

June 27, 1991

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Docket Nos. 50-275  
and 50-323

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Dear Mr. Shiffer:

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. 76112 AND 76113)

The Commission has issued the enclosed Amendment No. 64 to Facility Operating License No. DPR-80 and Amendment No. 63 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 in response to your application dated February 28, 1990 (reference LAR 90-03).

These amendments revise the combined Technical Specifications (TS) for the Diablo Canyon Power Plant Unit Nos. 1 and 2 by adding TS 3/4.7.1.6 and the associated Bases to assure operability of the steam generator 10 percent atmospheric dump valves for mitigation of a steam generator tube rupture accident.

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:

Harry Rood, Senior Project Manager  
Project Directorate V  
Division of Reactor Projects III/IV/V  
Office of Nuclear Reactor Regulation

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P PDR

Enclosures:

1. Amendment No. 64 to License No. DPR-80
2. Amendment No. 63 to License No. DPR-82
3. Safety Evaluation

cc w/enclosures:

See next page

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**NRC FILE CENTER COPY**

OFC	:LA/PD5/DRPW	:I/PD5/DRPW	:PM/PD5/DRPW	:BC/SRXB/DST	:OGC	:D/PD5/DRPW
NAME	:DFoster	:AFitzgerald	:pm:HRood	:RJones	:JDyer	
DATE	:05/13/91	:05/16/91	:05/21/91	:06/21/91	:05/28/91	:6/27/91

Mr. J. D. Shiffer  
Pacific Gas and Electric Company

Diablo Canyon

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

PACIFIC GAS AND ELECTRIC COMPANY  
DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-275  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 64  
License No. DPR-80

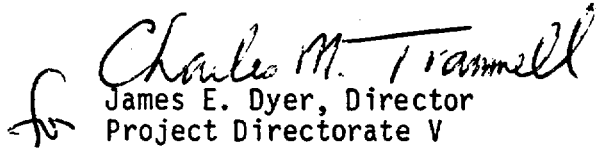
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Pacific Gas & Electric Company (the licensee) dated February 28, 1990, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 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. 64 , are hereby incorporated in the license. Pacific Gas & 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 becomes effective at the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
James E. Dyer, Director  
Project Directorate V  
Division of Reactor Projects III/IV/V  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: June 27, 1991



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

PACIFIC GAS AND ELECTRIC COMPANY  
DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 2

DOCKET NO. 50-323

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 63  
License No. DPR-82

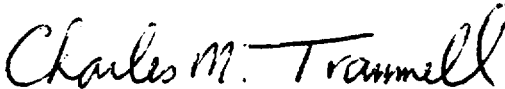
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  - B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without 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. 63, are hereby incorporated in the license. Pacific Gas & 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 becomes effective at the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
James E. Dyer, Director  
Project Directorate V  
Division of Reactor Projects III/IV/V  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: June 27, 1991

ATTACHMENT TO LICENSE AMENDMENT NOS. 64 AND 63

FACILITY OPERATING LICENSE NOS. DPR-80 AND 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 the captioned amendment number and contain marginal lines indicating the area of change. Overleaf pages are also included, as appropriate.

REMOVE PAGE

X

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-

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INSERT PAGE

X

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B 3/4 7-2a

B 3/4 7-2b

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## PLANT SYSTEMS

### STEAM GENERATOR 10% ATMOSPHERIC DUMP VALVES

#### LIMITING CONDITION FOR OPERATION

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3.7.1.6 Four steam generator 10% atmospheric dump valves (ADV) with the associated block valves open and associated remote manual controls, including the backup air bottles, shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3. (Cycle 5 and after)

#### ACTION:

- a. With one less than the required number of 10% ADVs OPERABLE, restore the inoperable steam generator 10% ADV to OPERABLE status within 7 days; or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With two less than the required numbered of 10% ADVs OPERABLE, restore at least one of the inoperable steam generator 10% ADVs to OPERABLE status within 72 hours; or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

#### SURVEILLANCE REQUIREMENTS

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4.7.1.6 Each steam generator 10% ADV, associated block valve and associated remote manual controls including the backup air bottles shall be demonstrated OPERABLE:

- a. At least once per 24 hours by verifying that the backup air bottle for each steam generator 10% ADV has a pressure greater than or equal to 260 psig, and
- b. At least once per 31 days by verifying that the steam generator 10% ADV block valves are open, and
- c. At least once per 18 months by verifying that all steam generator 10% ADVs will operate using the remote manual controls and the backup air bottles.

