Pacific Gas and Electric Company

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PG&E Letter DCL-01-047

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
2000 Annual Radioactive Effluent Release Report

Dear Commissioners and Staff:

PG&E is submitting the enclosed 2000 Annual Radioactive Effluent Release Report in accordance with 10 CFR 50.36a (a)(2) and Specification 5.6.3 of the Diablo Canyon Power Plant (DCPP) Technical Specifications.

In review of the DCPP 1998 and 1999 Annual Radioactive Effluent Release Reports, errors were identified. In addition, some values have been updated. Corrective actions have been taken to prevent these types of errors from recurring. PG&E hereby submits the correction and update information pages as Enclosure 1. Please replace the pages of previous submittals with the new pages enclosed.

The 2000 Annual Radioactive Effluent Release Report is contained in Enclosure 2 and describes the quantities of radioactive gaseous and liquid effluents released from the plant, and the solid radioactive waste shipments made during the period of January 1 through December 31, 2000.

One diskette is being sent with the report. The diskette contains required meteorological data. If you have any questions, please contact Jeff Gardner of my staff at (805) 545-4385.

Sincerely,

David H. Oatley

Rec'd w/ floppy disk

A009
IE48
1/1

cc: Edgar D. Bailey
Roger W. Briggs
Ellis W. Merchoff
B. Nestel
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Enclosure

DDC/3649/R0210645

CORRECTION AND UPDATE INFORMATION FOR 1998 AND 1999 DIABLO CANYON POWER PLANT ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

This enclosure contains corrections or updates as follows:

1. 1998 Report (PG&E Letter DCL-99-055 dated April 30, 1999):

   Section XI, Radiation Dose Due to Gaseous and Liquid Effluents, paragraph C., "Radiation Doses from Direct Radiation (Line-of-Sight Plus Sky-Shine) – Closest Site Boundary (800m)."

   The reported value for 1998 includes doses due to the presence of radioactive waste containers outside of plant buildings, and the storage of contaminated tools and equipment inside plant buildings.

   The calculation used to determine doses due to the presence of waste containers outside of plant buildings was incorrect for the second, third and fourth quarters. The calculation includes the distance of a thermoluminescent dosimeter (TLD) from the waste containers. Rather than using the value in units of meters, the value was in units of feet. This error resulted in overestimating the dose from this contribution by a factor of approximately 10.8.

   The total reported value of 8.72E-2 mrem has been revised to *5.69E-2 mrem*.

2. 1999 Report (PG&E Letter DCL-00-061 dated April 28, 2001):

   a. Section X, Solid Radwaste Shipments, Step A, "Solid Waste Shipped Offsite for Burial or Disposal (Not Irradiated Fuel)."

      As described in the 1999 report, the values for "Dry Compressible Waste, Contaminated Equipment, etc." were expected to increase after PG&E received the final disposal report from the waste processor. The changes are italicized and underlined below:

Type of Waste	Units	12 Month Period	
		Previous	Revised
b. Dry Compressible Waste,	m^3	1.55E+1	*1.68E+1*
Contaminated Equipment, etc.	Ci	3.50E+0	*3.70E+0*

b. Section XI, Radiation Dose Due to Gaseous and Liquid Effluents (1999), paragraph C., "Radiation Doses from Direct Radiation (Line-of-Sight Plus Sky-Shine) – Closest Site Boundary (800m)."

The reported value for 1999 includes doses due to the presence of radioactive waste containers outside of plant buildings, and the storage of contaminated tools and equipment inside plant buildings.

The calculation used to determine doses due to the presence of waste containers outside of plant buildings was incorrect for 1999. The calculation includes the distance of a TLD from the waste containers. Rather than using the value in units of meters, the value was in units of feet. This error resulted in overestimating the dose from this contribution by a factor of approximately 10.8.

The total reported value of 7.52E-2 mrem has been revised to *1.02E-2 mrem*.

c. Footnote 1 in Tables 1A, 1B, and 1C should read "RECP 6.1.6.1 Limit" rather than "RMCP 6.1.6.1 Limit."

Footnote 1 in Tables 4A, 4B, and 4C should read "RECP 6.1.3.1 Limit" rather than "RMCP 6.1.6.1 Limit."

