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December 18, 2006

Aaron Yue
Project Manager
California Department of Toxic Substances Control
Permitting and Corrective Action Branch
5796 Corporate Avenue
Cypress, California 90630

Robert Perdue
Executive Officer
California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

Subject: Interim Measures Compliance Monitoring Program
Request for Approval to Implement Limited Sampling Frequency for Selected Metals/General Minerals PG&E Topock Compressor Station, Needles, California

Dear Mr. Yue and Mr. Perdue:

This letter presents the rationale for Pacific Gas and Electric Company's request for approval to implement a limited sampling frequency for selected metals and general minerals currently included in the IM-3 injection monitoring program. The requested revision of monitoring parameters after one year is fully consistent with the approach outlined in the approved *Groundwater Compliance Monitoring Plan for Interim Measures No. 3 Injection Area* (herein referred to as the Compliance Monitoring Plan).

The Compliance Monitoring Plan, submitted to the California Regional Water Quality Control Board--Colorado River Basin Region (Regional Board) and the California Department of Toxic Substances Control (DTSC) on June 17, 2005, provides the objectives, proposed monitoring program, data evaluation methods, and reporting requirements for the Compliance Monitoring Program. Starting in July 2005 under the Compliance Monitoring Plan, samples were collected from groundwater wells according to the following schedule:

- In 2005:

    1. Nine observation wells (OW) located near the IM No. 3 injection wellfield were sampled monthly (July, August, September, October, November, and December 05 events).

2. Eight compliance monitoring wells (CW) located around the IM No. 3 injection wellfield were sampled semiannually in December 2005, with an additional quarterly round of sampling added in September 2005.

- As of September 2006:

3. Nine OW wells located near the IM No. 3 injection wellfield were sampled quarterly (March, June, September, and October events).
4. Eight CW wells located around the IM No. 3 injection wellfield were sampled semiannually (June and October events).

For all monthly, quarterly and semiannual sampling events conducted in the first year, laboratory analyses included total dissolved chromium [Cr(T)], hexavalent chromium [Cr(VI)], metals, specific conductance, pH, total dissolved solids (TDS), turbidity, silica, and major inorganic cations and anions. Groundwater elevation data and field water quality data, including specific conductance, temperature, pH, oxidation-reduction potential, dissolved oxygen, turbidity and salinity, were also measured during each monitoring event.

In this letter, PG&E is requesting the reduction of sampling frequency of selected metals and general minerals from quarterly to semiannual. This reduction was previously outlined in the Compliance Monitoring Plan Section 4.3.2 and Tables 4-1 and 4-2. As described in that plan, the limited suite is proposed for only OW wells, and not CW wells. The minerals and metals petitioned for reduction in sampling frequency consist of the following:

- General Minerals (7 constituents) – Ammonia, Iron, Calcium, Magnesium, Potassium, Sodium, and Alkalinity (as CaCO3)

- Metals (18 constituents) – Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, Copper, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium, and Zinc

The attached Table 1 presents all analytical results as well as frequency of detection for these constituents at OW wells as of September 2006. Based on data collected to date, PG&E believes that reducing the sampling frequency of these constituents from quarterly to semiannually will affect neither the objectives nor the quality of the CMP because they fall into one of the following categories:

- <u>Constituents with zero to limited occurrences in OW wells</u> – As shown in the attached Table 1, as of September 2006, ammonia, mercury, and thallium have not been detected in any samples collected from the OW wells. In addition, seven constituents were only detected at a frequency of less than 10% (defined as total number of detections divided by total number of samples for that constituent). They are:
  - Antimony and Cadmium (each detected in 1 out of 112 samples)
  - Cobalt (detected in 2 out of 112 samples)
  - Aluminum (detected in 5 out of 112 samples)

- Silver (each detected in 3 out of 112 samples)
- Dissolved Iron (detected in 6 out of 112 samples)
- Arsenic (detected in 10 out of 112 samples)

- Constituents routinely detected, with the variability between sampling events being minor and considered indicative of the natural variability of background water quality - With few exceptions, most of the constituents fall under this category. They include:
  - Alkalinity
  - Barium
  - Beryllium
  - Copper
  - Potassium
  - Magnesium
  - Manganese
  - Molybdenum
  - Nickel
  - Lead
  - Selenium
  - Zinc

- Constituents routinely detected and displaying a trend over time – Although there may be increasing trends and fluctuations associated with the concentrations of these compounds, PG&E believes that the semiannual sampling events will provide adequate resolution of the trend, and the data will be sufficient for the use of this data (performing water balance calculations and water typing). They include:
  - Calcium
  - Magnesium
  - Sodium

- Vanadium - Vanadium concentrations for OW wells are at low or non-detect levels with little variability over time, with the exception of results from October and November 2005 events. The data from October-November 2005 was anomalously high for most of the OW wells, and a review of the field and laboratory QA/QC data did not indicate any apparent reason for the anomalies. In general, the vanadium results for October-November 2005 are much higher than results from the previous month (September 2005) and the following months (December 2005, March 2006, June 2006 and August 2006). The results for the remainder of the metals analyzed did not show this anomalous temporary concentration spike, and therefore, provide support that the variability is not due to seasonal changes in groundwater geochemistry. Working with the project laboratories, CH2M HILL chemists have identified matrix interference that appears to have affected at least some of the vanadium results. Because the vanadium values do not show a fluctuation on a quarterly basis, PG&E believes that semiannual sampling events will provide adequate resolution of the natural variability in this compound.

For these reasons, we believe that implementing the limited suite for quarterly sampling (first and third quarter sampling events) is warranted. If acceptable to DTSC and the Regional Board, PG&E requests that this change be approved beginning with the first quarter 2007 sampling event, which is scheduled for January 24-25, 2007.

Thank you for your consideration of this request. If you have questions, please do not hesitate to contact me at (805) 546-5243.

Sincerely,

Julie Eaken for Yvonne Meeks

Yvonne Meeks

cc. Jose Cortez, RWQCB
Liann Chavez, RWQCB
Christopher Guerre / DTSC

Enclosure

TABLE 1
Results of OW Wells
PG&E Topock Compliance Monitoring Program

Location ID	Sample Date	Method:	6020A 6010B	6020A 6010B	6010B	6020A	6020A	6020A	6020A	6020A 6010B	6020A	6020A	6010B	6020A 6010B	6020A	6010B	6020A 6010B	6020A	6020A	6020A 6010B	6020A	6020A	6020A 6010B	6020A	6020A 6010B
		Analyte:	Alkalinity, bicarb as CaCO3	Alkalinity, total as CaCO3	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Cobalt	Copper	Iron	Iron Dissolved	Lead	Magnesium	Manganese	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Vanadium	Zinc
OW-01D	9/30/2004		39	39	0.052 U	0.005 U	0.01 U	0.102	0.003 U	0.0031 U	340	0.003 U	0.005 U	---	0.3 U	0.0021 U	17.5	0.378	0.0518	0.005 U	35.4	0.01 U	0.0031 U	2580	0.003 U	0.0307
OW-01D	11/18/2004		---	---	0.052 U	---	---	---	---	---	---	---	---	---	0.0208 U	---	---	0.301	---	---	---	---	---	---	---	---
OW-01D	12/21/2004		---	---	0.052 U	0.005 U	0.01 U	0.113	0.0031 U	0.0031 U	234	0.0031 U	0.005 U	---	0.3 U	0.0021 U	18.8	0.332	0.0356	0.005 U	33.4	0.01 U	0.0031 U	1250	0.0107	0.036
OW-01D	5/10/2005		---	---	---	0.002 U	0.00477	0.091	0.001 U	0.001 U	---	0.001 U	0.00252	---	0.104	0.001 U	---	0.299	0.0434	0.00105	15.5	0.001 U	0.001 U	---	0.00169	0.01 U
OW-01D	7/27/2005		39	39	0.052 U	0.005 U	0.01 U	0.0903	0.003 U	0.003 U	223	0.003 U	0.0216	0.311	0.3 U	0.0026 U	19	0.292	0.0461	0.0095	35.6	0.01 U	0.003 U	2080	0.0137	0.0383
OW-01D	8/25/2005		40.6	40.6	0.052 U	0.005 U	0.01 U	0.0522	0.0031 U	0.0031 U	246	0.0031 U	0.0165	---	0.3 U	0.0031 U	16.9	0.194	0.0266	0.005 U	24.6	0.01 U	0.0031 U	1870	0.0172	0.0156 U
OW-01D	9/14/2005		36.2	36.2	0.052 U	0.005 U	0.01 U	0.0615	0.003 U	0.0042 U	247	0.0042 U	0.005 U	---	0.3 U	0.005 U	17	0.17	0.0308	0.005 U	29.7	0.01 U	0.0042 U	1990	0.016	0.0208 U
OW-01D	10/19/2005		42.5	42.5	0.052 U	0.003 U	0.005 U	0.3 U	0.0021 U	0.0021 U	159	0.005 U	0.01 U	---	0.3 U	0.0021 U	10.5	0.5 U	0.0262	0.02 U	22	0.005 U	0.005 U	1130	0.122	0.02 U
OW-01D	11/14/2005		48.9	48.9	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	124	0.005 U	0.01 U	---	0.3 U	0.002 U	7.95	0.5 U	0.0341	0.02 U	17	0.005 U	0.005 U	1120	0.0741	0.02 U
OW-01D	12/5/2005		51.6	51.6	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	166	0.005 U	0.01 U	---	0.3 U	0.002 U	6.81	0.5 U	0.0414	0.02 U	16.3	0.005 U	0.005 U	1380	0.0108	0.02 U
OW-01D	3/14/2006		57.1	57.1	0.052 U	0.003 U	0.005 U	0.3 U	0.0011	0.002 U	108	0.005 U	0.01 U	---	0.3 U	0.002 U	7.57	0.5 U	0.016	0.02 U	18.4	0.005 U	0.005 U	796	0.0277	0.02 U
OW-01D	6/6/2006		58.8	58.8	0.052 U	0.003 U	0.005 U	0.3 U	0.0028	0.002 U	114	0.005 U	0.01 U	---	0.3 U	0.002 U	7.82	0.5 U	0.0088	0.02 U	17.6	0.005 U	0.005 U	1260	0.0138	0.02 U
OW-01D	8/31/2006		54.1	54.1	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	120	0.005 U	0.01 U	0.3 U	0.3 U	0.002 U	8.39	0.5 U	0.0158	0.02 U	17.4	0.005 U	0.005 U	980	0.0068	0.02 U
OW-01M	10/1/2004		59	59	0.052 U	---	---	0.0597	---	---	99.8	---	0.005 U	---	0.3 U	0.0021 U	7.95	0.05 U	0.0268	0.005 U	19.9	---	---	1260	---	0.0461
OW-01M	11/18/2004		---	---	0.052 U	---	---	---	---	---	---	---	---	---	0.0208 U	---	---	0.0104 U	---	---	---	---	---	---	---	---
