



**Pacific Gas and
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June 10, 2011

PG&E Letter DCL-11-071

10 CFR 50.75

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
Response to Requests for Additional Information Related to the Diablo Canyon
Nuclear Power Plant, Units 1 and 2, 2011 Decommissioning Funding Status Report
(TAC Nos. ME5476 and ME5477)

Dear Commissioners and Staff:

Pacific Gas & Electric Company (PG&E) submitted PG&E Letter DCL 11-039, dated March 31, 2011, for the 2011 Decommissioning Funding Status Report for Diablo Canyon Power Plant (DCPP), Unit Nos. 1 and 2, as required under 10 CFR 50.75(f)(1).


By NRC Letter dated May 13, 2011, the NRC staff has reviewed the submittal and determined that additional information is required in order to complete its review. The NRC requested that a response would be provided within 30 days of receipt of the letter transmitting the request for additional information. The attached enclosure provides the PG&E response for the request for additional information.

If you have any questions regarding this response, please contact Mr. Thomas Baldwin, Regulatory Service Manager at (805) 545-4720.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on June 10, 2011.

Sincerely,



James R. Becker



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SWH/50398418

Enclosure

cc: Diablo Distribution

cc/enc: Elmo E. Collins, NRC Region IV Regional Administrator

Michael S. Peck, NRC Senior Resident Inspector

James T. Polickoski, NRR Project Manager

Alan B. Wang, NRR Project Manager

NRC RAI 1: Minimum Decommissioning Financial Assurance (DFA) calculation:

Please provide the basis for the burial factor used in calculating the minimum requirement for DFA and, if necessary, a corrected submittal for that part of the DFS report.

By letter dated March 31, 2011, PG&E reported the amounts of decommissioning funds for DCP, Units 1 and 2, estimated to be required under 10 CFR 50.75(b) and (c), greater than the amount calculated by the NRC staff. Within its DFS report submittal, PG&E used the Direct Disposal factor (27.292), calculated the factor to 2011 by applying the average percent change between 2008 and 2010 and applying to the 2008 base factor, and restated the 2011 factor to 1986 (16.8999), which is not a current value within NUREG-1307, "Report on Waste Burial Charges: Changes in Decommissioning Waste Disposal Costs at Low-Level Waste Burial Facilities," Rev. 14 (ADAMS Accession No. ML103220151).

NUREG-1307, page IV, states, in part, that: "For plants that have no disposal site available for LLW [low-level waste] (e.g., plants not located within the Atlantic, Northwest, and Rocky Mountain Compacts), NUREG-1307, Rev. 14 assumes the costs for disposal is the same as that provided for the Atlantic Compact. for lack of a better alternative at this time. "

According to 10 CFR 50.75 (f)(1), the amount provided in the DFS report should be "the amount of decommissioning funds estimated to be required under 10 CFR 50.75(b) and (c)."

PG&E Response

NUREG-1307, page 3 states, "Effective July 1, 2008, waste from states that are not members of the Atlantic Compact was not[sic] longer accepted at the South Carolina disposal site. Licensees not located in either the Northwest, Rocky Mountain, or Atlantic Compacts should use the Bx values for the Generic LLW Disposal Site". The Bx Values for Generic LLW Disposal Site and the Atlantic Compact Direct Disposal are exactly the same for a PWR in 2008 and 2010.

DCPP calculations were based on the Generic LLW Disposal Site, escalating the values in the Generic LLW Disposal Site table from 2010 (the most current information in the table) to an assumed value for 2011 based on the increase reflected in the table between 2008 and 2010.

NRC RAI 2: After-tax decommissioning funds as of December 31, 2010:

Please indicate if the amount of decommissioning funds identified within the DFS report for DCP are the after-tax amounts of decommissioning funds accumulated through

December 31, 2010. If not, please provide the after-tax amounts of decommissioning funds accumulated through December 31, 2010.

On March 31, 2011, PG&E reported the amounts of decommissioning funds accumulated as of December 31, 2010, for DCPD but did not indicate if the amounts stated were the before or after-tax balances.

The provisions of 10 CFR 50.75(f)(1) and (2) require the licensee to report the amount of funds accumulated to the end of the calendar year preceding the report.

