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PG&E Letter DCL-01-014

U.S. Nuclear Regulatory Commission
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Docket No. 50-323, OL-DPR-82
Diablo Canyon Unit 2
Response to Request for Additional Information Regarding License Amendment
Request 00-04, Revision of Technical Specification 3.5.2 – Increase in Charging
Pump Completion Time During Unit 2 Cycle 10 from 72 Hours to 7 Days

Dear Commissioners and Staff:

On January 18, 2001, the NRC staff identified additional information required in order to complete their evaluation associated with License Amendment Request 00-04, which proposed to amend the facility operating license for Diablo Canyon Power Plant Unit 2, increasing the Centrifugal Charging Pump 2-1 completion time from 72 hours to 7 days during cycle 10. PG&E's response to the request for additional information is included in Enclosure 1. This additional information does not effect the results of the safety evaluation and no significant hazards determination previously transmitted in PG&E Letter DCL-00-086, "License Amendment Request 00-04, Revision of Technical Specification 3.5.2 - Increase in Charging Pump Completion Time During Unit 2 Cycle 10 from 72 Hours to 7 Days," dated June 2, 2000.

If you have additional questions regarding this response, please contact Mr. Pat Nugent at (805) 545-4720.

Sincerely,

Lawrence F. Womack

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Document Control Desk
February 14, 2001
Page 2

PG&E Letter DCL-01-014

cc: Edgar Bailey, DHS
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Enclosure
KJS

**PG&E Response to Request for Additional Information Regarding
License Amendment Request 00-04, Revision of Technical
Specification 3.5.2 - Increase in Charging Pump Completion Time
During Unit 2 Cycle 10 from 72 Hours to 7 Days**

Question 1

It is not clear that the replaced CCP will have enough injection flow to bound the values assumed in the LOCA and non-LOCA transient analyses presented in the FSAR. The licensee should provide justification to show that the FSAR safety analyses are still the bounding analyses with the replaced CCP.

PG&E Response to Question 1

A calculation was performed to demonstrate that the proposed replacement centrifugal charging pump (CCP) 2-1 is acceptable and bounded by the current emergency core cooling system (ECCS) flow analyses.

The calculation evaluated a +/- 30 psi high-low band applied to the expected replacement CCP performance curve. The ECCS flow performance was calculated for the high and low expected replacement CCP performance curves. The results of the calculation indicated that each high and low ECCS flow distribution would be well within the ECCS flow analysis results used for the Final Safety Analysis Report (FSAR) safety analyses cases.

Prior to declaring the replacement CCP operable and returning it to operation, a confirmatory CCP single-point verification flow test will be performed as part of the post maintenance test plan to confirm and validate the actual replacement CCP performance is within the +/- 30 psi band assumed in the replacement CCP calculation. This would ensure that the ECCS performance of the replacement CCP is bounded by the FSAR safety analyses cases. This testing methodology was previously used to support replacement of a safety injection pump at power at Diablo Canyon Unit 2 in 1995 as documented in letter DCL-95-065, "License Amendment Request 95-02 - Request for Emergency Review of Revision of Technical Specification 3/5.5.2 - Relaxation of Safety Injection Pump 2-2 Differential Pressure and Enforcement Discretion Regarding Compliance with Technical Specification 3/4.5.2," dated March 23, 1995.

Question 2

Provide a basis for selecting a high-low band of +/- 30 psi to assess the effects of the replaced CCP on the CCP performance curves that are used to determine the required ECCS flow.

PG&E Response to Question 2

The high-low band for the replacement CCP performance is an assumed value. The high-low band is selected to be wide enough to provide a high level of confidence that the actual measured replacement CCP differential pressure will be within the assumed high-low band following testing to support pump operability. The high-low band is also selected to be narrow enough such that the current FSAR accident analysis ECCS flow will remain bounding.

The magnitude of the high-low band is also based on the degree of confidence in the pump performance curve. The proposed replacement CCP is a new pump that came with a tested and certified pump curve from the vendor. Thus PG&E has a high degree of confidence in the replacement CCP performance. However, to account for instrument uncertainties, pressure readability, and other possible variances, a +/- 30 psi band was chosen. With this assumed +/- 30 psi band on the expected replacement CCP performance curve, FSAR accident analysis ECCS flow limits are not affected.

It should be noted that this +/- 30 psi band is an assumption used in the ECCS analysis for this particular pump replacement. If a different replacement pump other than the one currently expected to be used was installed, a broader band on the pump performance might be required to be assumed in the ECCS flow analysis. The proposed high-low band would still be required to be bounded by the existing ECCS flow analysis limits.