

December 31, 1985

Docket Nos. 50-317  
and 50-318

Mr. A. E. Lundvall, Jr.  
Vice President - Supply  
Baltimore Gas & Electric Company  
P. O. Box 1475  
Baltimore, Maryland 21203

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Dear Mr. Lundvall:

The Commission has issued the enclosed Amendment Nos. 111 and 94 to Facility Operating License Nos. DPR-53 and DPR-69 for Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2. These amendments consist of changes to the Technical Specifications in response to your application dated October 12, 1984.

The amendments change the Unit 1 and Unit 2 Technical Specification (TS) 3/4.8.1, "A.C. Sources" as follows: (1) separate remedial actions to be taken for inoperability of on-site A.C. power sources from those actions to be taken for inoperability of off-site A.C. power sources; (2) provide clarification regarding testing of automatic start bypass functions for the diesel generators; (3) delete a footnote in TS 3.8.1.1.b.2 that is no longer applicable; (4) reduce the frequency of diesel generator "cold, fast starts"; (5) change the remedial action requirements for the inoperability of the off-site A.C. power sources; and (6) update the standard for analysis of diesel fuel from ASTM D975-68 to ASTM D975-81.

A copy of the related Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's next bi-weekly Federal Register notice.

Sincerely,

/S/

David H. Jaffe, Project Manager  
PWR Project Directorate #8  
Division of PWR Licensing-B

Enclosures:

1. Amendment No. 111 to DPR-53
2. Amendment No. 94 to DPR-69
3. Safety Evaluation

cc w/enclosure:  
See next page

PBD#8  
PMKreutzer  
12/24/85

*(Signature)*  
PBD#8  
DJaffe  
12/24/85

PBD#8  
ATHadani  
12/24/85

*(Signature)*  
OELD  
12/24/85  
*Note change to center funding*

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PDR

Mr. A. E. Lundvall, Jr.  
Baltimore Gas & Electric Company

cc:

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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. 111  
License No. DPR-53

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Baltimore Gas & Electric Company (the licensee) dated October 12, 1984, 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.

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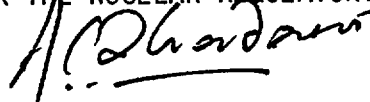
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-53 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 111, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



Ashok C. Thadani, Director  
PWR Project Directorate #8  
Division of PWR Licensing-B

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: December 31, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 111

FACILITY OPERATING LICENSE NO. DPR-53

DOCKET NO. 50-317

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are provided to maintain document completeness.

Remove Pages

3/4 8-1  
3/4 8-2  
3/4 8-2a  
3/4 8-3  
3/4 8-4

Insert Pages

3/4 8-1  
3/4 8-2  
3/4 8-3  
3/4 8-4

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### 3/4.8.1 A.C. SOURCES

##### OPERATING

##### LIMITING CONDITION FOR OPERATION

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

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system consisting of either:
  1. Two 500 Kv offsite power circuits, or as necessary
  2. The 69 Kv SMECO offsite power circuit described in the January 14, 1977 Safety Evaluation and one 500 Kv offsite power circuit, and
- b. Two separate and independent diesel generators (one of which may be a swing diesel generator capable of serving either Unit 1 or Unit 2) each with:
  1. Separate day fuel tanks containing a minimum volume of 375 gallons of fuel,
  2. A common fuel storage system consisting of two independent storage tanks each containing a minimum volume of 18,250 gallons of fuel, and
  3. A separate fuel transfer pump.

APPLICABILITY: MODES 1, 2, 3 and 4.

##### ACTION:

- a. With two offsite circuits of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and 4.8.1.1.2.a.4 within 24 hours, unless the diesel generators are already operating. Restore at least two offsite circuits to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one diesel generator inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter, and Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours. Restore two diesel generators to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

## ELECTRICAL POWER SYSTEMS

### LIMITING CONDITION FOR OPERATION (Continued)

#### ACTION: (Continued)

- c. With two offsite circuits and one diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter and Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours, unless the diesel generators are already operating. Restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore at least two offsite circuits and two diesel generators to OPERABLE status within 72 hours from the time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. With three of the above required offsite A.C. circuits inoperable, demonstrate the OPERABILITY of two diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours unless the diesel generators are already operating; restore at least one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours. With only one off-site source restored, restore at least two offsite circuits to OPERABLE status within 72 hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- e. With two of the above required diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; restore at least one of the inoperable diesel generators to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore at least two diesel generators to OPERABLE status within 72 hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

#### SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each required independent circuit between the offsite transmission network and the onsite Class 1E distribution system shall be:

- a. Demonstrated OPERABLE, as follows:
  1. For each 500 Kv offsite circuit, at least once per 7 days by verifying correct breaker alignments and indicated power availability,

ELECTRICAL POWER SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

- d. At least once per 18 months by:
1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.
  2. Verifying the generator capability to reject a load of  $\geq 500$  hp without tripping.
  3. Simulating a loss of offsite power in conjunction with a safety injection actuation test signal, and:
    - a) Verifying de-energization of the emergency busses and load shedding from the emergency busses.
    - b) Verifying the diesel starts from ambient condition on the auto-start signal, energizes the emergency busses with permanently connected loads, energizes the auto-connected emergency loads through the load sequencer and operates for  $> 5$  minutes while its generator is loaded with the emergency loads.
    - c) Verifying that the high jacket coolant temperature and low jacket coolant pressure trips are automatically bypassed on a Safety Injection Actuation Signal.
  4. Verifying the diesel generator operates for  $\geq 60$  minutes while loaded to  $\geq 2500$  kw.
  5. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000 hour rating of 2700 kw.



## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

2. For the 69 Kv SMECO offsite power circuit, within one hour of substitution for a 500 Kv offsite power circuit, and at least once per 8 hours thereafter during use by verifying correct breaker alignments and indicated power availability, and
- b. Demonstrated OPERABLE at least once per 18 months during shutdown by manually transferring unit power supply from the normal circuit to the alternate circuit.

#### 4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by:
  1. Verifying the fuel level in the day fuel tank.
  2. Verifying the fuel level in the fuel storage tank.
  3. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the day tank.
  4. Verifying the diesel starts and accelerates to at least 900 rpm with generator voltage and frequency at  $4160 \pm 420$  volts and  $60 \pm 1.2$  Hz, respectively.\*
  5. Verifying the generator is synchronized, loaded to  $\geq 1250$  Kw, and operates for  $\geq 60$  minutes.
  6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
  7. Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block within  $\pm 10\%$  of its design interval.
- b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank is within the acceptable limits specified in Table 1 of ASTM D975-81 when checked for viscosity, water and sediment.
- c. At least once per 184 days by verifying the diesel starts from ambient condition and accelerates to at least 900 rpm in  $\leq 10$  seconds.

\* All engine starts for the purpose of this Surveillance Requirement may be preceded by an engine prelube period and/or other warmup procedures recommended by the manufacturer so that mechanical wear and stress on the diesel engine is minimized.



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. 94  
License No. DPR-69

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Baltimore Gas & Electric Company (the licensee) dated October 12, 1984, 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.

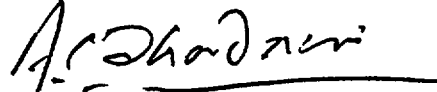
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.2 of Facility Operating License No. DPR-69 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 94, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



Ashok C. Thadani, Director  
PWR Project Directorate #8  
Division of PWR Licensing-B

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: December 31, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 94

FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NO. 50-318

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are provided to maintain document completeness.

Remove Pages

3/4 8-1  
3/4 8-2  
3/4 8-3  
3/4 8-4

Insert Pages

3/4 8-1  
3/4 8-2  
3/4 8-3  
3/4 8-4

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### 3/4.8.1 A.C. SOURCES

##### OPERATING

##### LIMITING CONDITION FOR OPERATION

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

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system consisting of either:
  1. Two 500 Kv offsite power circuits, or as necessary
  2. The 69 Kv SMECO offsite power circuit described in the January 14, 1977 Safety Evaluation and one 500 Kv offsite power circuit, and
- b. Two separate and independent diesel generators (one of which may be a swing diesel generator capable of serving either Unit 1 or Unit 2) each with:
  1. Separate day fuel tanks containing a minimum volume of 375 gallons of fuel,
  2. A common fuel storage system consisting of two independent storage tanks each containing a minimum volume of 18,250 gallons of fuel, and
  3. A separate fuel transfer pump.

APPLICABILITY: MODES 1, 2, 3 and 4.

##### ACTION:

- a. With two offsite circuits of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and 4.8.1.1.2.a.4 within 24 hours, unless the diesel generators are already operating. Restore at least two offsite circuits to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one diesel generator inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter, and Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours. Restore two diesel generators to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

## ELECTRICAL POWER SYSTEMS

### LIMITING CONDITION FOR OPERATION (Continued)

#### ACTION: (Continued)

- c. With two offsite circuits and one diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter and Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours, unless the diesel generators are already operating. Restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore at least two offsite circuits and two diesel generators to OPERABLE status within 72 hours from the time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. With three of the above required offsite A.C. circuits inoperable, demonstrate the OPERABILITY of two diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours unless the diesel generators are already operating; restore at least one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours. With only one offsite source restored, restore at least two offsite circuits to OPERABLE status within 72 hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- e. With two of the above required diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; restore at least one of the inoperable diesel generators to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore at least two diesel generators to OPERABLE status within 72 hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

### SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each required independent circuit between the offsite transmission network and the onsite Class 1E distribution system shall be:

a. Demonstrated OPERABLE, as follows:

1. For each 500 Kv offsite circuit, at least once per 7 days by verifying correct breaker alignments and indicated power availability,

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

2. For the 69 Kv SMECO offsite power circuit, within one hour of substitution for a 500 Kv offsite power circuit, and at least once per 8 hours thereafter during use by verifying correct breaker alignments and indicated power availability, and
    - b. Demonstrated OPERABLE at least once per 18 months during shutdown by manually transferring unit power supply from the normal circuit to the alternate circuit.
- 4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:
- a. At least once per 31 days on a STAGGERED TEST BASIS by:
    1. Verifying the fuel level in the day fuel tank.
    2. Verifying the fuel level in the fuel storage tank.
    3. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the day tank.
    4. Verifying the diesel starts and accelerates to at least 900 rpm with generator voltage and frequency at  $4160 \pm 420$  volts and  $60 \pm 1.2$  Hz, respectively.\*
    5. Verifying the generator is synchronized, loaded to  $\geq 1250$  Kw, and operates for  $\geq 60$  minutes.
    6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
    7. Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block within  $\pm 10\%$  of its design interval.
  - b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank is within the acceptable limits specified in Table 1 of ASTM D975-81 when checked for viscosity, water and sediment.
  - c. At least once per 184 days by verifying the diesel starts from ambient condition and accelerates to at least 900 rpm in  $\leq 10$  seconds.

\* All engine starts for the purpose of this Surveillance Requirement may be preceded by an engine prelube period and/or other warmup procedures recommended by the manufacturer so that mechanical wear and stress on the diesel engine is minimized.

ELECTRICAL POWER SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

- d. At least once per 18 months by:
1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.
  2. Verifying the generator capability to reject a load of  $\geq 500$  hp without tripping.
  3. Simulating a loss of offsite power in conjunction with a safety injection actuation test signal, and:
    - a) Verifying de-energization of the emergency busses and load shedding from the emergency busses.
    - b) Verifying the diesel starts from ambient condition on the auto-start signal, energizes the emergency busses with permanently connected loads, energizes the auto-connected emergency loads through the load sequencer and operates for  $\geq 5$  minutes while its generator is loaded with the emergency loads.
    - c) Verifying that the high jacket coolant temperature and low jacket coolant pressure trips are automatically bypassed on a Safety Injection Actuation Signal.
  4. Verifying the diesel generator operates for  $\geq 60$  minutes while loaded to  $\geq 2500$  kw.
  5. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000 hour rating of 2700 kw.





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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 111 AND 94

TO FACILITY OPERATING LICENSE NOS. DPR-53 AND DPR-69

BALTIMORE GAS AND ELECTRIC COMPANY

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-317 AND 50-318

Introduction

By application for license amendments dated October 12, 1984, Baltimore Gas and Electric Company (BG&E) requested changes to the Technical Specifications (TS) for Calvert Cliffs Units 1 and 2. The proposed amendments would change the Unit 1 and Unit 2 TS 3/4.8.1, "A.C. Sources" as follows: (1) separate remedial actions to be taken for inoperability of on-site A.C. power sources from those actions to be taken for inoperability of off-site A.C. power sources; (2) provide clarification regarding testing of automatic start bypass functions for the diesel generators; (3) delete a footnote in TS 3.8.1.1.b.2 that is no longer applicable; (4) reduce the frequency of diesel generator "cold, fast starts"; (5) change the remedial action requirements for the inoperability of the off-site A.C. power sources; and (6) update the standard for analysis of diesel fuel from ASTM D975-68 to ASTM D975-81.

Discussion and Evaluation

At the present time, TS 3.8.1.1 Action a provides remedial action to be taken in the event that one offsite power circuit or diesel generator becomes inoperable. The licensee has proposed that Action a be divided into two remedial actions, the first being applicable in the event that one offsite power circuit is inoperable. The second action statement, to be designated Action b, would be applicable in the event that a diesel generator becomes inoperable. Subsequent action statements would be redesignated to accommodate the new Action b. Aside from providing clarification by segregating remedial action requirements for off-site power sources from those for a diesel generator, the staff finds this proposed change has no effect on TS 3.8.1.1, is administrative in nature and is acceptable.

The licensee has proposed a change to TS 4.8.1.1.2.c.3.c concerning the testing of diesel generator trip signals which are bypassed on a safety injection actuation signal (SIAS). Section 8.4.1.2 of the Calvert Cliffs FSAR contains a list (items a through i) of all protective functions which will trip a diesel generator. A list (items a through e) is also presented which describes those protective functions which will still trip a diesel generator

in the event that a SIAS is actuated. A comparison of the two lists provides a third collection of protective functions which are bypassed on SIAS (even though these trip signals may be generated, they are not permitted to trip the diesel generator when SIAS is actuated.) This list consists of "high jacket coolant temperature" and "low jacket coolant pressure." It should be noted that there are other protective functions, bypassed on SIAS, which are not important under potential accident conditions. These protective functions are "start failure relay" which terminates a diesel start attempt rather than tripping the diesel generator during operation and "loss of field" which is important only when a diesel generator is synchronized to an energized bus during normal operation.

The purpose of TS 4.8.1.1.2.c.3.c is to periodically test all those protective functions which are bypassed on SIAS. The list of protective functions in the TS however, represents those trips which are not bypassed under SIAS conditions, preceded by the wording "Verifying that all diesel generator trips, except...." The proposed wording would be, "Verifying that the high jacket coolant temperature and low jacket coolant pressure trips are automatically bypassed on a Safety Injection Actuation Signal." The proposed change to the wording of TS 4.8.1.1.2.c.3.c provides a considerable improvement in clarity in that the list of protective functions to be tested is provided in the TS rather than the list of protective functions not requiring testing. There is no change, however, to the requirements of the TS and thus the staff finds the change is acceptable.

The licensee has proposed deletion of a footnote to TS 3.8.1.1.b.2 which is no longer applicable. The footnote pertains to a special operability requirement for the fuel oil storage system which permitted the storage tanks to be removed from service for inspection, during the Unit 2, April 1982, refueling outage. This footnote is no longer applicable and its deletion has no effect on TS 3.8.1.1.b.2, and thus the staff finds this change acceptable.

The licensee has proposed changes to TS 3.8.1.1 to reduce the frequency of diesel generator starts without prior lubrication ("cold fast start") and to eliminate unnecessary testing of the diesel generators when on-site or off-site power sources are inoperable.

The NRC staff has long recognized that the diesel generator reliability is a key factor in mitigation of design basis accidents involving loss of off-site power. More recently, the NRC staff has been concerned that excessive testing of diesel generators may actually be decreasing the reliability of this equipment at nuclear power facilities. On July 2, 1984, the NRC issued Generic Letter 84-15 (GL 84-15) which calls for licensees to reduce the frequency of diesel generator "cold fast starts" at nuclear power facilities. As part of GL 84-15, the NRC provided model TS containing the recommended frequency for "cold fast starts" and other types of diesel generator testing. In a partial response to GL 84-15, the licensee concluded that the diesel generators at Calvert Cliffs were being tested at frequencies exceeding those recommended by GL 84-15 and has requested changes to the TS.