PG&E Response

The amounts reported in the DFS report represented the market value of the funds:

Market Value (December 2010 dollars)	Unit 1 \$	807.5
	Unit 2 \$	1,083.1

The after-tax, liquidation value of the funds are:

Liquidation Value (December 2010 dollars)	Unit 1 \$	738.9
	Unit 2 \$	989.6

NRC RAI 3: Citation for real rate of return:

Please provide the citation (e.g., an Order by the rate-regulatory authority) by the regulatory entity that allows for the assumptions used regarding rates of escalation in decommissioning costs, rate of earnings on decommissioning funds, and rates of other factors assumed within PG&E's DFS report for DCPD. Also, please include the rate of earnings on the decommissioning funds and annual real rate of return, and confirm if the real rate of return is allowed by PG&E's regulatory authority for both the annual collections as well as the decommissioning trust funds for DCPD.

While PG&E's DFS report provides variable escalation rates for DCPD from 2010 through 2025, the rate of earnings and real rate of return on decommissioning funds were not provided within the DFS report.

As stated in 10 CFR 50.75(f)(1): "...the information in [the DFS] report must include [...] the assumptions used regarding rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections ... "

PG&E Response

California Public Utilities Commission ("CPUC") D.10-07-047 authorized the assumptions used regarding rates of escalation in decommissioning costs, rate of

earnings on decommissioning funds, and rates of other factors assumed within PG&E's DFS report for DCPD.

D.10-07-047 assumed the following rates of return for DCPD Unit 1:

Year	After-tax Annualized Rate of Return
2010	5.01%
2011	4.96%
2012	4.92%
2013	4.88%
2014	4.85%
2015	4.82%
2016	4.80%
2017	4.78%
2018	4.77%
2019	4.75%
2020	4.37%
2021	4.01%
2022	3.67%
2023	3.35%
2024	3.05%
2025	2.95%

D.10-07-047 assumed the following rates of return for DCPD Unit 2:

Year	After-tax Annualized Rate of Return
2010	5.01%
2011	4.96%
2012	4.91%
2013	4.88%
2014	4.85%
2015	4.82%
2016	4.80%
2017	4.78%
2018	4.77%
2019	4.75%
2020	4.37%
2021	4.01%
2022	3.67%
2023	3.35%
2024	3.05%
2025	2.95%

Following is the after-tax rate of return earned by the assets of the DCP Unit 1 Fund from the date of the initial contribution through 2010:

Year	After-tax Annualized Rate of Return Qualified Fund
1988	7.10%
1989	6.30%
1990	8.00%
1991	9.08%
1992	7.47%
1993	9.39%
1994	-0.84%
1995	20.07%
1996	9.21%
1997	15.94%
1998	13.91%
1999	8.93%
2000	0.75%
2001	-2.92%
2002	-3.62%
2003	15.73%
2004	7.72%
2005	4.84%
2006	9.55%
2007	5.69%
2008	-19.91%
2009	18.42%
2010	10.9%

Following is the after-tax rate of return earned by the assets of the DCP Unit 2 Fund from the date of the initial contribution through 2010:

Year	After-tax Annualized Rate of Return Qualified Fund
1988	7.10%
1989	6.30%
1990	8.00%
1991	9.08%
1992	7.47%
1993	9.39%
1994	-0.84%
1995	20.07%
1996	9.21%
1997	15.94%
1998	13.91%

1999	8.93%
2000	0.75%
2001	-2.92%
2002	-3.62%
2003	15.73%
2004	7.72%
2005	4.84%
2006	9.55%
2007	5.69%
2008	-19.91%
2009	18.42%
2010	10.9%

Amounts contributed to the decommissioning funds are based on the assumptions adopted by the CPUC. The annual collections are based on the assumed after-tax rate of returns. On a triennial basis, the CPUC conducts a Nuclear Decommissioning Cost Proceeding to review the prior proceeding's assumptions, as well as actual performance of the fund. At that time, future contributions to the funds are adjusted to reflect annual real rates of return for the prior three years.

NRC RAI 4: Summary of annual expenses:

Please provide a summary schedule of annual expenses, projected earnings, and end-of-year fund balances in 2010 dollars, for radiological decommissioning regarding the site-specific cost estimate of DCP, in order for the NRC staff to evaluate the amount of earnings credit available during the decommissioning period.

Within its DFS report, PG&E included a site-specific cost estimate (SSCE) that was escalated into 2011 dollars for DCP, Units 1 and 2, but did not include a summary schedule of annual expenses, projected earnings, and end-of-year fund balances.

Per 10 CFR 50.75(e)(1)(i) and (ii), the licensee must specifically describe the safe storage period in order to take credit for projected future earnings when it uses a site-specific estimate as the basis for using the prepayment or external sinking fund methods of financial assurance.

PG&E Response

The following tables provides a summary schedule of projected earnings and end-of-year fund balances using 2010 liquidation values, costs in 2010 dollars and the assumptions adopted by the CPUC in D.10-07-047:

DCPP UNIT 1

Year	Projected Earnings	DCPP #1 YE Bal Before +/-	Capital Gain Tax from Liquidation	Withdrawal (at YE)	Contrib. (at YE)	Remaining Assets
Liquidation Value						
12/31/2010		738.9				
2009						653.8
2010	1.0507	738.9	0.0	0.0	0.000	738.9
2011	1.0500	775.9	0.0	0.0	4.658	780.5
2012	1.0495	819.2	0.0	0.0	4.658	823.9
2013	1.0491	864.4	0.0	0.0	4.658	869.0
2014	1.0488	911.4	0.0	0.0	4.658	916.1
2015	1.0485	960.5	0.0	0.0	4.658	965.1
2016	1.0482	1011.7	0.0	0.0	4.658	1016.3
2017	1.0480	1065.1	0.0	0.0	4.658	1069.8
2018	1.0478	1120.9	0.0	0.0	4.658	1125.6
2019	1.0477	1179.2	0.0	0.0	4.658	1183.9
2020	1.0475	1240.2	-3.0	0.0	4.658	1241.9
2021	1.0437	1296.2	-4.8	0.0	4.658	1296.0
2022	1.0401	1348.0	-6.9	0.0	4.658	1345.8
2023	1.0367	1395.2	-9.3	0.0	4.658	1390.6
2024	1.0335	1437.2	-11.9	19.4	4.658	1410.5
2025	1.0305	1453.6	-4.6	142.4	4.269	1310.8
2026	1.0295	1349.5	0.0	330.9		1018.7
2027	1.0295	1048.7	0.0	367.4		681.4
2028	1.0295	701.5	0.0	171.9		529.6
2029	1.0295	545.2	0.0	153.0		392.3
2030	1.0295	403.8	0.0	20.7		383.2
2031	1.0295	394.5	0.0	21.0		373.5
2032	1.0295	384.5	0.0	21.5		363.0
2033	1.0295	373.7	0.0	21.8		351.9
2034	1.0295	362.3	0.0	22.2		340.0
2035	1.0295	350.1	0.0	22.7		327.4
2036	1.0295	337.1	0.0	23.2		313.9
2037	1.0295	323.2	0.0	59.5		263.6
2038	1.0295	271.4	0.0	122.9		148.5
2039	1.0295	152.9	0.0	49.7		103.2
2040	1.0295	106.2	0.0	50.0		56.2
2041	1.0295	57.9	0.0	15.5		42.3
2042	1.0295	43.6	0.0	12.9		30.7
2043	1.0295	31.6	0.0	13.3		18.3
2044	1.0295	18.9	0.0	13.7		5.2
2045	1.0295	5.4	0.0	14.0		-8.6
2046	1.0295	-8.9	0.0	14.4		-23.3
2047	1.0295	-23.9	0.0	14.8		-38.7
2048	1.0295	-39.9	0.0	15.2		-55.1
2049	1.0295	-56.7	0.0	15.6		-72.3
2050	1.0295	-74.4	0.0	16.0		-90.4
2051	1.0295	-93.1	0.0	40.5		-133.5
2052	1.0295	-137.5	0.0	27.4		-164.9

