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March 31, 2005

PG&E Letter HBL-05-008

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

Docket No. 50-133, OP-DPR-7
Humboldt Bay Unit 3
Decommissioning Funding Report for Humboldt Bay Power Plant Unit 3

Dear Commissioners and Staff:

PG&E is submitting the decommissioning fund report for Humboldt Bay Power Plant (HBPP) Unit 3, pursuant to the requirements of 10 CFR 50.75(f).

Humboldt Bay Unit 3

At the end of calendar year 2004, the market value of the HBPP Unit 3 (220 MWt) decommissioning trust funds was \$252.9 million. PG&E estimates an additional \$18.45 million (future nominal dollars) will need to be collected over the next year to coincide with a decommissioning of HBPP Unit 3 in 2008 based on a site-specific decommissioning cost estimate prepared by TLG Services, Inc. and adjusted per the Nuclear Decommissioning Cost Triennial Proceeding (NDCTP) Decision 03-10-014 from the California Public Utilities Commission (CPUC). The CPUC Decision was based on an Independent Spent Fuel Storage Installation (ISFSI) being constructed at HBPP that would be in operation until 2015 when all fuel would be removed from HBPP by the Department of Energy (DOE). Previous HBPP Assurance of Funding letters were based on HBPP fuel remaining in the spent fuel pool until DOE took possession after the opening of their Nuclear Fuel Repository in 2010.

The market value of the HBPP trust is lower than the minimum amount of the NRC decommissioning estimate of \$453.2 million (2005 dollars) that was calculated pursuant to the requirements specified in 10 CFR 50.75(c), which is based on a minimum 1200 MWt plant. PG&E is confident the HBPP trust, with the noted additional contributions, will be sufficient to ensure successful decommissioning and maintaining of the spent fuel in an ISFSI at HBPP Unit 3 in 2008 based on a site-specific decommissioning cost estimate prepared by TLG Services, Inc. and the CPUC Decision 03-10-014.

Supporting Cost Estimates

Based on site-specific cost estimates prepared by TLG Services, Inc. and adjustments as a result of the NDCTP Decision 03-10-014, PG&E has estimated that the decommissioning costs are approximately \$295.8 million (including \$18.4 million disbursed from the Trust(s) through December 2004 and \$277.4 million future radiological removal costs) for HBPP Unit 3 in 2005 dollars. These costs do not include dismantling or demolishing the non-nuclear portions of the

ADD



facilities (\$3.5 million), nor the licensing, construction, and operation of the ISFSI until 2015 (\$68.0 million).

To assure that sufficient funds will be available for decommissioning, PG&E has established external sinking trust fund accounts for HBPP Unit 3.

Supporting Enclosures

Supporting documentation for this report is included as Enclosures 1 through 4.

Enclosure 1 provides decommissioning funding status information in a format suggested by NEI and the NRC.

Enclosure 2 provides information on the escalation of the required decommissioning funding amounts from 1986 dollars to 2005 dollars. As required by 10 CFR 50.75(c)(2), and using NUREG 1577, "Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance," Revision 1 and NUREG 1307, "Report on Waste Burial Charges," Revision 10, the information includes escalation factors for energy, labor, and waste burial costs.

Enclosure 3 is the TLG Services, Inc. decommissioning cost estimate report prepared in February 2002 for PG&E for HBPP Unit 3. The TLG Services, Inc. cost estimate has then been adjusted to reflect the costs in 2005 dollars per CPUC Decision 03-10-014 by applying the escalation factors; adjusting the burial costs of Class A Low Level Radioactive Waste (LLRW) from \$140 per cubic foot to \$200 per cubic foot; and reducing the contingency from 30 percent to 25 percent. The report provides cost estimates for decommissioning of both the nuclear and non-nuclear facilities, including the ISFSI.

Enclosure 4 is a cash flow of the total decommissioning of HBPP that identifies the monies for NRC scope (removal of radiological contamination), non-NRC scope (including the non-radiological work) and the ISFSI.

Sincerely,

Gregory M. Rueger

Senior Vice President – Generation and Chief Nuclear Officer

Enclosures

cc/enc: John B. Hickman
Bruce S. Mallett
INPO
PG Fossil Gen HBPP Humboldt Distribution

**NRC Decommissioning Funding Status Report
Humboldt Bay Power Plant – Unit 3 (220 MWt)**

**NRC Decommissioning Funding Status Report
Humboldt Bay Power Plant - Unit 3 (220 MWt)**

As provided in 10 CFR 50.75(f)(1), each power reactor licensee is required to report to the NRC on a calendar year basis, beginning March 31, 1999, and annually thereafter, on the status of its decommissioning funding for each reactor that it owns and has already closed.

\$ in Millions

1. The minimum decommissioning fund estimate, pursuant to 10 CFR 50.75 (b) and (c).¹

January 2005 dollars

\$ 453.2

(HBPP is a shutdown unit with a Site Specific Cost Study; therefore, the minimum decommissioning fund estimate is based on the Site Specific Cost Study shown in item 8 of this enclosure.)

2. The amount accumulated at the end of the calendar year preceding the date of the report for items included in 10 CFR 50.75 (b) and (c). (Alternatively, the total amount accumulated at the end of the calendar year preceding the date of the report can be reported here if the cover letter transmitting the report provides the total estimate and indicates what portion of that estimate is for items not included in 10 CFR 50.75 (b) and (c)).

Market Value (December 2004 dollars)

\$ 252.9

3. A schedule of the annual amounts remaining to be collected; for items in 10 CFR 50.75 (b) and (c). (Alternatively, the annual amounts remaining to be collected can include items beyond those required in 10 CFR 50.75 (b) and (c) if the cover letter transmitting the report provides a total cost estimate and indicates what portion of that estimate is for items that are not included in 10 CFR 50.75 (b) and (c). (See item 6 of this enclosure describing the collection of additional funds.)

Amount remaining

\$ 18.45

Number of years to collect

1 year

Annual amount to be collected

\$ 18.45

¹ * The NRC formulas in section 10CFR50.75(c) include only those decommissioning costs incurred by licensees to remove a facility or site safely from service and reduce residual radioactivity to levels that permit: (1) release of the property for unrestricted use and termination of the license; or (2) release of the property under restricted conditions and termination of the license. The cost of dismantling or demolishing non-radiological systems and structures is not included in the NRC decommissioning cost estimates. The costs of managing and storing spent fuel on site until transfers to DOE are not included in the cost formulas.

4. The assumptions used regarding escalation in decommissioning cost, rates of earnings on decommissioning funds (assumes trust will be gradually converted to a more conservative, all fixed income portfolio after 2010), and rates of other factors used in funding projections:

Escalation in decommissioning costs	4.55 percent
Rate of Return on Qualified Trust 2005	6.50 percent
Rate of Return on Qualified Trust 2006	5.88 percent
Rate of Return on Qualified Trust 2007	5.33 percent
Rate of Return on Qualified Trust 2008	4.85 percent
Rate of Return on Qualified Trust 2009	4.46 percent
Rate of Return on Qualified Trust (2010-2015)	4.16 percent
Rate of Return on Non-Qualified Trust 2005	5.63 percent
Rate of Return on Non-Qualified Trust 2006	4.82 percent
Rate of Return on Non-Qualified Trust 2007	4.22 percent
Rate of Return on Non-Qualified Trust 2008	3.79 percent
Rate of Return on Non-Qualified Trust 2008	3.51 percent
Rate of Return on Non-Qualified Trust (2010-2015)	3.38 percent

5. Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v); NONE

6. Any modifications to a licensee's current method providing financial assurance occurring since the last submitted report. YES

CPUC granted \$18.45 million to be collected in 2003 through 2005 in Decision 03-10-014, dated October 2, 2003.

