

January 14, 2000

SECY-00-0010

FOR: The Commissioners

FROM: William D. Travers /RA/
Executive Director for Operations

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2 - RENEWAL
OF FULL-POWER OPERATING LICENSE

PURPOSE:

To — (1) inform the Commission of the results of the NRC staff's review of the Calvert Cliffs license renewal application submitted by the Baltimore Gas and Electric Company; (2) request that the Commission authorize the Director of NRR to make the appropriate findings and renew the operating licenses for the Calvert Cliffs Nuclear Power Plant Units 1 and 2 for an additional 20 years; and (3) request that the Commission authorize the Director of NRR to issue subsequent uncontested operating license renewals without prior Commission authorization.

BACKGROUND:

By letter dated April 8, 1998, the Baltimore Gas and Electric Company (BGE) submitted its application to renew the operating licenses (Reference 1) for Calvert Cliffs Nuclear Power Plant (CCNPP) Units 1 and 2 in accordance with 10 CFR Parts 51 and 54. In its submittal, BGE requested renewal of the operating licenses DPR-53 and DPR-69, which were initially issued under Section 104b of the Atomic Energy Act, for a period of 20 years beyond the current license expirations of midnight, July 31, 2014, and midnight, August 13, 2016, respectively.

Contact:
David Solorio, NRR
415-1973

DISCUSSION:

The staff performed its safety review of the Calvert Cliffs license renewal application in accordance with 10 CFR Part 54, using guidance in NRR Office Letter 805, "License Renewal Application Review Process," and the draft "Standard Review Plan for the Review of License Renewal Applications for Nuclear Power Plants," dated September 1997. NUREG-1705, "Safety Evaluation Report Related to the License Renewal of Calvert Cliffs Nuclear Power Plant, Units 1 and 2" (Reference 2), describes the results of the staff's review of the scoping and screening, aging management programs, and time-limited aging analyses, in accordance with the requirements of 10 CFR Part 54.

The Calvert Cliffs renewal application included a supplement to the Final Safety Analysis Report (FSAR), as required by 10 CFR 54.21(d). NUREG-1705 includes, as Appendix E, a summary listing of the programs, maintenance activities, and inspection procedures that form a significant basis for the staff's conclusion. This list represents those commitments that warrant regulatory control. BGE will incorporate appropriate changes to the next update of the Calvert Cliffs updated FSAR, which will occur after the issuance of a renewed license. The FSAR will be updated for each item in Appendix E in accordance with the guidance for 10 CFR 50.71(e). Since future changes to the FSAR will be made in accordance with 10 CFR 50.59, the NRC is assured that these programs, maintenance activities, and inspection procedures will be adequately controlled. Until the FSAR update is complete, a condition in the proposed renewed licenses (Attachment) requires that any changes to the items on the list be made in accordance with 10 CFR 50.59. The listing in Appendix E also identifies future actions. Throughout NUREG-1705, the staff has described various schedules for future actions. The staff has determined that the future actions are not required for operation during the existing license term; however, all but one of these future actions (the volumetric inspections of the Unit 1 control element drive mechanisms to be completed by 2029 as described in Section 3.2.3.2.1.C (6) of NUREG-1705) are required to be completed before entering the period of extended operation to effectively manage aging. The proposed renewed licenses include license conditions for the completion of these future actions. BGE can change the schedules for these actions without prior NRC approval, so long as the actions are completed in accordance with the license condition.

Following the completion of the safety evaluation report (SER) for the Calvert Cliffs renewal application, a new issue emerged from an operating reactor event at another plant related to aging effects applicable to medium-voltage cables that are either inaccessible or direct-buried and exposed to moisture. The issue concerned the need to address the effects on cable insulation due to appreciable wetting or submergence. This issue was discussed with BGE and, in a letter dated January 12, 2000, BGE committed to evaluate the root cause of the event for applicability to the most susceptible cables at Calvert Cliffs and take appropriate corrective action to modify the cable aging management program, if necessary. The staff finds this commitment acceptable. The staff will supplement the SER and the commitments in Appendix E, as appropriate, to reflect this additional commitment.

On the basis of its safety evaluation, as described in NUREG-1705, the staff, as provided by 10 CFR 54.29, concludes that —

- (1) actions have been identified and have been or will be taken with respect to managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require an aging management review under 10 CFR 54.21(a)(1) and
- (2) actions have been identified and have been or will be taken with respect to time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c).

