

March 8, 1996

Mr. Gregory M. Rueger  
Pacific Gas and Electric Company  
NPG - Mail Code A10D  
P. O. Box 770000  
San Francisco, California 94177

SUBJECT: ISSUANCE OF AMENDMENTS FOR DIABLO CANYON NUCLEAR POWER PLANT,  
UNIT NO. 1 (TAC NO. M94539)

Dear Mr. Rueger:

The Commission has issued the enclosed Amendment No. 111 to Facility Operating License No. DPR-80 for the Diablo Canyon Nuclear Power Plant, Unit No. 1. The amendment consists of changes to the Technical Specifications (TS) in response to your application dated January 18, 1996.

This amendment would revise the allowed outage time (AOT) in TS 3/4.8.1.1, Electrical Power Systems. The request is made to allow operation of Unit 1 in Mode 3 (Hot Standby) during replacement of non-safety-related auxiliary transformer 1-1, for a one-time extension of up to 48 hours beyond the 72 hours allowed by TS 3.8.1.1, Action Statement (a). The installation of auxiliary transformer 1-1 causes the delayed offsite power circuit to be inoperable during the time period of the transformer replacement.

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

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Docket No. 50-275

Enclosures: 1. Amendment No. 111 to DPR-80  
2. Safety Evaluation

cc w/encls: See next page

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DOCUMENT NAME: DC94539.AMD \*See previous concurrence

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

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Sincerely,

A handwritten signature in cursive script, appearing to read "William D. Bloom for".

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

Docket No. 50-275

Enclosures: 1. Amendment No. 111 to DPR-80  
2. Safety Evaluation

cc w/encls: See next page

cc w/encl:

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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. 111  
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 January 18, 1996, 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:

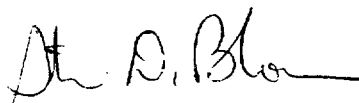
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(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 111, 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.

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: March 8, 1996

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 111 TO FACILITY OPERATING LICENSE NO. DPR-80

DOCKET NO. 50-275

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

REMOVE

3/4 8-1

INSERT

3/4 8-1

## 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 independent circuits (one with delayed access) between the offsite transmission network and the Onsite Class 1E Distribution System, and
- b. Three separate and independent diesel generators, each with:
  1. A separate engine-mounted fuel tank containing a minimum volume of 250 gallons of fuel, and
  2. Two supply trains of the Diesel Fuel Oil Storage and Transfer System containing a minimum combined storage of 33,000 gallons of fuel for one unit operation\* and 65,000 gallons of fuel for two unit operation\*\*.

APPLICABILITY: MODES 1, 2, 3, and 4.

#### ACTION:

- a. With one offsite circuit of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Specification 4.8.1.1.a. within 1 hour and at least once per 8 hours thereafter. If each of the diesel generators have not been successfully tested within the past 24 hours demonstrate its OPERABILITY by performing Specification 4.8.1.1.2a.2) separately for each such diesel generator within 24 hours. Restore the offsite circuit 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.

\* The performance of Technical Specification Surveillance Requirement 4.8.1.1.3.e requires one fuel oil storage tank to be removed from service to be drained and cleaned. During this surveillance, the diesel generator fuel oil storage requirement for one unit operation in Modes 1 through 4 and one unit operation in Mode 6 with at least 23 feet of water above the reactor vessel flange or with the reactor vessel defueled is 35,000 gallons. The tank being cleaned may be inoperable for up to 10 days. For the duration of tank cleaning, temporary onsite fuel oil storage of 24,000 gallons will be maintained. Prior to removal of a tank from service, the offsite circuits required by Technical Specification 3.8.1.1.a will be verified to be OPERABLE.

\*\* The performance of modifications to the diesel fuel oil storage and transfer system requires one fuel oil storage tank at a time to be drained and replaced with a new storage tank. During this period, the diesel generator fuel oil storage requirement for two unit operation in Modes 1 - 4, or for one unit operation in Modes 1 - 4 and one unit in Mode 5 or 6 is 35,000 gallons. A total of up to 120 days may be required to complete the replacement of both tanks. For the duration of the tank replacement, temporary onsite storage of 30,000 gallons will be maintained. Prior to removal of a tank from service, the offsite circuits required by Technical Specification 3.8.1.1.a. will be verified to be OPERABLE.

\*\*\*For Unit 1 Cycle 8, the allowed outage time may be extended to 120 hours on a one-time basis for installation of auxiliary transformer 1-1.

## ELECTRICAL POWER SYSTEMS

### LIMITING CONDITION FOR OPERATION

#### ACTION (Continued)

- b. With a diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the A.C. offsite sources by performing Specification 4.8.1.1.1a within 1 hour and at least once per 8 hours thereafter; and if the diesel generator became inoperable due to any cause other than preventive maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE diesel generators by performing Specification 4.8.1.1.2a.2) within 24 hours\*; restore the diesel generator to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. With one offsite circuit 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 Specification 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; and if the diesel generator became inoperable due to any cause other than preventive maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE diesel generators by performing Specification 4.8.1.1.2a.2) within 8 hours; 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 the other A.C. power source (offsite circuit or diesel generator) to OPERABLE status in accordance with ACTION a. or b., as appropriate with the time requirement of that ACTION statement based on the time of initial loss of the remaining inoperable A.C. power source. A successful test of diesel OPERABILITY per Specification 4.8.1.1.2a.2) performed under this ACTION statement for OPERABLE diesels or a restored to OPERABLE diesel satisfies the diesel generator test requirement of ACTION a. or b.
- d. With one diesel generator inoperable in addition to ACTION b. or c. above verify that:
1. 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
  2. When in MODE 1, 2, or 3 that at least two auxiliary feedwater pumps are OPERABLE.

If these conditions are not satisfied within 2 hours be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

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\*This test is required to be completed regardless of when the inoperable diesel generator is restored to operability.





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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 111 TO FACILITY OPERATING LICENSE NO. DPR-80

PACIFIC GAS AND ELECTRIC COMPANY

DIABLO CANYON NUCLEAR POWER PLANT, UNIT 1

DOCKET NO. 50-275

1.0 INTRODUCTION

By application dated January 18, 1996, Pacific Gas and Electric Company (or the licensee) requested changes to the Technical Specifications (Appendix A to Facility Operating License No. DPR-80) for the Diablo Canyon Nuclear Power Plant, Unit 1. The proposed changes requested a Technical Specification (TS) change to revise the allowed outage time (AOT) in TS 3/4.8.1.1, Electrical Power Systems. The request is made to allow operation of Unit 1 in Mode 3 (Hot Standby) during replacement of non-safety-related auxiliary transformer 1-1, for a one-time extension of up to 48 hours beyond the 72 hours allowed by TS 3.8.1.1, Action Statement (a). The installation of auxiliary transformer 1-1 causes the delayed offsite power circuit to be inoperable during the time period of the transformer replacement. After a preliminary review, the licensee was requested to clarify the availability of other ac power circuits and the time available for their connection during the proposed installation of the transformer. By telecon on February 1, 1996, the licensee provided the requested clarification. In addition, the licensee confirmed the staff's interpretation of compensatory commitments documented in their January 18, 1996, letter that are to be in effect during the installation of the transformer.

2.0 BACKGROUND

On October 21, 1995, a ground fault on non-safety-related auxiliary transformer 1-1 caused the failure of the transformer. A safety evaluation determined that Diablo Canyon Nuclear Power Plant (DCNPP) Unit 1 could be safely operated without the auxiliary transformer 1-1 until a replacement could be found. The replacement transformer will restore Unit 1 to its original design configuration. However, the installation of the replacement transformer will cause the 500 kV system (delayed offsite power source) to be inoperable during the time period of the transformer connection. The licensee states that the scheduled installation time for the replacement transformer is 79 hours. Thus, the requested 120-hour time period is based upon the planned installation time plus an additional margin for contingency.

### 3.0 EVALUATION

The staff's evaluation of the licensee's proposed change to the technical specifications follows:

Action Statement (a) of Limiting Condition for Operation (LCO) 3.8.1.1 addresses requirements when one of two offsite circuits becomes inoperable due to unplanned reasons while operating the plant in Modes 1, 2, 3, and 4. When one of two offsite circuits become inoperable, action statement (a) currently requires:

- (1) the operability of the remaining offsite circuit to be demonstrated by performing Specification 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter;
- (2) the operability of the onsite standby diesel generators to be demonstrated by performing Specification 4.8.1.1.2a) for each diesel generator within 24 hours if the diesel generator has not been successfully tested within the past 24 hours; and
- (3) the inoperable offsite circuit to be returned to operable status within 72 hours or the plant must be brought to hot shutdown conditions within the following 6 hours and cold shutdown conditions within the following 30 hours.