7. Any material changes to trust agreements. NONE

8. CPUC Submittal in 2005 Dollars in Millions:

Total Project (Decommission 2009)	\$ 367.3
Scope Excluded from NRC calculations	\$ 3.5
Scope of ISFSI from Licensing to Decommissioning in 2015	\$ 68.0
Scope Decommissioned and disbursed from Trust(s)	<u>\$ 18.4</u>
Total NRC Decommissioning Costs	\$ 277.4

**Calculation of Energy Escalation Factor
Reference NUREG-1307, Revision 10, Section 3.2**

Development of E Component

Enclosure 2
PG&E Letter HBL-05-008

Calculation of Energy Escalation Factor - REFERENCE NUREG-1307, REVISION 10, SECTION 3.2
Using Regional Indices SERIES ID: WPU0573 Light Fuel Oils (as of 03/05/05) and WPU0543 Industrial Electric Power (as of 03/05/05)

REBASED TO 1986 = 100

	PPI for Fuels & Related Products (1982 = 100) (P) = Industrial Energy Power	PPI for Light Fuel Oils (1982=100) (F) = Light Fuel Oils	PPI for Fuels & Related Products (1986 = 100) (P) = Industrial Energy Power BWR wt = 0.54 PWR wt = 0.58	PPI for Light Fuel Oils (1986=100) (F) = Light Fuel Oils BWR wt = 0.46 PWR wt = 0.42	Energy Escalation Factor (E) for BWR (Humboldt)
Jan-86	114.2	82.0	1.0000	1.0000	1.0000
Feb-86	115.0	62.4	1.0070	0.7610	0.8938
Mar-86	114.4	51.3	1.0018	0.6256	0.8287
Apr-86	113.7	49.8	0.9956	0.6073	0.8170
May-86	114.1	47.0	0.9991	0.5732	0.8032
Jun-86	115.3	44.7	1.0096	0.5451	0.7960
Jul-86	116.2	36.4	1.0175	0.4439	0.7537
Aug-86	116.3	40.1	1.0184	0.4890	0.7749
Sep-86	116.3	46.3	1.0184	0.5646	0.8097
Oct-86	113.0	43.1	0.9895	0.5256	0.7761
Nov-86	112.7	43.5	0.9869	0.5305	0.7769
Dec-86	112.3	45.6	0.9834	0.5561	0.7868
Jan-87	110.3	51.4	0.9658	0.6268	0.8099
Feb-87	109.8	53.1	0.9615	0.6476	0.8171
Mar-87	110.2	49.7	0.9650	0.6061	0.7999
Apr-87	109.9	52.0	0.9623	0.6341	0.8114
May-87	111.8	53.3	0.9790	0.6500	0.8277
Jun-87	113.9	55.1	0.9974	0.6720	0.8477
Jul-87	116.2	56.3	1.0175	0.6866	0.8653
Aug-87	115.7	59.4	1.0131	0.7244	0.8803
Sep-87	115.5	56.8	1.0114	0.6927	0.8648
Oct-87	111.0	59.3	0.9720	0.7232	0.8575
Nov-87	109.2	61.2	0.9562	0.7463	0.8597
Dec-87	109.6	58.1	0.9597	0.7085	0.8442
Jan-88	108.8	54.8	0.9527	0.6683	0.8219
Feb-88	109.0	51.5	0.9545	0.6280	0.8043
Mar-88	109.0	49.7	0.9545	0.6061	0.7942
Apr-88	109.1	53.3	0.9553	0.6500	0.8149
May-88	108.9	54.3	0.9536	0.6622	0.8195
Jun-88	117.2	50.6	1.0263	0.6171	0.8380
Jul-88	118.2	46.9	1.0350	0.5720	0.8220
Aug-88	118.3	46.8	1.0359	0.5707	0.8219
Sep-88	118.5	45.9	1.0377	0.5598	0.8178
Oct-88	114.2	42.3	1.0000	0.5159	0.7773
Nov-88	109.2	47.2	0.9562	0.5756	0.7811
Dec-88	110.5	50.6	0.9676	0.6171	0.8064
Jan-89	112.0	54.9	0.9807	0.6695	0.8376
Feb-89	112.0	54.0	0.9807	0.6585	0.8325
Mar-89	112.3	57.3	0.9834	0.6988	0.8525
Apr-89	112.4	61.5	0.9842	0.7500	0.8765
May-89	113.6	57.5	0.9947	0.7012	0.8597
Jun-89	119.8	53.3	1.0490	0.6500	0.8655
Jul-89	122.2	52.7	1.0701	0.6427	0.8735
Aug-89	122.4	53.5	1.0718	0.6524	0.8789

Development of E Component

Calculation of Energy Escalation Factor - REFERENCE NUREG-1307, REVISION 10, SECTION 3.2
Using Regional Indices SERIES ID: WPU0573 Light Fuel Oils (as of 03/05/05) and WPU0543 Industrial Electric Power (as of 03/05/05)

	REBASED TO 1986 = 100				Energy Escalation Factor (E) for BWR (Humboldt)
	PPI for Fuels & Related Products (1982 = 100) (P) =Industrial Energy Power	PPI for Light Fuel Oils (1982=100) (F) = Light Fuel Oils	PPI for Fuels & Related Products (1986 = 100) (P) =Industrial Energy Power BWR wt = 0.54	PPI for Light Fuel Oils (1986=100) (F) = Light Fuel Oils BWR wt = 0.46	
Sep-89	122.5	59.3	1.0727	0.7232	0.9119
Oct-89	117.2	64.0	1.0263	0.7805	0.9132
Nov-89	113.5	64.4	0.9939	0.7854	0.8980
Dec-89	114.2	68.1	1.0000	0.8305	0.9220
Jan-90	114.9	85.3	1.0061	1.0402	1.0218
Feb-90	115.0	59.4	1.0070	0.7244	0.8770
Mar-90	115.4	60.4	1.0105	0.7366	0.8845
Apr-90	115.1	61.0	1.0079	0.7439	0.8865
May-90	117.0	58.4	1.0245	0.7122	0.8808
Jun-90	123.9	53.0	1.0849	0.6463	0.8832
Jul-90	124.4	51.6	1.0893	0.6293	0.8777
Aug-90	124.6	72.3	1.0911	0.8817	0.9948
Sep-90	125.0	87.3	1.0946	1.0646	1.0808
Oct-90	121.2	104.8	1.0613	1.2780	1.1610
Nov-90	120.2	98.9	1.0525	1.2061	1.1232
Dec-90	118.9	89.3	1.0412	1.0890	1.0632
Jan-91	124.2	82.9	1.0876	1.0110	1.0523
Feb-91	124.3	74.3	1.0884	0.9061	1.0046
Mar-91	124.3	61.6	1.0884	0.7512	0.9333
Apr-91	124.7	60.0	1.0919	0.7317	0.9262
May-91	128.2	59.6	1.1226	0.7268	0.9405
Jun-91	132.6	57.6	1.1611	0.7024	0.9501
Jul-91	134.5	58.1	1.1778	0.7085	0.9619
Aug-91	133.8	62.1	1.1716	0.7573	0.9810
Sep-91	133.8	65.4	1.1716	0.7976	0.9996
Oct-91	128.3	67.6	1.1235	0.8244	0.9859
Nov-91	123.1	71.0	1.0779	0.8659	0.9804
Dec-91	125.1	62.2	1.0954	0.7585	0.9405
Jan-92	125.9	54.4	1.1025	0.6634	0.9005
Feb-92	125.3	57.3	1.0972	0.6988	0.9139
Mar-92	125.8	56.0	1.1016	0.6829	0.9090
Apr-92	124.8	59.0	1.0928	0.7195	0.9211
May-92	128.5	62.1	1.1252	0.7573	0.9560
Jun-92	134.8	65.4	1.1804	0.7976	1.0043
Jul-92	135.6	64.6	1.1874	0.7878	1.0036
Aug-92	135.1	63.3	1.1830	0.7720	0.9939
Sep-92	135.9	65.6	1.1900	0.8000	1.0106
Oct-92	131.2	68.2	1.1489	0.8317	1.0030
Nov-92	125.5	64.2	1.0989	0.7829	0.9536
Dec-92	126.7	59.4	1.1095	0.7244	0.9323
Jan-93	127.1	59.0	1.1130	0.7195	0.9320
Feb-93	126.4	60.4	1.1068	0.7366	0.9365
Mar-93	126.7	63.2	1.1095	0.7707	0.9536
Apr-93	126.8	62.4	1.1103	0.7610	0.9496
May-93	127.5	62.6	1.1165	0.7634	0.9541
Jun-93	136.9	60.8	1.1988	0.7415	0.9884

Development of E Component

Enclosure 2
PG&E Letter HBL-05-008

Calculation of Energy Escalation Factor - REFERENCE NUREG-1307, REVISION 10, SECTION 3.2
Using Regional Indices SERIES ID: WPU0573 Light Fuel Oils (as of 03/05/05) and WPU0543 Industrial Electric Power (as of 03/05/05)

	REBASED TO 1986 = 100				Energy Escalation Factor (E) for BWR (Humboldt)
	PPI for Fuels & Related Products (1982 = 100) (P) = Industrial Energy Power	PPI for Light Fuel Oils (1982=100) (F) = Light Fuel Oils	PPI for Fuels & Related Products (1986 = 100) (P) = Industrial Energy Power BWR wt = 0.54	PPI for Light Fuel Oils (1986=100) (F) = Light Fuel Oils BWR wt = 0.46	
Jul-93	137.1	57.0	1.2005	0.6951	0.9680
Aug-93	137.2	54.4	1.2014	0.6634	0.9539
Sep-93	137.6	59.3	1.2049	0.7232	0.9833
Oct-93	131.9	65.4	1.1550	0.7976	0.9906
Nov-93	126.3	61.6	1.1060	0.7512	0.9428
Dec-93	126.0	51.4	1.1033	0.6268	0.8841
Jan-94	126.2	51.5	1.1051	0.6280	0.8856
Feb-94	125.9	57.5	1.1025	0.7012	0.9179
Mar-94	125.8	56.2	1.1016	0.6854	0.9101
Apr-94	125.4	54.7	1.0981	0.6671	0.8998
May-94	126.0	54.7	1.1033	0.6671	0.9027
Jun-94	133.5	54.1	1.1690	0.6598	0.9347
Jul-94	134.5	56.3	1.1778	0.6866	0.9518
Aug-94	134.5	57.5	1.1778	0.7012	0.9586
Sep-94	134.9	57.7	1.1813	0.7037	0.9616
Oct-94	129.1	57.7	1.1305	0.7037	0.9341
Nov-94	127.0	58.8	1.1121	0.7171	0.9304
Dec-94	127.4	54.7	1.1156	0.6671	0.9093
Jan-95	127.6	54.7	1.1173	0.6671	0.9102
Feb-95	128.0	53.3	1.1208	0.6500	0.9043
Mar-95	128.3	54.3	1.1235	0.6622	0.9113
Apr-95	126.4	57.1	1.1068	0.6963	0.9180
May-95	130.2	59.1	1.1401	0.7207	0.9472
Jun-95	135.3	55.8	1.1848	0.6805	0.9528
Jul-95	136.6	53.5	1.1961	0.6524	0.9460
Aug-95	136.5	55.6	1.1953	0.6780	0.9573
Sep-95	133.7	58.2	1.1708	0.7098	0.9587
Oct-95	131.4	57.8	1.1506	0.7049	0.9456
Nov-95	127.6	59.5	1.1173	0.7256	0.9371
Dec-95	127.7	60.6	1.1182	0.7390	0.9438
Jan-96	127.9	62.6	1.1200	0.7634	0.9560
Feb-96	127.1	59.7	1.1130	0.7280	0.9359
Mar-96	127.8	63.5	1.1191	0.7744	0.9605
Apr-96	129.1	74.7	1.1305	0.9110	1.0295
May-96	135.0	72.0	1.1821	0.8780	1.0423
Jun-96	137.5	62.8	1.2040	0.7659	1.0025
Jul-96	136.0	64.3	1.1909	0.7841	1.0038
Aug-96	136.2	66.5	1.1926	0.8110	1.0171
Sep-96	136.2	73.4	1.1926	0.8951	1.0558
Oct-96	131.2	79.7	1.1489	0.9720	1.0675
Nov-96	127.1	76.5	1.1130	0.9329	1.0301
Dec-96	127.7	76.1	1.1182	0.9280	1.0307
Jan-97	128.3	73.7	1.1235	0.8988	1.0201
Feb-97	128.1	72.3	1.1217	0.8817	1.0113
Mar-97	128.2	65.2	1.1226	0.7951	0.9720
Apr-97	127.3	65.3	1.1147	0.7963	0.9683

Development of E Component

Enclosure 2
PG&E Letter HBL-05-008

Calculation of Energy Escalation Factor - REFERENCE NUREG-1307, REVISION 10, SECTION 3.2
Using Regional Indices SERIES ID: WPU0573 Light Fuel Oils (as of 03/05/05) and WPU0543 Industrial Electric Power (as of 03/05/05)

