

May 25, 2005

Mr. Gregory M. Rueger
Senior Vice President, Generation and
Chief Nuclear Officer
Pacific Gas and Electric Company
Diablo Canyon Power Plant
P. O. Box 3
Avila Beach, CA 93424

SUBJECT: DIABLO CANYON POWER PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF
AMENDMENTS RE: REVISION TO STANDBY DIESEL GENERATOR FUEL
OIL INVENTORY TECHNICAL SPECIFICATIONS (TAC NOS. MC4593 AND
MC4594)

Dear Mr. Rueger:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 181 to Facility Operating License No. DPR-80 and Amendment No. 183 to Facility Operating License No. DPR-82 for the Diablo Canyon Power Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated September 23, 2004, and its supplements dated December 21, 2004, and April 7, 2005.

The amendments revise the TSs to increase the current minimum emergency diesel generator fuel oil inventory required to be maintained onsite to support the use of low-sulfur fuel oil required by California Air Resources Board.

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,

/RA/

Girija S. Shukla, Project Manager, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-275
and 50-323

Enclosures: 1. Amendment No. 181 to DPR-80
2. Amendment No. 183 to DPR-82
3. Safety Evaluation

cc w/encls: See next page

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***SE input**

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DATE	5/24/05	5/24/05	3/10/05	5/23/05	5/25/05

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PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-275

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 181
License No. DPR-80

1. The Nuclear Regulatory Commission (Commission) has found that:
 - A. The application for amendment by Pacific Gas and Electric Company (licensee) dated September 23, 2004, and its supplements dated December 21, 2004, and April 7, 2005, comply 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.181, 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, and shall be implemented within 90 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Robert A. Gramm, Chief, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: May 25, 2005

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-323

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 183
License No. DPR-82

1. The Nuclear Regulatory Commission (Commission) has found that:
 - A. The application for amendment by Pacific Gas and Electric Company (licensee) dated September 23, 2004, and its supplements dated December 21, 2004, and April 7, 2005, comply 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. 183, 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, and shall be implemented within 90 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Robert A. Gramm, Chief, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: May 25, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 181

TO FACILITY OPERATING LICENSE NO. DPR-80

AND AMENDMENT NO. 183 TO FACILITY OPERATING LICENSE NO. DPR-82

DOCKET NOS. 50-275 AND 50-323

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

3.8-14

3.8-15

INSERT

3.8-14

3.8-15

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 181 TO FACILITY OPERATING LICENSE NO. DPR-80
AND AMENDMENT NO. 183 TO FACILITY OPERATING LICENSE NO. DPR-82
PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT, UNITS 1 AND 2
DOCKET NOS. 50-275 AND 50-323

1.0 INTRODUCTION

By application dated September 23, 2004, and its supplements dated December 21, 2004, and April 7, 2005 (available in the Agencywide Documents Access and Management System (ADAMS) under Accession Numbers ML042790468, ML043630279, and ML051030251, respectively), Pacific Gas and Electric Company (PG&E or licensee) requested changes to the Technical Specifications (TS; Appendix A to Facility Operating License Nos. DPR-80 and DPR-82) for the Diablo Canyon Power Plant, Units 1 and 2 (DCPP). The supplemental letters dated December 21, 2004, and April 7, 2005, provided additional clarifying information, did not expand the scope of the application as originally noticed, and did not change the staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on January 4, 2005 (70 FR 402).

The requested change would revise Technical Specification (TS) Section 3.8.3 to increase the current minimum emergency diesel generator (EDG) fuel oil inventory required to be maintained onsite to support the use of low-sulfur fuel oil required by California Air Resources Board (CARB).

CARB regulations requiring the use of fuel oil with a limit of 500 parts per million (ppm) sulfur and ultra-low sulfur (ULS) fuel oil with a limit of 15 ppm sulfur for EDG operation will go into effect on January 1, 2006, and June 1, 2006, respectively. These changes in California air pollution regulations will require DCPP to replace the Environmental Protection Agency (EPA) red-dyed diesel fuel oil currently used for EDG operation with the ULS fuel oil. The use of ULS fuel oil, which has a heat content lower than EPA fuel oil, will result in a slightly higher (approximately 5 percent) EDG fuel oil consumption rate at DCPP. Consequently, the licensee proposed to increase the minimum EDG fuel oil inventory required to be maintained in the fuel oil storage tanks (FOSTs).

