

Docket No. 50-317

DEC. 23 1974

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Baltimore Gas and Electric Company
ATTN: Mr. John W. Gore, Jr.
Vice President

Gas and Electric Building
Charles Center
Baltimore, Maryland 21203

Amendment No. 7
Change No. 6
License No. DPR-53

Gentlemen:

Baltimore Gas and Electric Company (BG&E) informed us by telephone on December 20, 1974, that it had discovered that its equipment for continuously monitoring the activity release rates of noble gases and particulates was not in conformance with Technical Specification 4.2, Table 4.2-1, item 12a, footnote 12 requirement that the continuous main vent monitor be capable of measuring noble gas and particulate activity release rates of $10 \mu\text{Ci}/\text{sec}$ and $10^{-5} \mu\text{Ci}/\text{sec}$, respectively. It informed us that while this continuous monitoring equipment, presently installed on Calvert Cliffs, is not capable of detecting the above activity release rates required by the Technical Specification, it had become aware that it had been operating in violation of this Specification and had informed the AEC of this situation. By letter dated December 21, 1974, Baltimore Gas and Electric Company requested that its Operating License No. DPR-53 for Calvert Cliffs Unit 1 be amended to modify Technical Specification 4.2 to delete the Table 4.2-1, item 12a, footnote 12 requirement that the continuous main vent monitor "be capable of measuring release rates of noble gases and particulates of $10 \mu\text{Ci}/\text{sec}$ and $10^{-5} \mu\text{Ci}/\text{sec}$, respectively".

The plant vent continuous monitoring equipment presently installed on Unit No. 1 is state-of-the-art equipment with measurement sensitivities for noble gases and particulates of $3 \times 10^{-6} \mu\text{Ci}/\text{cc}$ and $4 \times 10^{-10} \mu\text{Ci}/\text{cc}$ respectively. However, due to the very large air flow through this vent (136,500 cfm as listed in Table 9-18 of the FSAR), the monitors are not capable of detecting the release rates specified in footnote 12 to Table 4.2-1 of the present Technical Specifications.

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Baltimore Gas and Electric Co. - 2 -

The high setpoint ($6.5 \times 10^{-4} \mu\text{Ci/cc}$) for the main vent gaseous monitor corresponds to the maximum concentration permissible in the plant vent to ensure that the site boundary dose rate is less than 2 mrem/hr during periods when the value for X/Q is equal to the 5 percent level value of $1.3 \times 10^{-4} \text{ sec/m}^3$. The low setpoint ($1.5 \times 10^{-5} \mu\text{Ci/cc}$) has been established so that the continuous release of noble gases at radioactivity levels equivalent to the setpoint will not expose a hypothetical individual, continuously present in the open on any location on the site boundary, to an annual dose in excess of 10 mrem. Since the main vent radiogas monitor can measure $3 \times 10^{-6} \mu\text{Ci/cc}$, the hypothetical site boundary individual could not receive an annual dose in excess of 2 mrem without being detected by the monitor. The inability of the main vent radiogas monitor to measure a release rate of $10 \mu\text{Ci/sec}$ will not present any undue risk to either the general public or to operating personnel, since the equipment can measure radioactivity releases well below those resulting in design basis doses (10 mrem/yr). On this basis we conclude that deletion of the Technical Specification Table 4.2-1 requirement that the continuous main vent monitor be capable of measuring a noble gas release rate of $10 \mu\text{Ci/sec}$ does not involve a significant safety hazard consideration.

The main vent particulate monitor is not able to distinguish between particulate radioactivity of plant origin at $10^{-5} \mu\text{Ci/sec}$ and particulate radioactivity from the natural environment. An evaluation of plant effluents (PSAR Question 11.10, Table 11.10.1-1) indicates that the total release of radionuclides in particulate form, excluding iodines, will be far below the design basis limits of proposed 10 CFR 50, Appendix I; however, this extremely low level particulate radioactivity cannot be monitored by existing continuous air monitoring equipment.

The main vent particulate monitor setpoint ($1 \times 10^{-9} \mu\text{Ci/cc}$) is set sufficiently above absolute minimum sensitivity ($4 \times 10^{-10} \mu\text{Ci/cc}$) so that spurious alarms resulting from statistical and natural background variations are avoided. Continuous release of radioactive particulates at the monitor setpoint would result in an annual average site boundary concentration of particulates with half-life greater than eight hours of less than 0.1% of that listed in 10 CFR 20 for unidentified particulate matter. It is expected that the continuous release of radioactive particulates at the monitor setpoint would result in an exposure of less than 0.1 mrem/yr to an individual continuously present at the minimum site boundary. This dose from particulates other than iodines considers only the dose resulting from inhalation and does not consider environmental reconcentration mechanisms via the food pathway.

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As required by the Technical Specifications, an iodine collection cartridge with a prefilter is operated in parallel with the main vent monitor to collect particulate and iodine samples for laboratory analysis. These samples are normally analyzed on a weekly basis. Using the more sensitive laboratory equipment, release rates of 10^{-5} $\mu\text{Ci}/\text{sec}$ for particulates and/or iodine can be measured. Therefore, release rates approaching 10^{-5} $\mu\text{Ci}/\text{sec}$ would not exist for more than one week without being detected and measured via laboratory analysis. Additionally, the Technical Specifications require that should the iodine or particulate release rate exceed the release rate given in Specification 3.9.B.3, the particulate and iodine samples shall be analyzed at least five days per week until a steady release level has been established.