	PPI for Fuels & Related Products (1982 = 100) (P) =Industrial Energy Power	PPI for Light Fuel Oils (1982=100) (F) = Light Fuel Oils	REBASED TO 1986 = 100		Energy Escalation Factor (E) for BWR (Humboldt)
			PPI for Fuels & Related Products (1986 = 100) (P) =Industrial Energy Power BWR wt = 0.54	PPI for Light Fuel Oils (1986=100) (F) = Light Fuel Oils BWR wt = 0.46	
May-97	129.7	64.2	1.1357	0.7829	0.9734
Jun-97	135.1	60.8	1.1830	0.7415	0.9799
Jul-97	135.9	57.8	1.1900	0.7049	0.9669
Aug-97	134.7	61.5	1.1795	0.7500	0.9819
Sep-97	136.0	60.4	1.1909	0.7366	0.9819
Oct-97	130.1	64.8	1.1392	0.7902	0.9787
Nov-97	127.9	65.8	1.1200	0.8024	0.9739
Dec-97	128.3	59.4	1.1235	0.7244	0.9399
Jan-98	127.4	54.1	1.1156	0.6598	0.9059
Feb-98	127.2	52.0	1.1138	0.6341	0.8932
Mar-98	126.7	48.3	1.1095	0.5890	0.8701
Apr-98	126.4	50.2	1.1068	0.6122	0.8793
May-98	129.2	50.0	1.1313	0.6098	0.8914
Jun-98	133.8	46.3	1.1716	0.5646	0.8924
Jul-98	134.8	45.0	1.1804	0.5488	0.8898
Aug-98	135.2	44.0	1.1839	0.5366	0.8861
Sep-98	135.2	48.3	1.1839	0.5890	0.9103
Oct-98	130.4	47.4	1.1419	0.5780	0.8825
Nov-98	127.6	46.2	1.1173	0.5634	0.8625
Dec-98	126.6	38.8	1.1086	0.4732	0.8163
Jan-99	126.1	40.9	1.1042	0.4988	0.8257
Feb-99	125.5	38.2	1.0989	0.4659	0.8077
Mar-99	125.5	42.8	1.0989	0.5220	0.8335
Apr-99	125.2	52.5	1.0963	0.6402	0.8865
May-99	127.4	52.6	1.1156	0.6415	0.8975
Jun-99	131.0	52.4	1.1471	0.6390	0.9134
Jul-99	133.9	58.7	1.1725	0.7159	0.9624
Aug-99	133.9	63	1.1725	0.7683	0.9866
Sep-99	134.1	67.6	1.1743	0.8244	1.0133
Oct-99	129.5	65.5	1.1340	0.7988	0.9798
Nov-99	127.5	71.3	1.1165	0.8695	1.0029
Dec-99	126.5	72.9	1.1077	0.8890	1.0071
Jan-00	126.8	75.3	1.1103	0.9183	1.0220
Feb-00	126.7	87.9	1.1095	1.0720	1.0922
Mar-00	126.7	89.7	1.1095	1.0939	1.1023
Apr-00	126.8	83.1	1.1103	1.0134	1.0658
May-00	128.6	82.9	1.1261	1.0110	1.0731
Jun-00	133.6	86.2	1.1699	1.0512	1.1153
Jul-00	136.2	88.7	1.1926	1.0817	1.1416
Aug-00	137.4	91.6	1.2032	1.1171	1.1636
Sep-00	137.8	110.1	1.2067	1.3427	1.2692
Oct-00	134.1	108.6	1.1743	1.3244	1.2433
Nov-00	130.9	108.4	1.1462	1.3220	1.2271
Dec-00	132.7	100.6	1.1620	1.2268	1.1918
Jan-01	136.4	96.1	1.1944	1.1720	1.1841
Feb-01	136.4	91.6	1.1944	1.1171	1.1588

Development of E Component

Calculation of Energy Escalation Factor - REFERENCE NUREG-1307, REVISION 10, SECTION 3.2
Using Regional Indices SERIES ID: WPU0573 Light Fuel Oils (as of 03/05/05) and WPU0543 Industrial Electric Power (as of 03/05/05)

	REBASED TO 1986 = 100				Energy Escalation Factor (E) for BWR (Humboldt)
	PPI for Fuels & Related Products (1982 = 100) (P) = Industrial Energy Power	PPI for Light Fuel Oils (1982=100) (F) = Light Fuel Oils	PPI for Fuels & Related Products (1986 = 100) (P) = Industrial Energy Power BWR wt = 0.54	PPI for Light Fuel Oils (1986=100) (F) = Light Fuel Oils BWR wt = 0.46	
Mar-01	136.5	83.1	1.1953	1.0134	1.1116
Apr-01	135.1	86.2	1.1830	1.0512	1.1224
May-01	136.2	94.2	1.1926	1.1488	1.1725
Jun-01	148.4	90.2	1.2995	1.1000	1.2077
Jul-01	149.5	81.3	1.3091	0.9915	1.1630
Aug-01	148.9	83.2	1.3039	1.0146	1.1708
Sep-01	148.2	93	1.2977	1.1341	1.2225
Oct-01	143.8	76.8	1.2592	0.9366	1.1108
Nov-01	137.3	70.5	1.2023	0.8598	1.0447
Dec-01	136.9	56.6	1.1988	0.6902	0.9649
Jan-02	136.3	58.3	1.1935	0.7110	0.9715
Feb-02	135.4	59.6	1.1856	0.7268	0.9746
Mar-02	135.7	69.1	1.1883	0.8427	1.0293
Apr-02	135.4	76.4	1.1856	0.9317	1.0688
May-02	137.9	75	1.2075	0.9146	1.0728
Jun-02	143.6	71.4	1.2574	0.8707	1.0796
Jul-02	144.9	75.5	1.2688	0.9207	1.1087
Aug-02	145.0	77.9	1.2697	0.9500	1.1226
Sep-02	145.8	89.5	1.2767	1.0915	1.1915
Oct-02	140.0	95.1	1.2259	1.1598	1.1955
Nov-02	139.5	82.8	1.2215	1.0098	1.1241
Dec-02	139.6	84.6	1.2224	1.0317	1.1347
Jan-03	140.3	95.7	1.2285	1.1671	1.2003
Feb-03	140.6	120.4	1.2312	1.4683	1.3402
Mar-03	143.3	128.9	1.2548	1.5720	1.4007
Apr-03	144.3	98.3	1.2636	1.1988	1.2338
May-03	145.1	85.5	1.2706	1.0427	1.1657
Jun-03	148.3	87.2	1.2986	1.0634	1.1904
Jul-03	151.6	90.1	1.3275	1.0988	1.2223
Aug-03	151.3	94.1	1.3249	1.1476	1.2433
Sep-03	152.0	88.2	1.3310	1.0756	1.2135
Oct-03	147.4	97.8	1.2907	1.1927	1.2456
Nov-03	142.7	93.0	1.2496	1.1341	1.1965
Dec-03	142.9	95.8	1.2513	1.1683	1.2131
Jan-04	143.1	106.8	1.2531	1.3024	1.2758
Feb-04	143.1	100.8	1.2531	1.2293	1.2421
Mar-04	143.1	107.8	1.2531	1.3146	1.2814
Apr-04	143.1	115.2	1.2531	1.4049	1.3229
May-04	144.2	116	1.2627	1.4146	1.3326
Jun-04	152.4	111.5	1.3345	1.3598	1.3461
Jul-04	152.2	119.3	1.3327	1.4549	1.3889
Aug-04	154.0	131.1	1.3485	1.5988	1.4636
Sep-04	154.0	136.8	1.3485	1.6683	1.4956
Oct-04	146.2	161.7	1.2802	1.9720	1.5984
Nov-04	146.5	153.6	1.2828	1.8732	1.5544
Dec-04	147.9	133.4	1.2951	1.6268	1.4477

Development of E Component

Enclosure 2
PG&E Letter HBL-05-008

Calculation of Energy Escalation Factor - REFERENCE NUREG-1307, REVISION 10, SECTION 3.2
Using Regional Indices SERIES ID: WPU0573 Light Fuel Oils (as of 03/05/05) and WPU0543 Industrial Electric Power (as of 03/05/05)

	PPI for Fuels & Related Products (1982 = 100) (P) =Industrial Energy Power	PPI for Light Fuel Oils (1982=100) (F) = Light Fuel Oils	REBASED TO 1986 = 100		Energy Escalation Factor (E) for BWR (Humboldt)
			PPI for Fuels & Related Products (1986 = 100) (P) =Industrial Energy Power BWR wt = 0.54	PPI for Light Fuel Oils (1986=100) (F) = Light Fuel Oils BWR wt = 0.46	
Jan-05	150.6	138.5	1.3187	1.6890	1.4891

Oct 04 through Jan 05 are Preliminary Values from PPI Indices

**Humboldt Bay Power Plant Unit 3
Decommissioning Cost Estimate**

BEST PRINTED ON LEDGER SIZE PAPER

HUMBOLDT BAY POWER PLANT UNIT 3
AREA-BY-AREA ESTIMATE

(Thousands of 2002 dollars)

Disposable Waste

(Thousands of 2005 dollars)

(Escalated @ 12.887% from 2002; Revised Contingency to 25%; Revised Class A Burial Rate from \$140/cf to \$200/cf.)

Activity	(Thousands of 2002 dollars)								Disposable Waste				(Thousands of 2005 dollars)							
	2002 Decon	2002 Remove	2002 Pack	2002 Ship	2002 Bury	2002 Other	2002 Contgncy	2002 Total	A CF	B CF	C CF	GTCC	2005 Decon	2005 Remove	2005 Pack	2005 Ship	2005 Bury	2005 Other	2005 Contgncy	2005 Total
PERIOD 2																				
HBPP Unit #3 1996 Completed Projects						1,678		1,678										1,678		1,678
HBPP Unit #3 1997 Completed Projects						8,663		8,663										8,663		8,663
HBPP Unit #3 1998 Completed Projects						5,574		5,574										5,574		5,574
HBPP Unit #3 1999 Completed Projects						723		723										723		723
HBPP Unit #3 2000 Completed Projects						85		85										85		85
HBPP Unit #3 2001 Completed Projects						90		90										90		90
HBPP Unit #3 2002 Completed Projects						994		994										994		994
HBPP Unit #3 2003 Completed Projects						495		495										495		495
HBPP Unit #3 2004 Completed Projects																		510		510
ISFSI Design & Licensing 1998						344		344										344		344
ISFSI Design & Licensing 1999						2,281		2,281										2,281		2,281
ISFSI Design & Licensing 2000						2,736		2,736										2,736		2,736
ISFSI Design & Licensing 2001						398		398										398		398
ISFSI Design & Licensing 2002						114		114										114		114
ISFSI Design & Licensing 2003						2,539		2,539										2,539		2,539
ISFSI Design & Licensing 2004						824	176	1,000										1,426		1,426
ISFSI Design & Licensing 2005						163	924	1,087										1,087		1,087
Radiological Characterization						-29	133	104										242		242
Reactor Vessel Activation Analysis						85	15	100										85	21	106
Develop Cost, Schedule & Work Controls																				
Develop "Level 2" Decommissioning Schedule						102		102										102	25	127
Develop Site Facilities & Staffing Plan						170		170										170	43	213
Asbestos Removal						262	318	580										262	65	327
LLW Management Plan						467	118	585										467	117	584
Decom Demonstration Project						321	79	400										321	80	401
Decommissioning Design Basis						60		60										60	15	75
Revise Licensing Basis						100		100										100	25	125
Total PERIOD 2						29,240	1,763	31,003										31,547	392	31,939
PERIOD 3																				
1 Perform detailed rad survey																				
2 Review plant dwgs & specs.						321	48	369										362	91	453
3 End product description						100	15	115										113	28	141
4 Detailed by-product inventory						8	1	9										9	2	11
5 Define major work sequence						375	56	431										423	106	529
6 Perform SER and EA						310	47	357										350	87	437
7 Perform Site-Specific Cost Study						500	75	575										564	141	706
8 Prepare/submit License Termination Plan						166	25	190										187	47	234
9 Receive NRC approval of termination plan																				
Activity Specifications																				
10.1 Re-activate plant & temporary facilities						652	98	750										736	184	920
10.2 Plant systems						295	44	339										333	83	416
10.3 Reactor internals						660	99	759										745	186	931
10.4 Reactor vessel						600	90	690										677	169	847
10.5 Sacrificial shield						50	8	58										56	14	71
10.6 Moisture separators/reheaters						100	15	115										113	28	141
10.7 Reinforced concrete						160	24	184										181	45	226
10.8 Turbine & condenser						417	63	479										470	118	588
10.9 Pressure suppression structure						200	30	230										226	56	282
10.10 Primary containment						160	24	184										181	45	226
10.11 Plant structures & buildings						190	29	219										214	54	268
10.12 Waste management						109	16	125										123	31	154
10.13 Facility & site closeout						90	14	104										102	25	127
10 Total						3,682	552	4,235										4,157	1,039	5,196
Planning & Site Preparations																				
11 Prepare dismantling sequence						240	36	276										271	68	339
12 Plant prep. & temp. svces						2,219	333	2,552										2,505	626	3,131
13 Design water clean-up system						140	21	161										158	40	198
14 Rigging/CCEs/tooling/etc.						1,300	195	1,495										1,468	367	1,835
15 Procure casks/liners & containers						123	18	141										139	35	174

BEST PRINTED ON LEDGER SIZE PAPER

HUMBOLDT BAY POWER PLANT UNIT 3
AREA-BY-AREA ESTIMATE

Activity	(Thousands of 2002 dollars)								Disposable Waste				(Thousands of 2005 dollars) (Escalated @ 12.887% from 2002; Revised Contingency to 25%; Revised Class A Burial Rate from \$140/cf to \$200/cf.)							
	2002 Decon	2002 Remove	2002 Pack	2002 Ship	2002 Bury	2002 Other	2002 Contngncy	2002 Total	A CF	B CF	C CF	GTCC	2005 Decon	2005 Remove	2005 Pack	2005 Ship	2005 Bury	2005 Other	2005 Contngncy	2005 Total
	Detailed Work Procedures																			
16.1 Plant systems						473	71	544										534	134	668
16.2 Vessel head						24	4	28										27	7	34
16.3 Reactor internals						400	60	460										452	113	564
16.4 Remaining buildings						135	20	155										152	38	190
16.5 CRD housings & ICI tubes						100	15	115										113	28	141
16.6 Incore instrumentation						100	15	115										113	28	141
16.7 Removal primary containment						200	30	230										226	56	282
16.8 Reactor vessel						363	54	417										410	102	512
16.9 Facility closeout						120	18	138										135	34	169
16.10 Sacrificial shield						120	18	138										135	34	169
16.11 Reinforced concrete						100	15	115										113	28	141
16.12 Turbine & condensers						270	41	311										305	76	382
16.13 Moisture separators & reheaters						54	8	62										61	15	76
16.14 Radwaste building						127	19	146										143	36	179
16.15 Reactor building						127	19	146										143	36	179
16 Total						2,713	407	3,120										3,063	766	3,828
17 Asbestos removal program		98	39	1	349			601						110	44	1	394		137	685
Subtotal Period 3 Activity Costs		98	39	1	349	12,197	1,945	14,628						110	44	1	394	13,769	3,579	17,896
Period 3 Additional Costs																				
18 Additional Support Facilities						1,894	284	2,178										2,138	534	2,672
19 Mixed Waste Disposal		2	6	3		260	41	312	207					3	6	3		294	76	382
Period 3 Undistributed Costs																				
1 DOC staff relocation expenses		1,441					216	1,658						1,627					407	2,034
2 Insurance						213	21	234										240	60	301
3 Property taxes																				
4 Health physics supplies		228					57	285						257					64	321
5 Heavy equipment rental		431					65	495						486					122	608
6 Disposal of DAW generated			34	1	28		10	73	199						39	1	45		21	106
7 Plant energy budget						133	20	153										151	38	188
8 NRC Fees						314	31	346										355	89	443
9 Emergency Planning Fees						118	12	130										133	33	166
10 Site Security						964	145	1,108										1,088	272	1,360
11 Fabricate Casks & Construct ISFSI						13,616	4,153	17,769										14,131	3,533	17,664
12 Rebuilding Refueling Bldg Crane						1,008	151	1,159										1,138	284	1,422
Subtotal Undistributed Costs Period 3		2,100	34	1	28	16,366	4,881	23,410	199					2,370	39	1	45	17,236	4,923	24,613
Staff Costs																				
DOC Staff Cost						1,739	261	2,000										1,964	491	2,454
Utility Staff Cost						14,285	2,143	16,427										16,125	4,031	20,157
TOTAL PERIOD 3 COST		2,200	79	4	376	46,741	9,555	58,955	406					2,483	89	5	438	51,525	13,635	68,175
PERIOD 4																				
20 Remove spent fuel racks		40	8	12	2	193	66	402	1,377				45	9	14	3	311	75	114	569
21 Fuel Pool Cleanup						348	52	400										393	98	491
Nuclear Steam Supply System Removal																				
22.1 CRDMs & ICIs Removal	3	22	46	4	352		100	528	782				4	25	52	5	177	66	328	
22.2 Reactor Vessel Internals	8	1,893	1,233	127	720		2,124	6,105	506		423		9	2,137	1,392	143	847	1,132	5,661	
22.3 Reactor Vessel	8	3,443	294	97	500		2,934	7,276	286	626	423		9	3,887	332	110	583	1,230	6,150	
22 Totals	19	5,358	1,573	228	1,572		5,158	13,909	1,574	626	423		21	6,049	1,776	258	1,775	2,026	12,139	
Removal of Major Equipment																				
23 Main Turbine/Generator		72				1,251	206	1,528						81				1,412	373	1,866
24 Main Condensers #		21	87	27	1,175	989	460	2,760	8,396					24	98	31	1,327	1,116	649	3,245
Disposal of Plant Systems																				
25.1 HMS1-1		40				28	14	82						46				31	19	96
25.2 HMS1-2		4				2	1	8						4				3	2	9
25.3 HMSP		6				4	2	12						6				5	3	14
25.4 OTS-1		12				14	5	31						13				16	7	37

BEST PRINTED ON LEDGER SIZE PAPER																					
HUMBOLDT BAY POWER PLANT UNIT 3																					
AREA-BY-AREA ESTIMATE																					
(Thousands of 2002 dollars)										Disposable Waste				(Thousands of 2005 dollars)							
										(Escalated @ 12.887% from 2002; Revised Contingency to 25%; Revised Class A Burial Rate from \$140/cf to \$200/cf.)											
Activity	2002 Decon	2002 Remove	2002 Pack	2002 Ship	2002 Bury	2002 Other	2002 Contngncy	2002 Total		A CF	B CF	C CF	GTCC	2005 Decon	2005 Remove	2005 Pack	2005 Ship	2005 Bury	2005 Other	2005 Contngncy	2005 Total
25.5 OTS-2		11					10	4	25						12				11	6	29
25.6 OTS-3		16					30	8	54						18				33	13	64
25.7 OTS-4		10					9	4	24						12				11	6	28
25.8 OTS-5		8					4	2	14						9				4	3	16
25.9 OTS-6		2					1	1	3						2				1	1	4
25.10 RB1-1		43					52	19	114						49				59	27	134
25.11 RB1-2		20					15	7	42						22				17	10	49
25.12 RB1-3		16					5	5	25						18				5	6	29
25.13 RB1-4		72					24	22	118						81				28	27	135
25.14 RB1-5		97					38	30	165						110				43	38	190
25.15 RB1-6		401					201	130	732						453				227	170	849
25.16 RB2-1		56					23	17	96						63				25	22	111
25.17 RB2-2		64					70	27	161						72				79	38	190
25.18 RB2-3		84					14	23	121						94				16	28	138
25.19 RB2-4		33					6	9	48						37				7	11	55
25.20 RB2-5		136					82	46	265						154				93	62	308
25.21 RB2-6		216					27	58	301						243				31	69	343
25.22 RB2-7		205					42	57	304						231				47	70	348
25.23 RB2-8		225					167	81	473						254				188	110	552
25.24 RB2-9		225					167	81	473						254				188	110	552
25.25 RB3-1		64					38	22	124						73				43	29	144
25.26 RB3-2		11					6	4	21						13				7	5	25
25.27 RB4-1		50					49	20	118						56				55	28	139
25.28 RB4-2		36					15	11	61						40				17	14	71
25.29 RB5-1		27					8	8	42						31				9	10	49
25.30 RB5-1 (HVAC Scope)		29					22	10	61						32				25	14	71
25.31 RBP		362					5	91	458						408				6	103	517
25.32 RW1-1		186					50	54	290						210				56	67	333
25.33 RW1-2		200					59	59	318						226				66	73	365
25.34 RW1-3		4					1	1	6						4				2	1	7
25.35 RW1-4		47					32	16	95						53				36	22	111
25.36 RW1-5		55					24	17	96						62				27	22	112
25.37 RW1-6		42					30	15	88						48				34	21	103
25.38 RW1-7		15					7	5	27						17				8	6	31
25.39 RW1-8		4					2	1	7						5				2	2	8
25.40 RW1-9		4					1	1	6						5				1	1	7
25.41 RWP		127					2	32	161						144				2	36	182
25.42 TB1-1		82					63	30	175						93				71	41	204
25.43 TB1-2		7					492	75	574						7				555	141	703
25.44 TB1-3		25					25	10	60						28				28	14	71
25.45 TB2-1		357					267	129	753						403				301	176	880
25.46 TB2-2		64					47	23	134						72				53	31	156
25.47 TB3-1		385					263	136	784						435				297	183	914
25.48 TB3-2		13					19	6	38						14				21	9	44
25.49 TB3-3		27					0	7	34						31				0	8	39
25.50 TB4-1		106					51	34	191						120				58	44	222
25.51 TB4-2		436					150	131	716						492				169	165	826
25.52 TB5-1		97					19	27	144						110				22	33	164
25.53 TB5-2		61					19	18	98						69				21	23	113
25.54 TB6-1		69					47	24	141						78				53	33	164
25.55 TB6-2		82					48	28	157						92				54	37	183
25.56 TB7-1		83					76	32	192						94				86	45	225
25.57 TB7-2		14					14	6	35						16				16	8	41
25.58 TB7-3		10					12	4	26						11				14	6	31
25.59 TB7-4		9					2	3	14						11				3	3	16
25.60 TB7-5		20					24	8	52						22				27	12	61
25.61 TB7-6		36					29	13	78						40				33	18	91
25.62 TB7-7		26					10	8	45						30				11	10	51
25.63 TBP		660					9	166	835						745				10	189	944
25.64 YARD		3					0	1	4						4				0	1	5
25.65 YD1-1		48					231	47	326						55				260	79	394
25.66 YD1-2		75					68	29	171						84				77	40	201
25.67 YD1-5		7					7	3	17						8				8	4	19
25.68 YD2-1		35					8	10	53						40				9	12	61
25.69 YD2-2		14					8	5	27						16				9	6	31
25.70 YD2-3		5					6	2	14						6				7	3	16
25.71 YD2-4		82					51	28	162						93				58	38	188
25.72 YD2-5		199					137	70	407						225				155	95	475
25.73 YD2-6		142					77	47	266						160				86	62	308