At the present time, TS 4.8.1.1.2.a.4 requires the diesel to be started on a monthly basis and accelerate to 900 rpm in less than or equal to 10 seconds. This TS represents the "cold fast start" requirement. The licensee has requested a change to TS 4.8.1.1.2.a.4 to delete the 10-second start requirement and add the following footnote:

"All engine starts for the purpose of this surveillance requirement may be preceded by an engine prelube period and/or other warm-up procedure recommended by the manufacturer so that mechanical wear and stress on the diesel engine is minimized."

In addition, the words "...with generator voltage and frequency at  $4160 \pm 420$  volts and  $60 \pm 1.2$  Hz, respectively," would be added to the TS requirements. A new proposed "cold fast start" requirement would be incorporated in new TS 4.8.1.1.2.c and would require the diesel to be started from ambient conditions every 184 days and accelerated to at least 900 rpm in less than or equal to 10 seconds. Subsequent TS would be renumbered to accommodate this new TS. The modified TS 4.8.1.1.2.a and new TS 4.8.1.1.2.c are consistent with the model TS in GL 84-15 and are acceptable.

The licensee has also proposed a change to TS 3.8.1.1 concerning the testing of the diesel generator(s) when other diesel generator(s) and/or off-site power sources are inoperable. At the present time, diesel generator(s) must be started within 1 hour, and restarted at least every 8 hours under the following conditions:

- o Inoperability of one off-site power source (Action a)
- o Inoperability of one diesel generator (Action b)
- o Inoperability of one off-site power source and one diesel generator (Action c)
- o Two off-site power sources (Action d)

The licensee has requested that Actions a, b, c and d be changed to reflect the following diesel generator start times:

- Action a - Within 24 hours
- Action b - Within 24 hours
- Action c - Within 8 hours
- Action d - Within 8 hours

The above would only have to be performed if the diesel generator(s) were not already running for Actions a, c, and d. The licensee's proposed TS would result in a longer time before the first diesel generator start and eliminate repetitive starts consistent with the model TS in GL 84-15.

By eliminating unnecessary diesel generator testing, especially those requiring "cold fast starts," it is expected that the overall reliability of the diesel generators will be improved. The staff finds that the proposed TS changes are consistent with the guidance in GL 84-15 and are acceptable.

The licensee has requested a change to the Action Statements of TS 3.8.1.1 which address the remedial measures to be taken when off-site power sources are inoperable. At the present time, the Limiting Condition for Operation (LCO) references three off-site power sources: two 500 Kv circuits and one 69Kv circuit. The Action statements, however, are based on two 500 Kv circuits. The licensee has proposed that reference to "500 Kv" in the Action statements be deleted so that the Action statements would be applicable to either 500 Kv or 69 Kv off-site power sources. In addition, the Action statements would be changed as follows:

- o Action a, applicable to the inoperability of one off-site power source would be changed to be applicable to two-offsite power sources.
- o Action c, applicable to the inoperability of one off-site power source and one diesel generator would be changed to be applicable to two off-site power sources and one diesel generator.
- o Action d, applicable to the inoperability of two off-site power sources would be changed to be applicable to three off-site power sources.

A comparison of Calvert Cliffs TS 3.8.1.1. with the model TS of GL 84-15 indicates that Calvert Cliffs is credited with more off-site power sources in the LCO than are reflected in the Action statement. The licensee's proposed changes to the Action statements would be consistent with the LCO, would provide consistency within the TS, and would not otherwise effect the requirements of TS 3.8.1.1; thus the staff finds they are acceptable.

Finally, BG&E has requested a change to TS 4.8.1.1.2.b which requires that diesel fuel oil be tested in accordance with ASTM D975-68. The licensee has requested that a revised standard, ASTM D975-81, be referenced in TS 4.8.1.1.2.b. A comparison of ASTM D975-68 and ASTM D975-81 indicates that no change to diesel generator operation would result from use of the revised standard in TS 4.8.1.1.2.b. Since diesel generator reliability would not be decreased, the staff finds that the proposed change to TS 4.8.1.2.b is acceptable.

#### Environmental Consideration

These amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The 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 published a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these 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 these amendments.

Conclusion

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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