2.0 REGULATORY EVALUATION

Section 182.a of the Atomic Energy Act of 1954, as amended, requires applicants for nuclear power plant operating licenses to include TS as a part of the license. The Nuclear Regulatory Commission's (NRC's) regulatory requirements related to the content of TS are set forth in

Title 10 of the *Code of Federal Regulations* (10 CFR) 50.36, which requires that the TS include items in five specific categories: (1) safety limits, limiting safety settings and limiting control settings; (2) limiting conditions for operation (LCO); (3) surveillance requirements (SR); (4) design features; and (5) administrative controls.

Section 50.36(c)(2)(ii) of 10 CFR sets forth four criteria to be used in determining whether an LCO is required to be included in the TS. Fuel oil inventories are required to be maintained in the FOSTs to ensure minimum required EDG operation for 7 days following a loss-of-coolant accident (LOCA), therefore, this satisfies 10 CFR 50.36(c)(2)(ii) Criterion 2 which states:

A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

There are six EDGs and their associated support systems including the fuel oil transfer and storage system for both units. The fuel oil transfer and storage system for the EDGs is a common system shared between both units. The system primarily consists of two redundant fuel oil transfer pumps and two FOSTs each with a nominal capacity of 50,000 gallons, and is designed in such a way that fuel oil can be supplied by either fuel oil transfer pump from either FOST to replenish the EDG day tanks as required. One pump is adequate to supply the six EDGs operating at full load.

With regard to the minimum fuel oil inventory required to be maintained onsite for EDG operation, Regulatory Guide 1.137, Revision 1, "Fuel Oil Systems for Standby Diesel Generators," endorses the guidance established in the American National Standards Institute (ANSI) N195-1976, "Fuel Oil System for Standby Diesel Generators." ANSI standard N195-1976 requires the onsite fuel oil storage be sufficient to operate the minimum number of EDGs required following the limiting design basis accident (DBA) for 7 days. For a multiple-unit nuclear station with fuel oil systems having components shared between units, the fuel oil storage capacity shall be based on the following:

1. Operation of minimum engineered safety features assuming any limiting DBA in one unit.
2. Operation of equipment necessary to safely shutdown all units at the site and to maintain the shutdown condition of all units.
3. No availability of off-site ac power.

In compliance with the above guidance, Section 9.5.4, "Diesel Generator Fuel Oil Storage and Transfer System," of the DCPD Updated Safety Analysis Report states that the fuel oil storage capacity provides 7 days of onsite power generation in order to operate (a) the minimum required engineering safety features (ESF) equipment following a LOCA for one unit, and the equipment for the second unit in either the hot or cold shutdown condition, or (b) the equipment for both units in either the hot or cold shutdown condition. Subsequently, the following minimum combined inventory of fuel oil required to be maintained in the FOSTs for different modes of plant operation were established in the current DCPD TS Section 3.8.3:

The LCO of the current TS Section 3.8.3 requires that the fuel level for the stored diesel fuel oil shall be within the following limits:

- a. Combined storage of $\geq 65,000$ gallons for two units in MODES 1, 2, 3, and 4; or
- b. Combined storage of
 1. $\geq 33,000$ gallons for one unit (if any) in MODES 1, 2, 3, and 4; and
 2. $\geq 26,000$ gallons for each unit in MODES 5 and 6.

In addition, the current TS 3.8.3 specifies the following ACTIONS to be taken whenever a combined fuel level in storage tanks is not within limits:

- A.1.1 Verify combined fuel oil level $\geq 29,000$ gallons for each unit operating in MODES 1, 2, 3, or 4 immediately, and
- A.1.2 Verify combined fuel oil level $\geq 23,000$ gallons for each unit operating in MODES 5 or 6 immediately, and
- A.2 Restore fuel oil level to 48 hours within limits.

Also, the current LCO 3.8.3 contains the following footnote to define the fuel oil inventory requirements while one tank is removed from service to permit FOST cleaning once every ten years in accordance with the TS Surveillance Requirements:

The performance of diesel fuel oil tank cleaning requires one fuel oil storage tank to be removed from service to be drained and cleaned. During this time, the fuel oil storage requirement for one unit operation in MODES 1, 2, 3, and 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 $\geq 35,000$ gallons. The tank being cleaned may be inoperable for up to 10 days. For the duration of the tank cleaning, temporary onsite fuel oil storage of $\geq 24,000$ gallons will be maintained. Prior to removal of a tank from service, the offsite circuits required by LCO 3.8.1 or 3.8.2 will be verified to be OPERABLE.

