

Docket No. 50-317

DEC 01 1976

Baltimore Gas and Electric Company  
ATTN: Mr. A. E. Lundvall, Jr.  
Vice President - Supply  
Gas and Electric Building  
Charles Center  
Baltimore, Maryland 21203

Gentlemen:

The Commission has filed the enclosed "Notice of Proposed Issuance of Amendment to Facility Operating License" with the Office of the Federal Register for publication. The notice relates to your request dated July 6, 1976, and associated filings dated October 1 and 20, and November 5 and 30, 1976, for amendment to License No. DPR-53 for Unit No. 1 of the Calvert Cliffs Nuclear Power Plant to incorporate operating limits in the Technical Specifications based on an acceptable emergency core cooling system evaluation model that conforms with the requirements of Section 50.46 of 10 CFR Part 50.

Sincerely,

Original Signed by:  
Dennis L. Ziemann

Dennis L. Ziemann, Chief  
Operating Reactors Branch #2  
Division of Operating Reactors

Enclosure:  
Notice

cc w/enclosure:  
See next page

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- JRBuchanan, NSIC

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SURNAME >	RMDiggs:ah	EAREeves	<i>Torste Hovde</i>	DLZiemann	
DATE >	11/19/76	11/19/76	11/22/76	12/1/76	

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cc w/enclosure:

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

James C. Cawood, Jr., Esquire  
Vice President  
Chesapeake Environmental  
Protection Association  
4700 Auth Place  
Camp Springs, Maryland 20023

George F. Trowbridge, Esquire  
Shaw, Pittman, Potts and  
Trowbridge  
1800 M Street, N. W.  
Washington, D. C. 20036

Bechtel Power Corporation  
ATTN: Mr. R. L. Ashley  
Chief Nuclear Engineer  
P. O. Box 607  
Gaithersburg, Maryland 20760

Combustion Engineering, Inc.  
ATTN: Mr. J. A. Honey  
Project Manager  
P. O. Box 500  
Windsor, Connecticut 06095

Mr. R. C. L. Olson  
Baltimore Gas and Electric Company  
Room 922 Gas and Electric Building  
Charles Center  
Baltimore, Maryland 21203

Mr. R. M. Douglass, Chief Engineer  
Calvert Cliffs Nuclear Power Plant  
Baltimore Gas and Electric Company  
Lusby, Maryland 20657

Calvert County Library  
Prince Frederick, Maryland 20678

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

Chief, Energy Systems  
Analyses Branch (AW-459)  
Office of Radiation Programs  
U. S. Environmental Protection  
Agency  
Room 645, East Tower  
401 M Street, S. W.  
Washington, D. C. 20460

U. S. Environmental Protection  
Agency  
Region III Office  
ATTN: EIS COORDINATOR  
Curtis Building (Sixth Floor)  
6th and Walnut Streets  
Philadelphia, Pennsylvania 19106

cc w/4 enclosures and BG&E  
filings dtd. 7/6/76; 10/1  
10/20 w/o prop., 11/5 and  
11/30/76:

Director, Department of State  
Planning  
301 West Preston Street  
Baltimore, Maryland 21201

*inadvertently left off original.  
Dr. Paul Mazarot, Director  
Department of Natural Resources  
Power Plant Siting Program  
Emergency + Coastal Zone Administration  
Towers State Office Building  
Annapolis, MD 21401*

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UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-317

BALTIMORE GAS AND ELECTRIC COMPANY

NOTICE OF PROPOSED ISSUANCE OF AMENDMENT  
TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License No. DPR-53 issued to the Baltimore Gas and Electric Company (the licensee) for operation of the Calvert Cliffs Nuclear Power Plant Unit No. 1 (the facility), a pressurized water reactor located in Calvert County, Maryland, and currently authorized to operate at power levels up to 2560 Mwt.

In accordance with the licensee's application for a license amendment dated July 6, 1976, and associated filings by the licensee dated October 1 and 20 and November 5 and 30, 1976, the amendment would modify operating limits in the Technical Specifications based upon an evaluation of the Emergency Core Cooling System (ECCS) performance calculated in accordance with an acceptable evaluation model that conforms with the requirements of the Commission's regulations in 10 CFR Section 50.46. The amendment would modify various limits established in accordance with the Commission's Interim Acceptance Criteria, and would terminate the further restrictions imposed by the Commission's December 27, 1974 and June 17, 1976 Orders for Modification of License, and would impose instead, limitations established in accordance with the Commission's Acceptance Criteria for Emergency Core Cooling Systems for Light Water Nuclear Power Reactors, 10 CFR Section 50.46.

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

By JAN 12 1977 the licensee may file a request for a hearing and any person whose interest may be affected by this proceeding may file a request for a hearing in the form of a petition for leave to intervene with respect to the issuance of the amendment to the subject facility operating license. Petitions for leave to intervene must be filed under oath or affirmation in accordance with the provisions of Section 2.714 of 10 CFR Part 2 of the Commission's regulations. A petition for leave to intervene must set forth the interest of the petitioner in the proceeding, how that interest may be affected by the results of the proceeding, and the petitioner's contentions with respect to the proposed licensing action. Such petitions must be filed in accordance with the provisions of this FEDERAL REGISTER notice and Section 2.714, and must be filed with the Secretary of the Commission, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Docketing and Service Section, by the above date. A copy of the petition and/or request for a hearing should be sent to the Executive Legal Director, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, and to James A. Biddison, Jr., General Counsel, Gas and Electric Building, Charles Center, Baltimore, Maryland 21203, the attorney for the licensee.