OW-01M	12/21/2004		---	---	0.052 U	0.005 U	0.01 U	0.0581	0.0031 U	0.0031 U	96.8	0.0031 U	0.005 U	---	0.3 U	0.0021 U	8.05	0.05 U	0.0268	0.005 U	15.8	0.01 U	0.0031 U	863	0.0147	0.0209
OW-01M	5/10/2005		---	---	---	0.002 U	0.00269	0.0516	0.001 U	0.001 U	---	0.001 U	0.00241	---	0.1 U	0.001 U	---	0.00107	0.0235	0.00468	9.3	0.001 U	0.001 U	---	0.00545	0.0131
OW-01M	7/27/2005		51.1	51.1	0.052 U	0.005 U	0.01 U	0.0579	0.003 U	0.003 U	98.6	0.003 U	0.005 U	0.3 U	0.3 U	0.0026 U	8.99	0.05 U	0.027	0.005 U	24.3	0.01 U	0.003 U	1090	0.0147	0.013 U
OW-01M	8/25/2005		53.3	53.3	0.052 U	0.005 U	0.01 U	0.0218	0.0031 U	0.0031 U	102	0.0031 U	0.021	---	0.3 U	0.0031 U	7.82	0.05 U	0.0122	0.005 U	17.8	0.01 U	0.0031 U	1020	0.0122	0.0156 U
OW-01M	9/14/2005	(FD)	46.5 J	46.5 J	0.052 U	0.005 U	0.01 U	0.0504	0.003 U	0.003 U	137	0.003 U	0.005 U	---	0.3 U	0.005 U	8.39	0.05 U	0.0162	0.005 U	18.8	0.01 U	0.003 U	1250	0.0133	0.02 U
OW-01M	9/14/2005		36.2 J	36.2 J	0.052 U	0.005 U	0.01 U	0.0527	0.003 U	0.003 U	124	0.003 U	0.005 U	---	0.3 U	0.005 U	8.9	0.05 U	0.0174	0.005 U	20.2	0.01 U	0.003 U	1290	0.0125	0.02 U
OW-01M	10/19/2005		40.5	40	0.052 U	0.003 U	0.005 U	0.3 U	0.0021 U	0.0021 U	128	0.005 U	0.01 U	---	0.3 U	0.0049	9.28	0.5 U	0.0147	0.02 U	18.9	0.0052	0.005 U	868	0.0521	0.02 U
OW-01M	11/14/2005		51.4	51.4	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	113	0.005 U	0.01 U	---	0.3 U	0.002 U	9.42	0.5 U	0.0136	0.02 U	17.3	0.005 U	0.005 U	832	0.0625	0.02 U
OW-01M	12/5/2005		48.8	48.8	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	159	0.005 U	0.01 U	---	0.3 U	0.002 U	9.32	0.5 U	0.0126	0.02 U	17.7	0.005 U	0.005 U	1040	0.0054	0.02 U
OW-01M	3/14/2006		69.5	69.5	0.052 U	0.003 U	0.005 U	0.3 U	0.0012	0.002 U	156	0.005 U	0.01 U	---	0.3 U	0.002 U	10.9	0.5 U	0.0081	0.02 U	18.2	0.005 U	0.005 U	765	0.0193	0.02 U
OW-01M	6/6/2006		56.4	56.4	0.052 U	0.003 U	0.005 U	0.3 U	0.0025	0.002 U	163	0.005 U	0.01 U	---	0.3 U	0.002 U	13.9	0.5 U	0.0075	0.02 U	22.1	0.005 U	0.005 U	1310	0.0121	0.02 U
OW-01M	8/31/2006		65.6	65.6	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	169	0.005 U	0.01 U	0.3 U	0.3 U	0.002 U	13.9	0.5 U	0.0115	0.02 U	21.8	0.005 U	0.005 U	920	0.005 U	0.02 U
OW-01S	12/21/2004		---	---	0.052 U	0.005 U	0.01 U	0.0662	0.0031 U	0.0031 U	78.8	0.0031 U	0.005 U	---	0.407	0.0021 U	14.1	0.05 U	0.0273	0.0087	12.6	0.01 U	0.0031 U	291	0.0121	0.0264
OW-01S	7/28/2005	(FD)	75.4	75.4	0.052 U	0.005 U	0.01 U	0.0607	0.003 U	0.003 U	61.9	0.003 U	0.005 U	0.3 U	0.3 U	0.0024 U	11	0.05 U	0.0172	0.0075	11.3	0.01 U	0.003 U	279	0.0106	0.0122 U
OW-01S	7/28/2005		80.3	80.3	0.052 U	0.005 U	0.01 U	0.0592	0.003 U	0.003 U	66.4	0.003 U	0.005 U	0.3	0.3 U	0.0021 U	11.6	0.05 U	0.0157	0.0071	12	0.01 U	0.003 U	277	0.005	0.0104 U
OW-01S	8/26/2005		73.4	73.4	0.052 U	0.005 U	0.01 U	0.0675	0.0031 U	0.0031 U	82.7	0.0031 U	0.005 U	---	0.3 U	0.0031 U	13.5	0.05 U	0.0116	0.0103	11.5	0.01 U	0.0031 U	293	0.0068	0.0156 U
OW-01S	9/15/2005		68.8	68.8	0.052 U	0.005 U	0.01 U	0.0666	0.003 U	0.003 U	97	0.003 U	0.005 U	---	0.3 U	0.0047	14.6	0.05 U	0.0096	0.0064	13	0.01 U	0.003 U	361	0.013	0.02 U
OW-01S	10/20/2005		67.5	67.5	0.052 U	0.003 U	0.005 U	0.3 U	0.0021 U	0.0021 U	107	0.005 U	0.01 U	---	0.3 U	0.0021 U	13.1	0.5 U	0.014	0.02 U	15.6	0.0059	0.005 U	491	0.0564	0.02 U
OW-01S	11/16/2005		81.8	81.8	0.118	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	50.3	0.005 U	0.01 U	---	0.3 U	0.0026	15.7	0.5 U	0.0094	0.02 U	10.2	0.005 U	0.005 U	133	0.0279	0.02 U
OW-01S	12/5/2005	(FD)	84.1	84.1	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	80.6	0.005 U	0.01 U	---	0.3 U	0.002 U	11.2	0.5 U	0.0111	0.02 U	8.27	0.005 U	0.005 U	228	0.005 U	0.02 U
OW-01S	12/5/2005		73.3	73.3	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	90.4	0.005 U	0.01 U	---	0.3 U	0.002 U	12.4	0.5 U	0.0119	0.02 U	9.25	0.005 U	0.005 U	239	0.005 U	0.02 U

