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Docket No. 50-317

JUL 31 1974

**Baltimore Gas and Electric Company**  
**ATTN: Mr. John W. Gore, Jr.**  
**Vice President**  
**Gas and Electric Building**  
**Charles Center**  
**Baltimore, Maryland 21203**

bcc: J. R. Buchanan, ORNL  
 Thomas B. Abernathy, DTIE  
 A. Rosenthal, ASLAB  
 N. H. Goodrich, ASLBP

Gentlemen:

The Atomic Energy Commission has issued Facility Operating License No. DPR-53 to you for the Calvert Cliffs Nuclear Power Plant, Unit 1 (copy enclosed). This license authorizes you to operate Unit 1 at steady state reactor core power levels not to exceed 2560 megawatts thermal (rated power) in accordance with the Technical Specifications, Appendices A and B (copy enclosed). However, activities under the license are temporarily being limited to fuel loading, post core loading hot functional testing, and low power physics tests until the Directorate of Regulatory Operations has made a satisfactory finding of completion of the items listed in Sections A, B, and C of Enclosure No. 2, respectively.

A copy of a related notice, which has been forwarded to the Office of the Federal Register for publication, is enclosed.

Two signed copies of the Indemnity Agreement, which covers the activities authorized under License No. DPR-53, are enclosed for your review and acceptance. Please sign and return one copy of the Agreement to this Office.

Sincerely,

Original Signed by  
 O. D. Parr

**Olan D. Parr, Chief**  
**Light Water Reactors**  
**Project Branch 1-3**  
**Directorate of Licensing**

Enclosures: *SEE REPORTS SHEET*  
 See page 2

*REC R. Kinsey 7/30/74*

*BN 7/31*

OFFICE	L:LWR 1-3 <i>JHW</i>	L:LWR 1-3 <i>GR</i>	L:LWR 1-3 <i>ODP</i>	OGC <i>RB</i>	EP	RO <i>GR</i>
SURNAME	VHWilson:cls	GRivenbark	ODParr	LBrenner	RGeekler <i>by phone</i>	GR <i>by phone</i>
DATE	7/29/74	7/30/74	7/31/74	7/30/74	7/29/74	7/30/74

**Enclosures:**

1. Facility Operating License  
No. DPR-53 with Technical  
Specifications
2. List of Outstanding Items
3. Federal Register Notice
4. Indemnity Agreement B-70,  
Amendment No. 2

cc: Mr. James A. Biddison, Jr.  
General Counsel  
Gas and Electric Building  
Charles Center  
Baltimore, Maryland 21203

James C. Cawood, Jr., Esq.  
Vice President  
Chesapeake Environmental  
Protection Association  
4700 Auth Place  
Camp Springs, Maryland

George F. Trowbridge, Esq.  
Shaw, Pittman, Potts and  
Trowbridge  
910 17th Street, N.W.  
Washington, D. C. 20006

Mr. Warren D. Hodges, Director  
Department of State Planning  
301 West Preston Street  
Baltimore, Maryland 21201

Mr. Bernard Fowler, President  
Board of County Commissioners  
Prince Frederick, Maryland 20678

Mr. Robert J. Blanco, Region III  
Environmental Protection Agency  
Sixth and Walnut Streets  
Philadelphia, Pennsylvania 19106

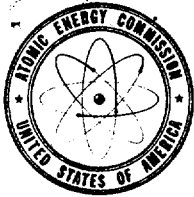
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cc: Mr. Bruce Blanchard  
Environmental Projects Review  
Department of the Interior  
Room 5321  
18th and C Streets, N. W.  
Washington, D. C. 20240

Mr. Sheldon Myers  
ATTN: Mr. Jack Anderson  
Office of Federal Activities  
EPA, Room W-541, Waterside Mall  
401 M Street, S. W.  
Washington, D. C. 20460

Colonel Howard Sargent  
Executive Director of Civil Works  
Office of the Chief of Engineers  
Corps of Engineers  
Department of Army  
Forrestal Building, Room 4-G060  
Washington, D. C. 20314

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SURNAME▶						
DATE▶						



UNITED STATES  
ATOMIC ENERGY COMMISSION  
WASHINGTON, D.C. 20545

BALTIMORE GAS & ELECTRIC COMPANY

DOCKET NO. 50-317

(Calvert Cliffs Nuclear Power Plant, Unit 1)

FACILITY OPERATING LICENSE

License No. DPR-53

1. The Atomic Energy Commission (the Commission) having found that:
  - A. The application for license filed by Baltimore Gas & 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. Construction of the Calvert Cliffs Nuclear Power Plant, Unit 1, (facility) has been substantially completed in conformity with Construction Permit No. CPPR-63 and the application, as amended, the provisions of the Act and the rules and regulations of the Commission;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
  - D. There is reasonable assurance: (i) that the activities authorized by this operating 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 rules and regulations of the Commission;
  - E. The licensee is technically and financially qualified to engage in the activities authorized by this operating license in accordance with the rules and regulations of the Commission;
  - F. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

