

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

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- 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

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- 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: