June 5, 1998

Mr. Gregory M. Rueger, Senior Vice
President and General Manager
Pacific Gas and Electric Company
P. O. Box 770000
San Francisco, California 94177

SUBJECT: ISSUANCE OF AMENDMENTS FOR DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 1 (TAC NO. M98128) AND UNIT NO. 2 (TAC NO. M98129)

Dear Mr. Rueger:

The Commission has issued the enclosed Amendment No. 127 to Facility Operating License No. DPR-80 and Amendment No. 125 to Facility Operating License No. DPR-82 for the Diablo Canyon Nuclear Power Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated February 27, 1997, as supplemented by letter dated December 4, 1997.

These amendments revise the combined Technical Specifications (TS) for the Diablo Canyon Power Plant (DCPP) Unit Nos. 1 and 2 to revise TS 3/4.8.1.1, "A.C. Sources - Operating," to clarify that emergency diesel generator (EDG) testing is initiated from standby conditions rather than "ambient" conditions. The associated TS Bases were revised to discuss the temperature range that satisfies EDG standby conditions. This amendment also revises TS 3/4.3.2, "Instrumentation - Engineering Safety Features Actuation System Instrumentation." This revision clarifies that when one or both of the first level load shed relays, or one or both of the second level undervoltage relays are inoperable, the associated EDG for that bus shall be declared inoperable.

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

Sincerely,

Original Signed By

Steven D. Bloom, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-275
and 50-323

Enclosures: 1. Amendment No. 127 to DPR-80
2. Amendment No. 125 to DPR-82
3. Safety Evaluation

cc w/encls: See next page

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

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-275

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 127
License No. DPR-80

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Pacific Gas and Electric Company (the licensee) dated February 27, 1997, as supplemented by letter dated December 4, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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.

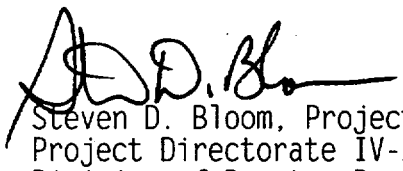
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-80 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 127 , are hereby incorporated in the license. Pacific Gas and Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

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

FOR THE NUCLEAR REGULATORY COMMISSION



Steven D. Bloom, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: **June 5, 1998**

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

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-323

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 125
License No. DPR-82

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Pacific Gas and Electric Company (the licensee) dated February 27, 1997, as supplemented by letter dated December 4, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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.

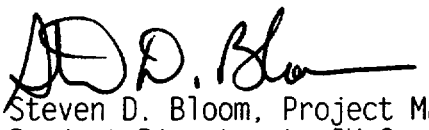
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-82 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 125 , are hereby incorporated in the license. Pacific Gas and Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

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

FOR THE NUCLEAR REGULATORY COMMISSION



Steven D. Bloom, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: June 5, 1998

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 127 TO FACILITY OPERATING LICENSE NO. DPR-80

AND AMENDMENT NO. 125 TO FACILITY OPERATING LICENSE NO. DPR-82

DOCKET NOS. 50-275 AND 50-323

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by Amendment number and contain marginal lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE	INSERT
3/4 3-20	3/4 3-20
3/4 3-21	3/4 3-21
3/4 8-3	3/4 8-3
B 3/4 8-2	B 3/4 8-2

TABLE 4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
6. Auxiliary Feedwater					
a. Manual Initiation	1 manual switch/pump	1 manual switch/pump	1 manual switch/pump	1, 2, 3	24
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3	22
c. Stm. Gen. Water Level-Low-Low					
1) Start Motor-Driven Pumps					
a. Steam Generator Water Level-Low-Low	3/S.G.	2/S.G. in one S.G.	2/S.G. in each S.G.	1, 2, 3###	20
b. RCS loop ΔT	4 (1/loop)	N.A.	N.A.	1, 2	29
2) Start Turbine-Driven Pump					
a. Steam Generator Water Level-Low-Low	3/S.G.	2/S.G. in any 2 S.G.	2/S.G. in each S.G.	1, 2, 3###	20
b. RCS loop ΔT	4 (1/loop)	N.A.	N.A.	1, 2	29
d. Undervoltage-RCP Bus Start Turbine-Driven Pump	2/bus	1/bus on both busses	1/bus	1	35
e. Safety Injection Start Motor-Driven Pumps	See Item 1. above for all Safety Injection initiating functions and requirements.				

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
7. Loss of Power (4.16 kV Emergency Bus Undervoltage)					
a. First Level				1, 2, 3, 4	
1) Diesel Start	1/Bus	1/Bus	1/Bus		16
2) Initiation of Load Shed	2/Bus	2/Bus	2/Bus		15
b. Second Level				1, 2, 3, 4	
1) Undervoltage Relays	2/Bus	2/Bus	2/Bus		15
2) Timers to Start Diesel	1/Bus	1/Bus	1/Bus		16
3) Timers to Shed Load	1/Bus	1/Bus	1/Bus		16
8. Engineered Safety Features Actuation System Interlocks					
a. Pressurizer Pressure, P-11	3	2	2	1, 2, 3	21
b. DELETED					
c. Reactor Trip, P-4	2	2	2	1, 2, 3	23

TABLE 3.3-3 (Continued)

TABLE NOTATIONS

#Trip function may be blocked in this MODE below the P-11 (Pressurizer Pressure Interlock) Setpoint.

##Trip function automatically blocked above P-11 (Pressurizer Pressure Interlock) Setpoint and is automatically blocked below P-11 when Safety Injection on Steam Line Pressure-Low is not blocked.

###For Mode 3, the Trip Time Delay associated with the Steam Generator Water Level-Low-Low channel must be less than or equal to 464.1 seconds.

ACTION STATEMENTS

ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1, provided the other channel is OPERABLE.

ACTION 15 - With the number of OPERABLE Channels less than the Minimum Channels OPERABLE requirement, declare the affected Emergency Diesel Generator(s) inoperable and comply with the ACTION statements of Specification 3.8.1.1; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.

ACTION 16 - With the number of OPERABLE Channels one less than the Total Number of Channels, declare the affected Emergency Diesel Generator(s) inoperable and comply with the ACTION statements of Specification 3.8.1.1; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.

ACTION 17 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the bypassed condition and the Minimum Channels OPERABLE requirement is met. One additional channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.

ACTION 18 - With less than the Minimum Channels OPERABLE requirement, operation may continue provided the containment purge supply and exhaust valves (RCV-11, 12, FCV 660, 661, 662, 663, 664) are maintained closed.

ACTION 19 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 20 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours, and

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel or one additional channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

ACTION 21 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

ACTION 22 - With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACTION 23 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

ACTION 24 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or declare the associated pump or valve inoperable and take the ACTION required by Specification 3.7.1.5 or 3.7.1.2 as applicable.

ACTION 25 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACTION 29 - With the number of OPERABLE channels less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided that within 6 hours, for the affected RCS Loop Delta-T channel(s), either:

a. The Trip Time Delay threshold power level for zero seconds time delay is adjusted to 0% RTP, or

b. With the number of OPERABLE channels one less than the Total Number of Channels, the affected Steam Generator Water Level-Low-Low channels are placed in the tripped condition.

ACTION 35 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the trip condition within 6 hours, and

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.2.1.

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the Onsite Class 1E Distribution System shall be:

a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments, indicated power availability, and

b. Demonstrated OPERABLE at least once per REFUELING INTERVAL during shutdown by:

1) Transferring 4 kV vital bus power supply from the normal circuit to the alternate circuit (manually and automatically) and to the delayed access circuit (manually), and

2) Verifying that on a Safety Injection test signal, without loss of offsite power, the preferred, immediate access offsite power source energizes the emergency busses with permanently connected loads and energizes the auto-connected emergency (accident) loads through sequencing timers.

4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:

a. In accordance with the frequency specified in Table 4.8-1 on a STAGGERED TEST BASIS by:*

1) Verifying the fuel level in the engine-mounted fuel tank,

2) Verifying the diesel starts from standby condition and accelerates to at least 900 rpm in less than or equal to 10 seconds. The generator voltage and frequency shall be 4160 + 240/-375 volts and 60 ± 1.2 Hz within 13 seconds after the start signal. The diesel generator shall be started for this test by using one of the following signals:

a) Manual, or

b) Simulated loss of offsite power by itself (Startup bus undervoltage), or

c) A Safety Injection actuation test signal by itself.

*All diesel generator starts for the purpose of this surveillance test may be preceded by an engine prelube period. Further, all surveillance tests, with the exception of once per 184 days, may also be preceded by warmup procedures (e.g., gradual acceleration and/or gradual loading > 150 sec) as recommended by the manufacturer so that the mechanical stress and wear on the diesel engine is minimized.

SURVEILLANCE REQUIREMENTS (Continued)

3) Verifying the generator is synchronized, loaded to greater than or equal to 2484 kW in less than or equal to 60 seconds, and operates for greater than or equal to 60 minutes.

4) Verifying the diesel generator is aligned to provide standby power to the associated emergency busses, and

5) Verifying the diesel engine protective relay trip cutout switch is returned to the cutout position following each diesel generator test.

b. At least once per REFUELING INTERVAL during shutdown, 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 that the load sequence timers are OPERABLE with each load sequence timer within the limits specified in Table 4.8-2;

3) Verifying the generator capability to reject a load of greater than or equal to 508 kW while maintaining voltage at 4160 + 240/-375 volts and frequency at 60 ± 3 Hz;

4) Verifying the generator capability to reject a load of greater than or equal to 2484 kW without tripping. The generator voltage shall not exceed 4580 volts during and following the load rejection;

5) Simulating a loss of offsite power by itself, and:

a) Verifying de-energization of the emergency busses and load shedding from the emergency busses, and

b) Verifying the diesel starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 10 seconds, energizes the required auto-connected loads through sequencing timers and operates for greater than or equal to 5 minutes while its generator is loaded with the permanent and auto-connected loads. After energization of these loads, the steady state voltage and frequency of the emergency busses shall be maintained at 4160 + 240/-375 volts and 60 ± 1.2 Hz during this test.

3/4.8.1, 3/4.8.2, and 3/4.8.3 A.C. SOURCES, D.C. SOURCES, and ONSITE POWER DISTRIBUTION

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 Criterion 17 of Appendix A to 10 CFR Part 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 is consistent with the initial condition assumptions of the safety analyses and is based upon maintaining sufficient redundancy 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 one onsite A.C. source. The A.C. and D.C. source allowable out-of-service times are based on Regulatory Guide 1.93, "Availability of Electrical Power Sources," December 1974 except for the allowed outage time associated with Action Statement b. of Specification 3.8.1.1. This allowed outage time was changed to be consistent with the recommendation of Diablo Canyon Power Plant Diesel Generator Allowed Outage Time Study, May 1989. When one diesel generator is inoperable, there is an additional ACTION requirement to verify that all required systems, subsystems, trains, components and devices, that depend on the remaining OPERABLE diesel generators as a source of emergency power, are also OPERABLE, and that at least two auxiliary feedwater pumps are OPERABLE. This requirement is intended to provide assurance that a loss-of-offsite power event will not result in a complete loss of safety function of critical systems during the period one of the diesel generators is inoperable. The term, verify, as used in this context means to administratively check by examining logs or other information to determine if certain components are out-of-service for maintenance or other reasons. It does not mean to perform the surveillance requirements needed to demonstrate the OPERABILITY of the component.

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 design of the 125-volt D.C. distribution system is such that a battery can have associated with it a full capacity charger powered from it associated 480-volt vital bus or an alternate full capacity charger powered from another 480-volt vital bus. Technical Specification 3.8.2.1 ACTION c. limits operation in the latter configuration to 14 days. Technical Specification 3.8.3.1 requires either charger be OPERABLE.

The Surveillance Requirements for demonstrating the OPERABILITY of the diesel generators are in accordance with the recommendations of Regulatory

A.C. SOURCES, D.C. SOURCES, and ONSITE POWER DISTRIBUTION (Continued)

Guides 1.9, "Selection of Diesel Generator Set Capacity for Standby Power Supplies," March 10, 1971, 1.108, "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants," Revision 1, August 1977, where applicable.

"Standby condition" stated in surveillance requirement 4.8.1.1.2a.2 means the lubricating oil and jacket water temperatures are between 90°F and 175°F. The lube oil and jacket water temperatures must be maintained at or above 90°F for EDG operability.

The steady state voltage and frequency Surveillance Requirements for demonstrating the OPERABILITY of the diesel generators are consistent with the second level undervoltage relay allowable values. This is the minimum steady state voltage needed on 4160 volt vital buses to ensure adequate 4160 volt, 480 volt and 120 volt levels. The maximum steady state output voltage of 4400 V is the maximum operating voltage for 4000 V motors specified in ANSI C84.1. The maximum steady state output voltage of 4400 V ensures that, for a lightly loaded distribution, system, the voltage at the terminals of 4000 V motors is no more than the maximum rated operating voltages. The specified minimum and maximum frequencies of the DG are 58.8 Hz and 61.2 Hz, respectively. These values are equal to ± 2% of the 60 Hz nominal frequency and are derived from the recommendations given in Regulatory Guide 1.9.

The Surveillance Requirements for demonstrating the OPERABILITY of the batteries are based on the recommendations of Regulatory Guide 1.129, "Maintenance Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," February 1978, and IEEE Std 450-1980, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations." One exception to Regulatory Guide 1.129, Section C.1, applies to the battery service test. The service test should be performed during an outage, with the interval between tests not to exceed 30 months.

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage onfloat charge, connection resistance values and the performance of battery service and discharge tests ensures the effectiveness of the charging system, the ability to handle high discharge rates and compares the battery capacity at that time with the rated capacity.

Table 4.8-3 specifies the normal limits for each designated pilot cell and each connected cell for electrolyte level, float voltage and specific gravity. The limits for the designated pilot cells float voltage and specific gravity, greater than 2.13 volts and 0.015 below the manufacturer's full charge specific gravity or a battery charger current that had stabilized at a low value, is characteristic of a charged cell with adequate capacity. The normal limits for each connected cell for float voltage and specific gravity, greater than 2.13 volts and not more than 0.020 below the manufacturer's full charge specific gravity with an average specific gravity of all the connected cells not more than 0.010 below the manufacturer's full charge specific gravity, ensures the OPERABILITY and capability of the battery.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 127 TO FACILITY OPERATING LICENSE NO. DPR-80

AND AMENDMENT NO. 125 TO FACILITY OPERATING LICENSE NO. DPR-82

PACIFIC GAS AND ELECTRIC COMPANY

DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2

DOCKET NOS. 50-275 AND 50-323

1.0 INTRODUCTION

By application dated February 27, 1997, as supplemented by letter dated December 4, 1997, Pacific Gas and Electric Company (licensee) requested changes to the Technical Specifications (Appendix A to Facility Operating License Nos. DPR-80 and DPR-82) for the Diablo Canyon Nuclear Power Plant, Units 1 and 2. The proposed changes revise the combined Technical Specifications (TS) for the Diablo Canyon Power Plant (DCPP) Unit Nos. 1 and 2 to revise TS 3/4.8.1.1, "A.C. Sources - Operating," to clarify that emergency diesel generator (EDG) testing is initiated from standby conditions rather than "ambient" conditions. The associated TS Bases were revised to discuss the temperature range that satisfies EDG standby conditions. This amendment also revises TS 3/4.3.2, "Instrumentation - Engineering Safety Features Actuation System Instrumentation." This revision clarifies that when one or both of the first level load shed relays, or one or both of the second level undervoltage relays are inoperable, the associated EDG for that bus shall be declared inoperable.

The December 4, 1997, supplemental letter provided additional clarifying information and did not change the initial no significant hazards consideration determination published in the Federal Register on April 9, 1997 (62 FR 17240).

2.0 EVALUATION

2.1 EDG Standby Conditions

Each unit at Diablo Canyon has three independent automatic starting EDGs to power essential loads if normal power sources are not available. The EDGs are normally maintained in a standby condition by means of two warming systems when not in operation. The lubricating oil is warmed and continually circulated by means of a precirculating oil system. The jacket water is kept warm with thermostatically controlled immersion heaters. During outages or maintenance periods, the EDG temperature may be outside the range provided by the warming systems, but still within acceptable temperature ranges established by vendor recommendations and PG&E test results.

Surveillance Requirement 4.8.1.1.2a.2 requires that the EDGs be started from ambient conditions. This implies that the EDGs must be started at room temperature. The jacket water and lube oil warming systems are normally in operation or, if not, the EDG temperatures are within an acceptable range. A more accurate term to describe the conditions in which it is acceptable to start the EDGs is "standby condition."