Accordingly, the staff finds that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis for Calvert Cliffs Units 1 and 2.

To support the review of BGE's license renewal application, Region I conducted three inspections at Calvert Cliffs with support from Region II and NRR. The inspections were conducted in accordance with Inspection Manual Chapters 2515, "Light-Water Reactor Inspection Program - Operations Phase"; 2516, "Policy and Guidance for the License Renewal Inspection Programs"; and inspection procedure 71002, "License Renewal Inspection." As described in the memorandum from H. J. Miller, dated January 13, 2000 (Reference 3), the results of these three inspections verified that there is reasonable assurance the contents of the application, aging management programs, implementation, and other activities related to the license renewal of Calvert Cliffs are in accordance with docketed commitments and regulatory requirements.

Following issuance of the SER with open and confirmatory items on March 21, 1999 (Reference 4), the staff and BGE briefed the ACRS Subcommittee on Plant License Renewal on April 28 and 29, 1999, and briefed the ACRS Full Committee on May 5, 1999, on the SER. On May 19, 1999, the ACRS issued its "Interim Letter on the Safety Aspects of the Baltimore Gas and Electric Company's License Renewal Application for Calvert Cliffs Nuclear Power Plant, Units 1 and 2." In its interim letter, the ACRS noted that while a number of open issues still needed to be resolved, it appeared that BGE had developed and implemented adequate processes to identify the structures, systems, and components (SSCs) that are subject to an aging management review and will be able to demonstrate that aging-induced degradation will be adequately managed during the period of extended operation. Following resolution of the open and confirmatory items, the staff forwarded a report summarizing their closure to the ACRS on November 3, 1999. Subsequently, on November 18, 1999, the staff briefed the ACRS Subcommittee on Plant License Renewal regarding resolution of the open and confirmatory items. On December 2, 1999, the staff and BGE briefed the ACRS Full Committee. On December 10, 1999, the ACRS issued its recommendation to the Commission regarding the renewal of the Calvert Cliffs license based on its review of the license renewal application and SER, "Report on the Safety Aspects of the License Renewal Application for Calvert Cliffs Nuclear Power Plant Units 1 and 2." In its report (included in Chapter 5 of NUREG-1705, Reference 2), the ACRS stated that, on the basis of its review of the BGE license renewal application, the final SER, and the resolution of the open and confirmatory items identified in the SER, it concluded that BGE has properly identified the SSCs that are subject to aging management programs. Furthermore, the ACRS concluded that the programs

instituted to manage aging-related degradation of the identified SSCs are appropriate and provide reasonable assurance that Calvert Cliffs Units 1 and 2 can be operated in accordance with its current licensing basis for the period of the extended license without undue risk to the health and safety of the public.

The staff performed its environmental review of the Calvert Cliffs license renewal application in accordance with 10 CFR Part 51, using the guidelines described in a draft of the "Standard Review Plans for Environmental Reviews for Nuclear Power Plants, Supplement 1: Operating License Renewal," NUREG-1555, Supplement 1 (February 1999 prepublication copy). On June 10, 1998, the staff published a Notice of Intent (63 FR 31813) to prepare an environmental impact statement (EIS) and conduct scoping, initiating a 60-day scoping period. The EIS, prepared by the staff for the plant-specific review, is a supplement to the Generic Environmental Impact Statement (GEIS), NUREG-1437 that was codified in 10 CFR Part 51 for license renewal; for Calvert Cliffs, the EIS is Supplement 1 to the GEIS (SEIS). Two public scoping meetings were held in July 1998 in Solomons, Maryland. The staff also visited the CCNPP site in July 1998, reviewed the comments received during scoping, reviewed related documents, and consulted with Federal, State, and local agencies. On February 24, 1999, the staff issued a draft of the SEIS (Supplement 1 to NUREG-1437), which contained the preliminary results of the staff's evaluation and recommendation. With the publication of the EPA Notice of Filing of the draft SEIS (64 FR 10662, March 5, 1999), the NRC initiated a 75-day public comment period on the preliminary results of the staff's review. During this comment period, two public meetings were held in Solomons, Maryland, in April 1999. In these meetings, the staff described the approach and results of the NRC environmental review and answered questions to give members of the public information to assist them in formulating their comments. The comment period for the draft SEIS ended on May 20, 1999. The staff evaluated the comments received on the draft SEIS and completed its analysis, considering and weighing the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and the alternatives available for reducing or avoiding adverse effects. The final version of the SEIS regarding CCNPP was issued on October 5, 1999 (Reference 5). Disposition of the comments from members of the public are addressed in the SEIS. As discussed in Section 9.3 of the SEIS, the staff determined that, on the basis of (1) the analysis and findings in the *Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants*, NUREG-1437; (2) the ER [Environmental Report] submitted by BGE; (3) consultation with other Federal, State, and local agencies; (4) its own independent review; and (5) its consideration of public comments, the adverse environmental impacts of license renewal for Calvert Cliffs Unit 1 and Unit 2 are not so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