TABLE 1
Results of OW Wells
PG&E Topock Compliance Monitoring Program

Location ID	Sample Date	Method:	6020A 6010B	6020A 6010B	6010B	6020A	6020A	6020A	6020A	6020A	6020A 6010B	6020A	6020A	6010B	6020A 6010B	6020A	6020A	6020A 6010B	6020A	6020A	6020A	6020A 6010B	6020A	6020A 6010B
		Analyte:	Alkalinity, bicarb as CaCO3	Alkalinity, total as CaCO3	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Cobalt	Copper	Iron	Iron Dissolved	Lead	Magnesium	Manganese	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Vanadium	Zinc
OW-01S	3/15/2006		74.5	74.5	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	79.5	0.005 U	0.01 U	---	0.3 U	0.002 U	15.3	0.5 U	0.0055	0.02 U	10.7	0.005 U	0.005 U	181	0.0064	0.02 U
OW-01S	6/6/2006		66.2	66.2	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	123	0.005 U	0.01 U	---	0.3 U	0.002 U	16.6	0.5 U	0.0066	0.02 U	11.8	0.005 U	0.005 U	389	0.0062	0.02 U
OW-01S	8/31/2006		65.6	65.6	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	115	0.005 U	0.01 U	0.676	0.3 U	0.002 U	19.3	0.5 U	0.0149	0.02 U	13.2	0.005 U	0.005 U	287	0.005 U	0.02 U
OW-02D	1/13/2005		---	---	0.052 U	0.005 U	0.01 U	0.0833	0.0031 U	0.0031 U	303	0.0031 U	0.005 U	---	0.164	0.0029	15.2	0.39	0.0665	0.0135	46.6	0.0171	0.0085	2000	0.0177	0.0174
OW-02D	5/10/2005		---	---	---	0.002 U	0.0033	0.0716	0.001 U	0.001 U	---	0.001 U	0.00311	---	0.161	0.001 U	---	0.286	0.057	0.001 U	18.6	0.001 U	0.001 U	---	0.001 U	0.01 U
OW-02D	7/28/2005		34.1	34.1	0.052 U	0.005 U	0.01 U	0.0546	0.003 U	0.003 U	296	0.003 U	0.005 U	0.3 U	0.3 U	0.0024 U	16.2	0.175	0.0512	0.0067	38.3	0.01 U	0.003 U	2590	0.0172	0.0122 U
OW-02D	8/25/2005		43.1	43.1	0.052 U	0.005 U	0.01 U	0.0211	0.0031 U	0.0031 U	58.8	0.0031 U	0.0186	---	0.3 U	0.0031 U	3.33	0.05 U	0.0143	0.005 U	16.1	0.01 U	0.0031 U	1100	0.0152	0.0156 U
OW-02D	9/14/2005		38.7	38.7	0.052 U	0.005 U	0.01 U	0.0199	0.003 U	0.003 U	90.3	0.003 U	0.0063	---	0.3 U	0.005 U	4.65	0.05 U	0.0113	0.005 U	21.5	0.01 U	0.003 U	1570	0.017	0.02 U
OW-02D	10/20/2005		30	30	0.052 U	0.003 U	0.005 U	0.3 U	0.0021 U	0.0021 U	142	0.005 U	0.01 U	---	0.3 U	0.0024	8.22	0.5 U	0.0088	0.02 U	21	0.005 U	0.005 U	805	0.0862	0.02 U
OW-02D	11/14/2005		33.4	33.4	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	199	0.005 U	0.01 U	---	0.3 U	0.002 U	12	0.5 U	0.0107	0.02 U	20.9	0.0056	0.005 U	1110	0.052	0.02 U
OW-02D	12/5/2005		46.1	46.1	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	231	0.005 U	0.01 U	---	0.3 U	0.002 U	11.3	0.5 U	0.0098	0.02 U	20	0.0065	0.005 U	1170	0.005 U	0.02 U
OW-02D	3/14/2006		76.9	76.9	0.052 U	0.003 U	0.005 U	0.3 U	0.0013	0.002 U	194	0.005 U	0.01 U	---	0.3 U	0.002 U	16.8	0.5 U	0.0082	0.02 U	23.7	0.005 U	0.005 U	863	0.0126	0.02 U
OW-02D	6/7/2006		74.8	74.8	0.052 U	0.003 U	0.005 U	0.3 U	0.0023	0.002 U	230	0.005 U	0.01 U	---	0.3 U	0.002 U	20.2	0.5 U	0.0082	0.02 U	26.4	0.005 U	0.005 U	1310	0.0118	0.02 U
OW-02D	8/31/2006		64.7	64.7	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	196	0.005 U	0.01 U	0.3 U	0.3 U	0.002 U	18	0.5 U	0.0144	0.02 U	22.1	0.005 U	0.005 U	904	0.005 U	0.02 U
OW-02M	5/11/2005		---	---	---	0.002 U	0.00165	0.0603	0.001 U	0.001 U	---	0.001 U	0.001 U	---	0.1 U	0.001 U	---	0.0442	0.0353	0.001 U	10.8	0.001 U	0.001 U	---	0.00296	0.0113
OW-02M	7/28/2005		51.1	51.1	0.052 U	0.005 U	0.01 U	0.0527	0.003 U	0.003 U	132	0.003 U	0.005 U	0.3 U	0.3 U	0.0024 U	10.8	0.05 U	0.0324	0.005 U	23.6	0.01 U	0.003 U	1050	0.0144	0.0122 U
