



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

October 28, 1994

Docket File

Mr. Robert E. Denton
Vice President - Nuclear Energy
Baltimore Gas & Electric Company
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, Maryland 20657

SUBJECT: TEMPORARY EXEMPTION FROM THE REQUIREMENTS OF 10 CFR PART 50, APPENDIX A, GENERAL DESIGN CRITERION 2, "DESIGN BASES FOR PROTECTION AGAINST NATURAL PHENOMENA," CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1 (TAC NO. M90170) AND UNIT NO. 2 (M90171)

Dear Mr. Denton:

The Commission has issued the enclosed temporary exemption from the requirements of 10 CFR Part 50, Appendix A, General Design Criterion-2 (GDC-2), for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2. Baltimore Gas and Electric Company (BG&E) plans to upgrade the Unit 2 emergency diesel generator (EDG) No. 21 during the Unit 2 refueling outage (RFO-10) which will commence on March 17, 1995, and is scheduled to be completed in late May 1995.

The EDG upgrade requires that a steel missile door be removed about 4 times during the outage. Each removal is expected to be for a period of about 24 hours which will result in the missile protection door being removed for a total time of approximately 100 hours during the scheduled 65-day RFO-10. As a result, the normal design basis protection against natural phenomena afforded by the steel missile door will be temporarily removed, from not only the out-of-service EDG, but also from the support systems of the other operable EDGs required for the operation of Unit 1 and the shutdown or refueling of Unit 2. Therefore, pursuant to 10 CFR 50.12(a), BG&E requested a temporary exemption from the requirements of 10 CFR Part 50, Appendix A,

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October 28, 1994

GDC-2, for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, to allow temporary removal of the steel missile door which is necessary for the upgrading of the Unit 2 EDG No. 21 during RFO-10.

A safety evaluation supporting the above exemption is enclosed. Also, a copy of the exemption is being forwarded to the Office of Federal Register for publication.

Sincerely,



Ledyard B. Marsh, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-317
and 50-318

Enclosures: 1. Exemption
2. Safety Evaluation

cc w/encls: See next page

Mr. Robert E. Denton
Calvert Cliffs Nuclear Power Plant

Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 and 2

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UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of

BALTIMORE GAS AND ELECTRIC
COMPANY

(Calvert Cliffs Nuclear Power
Plant, Unit Nos. 1 and 2)

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Docket Nos. 50-317
and 50-318

EXEMPTION

I.

The Baltimore Gas and Electric Company (BG&E/licensee) is the holder of Facility Operating License Nos. DPR-53 and DPR-69, which authorizes operation of the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 (the facilities), respectively. The license provides, among other things, that the facilities are subject to all rules, regulations and Orders of the U.S. Nuclear Regulatory Commission (the Commission) now or hereafter in effect.

The facilities are pressurized water reactors located at the licensee's site in Calvert County, Maryland.

The licensee is implementing upgrades to the existing safety-related emergency diesel generators (EDGs) to increase their load capacity. The first part of this effort was to upgrade Unit 1 EDG No. 11 during the previous Unit 1 refueling outage (RFO-11). The second part of the EDG upgrade project is to upgrade Unit 2 EDG No. 21 during the upcoming Unit 2 refueling outage (RFO-10). RFO-10 is scheduled to commence on March 17, 1995, and to be completed in late May 1995. To support this second portion of the upgrades, the licensee has identified one temporary exemption required at this time. The exemption is specified below.

II.

The Code of Federal Regulations at 10 CFR Part 50, Appendix A, General Criterion-2 (GDC-2), requires that: Structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena such as ... tornadoes, ... without loss of capability to perform their safety functions.

The licensee has requested the temporary exemption from GDC-2 because of the planned upgrade of the Unit 2 EDG No. 21. The effort will require temporary removal of a steel missile door which will expose portions of the support systems of EDG Nos. 11 and 12. These EDGs are required to be operable to support the operation of Unit No. 1 and the shutdown or refueling of Unit No. 2. These EDGs require protection from the potential effects of postulated missiles generated by natural phenomena. The licensee indicates that the steel missile door will be removed 4 times during RFO-10. The licensee estimates that each of the missile door removals will last for about 24 hours which will result in a total removal time of about 100 hours during the scheduled 65 day outage.

