



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
October 21, 1991

Docket Nos. 50-317
and 50-318

Mr. G. C. Creel
Vice President - Nuclear Energy
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
MD Rts. 2 & 4
P. O. Box 1535
Lusby, Maryland 20657

Dear Mr. Creel:

SUBJECT: ISSUANCE OF AMENDMENTS FOR CALVERT CLIFFS NUCLEAR POWER PLANT,
UNIT NO. 1 (TAC NO.M81402) AND UNIT NO. 2 (TAC NO.M81403)

The Commission has issued the enclosed Amendment No.163 to Facility Operating License No. DPR-53 and Amendment No.143 to Facility Operating License No. DPR-69 for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications in response to your application transmitted by letter dated September 5, 1991, as supplemented on September 26, 1991.

The amendments allow the removal of the dedicated Class 1E emergency diesel generator (EDG) from a shutdown unit and allow its realignment to the operating unit for a period of up to 7 days. This is necessary to meet the technical specification (TS) requirement that two Class 1E emergency power sources be available for an operating unit and will allow the removal of the shared Class 1E No. 12 EDG to permit the performance of its required inspections and maintenance.

Specifically, the changes modify TS Sections 3.8.1.2, "ELECTRICAL POWER SYSTEMS - SHUTDOWN", and 3.8.2.2, "A.C. DISTRIBUTION - SHUTDOWN", for both units. The TS changes provide for a special test exception from the present requirement for an operable Class 1E EDG on the shutdown unit (Modes 5 and 6). The change also specifies the compensatory measures and actions required to be taken for the shutdown unit, including the availability of a temporary diesel generator, during the unavailability of a dedicated Class 1E EDG. The TS Bases are also modified to support the changes.

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Mr. G. C. Creel

- 2 -

October 21, 1991

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,



Daniel G. McDonald, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 163 to DPR-53
2. Amendment No. 143 to DPR-69
3. Safety Evaluation

cc w/enclosures:
See next page

Mr. G. C. Creel
Baltimore Gas & Electric Company

Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 and 2

cc:

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Calvert County Board of
Commissioners
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Prince Frederick, Maryland 20678

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

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 163
License No. DPR-53

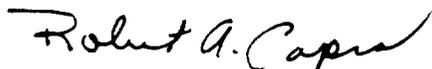
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Baltimore Gas and Electric Company (the licensee) dated September 5, 1991, as supplemented on September 26, 1991, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - 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. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-53 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 163, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 21, 1991



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

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-318

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 143
License No. DPR-69

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Baltimore Gas and Electric Company (the licensee) dated September 5, 1991, as supplemented on September 26, 1991, 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;
 - 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. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.2 of Facility Operating License No. DPR-69 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 143, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 21, 1991

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 163 FACILITY OPERATING LICENSE NO. DPR-53

AMENDMENT NO. 143 FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NOS. 50-317 AND 50-318

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
3/4 8-5	3/4 8-5
-	3/4 8-5a
3/4 8-7	3/4 8-7
-	3/4 8-7a
B 3/4 8-1	B 3/4 8-1

ELECTRICAL POWER SYSTEMS

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and
- b. One diesel generator with:
 1. A day fuel tank containing a minimum volume of 375 gallons of fuel,
 2. A fuel storage system containing a minimum volume of 18,250 gallons of fuel, and
 3. A fuel transfer pump.

APPLICABILITY: MODES 5 and 6.

ACTION:

- a. With less than the above minimum required A.C. electrical power sources OPERABLE for reasons other than the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 diesel generator:
 1. Immediately* suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel, and
 2. Immediately initiate corrective actions to restore the minimum A.C. electrical power sources to OPERABLE status, and
 3. Establish containment penetration closure as identified in Specification 3.9.4 within 8 hours.

* Performance of Action a. shall not preclude completion of actions to establish a safe conservative position.

ELECTRICAL POWER SYSTEMS

SHUTDOWN

LIMITING CONDITION FOR OPERATION (continued)

- b. With less than the above minimum required A.C. electrical power sources **OPERABLE** for the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 emergency diesel generator:**
1. Verify either two 500 kV offsite power circuits or a 500 kV offsite power circuit and the 69 kV SMECO offsite power circuit are available and capable of being used. This availability shall be verified prior to removing the **OPERABLE** emergency diesel generators and once per shift thereafter,
 2. Suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel,
 3. Have established containment penetration closure as identified in Specification 3.9.4,
 4. An emergency diesel generator shall be **OPERABLE** and aligned to provide power to the emergency busses within seven days.
 5. Within two weeks prior to the planned unavailability of an **OPERABLE** emergency diesel generator, a temporary diesel generator shall be demonstrated available.
 6. A temporary diesel generator shall be demonstrated available by starting it at least once per 72 hours.
 7. If **ACTIONS** b) 1 through b) 6 are not met, restore compliance with the **ACTIONS** within 4 hours or restore an **OPERABLE** emergency diesel generator within the next 4 hours.

SURVEILLANCE REQUIREMENTS

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated **OPERABLE** by the performance of each of the Surveillance Requirements of 4.8.1.1.1 and 4.8.1.1.2 except for requirement 4.8.1.1.2a.5.

** The provisions of Action b) are no longer applicable following the installation of two additional emergency diesel generators.

ELECTRICAL POWER SYSTEMS

A.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.2 As a minimum, the following A.C. electrical busses shall be **OPERABLE** and energized from sources of power other than a diesel generator but aligned to an **OPERABLE** diesel generator:

- 1 - 4160 volt Emergency Bus
- 1 - 480 volt Emergency Bus
- 2 - 120 volt A.C. Vital Busses

APPLICABILITY: **MODES 5 and 6**

ACTION:

- a. With less than the above complement of A.C. busses **OPERABLE** and energized for reasons other than the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 diesel generator:
 - 1. Immediately* suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel, until the minimum required A.C. busses are restored to **OPERABLE** and energized status, and
 - 2. Immediately initiate corrective actions to restore the minimum A.C. electrical busses to **OPERABLE** and energized status, and
 - 3. Establish containment penetration closure as identified in Specification 3.9.4 within 8 hours.

* Performance of Action a. shall not preclude completion of actions to establish a safe conservative position.

ELECTRICAL POWER SYSTEMS

A.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION (continued)

- b. With less than the above minimum required A.C. electrical power sources **OPERABLE** for the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 emergency diesel generator:**
1. Verify either two 500 kV offsite power circuits or a 500 kV offsite power circuit and the 69 kV SMECO offsite power circuit are available and capable of being used. This availability shall be verified prior to removing the **OPERABLE** emergency diesel generators and once per shift thereafter,
 2. Suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel,
 3. Have established containment penetration closure as identified in Specification 3.9.4,
 4. An emergency diesel generator shall be **OPERABLE** and aligned to provide power to the emergency busses within seven days.
 5. Within two weeks prior to the planned unavailability of an **OPERABLE** emergency diesel generator, a temporary diesel generator shall be demonstrated available.
 6. A temporary diesel generator shall be demonstrated available by starting it at least once per 72 hours.
 7. If **ACTIONS** b) 1 through b) 6 are not met, restore compliance with the **ACTIONS** within 4 hours or restore an **OPERABLE** emergency diesel generator within the next 4 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.2 The specified A.C. busses shall be determined **OPERABLE** and energized from A.C. sources other than the diesel generators at least once per 7 days by verifying correct breaker alignment and indicated power availability.

** The provisions of Action b) are no longer applicable following the installation of two additional emergency diesel generators.

3/4.8 ELECTRICAL POWER SYSTEMS

BASES

The **OPERABILITY** of the A.C. and D.C. power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for 1) the safe shutdown of the facility and 2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criteria 17 of Appendix "A" to 10 CFR 50.

The **ACTION** requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The **OPERABILITY** of the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least one of each of the onsite A.C. and D.C. power sources and associated distribution systems **OPERABLE** during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source.

The **OPERABILITY** of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

The **ACTION** requirements for LCO 3.8.1.2 and 3.8.2.2 are associated with the performance of Surveillance 4.8.1.1.2.d.1 on No. 12 emergency diesel generator with Unit 1 shutdown and Unit 2 at power. This requires that No. 11 emergency diesel generator be aligned to Unit 2. The actions specified reduce the probability of a loss of offsite power by requiring the availability of two offsite power circuits. A temporary diesel is available which has sufficient capacity to carry all required shutdown loads. This **ACTION** only applies to the performance of Surveillance 4.8.1.1.2.d.1 on No. 12 emergency diesel generator. Performance of Surveillance 4.8.1.1.2.d.1 on No. 11 emergency diesel generator would not violate the LCOs for 3.8.1.2 and 3.8.2.2 because the No. 12 emergency diesel generator may be aligned to either unit.

ELECTRICAL POWER SYSTEMS

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and
- b. One diesel generator with:
 1. A day fuel tank containing a minimum volume of 375 gallons of fuel,
 2. A fuel storage system containing a minimum volume of 18,250 gallons of fuel, and
 3. A fuel transfer pump.

APPLICABILITY: MODES 5 and 6.

ACTION:

- a. With less than the above minimum required A.C. electrical power sources OPERABLE for reasons other than the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 diesel generator:
 1. Immediately* suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel, and
 2. Immediately initiate corrective actions to restore the minimum A.C. electrical power sources to OPERABLE status, and
 3. Establish containment penetration closure as identified in Specification 3.9.4 within 8 hours.

* Performance of Action a. shall not preclude completion of actions to establish a safe conservative position.

ELECTRICAL POWER SYSTEMS

SHUTDOWN

LIMITING CONDITION FOR OPERATION (continued)

- b. With less than the above minimum required A.C. electrical power sources **OPERABLE** for the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 emergency diesel generator:**
1. Verify either two 500 kV offsite power circuits or a 500 kV offsite power circuit and the 69 kV SMECO offsite power circuit are available and capable of being used. This availability shall be verified prior to removing the **OPERABLE** emergency diesel generators and once per shift thereafter,
 2. Suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel,
 3. Have established containment penetration closure as identified in Specification 3.9.4,
 4. An emergency diesel generator shall be **OPERABLE** and aligned to provide power to the emergency busses within seven days.
 5. Within two weeks prior to the planned unavailability of an **OPERABLE** emergency diesel generator, a temporary diesel generator shall be demonstrated available.
 6. A temporary diesel generator shall be demonstrated available by starting it at least once per 72 hours.
 7. If **ACTIONS** b) 1 through b) 6 are not met, restore compliance with the **ACTIONS** within 4 hours or restore an **OPERABLE** emergency diesel generator within the next 4 hours.

SURVEILLANCE REQUIREMENTS

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated **OPERABLE** by the performance of each of the Surveillance Requirements of 4.8.1.1.1 and 4.8.1.1.2 except for requirement 4.8.1.1.2a.5.

** The provisions of Action b) are no longer applicable following the installation of two additional emergency diesel generators.

ELECTRICAL POWER SYSTEMS

A.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.2 As a minimum, the following A.C. electrical busses shall be **OPERABLE** and energized from sources of power other than a diesel generator but aligned to an **OPERABLE** diesel generator:

- 1 - 4160 volt Emergency Bus
- 1 - 480 volt Emergency Bus
- 2 - 120 volt A.C. Vital Busses

APPLICABILITY: **MODES 5 and 6**

ACTION:

- a. With less that the above complement of A.C. busses **OPERABLE** and energized for reasons other than the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 diesel generator:
 - 1. Immediately* suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel, until the minimum required A.C. busses are restored to **OPERABLE** and energized status, and
 - 2. Immediately initiate corrective actions to restore the minimum A.C. electrical busses to **OPERABLE** and energized status, and
 - 3. Establish containment penetration closure as identified in Specification 3.9.4 within 8 hours.

* Performance of Action a. shall not preclude completion of actions to establish a safe conservative position.

ELECTRICAL POWER SYSTEMS

A.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION (continued)

- b. With less than the above minimum required A.C. electrical power sources **OPERABLE** for the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 emergency diesel generator:**
1. Verify either two 500 kV offsite power circuits or a 500 kV offsite power circuit and the 69 kV SMECO offsite power circuit are available and capable of being used. This availability shall be verified prior to removing the **OPERABLE** emergency diesel generators and once per shift thereafter,
 2. Suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel,
 3. Have established containment penetration closure as identified in Specification 3.9.4,
 4. An emergency diesel generator shall be **OPERABLE** and aligned to provide power to the emergency busses within seven days.
 5. Within two weeks prior to the planned unavailability of an **OPERABLE** emergency diesel generator, a temporary diesel generator shall be demonstrated available.
 6. A temporary diesel generator shall be demonstrated available by starting it at least once per 72 hours.
 7. If **ACTIONS** b) 1 through b) 6 are not met, restore compliance with the **ACTIONS** within 4 hours or restore an **OPERABLE** emergency diesel generator within the next 4 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.2 The specified A.C. busses shall be determined **OPERABLE** and energized from A.C. sources other than the diesel generators at least once per 7 days by verifying correct breaker alignment and indicated power availability.

** The provisions of Action b) are no longer applicable following the installation of two additional emergency diesel generators.

3/4.8 ELECTRICAL POWER SYSTEMS

BASES

The **OPERABILITY** of the A.C. and D.C. power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for 1) the safe shutdown of the facility and 2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criteria 17 of Appendix "A" to 10 CFR 50.

The **ACTION** requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The **OPERABILITY** of the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least one of each of the onsite A.C. and D.C. power sources and associated distribution systems **OPERABLE** during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source.

The **OPERABILITY** of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

The **ACTION** requirements for LCO 3.8.1.2 and 3.8.2.2 are associated with the performance of Surveillance 4.8.1.1.2.d.1 on No. 12 emergency diesel generator with Unit 2 shutdown and Unit 1 at power. This requires that No. 21 emergency diesel generator be aligned to Unit 1. The actions specified reduce the probability of a loss of offsite power by requiring the availability of two offsite power circuits. A temporary diesel is available which has sufficient capacity to carry all required shutdown loads. This **ACTION** only applies to the performance of Surveillance 4.8.1.1.2.d.1 on No. 12 emergency diesel generator. Performance of Surveillance 4.8.1.1.2.d.1 on No. 21 emergency diesel generator would not violate the LCOs for 3.8.1.2 and 3.8.2.2 because the No. 12 emergency diesel generator may be aligned to either unit.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 163 TO FACILITY OPERATING LICENSE NO. DPR-53
AND AMENDMENT NO. 143 TO FACILITY OPERATING LICENSE NO. DPR-69
BALTIMORE GAS AND ELECTRIC COMPANY
CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-317 AND 50-318

1.0 INTRODUCTION

By letter dated September 5, 1991, as supplemented September 26, 1991, the Baltimore Gas and Electric Company (the licensee) submitted a request for changes to the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, Technical Specifications (TS). The requested changes would allow the removal of the dedicated Class 1E emergency diesel generator (EDG) from a shutdown unit and allows its realignment to the operating unit for a period of up to 7 days. This is necessary to meet the TS requirement that two Class 1E emergency power sources be available for an operating unit and will allow the removal of the shared Class 1E No. 12 EDG to permit the performance of its required inspections and maintenance.

Specifically, the changes modify TS Sections 3.8.1.2, "ELECTRICAL POWER SYSTEMS - SHUTDOWN", and 3.8.2.2, "A.C. DISTRIBUTION - SHUTDOWN", for both units. The TS changes provide for a special test exception from the present requirement for an operable Class 1E EDG on the shutdown unit (Modes 5 and 6). The change also specifies the compensatory measures and actions required to be taken for the shutdown unit, including the availability of a temporary diesel generator (TDG), during the unavailability of a dedicated Class 1E EDG. The TS Bases are also modified to support the changes. The September 26, 1991, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 BACKGROUND

By letter dated September 9, 1991, Baltimore Gas and Electric Company (the licensee) requested an Amendment to its Operating License for Calvert Cliffs, Units 1 and 2 to revise Technical Specifications (TS) 3.8.1.2 and 3.8.2.2 to allow the removal of the shared No. 12 Class 1E emergency diesel generator (EDG) for a period of up to 7 days. The licensee requested this amendment because recent Amendments to the Units 1 and 2 TS 3.8.1.2 and 3.8.2.2 issued on June 27, 1991, do not allow the No. 12 EDG to be removed from service for inspection for more than 72 hours without shutting down both nuclear units.

The licensee's maintenance policy now requires, based on vendor recommendations, that 7 days be allocated to conduct inspection and maintenance activities on the No. 12 EDG. The inspection and maintenance activities are required by Surveillance Requirement 4.8.1.1.2.d.1. In order to facilitate these activities on the No. 12 EDG and other required maintenance and surveillance testing, the licensee plans to shut down one unit before the current surveillance interval for the No. 12 EDG expires.

The operating unit requires two Class 1E emergency power sources to be operable. The licensee proposes to align the operable dedicated EDG from the shutdown unit to the operating unit during the time that the shared No. 12 EDG is out of service. Further, the Licensee proposes to take compensatory measures for the shutdown unit, which includes the use of a temporary diesel generator, to provide assurance that AC electrical power will be available, if needed, to power the necessary equipment to maintain the unit in the shutdown condition upon loss of the offsite power source.

Given the 18-month surveillance interval on the No. 12 EDG for Surveillance Requirement 4.8.1.1.2.d.1, the licensee anticipates that the No. 12 EDG will be taken out of service under the provisions of this amendment at least three times prior to the installation of the two additional EDGs currently scheduled for February 1995.

3.0 EVALUATION

The Calvert Cliffs Nuclear Power Plant emergency AC electrical power configuration consists of three Class 1E EDGs. The No. 11 EDG is normally aligned to Unit 1, the No. 21 EDG is normally aligned to Unit 2, and the No. 12 EDG, which is a shared or "swing" diesel generator, may be aligned to either unit. The design also allows for the normally dedicated diesel generator to be aligned to the other unit, i.e., the No. 11 EDG can be aligned to Unit 2 or the No. 21 EDG can be aligned to Unit 1. This arrangement allows the shared diesel generator (No. 12 EDG) to be removed from service while still meeting the operating requirements of TS 3.8.1.1 (two EDGs operable in Modes 1, 2, and 3) for one unit. The specific TS changes and our evaluation are:

Action Statements 3.8.1.2./3.8.2.2

The licensee proposes to change the subject action statements by segregating the existing text into new sections 3.8.1.2.a and 3.8.2.2.a which is to be applicable for periods other than the performance of Surveillance Requirement, 4.8.1.1.2.d.1 on EDG No. 12, Section b is added to Specifications 3.8.1.2 and 3.8.2.2 which specifies the actions to be taken for periods with less than the minimum required AC electrical power sources operable during the performance of Surveillance Requirement 4.8.1.1.2.d.1 on the No. 12 EDG. Specifically, for the proposed sections 3.8.1.2.b and 3.8.2.2.b the licensee proposes the following compensatory measures:

- a. Either two 500 KV offsite power circuits or one 500 KV power circuit and the 69 KV Southern Maryland Electric Cooperative (SMECO) offsite power circuit shall be available during the No. 12 EDG out of service period.