OW-02M	8/25/2005		50.8	50.8	0.052 U	0.005 U	0.01 U	0.0474	0.0031 U	0.0031 U	124	0.0031 U	0.0206	---	0.3 U	0.0031 U	9.13	0.05 U	0.0229	0.005 U	18.6	0.01 U	0.0031 U	1100	0.0114	0.0271
OW-02M	9/14/2005		41.3	41.3	0.052 U	0.005 U	0.01 U	0.0449	0.003 U	0.003 U	144	0.003 U	0.005 U	---	0.3 U	0.005 U	9.84	0.05 U	0.0215	0.005 U	19.3	0.01 U	0.003 U	1290	0.0124	0.02 U
OW-02M	10/20/2005		37.5	37.5	0.052 U	0.003 U	0.005 U	0.3 U	0.0021 U	0.0021 U	151	0.005 U	0.01 U	---	0.3 U	0.0032	9.97	0.5 U	0.015	0.02 U	18.7	0.005 U	0.005 U	980	0.0913	0.02 U
OW-02M	11/15/2005	(FD)	46	46	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	150	0.005 U	0.01 U	---	0.3 U	0.002 U	11	0.5 U	0.0157	0.02 U	19.1	0.005 U	0.005 U	932	0.0518	0.02 U
OW-02M	11/15/2005		38.3	38.3	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	140	0.005 U	0.01 U	---	0.3 U	0.002 U	11.3	0.5 U	0.017	0.02 U	20	0.005 U	0.005 U	865	0.0518	0.02 U
OW-02M	12/6/2005		46.1	46.1	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	214	0.005 U	0.01 U	---	0.3 U	0.002 U	15.3	0.5 U	0.0136	0.02 U	22.4	0.0065	0.005 U	1110	0.0069	0.0388
OW-02M	3/14/2006		67	67	0.052 U	0.003 U	0.005 U	0.3 U	0.0011	0.002 U	181	0.005 U	0.01 U	---	0.3 U	0.002 U	14.6	0.5 U	0.0081	0.02 U	23.3	0.005 U	0.005 U	818	0.0158	0.02 U
OW-02M	6/7/2006		59.8	59.8	0.052 U	0.003 U	0.005 U	0.3 U	0.0023	0.002 U	190	0.005 U	0.01 U	---	0.3 U	0.002 U	15.2	0.5 U	0.0088	0.02 U	22.6	0.005 U	0.005 U	1180	0.011	0.02 U
OW-02M	8/30/2006		65.1	65.1	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	187	0.005 U	0.01 U	0.3 U	0.3 U	0.002 U	16.8	0.5 U	0.013	0.02 U	23.4	0.005 U	0.005 U	922	0.005 U	0.02 U
OW-02S	12/29/2004		---	---	0.052 U	0.005 U	0.01 U	0.0319	0.0031 U	0.0031 U	33.7	0.0031 U	0.005 U	---	0.3 U	0.0021 U	5.56	0.131	0.0893	0.005 U	11.3	0.01 U	0.0031 U	218	0.007	0.0333
OW-02S	7/28/2005		107	107	0.052 U	0.005 U	0.01 U	0.0537	0.003 U	0.003 U	37.5	0.003 U	0.005 U	0.3 U	0.3 U	0.0024 U	5.18	0.05 U	0.0356	0.005 U	9.44	0.01 U	0.003 U	274	0.0108	0.0122 U
OW-02S	8/26/2005		114	114	0.052 U	0.005 U	0.01 U	0.0606	0.0031 U	0.0031 U	36.7	0.0031 U	0.005 U	---	0.3 U	0.0031 U	5.18	0.05 U	0.0356	0.005 U	9.29	0.01 U	0.0031 U	280	0.0085	0.0156 U
OW-02S	8/26/2005	(FD)	114	114	0.052 U	0.005 U	0.01 U	0.0598	0.0031 U	0.0031 U	36.5	0.0031 U	0.005 U	---	0.3 U	0.0031 U	5.2	0.05 U	0.0383	0.005 U	9.33	0.01 U	0.0031 U	261	0.0092	0.0156 U
OW-02S	9/14/2005		103	103	0.052 U	0.005 U	0.01 U	0.0625	0.003 U	0.003 U	43.1	0.003 U	0.005 U	---	0.3 U	0.005 U	5.33	0.05 U	0.0323	0.005 U	9.13	0.01 U	0.003 U	452	0.0107	0.02 U
OW-02S	10/20/2005		100	100	0.052 U	0.003 U	0.005 U	0.3 U	0.0021 U	0.0021 U	45.3	0.005 U	0.01 U	---	0.3 U	0.0021 U	5.03	0.5 U	0.029	0.02 U	7.79	0.005 U	0.005 U	234	0.0382	0.02 U
OW-02S	11/15/2005		120	120	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	38.1	0.005 U	0.01 U	---	0.3 U	0.002 U	5.02	0.5 U	0.0376	0.02 U	7.9	0.0068	0.005 U	240	0.0235	0.02 U
OW-02S	12/6/2005		111	111	0.0567	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	40.1	0.005 U	0.01 U	---	0.3 U	0.002 U	5.49	0.5 U	0.034	0.02 U	8.02	0.005 U	0.005 U	239	0.0058	0.02 U
OW-02S	3/15/2006		107	107	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	43.2	0.005 U	0.01 U	---	0.3 U	0.002 U	5.54	0.5 U	0.0313	0.02 U	9.32	0.005 U	0.005 U	226	0.0067	0.02 U
OW-02S	3/15/2006	(FD)	102	102	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	37	0.005 U	0.01 U	---	0.3 U	0.002 U	5.06	0.5 U	0.0286	0.02 U	8.73	0.005 U	0.005 U	194	0.0069	0.02 U