A petition for leave to intervene must be accompanied by a supporting affidavit which identifies the specific aspect or aspects

	of the proceeding	as to which	intervention is desired and	specifies	
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with particularity the facts on which the petitioner relies as to both his interest and his contentions with regard to each aspect on which intervention is requested. Petitions stating contentions relating only to matters outside the Commission's jurisdiction will be denied.

All petitions will be acted upon by the Commission or licensing board, designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel. Timely petitions will be considered to determine whether a hearing should be noticed or another appropriate order issued regarding the disposition of the petitions.

In the event that a hearing is held and a person is permitted to intervene, he becomes a party to the proceeding and has a right to participate fully in the conduct of the hearing. For example, he may present evidence and examine and cross-examine witnesses.

For further details with respect to this action, see (1) the application for amendment dated July 6, 1976, and associated filings by the licensee dated October 1 and 20 and November 5 and <sup>30</sup>, 1976, (2) the Commission's Order for Modification of License issued December 27, 1974 (published in the Federal Register on January 9, 1975 - 40 F.R. 1783) and the documents referred to in the Order, and (3) the Order for Modification of License issued June 17, 1976 (published in the Federal Register on June 28, 1976 - 41 F.R. 26616), and the documents referred to in the Order, which are available for public inspection at the

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Commission's Public Document Room, 1717 H Street, N. W., Washington,  
D. C., 20555 and at the Calvert County Library, Prince Frederick,  
Maryland 20678.

Dated at Bethesda, Maryland, this **DEC 01 1976**

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by:  
Dennis L. Ziemann

Dennis L. Ziemann, Chief  
Operating Reactors Branch #2  
Division of Operating Reactors

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DETERMINATION OF PROPOSED LICENSING AMENDMENT

Licensee: Baltimore Gas & Electric Company (50-317)

Request for: A License amendment for Calvert Cliffs Unit No. 1  
for: (1) Cycle 2 Reload, including installation of  
three test fuel assemblies and (2) the ECCS  
evaluation for the reload.

Request Date: November , 1976

Proposed Noticing Action: (X) Pre-notice Recommended for Item 2  
(X) Post-notice Recommended for Item 1  
( ) Determination delayed pending  
completion of Safety Evaluation

Basis for Decision: 1. The Cycle 2 Reload incorporates the following  
minor design changes in the fuel assembly  
structure and the fuel rods to improve overall  
fuel performance:

- a. Features already tested during Cycle 1  
and in other CE reactors to provide for  
fuel rod replacements within an assembly.
- b. An increase in fuel pellet density and  
clad wall thickness resulting in a slight  
reduction in the cladding gap.
- c. A reduction in fuel rod fill pressure  
commensurate with the increased clad  
thickness.
- d. A reduction in pellet lengths and addition  
of a chamfer to the pellet to reduce pellet  
clad interaction.
- e. An increase in the assembly holddown force  
with an associated increased margin to  
accommodate flow forces and crud accumulation.

Basis for Decision (Cont'd):

The fuel thermal design has been evaluated using a staff approved computer model. Our preliminary review indicates more justification may be required for their proposed decrease in uncertainties relating to radial peaking factors. If the justification is not adequate, the uncertainties would be adjusted appropriately. Reactor performance with Cycle 2 fuel is not expected to be significantly different from the existing design of Cycle 1.

The reload incorporates three test fuel assemblies which are part of a Combustion Engineering research and development program for future fuel rod improvement. The overall design of the test rods is similar to the standard fuel rods reviewed for Cycle 1 except for minor differences described in the attached proprietary report (Copy No. 26). Existing fuel fabrication processes are used in fabrication of the test rods and similar rods have been tested successfully in foreign reactors.

The proposed fuel changes are not significantly different from previously evaluated and accepted reloads.

Therefore, based on our preliminary review, we have determined that Cycle 2 operation with the reload fuel and the test assemblies will not involve a significant increase in the probability or consequences of accidents previously considered and will not involve a significant decrease in a safety margin and therefore do not require pre-noticing.

2. The portion of the reload application related to the ECCS analysis will be prenoticed. The amendment would modify various limits established in accordance with the Commission's Interim Acceptance Criteria, and would terminate the further restrictions imposed by the Commission's December 27, 1974 and June 17, 1976 Orders for Modification of License, and would impose instead, limitations established in accordance with the Commission's Acceptance Criteria for Emergency Core Cooling Systems for Light Water Nuclear Power Reactors, 10 CFR Section 50.46.

- Proposed NEPA Action: ( ) EIS Required
- ( ) Negative Declaration (ND) and Environmental Impact Appraisal (EIA) Required
- (X) No EIS, ND or EIA Required
- ( ) Determination delayed pending completion of EIA

Basis for Decision: The proposed change would involve neither a major action significantly affecting the human environment, nor a change in types or amounts of effluents, nor an increase in authorized power level.

Noticing Concurrences:

- Edward A. Reeves*  
1. Edward A. Reeves 11/15/76
- Dick Ziemann*  
2. Dennis L. Ziemann 11/15/76
- Karl R. Goller*  
3. Karl R. Goller 11/19/76
- James R. Tourkotte*  
4. Executive Legal Director 11/22/76

*James R. Tourkotte*