3.0 TECHNICAL EVALUATION

To comply with the CARB regulations, the licensee recalculated the LCO 3.8.3 fuel oil inventory requirements based on the slightly lower heat content ULS fuel oil. Other assumptions (including minimum ESF operating conditions; the amount of unusable volume and vortexing) used in the original calculation were not changed. Consequently, the licensee proposed the following changes to the current TS 3.8.3:

LCO 3.8.3.a - The combined storage for 2 units in Modes 1, 2, 3, and 4 will be increased from $\geq 65,000$ gallons to $\geq 79,000$ gallons.

LCO 3.8.3.b.1 and 2 - The combined storage for one unit in Modes 1, 2, 3, and 4, and each unit in Modes 5 and 6, will be increased from $\geq 33,000$ gallons to $\geq 41,000$ gallons, and from $\geq 26,000$ gallons to $\geq 31,000$ gallons, respectively.

TS 3.8.3 Required Action A.1.1 - Verification of combined fuel level for each unit operating in Modes 1, 2, 3, or 4 will be increased from $\geq 29,000$ gallons to $\geq 36,000$ gallons.

TS 3.8.3 Required Action A.1.2 - Verification of combined fuel level for each unit operating in Modes 5 or 6 will be increased from $\geq 23,000$ gallons to $\geq 27,000$ gallons.

Based on its review, the staff finds that the above proposed changes do not change the DCPD licensing basis requirement to maintain a minimum fuel oil required to support 7-day EDG operation following a LOCA in one unit and a concurrent non-LOCA safe shutdown in the remaining unit. The two existing 50,000 gallon tanks are sufficiently large to accommodate the increased volumes, therefore, the staff finds the above proposed changes to the current TSs acceptable.

In addition, the licensee proposed the following changes to the current TS 3.8.3 footnote:

LCO 3.8.3 Note - During performance of diesel fuel oil tank cleaning, with one tank removed from service for up to 10 days, the fuel oil storage requirement for one unit in operation in Modes 1, 2, 3, and 4 and one unit in Mode 6 with at least 23 feet of water above the reactor vessel flange or with the reactor vessel defueled will be increased from $\geq 35,000$ gallons to $\geq 41,000$ gallons. For the duration of tank cleaning, temporary onsite fuel oil storage will be increased from $\geq 24,000$ gallons to $\geq 25,000$ gallons.

The proposed changes result in less than three percent increase of fuel oil in the permanent storage tank and slightly over four percent increase of the temporary onsite fuel oil storage. On November 10, 2004, the staff requested the licensee to provide a detailed discussion to demonstrate that the proposed combined permanent and temporary fuel oil inventory on site will be sufficient for a 7-day EDG operation following a LOCA during the duration of FOST cleaning. In its response dated December 21, 2004, the licensee indicated that for one unit in operation in Modes 1, 2, 3, and 4 and one unit in Mode 6 with at least 23 feet of water above the reactor vessel flange or with the reactor vessel defueled, the EDG operation consumption rate is approximately 8,252 gallons of ULS fuel oil per day. The proposed 41,000 gallons of ULS fuel oil maintained in the permanent storage tank would provide slightly over 4 days of EDG operation. The proposed temporary onsite fuel oil storage support EDG operation for approximately 3 days. Based on its review, the staff concludes that there is sufficient supply of fuel oil for a 7-day EDG operation following a LOCA during the duration of FOST cleaning at DCPD. Therefore, the staff finds the above proposed changes to TS 3.8.3 footnote acceptable.

Based on its review and evaluation described above, the staff concludes that the proposed changes remain consistent with the intent of the guidance described in ANS N195-1976 regarding the design requirements for the EDG fuel oil inventory. Therefore, the staff finds the above proposed TS changes 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

The amendments change limiting conditions for operation. 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 (70 FR 402; published January 4, 2005). 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: D. Shum

Date: May 25, 2005

Diablo Canyon Power Plant, Units 1 and 2

cc:

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March 2005