BEST PRINTED ON LEDGER SIZE PAPER																				
HUMBOLDT BAY POWER PLANT UNIT 3																				
AREA-BY-AREA ESTIMATE																				
(Thousands of 2002 dollars)										Disposible Waste				(Thousands of 2005 dollars)						
										(Escalated @ 12.887% from 2002; Revised Contingency to 25%; Revised Class A Burial Rate from \$140/cf to \$200/cf.)										
Activity	2002 Decon	2002 Remove	2002 Pack	2002 Ship	2002 Bury	2002 Other	2002 Contngncy	2002 Total	A CF	B CF	C CF	GTCC	2005 Decon	2005 Remove	2005 Pack	2005 Ship	2005 Bury	2005 Other	2005 Contngncy	2005 Total
25.74 YDP		167				122	60	350						189				138	82	408
25 Totals		6,711				3,783	2,245	12,740						7,576				4,271	2,962	14,809
26 Erect scaffolding for systems removal		279	0	0	11	26	76	393	25					315	0	0	6	29	86	437
Decontamination of Site Buildings																				
27.1 HMS	18		7	3	65		26	119	461				20		8	3	104		34	170
27.2 RB1	379	250	108	43	1,016	532	603	2,932	7,009				428	283	121	49	1,582	601	766	3,830
27.3 RB2	590	635	21	8	214	488	584	2,539	1,298				666	717	24	9	293	550	565	2,824
27.4 RB3	15	3	3	1	29	8	17	76	201				17	3	3	1	45	9	20	98
27.5 RB4	12	2	3	1	26	8	15	67	179				14	3	3	1	40	9	17	87
27.6 RW1	57	1	13	5	121	1	61	259	847				65	1	15	6	191	1	70	348
27.7 TB1	5	2	1	1	13	5	7	34	88				6	2	2	1	20	5	9	44
27.8 TB2	29	1	6	3	60	3	31	134	425				33	1	7	3	96	4	36	180
27.9 TB3	11	1	2	1	23	2	12	51	160				12	1	3	1	36	2	14	68
27.10 TB4	15	3	4	2	36	9	19	86	247				16	3	4	2	56	10	23	114
27.11 TB5	8		2	1	17		8	35	119				9		2	1	27		10	48
27.12 TB6	7		2	1	15		8	32	110				8		2	1	25		9	44
27.13 TB7	11		4	1	33		14	63	236				12		4	2	53		18	89
27.14 YD1	7		2	1	16		8	34	117				8		2	1	26		9	47
27.15 YD2	43		12	5	109		51	219	776				49		13	5	175		61	303
27.16 RB5-1 (Refuel Bldg Roof)	23		5	2	46		24	100	330				26		6	2	75		27	135
27 Totals	1,230	897	194	78	1,839	1,054	1,488	6,779	12,603				1,388	1,013	219	88	2,845	1,190	1,686	8,428
Demolition of Remaining Site Buildings																				
28.1 Contaminated Equipment Storage		7		8	280		44	339								10	451		117	585
28.2 Fuel Pool Tremie Removal		72		64	2,094		334	2,563						81		72	3,376		882	4,411
28.3 Gas Stack		29		67	2,221		348	2,665						33		76	3,581		922	4,612
28.4 Hot Machine Shop & Calibration		18		19	641		102	780						21		22	1,033		269	1,345
28.5 New Off Gas Vault		79		154	5,088		798	6,119						89		174	8,204		2,117	10,584
28.6 Radwaste Treatment		123		97	3,193		512	3,925						138		109	5,150		1,349	6,747
28.7 Refueling		352		271	8,927		1,433	10,983						398		306	14,396		3,775	18,874
28.8 Solid Waste Vault		5		5	155		25	189						6		5	250		65	326
28.9 Turbine		387		312	10,284		1,647	12,630						437		352	16,584		4,343	21,716
28.10 Yard Structures		32		25	827		133	1,017						37		28	1,334		350	1,748
28 Totals		1,104		1,023	33,709		5,375	41,210						1,246		1,154	54,358		14,190	70,948
29 Utility license termination survey						2,232	670	2,901										2,519	630	3,149
30 ORISE confirmatory survey						111	33	144										125	31	156
31 Terminate license								Note 1												
Period 4 Additional Costs																				
32 Decon and Remediate Intake and Discharge	174	1,582	679	167	3,620		1,480	7,702	25,855				196	1,786	767	188	5,837		2,194	10,969
33 Contaminated Soil Removal		10		71	3,080		783	3,945	22,000					11		81	4,967		1,265	6,324
34 Caisson Mixed Waste Removal		68	41	8	279		109	505	22,000					77	46	9	4,967		1,275	6,374
35 Discharge Piping	28	342	106	32	974		359	1,841	1,419				32	387	119	36	320		224	1,118
36 Replacement of Drains and Catch Basins		51					8	59	6,958					58					14	72
Subtotal Period 4 Activity Costs	1,490	16,504	2,693	1,637	46,451	9,859	18,584	97,219	80,207	626	423		1,682	18,554	2,993	1,839	71,746	11,130	26,541	134,720
Period 4 Undistributed Costs																				
1 Decon equipment	689						103	793					778						194	972
2 Decon supplies	332						83	415					375						94	468
3 DOC staff relocation expenses		1,441					216	1,658						1,627					407	2,034
4 Process liquid waste	79		48	92	312		136	668		695			89		54	104	352		150	750
5 Insurance						365	37	402										413	103	516
6 Property taxes																				
7 Health physics supplies		1,603					401	2,004						1,810					452	2,262
8 Heavy equipment rental		6,184					928	7,111						6,981					1,745	8,726
9 Small tool allowance		197					30	226						222					56	278
10 Pipe cutting equipment		911					137	1,048						1,028					257	1,286
11 Disposal of DAW generated			101	2	81		31	215	581						114	2	131		62	309
12 Decommissioning Equipment Disposition			9	4	80	480	93	666	572						10	5	129	542	171	857
13 Plant energy budget						316	47	363										357	89	446
14 NRC Fees						545	55	600										616	154	770
15 Emergency Planning Fees						344	34	379										389	97	486
16 Site Security						1,420	213	1,633										1,603	401	2,004
17 LLRW Processing Equipment						1,001	150	1,151										1,130	282	1,412
18 ISFSI O&M						60	18	78										68	17	85

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HUMBOLDT BAY POWER PLANT UNIT 3
AREA-BY-AREA ESTIMATE

(Thousands of 2002 dollars)

Disposable Waste

(Thousands of 2005 dollars)

(Escalated @ 12.887% from 2002; Revised Contingency to 25%; Revised Class A Burial Rate from \$140/cf to \$200/cf.)