NUREG-1432, Revision 1, "Standard Technical Specification - Westinghouse Plants," states that for the purpose of EDG testing, the EDGs are to be started from standby conditions; that is, with the engine coolant and lube oil continuously circulated and temperature maintained consistent with manufacturer recommendations.

The replacement of the term "ambient" with "standby" clarifies the TS, and more accurately describes the condition in which the EDGs are maintained, and would be required to start under in an accident condition. The change to the TS Bases 3/4.8.1 defines standby temperatures for EDG surveillance testing as requiring the lubricating oil and jacket water temperatures to be between 90°F and 175°F based on vendor recommendations and PG&E test results.

The staff reviewed the change and finds that the word "standby" to be more descriptive of the actual conditions of the diesel; therefore, this change is acceptable.

2.2 4kV Undervoltage Relays

There are two levels of undervoltage detection and automatic transfer provided for the 4kV (4160V) vital buses to transfer vital loads to the EDGs in the event of an undervoltage condition.

The first level of undervoltage protection detects the loss of bus voltage (<69 percent bus voltage) and has sufficient time delay to allow transfer of the vital busses to the startup transformer. Two first level undervoltage load shed relays (FLURs), one instantaneous and one time delayed, are used to prevent spurious transfers. EDGs are automatically started on sustained bus undervoltage (approximately 0.7 seconds at 0 volts). If the transfer to the startup transformer is unsuccessful, the FLURs will shed the vital bus motor loads. After the EDG breaker closes, the vital bus loads are started by individual load sequencing timing relays.

In 1977, each 4 kV vital bus was provided with a second level undervoltage relay (SLUR) protection to detect voltages under 3785V. This setting is based on requirements that there be a minimum of 90 percent voltage at the 120V vital loads. Once the second level undervoltage is detected by the relays, timing relays provide two sequential time delays to EDG starting and loading. The EDGs are started after a delay of approximately 10 seconds and after an additional 10 seconds, all 4160V motors are shed in preparation for EDG loading. EDG breaker closing is delayed approximately 2 seconds to allow motor breakers to trip and bus voltage to decay. After the EDG breaker closes, the vital loads are started by individual load sequencing timing relays.

The current TS 3.3.2, Table 3.3-3, Functional Unit 7, "Loss of Power (4.16kV Emergency Bus Undervoltage)," Section 7.a.2 "First Level - Initiation of Load Shed," and Section 7.b.1, "Second Level - Undervoltage Relays" lists the total number of channels as 2/bus and the minimum number of channels operable as 2/bus. The action associated with this (Action 16) states:

> "With the number of OPERABLE channels one less than the Total Number of Channels, declare the affected Emergency Diesel Generator(s) inoperable and comply with ACTION statements of Specification 3.8.1.1; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1."

The action statements for TS 3.8.1.1 require verification of operability of the offsite power sources within one hour and once per eight hours thereafter, and verification of operability of the remaining EDGs.

There is no stated action for a condition where both load shed FLURs or SLURs are inoperable. This could imply that the plant would be in a TS 3.0.3 action statement which contains a one hour limiting condition for operation. However, having both FLURs or SLURs inoperable affects only one vital 4 kV bus and its associated equipment. Technical Specification 3.0.3 is intended to place the plant in a safe configuration when no other action statements are applicable. Technical Specification 3.0.3 would result in placing the plant in a transient condition due to an unnecessary shutdown, which increases the risk of an accident.

The FLURs and SLURs contacts are connected in series for two-out-of-two logic, and both FLURs and SLURs are required to actuate to cause a bus transfer to the EDG. This assures that a single failure of a FLUR or SLUR does not cause an unnecessary transfer of the vital bus to the EDGs. Since both FLUR or SLUR relays are required to be operable to cause an undervoltage actuation, entry into Action Statement 15 recognizes that the undervoltage function will not operate. The inoperability of the second relay does not result in a change of conditions and therefore, Action Statement 15 should be applied rather than entry into TS 3.0.3.

The staff reviewed the change and finds that the revision to be consistent with the Improved TS. This is an improvement from the existing TS, and, therefore, the proposed TS change is acceptable.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

These amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change 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 (62 FR 17240). 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.

5.0 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.

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Date: **June 5, 1998**