In accordance with 10 CFR 54.19(b), license renewal applications include "conforming changes to the standard indemnity agreement, 10 CFR 140.92, Appendix B, to account for the expiration term of the proposed renewed license." BGE stated in its renewal application that:

The current indemnity agreement (B-70) for licenses DPR-53 and DPR-69 does not contain a specific expiration term. Expiration is expressed in terms of the time of the expiration of the licenses specified. Therefore, conforming changes to account for the expiration term of the proposed renewed licenses are unnecessary.

The staff notes that the current indemnity agreement for Calvert Cliffs states in Article VII that the agreement shall terminate at the time of expiration of that license specified in Item 3 of the attachment to the agreement. Item 3 of the attachment to the indemnity agreement lists two license numbers. By maintaining the license numbers on issuance of the renewed license, conforming changes need not be made to the indemnity agreement. Therefore, the requirements of 10 CFR 54.19(b) have been met.

The National Whistleblower Center (NWC), requested a hearing and petitioned for leave to intervene in the proceeding on BGE's license renewal application. On October 16, 1998, the Atomic Safety and Licensing Board (ASLB) denied the intervention petition and hearing request and dismissed the proceeding. NWC appealed the ASLB's denial to the Commission and the Commission upheld the ASLB's decision on December 23, 1998. NWC filed an appeal with the United States Court of Appeals for the District of Columbia Circuit. Although the Court on November 12, 1999, initially ruled 2-1 against the NRC, the Court, on its own motion, vacated its November 12 decision on November 22, 1999. On December 7, 1999, the Court issued an order for briefs and argument in the case. Briefs are to be filed on January 21, 2000, and the case is to be argued on January 26, 2000. The Court did not stay further NRC action on the application pending resolution of the appeal.

As a result of the staff's review of BGE's license renewal application, the staff recommends that the Commission authorize the Director of NRR to make the appropriate findings, and once he has made those findings, to issue renewed operating licenses for the Calvert Cliffs Nuclear Power Plants Unit 1 and Unit 2 for an additional 20 years of operation in accordance with the attached renewed licenses (Attachment).

In this paper, the staff is also seeking Commission guidance on the issue of the Commission's role in the issuance of future uncontested licenses. Pursuant to Management Directive 9.27, the Director of NRR is authorized and directed to take action to:

issue, renew, and amend licenses for manufacture, construction, possession, use, acquisition, and operation of utilization and production facilities other than fuel reprocessing plants and isotopic enrichment plants required by the Atomic Energy Act of 1954, as amended; sections 201(1), 202(2), and 203 of the Energy Reorganization Act of 1974; and 10 CFR Part 50, including amendments to such licenses with respect to safeguards matters and transportation within the site boundary.

An apparent limitation of the Director's authority, which does not appear in Management Directive 9.27, is contained in a 1981 policy statement, "Statement of Policy on Issuance of Uncontested Fuel-Load and Low-Power Testing Operating Licenses," 48 FR 47906 (September 30, 1981). According to this Policy Statement, which in very broad terms addresses the issuance of operating licenses:

In future uncontested cases, full-power operation will be authorized by the Commission. However, in such cases the Director shall authorize fuel-loading and low-power testing without the need to obtain prior Commission approval.