- G. The issuance of this operating license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental costs and considering available alternatives, the issuance of Facility Operating License No. DPR-53 (subject to the conditions for protection of the environment set forth herein) is in accordance with 10 CFR Part 50, Appendix D, of the Commission's regulations and all applicable requirements of said Appendix D have been satisfied; and
  - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70, including 10 CFR Section 30.33, 40.32, and 70.23 and 70.31.
2. Facility Operating License No. DPR-53 is hereby issued to the Baltimore Gas & Electric Company to read as follows:
- A. This license applies to the Calvert Cliffs Nuclear Plant, Unit 1, a pressurized water reactor and associated equipment (the facility), owned by the Baltimore Gas & Electric Company. The facility is located in Calvert County, Maryland and is described in the "Final Safety Analysis Report" as supplemented and amended (Amendments 11 through 47) and the Environmental Report as supplemented and Amendment No. 1 thereto.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Baltimore Gas & Electric Company:
    - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "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) 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 reactor fuel, sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required for reactor operation;

- (3) Pursuant to the Act and 10 CFR Part 30 to receive, possess and use at any time 100 millicuries each of any byproduct material without restriction to chemical or physical form, for sample analysis or instrument calibration; and Sodium-24, in liquid form, not to exceed 500 millicuries for tracer measurements for steam turbine acceptance testing;
- (4) Pursuant to the Act and 10 CFR Parts 40 and 70 to receive, possess and use at any time 100 milligrams each of any source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration;
- (5) Pursuant to the Act and 10 CFR Parts 30 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 shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or 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 2560 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendices A & B attached hereto are hereby incorporated in this license. The licensee shall operate the facility in accordance with the Technical Specifications.

D. Pursuant to the Agreement dated April 25, 1973, between the licensee, Chesapeake Environmental Protection Association and the Commission, the licensee shall, prior to the operation of Unit No. 1 above 60% capacity, but in no event later than six (6) months after the date of commercial operation, have selected an optimum cooling tower system for both Units Nos. 1 and 2 and will have completed the following pre-construction design and engineering of said system (this effort would provide a ready design in the event conversion to an alternate cooling system proves necessary at a later date because of unexpected, detrimental environmental effects):

(1) Civil Engineering

- (a) Site investigation and soil studies.
- (b) Shoreline design change studies and preparation of license application for dredging and filling.
- (c) Preliminary layout drawings of circulating water piping.
- (d) Foundation studies.

(2) Electrical Engineering

Preliminary single line drawings and design review of auxiliary electrical capacity.

(3) Mechanical layout and engineering

- (a) Cooling tower sizing and selection.
- (b) Cooling tower specifications.
- (c) Preliminary equipment sizing of pumps, piping and buildings.
- (d) Large pump specifications.
- (e) Additional site meteorological studies pertaining to cooling tower drift.

E. This license is effective as of the date of issuance and shall expire at midnight July 7, 2009.

FOR THE ATOMIC ENERGY COMMISSION

Original Signed by

Roger S. Boyd

A. Giambusso, Deputy Director  
for Reactor Projects  
Directorate of Licensing

Attachment:  
Appendices A & B -  
Technical Specifications

Date of Issuance: JUL 31 1974

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-317

BALTIMORE GAS & ELECTRIC COMPANY

(Calvert Cliffs Nuclear Plant, Unit 1)

NOTICE OF ISSUANCE OF A FACILITY OPERATING LICENSE

Notice is hereby given that the Atomic Energy Commission (the Commission) has issued Facility Operating License No. DPR-53 to Baltimore Gas & Electric Company authorizing operation of the Calvert Cliffs Nuclear Power Plant, Unit 1, at steady state reactor core power levels not to exceed 2560 megawatts thermal (rated power). However, activities under the license are temporarily being limited to fuel loading, post core loading hot functional testing, and low power physics tests until certain items identified by the Directorate of Regulatory Operations have been satisfactorily resolved. The Calvert Cliffs Nuclear Plant, Unit 1, is a pressurized water nuclear reactor located at the licensee's site in Calvert County, Maryland.

The Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations in 10 CFR Chapter I, which are set



forth in the license. The application for the license complies with the standards and requirements of the Act and the Commission's rules and regulations.

The license is effective as of its date of issuance and shall expire on July 7, 2009.