TABLE 1
Results of OW Wells
PG&E Topock Compliance Monitoring Program

Location ID	Sample Date	Method:	6020A 6010B	6020A 6010B	6010B	6020A	6020A	6020A	6020A	6020A	6020A 6010B	6020A	6020A	6010B	6020A 6010B	6020A	6010B	6020A 6010B	6020A	6020A	6020A	6020A 6010B	6020A	6020A 6010B
		Analyte:	Alkalinity, bicarb as CaCO3	Alkalinity, total as CaCO3	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Cobalt	Copper	Iron	Iron Dissolved	Lead	Magnesium	Manganese	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Vanadium	Zinc
OW-02S	6/6/2006 (FD)		103	103	0.052 U	0.003 U	0.005 U	0.3 U	0.0018	0.002 U	56.6	0.005 U	0.01 U	---	0.3 U	0.002 U	5.21	0.5 U	0.0272	0.02 U	8.72	0.0062	0.005 U	416	0.0075	0.02 U
OW-02S	6/6/2006		101	101	0.052 U	0.003 U	0.005 U	0.3 U	0.0016	0.002 U	57.7	0.005 U	0.01 U	---	0.3 U	0.002 U	5.16	0.5 U	0.0319	0.02 U	8.77	0.0058	0.005 U	422	0.0079	0.02 U
OW-02S	9/8/2006 (FD)		113	113	0.0665	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	35.9	0.005 U	0.01 U	0.3 U	0.3 U	0.002 U	4.86	0.5 U	0.0448	0.02 U	7.82	0.005 U	0.005 U	245	0.0062	0.02 U
OW-02S	9/8/2006		103	103	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	37.6	0.005 U	0.01 U	0.3 U	0.3 U	0.002 U	4.98	0.5 U	0.0462	0.02 U	7.93	0.005 U	0.005 U	227	0.0067	0.02 U
OW-05D	12/22/2004		---	---	0.052 U	0.005 U	0.01 U	0.0784	0.0031 U	0.0031 U	212	0.0031 U	0.005 U	---	0.3 U	0.0021 U	14.6	0.371	0.0811	0.0081	30.2	0.01 U	0.0031 U	1370	0.0133	0.0243
OW-05D	12/22/2004 (FD)		---	---	0.052 U	0.005 U	0.01 U	0.0844	0.0031 U	0.0031 U	222	0.0031 U	0.005 U	---	0.3 U	0.0021 U	15.2	0.363	0.0838	0.0093	32.3	0.01 U	0.0031 U	1480	0.0116	0.0289
OW-05D	5/11/2005		---	---	---	0.002 U	0.00441	0.0658	0.001 U	0.001 U	---	0.001 U	0.00409	---	0.237	0.001 U	---	0.269	0.0638	0.001 U	17	0.001 U	0.001 U	---	0.001 U	0.01 U
OW-05D	7/28/2005		36.5	36.5	0.052 U	0.005 U	0.01 U	0.0616	0.003 U	0.003 U	248	0.003 U	0.005 U	0.3 U	0.3 U	0.0024 U	15.7	0.226	0.057	0.0054	30.7	0.01 U	0.003 U	2040	0.0102	0.0122 U
OW-05D	8/26/2005		35.4	35.4	0.202	0.005 U	0.01 U	0.0458	0.0031 U	0.0031 U	223	0.0031 U	0.005 U	---	0.3 U	0.0031 U	12.4	0.103	0.0488	0.0097	29.2	0.01 U	0.0031 U	1960	0.0112	0.0367
OW-05D	9/13/2005		31	31	0.052 U	0.005 U	0.01 U	0.0538	0.003 U	0.0042 U	314	0.0042 U	0.015	---	0.3 U	0.005 U	16.6	0.113	0.0425	0.0065	32.8	0.01 U	0.0042 U	2450	0.0144	0.0227
OW-05D	10/19/2005		37.5	37.5	0.052 U	0.003 U	0.005 U	0.3 U	0.0021 U	0.0021 U	178	0.005 U	0.01 U	---	0.3 U	0.0037	8.9	0.5 U	0.0464	0.02 U	23.1	0.005 U	0.005 U	1260	0.0966	0.02 U
OW-05D	11/15/2005		43.5	43.5	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	139	0.005 U	0.01 U	---	0.3 U	0.002 U	6.88	0.5 U	0.0509	0.02 U	19	0.005 U	0.005 U	1300	0.0853	0.03
OW-05D	12/6/2005		46.1	46.1	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	124	0.005 U	0.01 U	---	0.3 U	0.002 U	6.53	0.5 U	0.045	0.02 U	17.9	0.005 U	0.005 U	1220	0.0097	0.0333
OW-05D	3/15/2006		49.6	49.6	0.052 U	0.003 U	0.005 U	0.3 U	0.0014	0.002 U	93.9	0.005 U	0.01 U	---	0.3 U	0.002 U	4.8	0.5 U	0.0207	0.02 U	18.1	0.005 U	0.005 U	861	0.0137	0.02 U
OW-05D	6/7/2006		59.3	59.3	0.52 U	0.003 U	0.005 U	0.3 U	0.0025	0.002 U	124	0.005 U	0.01 U	---	0.3 U	0.002 U	5.09	0.5 U	0.0118	0.02 U	18.4	0.005 U	0.005 U	1100	0.013	0.02 U
OW-05D	8/30/2006		72	72	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	102	0.005 U	0.01 U	0.3 U	0.3 U	0.002 U	5.42	0.5 U	0.013	0.02 U	17.8	0.005 U	0.005 U	1020	0.0051	0.02 U