Corrected pages are not included for replacement since these errors do not involve quantitative values.

d. Tables 10A and 10B

The headings for the numerical columns on each table have been revised to include "% of TS Limit" rather than "%" or "Dose." The corrected headings are italicized and underlined.

Correction to PG&E Letter DCL-99-055

XI. Radiation Dose Due to Gaseous and Liquid Effluents

Radiation Doses

A. Radiation doses from radioactive liquid effluents

The radiation dose contributions due to releases of radioactive liquid effluents to the total body and each individual organ for the maximum exposed adult have been calculated in accordance with the methodology in the ODCP. Dose contributions listed in Table 7 show conformance to RECP 6.1.4.1.

B. Radiation doses from radioactive gaseous effluents

The radiation dose contributions due to radioactive gaseous effluents at the site boundary for the land sectors have been calculated in accordance with the calculation methodology in the ODCP. Each unit's dose contribution has been calculated separately. The latest five-year historical average meteorology conditions were used in these calculations. In addition to the site boundary doses, the dose to an individual (critical receptor) due to radioiodines, tritium, and particulates released in gaseous effluents with half-lives greater than 8 days is determined in accordance with the methodology in the ODCP based on the methodology described in NUREG 0133. Dose contributions listed in Table 8, which represents the maximum dose for age groups, organs, and geographic locations for the report period, show conformance to RECP 6.1.6.1, 6.1.7.1, and 6.1.8.1.

C. Radiation Doses from Direct Radiation (Line-of-Sight Plus Sky-Shine) - Closest Site Boundary (800m)

For the report period, the radiation dose is evaluated to be *5.69E-2* mrem due to the presence of radioactive waste containers outside of plant buildings and the storage of contaminated tools and equipment inside plant buildings.

D. Radiation Doses from Chemistry Laboratory Radioactive Gaseous Effluents - Closest Site Boundary (800m)

The radiation doses due to chemistry laboratory radioactive gaseous effluents for the report period is evaluated to be *2.31E-6* mrem.

E. Radiation Doses from Post-accident Sampling System Radioactive Gaseous Effluents - Closest Site Boundary (800m)

The radiation doses due to post-accident sampling system radioactive gaseous effluents for the report period is evaluated to be 2.29E-6 mrem.

Correction to PG&E Letter DCL-99-055

X. Solid Radwaste Shipments

Solid Waste and Irradiated Fuel Shipment

A. Solid Waste Shipped Offsite for Burial or Disposal (Not irradiated fuel)

1. Type of Waste	Unit	12 Month Period	Est. Total Error, %
a. Spent Resins, Filter Sludges, Evaporator Bottoms, etc.	m^3 Ci	9.65E+0 2.32E+2	0.00E+0 4.92E+0
b. Dry Compressible Waste, Contaminated Equipment, etc.	m^3 Ci	*1.68E+1* *3.70E+0*	0.00E+0 1.00E+1
c. Irradiated Components, Control Rods, etc.	m^3 Ci	0.00E+0 0.00E+0	0.00E+0 0.00E+0
d. Other	m^3 Ci	0.00E+0 0.00E+0	0.00E+0 0.00E+0

2. Estimate of Major Nuclide Composition (by type of waste)

a.

Co-60	%	41
Ni-63	%	23.5
Fe-55	%	12.9
Zn-65	%	12.3

b.

Fe-55	%	40
Nb-95	%	13.9
Co-60	%	13.3
Zr-95	%	9
Ni-63	%	7
Fe-59	%	5.4
Sb-125	%	1.2

c.

Not Applicable	%	N/A

d.

Not Applicable	%	N/A

Correction to PG&E Letter DCL-99-055

XI. Radiation Dose Due to Gaseous and Liquid Effluents (1999)

Radiation Doses

A. Radiation doses from radioactive liquid effluents

The radiation dose contributions due to releases of radioactive liquid effluents to the total body and each individual organ for the maximum exposed adult have been calculated in accordance with the methodology in the ODCP. Dose contributions listed in Table 7 show conformance to RECP 6.1.4.1.

B. Radiation doses from radioactive gaseous effluents

The radiation dose contributions due to radioactive gaseous effluents at the site boundary for the land sectors have been calculated in accordance with the calculation methodology in the ODCP. Each unit's dose contribution has been calculated separately. The latest five-year historical average meteorology conditions were used in these calculations. In addition to the site boundary doses, the dose to an individual (critical receptor) due to radioiodines, tritium, and particulates released in gaseous effluents with half-lives greater than 8 days is determined in accordance with the methodology in the ODCP based on the methodology described in NUREG 0133. Dose contributions listed in Table 8, which represents the maximum dose for age groups, organs, and geographic locations for the report period, show conformance to RECP 6.1.6.1, 6.1.7.1, and 6.1.8.1.

C. Radiation Doses from Direct Radiation (Line-of-Sight Plus Sky-Shine) - Closest Site Boundary (800 m)

For the report period, the radiation dose is evaluated to be *1.02E-2* mrem due to the presence of radioactive waste containers outside of plant buildings and the storage of contaminated tools and equipment inside plant buildings.

D. Radiation Doses from Chemistry Laboratory Radioactive Gaseous Effluents - Closest Site Boundary (800m)

The radiation doses due to chemistry laboratory radioactive gaseous effluents for the report period is evaluated to be 2.34E-6 mrem.

E. Radiation Doses from Post-accident Sampling System Radioactive Gaseous Effluents - Closest Site Boundary (800m)

The radiation doses due to post-accident sampling system radioactive gaseous effluents for the report period is evaluated to be 2.29E-6 mrem.

Correction to PG&E Letter DCL-99-055

Table 10a

Percent of Technical Specification Limits[1] for Radioactive Gaseous Effluents (Unit 1)

		First Quarter % of TS Limit	Second Quarter % of TS Limit	Third Quarter % of TS Limit	Fourth Quarter % of TS Limit	Annual Total % of TS Limit
Site Boundary						
Noble Gas						
Gamma Air Dose	mrad	1.71E-2	4.30E-4	5.08E-4	4.18E-4	9.22E-3
Beta Air Dose	mrad	3.40E-3	7.60E-5	4.68E-4	7.36E-5	2.01E-3

		First Quarter % of TS Limit	Second Quarter % of TS Limit	Third Quarter % of TS Limit	Fourth Quarter % of TS Limit	Annual Total % of TS Limit
Nearest Residence - NNW						
I,P,T						
Critical Receptor (Highest Organ)	mrem	2.12E-2	3.54E-3	4.05E-3	4.35E-3	1.66E-2

		First Quarter % of TS Limit	Second Quarter % of TS Limit	Third Quarter % of TS Limit	Fourth Quarter % of TS Limit	Annual Total % of TS Limit
Nearest Vegetable Garden - ESE						
I,P, T						
Critical Receptor (Highest Organ)	mrem	1.76E-2	3.19E-3	3.86E-3	5.21E-3	1.49E-2

NOTE:
[1] RECP 6.1.6.1, 6.1.7.1, and 6.1.8.1

Table 10b

Percent of Technical Specification Limits [1] for Radioactive Gaseous Effluents (Unit 2)

		First *Quarter % of TS Limit*	Second *Quarter % of TS Limit*	Third *Quarter % of TS Limit*	Fourth *Quarter % of TS Limit*	Annual *Total % of TS Limit*
Site Boundary						
Noble Gas						
Gamma Air Dose	mrad	7.98E-4	7.50E-4	1.62E-2	3.42E-2	2.60E-2
Beta Air Dose	mrad	1.17E-3	4.99E-4	2.61E-2	5.55E-2	4.16E-2

		First *Quarter % of TS Limit*	Second *Quarter % of TS Limit*	Third *Quarter % of TS Limit*	Fourth *Quarter % of TS Limit*	Annual *Total % of TS Limit*
Nearest Residence - NNW						
I ,P, T						
Critical Receptor (Highest Organ)	mrem	2.80E-3	1.82E-3	4.62E-3	1.20E-1	6.49E-2

		First *Quarter % of TS Limit*	Second *Quarter % of TS Limit*	Third *Quarter % of TS Limit*	Fourth *Quarter % of TS Limit*	Annual *Total % of TS Limit*
Nearest Vegetable Garden - ESE						
I ,P, T						
Critical Receptor (Highest Organ)	mrem	2.53E-3	1.64E-3	4.90E-3	6.12E-1	3.11E-1

NOTE:
[1] RECP 6.1.6.1, 6.1.7.1, and 6.1.8.1