A comparable provision limiting the Director's authority in contested proceedings is found in 10 CFR 2.764 (f)(2). This raises the question of whether the Policy Statement limits the

Director's authority to issue renewed licenses. With the issuance of the initial license, there normally issued a fuel-load/low-power license, followed by a full-power license; however, the effect of license renewal is to continue to permit full-power operation of a facility that was previously authorized to operate at full-power for a period of forty years. The Policy Statement predated any license renewal regulations, so the staff concludes that the Policy Statement did not address the specific question of who would issue a renewed license. The Policy Statement appears to be concerned solely with the issuance of the initial license for a facility (because of the clear distinction between fuel-loading/low-power testing, and full-power operation). On the basis of the foregoing and, in the absence of other guidance, it is not clear whether the Commission wants to reserve for itself the authorization for the issuance of a renewed license. In light of the existence of the Policy Statement, the staff is seeking clarification of the role of the Commission in the issuance of future uncontested license renewals. Additionally, the staff recommends that the Commission clarify its 1981 Policy Statement to permit the Director of NRR, upon making the appropriate findings, to issue renewed licenses without prior Commission approval.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections. The Office of the Chief Financial Officer has reviewed this paper for resource implications and has no objections.

RECOMMENDATION:

That the Commission:

1. Authorize the Director of NRR to renew the operating licenses for the Calvert Cliffs Nuclear Power Plants Units 1 and 2 upon making the appropriate findings on safety and environmental matters.
2. Require the staff to revise the 1981 Policy Statement, "Statement of Policy on Issuance of Uncontested Fuel-Load and Low Power Testing Operating Licenses," to make it clear that the Director of NRR is authorized to issue renewed licenses in uncontested proceedings after a briefing to the Commission, if requested. The staff will continue to request Commission authorization for subsequent renewals until these actions are taken.
3. Note that the staff will make any necessary conforming changes to the renewed licenses as a result of any pending licensing actions while the Commission is considering the staff's recommendations.

/RA/

William D. Travers
Executive Director
for Operations

Attachment: Renewed License for Calvert Cliffs Nuclear Power Plant Units 1 and 2

References:

1. "Calvert Cliffs Nuclear Power Plant Units 1 and 2 License Renewal Application,"
Accession Number 9804100416
2. "NUREG-1705, Safety Evaluation Report Related to the License Renewal of Calvert
Cliffs Nuclear Power Plant, Units 1 and 2," dated December 1999, Accession Number
ML003674053
3. "Regional Administrator Letter on License Renewal for Calvert Cliffs Nuclear Power
Plant, Units 1 and 2," Accession Number ML003674284
4. "Safety Evaluation Report Related to the License Renewal of Calvert Cliffs Nuclear
Power Plant, Units 1 and 2," dated March 21, 1999, Accession Number 9903290122
5. "Generic Environmental Impact Statement for License Renewal of Nuclear Plants,
Supplement 1, Regarding the Calvert Cliffs Plant, Final Report," Accession Number
9910290240

2. Require the staff to revise the 1981 Policy Statement, "Statement of Policy on Issuance of Uncontested Fuel-Load and Low Power Testing Operating Licenses," to make it clear that the Director of NRR is authorized to issue renewed licenses in uncontested proceedings after a briefing to the Commission, if requested. The staff will continue to request Commission authorization for subsequent renewals until these actions are taken.
3. Note that the staff will make any necessary conforming changes to the renewed licenses as a result of any pending licensing actions while the Commission is considering the staff's recommendations.

/RA/

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Attachment: Renewed License for Calvert Cliffs Nuclear Power Plant Units 1 and 2

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1. "Calvert Cliffs Nuclear Power Plant Units 1 and 2 License Renewal Application," Accession Number 9804100416
2. "NUREG-1705, Safety Evaluation Report Related to the License Renewal of Calvert Cliffs Nuclear Power Plant, Units 1 and 2," dated December 1999, Accession Number ML003674053
3. "Regional Administrator Letter on License Renewal for Calvert Cliffs Nuclear Power Plant, Units 1 and 2," Accession Number ML003674284
4. "Safety Evaluation Report Related to the License Renewal of Calvert Cliffs Nuclear Power Plant, Units 1 and 2," dated March 21, 1999, Accession Number 9903290122
5. "Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 1, Regarding the Calvert Cliffs Plant, Final Report," Accession Number 9910290240

*See previous concurrence

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TICKET NUMBER:

DUE DATE: January 14, 2000

DOCUMENT NAME: Accession # ML003672584

ORIGINATOR: D. Solorio

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2 -
RENEWAL OF FULL-POWER OPERATING LICENSE

SECRETARY: Sonary Chey

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12. <u>CIO</u>	12. <u>N/A 1/5/2000</u>
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14. <u>W. Travers</u>	14. _____
<u>SECRETARY - DISPATCH</u>	

CAN DOCUMENT BE DELETED AFTER DISPATCH? YES ___ NO ___

SPECIAL INSTRUCTIONS: _____

NOTE: This version of the paper included all reference dates and accession numbers for ADAMS package. RLSB/NRR should confirm completion of the references in the ADAMS package before this paper is sent to the Commission and/or declared an official agency record.