DCPP UNIT 2

Year	Projected Earnings	DCPP #2 YE Bal Before +/-	Capital Gain Tax from Liquidation	Withdrawal (at YE)	Contrib. (at YE)	Remaining Assets
Liquidation Value						
12/31/2010		989.6				
2009						886.1
2010	1.0507	989.6	0.0	0.0	0.000	989.6
2011	1.0500	1039.1	0.0	0.0	4.350	1043.4
2012	1.0495	1095.1	0.0	0.0	4.350	1099.5
2013	1.0491	1153.5	0.0	0.0	4.350	1157.8
2014	1.0488	1214.3	0.0	0.0	4.350	1218.7
2015	1.0485	1277.7	0.0	0.0	4.350	1282.1
2016	1.0482	1343.9	0.0	0.0	4.350	1348.2
2017	1.0480	1413.0	0.0	0.0	4.350	1417.3
2018	1.0478	1485.1	0.0	0.0	4.350	1489.4
2019	1.0477	1560.4	0.0	0.0	4.350	1564.7
2020	1.0475	1639.1	-4.0	0.0	4.350	1639.4
2021	1.0437	1711.1	-6.4	0.0	4.350	1709.0
2022	1.0401	1777.6	-9.2	0.0	4.350	1772.8
2023	1.0367	1837.9	-12.3	0.0	4.350	1829.9
2024	1.0335	1891.3	-15.6	0.0	4.350	1880.0
2025	1.0305	1937.4	-6.1	41.9	1.450	1890.8
2026	1.0295	1946.6	0.0	164.1		1782.5
2027	1.0295	1835.1	0.0	384.2		1450.9
2028	1.0295	1493.7	0.0	367.2		1126.5
2029	1.0295	1159.8	0.0	222.6		937.2
2030	1.0295	964.9	0.0	168.2		796.7
2031	1.0295	820.2	0.0	51.8		768.4
2032	1.0295	791.0	0.0	53.3		737.7
2033	1.0295	759.5	0.0	54.5		705.0
2034	1.0295	725.8	0.0	55.9		669.9
2035	1.0295	689.7	0.0	57.4		632.3
2036	1.0295	651.0	0.0	59.1		591.8
2037	1.0295	609.3	0.0	95.1		514.2
2038	1.0295	529.4	0.0	170.8		358.6
2039	1.0295	369.2	0.0	175.1		194.1
2040	1.0295	199.8	0.0	181.3		18.6
2041	1.0295	19.1	0.0	25.7		-6.6
2042	1.0295	-6.8	0.0	12.8		-19.6
2043	1.0295	-20.2	0.0	13.1		-33.3
2044	1.0295	-34.3	0.0	13.5		-47.8
2045	1.0295	-49.2	0.0	13.8		-63.1
2046	1.0295	-64.9	0.0	14.2		-79.2
2047	1.0295	-81.5	0.0	14.6		-96.1
2048	1.0295	-98.9	0.0	15.0		-114.0
2049	1.0295	-117.4	0.0	15.4		-132.8
2050	1.0295	-136.7	0.0	15.8		-152.5
2051	1.0295	-157.0	0.0	39.3		-196.3
2052	1.0295	-202.1	0.0	27.2		-229.3

NRC RAI 5: Site-specific study - DCP, Unit No. 2:

Please clarify why the site-specific cost estimate for DCP, Unit No. 2 is less than the minimum decommissioning financial assurance amount calculated by PG&E for radiological decommissioning.

Within its DFS report, PG&E stated that the minimum decommissioning amount for DCP, Unit No. 2 is \$580.3 million, which was calculated pursuant to the requirements specified under 10 CFR 50.75(c). However, based on site-specific cost estimates prepared by TLG Services, Inc., and the NDCTP Decision, PG&E estimated that the decommissioning cost for DCP, Unit No. 2 is approximately \$546.5 million.

As stated under 10 CFR 50.75(b)(1): "...[f]inancial assurance for decommissioning will be [...] provided in an amount which may be more, but not less than the amount stated in the table in paragraph (c)(1) ... "

PG&E Response

The reasons that the site-specific cost estimate for DCP Unit 2 is less than the minimum decommissioning financial assurance amount are that the common facility costs are included in the Unit 1 portion of the estimate and the current estimate assumes that much of the structures at DCP will be used as backfill at the site (thus no disposal costs). Also, DCP has assumed all security costs in the Spent Fuel Management scope of work.

PG&E was in error in stating that the site-specific cost estimate for Unit 2 was greater than the calculated minimum decommissioning cost pursuant to the requirements of 10 CFR 50.75(e) as indicated by the calculated value (\$580.3 million) and the site-specific estimate (\$546.5 million).

Per 10 CFR 50.75 (b)(4) "... The amount stated in the applicant's or licensee's certification may be based on a cost estimate for decommissioning the facility. As part of the certification a copy of the financial instrument obtained to satisfy the requirements of paragraph (e) of this section must be submitted...". The assumption that PG&E must collect funding to the amount calculated by 10 CFR 50.75(c) requirements would result in excess funding in the Trust accounts that would have to be returned to rate payers at a later date (not necessarily those who paid) based on the current site-specific cost estimate.

PG&E included the TLG Services cost estimate that was approved by the California Public Utilities Commission (CPUC) in the most recent Nuclear Decommissioning Cost Triennial Proceeding (NDCTP)