For Cycle 8 operation of DCNPP Unit 1, the licensee has proposed to add a footnote to 3.8.1.1.a that will permit an offsite circuit to be inoperable for up to 120 hours from its current 72 hours. The proposed change is to be on a one time basis. In addition, the licensee in its January 18, 1996 letter committed to the following compensatory measures during the proposed 120 hours:

- (1) The plant will be operated in Mode 3 (Hot Standby).
- (2) A reduced transfer of DCNPP nonvital loads will be implemented for DCNPP Unit 2 should Morro Bay Units 3 and 4 become unavailable to prevent a reduction of 230 kV system voltage.
- (3) Activities at the 230 kV and 500 kV switchyards will be coordinated to prevent damage or interference that could impact operability of the 230 kV and 500 kV systems.
- (4) Operation and maintenance activities and their impact on the 230 kV system will be communicated and discussed with the DCNPP operational staff, transmission system planning staff, and transmission network system operational staff.
- (5) Twelve kV auxiliary house loads normally aligned to Unit 1 will be aligned to Unit 2.

- (6) The shift supervisor at DCNPP will call, at the start of each shift, the transmission network system operational staff to verify the operability of the 230 kV system.
- (7) No elective testing or maintenance which can affect operability of Unit 1 safety systems will be conducted. Testing of the onsite standby diesel generators will be conducted prior to the planned outage of the offsite circuit.
- (8) Operating procedures have been revised for natural circulation cooldown, loss of offsite power, and the proper control of the secondary plant. Operator training for these revised operating procedures will be completed prior to the planned outage of the offsite circuit.

### 3.1 Licensee's Basis for Change

An evaluation of the impact of the extended AOT on the DCNPP probabilistic risk assessment (PRA) was conducted by the licensee. The PRA evaluation concluded that the increase in core damage probability for the total 120-hour AOT was approximately  $1.2 \text{ E-}07$ . According to EPRI/NEI TR-105396, "PSA Applications Guide," August 1995, an increase in core damage probability of less than  $1\text{E-}6$  is considered non-risk significant.

### 3.2 Staff Evaluation

DCNPP Unit 1 is supplied with offsite power from the 500 kV and 230 kV systems. During normal operation, the main generator supplies power to the safety buses through auxiliary transformer 1-2. When the unit is not operating, the main generator can be disconnected from the system by a motor-operated disconnecting link and power to the safety loads and the auxiliary loads can be supplied through auxiliary transformer 1-2 by backfeeding from the 500 kV system through the main transformer. This circuit is designated as a delayed offsite power source.

On a plant trip, safety buses as well as non-safety buses are automatically fast transferred to the 230 kV system. The 230 kV system provides an immediate source of offsite power to the safety loads through startup transformers 1-1 and 1-2. If the 230 kV system is not available, the emergency diesel generators provide power to the safety buses.

During the 120-hour transformer installation period, the plant would be in Mode 3, and the class 1E divisions will be directly powered from the 230 kV transmission network through startup transformers 1-1 and 1-2. In addition, each of the Class 1E divisions has its own onsite standby diesel generator available with sufficient capacity and capability for safe shutdown of DCNPP. The standby diesel generators will be tested before the planned outage of the delayed offsite power source to assure their operability. Thus, in the event of the loss of the immediate access offsite circuit, there will be assurance that sufficient onsite ac power will be available from standby diesel generators in the event that a single failure of one division occurs, thereby permitting safe shutdown of DCNPP with the remaining division. Also it should

be noted that if loss of the 230 kV offsite circuit should occur during this proposed 120-hour AOT and be accompanied by the loss of all three onsite standby diesel generators (Station Blackout), power from DCNPP Unit 2 can be made available to meet the safe shutdown requirements for Unit 1.

Based on compensatory commitments documented in the licensee's January 18, 1996, letter, the staff concludes that there is reasonable assurance that sufficient power will be available to permit safe shutdown of DCNPP. Therefore, the proposed extension to the AOT from 72 to 120 hours is acceptable.

#### 4.0 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.

#### 5.0 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. 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 (61 FR 3737). 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.

#### 6.0 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 Contributor: Om Chopra

Date: March 8, 1996