OW-05M	1/13/2005		---	---	0.052 U	0.0111	0.0144	0.0601	0.0088	0.0105	290	0.01	0.0106	---	0.05 U	0.0102	10.4	0.05 U	0.0501	0.0201	26	0.0186	0.02	1220	0.0229	0.0373
OW-05M	5/11/2005		---	---	---	0.002 U	0.0017	0.0511	0.001 U	0.001 U	---	0.001 U	0.0016	---	0.1 U	0.001 U	---	0.00283	0.039	0.00128	12.9	0.001 U	0.001 U	---	0.00261	0.01 U
OW-05M	7/28/2005		38.9	38.9	0.052 U	0.005 U	0.01 U	0.0476	0.003 U	0.003 U	161	0.003 U	0.005 U	0.3 U	0.3 U	0.0024 U	12	0.05 U	0.0354	0.005 U	25.8	0.01 U	0.003 U	1520	0.0097	0.0122 U
OW-05M	8/26/2005		43	43	0.052 U	0.005 U	0.01 U	0.0458	0.0031 U	0.0031 U	168	0.0031 U	0.0058	---	0.3 U	0.0031 U	10.3	0.05 U	0.0321	0.005 U	21.1	0.01 U	0.0031 U	1440	0.0097	0.0156 U
OW-05M	9/13/2005		41.3	41.3	0.052 U	0.005 U	0.01 U	0.042	0.003 U	0.0042 U	225	0.0042 U	0.0114	---	0.3 U	0.005 U	13.2	0.05 U	0.0286	0.0054	27.7	0.01 U	0.0042 U	2050	0.0134	0.0264
OW-05M	10/20/2005 (FD)		40	40	0.052 U	0.003 U	0.005 U	0.3 U	0.0021 U	0.0021 U	180 J	0.005 U	0.01 U	---	0.3 U	0.0021 U	11.2	0.5 U	0.0238	0.02 U	22.4	0.005 U	0.005 U	1130 J	0.118	0.02 U
OW-05M	10/20/2005		40	40	0.052 U	0.003 U	0.005 U	0.3 U	0.0021 U	0.0021 U	227 J	0.005 U	0.01 U	---	0.3 U	0.0021 U	12.1	0.5 U	0.026	0.02 U	25	0.005 U	0.005 U	1440 J	0.122	0.02 U
OW-05M	11/15/2005		43.5	43.5	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	176	0.005 U	0.01 U	---	0.3 U	0.002 U	11.8	0.5 U	0.0249	0.02 U	22.1	0.005 U	0.005 U	1180	0.0706	0.025
OW-05M	12/6/2005		43.4	43.4	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	211	0.005 U	0.01 U	---	0.3 U	0.002 U	11.6	0.5 U	0.0245	0.02 U	21	0.005 U	0.005 U	1330	0.0064	0.0238
OW-05M	3/15/2006		39.7	39.7	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	200	0.005 U	0.01 U	---	0.3 U	0.002 U	11.5	0.5 U	0.0201	0.02 U	24.3	0.005 U	0.005 U	1170	0.0139	0.02 U
OW-05M	6/7/2006		41.8	41.8	0.052 U	0.003 U	0.005 U	0.3 U	0.0023	0.002 U	203	0.005 U	0.01 U	---	0.3 U	0.002 U	11.4	0.5 U	0.0195	0.02 U	23.1	0.005 U	0.005 U	2210	0.0124	0.02 U
OW-05M	8/30/2006		52.3	52.3	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	186	0.005 U	0.01 U	0.3 U	0.3 U	0.002 U	11.6	0.5 U	0.0447	0.02 U	26.1	0.005 U	0.005 U	1300	0.005 U	0.02 U
OW-05S	12/21/2004		---	---	0.052 U	0.005 U	0.01 U	0.0513	0.0031 U	0.0031 U	52.5	0.0031 U	0.005 U	---	0.3 U	0.0021 U	8.06	0.05 U	0.0213	0.005 U	11.8	0.01 U	0.0649	194	0.0129	0.0256
OW-05S	5/11/2005		---	---	---	0.002 U	0.00195	0.053	0.001 U	0.001 U	---	0.00107	0.00155	---	0.1 U	0.001 U	---	0.00535	0.019	0.00414	6.64	0.00282	0.001 U	---	0.0055	0.0166
OW-05S	5/11/2005 (FD)		---	---	---	0.002 U	0.00222	0.0644	0.001 U	0.001 U	---	0.00125	0.00226	---	0.1 U	0.001 U	---	0.00647	0.0194	0.0049	6.71	0.00282	0.001 U	---	0.00543	0.0145
OW-05S	7/28/2005		85.1	85.1	0.052 U	0.005 U	0.01 U	0.0489	0.003 U	0.003 U	49.4	0.003 U	0.005 U	0.3 U	0.3 U	0.0024 U	8.77	0.05 U	0.0171	0.005 U	10.2	0.01 U	0.003 U	235	0.0114	0.0122 U
OW-05S	8/26/2005		88.6	88.6	0.052 U	0.005 U	0.01 U	0.054	0.0031 U	0.0031 U	56.9	0.0031 U	0.005 U	---	0.3 U	0.0031 U	9.33	0.05 U	0.0178	0.005 U	9.67	0.01 U	0.0031 U	240	0.0079	0.0156 U
OW-05S	9/13/2005		80.1	80.1	0.052 U	0.005 U	0.01 U	0.0483	0.003 U	0.003 U	73.7	0.003 U	0.015	---	0.3 U	0.005 U	10.1	0.05 U	0.0157	0.005 U	11.3	0.01 U	0.003 U	304	0.0079	0.02 U
OW-05S	10/20/2005		80	80	0.052 U	0.003 U	0.005 U	0.3 U	0.0021 U	0.0021 U	73.9	0.005 U	0.01 U	---	0.3 U	0.0028	10.6	0.5 U	0.0168	0.02 U	9.98	0.005 U	0.005 U	221	0.0415	0.02 U

