



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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December 4, 1997

*See
Reports*

Mr. Gregory M. Rueger, Senior Vice President
and General Manager
Pacific Gas and Electric Company
Nuclear Power Generation N9B
P. O. Box 770000
San Francisco, California 94177

SUBJECT: REVIEW OF DIABLO CANYON INDIVIDUAL PLANT EXAMINATION OF EXTERNAL
EVENTS (IPEEE) SUBMITTAL (TAC NOS. M83614 AND M83615)

Dear Mr. Rueger:

By letter dated June 27, 1994, as supplemented by letter dated November 13, 1995, Pacific Gas and Electric Company submitted its response to the June 28, 1994, Generic Letter (GL) 88-20, Supplement 4 (with NUREG-1407, Procedural and Submittal Guidance) for the Diablo Canyon Power Plant (DCPP). Supplement 4 requested all licensees to perform individual plant examinations of external events (IPEEE) to identify plant-specific vulnerabilities to severe accidents and to report the results to the Commission together with any licensee-determined improvements and corrective actions. Enclosed is the staff's Evaluation Report (ER), with the contractor's Technical Evaluation Report (TER) of the review that was performed.

A Step 1 review was performed which examined the IPEEE results for their "reasonableness" considering the design and operation of the plant. On the basis of the review performed by the contractor and reviewed by a senior review board, the NRC concluded that the aspects of seismic, fires, and high winds, floods, and transportation and others were adequately addressed. The staff's and contractor's review findings are summarized in the enclosed ER, and the details of the contractor's findings appear in the attachment to the ER.

The licensee estimated a seismic core damage frequency (CDF) of $4.2E-5$ per reactor-year (RY) using a site-specific hazard curve, and a fire CDF of $2.7E-5$ /RY. The licensee also estimated that the contributions from other external events (e.g., external floods and high winds) are insignificant at the Diablo Canyon site. The licensee estimated that the CDF due to internal events is about $8.8E-5$ /RY, including internal flooding.

The licensee defined a potential severe accident vulnerability as having any component, system, operator action, or accident sequence that contributes more than 50 percent to the CDF or has CDF greater than $1E-4$ /RY [criteria recommended by Nuclear Management and Resources Council (NUMARC)]. The licensee did not identify any potential vulnerabilities associated with external events, thus, no improvements related to external events were considered as necessary. However, a number of plant-specific improvements

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were implemented as a part of the Long Term Seismic Program (LTSP) at DCP. These improvements will improve the seismic safety and reduce potential seismic vulnerabilities at DCP.

The licensee has addressed generic safety issues (GSIs) GSI-131, "Potential Seismic Interaction Involving the Movable In-Core Flux Mapping System in Westinghouse Plants," GSI-103, "Design for Probable Maximum Precipitation (PMP)," and USI A-45, "Shutdown Decay Heat Removal Requirements" which were explicitly requested in Supplement 4 to GL 88-20.

On the basis of the Step 1 review, the staff concludes that the licensee's IPEEE process is capable of identifying the most likely severe accidents and severe accident vulnerabilities and, therefore, that the Diablo Canyon IPEEE has met the intent of Supplement 4 to GL 88-20.

In addition, the licensee's IPEEE submittal contains some specific information that addresses the external event aspects of certain generic safety issues [e.g., GSI 147, "Fire-Induced Alternate Shutdown/Control Room Panel Interactions," GSI 148, "Smoke Control and Manual Fire-Fighting Effectiveness," and GSI 172, "Multiple System Responses Program (MSRP)"]. The specific information associated with each issue is identified and discussed in the TER. Based on the staff's and contractors' reviews of the information contained in the submittal, the staff considers that the licensee's process is capable of identifying potential vulnerabilities associated with these issues. On the basis that no vulnerabilities associated with the external event aspects of these issues were identified at DCP, the staff considers these issues resolved.

If you have any questions regarding the attached ER, please contact me at (301) 415-1313.

Sincerely,

Original Signed By
Steven D. Bloom, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-275
and 50-323

Enclosure: Evaluation Report

cc w/encl: See next page

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cc w/encl:

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