



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

February 23, 1994

Docket No. 50-318

Mr. Robert. E. Denton
Vice President - Nuclear Energy
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, Maryland 20657-4702

Dear Mr. Denton:

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. 2 (TAC NO. M88454)

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 No. 2. Baltimore Gas and Electric Company (BG&E) plans to upgrade the Unit 1 emergency diesel generator (EDG) No. 11 during the Unit 1 refueling outage (RFO-11) which commenced on February 8, 1994, and is scheduled to be completed in early May 1994.

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 89-day RFO-11. 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 for Unit 2. Therefore, pursuant to 10 CFR 50.12(a), BG&E has requested a temporary exemption from the requirements of 10 CFR Part 50, Appendix A, GDC-2, for the Calvert Cliffs Nuclear Power Plant, Unit No. 2, during the upgrading of the Unit 1 EDG No. 11. BG&E has requested that the GDC-2 exemption period be during RFO-11.

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Mr. Robert E. Denton

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February 23, 1994

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

Sincerely,



Robert A. Capra, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Exemption
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. Robert E. Denton
Baltimore Gas & Electric Company

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) Docket No. 50-318
COMPANY)
(Calvert Cliffs Nuclear Power)
Plant, Unit No. 2))

EXEMPTION

I.

The Baltimore Gas and Electric Company (BG&E/licensee) is the holder of Facility Operating License No. DPR-69, which authorizes operation of the Calvert Cliffs Nuclear Power Plant, Unit No. 2 (the facility). The license provides, among other things, that the facility is subject to all rules, regulations and Orders of the U.S. Nuclear Regulatory Commission (the Commission) now or hereafter in effect.

The facility is a pressurized water reactor 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 will be to upgrade Unit 1 EDG No. 11 during the upcoming Unit 1 refueling outage (RFO-11). This outage commenced on February 8, 1994, and is scheduled to be completed in early May 1994. To support this initial 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 1 EDG No. 11. The effort will require temporary removal of a steel missile door which will expose portions of the support systems of EDG Nos. 12 and 21. These EDGs are required to be operable to support the operation of Unit No. 2 and 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-11. 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 89 day outage.

The licensee is providing compensatory action to assure the safe operation 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 18, 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 35 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 February , 1994, the NRC staff concludes that the likelihood of unacceptable damage to the exposed portions of the Unit No. 2 EDG 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 No. 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. 12 and 21 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 (February 17, 1994, 59 FR 8033).

The subject Unit No. 1 EDG No. 11 upgrade GDC-2 exemption is effective from its date of issuance through May 15, 1994.

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 23rd day of February 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. 50-3178

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 December 17, 1993, as supplemented on February 4, 1994, BG&E requested a temporary exemption to GDC-2 to perform the initial upgrading on the Unit 1 EDG No. 11. 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. 12 and 21) will be exposed to postulated missiles which could be generated by natural phenomena. The EDGs are required to be operable to support the operation of Unit 2. The requested exemption is for the duration of the Unit 1 refueling outage (RFO-11) which is scheduled from

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February 8, 1994, to early May 1994. Unit 1 will be defueled and will not require an operable EDG during the outage.

2.0 EVALUATION

While producing some increase in missile interaction risk during Unit No. 2 operation, 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 scheduled 89 day RFO-11. 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 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 35 miles/hour at the site in accordance with the plant site Emergency Response Implementation Procedure 3.0, Attachment 18. 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 Unit No. 2 EDG 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 the 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: February 23, 1994

Mr. Robert E. Denton

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February 23, 1994

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

Sincerely,

Original signed by:

Robert A. Capra, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:

- 1. Exemption
- 2. Safety Evaluation

cc w/enclosures:
See next page

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