The inability of the main vent particulate monitor to measure a release rate of 10^{-5} $\mu\text{Ci}/\text{sec}$ will not present any undue risk to either the general public or to operating personnel since the existing monitoring equipment, supplemented by laboratory analysis, provides reasonable assurance that design objectives for particulates (per 10 CFR 50, proposed Appendix I) will not be exceeded. On this basis we conclude that deletion of the Technical Specification Table 4.2-1 requirement that the continuous main vent monitor be capable of measuring a particulate release rate of 10^{-5} $\mu\text{Ci}/\text{sec}$ does not involve a significant safety hazard consideration.

We are hereby amending License No. DPR-53 to change footnote 12 of Table 4.2-1 of Technical Specification 4.2 to delete the requirement that the monitor be capable of measuring release rates of noble gases and particulates of 10 $\mu\text{Ci}/\text{sec}$ and 10^{-5} $\mu\text{Ci}/\text{sec}$, respectively, to require that the Unit 2 main vent monitors be operable prior to operation of Unit 1 at power levels in excess of 1% of rated power, and to require monitoring of the Unit 2 vent by sample analysis during the interim period.

The amended Technical Specification is presented as Change No. 6 to the Technical Specification and is attached to the enclosed Amendment No. 7 to the Calvert Cliffs Unit 1 Operating License. A copy of the Federal Register Notice of this Amendment is also enclosed.

Sincerely,

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R. C. DeYoung, Assistant Director
for Light Water Reactors Group 1
Directorate of Licensing

OFFICE						
	Enclosures:	LWR 1-1	L:ETSB	OGC	L:AD	
SURNAME	1. Amendment No. 7 to DPR-53	GRivenbark	PGStoddart	STRipiron	RCDeYoung	1
	2. Federal Register Notice	OParrish				
DATE		12/23/74	12/27/74	12/23/74	12/27/74	

Handwritten notes and signatures on the left margin, including a signature at the top and various scribbles and initials below.

Baltimore Gas and Electric Co. - 4 -

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 20023

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

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

OFFICE >						
SURNAME >						
DATE >						

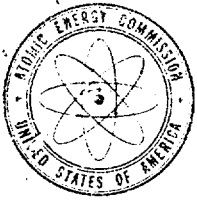
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cc: Mr. Sheldon Myers
ATTN: Mr. Jack Anderson
Office of Federal Activities
EPA, Room W-541, Waterside Mall
401 M Street, S. W.
Washington, D. C. 20460

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

OFFICE						
SURNAME						
DATE						



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

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 7
License No. DPR-53

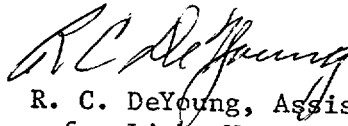
1. The Atomic Energy Commission (the Commission) having found that:
 - A. The application for amendment by Baltimore Gas and Electric Company (the licensee) dated December 21, 1974, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended, and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. Prior public notice of this amendment is not required since the amendment does not involve a significant hazards consideration.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility License No. DPR-53 is hereby amended to read as follows:

"(2) Technical Specifications

The Technical Specifications contained in Appendix A and B, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 6."

3. This license amendment is effective as of the date of its issuance.

FOR THE ATOMIC ENERGY COMMISSION



R. C. DeYoung, Assistant Director
for Light Water Reactors Group 1
Directorate of Licensing

Date of Issuance: December 23, 1974

ATTACHMENT TO LICENSE AMENDMENT NO. 7
CHANGE NO. 6 TO THE TECHNICAL SPECIFICATIONS
FACILITY OPERATING LICENSE NO. DPR-53
BALTIMORE GAS AND ELECTRIC COMPANY
CALVERT CLIFFS UNIT 1
DOCKET NO. 50-317

Footnote 12 of Table 4.2.1 of Technical Specification 4.2 is modified to read as follows:

(12) Gaseous effluents from each environmental release point shall be monitored and recorded to enable release rates of gross radioactivity to be determined on an hourly basis. Whenever either the radiogas or the particulate monitor is inoperable appropriate grab samples shall be taken and analyzed at least 5 days per week. The release points shall include the main vent for Unit 2. The monitors for this vent shall be operable prior to operation of Unit 1 at power levels in excess of 1% of rated power; until such time, appropriate grab samples shall be taken and analyzed at least 5 days per week in order to monitor the effluent from the Unit 2 main vent.

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-317

BALTIMORE GAS AND ELECTRIC COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO

FACILITY OPERATING LICENSE

Notice is hereby given that the U. S. Atomic Energy Commission (the Commission) has issued Amendment No. 7 to Facility Operating License No. DPR-53 issued to Baltimore Gas and Electric Company which revised Technical Specifications for operation of the Calvert Cliffs Nuclear Power Plant, Unit 1, located in Calvert County, Maryland. The amendment is effective as of its date of issuance.

The amendment modifies the Specifications to delete the requirement that the continuous main vent monitor be capable of measuring release rates of noble gases and particulates of $10 \mu\text{Ci}/\text{sec}$ and $10^{-5} \mu\text{Ci}/\text{sec}$ respectively.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment.

For further details with respect to this action, see (1) the application for amendment dated December 21, 1974, (2) Amendment No. 7 to License No. DPR-53, with any attachments, and (3) the related safety evaluation contained in the Commission's letter to Baltimore Gas and Electric Company. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C., and at the Calvert County Library, Prince Frederick, Maryland 20678.

A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Atomic Energy Commission, Washington, D. C. 20545, Attention: Deputy Director for Reactor Projects, Directorate of Licensing- Regulation.

Dated at Bethesda, Maryland this 23rd day of December 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