

February 24, 2000

**David H. Oatley** Vice President—Diablo Canyon Operations and Plant Manager

Diablo Canyon Power Plant P.O. Box 56 Avila Beach, CA 93424

805.545.6000

PG&E Letter DCL-00-028

U.S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, DC 20555-0001

Docket No. 50-323, OL-DPR-82
Diablo Canyon Unit 2
<u>Licensee Event Report 2-2000-001-00</u>
<u>Technical Specification 4.4.8 Not Met Due to Personnel Error</u>

Dear Commissioners and Staff:

PG&E is submitting the enclosed licensee event report regarding Technical Specification Surveillance Requirement 4.4.8, "Specific Activity," not being met due to personnel error.

This event was not considered risk significant and did not adversely affect the health and safety of the public.

Sincerely

David H. Oatley

tor DHO

CC:

Steven D. Bloom Ellis W. Merschoff David L. Proulx Diablo Distribution INPO

**Enclosure** 

TLH/2246/A0501805

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On January 26, 2000, at 1753 PST, with Unit 2 in Mode 1 (Power Operation) at 100 percent power, Technical Specification (TS) 3.4.8, "Specific Activity," was not met. TS 4.4.8, Table 4.4-4, item 1 of the table and the applicable notation require that gross activity analysis be done at least once per 72 hours in Modes 1, 2, 3, and 4 and that the sample analysis be completed within 2 hours. Contrary to the requirement, the sample analysis was not completed for 2 hours and 32 minutes.

This condition was discovered by a supervisory review of sampling results.

The condition was caused by personnel error. The responsible technician was delayed after taking the sample but also believed, incorrectly, that Technical Specification 4.0.2 could be applied to the sample period.

The involved individual was counseled. Other personnel were advised of the condition and procedure requirements during a departmental tailboard. Although unrelated to the cause of the condition, a conflict between the governing procedure and the TS requirement for sample analysis completion time was identified and corrected. A review of past samples was done to determine the number and effect of late analyses. The review indicated that previous samples were unaffected by this condition.

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TEXT

#### I. <u>Plant Conditions</u>

Unit 2 was in Mode 1 (Power Operation) at 100 percent power.

### II. <u>Description of Problem</u>

## A. Summary

On January 26, 2000, at 1753 PST, with Unit 2 in Mode 1 (Power Operation) at 100 percent power, Technical Specification (TS) 3.4.8, "Specific Activity," was not met. TS 4.4.8, Table 4.4-4, item 1 of the table and the applicable notation require that gross activity analysis be done at least once per 72 hours in Modes 1, 2, 3, and 4 and that the sample analysis be completed within 2 hours. Contrary to the requirement, the sample analysis was not completed for 2 hours and 32 minutes.

#### B. Background

TS Table 4.4-4 Item 1, "Gross Radioactivity Determination," requires the sample and analysis for specific activity frequency to be at least once per 72 hours in Modes 1, 2, 3, and 4. The applicable table notation states in part that, "The total specific activity shall be the sum of the degassed beta-gamma activity and the total of all identified gaseous activities in the sample within 2 hours after the sample is taken and extrapolated back to when the sample was taken."

This requirement is implemented in Chemical Analysis Procedure D-6, "Specific Activity Determination in Liquid Samples."

### C. Event Description

On January 22, 2000, at 1753 PST, the Unit 2 reactor coolant system (RCS) was sampled for specific activity. The sample was analyzed properly and specific activity was found to be within TS requirements.

On January 25, 2000, at 1658 PST, a sample was taken from the Unit 2 RCS. The gaseous portion of the sample was counted within two hours which met the Technical Specification requirement. However, counting of the degassed liquid part of the sample was not completed until 1930 PST, a total time of 2 hours, 32 minutes.

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TEXT

On January 26, 2000, at 1753 PST, the TS 3.4.8 was exceeded.

On January 27, 2000, at 1640 PST, the Unit 2 RCS was sampled for specific activity. The sample was analyzed properly and specific activity was found to be within TS requirements.

On January 31, 2000, PG&E discovered that the sample taken on January 25, 2000, did not meet the two hour analysis TS requirement. PG&E conservatively assumed that the late sample did not satisfy the surveillance requirement and that TS 3.4.8 was not met. PG&E determined that the condition was reportable in accordance with 10 CFR 50.73 (a)(2)(i)(B).

D. Inoperable Structures, Components, or Systems that Contributed to the Event

None.

- E. Dates and Approximate Times for Major Occurrences
  - 1. January 26, 2000, at 1753 PST:

Event Date: TS 3.4.8 was

not met.

2. January 31, 2000:

Discovery Date: PG&E

determined the condition

was reportable in accordance with

10 CFR 50.73(a)(2)(i)(B).

F. Other Systems or Secondary Functions Affected

None.

G. Method of Discovery

The condition was discovered during a supervisory review of previous samples.

H. Operator Actions

None.

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TEXT

I. Safety System Responses

None.

### III. Cause of the Problem

#### A. Immediate Cause

The condition was caused by failing to meet the TS requirement for completion of specific activity sample analysis time.

#### B. Root Cause

The condition was caused by personnel error. The responsible technician was delayed after taking the sample and also believed, incorrectly, that TS 4.0.2. (surveillance extension period) could be applied to the sample period. During the cause investigation, PG&E discovered that Chemical Analysis Procedure D-6 conflicted with the TS requirement. The procedure required that the sample count begin within two hours of the sample time with no requirement for time for completing the analysis. The TS bases defines the allowable time of two hours as that between the time the sample is taken and the time of completing the initial analysis.

## IV. Analysis of the Event

Though the TS surveillance requirement was not met, there was no safety significance to the event. A comparative analysis of the samples taken on January 22, 25, and 27, 2000, indicated that the January 25, 2000 sample results were valid and within TS requirements for specific activity of less than or equal to 1 microcurie/gram equivalent I-131, and less than or equal to 100/E microcuries/gram of gross radioactivity.

Specific activity analysis results are judged to be accurate within a three hour count time. The present gamma spectroscopy technology is significantly more accurate than the gamma spectroscopy in the 1970s when the TS bases were written. Also, a majority of the activity has half lives of greater than 4 hours. A majority of the activity is tritium, which has a half life of approximately 12 years. Therefore, there is no safety significance related to the late sample analysis or the procedure requirement to start the analysis versus complete the analysis.

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TEXT

The condition was evaluated using the NRC's Significance Determination Process in accordance with NRC Inspection Manual Chapter 06XX, Draft Revision 1 (8/10/99) and was screened out as green. In addition, this condition is not considered a Safety System Functional Failure in accordance with the draft guidance provided in NEI 99-02, dated November 12, 1999.

### V. <u>Corrective Actions</u>

- A. Immediate Corrective Actions
  - 1. The technician responsible for the sample was counseled regarding procedure requirements.
  - A review of past samples (back to January 1, 2000) was done to determine the number and effect of late analyses. The review indicated that previous samples were unaffected by this condition.
- B. Corrective Actions to Prevent Recurrence
  - 1. The chemistry section received a tailboard on the condition and procedure requirements.
  - 2. Chemical Analysis Procedure D-6 was revised to eliminate the conflict with the TS requirement.
  - 3. Training will be given to advise applicable personnel of the procedure change.

## VI. Additional Information

A. Failed Components

None.

B. Previous Similar Events

None.