



**Pacific Gas and  
Electric Company®**

**THE ATTACHMENT OF THE ENCLOSURE TO THIS LETTER IS SECURITY-RELATED  
INFORMATION. WITHHOLD UNDER 10 CFR 2.390**

October 3, 2013

PG&E Letter DCL-13-096

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

**Barry S. Allen**  
Site Vice President

Diablo Canyon Power Plant  
Mail Code 104/6  
P. O. Box 56  
Avila Beach, CA 93424

805.545.4888  
Internal: 691.4888  
Fax: 805.545.6445

10 CFR 50.90

Diablo Canyon Units 1 and 2  
Docket No. 50-275, OL-DPR-80  
Docket No. 50-323, OL-DPR-82  
PG&E Response to NRC Request for Supplemental Information for License  
Amendment Request 13-03

- References:
1. PG&E Letter DCL-13-065, "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)," dated June 26, 2013
  2. NRC Letter to PG&E, "Diablo Canyon Power Plant, Unit Nos. 1 and 2 - Supplemental Information Needed for Acceptance of Requested Licensing Action Re: License Amendment Request to Adopt National Fire Protection Association Standard 805 (TAC Nos. MF2333 and MF2334)," dated September 24, 2013

Dear Commissioners and Staff:

On September 24, 2013, the NRC staff requested, in Reference 2, additional information needed to support the license amendment application provided in Reference 1.

The Enclosure of this letter provides a supplement to the Reference 1 application.

The Attachment of the Enclosure contains security-related information and should be withheld under 10 CFR 2.390.

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

A member of the STARS (Strategic Teaming and Resource Sharing) Alliance  
Callaway • Comanche Peak • Diablo Canyon • Palo Verde • San Onofre • South Texas Project • Wolf Creek

**THE ATTACHMENT OF THE ENCLOSURE TO THIS LETTER IS SECURITY-RELATED  
INFORMATION. WHEN SEPARATED FROM THE ATTACHMENT,  
THIS DOCUMENT IS DECONTROLLED**



Document Control Desk  
October 3, 2013  
Page 2

PG&E Letter DCL-13-096

The information provided in this supplement does not affect the results of the no significant hazards consideration determination previously transmitted in Reference 1.

PG&E makes no regulatory commitments (as defined by NEI 99 04) in this letter. This letter includes no revisions to existing regulatory commitments.

Pursuant to 10 CFR 50.91, PG&E is sending a copy of this supplement to the 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 October 3, 2013.

Sincerely,

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

Barry S. Allen  
*Site Vice President*

mjrm/4557/SAPN50037411

Enclosure

cc: Diablo Distribution  
cc/enc: Thomas R. Hipschman, NRC, Senior Resident Inspector  
Gonzalo L. Perez, Branch Chief, California Dept of Public Health  
Jennivine K. Rankin, NRR Project Manager  
Steven A. Reynolds, Acting NRC Region IV Administrator

**PG&E Response to NRC Request for Supplemental Information for License Amendment  
Request 13-03**

- References:
1. PG&E Letter DCL-13-065, "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)," dated June 26, 2013
  2. NRC Letter to PG&E, "Diablo Canyon Power Plant, Unit Nos. 1 and 2 - Supplemental Information Needed for Acceptance of Requested Licensing Action Re: License Amendment Request to Adopt National Fire Protection Association Standard 805 (TAC Nos. MF2333 and MF2334)," dated September 24, 2013

On September 24, 2013, the Nuclear Regulatory Commission (NRC) staff requested, in Reference 2, additional information needed to support the license amendment request application provided in Reference 1. The NRC requests and Pacific Gas and Electric Company (PG&E) responses are provided below.

**NRC Request 1:**

*Tables W-2 and W-3 of the submittal dated June 26, 2013, present the significant-risk accident sequences for [Diablo Canyon Power Plant] DCPP, Units 1 and 2, respectively, associated with fire scenarios that individually contribute greater than 0.5% of the calculated fire core damage frequency (CDF). There are no similar tables provided for large early release frequency (LERF). Please provide listings of all of the fire initiating events that contribute individually greater than 0.5 percent of the calculated LERF for both Units 1 and 2 (similar to Tables W-2 and W-3 for CDF).*

**PG&E Response:**

Unit 1 and Unit 2 fire probabilistic risk assessment (FPRA) LERF significant fire initiating events (individually representing greater than 0.5 percent of the calculated LERF) are provided below in the Attachment to this Enclosure as Tables 1 and 2, respectively.

