



**Pacific Gas and Electric Company®**

The Enclosure 1, Attachments C, D, G, and W Contain ~~Security-Related Information – Withhold Under 10 CFR 2.390~~

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June 26, 2013

PG&E Letter DCL-13-065

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555-0001

10 CFR 50.90

Diablo Canyon Units 1 and 2  
Docket No. 50-275, OL-DPR-80  
Docket No. 50-323, OL-DPR-82  
License Amendment Request 13-03  
License Amendment Request to Adopt NFPA 805 Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants (2001 Edition)

- References:
1. PG&E Letter DCL-05-153, "Letter of Intent to Adopt NFPA 805, 'Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants,' 2001 Edition," dated December 29, 2005
  2. PG&E Letter DCL-11-076, "Request for Extension of Enforcement Discretion and Commitment to Submittal Date for 10 CFR 50.48(c) License Amendment Request," dated June 24, 2011
  3. NRC Letter to PG&E, "Diablo Canyon Power Plant, Unit Nos. 1 and 2 – Commitment to Submit a License Amendment Request to Transition to 10 CFR 50.48(c), National Fire Protection Association Standard NFPA 805, and Request to Extend Enforcement Discretion (TAC NOS. ME6634 AND ME6635)," dated July 28, 2011

Dear Commissioners and Staff:

Pursuant to 10 CFR 50.90, Pacific Gas and Electric Company (PG&E) hereby requests approval of the enclosed proposed amendment to Facility Operating License Nos. DPR-80 and DPR-82 for Units 1 and 2 of the Diablo Canyon Power Plant (DCPP) respectively.

The enclosed license amendment request (LAR) requests Nuclear Regulatory Commission (NRC) approval for adoption of a new fire protection (FP) licensing basis, which complies with the requirements in 10 CFR 50.48(a), 10 CFR 50.48(c), and the guidance in Regulatory Guide (RG) 1.205, Revision 1, "Risk-Informed, Performance Based Fire Protection for Existing Light-Water Nuclear Power Plants." This LAR also follows the guidance in Nuclear Energy Institute (NEI) 04-02,

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When separated from these attachments, this document is decontrolled.

*Adole*



June 26, 2013

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Revision 2, "Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program Under 10 CFR 50.48(c)."

In Reference 1, PG&E submitted a letter of intent to adopt National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition, in accordance with 10 CFR 50.48(c) for DCPD Units 1 and 2. In Reference 2, PG&E requested the current extension of enforcement discretion to June 28, 2013.

In Reference 3, the NRC found the request in Reference 2 consistent with NRC Commission approved direction as provided in SRM-SECY-11-0061, "Staff Requirements -SECY-11-0061 - A Request to Revise the Interim Enforcement Policy for Fire Protection Issues on 10 CFR 50.48(c) to Allow Licensees to Submit License Amendment Requests in a Staggered Approach (RIN 3150-AG48)," dated June 10, 2011 (ADAMS Accession No. ML 111610616), and granted the request in accordance with the Interim Enforcement Policy concerning Enforcement Discretion for Certain Fire Protection Issues as published in the *Federal Register* on July 12, 2011 (76 FR 40777).

Upon approval, the DCPD FP Program will transition to a new Risk-Informed, Performance-Based (RI-PB) alternative in accordance with 10 CFR 50.48(c), which incorporates by reference NFPA 805. The NFPA 805 FP Program will supersede the current FP Program licensing basis.

The transition to the proposed new FP licensing basis includes the following high level activities: a new fire safe shutdown analysis, a new Fire Probabilistic Risk Assessment (PRA), and completion of activities required for transitioning the licensing basis to 10 CFR 50.48(c).

A Fire PRA to support the RI-PB change evaluations per Regulatory Positions C.2.2 and C.4.3 of RG 1.205, Revision 1, has been completed. The PRA was developed in accordance with NUREG/CR-6850 and EPRI Transition Report (TR)-1011989, and is discussed in Enclosure 1, Section 4.5. In accordance with the guidance in Regulatory Position C.2.2.4.2 of RG 1.205, Revision 1, PG&E has evaluated the total risk change associated with pre-transition FP Program variances meeting the NFPA 805 performance-based approach (via the fire risk evaluation process). Further, upon completion of the plant modifications, as referenced in Section 4.8.2 of Enclosure 1, the total change in risk associated with the transition to NFPA 805 will be consistent with the acceptance guidelines in RG 1.174, Revision 2.