The staff agrees that the added availability of the two offsite power circuits provides greater assurance that AC power will be available to the shutdown unit reducing the possibility of a loss of offsite power event similar to the March 1990 Vogtle event. The actions by the licensee to prohibit planned maintenance on the 500 KV transmission lines and in the switchyard as well as verification every 12-hour shift of the availability of the 69 KV SMECO line represent prudent steps to maintain offsite power sources to the shutdown unit. Further, the licensee's Emergency Response Plan requires that certain precautionary actions be taken, up to and including the shutting down of the operating unit. On the approach of a severe storm these actions reduce the potential for weather-related events from adversely affecting safe operation of both units during the 7 day period.

- b. Core alterations, positive reactivity changes, movement of irradiated fuel, and movement of heavy loads over irradiated fuel will be suspended, and containment penetration closure will be established during the No. 12 EDG out of service period.

These measures are taken by the licensee to preclude a fuel handling accident and to reduce the possibility of a boron dilution accident which are the design basis accidents for a shutdown unit. The containment closure measure provides additional assurance that the consequences of an accident will be mitigated.

- c. A temporary diesel generator (TDG) capable of carrying the shutdown unit's AC electrical loads will be available.

The staff has reviewed the installation of the TDG to provide a backup onsite emergency source of power capable of supporting the necessary safety related loads during shutdown as cited in the amendment request. In addition, the staff has met with licensee representatives to obtain additional clarifying information in the following areas: (1) the details regarding the design, operation, and maintenance of the TDG; (2) the installation details of the TDG prior to and between refueling outage periods; (3) details of the 50.59 Safety Evaluation which indicates that no impairment has been created to existing safety-related equipment due to the use of the TDG, and (4) what effects this TS change has on EDG reliability and, therefore, overall plant safety. During the subject discussions, the licensee agreed to change the period to perform the load test on the TDG from 1 hour to 4 hours in order to be consistent with the testing methodology used to test the existing EDGs. In the above mentioned areas the staff believes that the licensee has taken appropriate action to prescribe measures to maintain a source of emergency onsite power should this source be necessary to maintain the shutdown unit in a safe condition.

Given the compensatory measures proposed to be taken by the licensee cited in Sections 3.8.1.2.b and 3.8.2.2.b, the estimated small reduction in overall diesel generator reliability and the short interval (7 days) the subject measures are expected to be in force, we find that the TS change, with the TDG load test to be performed for 4 hours rather than 1 hour, is acceptable.

Bases 3/4.8

The licensee proposes to reflect the change shown in Specifications 3.8.1.2 and 3.8.2.2 in the TS Bases. The staff finds that this change does not affect the original TS intent, is consistent with the requirement to have minimum specified AC sources during Modes 5 and 6 operable, consistent with the requested changes, and is, therefore, acceptable.

4.0 SUMMARY

We have reviewed the licensee's amendment submittal and have concluded that: 1) the TS changes for additional redundancy in offsite AC power sources, 2) restrictions on onsite activities which could lead to degraded operating conditions, and 3) the installation of a TDG with appropriate controls during the short interval anticipated, do not significantly increase the risk to the health and safety of the public and is, therefore, acceptable. In addition, the requested change will allow more thorough inspection of the No. 12 EDG to be accommodated, thereby enhancing the long-term reliability of the EDG and the changes in the TS Bases are consistent with the requested changes.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Maryland State official was notified of the proposed issuance of the amendments. The State official had no comments.

6.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change the surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (56 FR 46450). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

7.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors:

R. Jenkins

C. Morris

Date: October 21, 1991

Mr. G. C. Creel

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October 21, 1991

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

Original signed by:

Daniel G. McDonald, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 163 to DPR-53
2. Amendment No. 143 to DPR-69
3. Safety Evaluation

cc w/enclosures:

See next page

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AMENDMENT NO. 143 TO FACILITY OPERATING LICENSE NO. DPR-69-CALVERT CLIFFS UNIT 2

Docket File

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