TABLE 1
Results of OW Wells
PG&E Topock Compliance Monitoring Program

Location ID	Sample Date	Method:	6020A 6010B	6020A 6010B	6010B	6020A	6020A	6020A	6020A	6020A	6020A 6010B	6020A	6020A	6010B	6020A 6010B	6020A	6020A	6020A	6020A 6010B	6020A	6020A	6020A 6010B	6020A	6020A 6010B
		Analyte:	Alkalinity, bicarb as CaCO3	Alkalinity, total as CaCO3	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Cobalt	Copper	Iron	Iron Dissolved	Lead	Magnesium	Manganese	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Vanadium	Zinc
OW-05S	11/15/2005		94.6	94.6	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	66	0.005 U	0.01 U	---	0.3 U	0.002 U	9.83	0.5 U	0.0151	0.02 U	8.57	0.005 U	0.005 U	212	0.0254	0.02 U
OW-05S	12/6/2005		92.3	92.3	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	59.2	0.005 U	0.01 U	---	0.3 U	0.002 U	9.32	0.5 U	0.0176	0.02 U	8.23	0.005 U	0.005 U	195	0.0052	0.02 U
OW-05S	3/15/2006		89.3	89.3	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	52.8	0.005 U	0.01 U	---	0.3 U	0.002 U	8.53	0.5 U	0.0142	0.02 U	8.68	0.005 U	0.005 U	150	0.005 U	0.02 U
OW-05S	6/7/2006		85	85	0.052 U	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	63.5	0.005 U	0.01 U	---	0.3 U	0.002 U	8.68	0.5 U	0.0153	0.02 U	9.12	0.005 U	0.005 U	271	0.0059	0.02 U
OW-05S	8/31/2006		88.8	88.8	0.0991	0.003 U	0.005 U	0.3 U	0.001 U	0.002 U	56.4	0.005 U	0.01 U	0.314	0.3 U	0.002 U	8.58	0.5 U	0.0252	0.02 U	8.22	0.005 U	0.005 U	187	0.0052	0.02 U

NOTES:
All concentrations are in milligrams per liter
-- not analyzed
FD field duplicate
J concentration or reporting limits estimated by laboratory or validation
U not detected at listed reporting limit
mg/L milligrams per liter