RENEWED FACILITY OPERATING LICENSE
CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 1
BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-317

Renewed License No. DPR-53

1. The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. DPR-53 issued on July 31, 1974, has now found that:
 - A. The application to renew License No. DPR-53 filed by Baltimore Gas and Electric Company (the licensee) 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, and all required notifications to other agencies or bodies have been duly made;
 - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Calvert Cliffs Nuclear Power Plant, Unit 1 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
 - (3) There is reasonable assurance: (i) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the applicable regulations set forth in 10 CFR Chapter I, except as exempted from compliance;
 - D. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements";
 - E. The renewal of this license will not be inimical to the common defense and security or the health and safety of the public; and

Attachment

- F. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the renewal of this license is in accordance with 10 CFR Part 51 and all applicable requirements have been satisfied.
2. On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-53, issued on July 31, 1974, is superseded by Renewed Facility Operating License No. DPR-53, which is hereby issued to Baltimore Gas and Electric Company, to read as follows:
- A. This license applies to the Calvert Cliffs Nuclear Power Plant, Unit 1, a pressurized water nuclear reactor and associated equipment (the facility), owned by Baltimore Gas and Electric Company (the licensee). The facility is located in Calvert County, Maryland, and is described in the licensee's Final Safety Analysis Report (FSAR), as supplemented and amended, and the licensee's Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) The licensee, pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Calvert County, Maryland, in accordance with the procedures and limitations set forth in this license;
 - (2) The licensee, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time, special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, and described in the Final Safety Analysis Report, as supplemented and amended;
 - (3) The licensee, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, at any time, any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
 - (4) The licensee, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, in amounts as required, any byproduct, source, and special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
 - (5) The licensee, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

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 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 reactor steady-state core power levels not in excess of 2700 megawatts-thermal in accordance with the conditions specified herein.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, and the Environmental Protection Plan contained in Appendix B of this license, as revised through Amendment No. ____, both of which are attached hereto, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(a) For Surveillance Requirements (SRs) that are new, in Amendment to Final 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. 228 are hereby incorporated into this license. Baltimore Gas and Electric Company shall operate the facility in accordance with the Additional Conditions.

(4) Secondary Water Chemistry Program

The licensee 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. Identification of process sampling points.
 - d. Procedure for recording and management of data.
 - e. Procedures defining corrective actions for off control point chemistry conditions; and
 - f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.
- D. The licensee shall fully implement and maintain in effect all provisions of the physical security, guard training and qualification, safeguards contingency plans, including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain safeguards information protected under 10 CFR 73.21, are entitled, respectively: "Calvert Cliffs Nuclear Power Plant Physical Security Plan," with revisions submitted through February 17, 1988; "Calvert Cliffs Nuclear Power Plant Guard Training and Qualification Plan," with revisions submitted through November 1, 1985; and "Calvert Cliffs Nuclear Power Plant Safeguards Contingency Plan," with revisions submitted February 9, 1988. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.
- E. The licensee is required to implement and maintain the administrative controls identified in Section 6 of the NRC's Fire Protection Safety Evaluation on the facility dated September 14, 1979.
- F. At the time of the next scheduled update to the FSAR required pursuant to 10 CFR 50.71(e)(4) following the issuance of this renewed license, the licensee shall update the FSAR to include the FSAR supplement submitted pursuant to 10 CFR 54.21(d), as amended, and supplemented by the program descriptions in Appendix E to the Safety Evaluation Report, NUREG-1705. Until that FSAR update is complete, the licensee may make changes to the programs described in Appendix E without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- G. Any future actions listed in Appendix E to the Safety Evaluation Report, NUREG-1705, shall be included in the FSAR. The licensee shall complete these actions by July 31, 2014, except for the volumetric inspections of the control element drive mechanisms, which must be completed no later than 2029 for Unit 1 (Appendix E, Item 65).
- H. This renewed license is effective as of the date of issuance and shall expire at midnight on July 31, 2034.