A copy of (1) Facility Operating License No. DPR-53 complete with Technical Specifications (Appendices "A" and "B"); (2) the reports of the Advisory Committee on Reactor Safeguards, dated June 12, 1973 and January 14, 1974; (3) the Directorate of Licensing's Safety Evaluation dated August 28, 1972, and Supplements 1, 2 and 3 thereto dated May 4, 1973, December 4, 1973, and June 14, 1974, respectively; (4) the Final Safety Analysis Report and amendments thereto; (5) the applicant's supplemental Environmental Report dated November 8, 1971 and Amendment No. 1 thereto; (6) the Draft Environmental Statement dated January 20, 1972 and (7) the Final Environmental Statement dated April 1973, are available for public inspection at the Commission's Public Document Room at 1717 H Street, N.W., Washington, D. C. and at the Calvert County Library, Prince Frederick, Maryland. A copy of the license and the Safety Evaluation may be obtained upon request address-

sed to the United States Atomic Energy Commission, Washington, D.C.  
20545, Attention: Deputy Director for Reactor Projects, Directorate  
of Licensing, Regulation.

Dated at Bethesda, Maryland, this 31 day of JUL 1974.

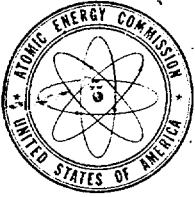
FOR THE ATOMIC ENERGY COMMISSION

Original Signed by  
O. D. Parr

Olan D. Parr, Chief  
Light Water Reactors  
Project Branch 1-3  
Directorate of Licensing

INCOMPLETE CONSTRUCTION AND PREOPERATIONAL TEST ITEMS  
THAT ARE REQUIRED TO BE COMPLETED

- A. Items that are required to be completed prior to proceeding beyond fuel loading.
  - 1. Preoperational Tests
    - a. Reactor Protective System
    - b. CEDM Cooling System
    - c. Reactor Component Handling
    - d. Main Steam Isolation Valves
  - 2. Construction
    - a. Administrative controls to preclude inadvertent over-pressurization of the reactor coolant system during solid system operation.
    - b. Expansion joints in the salt water cooling system that have been found to be elongated beyond their design limits will be replaced and spacers added.
    - c. Hydrogen supply line to the volume control tank.
  
- B. Items that are required to be completed prior to proceeding beyond the post-core loading hot functional testing.
  - 1. Preoperational Tests
    - a. Liquid Waste System Evaporators
    - b. Radiation Monitoring and Process Radiation Systems
    - c. Variable Overpower Trip System
  - 2. Construction
    - a. Installation and design documentation of safety related pipe hangers, restraints and supports.
  
- C. Items that are required to be completed prior to proceeding beyond the low power physics tests.
  - 1. Preoperational Tests
    - a. Solid Waste System
    - b. Hydrogen Purge System
  - 2. Construction
    - a. Evaluation of adequacy of the diesel generator air start system modifications.
    - b. Incore instrumentation.
    - c. Reactor internals vibration monitoring capability.
    - d. Modification of the primary CEA position indication system.



UNITED STATES  
ATOMIC ENERGY COMMISSION  
WASHINGTON, D.C. 20545

Docket No. 50-317

AMENDMENT TO INDEMNITY AGREEMENT NO. B-70

AMENDMENT NO. 2

Effective JUL 31 1974, Indemnity Agreement No. B-70, between Baltimore Gas and Electric Company and the Atomic Energy Commission, dated August 23, 1973, as amended, is hereby further amended as follows:

Item 2a of the Attachment to the indemnity agreement is deleted in its entirety and the following substituted therefor:

Item 2 - Amount of financial protection

- a. \$1,000,000 (From 12:01 a.m., August 23, 1973, to 12 midnight, JUL 30 1974, inclusive)
- \$110,000,000 (From 12:01 a.m., JUL 31 1974 )

Item 3 of the Attachment to the indemnity agreement is deleted in its entirety and the following substituted therefor:

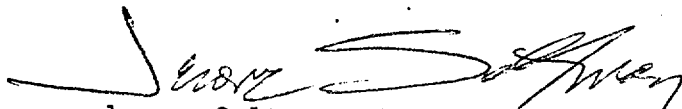
Item 3 - License number or numbers

- SNM-1364 (From 12:01 a.m., August 23, 1973, to 12 midnight, JUL 30 1974, inclusive)
- DPR-53 (From 12:01 a.m., JUL 31 1974 )

Item 5 of the Attachment to the indemnity agreement is amended by adding the following:

Nuclear Energy Liability Policy (Facility Form) No. MF-76  
issued by Mutual Atomic Energy Liability Underwriters.

FOR THE UNITED STATES ATOMIC ENERGY COMMISSION



Jerome Saltzman, Deputy Chief  
Office of Antitrust & Indemnity  
Directorate of Licensing

Accepted \_\_\_\_\_, 1974

By \_\_\_\_\_  
BALTIMORE GAS AND ELECTRIC COMPANY