## PLANT SYSTEMS

### BASES

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#### 3/4.7.1.4 SPECIFIC ACTIVITY

The limitations on Secondary Coolant System specific activity ensure that the resultant off-site radiation dose will be limited to a small fraction of 10 CFR Part 100 dose guideline values in the event of a steam line rupture. This dose also includes the effects of a coincident 1 gpm reactor-to-secondary tube leak in the steam generator of the affected steam line. These values are consistent with the assumptions used in the safety analyses.

#### 3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVES

The OPERABILITY of the main steam line isolation valves ensures that no more than one steam generator will blowdown in the event of a steam line rupture. This restriction is required to: (1) minimize the positive reactivity effects of the Reactor Coolant System cooldown associated with the blowdown, and (2) limit the pressure rise within containment in the event the steam line rupture occurs within containment. The OPERABILITY of the main steam isolation valves within the closure times of the Surveillance Requirements is consistent with the assumptions used in the safety analyses.

#### 3/4.7.1.6 STEAM GENERATOR 10% ATMOSPHERIC DUMP VALVES

The Limiting Condition for Operation requirement of four steam generator 10% atmospheric dump valves (ADV) (PCV-19, PCV-20, PCV-21, and PCV-22) ensures that following a steam generator tube rupture accident subcooling can be achieved, consistent with assumptions used in the steam generator tube rupture analysis, to facilitate equalizing pressures between the Reactor Coolant System and the faulted steam generator. This eliminates further primary to secondary leakage and potential subsequent overflow of the affected steam generator. The analysis assumes that the 10% ADV on the ruptured steam generator is not used, and that the other three 10% ADVs are used for heat removal. The surveillance requirement for the 10% ADVs backup air bottles ensures that the 10% ADVs will be available to mitigate the consequences of a steam generator tube rupture accident concurrent with loss of offsite power.

A backup air bottle pressure of 260 psig provides adequate air to operate as assumed in the analysis. This provides sufficient margin to allow cooldown consistent with the analysis assumptions.

Concurrent with the requirement that a specific number of 10% ADVs be OPERABLE is the requirement that the associated 10% ADV block valves upstream be open. Should an associated 10% ADV block valve be closed, the 10% ADV downstream of that block valve should also be considered inoperable and the applicable ACTION statement shall be entered until such time that the block valve is opened.

## PLANT SYSTEMS

### BASES

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#### 3/4.7.1.6 STEAM GENERATOR 10% ATMOSPHERIC DUMP VALVES (continued)

Additionally, the requirements of Technical Specification 3.6.3, Containment Isolation Valves, apply to the 10% ADVs.

The Technical Specification is applicable in plant operational Modes 1, 2, and 3 because the 10% ADVs are required to provide the subcooling as necessary to permit primary system depressurization for SGTR accident mitigation.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 64 TO FACILITY OPERATING LICENSE NO. DPR-80  
AND AMENDMENT NO. 63 TO FACILITY OPERATING LICENSE NO. DPR-82  
PACIFIC GAS AND ELECTRIC COMPANY  
DIABLO CANYON NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-275 AND 50-323

1.0 INTRODUCTION

Condition 2.C.(9) of Amendment 12 to Facility Operating License No. DPR-82, (the Diablo Canyon Unit 2 operating license) required that the Pacific Gas and Electric Company (PG&E, or the licensee) demonstrate that the steam generator tube rupture (SGTR) analysis presented in the Diablo Canyon Final Safety Analysis Report (FSAR) is the most severe case with respect to the release of fission products and calculated doses. The NRC staff recently approved the SGTR analysis submitted by PG&E in response to the license condition. The staff review and approval of the Diablo Canyon SGTR analysis is documented in a letter dated April 3, 1991, from H. Rood (NRC) to J.D. Shiffer (PG&E), "Closeout of Steam Generator Tube Rupture Analysis Issue for Diablo Canyon Power Plant, and Finding of Compliance with Condition 2.C.(9) of Unit 2 Operating License DPR-82 (TAC Nos. 68346 and 68347)."

In addition to the SGTR analysis, License Condition 2.C.(9) of DPR-82 also required that PG&E propose changes to the Diablo Canyon Combined Technical Specifications (TS) consistent with the SGTR analysis assumptions. In the Diablo Canyon SGTR analysis, the atmospheric dump valves (ADV) are relied upon, following an SGTR accident concurrent with a loss of offsite power, to cool down the primary coolant system to allow equalization of pressure between the primary coolant system and the steam generator with tube rupture(s). Equalization of pressure will terminate primary-to-secondary coolant leakage, and thereby prevent subsequent overflow of the faulted steam generator. Before issuance of these amendments, ADV operability was assured by other administrative controls (plant operating procedures), but ADV operability was not covered by the TS.

In response to Condition 2.C.(9) of DPR-82, by letter dated February 28, 1990, PG&E proposed TS to assure ADV operability. Specifically, PG&E requested that the TS be modified adding TS 3/4.7.1.6 and the associated Bases to assure operability of the steam generator (SG) 10 percent ADVs for mitigation of an SGTR accident. The new limiting condition for operation will require all four SG ADVs to be operable in Modes 1, 2, and 3. New action statements will limit plant operation to 7 days with one ADV inoperable and 72 hours with two ADVs inoperable. New surveillance requirements will verify that backup air supply for the valves is available, that the SG ADV block valves are open, and that the

SG ADVs are capable of being opened and closed using remote manual controls and backup air bottles. Design changes associated with these TS changes include addition of an independent vital control power source for the backup air bottle controls for each valve, and the addition of manual selection capability for the backup air supplies. The design changes were implemented during the recently-completed fourth refueling outage at Unit 1, and will be implemented during the fourth refueling outage for Unit 2 (scheduled to begin in September 1991).

## 2.0 EVALUATION

In its letter of February 28, 1990, the licensee proposed to add TS 3/4.7.1.6 to the Diablo Canyon Combined Technical Specifications to assure operability of the SG ADVs. The licensee states that the DCPD design includes four SG ADVs, one for each SG. The ADV design includes remote manual controls and seismically qualified backup air bottles. The air bottles provide a backup air supply sufficient to operate the valves in the event that the normal air supply is unavailable due to a loss of offsite power. Having all four SG ADVs operable assures that, following an SGTR accident concurrent with loss of offsite power, subcooling can be achieved, consistent with the assumptions used in the SGTR analysis, to facilitate equalizing the pressures in the reactor coolant system and the faulted SG. Equalizing pressure will terminate primary-to-secondary coolant leakage, and will thereby prevent subsequent overflow of the faulted SG. The Diablo Canyon SGTR analysis assumes that the ADV for the faulted SG is unavailable, and that the other three ADVs are used for heat removal. Based on this, the new TS requires that all four ADVs be operable, including the associated remote manual controls and the backup air bottles, in Operating Modes 1, 2, and 3. Operability in Modes 4, 5, and 6 is not required because the ADVs are not necessary to achieve pressure equalization in these Modes.

Each ADV is equipped with a locally operated, manual block valve. To assure that all ADVs are operable, the new TS also requires the ADV block valves be open during operation in Modes 1, 2, and 3. The new TS also includes appropriate surveillance requirements for the ADVs and actions to be taken by the plant operators in the event that one or more ADVs are inoperable.

The licensee notes that similar ADV technical specifications have been implemented for several other Westinghouse plants.

The NRC staff has reviewed the licensee's bases for the requirements included in the new Diablo Canyon ADV TS, and finds them acceptable. In summary, the staff finds that TS 3/4.7.1.6 is consistent with the Diablo Canyon SGTR analysis, constitutes an additional restriction on plant operation that will enhance plant safety, and is therefore acceptable.

## 3.0 STATE CONSULTATION

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

#### 4.0 ENVIRONMENTAL CONSIDERATION

These amendments involve changes 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 a surveillance requirement. 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 issued a proposed finding that the 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.

#### 5.0 CONCLUSION

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

Principal Contributor: H. Rood

Dated: June 27, 1991