The licensee is providing compensatory action to assure the safe operation of Unit No. 1 and refueling of Unit No. 2 for the short periods of time during which the steel missile door will be removed. To encompass all severe weather conditions as defined in the plant site Emergency Response Plan Implementing Procedures 3.0, Attachment 17, a concerted effort will be made to reinstall the missile door if a tornado or hurricane watch is issued or if sustained winds are predicted to be greater than 50 miles/hour at the site. The only factor which would impede the reinstallation of the missile door

would be to ensure the safety of the individuals performing the reinstallation.

Considering the existing design features and compensatory measure proposed by the licensee, the likelihood of damage to the exposed EDG support systems from postulated missiles generated by natural phenomena is minimal for the short periods of time that the protective door will be removed. Also, based on the compensatory measure provided, reasonable assurance exists that the ability to reinstall the missile door will be maintained prior to any severe weather which could result in airborne missiles. Therefore, there is reasonable assurance that the proposed GDC-2 exemption will present no undue risk to public health and safety.

III.

The Commission has determined, pursuant to 10 CFR 50.12(a), that special circumstances as set forth in 10 CFR 50.12(a)(2)(v) exist. The exemption would provide only temporary relief from the applicable regulation (GDC-2). The exemption is requested for a specific time period after which the facility would again be in conformance with all the requirements of GDC-2. The licensee has made good faith efforts in considering alternatives to the exemption request and has concluded that the EDG upgrades can only be conducted without the subject exemption during a period when both units are shut down.

Based on the above and on review of the licensee's submittal, as summarized in the Safety Evaluation, dated October 28, 1994, the NRC staff concludes that the likelihood of unacceptable damage to the exposed portions

of the operable EDGs support systems due to weather-induced missiles during the short duration exposures occurring in the exemption period is low.

Based on the low probability of unacceptable events, coupled with the compensatory measure which the licensee has committed to, the NRC staff finds the proposed exemption from GDC-2 to be acceptable.

IV.

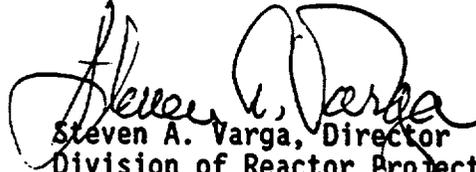
Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, the subject exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. The Commission further determines that special circumstances, as provided in 10 CFR 50.12(a)(2)(v), are present justifying the exemption; namely, that the exemption would provide only temporary relief from the applicable regulations and that the licensee has made good faith efforts to comply with the regulations.

Therefore, the Commission hereby approves the following exemption: Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, may operate without conforming to the requirements of GDC-2 as they apply to the exposed portions of the support systems for EDG Nos. 11 and 12 providing that the compensatory measure as described herein is in place for the period of the exemption.

Pursuant to 10 CFR 51.32, the Commission has determined that granting the above exemption will have no significant impact on the quality of the human environment (October 27, 1994, 58 FR 54013).

The subject Unit No. 2 EDG No. 21 upgrade GDC-2 exemption is effective from its date of issuance through May 31, 1995.

FOR THE NUCLEAR REGULATORY COMMISSION

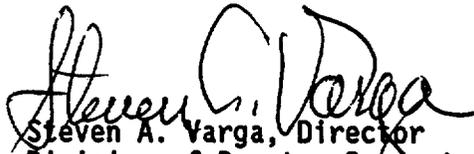
A handwritten signature in black ink, appearing to read "Steven A. Varga". The signature is fluid and cursive, with the first name being particularly prominent.

Steven A. Varga, Director
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 28th day of October 1994

The subject Unit No. 2 EDG No. 21 upgrade GDC-2 exemption is effective from its date of issuance through May 31, 1995.

FOR THE NUCLEAR REGULATORY COMMISSION



Steven A. Varga, Director
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 28th day of October 1994



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
EMERGENCY DIESEL GENERATORS QUALIFICATION REPORT
BALTIMORE GAS AND ELECTRIC COMPANY
CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 2
DOCKET NO. 50.317

1.0 INTRODUCTION

On July 21, 1988, Part 50 of Title 10 of the Code of Federal Regulations was amended to include a new Section 50.63, entitled, "Loss of All Alternating Current Power," referred to as the station blackout (SBO) rule. The SBO rule requires that each light-water cooled nuclear power plant be able to withstand and recover from an SBO of specified duration. The SBO rule also requires that information defined in the rule be provided to the staff for review.

