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PG&E Letter DCL-05-042

U.S. Nuclear Regulatory Commission
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
Control Room Envelope Inleakage Test Results Relative to Generic Letter 2003-01, "Control Room Habitability"

Dear Commissioners and Staff:

This letter provides control room habitability test results for Diablo Canyon Power Plant (DCPP), Units 1 and 2, relative to Generic Letter (GL) 2003-01, "Control Room Habitability," dated June 12, 2003. Pacific Gas and Electric (PG&E) provided its 60-day response to GL 2003-01 in PG&E Letter DCL-03-096, dated August 8, 2003. In that letter, PG&E stated it planned to perform testing to confirm the integrity of the DCPP control room envelope and report the results within 90 days of test completion. Testing was performed in January 2005, and the results show that the DCPP control room envelope has no unfiltered inleakage. A summary of the testing and results is provided in Enclosure 1.

If you have any questions or require additional information, please contact Stan Ketelsen at (805) 545-4720.

Sincerely,

David H. Oatley

jer/3664
Enclosure
cc: Edgar Bailey, DHS
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DCPP Control Room Envelope Inleakage Test Results Relative to NRC Generic Letter 2003-01

This enclosure provides control room habitability test results for Diablo Canyon Power Plant (DCPP), Units 1 and 2, relative to Generic Letter (GL) 2003-01, "Control Room Habitability," dated June 12, 2003. Pacific Gas and Electric (PG&E) provided its 60-day response to GL 2003-01 in PG&E Letter DCL-03-096, dated August 8, 2003. In that letter PG&E stated it planned to perform testing to confirm the integrity of the DCPP control room envelope and report the results within 90 days of test completion.

Background

DCPP has a common control room for Units 1 and 2. In DCL-03-096, PG&E stated it planned to perform tracer gas testing of the control room in accordance with American Society for Testing and Materials consensus standard E741, "Standard Test Method for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution." PG&E also stated it planned to perform the "component test" method referred to in NRC Regulatory Guide (RG) 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactor, May 2003." The intent was to correlate the component test results with the tracer gas test results so that subsequent control room envelope integrity testing could be performed by plant personnel using the component test method.

Control Room Envelope Testing and Results

Tracer gas testing was performed in January 2005 with the assistance of a testing vendor. Guidance provided by RG 1.197, Section 2.2, "Alignment, Operation, and Performance," states that testing should be conducted in the alignment that results in the greatest consequence to the control room operator, and that a single active failure should be considered when identifying inleakage vulnerabilities. The greatest vulnerability for the DCPP control room envelope during an accident is inleakage through one of the double sets of dampers that isolate when the control room ventilation system (CRVS) is placed in the pressurization mode (Mode 4). The purpose of Mode 4 operation is to limit radiation exposure to the control room in the event of a radiation release. The tracer gas test procedure involved running four Mode 4 configurations: two using Subtrains A and B for the Unit 1 CRVS, and two using Subtrains A and B for the Unit 2 CRVS. To create a worst-case condition for each test configuration, an outside air supply damper and an exhaust damper powered by a common power supply were intentionally failed opened to establish a single active failure condition.

The final vendor test report was issued on March 24, 2005, and concludes that the DCPP control room envelope has no unfiltered inleakage. In accordance with RG 1.197, Section 1.4, "Test Results and Uncertainty," the test uncertainty value does

not need to be included in results showing inleakage to be less than 100 standard cubic feet per minute.

PG&E also attempted to perform component testing in accordance with RG 1.197 in conjunction with the tracer gas test. However, due to test instrument problems, the component test was not completed. The January 2005 tracer gas test results are sufficient to show that the DCPP control room envelope has no unfiltered inleakage.