



**Pacific Gas and  
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June 18, 2012

PG&E Letter DCL-12-062  
U.S. Nuclear Regulatory Commission

10 CFR 50.90

ATTN: Document Control Desk  
Washington, DC 20555-0001

Docket No. 50-275, OL-DPR-80  
Docket No. 50-323, OL-DPR-82  
Diablo Canyon Units 1 and 2  
Response to NRC Request for Additional Information Regarding PG&E Letter  
DCL-11-072, "License Amendment Request 11-06, Revision to Technical  
Specification 3.3.5, 'Loss of Power (LOP) Diesel Generator (DG) Start  
Instrumentation,'" dated October 24, 2011

References: 1. PG&E Letter DCL-11-072, "License Amendment Request  
11-06, Revision to Technical Specification 3.3.5, 'Loss of  
Power (LOP) Diesel Generator (DG) Start Instrumentation,'" dated October 24, 2011.

Dear Commissioners and Staff:

In Reference 1, Pacific Gas and Electric Company (PG&E) submitted License Amendment Request (LAR) 11-06 to revise the Operating Licenses, to revise Technical Specification (TS) 3.3.5, "Loss of Power (LOP) Diesel Generator (DG) Start Instrumentation," and to correct the nonconservative First Level Undervoltage Relays TS limits contained in the current TS Surveillance Requirements (SR) 3.3.5.3.

On May 11, 2012, the NRC staff requested, via email, additional information required to complete the review of LAR 11-06. PG&E's responses to the staff's questions are provided in the Enclosure.

This information does not affect the results of the technical evaluation or the significant hazards consideration determination previously transmitted in Reference 1.

PG&E is making a regulatory commitment (as defined by NEI 99-04) in this letter. The commitment is contained in the Attachment of the Enclosure to this letter.

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 18, 2012.

Sincerely,

A handwritten signature in blue ink, appearing to read 'James R. Becker', written over a horizontal line.

James R. Becker  
*Site Vice President*

dngd/4955 SAPN 50480899

Enclosure

cc: Diablo Distribution

cc/enc: Gary W. Butner, Branch Chief, California Department of Public Health  
Elmo E. Collins, NRC Region IV  
Michael S. Peck, NRC, Senior Resident Inspector  
Joseph M. Sebrosky, NRR Project Manager

***PG&E Response to NRC Request for Additional Information for  
Diablo Canyon Power Plant Regarding Technical Specification 3.3.5***

NRC Question 1:

*In light of Information Notice 2011-21 (Agencywide Documents Access and Management System Accession No. ML113430785) please provide information to support that the large break loss-of coolant accident (LOCA) results will remain within 10 CFR 50.46 limits when both the thermal conductivity degradation error and the safety injection delay are accounted for.*

PG&E Response:

PG&E is participating in the Pressurized Water Reactor Owner's Group (PWROG) Thermal Conductivity Degradation Large Break LOCA Assessment project that will address Information Notice 2011-21. PG&E expects the results of this assessment by August 27, 2012. PG&E will provide the results of this assessment to the NRC within 30 days of receiving the final approved results from the PWROG.

NRC Question 2:

*Please provide Reference 10 and any additional evaluation that led to the following conclusion on page 4 of the submittal, "It was determined that the additional ECCS [Emergency Core Cooling System] delay due to a 4.16 kV SLUR [second level undervoltage relay] actuation time delay would have an insignificant effect on the small break loss-of-coolant accident (SBLOCA) thermal hydraulic results."*

PG&E Response:

This response provides a more detailed non-proprietary summary of the Westinghouse evaluation conclusions established in PGE-10-54 (Reference 10 of PG&E Letter DCL-11-072, dated October 24, 2011). The proprietary Westinghouse evaluation will be made available for inspection by NRC staff in Washington DC, upon request.

The SBLOCA analyses of record for Diablo Canyon Units 1 and 2 are documented in Updated Final Safety Analysis Report (UFSAR) Section 15.3.1. These analyses are based on an assumed delay time of 27 seconds for Emergency Core Cooling System (ECCS) safety injection (SI) flow to begin after the SI setpoint is reached as summarized in the sequence of events in UFSAR Table 15.3-1. The Second Level Undervoltage Relay (SLUR) delay time results in an increased ECCS delay time of 15 seconds greater than the SBLOCA Analysis of Record (AOR) or a total of 42 seconds after the SI signal is reached.

UFSAR Table 15.3-1 shows that for the SBLOCA AOR, the ECCS flow is calculated to occur within the first 30 to 90 seconds after the break, which is still during the initial

depressurization phase of the transient. Because this is prior to the subsequent effects related to Reactor Coolant System (RCS) loop seal clearing, core uncover, and accumulator injection, the only significant effect of delaying ECCS flow would be a reduction in the total mass injected into the RCS during the depressurization period. UFSAR Figure 15.3-9 for the limiting Unit 1 3-inch SBLOCA case characteristically shows that the RCS pressure remains above 1,100 psig during this period. As shown in UFSAR Figure 15.3-1, the total ECCS injection flow rate at this elevated pressure is small compared to the higher flow rate that would result during the lower RCS pressure conditions that exist between the time core uncover occurs and the top of the core is recovered.

Thus, the ECCS water mass injected due to this early delay in ECCS injection flow during the depressurization phase is orders of magnitude less than the total injection mass that is calculated to enter the RCS during the core recovery and peak clad temperature time frames. Therefore, the additional ECCS delay results in a minimal reduction in the total ECCS flow delivered, and is concluded to have a negligible impact on the SBLOCA transient.

### **List of Regulatory Commitments**

#### **Commitment 1**

PG&E will provide the results of the Thermal Conductivity Degradation Large Break LOCA Assessment to the NRC within 30 days of receiving the final approved results from the PWROG.