Enclosure 1 contains the DCPD TR and its supporting attachments. The TR provides the required technical and regulatory assessments to enable NRC review and approval of the new licensing basis. The DCPD TR is based on Revision 1P of

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the industry template developed by the NEI NFPA 805 Task Force and adopts the resolution of applicable Frequently Asked Questions.

Attachments C, D, G, and W of Enclosure 1 contain security-related information and should be withheld under 10 CFR 2.390.

Enclosures 2 contains the markup Operating License pages. Enclosure 3 contains the markup Technical Specifications (TS) pages. Enclosure 4 contains the retyped TS page.

The changes in this LAR are not required to address an immediate safety concern. PG&E requests approval of this LAR within 24 months, and proposes to implement the new FP licensing basis in accordance with the implementation schedule provided in Section 5.5 of the TR. Specific activities and modifications required for implementation are listed in Attachment S, Tables S-3 and S-2, respectively, of the TR. However, the final actions and modifications to be implemented may change as a result of the NRC review process.

This communication contains new commitments to be implemented following NRC approval of the LAR. The commitments are contained in Enclosure 5.

In accordance with site administrative procedures and the Quality Assurance Program, the proposed amendment has been reviewed by the Plant Staff Review Committee.

Pursuant to 10 CFR 50.91, PG&E is sending a copy of this proposed amendment to the California Department of Public Health.

If you have any questions or require additional information, please contact Mr. Tom Baldwin at 805-545-4720.

I state under penalty of perjury that the foregoing is true and correct.

Executed on June 26, 2013.

Sincerely,

A handwritten signature in black ink that reads 'Barry S. Allen'.

Barry S. Allen  
*Site Vice President*



June 26, 2013

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mjrm/4557

Enclosures

cc: Diablo Distribution

cc/enc: Thomas R. Hipschman, NRC, Senior Resident Inspector

Arthur T. Howell, III, NRC Region IV

Gonzalo L. Perez, Branch Chief, California Dept of Public Health

James T. Polickoski, NRR Project Manager

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Enclosure 1  
PG&E Letter DCL-13-065

## **Transition Report**

**Transition to 10 CFR 50.48(c) - NFPA 805  
Performance-Based Standard for Fire Protection for Light  
Water Reactor Electric Generating Plants, 2001 Edition**

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**Proposed Operating License Markup**

(4) Special Tests

PG&E is authorized to perform steam generator moisture carryover studies and turbine performance tests at the Diablo Canyon Nuclear Power Plant, Unit 1. These studies involve the use of an aqueous tracer solution of three (3) curies of sodium-24. PG&E's personnel shall be in charge of conducting these studies and be knowledgeable in the procedures. PG&E shall impose personnel exposure limits, posting, and survey requirements in conformance with those in 10 CFR Part 20 to minimize personnel exposure and contamination during the studies. Radiological controls shall be established in the areas of the chemical feed, feedwater, steam, condensate and sampling systems where the presence of the radioactive tracer is expected to warrant such controls. PG&E shall take special precautions to minimize radiation exposure and contamination during both the handling of the radioactive tracer prior to injection and the taking of system samples following injection of the tracer. PG&E shall ensure that all regulatory requirements for liquid discharge are met during disposal of all sampling effluents and when re-establishing continuous blowdown from the steam generators after completion of the studies.

(5) Fire Protection

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License  
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- a. PG&E shall implement and maintain in effect all provisions of the approved fire protection plan as discussed in its Final Safety Analysis Report Update, in PG&E's December 6, 1984, Appendix R Report, and in the NRC staff's Fire Protection Evaluation in Supplements 8, 9, 13, 23, and 27 to the Diablo Canyon Safety Evaluation Report, subject to provision b below.
- b. PG&E may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.
- c. Deleted.

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. 217, 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) 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.

