

April 14, 2000

Mr. Gregory M. Rueger  
Senior Vice President and General Manager  
Pacific Gas and Electric Company  
Diablo Canyon Nuclear Power Plant  
P. O. Box 3  
Avila Beach, CA 93424

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - DIABLO CANYON  
METHODOLOGY FOR ESTABLISHING PRESSURE/TEMPERATURE AND LOW  
TEMPERATURE OVERPRESSURE PROTECTION LIMITS - DIABLO CANYON  
POWER PLANT, UNITS 1 AND 2 (TAC NOS. MA5614 AND MA5615)

Dear Mr. Rueger:

In a letter dated November 24, 1999, as supplemented by letter dated March 16, 2000, Pacific Gas and Electric Company (PGE), submitted its request for approval of methodology for establishing pressure/temperature and low temperature overpressure protection limits using WCAP 14040-NP-A in accordance with Generic Letter 96-03 for Diablo Canyon Power Plant, Units 1 and 2. The staff has reviewed your submittal and has identified the need to request additional information in order to determine the acceptability of your request. The enclosure describes the specific information requested.

The enclosed request was discussed with Mr. Terry Grebel of your staff on April 13, 2000. A mutually agreeable target date of April 30, 2000, for your response was established. If circumstances result in the need to revise the target date, please call me at the earliest opportunity. If you have any questions regarding this matter, please contact me at (301) 415-1313.

Sincerely,

*/RA/*

Steven D. Bloom, Project Manager, Section 2  
Project Directorate IV and Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-275  
and 50-323

Enclosure: Request for Additional Information

cc w/encl: See next page

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Diablo Canyon Power Plant, Units 1 and 2

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REQUEST FOR ADDITIONAL INFORMATION  
CONCERNING TECHNICAL SPECIFICATION CHANGES FOR  
LOW TEMPERATURE OVERPRESSURE PROTECTION SETPOINTS  
PACIFIC GAS AND ELECTRIC COMPANY  
DIABLO CANYON UNIT 1

There are similarities between Diablo Canyon Units 1 and 2, therefore, only Unit 1 is discussed.

Consider the following:

- Ref. 1, pg. 28/29, the limiting element is Weld 3-442C, peak fluence for 32 EFPYs,  $f=1.54 \times 10^{19}$  n/cm<sup>2</sup>
  - Ref. 2, pg. 6-13, M/C=1.16, using ENDF/B-IV. This accounts for capsules' Y, S and cavity data. The peak value for 32 EFPYs (Table 6-18)  $f=1.54 \times 10^{19}$ .
  - Ref. 3, pg. 8-7 (Table 8.1-4) peak fluence 32 EFPYs  $f=1.39 \times 10^{19}$  n/cm<sup>2</sup>.
  - Ref. 3, pg. 7-3, (Table 7.1-1) capsule Y is reported to have M/C=.83. Compare this to the results of Ref. 1. There is a 33% difference.
  - The dosimetry reported in Ref. 3 seems to be highly irregular. For example pg. 6-32 (Table 6.2-8) at the midplane, 48° in the azimuth (the closest available to 45°) lists M/C values of: .877, .763, .962, .990, .561 and .714. Likewise (Table 6.3-8) pg. 6-52 has M/C values of: .780, .826, .741, .746, .870, .495 and .700.
  - The situation at the top and bottom of the beltline is even more diverging.
  - The trend in this cavity dosimetry has been reversed (in terms of M/C) by 40% or more at the midplane and more at the top and bottom of the beltline.
  - The adjusted values show an M/C about 1.0.
1. Given that cavity dosimetry was part of the Ref. 1 fluence calculation and it was estimated after cycle 5 when low leakage was established, where does the difference in the estimated EOL fluence come from? Is it justified?
  2. Do you consider the Ref. 3 dosimetry to be credible and why?
  3. Provide the covariance matrix and the values of the other components and discuss the adjustments performed to the measured values in view of the severity of the adjustments.
  4. How and which of the adjusted values were averaged to produce the final value?

5. In Ref. 3 pg. 3-3, second paragraph you state that the source distribution for the forward calculation was generic for 4-loop plants. In pg. 3-15 you state that the spectrum was ". . . obtained from the plant specific calculation for each dosimetry location." Are both of these statements true?
6. Ref. 3, pg. 3-17 lists flux normalization uncertainty and flux group uncertainties ( $E > 0.0055$  MeV) as 30%. Please explain where these values come from and what role they play in the adjustment process.

#### REFERENCES

1. Letter from D.H. Oatley, Pacific Gas and Electric to US NRC "Request for NRC Approval of Diablo Canyon Methodology for Establishing Pressure/temperature and Low Temperature Overpressure Protection Limits Using WCAP-14040NP-A in Accordance with Generic Letter 96-03," November 24, 1999.
2. WCAP-113750, "Analysis of Capsule Y from the Pacific Gas and Electric Company Diablo Canyon Unit 1 Reactor Vessel Radiation Surveillance Program," E. Terek, et al, Westinghouse Electric Corporation, July 1993.
3. WCAP-114284, "Pacific Gas and Electric Company Reactor Cavity Neutron Measurement Program for Diablo Canyon Unit 1 - Cycles 1 through 6," S. Anderson, Westinghouse Electric Corporation, January 1995.