**NRC Request 2:**

*Table S-2 of the submittal dated June 26, 2013, identifies Modification S-2.3, "Reactor Coolant Pump (RCP) Seal Cooling Modification," which includes installation of Westinghouse SHIELD low leakage RCP seals. The NRC staff understands that PG&E fully intends to install this modification or other compensatory measures in order to achieve the desired plant safety, as documented in the LAR. However, given the recent concerns about the performance of the new Westinghouse RCP seals, the risk reduction credit taken in this application for this modification may be optimistic. Not crediting the RCP seal cooling modification will likely increase the total CDF and LERF for both units. Please discuss the impact of not crediting the new Westinghouse SHIELD RCP seals on CDF, LERF, delta ( $\Delta$ ) CDF, and  $\Delta$ LERF.*

**PG&E Response:**

As noted by the NRC Request 2, PG&E remains confident that an RCP seal cooling upgrade modification is feasible, and that a solution will be implemented consistent with the commitment made in PG&E Letter DCL-13-065 under oath and affirmation. As requested, the model results to date without credit for the RCP Shutdown Seal (SDS) Cooling Modification are provided in Table 3 in the Attachment to this Enclosure and continued refinement will be completed by the time of the NRC Audit.

The following information is presented to illustrate the reasons behind PG&E's continued confidence that an RCP seal cooling upgrade modification is feasible. As stated in PG&E Letter DCL-13-065, Enclosure 1, Modification S-2.3 "is required to reduce the risk associated with a loss of seal cooling-induced loss-of-coolant Accident (LOCA) that could result from a fire in multiple areas." The proposed modification is a "RCP Seal Cooling Modification." A number of possible solutions are being considered to this commitment, including (1) installing the Westinghouse SHIELD SDS, (2) installing an alternate seal cooling system and (3) installing Flowserve N9000 Seals. Sensitivity analyses of options (1) and (2) have been completed.

The sensitivity results for options (1) and (2) show that either modification would provide sufficient risk margin to offset the risk increase due to the National Fire Protection Association (NFPA) 805 transition. Option (1) was analyzed with a higher unreliability value than that provided in WCAP-17100-P, Supplement 1.

Regarding option (3), industry information collected by PG&E suggests that the risk benefit would be similar to that of options (1) and (2), and that it would also provide sufficient risk margin to offset the risk increase due to the NFPA 805 transition.

**THE ATTACHMENT OF THE ENCLOSURE TO THIS LETTER IS ~~SECURITY-RELATED~~  
INFORMATION. WHEN SEPARATED FROM THE ATTACHMENT,  
THIS DOCUMENT IS DECONTROLLED**

Enclosure  
PG&E Letter DCL-13-096

Based on these considerations, the reliability of the final modification will be such that the risk improvement from a plant modification will offset the risk increase due to the NFPA 805 transition, resulting in a net negative change in risk (i.e., a decrease in risk). Per RG 1.174 Regulatory Position C.2.4, "if the application clearly shows a decrease in CDF/LERF, the change will be considered to have satisfied the relevant principle of risk-informed regulation with respect to CDF/LERF." Regulatory Guide 1.174 risk acceptance guidelines would therefore be satisfied based on the less-than-zero risk associated with transition to NFPA 805.

Adequate time is available to allow for finalization of currently outstanding technical issues if necessary to determine the appropriate modification option. Specifically, per PG&E letter DCL-13-065, Enclosure 5, Commitment No. 3, "PG&E will complete modifications necessary to support the new fire protection licensing basis for transitioning to NFPA 805 by the end of Units 1 and 2 Refueling Outages, currently scheduled for April/May 2017 (1R20) and February/March 2018 (2R20), respectively."

Additionally, PG&E committed per Implementation Item S-3.24 (Table S-3) to "verify the validity of the reported change-in-risk upon completion of all Table S-2 modifications." Accordingly, the FPRA model will be reviewed and revised as required per this commitment to reflect the modification that is installed.

Finally, as committed in PG&E Letter DCL-13-065, Enclosure 1, Modification S-2.3, appropriate compensatory measures have been established per DCPD Interdepartmental Administrative Procedure, OM8.ID2, "Fire System Impairment," as required, which will be maintained until the modification is implemented.

**THE ATTACHMENT OF THE ENCLOSURE TO THIS LETTER IS ~~SECURITY-RELATED~~  
INFORMATION. WHEN SEPARATED FROM THE ATTACHMENT,  
THIS DOCUMENT IS DECONTROLLED**