(4) Fire Protection (SSER 31, Section 9.6.1 and SSER 32, Section 10)

- a. PG&E shall implement and maintain in effect all provisions of the approved fire protection program as discussed in its Final Safety Analysis Report Update, in PG&E's December 6, 1984, Appendix R Report, and in the NRC staff's Fire Protection Evaluation in Supplements 8, 9, 13, 23, 27 and 31 to the Diablo Canyon Safety Evaluation Report, subject to provision b below.
- b. PG&E may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.
- c. Deleted.

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**OPERATING LICENSE INSERT**

**(Unit 1 condition C.2.(5) and Unit 2 condition C.2.(4))**

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- a. PG&E shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the PG&E amendment request dated June 27, 2013, (and supplements dated \_\_\_\_\_ and \_\_\_\_\_) and as approved in the SER dated \_\_\_\_\_ (and supplements dated \_\_\_\_\_). Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, PG&E may make changes to the Fire Protection Program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.
- b. Risk-Informed Changes that May Be Made Without Prior NRC Approval
- A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed Fire Probabilistic Risk Assessment model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact:
- (1) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

- (2) Prior NRC review and approval is not required for individual changes that result in a risk increase less than  $1 \times 10^{-7}$ /year (yr) for CDF and less than  $1 \times 10^{-8}$ /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

c. Other Changes that May Be Made Without Prior NRC Approval

- (1) Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program

Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental Fire Protection Program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. PG&E may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.

PG&E may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is "adequate for the hazard." Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- "Fire Alarm and Detection Systems" (Section 3.8);
- "Automatic and Manual Water-Based Fire Suppression Systems" (Section 3.9);
- "Gaseous Fire Suppression Systems" (Section 3.10);
- and,

**Proposed Technical Specification Markup**

## 5.0 ADMINISTRATIVE CONTROLS

### 5.4 Procedures

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- 5.4.1 Written procedures shall be established, implemented, and maintained covering the following activities:
- a. The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978;
  - b. The emergency operating procedures required to implement the applicable requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33 and responses to the subject NUREGs;
  - c. Quality assurance for effluent and environmental monitoring;
  - d. ~~Fire Protection Program implementation; and~~ *Not used; and*
  - e. All programs specified in Specification 5.5.
-

**Revised Technical Specification Page(s)**

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**5.0-5**

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## 5.0 ADMINISTRATIVE CONTROLS

### 5.4 Procedures

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- 5.4.1 Written procedures shall be established, implemented, and maintained covering the following activities:
- a. The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978;
  - b. The emergency operating procedures required to implement the applicable requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33 and responses to the subject NUREGs;
  - c. Quality assurance for effluent and environmental monitoring;
  - d. Not used; and
  - e. All programs specified in Specification 5.5.
-

### **List of Regulatory Commitments**

**Commitment 1:** (Section 5.4 of Transition Report)

After the approval of the LAR, in accordance with 10 CFR 50.71(e), the DCPD UFSAR will be revised. The format and content will be consistent with NEI 04-02, Revision 2, FAQ 12-0062.

**Commitment 2:** (Section 5.5 of Transition Report)

Implementation of the new NFPA 805 FP Program to include procedure changes, process updates, and training to affected plant personnel will occur 180 days after issuance of the license amendment (see Attachment S, Table S-3).

**Commitment 3:** (Section 5.5 of Transition Report)

PG&E will complete modifications necessary to support the new FP licensing basis for transitioning to NFPA 805 by the end of the Units 1 and 2 Refueling Outages, currently scheduled for April/May 2017 (1R20) and February/March 2018 (2R20), respectively.

**Commitment 4:** (Section 5.5 of Transition Report)

Appropriate compensatory measures will be established per OM8.ID2, "Fire System Impairment," and maintained until modifications are complete (see attachment S, Table S-2).

**Commitment 5:** (Attachment S of Transition Report, Table S-3)

Table S-3, Implementation Items, provided below are those items (procedure changes, process updates, and training to affected plant personnel) that will be completed prior to the implementation of new NFPA 805 Fire Protection Program (FPP), as defined in Section 5.5 of this LAR.