BG&E responded to the requirements of the rule and the staff approved its response by letter dated February 12, 1992. The staff's approval included the addition of two new safety-related Class-1E emergency diesel generators (EDGs).

BG&E submitted a revised response to the SBO Rule on July 7, 1993. One of the initial commitments approved by the NRC staff in its safety evaluation (SE) was to install two safety-related EDGs, as noted above, which would have resulted in a total of five safety-related EDGs at the site. The revised response changed that commitment to add one safety-related and one nonsafety-related EDG. The nonsafety-related EDG will be utilized as an alternate ac power source during SBO conditions. The final configuration will include two dedicated safety-related EDGs per unit. The revised response was approved by SE dated September 22, 1993.

The three existing safety-related EDGs are being modified to increase their rated capacity from 2500 KW to 3000 KW which will enhance the overall reliability of the onsite electrical power distribution system.

By letter dated August 4, 1994, BG&E requested a temporary exemption to GDC-2 to perform the initial upgrading on the Unit 2 EDG No. 21. The exemption is necessary because a steel missile door will have to be periodically removed in order for the work to be performed at various stages of the upgrade. During the periods of time when the missile protection door is removed, portions of support systems for the remaining EDGs (Nos. 11 and 12) will be exposed to postulated missiles which could be generated by natural phenomena. The EDGs

Enclosure

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are required to be operable to support the operation of Unit 1 and the shutdown or refueling of Unit 2. The requested exemption is for the duration of the Unit 2 refueling outage (RFO-10) which is scheduled from March 17, 1995, to late May 1995. By letter dated February 23, 1994, a similar temporary exemption was issued by the Commission to support the upgrade of the Unit 1 EDG No. 11.

2.0 EVALUATION

While producing some increase in missile interaction risk during Unit No. 1 operation and the shutdown or refueling of Unit No. 2, it will be minimal due to the short periods of time that the missile door will be removed. The steel missile door will be required to be removed about four times during the outage. The licensee estimates that each of the removals will last for about 24 hours, which will result in a total removal time of about 100 hours during the Unit 2 scheduled 65 day RFO-10. Thus, the likelihood of tornado-generated or other high wind-generated missile damage which could affect the exposed portions of the support systems for the operable EDGs is low.

Even though the added risk is small, BG&E is providing compensatory action to assure the safe operation of Unit No. 2 and safe shutdown or refueling of Unit No. 1 during the short periods of time when the missile door will be removed. A concerted effort will be made to reinstall the missile door if a tornado watch or hurricane watch is issued or if sustained winds are predicted to be greater than 50 miles/hour at the site in accordance with the plant site Emergency Response Implementation Procedure 3.0, Attachment 17. This will not only encompass tornado conditions, but other severe weather conditions. The only factor which would impede the reinstallation of the missile door would be to ensure the safety of the individuals performing the reinstallation. However, based on previous responses to severe weather conditions, the NRC staff has noted that BG&E has performed the necessary preparatory actions for the impending weather prior to conditions which could compromise personnel safety.

The staff has reviewed the licensee's proposed exemption to GDC-2, including the compensatory measure, and concluded that the likelihood of missile damage to the operable EDGs portions of the support systems which would not be protected during short periods of time is small during the period for which the requested exemption would apply.

3.0 CONCLUSION

Based on its review, the staff has concluded that the licensee's proposed temporary exemption to GDC-2 should be granted. This conclusion is based on the low probability of missile generation during the short period of time for which the exemption would apply and the compensatory measures that will be in place.

Principal Contributor: D. McDonald

Date: October 28, 1994

GDC-2, for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, to allow temporary removal of the steel missile door which is necessary for the upgrading of the Unit 2 EDG No. 21 during RFO-10.

A safety evaluation supporting the above exemption is enclosed. Also, a copy of the exemption is being forwarded to the Office of Federal Register for publication.

Sincerely,

Original signed by:

Ledyard B. Marsh, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-317
and 50-318

Enclosures: 1. Exemption
2. Safety Evaluation

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