FOR THE NUCLEAR REGULATORY COMMISSION

Samuel J. Collins, Director
Office of Nuclear Reactor Regulation

Attachments:

Appendix A - Technical Specifications
Appendix B - Environmental Protection Plan
Appendix C - Additional Conditions

Date of Issuance:

RENEWED FACILITY OPERATING LICENSE
CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 2
BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-318

Renewed License No. DPR-69

1. The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. DPR-69 issued on November 30, 1976, has now found that:
 - A. The application to renew License No. DPR-69 filed by Baltimore Gas and Electric Company (the licensee) 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, and all required notifications to other agencies or bodies have been duly made;
 - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Calvert Cliffs Nuclear Power Plant, Unit 2 (facility or plant), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
 - (3) There is reasonable assurance: (i) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the applicable regulations set forth in 10 CFR Chapter I, except as exempted from compliance;
 - D. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements";
 - E. The renewal of this license will not be inimical to the common defense and security or the health and safety of the public; and

Attachment

- F. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the renewal of this license is in accordance with 10 CFR Part 51 and all applicable requirements have been satisfied.
2. On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-69, issued on November 30, 1976, is superseded by Renewed Facility Operating License No. DPR-69, which is hereby issued to Baltimore Gas and Electric Company, to read as follows:
- A. This license applies to the Calvert Cliffs Nuclear Power Plant, Unit 2, a pressurized water nuclear reactor and associated equipment (the facility), owned by Baltimore Gas and Electric Company (the licensee). The facility is located in Calvert County, Maryland, and is described in the licensee's Final Safety Analysis Report (FSAR), as supplemented and amended, and the licensee's Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) The licensee, pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Calvert County, Maryland, in accordance with the procedures and limitations set forth in this license;
 - (2) The licensee, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time, special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, and described in the Final Safety Analysis Report, as supplemented and amended;
 - (3) The licensee, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, at any time, any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
 - (4) The licensee, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, in amounts as required, any byproduct, source, and special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
 - (5) The licensee, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

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 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 reactor steady-state core power levels not in excess of 2700 megawatts-thermal in accordance with the conditions specified herein.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, and the Environmental Protection Plan contained in Appendix B of this license, as revised through Amendment No. ____, both of which are attached hereto, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(1) For Surveillance Requirements (SRs) that are new, in Amendment 201 to Final 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

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.

(5) Additional Conditions

The Additional Conditions contained in Appendix C as revised through Amendment No. 202 are hereby incorporated into this license. Baltimore Gas and Electric Company shall operate the facility in accordance with the Additional Conditions.

(6) Secondary Water Chemistry Program

The licensee 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. Identification of process sampling points.
 - d. Procedure for recording and management of data.
 - e. Procedures defining corrective actions for off control point chemistry conditions; and
 - f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.
- D. The licensee shall fully implement and maintain in effect all provisions of the physical security, guard training and qualification, safeguards contingency plans, including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain safeguards information protected under 10 CFR 73.21, are entitled, respectively: "Calvert Cliffs Nuclear Power Plant Physical Security Plan," with revisions submitted through February 17, 1988; "Calvert Cliffs Nuclear Power Plant Guard Training and Qualification Plan," with revisions submitted through November 1, 1985; and "Calvert Cliffs Nuclear Power Plant Safeguards Contingency Plan," with revisions submitted February 9, 1988. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.
- E. The licensee is required to implement and maintain the administrative controls identified in Section 6 of the NRC's Fire Protection Safety Evaluation on the facility dated September 14, 1979.
- F. At the time of the next scheduled update to the FSAR required pursuant to 10 CFR 50.71(e)(4) following the issuance of this renewed license, the licensee

shall update the FSAR to include the FSAR supplement submitted pursuant to 10 CFR 54.21(d), as amended, and supplemented by the program descriptions in Appendix E to the Safety Evaluation Report, NUREG-1705. Until that FSAR update is complete, the licensee may make changes to the programs described in Appendix E without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

- G. Any future actions listed in Appendix E to the Safety Evaluation Report, NUREG-1705, shall be included in the FSAR. The licensee shall complete these actions by August 13, 2016.
- H. This renewed license is effective as of the date of issuance and shall expire at midnight on August 13, 2036.

FOR THE NUCLEAR REGULATORY COMMISSION

Samuel J. Collins, Director
Office of Nuclear Reactor Regulation

Attachments:

Appendix A - Technical Specifications
Appendix B - Environmental Protection Plan
Appendix C - Additional Conditions

Date of Issuance: