

March 21, 2007

Mr. John S. Keenan  
Senior Vice President and Chief Nuclear Officer  
Pacific Gas and Electric Company  
Diablo Canyon Power Plant  
P.O. Box 770000  
San Francisco, CA 94177-0001

SUBJECT: DIABLO CANYON POWER PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF  
AMENDMENTS RE: STEAM GENERATOR TUBE INTEGRITY TECHNICAL  
SPECIFICATION (TAC NOS. MD2132 AND MD2133)

Dear Mr. Keenan:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 194 to Facility Operating License No. DPR-80 and Amendment No. 195 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 May 30, 2006, as supplemented by letters dated November 22, 2006, and January 11, 2007.

The amendments revise the existing steam generator (SG) tube surveillance program. The changes are modeled after TS Task Force (TSTF) traveler TSTF-449, Revision 4, "Steam Generator Tube Integrity," and the model safety evaluation prepared by the NRC and published in the *Federal Register* on March 2, 2005 (70 FR 10298). The scope of the application includes changes to the definition of leakage, changes to the primary-to-secondary leakage requirements, changes to the SG tube surveillance program (SG tube integrity), changes to the SG reporting requirements, and associated changes to the TS Bases. As stated in your letter dated February 16, 2006, the amendments are also the modification of the SG portion of the TSs requested in NRC Generic Letter (GL) 2006-01, "Steam Generator Tube Integrity and Associated Technical Specifications." The NRC staff considers the amendments to be an acceptable and complete response to GL 2006-01. This completes the NRC staff's efforts on TAC Nos. MD2132 and MD2133.

J. S. Keenan

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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/***

Alan Wang, Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosures:   1. Amendment No. 194 to DPR-80  
                  2. Amendment No. 195 to DPR-82  
                  3. Safety Evaluation

cc w/encls: See next page

J. S. Keenan

-2-

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,

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Alan Wang, Project Manager  
Plant Licensing Branch IV  
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1. Amendment No. 194 to DPR-80
  2. Amendment No. 195 to DPR-82
  3. Safety Evaluation

cc w/encls: See next page

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**ADAMS Accession Nos.: Pkg ML070440492** (Amdt./License ML070440493, TS Pgs ML0704400494)

|        |             |             |             |         |             |
|--------|-------------|-------------|-------------|---------|-------------|
| OFFICE | NRR/LPL4/PM | NRR/LPL4/LA | DCI/CSGB/BC | OGC     | NRR/LPL4/BC |
| NAME   | AWang       | LFeizollahi | AHiser      | JRund   | DTerao      |
| DATE   | 3/7/07      | 3/6/07      | 2/7/07      | 3/15/07 | 3/16/07     |

**OFFICIAL RECORD COPY**

Diablo Canyon Power Plant, Units 1 and 2

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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. 194  
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 May 30, 2006, as supplemented by letter dated November 22, 2006, and January 11, 2007, 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 and paragraph 2.C.(2) of Facility Operating License No. DPR-80 as indicated in the attachment to this license amendment.

3. This license amendment is effective as of its date of issuance and shall be implemented within 120 days.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

David Terao, Chief  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility  
Operating License and  
Technical Specifications

Date of Issuance: March 21, 2007

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-323

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 195  
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 May 30, 2006, as supplemented by letters dated November 22, 2006, and January 11, 2007, 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 and paragraph 2.C.(2) of Facility Operating License No. DPR-82 as indicated in the attachment to this license amendment.

3. This license amendment is effective as of its date of issuance and shall be implemented within 120 days.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

David Terao, Chief  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility  
Operating License and  
Technical Specifications

Date of Issuance: March 21, 2007

ATTACHMENT TO LICENSE AMENDMENT NO. 194  
TO FACILITY OPERATING LICENSE NO. DPR-80 AND  
AMENDMENT NO. 195 TO FACILITY OPERATING LICENSE NO. DPR-82  
DOCKET NOS. 50-275 AND 50-323

Replace the following pages of the Facility Operating Licenses, Nos. DPR-80 and DPR-82, and 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.

Facility Operating Licenses, Nos. DPR-80 and DPR-82

| <u>REMOVE</u> | <u>INSERT</u> |
|---------------|---------------|
| -3-           | -3-           |
| -3-           | -3-           |

Technical Specifications

| <u>REMOVE</u> | <u>INSERT</u> |
|---------------|---------------|
| 1.1-4         | 1.1-4         |
| 3.4-27        | 3.4-27        |
| 3.4-28        | 3.4-28        |
| —             | 3.4-37        |
| ---           | 3.4-38        |
| 5.0-10        | 5.0-10        |
| 5.0-11        | 5.0-11        |
| 5.0-11a       | 5.0-12        |
| 5.0-12        | 5.0-13        |
| 5.0-13        | 5.0-14        |
| 5.0-13a       | 5.0-15        |
| 5.0-14        | 5.0-16        |
| 5.0-15        | 5.0-17        |
| 5.0-16        | 5.0-18        |
| 5.0-17        | 5.0-19        |
| 5.0-18        | —             |
| 5.0-19        | —             |
| 5.0-29        | 5.0-29        |
| 5.0-30        | 5.0-30        |
| 5.0-30a       | 5.0-30a       |
| 5.0-30b       | 5.0-30b       |

- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
  - (5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This License shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
- (1) Maximum Power Level

The Pacific Gas and Electric Company is authorized to operate the facility at reactor core power levels not in excess of 3411 megawatts thermal (100% rated power) in accordance with the conditions specified herein.
  - (2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 194, 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) Initial Test Program

The Pacific Gas and Electric Company shall conduct the post-fuel-loading initial test program (set forth in Section 14 of Pacific Gas and Electric Company's Final Safety Analysis Report, as amended), without making any major modifications of this program unless modifications have been identified and have received prior NRC approval. Major modifications are defined as:

    - a. Elimination of any test identified in Section 14 of PG&E's Final Safety Analysis Report as amended as being essential;

- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This License shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The Pacific Gas and Electric Company is authorized to operate the facility at reactor core power levels not in excess of 3411 megawatts thermal (100% rated power) in accordance with the conditions specified herein.

(2) Technical Specifications (SSER 32, Section 8)\* and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 195, 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) Initial Test Program (SSER 31, Section 4.4.1)

Any changes to the Initial Test Program described in Section 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change.

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\*The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report and/or its supplements wherein the license condition is discussed.

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 194 TO  
FACILITY OPERATING LICENSE NO. DPR-80 AND  
AND AMENDMENT NO. 195 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 May 30, 2006 (Agency Documents Access and Management System (ADAMS) Accession No. ML061570107), as supplemented by letters dated November 22, 2006 (ADAMS Accession No. ML063380448), and January 11, 2007 (ADAMS Accession No. ML070190080), Pacific Gas and Electric Company (the licensee) requested changes to the Technical Specifications (TSs, Appendix A to Facility Operating License Nos. DPR-80 and DPR-82) for the Diablo Canyon Power Plant, Units Nos. 1 and 2.

The proposed amendments would revise the existing steam generator (SG) tube surveillance program. The changes are modeled after Technical Specification Task Force (TSTF) traveler TSTF-449, Revision 4, "Steam Generator Tube Integrity," and the model safety evaluation (SE) prepared by the U.S. Nuclear Regulatory Commission (NRC) and published in the *Federal Register* on March 2, 2005 (70 FR 10298). Specifically, the proposed changes would revise the definition of leakage and would make changes to the primary-to-secondary leakage requirements, changes to the SG tube surveillance program (SG tube integrity), changes to the SG reporting requirements, and associated changes to the TS Bases.

The supplemental letters dated November 22, 2006, and January 11, 2007, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on July 18, 2006 (71 FR 40751).

## 2.0 REGULATORY EVALUATION

The background, description, and applicability of the proposed changes associated with the SG tube integrity issue and the applicable regulatory requirements were included in the NRC

staff's model SE. The "Notice of Availability of Model Application Concerning Technical Specification; Improvement To Modify Requirements Regarding Steam Generator Tube Integrity; Using the Consolidated Line Item Improvement Process," was published in the *Federal Register* on May 6, 2005 (70 FR 24126), and made the model SE available for licensees to reference.

### 3.0 TECHNICAL EVALUATION

#### 3.1 Overview

In its May 30, 2006, application, and November 22, 2006, and January 11, 2007, supplements, the licensee proposed changes to the TSs that are modeled after TSTF Standard Technical Specification Change Traveler, TSTF-449, "Steam Generator Tube Integrity." There were minor differences between TSTF-449 and the licensee's application. These included differences in the facility licensing basis (other than those discussed in TSTF-449) and differences in TS numbering. These differences are discussed below.

With respect to the differences in the facility licensing basis, the differences did not invalidate the technical evaluation of TSTF-449; rather, they resulted in the licensee having to slightly deviate from some of the modifications discussed in TSTF-449. For example, in the Bases section for SG tube integrity, TSTF-449 indicated that the accident analysis for an SG tube rupture assumed the contaminated secondary fluid was only briefly released to the atmosphere via safety valves and that the majority was discharged to the main condenser. Since the licensee has a different licensing basis than the one described in the Standard TS (i.e., TSTF-449), it did not include this sentence. The licensee instead indicated that the analysis assumes the contaminated secondary fluid is released briefly to the atmosphere from all the power-operated relief valves (PORVs) following a reactor trip. That is, the contaminated secondary fluid is released from the PORV associated with the ruptured SG for 30 minutes, is released from the PORV from the intact SGs during cooldown, and is released from all PORVs following cooldown until termination of the event. Another example (in the Bases section for TSTF-449) is that the licensee provided additional text concerning the accident-induced primary-to-secondary leakage limit. Since these differences were minor in nature, and are consistent with the plant's licensing basis (e.g., in the level of detail incorporated into the TS Bases), or are consistent with the intent of TSTF-449, the NRC staff determined that these deviations from TSTF-449 were acceptable.