Activity	(Thousands of 2002 dollars)								Disposable Waste				(Thousands of 2005 dollars)							
	2002 Decon	2002 Remove	2002 Pack	2002 Ship	2002 Bury	2002 Other	2002 Contngncy	2002 Total	A CF	B CF	C CF	GTCC	2005 Decon	2005 Remove	2005 Pack	2005 Ship	2005 Bury	2005 Other	2005 Contngncy	2005 Total
19 ISFSI Fixed Costs						1,188	356	1,544										1,341	335	1,676
20 ISFSI Security						2,292	687	2,979										2,587	647	3,234
21 NRC ISFSI Fees						549	165	714										620	155	775
22 Fabricate Casks & Construct ISFSI						8,376	2,555	10,931										8,693	2,173	10,866
Subtotal Undistributed Costs Period 4	1,100	10,336	157	98	473	16,938	6,475	35,577	1,153	695			1,242	11,668	178	111	612	18,358	8,042	40,211
Staff Costs																				
DOC Staff Cost						9,888	1,483	11,371										11,162	2,790	13,952
Utility Staff Cost						36,785	5,518	42,303										41,526	10,381	51,907
TOTAL PERIOD 4	2,590	26,840	2,850	1,735	46,924	73,469	32,060	186,469	81,360	1,321	423		2,924	30,222	3,171	1,949	72,359	82,175	47,755	240,790
PERIOD 5																				
Site Closeout Activities																				
37 Backfill Site		222					33	256						251				63		314
38 Grade & landscape site		24					4	27						27				7		34
39 Final report to NRC						156	23	179										176	44	220
Period 5 Additional Costs																				
40 Purchase Impact Limiters						1,800	540	2,340										1,868	467	2,335
41 Transfer of spent fuel to DOE						400	120	520										407	102	508
42 Vessel & Internals GTCC Disposal					141		21	162				141					159	40	199	
43 ISFSI Decommissioning		675					203	878						762				190		952
Subtotal Period 5 Activity Costs		921			141	2,356	944	4,363				141		1,040			159	2,451	913	4,563
Period 5 Undistributed Costs																				
1 Insurance						25	2	27										28	7	35
2 Property taxes																				
3 Heavy equipment rental		700					105	806						791				198		988
4 Small tool allowance		14					2	16						16				4		20
5 Plant energy budget						9	1	10										10	3	13
6 Emergency Planning Fees						648	65	713										732	183	915
7 Site Security						21	3	24										23	6	29
8 ISFSI O&M						179	54	233										202	51	253
9 ISFSI Fixed Costs						3,563	1,069	4,632										4,022	1,006	5,028
10 ISFSI Security						6,876	2,063	8,939										7,762	1,941	9,703
11 NRC ISFSI Fees						1,700	511	2,211										1,919	480	2,399
Subtotal Undistributed Costs Period 5		714				13,021	3,876	17,611				141		806			14,699	3,876	19,381	
Staff Costs																				
DOC Staff Cost						497	75	571										561	140	701
Utility Staff Cost						1,217	183	1,400										1,374	344	1,718
TOTAL PERIOD 5		1,636			141	17,091	5,077	23,945				141		1,846			159	19,085	5,273	26,363
TOTAL COST TO DECOMMISSION	2,590	30,675	2,929	1,739	47,442	166,542	48,455	300,372	81,766	1,321	423	141	2,924	34,552	3,260	1,954	72,956	184,331	67,054	367,266
ISFSI Costs		675				51,130	13,763	65,569						762				55,823	11,415	68,000
Design & Licensing						9,400	1,100	10,500										10,926		10,926
Procure Cask/Liners & Containers						22,115	6,726	28,842										22,963	5,741	28,704
Rebuilding of Refueling Bldg Crane						1,008	151	1,159										1,138	284	1,422
Purchase Impact Limiters/Transfer to DOE						2,200	660	2,860										2,275	569	2,844
ISFSI O&M						239	72	311										270	67	337
ISFSI Fixed Costs						4,751	1,425	6,176										5,363	1,341	6,704
ISFSI Security						9,168	2,750	11,918										10,349	2,587	12,937
ISFSI NRC Fees						2,249	676	2,925										2,539	635	3,174
ISFSI Decommissioning of Facility		675					203	878						762				190		952
Non Radiological Scope (Per TLG Estimate in Column Labeled "CLEAN")								3,126												3,529
10.1 Re-Activate plant & temporary facilities								75												85
10.2 Plant systems								34												38
10.7 Reinforced Concrete								18												20

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HUMBOLDT BAY POWER PLANT UNIT 3
AREA-BY-AREA ESTIMATE

Activity	(Thousands of 2002 dollars)								Disposable Waste				(Thousands of 2005 dollars)								
	2002	2002	2002	2002	2002	2002	2002	2002	A CF	B CF	C CF	GTCC	(Escalated @ 12.887% from 2002; Revised Contingency to 25%; Revised Class A Burial Rate from \$140/cf to \$200/cf.)								
	Decon	Remove	Pack	Ship	Bury	Other	Contgncy	Total					2005	2005	2005	2005	2005	2005	2005	2005	
10.13 Facility & site closeout								52													59
16.1 Plant systems								54													61
16.4 Remaining buildings								116													131
16.9 Facility closeout								69													78
16.11 Reinforced concrete								58													65
16.14 Radwaste building								15													17
16.15 Reactor building								15													17
Period 4 Undistributed costs																					
8 Heavy equipment rental								711													803
9 Small tool allowance								23													26
13 Plant energy budget								36													41
37 Backfill site								256													289
38 Grade & landscape site								27													30
Period 5 Undistributed costs																					
3 Heavy equipment rental								806													910
4 Small tool allowance								16													18
5 Plant energy budget								10													11
7 Site security								24													27
Staff Costs - Period 5																					
DOC Staff Cost								571													645
Utility Staff Cost								140													158
NRC Scope Spent through Dec 31, '03																					
Caisson In-Leakage								9,759													9,759
Ventilation Stack Removal								5,740													5,740
Site Radiological Characterization								1,150													1,150
Removal/Disposal Asbestos								800													800
Decon Radiological Characterization								506													506
Legal Services for DOE litigation								74													74
(Disbursed from the Trust as of 12/31/04 \$27,348,074)																					

**Humboldt Bay Power Plant Unit 3
Decommissioning Cash Flow
(Estimated in 2005 Dollars)**

**Humboldt Bay Power Plant Unit 3
Decommissioning Cash Flow (Note 1)
(Estimated in 2005 Dollars)**

Year	NRC Scope (Radiological)	Non-NRC Scope (Non- Radiological)	ISFSI Engr/License Construction Operation (Note 1)	Total	Cummulative Decommission Estimate	Trust Account Funding (Note 2)
1996	\$1,678,452			\$1,678,452	\$1,678,452	
1997	\$8,663,216			\$8,663,216	\$10,341,669	
1998	\$5,573,757		\$344,408	\$5,918,165	\$16,259,834	
1999	\$723,490		\$2,281,454	\$3,004,944	\$19,264,778	
2000	\$85,241		\$2,736,091	\$2,821,331	\$22,086,109	
2001	\$89,543		\$398,012	\$487,555	\$22,573,664	
2002	\$994,127		\$113,704	\$1,107,831	\$23,681,495	
2003	\$494,838		\$2,539,476	\$3,034,313	\$26,715,809	
2004	\$491,069		\$1,444,629	\$1,935,698	\$28,651,507	\$27,348,074
2005	\$1,515,149		\$5,039,826	\$6,554,975	\$35,206,481	\$295,677,940
2006	\$23,902,774		\$2,730,300	\$26,633,074	\$61,839,555	
2007	\$52,267,399	\$598,690	\$15,782,100	\$68,648,189	\$130,487,743	
2008	\$63,130,491	\$312,360	\$10,250,000	\$73,692,851	\$204,180,594	
2009	\$57,639,384	\$312,360	\$4,590,000	\$62,541,744	\$266,722,338	
2010	\$62,685,351	\$312,360	\$2,640,000	\$65,637,711	\$332,360,049	<u>\$323,026,014</u>
2011	\$8,725,166	\$1,992,857	\$2,430,000	\$13,148,022	\$345,508,071	
2012	\$7,079,401		\$2,430,000	\$9,509,401	\$355,017,472	
2013			\$2,430,000	\$2,430,000	\$357,447,472	
2014			\$2,430,000	\$2,430,000	\$359,877,472	
2015			\$7,390,000	\$7,390,000	\$367,267,472	
2016				\$0	\$367,267,472	
2017				\$0	\$367,267,472	
2018				\$0	\$367,267,472	
2019				\$0	\$367,267,472	
2020				\$0	\$367,267,472	
TOTAL	<u>\$295,738,845</u>	<u>\$3,528,627</u>	<u>\$68,000,000</u>	<u>\$367,267,472</u>		

Notes:

- 1) Cash Flow is based on construction of ISFSI and Fuel removed from HBPP in 2015 (DOE Repository opens in 2010)
- 2) Trust Account Value of \$284 million is Expense Equivalent Liquidation Value (Includes Tax Break)
Market Value of Trust as of 12/04 was \$252.9 million, expended as of 12/04 was \$27.348 million
- 3) Assumes CPUC recommendation of burial costs of \$200/cf for LLRW in Decision 03-10-014
- 4) Assumes CPUC recommendation of 25% contingency in Decision 03-10-014