

January 29, 2001

Mr. Gregory M. Rueger  
Senior Vice President, Generation and  
Chief Nuclear Officer  
Pacific Gas and Electric Company  
Diablo Canyon Nuclear Power Plant  
P. O. Box 3  
Avila Beach, CA 94177

SUBJECT: DIABLO CANYON NUCLEAR POWER PLANT, UNITS NO. 1 AND 2 -  
COMPLETION OF LICENSING ACTION FOR GENERIC LETTER 98-02, "LOSS  
OF REACTOR COOLANT INVENTORY AND ASSOCIATED POTENTIAL FOR  
LOSS OF EMERGENCY MITIGATION FUNCTION WHILE IN A SHUTDOWN  
CONDITION" (TAC NOS. MA4783 AND MA4784)

Dear Mr. Rueger:

On May 28, 1998, the U.S. Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 98-02 to all holders of operating licenses for Pressurized Water Reactors (PWR), except those who have permanently ceased operations, and have certified that fuel has been permanently removed from the reactor vessel. The NRC issued GL 98-02 to request that PWR licensees evaluate a September 17, 1994, event, which occurred at Wolf Creek, which had the potential to drain down the reactor coolant system (RCS) to the refueling water storage tank (RWST) and, at the same time, render the emergency core cooling system (ECCS) and residual heat removal (RHR) system inoperable by introducing a steam/water mixture to the suction side of the ECCS and RHR pumps. Addressees of GL 98-02 were requested to provide the following information within 180 days: (1) an assessment of whether the addressee's facility is vulnerable to the September 17, 1994, Wolf Creek event, and (2) if the facility is found to be vulnerable, an assessment of the plant-specific 10 CFR Part 50, Appendix B, quality assurance program attributes which will prevent the subject event. If the addressee's facility was determined to be vulnerable, a response to information item (1) was to be provided pursuant to 10 CFR 50.54(f) and 10 CFR 50.4, and the responses to information items (1) and (2) were to be kept in a licensee's retrievable system for use by the NRC staff on an as-needed basis.

In response to GL 98-02, Pacific Gas and Electric Company (PG&E) provided a letter dated November 20, 1998, for Diablo Canyon Nuclear Power Plant (DCPP), Units No. 1 and 2. The submittal indicated that DCPP Units 1 and 2, were vulnerable to the type of incident which occurred at Wolf Creek, as following refueling operations, a lineup can be established to allow an RHR pump to drain the refueling cavity back to the RWST through Valve 8741, which is a normally closed manual isolation valve in the common line between each RHR loop and the RWST. The submittal further indicated that:

- (1) If Valve 8741 were opened in Mode 4, the control room would immediately receive an RWST high level alarm as the RWST is maintained within the range of its high level alarm. In addition, DCPD procedures required stopping RHR pumps if pressurizer level dropped below 12 percent, which would slow the inventory loss.
- (2) Valve 8741 is a sealed closed valve and is controlled by a sealed component checklist in Mode 4.
- (3) DCPD would place a caution labeling on Valve 8741, and place cautions in procedures governing Mode 4 operations concerning operation of Valve 8741.

Additionally, GL 98-02 requested that responses to parts (1) and (2) of the required information shall be kept in a retrievable licensee system that NRC can verify on an as-needed or sample basis. Accordingly, by the inspections conducted during December 26, 1999, through February 12, 2000, at DCPD Units 1 and 2, the inspectors verified PG&E's response to GL 98-02. By letter dated March 8, 2000, the NRC Region IV staff issued NRC Inspection Report No. 50-275/99-19 and 50-323/99-19, which contained details of the NRC staff's on-site verification of activities which PG&E undertook in response to GL 98-02 for DCPD Units 1 and 2. Specifically, the inspector verified that PG&E had effectively implemented administrative controls, configuration management, and operating procedures to preclude an inadvertent draindown event as described in GL 98-02, as follows.

The inspectors reviewed the procedures associated with boron control using the RHR system in Mode 4, and concluded that this procedure for boron equalization minimized potential draindowns. The inspectors reviewed the procedures for RHR operation in Mode 4 and concluded that the procedures minimized potential draindowns associated with RHR system operation in Mode 4. The inspectors verified that Valve 8741 was in the sealed valve program and that the valve was sealed closed in both units. The inspectors verified that both valves were labeled with caution plates stating not to operate in Mode 4 with reactor coolant to RHR suction valves open and concluded that DCPD adequately controlled the position of Valve 8741. The inspectors determined that DCPD had changed its procedure to preclude opening Valve 8741 in Mode 4 with reactor coolant to RHR suction valves open. The inspectors reviewed past DCPD problems with maintaining configuration control of valves and with simultaneous performance of maintenance and testing activities during shutdown conditions and determined that the problem identification and resolution of deficiencies associated with configuration control during outages was satisfactory. The inspectors discussed draining of the reactor coolant system in Mode 4 with a number of operators on several crews and considered the knowledge of the operations staff appropriate for minimizing the potential for and effects of a loss of reactor coolant system inventory. The inspectors reviewed drawings for the RHR and emergency core cooling systems and did not identify any additional paths that could create a similar draindown of the reactor coolant to the RWST in Mode 4. Overall, the inspectors concluded that the above corrective actions in response to Generic Letter 98-02 were thorough and minimized the potential for a loss of inventory event in Mode 4.

The NRC staff has reviewed your response to GL 98-02 and has concluded that (1) all the information requested by GL 98-02 has been provided, and (2) that your on-site activities adequately addressed the concerns of GL 98-02 for DCPD Units 1 and 2; therefore, we consider GL 98-02 to be closed for DCPD Units 1 and 2.

Sincerely,

***/RA/***

Girija S. Shukla, Project Manager, Section 2  
Project Directorate IV & Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-275  
and 50-323

cc: See next page

The NRC staff has reviewed your response to GL 98-02 and has concluded that (1) all the information requested by GL 98-02 has been provided, and (2) that your on-site activities adequately addressed the concerns of GL 98-02 for DCP, Units 1 and 2; therefore, we consider GL 98-02 to be closed for DCP, Units 1 and 2.

Sincerely,

**/RA/**

Girija S. Shukla, Project Manager, Section 2  
Project Directorate IV & Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

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Diablo Canyon Power Plant, Units 1 and 2

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