With respect to the differences in the numbering of the TSs, these differences were editorial in nature and did not affect the technical adequacy of the submittal. As a result, the NRC staff determined that these changes were acceptable.

In addition to these minor changes, the licensee proposed to include previously-approved alternate repair criteria into their proposed new TSs. The structure of TSTF-449 allows licensees to incorporate alternate repair criteria into the TSTF-449 format. By incorporating the previously-approved repair criteria into the TSTF-449 format, there were several additions, deletions, and changes to the requirements. These changes (including additions and deletions), were made as a result of the format, content, and performance-based approach of TSTF-449.

The staff verified that: (a) the inspection criteria associated with these repair criteria were moved, as appropriate, to the inspection section of the proposed SG TSs, (b) the repair criteria were moved, as appropriate, to the repair criteria section of the proposed SG TSs, and (c) the reporting requirements were moved to the reporting section of the proposed SG TSs. There were some pre-existing reporting requirements associated with these previously-approved repair criteria that were deleted since the reporting requirements are no longer necessary. These requirements are no longer necessary because the licensee incorporated the limits that would require the report to be submitted into the definition of SG tube integrity (and the plant cannot operate when SG tube integrity is not maintained under the proposed new SG TSs). A reporting requirement was also added to the new SG TS to reflect a commitment to submit the report. In summary, the NRC staff determined that the previously-approved repair criteria were appropriately incorporated into the TSs.

The proposed TS changes that are consistent with TSTF-449 are: (1) a revised definition of LEAKAGE in TS 1.1, (2) a revised TS 3.4.13, "RCS [Reactor Coolant System] Operational LEAKAGE," (3) a new TS 3.4.17, "Steam Generator (SG) Tube Integrity," (4) a revised TS 5.5.9, "Steam Generator (SG) Program," (5) a revised TS 5.6.10, "Steam Generator (SG) Tube Inspection Report," and (6) revised Table of Contents pages to reflect the proposed changes. The NRC staff also concluded that the remainder of the application was consistent with or more limiting than the requirements in TSTF-449. Therefore, the staff determined that the model SE is applicable to this review and finds the proposed changes acceptable.

### 3.2 Acceptability of the Adoption of TSTF-449

The proposed TS changes establish a programmatic, largely performance-based regulatory framework for ensuring SG tube integrity is maintained. The NRC staff finds that it addresses key shortcomings of the current framework by ensuring that SG programs are focused on accomplishing the overall objective of maintaining tube integrity. It incorporates performance criteria for evaluating tube integrity that the NRC staff finds consistent with the structural margins and the degree of leak tightness assumed in the current plant licensing basis. The NRC staff finds that maintaining these performance criteria provide reasonable assurance that the SGs can be operated safely without an increase in risk.

The revised TSs contain limited specific details concerning how the SG program is to achieve the required objective of maintaining tube integrity. The intent is that the licensee will have the flexibility to determine the specific strategy for meeting this objective. However, the NRC staff finds that the revised TSs include sufficient regulatory constraints on the establishment and implementation of the SG program such as to provide reasonable assurance that tube integrity will be maintained.

Failure to meet the performance criteria will be reportable pursuant to the requirements in Sections 50.72 and 50.73 of Title 10 of the *Code of Federal Regulations* (10 CFR). The NRC reactor oversight process provides a process by which the NRC staff can verify that the licensee has identified any SG program deficiencies that may have contributed to such an occurrence and that appropriate corrective actions have been implemented.

In conclusion, the NRC staff finds that the TS changes proposed by the licensee in its May 30, 2006, application, as supplemented by letters dated November 22, 2006, and January 11,

2007, conform to the requirements of 10 CFR 50.36 and establish a TS framework that will provide reasonable assurance that SG tube integrity is maintained without undue risk to public health and safety.

The licensee included in its application the revised TS Bases to be implemented with the TS change. The NRC staff finds that the TS Bases Control Program is the appropriate process for updating the affected TS Bases pages and has, therefore, not included the affected Bases pages with this amendment.

#### 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 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 (71 FR 40751; published on July 18, 2006). 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.

#### 7.0 REFERENCES

A complete list of references used to complete this review can be found in the NRC's model SE published in the *Federal Register* on March 2, 2005 (70 FR 10298)

Principal Contributor: Y. Diaz-Castillo

Date: March 21, 2007