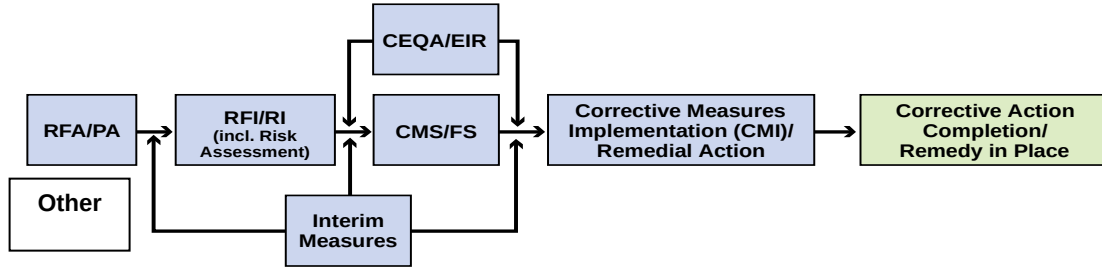


## Topock Project Executive Abstract

|                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Document Title: November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test</p> <p>Submitting Agency/Authoried by: PG&amp;E</p> <p>Final Document? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>                                                                                                             | <p>Date of Document: December 15, 2008</p> <p>Who Created this Document?: (i.e. PG&amp;E, DTSC, DOI, Other)</p> <p>PG&amp;E</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>Priority Status: <input type="checkbox"/> <b>HIGH</b> <input type="checkbox"/> <b>MED</b> <input checked="" type="checkbox"/> <b>LOW</b></p> <p>Is this time critical? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>                                                                                                              | <p>Action Required:</p> <p><input checked="" type="checkbox"/> Information Only <input type="checkbox"/> Review &amp; Comment</p> <p>Return to: _____</p> <p>By Date: _____</p> <p><input type="checkbox"/> Other / Explain:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p>Type of Document:</p> <p><input checked="" type="checkbox"/> Draft <input type="checkbox"/> Report <input type="checkbox"/> Letter <input type="checkbox"/> Memo</p> <p><input type="checkbox"/> Other / Explain:</p>                                                                                                                                       | <p>What does this information pertain to?</p> <p><input type="checkbox"/> Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA)/Preliminary Assessment (PA)</p> <p><input type="checkbox"/> RCRA Facility Investigation (RFI)/Remedial Investigation (RI) (including Risk Assessment)</p> <p><input type="checkbox"/> Corrective Measures Study (CMS)/Feasibility Study (FS)</p> <p><input type="checkbox"/> Corrective Measures Implementation (CMI)/Remedial Action</p> <p><input type="checkbox"/> California Environmental Quality Act (CEQA)/Environmental Impact Report (EIR)</p> <p><input type="checkbox"/> Interim Measures</p> <p><input checked="" type="checkbox"/> Other / Explain: Regional Water Quality Control Board (RWQCB)</p> |
| <p>What is the consequence of NOT doing this item? What is the consequence of DOING this item? Permit required monitoring report</p>                                                                                                                                                                                                                           | <p>Is this a Regulatory Requirement?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If no, why is the document needed?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p>Brief Summary of attached document:</p> <p>The report summarizes the activities conducted during the month of November for the Uplands In-Situ Pilot Test per the Waste Discharge Requirement (WDR). The report presents data received since the last report was submitted and details any operational changes to the pilot test as allowed by the WDR.</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>Written by: ARCADIS on behalf of PG&amp;E</p>                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>Recommendations: None</p>                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>How is this information related to the Final Remedy or Regulatory Requirements: The report is required under the Waste Discharge Requirement Permit Order No. R7-2007-0015</p>                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>Other requirements of this information?</p> <p>None.</p>                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

Related Reports and Documents:

Click any boxes in the Regulatory Road Map (below) to be linked to the Documents Library on the DTSC Topock Web Site ([www.dtsc-topock.com](http://www.dtsc-topock.com)). The link to the Documents Library is currently UNDER CONSTRUCTION.



Version 8

**Legend**

RFA/PA – RCRA Facility Assessment/Preliminary Assessment

RFI/RI – RCRA Facility Investigation/CERCLA Remedial Investigation (including Risk Assessment)

CMS/FS – RCRA Corrective Measure Study/CERCLA Feasibility Study

CEQA/EIR – California Environmental Quality Act/Environmental Impact Report



**Pacific Gas and  
Electric  
Company**

**Yvonne Meeks**  
Manager

Environmental Remediation  
Gas T&D Department

*Mailing Address*  
4325 South Higuera Sreet  
San Luis Obispo, CA 93401  
*Location*  
6588 Ontario Road  
San Luis Obispo, CA 93405  
Tel: (805) 234-2257  
Email: [yim1@pge.com](mailto:yim1@pge.com)

December 15, 2008

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

**Subject: Board Order R7-2007-0015  
PG&E Topock Compressor Station, Needles, California  
Upland In-Situ Pilot Test  
November 2008 Monitoring Report**

Dear Mr. Perdue:

Enclosed is the Board Order R7-2007-0015 November 2008 Monitoring Report for the Pacific Gas and Electric Company (PG&E) Topock Compressor Station, upland reductive zone in situ pilot test. This report is being submitted in compliance with the Waste Discharge Requirements (WDRs) issued by the Colorado River Basin Regional Water Quality Control Board (Water Board) under Board Order R7-2007-0015. WDRs under Board Order R7-2009-0015 apply to the upland reductive zone in situ pilot test only.

If you have any questions regarding this report, please call me at (805) 234-2257.

Sincerely,

Yvonne Meeks  
Topock Project Manager

Enclosures:

Board Order R7-2007-0015 November 2008 Monitoring Report for the Upland Reductive Zone In Situ Pilot Test.

cc: Abdi Haile, Water Board  
Aaron Yue, DTSC (2 copies)

**Pacific Gas and Electric Company**

**November 2008 Monitoring Report  
for the Upland Reductive Zone In-  
Situ Pilot Test**

Waste Discharge Requirements  
Order No. R7-2007-0015  
PG&E Topock Compressor Station  
San Bernardino County, California

15 December 2008



This report was prepared under the supervision of a California  
licensed Professional Geologist (PG)

A handwritten signature in black ink that reads "Janis Lutrick".

---

Janis Lutrick  
Senior Scientist

A handwritten signature in black ink that reads "Margaret Gentile".

---

Margaret Gentile, PhD  
Staff Engineer

A handwritten signature in blue ink that reads "Lisa R. Kellogg".

---

Lisa Kellogg, PG, CEM  
Principal Geologist  
Certified Project Manager

**November 2008 Monitoring  
Report for the Upland  
Reductive Zone In-Situ Pilot  
Test**

Waste Discharge Requirements  
Order No. R7-2007-0015  
PG&E Topock Compressor  
Station  
San Bernardino County,  
California

Prepared for:  
Pacific Gas and Electric Company

Prepared by:  
ARCADIS  
155 Montgomery Street  
Suite 1500  
San Francisco  
California 94104  
Tel 415 374 2744  
Fax 415 374 2745

Our Ref.:  
RC000689.0004.00009

Date:  
15 December 2008

*This document is intended only for the use  
of the individual or entity for which it was  
prepared and may contain information that  
is privileged, confidential, and exempt from  
disclosure under applicable law.*

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- B Calibration Logs for Field Monitoring Instruments
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- D Analytical Reports and Chain-of-Custody Documentation (on Compact Disc)

|           |                                                                                                        |
|-----------|--------------------------------------------------------------------------------------------------------|
| EMAX      | EMAX Laboratories, Inc.                                                                                |
| gpm       | Gallons per minute                                                                                     |
| ISPT      | In-Situ Pilot Test                                                                                     |
| µg/L      | Micrograms per liter                                                                                   |
| mg/L      | Milligrams per liter                                                                                   |
| MRP       | Monitoring and Reporting Program                                                                       |
| OZARK     | Ozark Underground Laboratories, Inc.                                                                   |
| PG&E      | Pacific Gas and Electric Company                                                                       |
| RWQCB     | California Regional Water Quality Control Board, Colorado River Basin Region                           |
| SAFPM     | <i>Sampling, Analysis, and Field Procedures Manual, PG&amp;E Topock Program, Revision 1</i>            |
| S/M/D     | Shallow/Middle/Deep                                                                                    |
| TOC       | Total Organic Carbon                                                                                   |
| Truesdail | Truesdail Laboratories                                                                                 |
| USEPA     | United States Environmental Protection Agency                                                          |
| Work Plan | <i>In-Situ Hexavalent Chromium Reduction Pilot Test Plan – Upland Plume Treatment (September 2006)</i> |



## **1.0 Introduction**

Pacific Gas and Electric (PG&E) is implementing an Upland reductive zone in-situ pilot test (ISPT) to address chromium concentrations in groundwater at the Topock Compressor Station (the Site) near Needles, California. The purpose of the Upland ISPT is to evaluate the efficacy of using a reagent mixture to reduce Hexavalent chromium in groundwater to form stable, insoluble trivalent chromium. The Upland ISPT consists of the recirculation of the reagent mixture between the two recirculation wells (PTR-1 and PTR-2) and monitoring the results in surrounding groundwater monitoring wells (PT-7Shallow/Middle/Deep [S/M/D] through PT-9S/M/D, MW-11, MW-24A/B, and MW-38S/D). Figure 1 provides a map of the PG&E Topock Compressor Station and ISPT area. (All figures are provided at the end of the report).

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California Regional Water Quality Control Board, Colorado River Basin Region (RWQCB), Order No. R7-2007-0015 authorizes PG&E to inject a total of approximately 38,000 gallons of reagent through the duration of the test. An automated reagent dosing system meters the reagent injections at regular intervals during each day of the pilot test.

The Monitoring and Reporting Program (MRP) under Order No. R7-2007-0015 requires monthly monitoring reports to be submitted by the 15<sup>th</sup> day of the following month. This report describes monitoring activities related to the Upland ISPT for November 2008.

## **2.0 In-Situ Pilot Test Sampling Locations**

Table 1 summarizes the well construction details of the recirculation wells (PTR-1 and PTR-2) and monitoring wells (PT-7S/M/D through PT-9S/M/D, MW-11, MW-24A/B, and MW-38S/D). Figure 2 provides a map of the sampling locations. Figure 3 presents the well construction and cross section information for the monitoring wells sampled in the Upland ISPT.

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### 3.0 Description of Activities

The procedures of the Upland ISPT are outlined in the *In-Situ Hexavalent Chromium Reduction Pilot Test Work Plan – Upland Plume Treatment* (Work Plan; ARCADIS 2006). During November 2008, ARCADIS operated the Upland system and completed the ninth and final monthly sampling event. Field activities were performed in accordance with the Work Plan and the applicable procedures contained within the *Sampling, Analysis, and Field Procedures Manual, PG&E Topock Program, Revision 1* (SAFPM) (CH2M Hill, 2005) and the MRP.

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This section summarizes the Upland ISPT operation and sampling activities.

#### 3.1 Upland ISPT Operations

On March 5, 2008, ARCADIS began recirculation of groundwater and daily injection of reagent at the upland ISPT. As discussed in the *February Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test* (ARCADIS, 2008), the aquifer test results demonstrated that the recirculation system could sustain recirculation at 30 gallons per minute (gpm). The system has been operating at 30 gpm since March 5, 2008. During system operation, approximately 100 gallons of reagent were injected into each well each day at a rate of approximately 5 gpm, as authorized by the RWQCB Order No. R7-2007-0015. The injected reagent is a 40 percent ethanol solution in accordance with the Work Plan.

On May 29, 2008, PG&E (PG&E, 2008) requested approval of the Water Board to temporarily discontinue ethanol dosing in order to monitor the systems' ability to distribute TOC sufficiently through the recirculation cell. No change to the pumping rate was planned for the period that dosing was to be discontinued. To evaluate the TOC distribution, periodic sampling of TOC was conducted from monitoring wells PT-7M, PT-7D, PT-8S, PT-8M, PT-8D, MW-24A, PTR-1, and PTR-2 during this period. Written approval for the temporary cessation of ethanol dosing was received on May 29, 2008 (ARCADIS, 2008), and the ethanol dosing was discontinued on June 2, 2008. Copies of the request and approval letters are provided in Appendix A.

On August 4, 2008, PG&E notified the Water Board of their intent to resume ethanol dosing in recirculation well PTR-2 (Appendix A). The decision to resume ethanol dosing was based on data collected at nearby well MW-24A which showed declining TOC trends due to the temporary cessation of ethanol dosing. In order to maintain the reducing zone that was already created around MW-24A, ethanol dosing resumed in

well PTR-2 on August 6, 2008. Based on the data collected the ethanol dose in PTR-2 was reduced to approximately 25 gallons per day.

On October 14, 2008, the dosing rate in PTR-2 was increased to approximately 45 gallons per day. In addition, an increase in the recirculation rate to approximately 25 gpm was made at PTR-2 to improve horizontal distribution through the system. On October 23, 2008, PG&E notified the Water Board (Appendix A) of their intent to increase the dosing rate to approximately 100 gallons per day in both PTR-1 and PTR-2. This is the original dosing rate originally specified in Board Order No. R7-2007-0015.

The primary ethanol dosing was completed November 1, 2008. The ethanol tank rinse procedure commenced on November 4, 2008, by removing excess solution from the tank and injecting into PTR-1 and PTR-2. A triple-rinse was completed on the fill lines and the tank itself. The rinse procedure was completed on November 6, 2008, and the tank remains empty onsite.

Recirculation continued through the month of November in PTR-1 and PTR-2, with the Uplands Reductive Zone In-Situ Pilot Test recirculation phase concluding at the beginning of December. On November 24, 2008, PG&E notified the Water Board of their intent to modify the flow pattern in PTR-2 to perform a hydraulic extraction test the first week of December. The notification letter is included in Appendix A.

### **3.2 Sampling Activities**

The ninth and final monthly sampling event was conducted November 11 through 13, 2008. The sampling event was performed in accordance with the Work Plan and the applicable procedures contained within the SAFPM (CH2M Hill, 2005) and the MRP. The new data included in this report is from the October 14 through 16 monthly sampling event. The results from the ninth monthly sampling event are not included in this report because final lab reports will not be received in time to submit the report; however, they will be reported in the December 2008 monthly report.

Samples were collected, labeled, and packaged according to the SAFPM, as summarized in Section 4.0. Table 2 presents the field parameter results. Tables 3 and 4 present the groundwater analytical results, including historical data from July 2007 to present. As required under the MRP, calibration logs for field-monitoring instruments are included in Appendix B. Groundwater sampling logs are included in Appendix C.

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In accordance with the MRP, groundwater samples from the sampling events are analyzed for Hexavalent chromium (United States Environmental Protection Agency [USEPA] Method 218.6 SM 2500-Cr) by Truesdail Laboratories (Truesdail); for dissolved iron, total dissolved chromium (USEPA 200.7), total iron (USEPA 200.8), sulfate (USEPA 300), total organic carbon (TOC) (USEPA Method 5310B), and sulfide (USEPA Method 4500-S<sup>2-</sup>) by EMAX Laboratories, Inc. (EMAX); and for fluorescein and by Ozark Underground Laboratories, Inc. (OZARK). Groundwater samples from monthly events are analyzed for all of the above as well as dissolved calcium, dissolved potassium, dissolved sodium and dissolved manganese (USEPA 200.7), total arsenic and total manganese (USEPA 200.8), and anions chloride, nitrate, nitrite and phosphorous (as phosphate) (USEPA 300). In addition, groundwater samples were analyzed for dissolved arsenic during the monthly event (USEPA 200.7). Hexavalent chromium was also analyzed in the field at the Interim Measures 3 facility using HACH Method 8023 - program 1560, during the monthly sampling event.

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#### **4.0 Sampling and Analytical Procedures**

Groundwater sampling and associated tasks were performed in accordance with the applicable procedures contained in the SAFPM (CH2M Hill, 2005) and as summarized below.

Monitoring wells were purged and sampled. Prior to groundwater sampling, the depth to water was recorded for each well. These data were used to evaluate the volume of standing water in the well. The monitoring wells were purged using a WaTerra<sup>®</sup> purge pump with dedicated polyethylene tubing. Purging continued until three casing volumes had been removed. The field parameters, such as pH, specific conductance, and temperature were recorded (Table 2). After completion of purging, the groundwater samples were collected into the appropriate containers.

Recirculation wells (PTR-1 and PTR-2) samples were collected from dedicated sampling ports. Water was purged from the sample port prior to sampling the recirculation well to remove any stagnant water from the port.

The samples were stored in coolers at 4 degrees Celsius and transported to Truesdail and EMAX (and then from EMAX to Ozark) via a courier service under chain-of-custody documentation. Truesdail and EMAX are certified by the California Department of Health Services (Certification #1247 and #02116CA, respectively) under the State of California's Environmental Laboratory Accreditation Program.

Analyses were performed in accordance with the latest edition of the "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR Part 136), or equivalent methods promulgated by the USEPA.

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Sampling was conducted in accordance with the sampling frequency required by the MRP. Sample results are summarized in Tables 3 and 4. Calibration logs for field-monitoring instruments are presented in Appendix B. Sampling logs are presented in Appendix C. Copies of laboratory analytical results are presented on compact disc in Appendix D.

Table 5 identifies the laboratory that performed each analysis and lists the following required monitoring information:

- Sample Location
- Sample identification
- Sampler name
- Sample date
- Sample time
- Laboratory performing the analysis
- Analysis method
- Analysis date
- Laboratory technician

## 5.0 Analytical Results

Summaries of the field test parameters, primary parameters, and secondary parameters are presented in Tables 2, 3, and 4, respectively.

To date, the Upland ISPT has successfully demonstrated complete reagent distribution and chromium reduction across the entire shallow interval, and significant distribution and chromium reduction in the middle and deep depth intervals. Complete reduction of Cr(VI) was observed in PT-7S for the first time in October and continues to be observed at PT-7M, PT-7D and PT-8S. Although Cr(VI) concentrations increased slightly in MW-24A to 5.84 µg/L, the concentration remains well below the maximum concentration of 3,890 µg/L observed at this location.

Previously, indications of arrival of recirculated groundwater and reduction of hexavalent chromium at the monitoring well between the recirculation wells (PT-8) was stronger in the shallow zone than in the deep zone. However, the October result at PT-8D showed Cr(VI) concentrations declined to 18 µg/L, down from 3,130 µg/L in September, and total organic carbon concentrations increased to 58.1 mg/L, indicating that lateral distribution in the deep zone improved.

With the use of in-situ technology, the creation of the desired reducing environment may cause temporary solubilization and mobilization of reducible metals that naturally reside in the aquifer matrix, such as manganese, iron, and arsenic. The dissolved metals are expected to attenuate downgradient of the reducing zone created by the Upland ISPT, as was observed during the Floodplain ISPT (ARCADIS, 2008).

Additional data trends will be assessed in the last monthly monitoring report submitted in January 2009 and in the final report submitted 90 days after completion of the pilot test.

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## **6.0 Conclusions**

This report summarizes the activities and results for November 2008 activities, which consisted of the continued operation of the groundwater recirculation and the eighth monthly groundwater sampling event.

There were no incidents of non-compliance with respect to Order No. R7-2007-0015.

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## **7.0 References**

- ARCADIS, 2006. In-Situ Hexavalent Chromium Reduction Pilot Test Work Plan, Upland Plume Treatment (Work Plan), Waste Discharge Requirements, Order No. R7-2006-0015, PG&E Topock Compressor Station, San Bernardino County, California, September 29.
- ARCADIS, 2008. PG&E, Floodplain Reductive Zone In-Situ Pilot Test, Final Completion Report, PG&E Topock Compressor Station, San Bernardino County, California, March 5.
- California Regional Water Quality Control board, Colorado River Basing Region, 2008. Letter to Yvonne J. Meeks, Project Manager, Pacific Gas & Electric Company, May 29, 2008.
- CH2M Hill, 2005. Sampling, Analysis, and Field Procedures Manual (SAFPM), PG&E Topock Program, PG&E Topock Compressor Station Needles, California, March 31, 2005.
- Pacific Gas & Electric Company, 2008. Letter to Robert Perdue. Executive Officer. California Regional Water Quality Control Board, Colorado River Basin Region, May 29, 2008.

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**8.0 Certification**

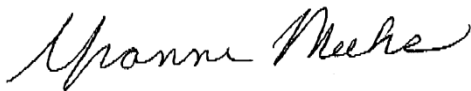
PG&E submitted a signature delegation letter to the RWQCB on July 5, 2006. The letter delegated PG&E's signature authority to Mr. Curt Russell and Ms. Yvonne Meeks.

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**Certification Statement:**

I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

Signature:



Name: Yvonne Meeks  
Company: PG&E  
Title: Project Manager  
Date: December 15, 2008

**Table 1**  
**Boring and Well Construction Detail Summary**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Well or Boring Designation | Date Completed | Aquifer Zone | Ground Elevation*<br>(feet msl) | TOC Elevation**<br>(feet msl) | Total Depth of Boring<br>(feet bgs) | Casing Diameter<br>(inches) | Boring Diameter<br>(inches) | Well Completion Depth<br>(feet bgs) | Well Completion Elevation<br>(feet msl) | Screen Depth Interval<br>(feet bgs) | Screen Elevation Interval<br>(feet msl) | Sand Pack Depth Interval<br>(feet bgs) | Sand Pack Elevation Interval<br>(feet msl) | Bentonite Depth Interval<br>(feet bgs) | Bentonite Elevation Interval<br>(feet msl) | Well Permit Number | Distance From PTR-1<br>(feet) | Distance From PTR-2<br>(feet) | Latitude  | Longitude   |
|----------------------------|----------------|--------------|---------------------------------|-------------------------------|-------------------------------------|-----------------------------|-----------------------------|-------------------------------------|-----------------------------------------|-------------------------------------|-----------------------------------------|----------------------------------------|--------------------------------------------|----------------------------------------|--------------------------------------------|--------------------|-------------------------------|-------------------------------|-----------|-------------|
| PT-7S                      | 11-May-07      | S            | -                               | 561.04                        | 155                                 | 2                           | 6                           | 230                                 | 330.54                                  | 130-150                             | 431-411                                 | 129-155                                | 432-406                                    | 127-129                                | 434-432                                    | 2007040400         | 17                            | 122                           | 34.71663  | -114.49390  |
| PT-7M                      | 11-May-07      | M            | -                               | 560.66***                     | 187.5                               | 2                           | 6                           | 187.5                               | 373.66                                  | 165-185                             | 396-376                                 | 164-187                                | 397-374                                    | 162-164                                | 399-397                                    | 2007040401         | 20                            | 118                           | 34.71662  | -114.49391  |
| PT-7D                      | 11-May-07      | D            | -                               | 560.46                        | 221.5                               | 2                           | 6                           | 230                                 | 330.42                                  | 197-217                             | 363-343                                 | 196-221.5                              | 364-338.5                                  | 194-196                                | 366-364                                    | 2007040402         | 17                            | 122                           | 34.71663  | -114.49390  |
| PT-8S                      | 21-May-07      | S            | -                               | 562.60                        | 152                                 | 2                           | 6                           | 225                                 | 337.60                                  | 127-147                             | 436-416                                 | 126-152                                | 437-411                                    | 124-126                                | 439-437                                    | 2007040403         | 68                            | 70                            | 34.71650  | -114.49382  |
| PT-8M                      | 21-May-07      | M            | 562.47                          | 562.59                        | 184.5                               | 2                           | 6                           | 184.5                               | 378.09                                  | 162-182                             | 401-381                                 | 161-184.5                              | 402-378.5                                  | 159-161                                | 404-402                                    | 2007040404         | 67                            | 71                            | 34.71651  | -114.49381  |
| PT-8D                      | 21-May-07      | D            | -                               | 562.07                        | 212.5                               | 2                           | 6                           | 225                                 | 337.07                                  | 190-210                             | 373-353                                 | 189-212.5                              | 374-350.5                                  | 187-189                                | 376-374                                    | 2007040405         | 68                            | 70                            | 34.71650  | -114.49382  |
| PT-9S                      | 6-Jun-07       | S            | -                               | 559.68                        | 153                                 | 2                           | 6                           | 218                                 | 341.67                                  | 128-148                             | 432-412                                 | 126-153                                | 434-407                                    | 120-126                                | 440-434                                    | 2007040406         | 119                           | 180                           | 34.71684  | -114.49362  |
| PT-9M                      | 6-Jun-07       | M            | 559.50                          | 559.67                        | 187                                 | 2                           | 6                           | 187                                 | 372.67                                  | 162-182                             | 398-378                                 | 158-187                                | 402-373                                    | 155-158                                | 405-402                                    | 2007040407         | 116                           | 181                           | 34.71684  | -114.49364  |
| PT-9D                      | 6-Jun-07       | D            | 559.56                          | 559.66                        | 212.5                               | 2                           | 6                           | 218                                 | 341.66                                  | 190-210                             | 370-350                                 | 188-212.5                              | 372-347.5                                  | 156-188                                | 404-372                                    | 2007040408         | 120                           | 181                           | 34.71684  | -114.49362  |
| MW-11                      | 30-Jun-97      | S            | -                               | 522.19                        | 86.5                                | 4                           | 6                           | 84                                  | 438.19                                  | 62-82                               | 460-480                                 | 59-83                                  | 522.83-509.83                              | 55-59                                  | 467.19-463.19                              | -                  | 179                           | 282                           | -         | -           |
| MW-24A                     | 13-May-96      | S            | -                               | 567.44                        | 124.5                               | 4                           | -                           | 124.5                               | 441.50                                  | 104-124                             | 162-182                                 | 99-124.5                               | 441.5-416.5                                | 91-99                                  | 475-467                                    | -                  | 131                           | 12                            | -         | -           |
| MW-24B                     | 16-May-98      | M            | -                               | 565.18                        | 217.5                               | 4                           | -                           | 217.5                               | 348.50                                  | 193-213                             | 373-393                                 | 188-217.5                              | 378-348.5                                  | 182.5-188                              | 383.5-378                                  | -                  | 127                           | 59                            | -         | -           |
| MW-38S                     | 11-Apr-04      | S            | 522.8                           | 526.66                        | 130                                 | 2                           | -                           | 130                                 | 400.00                                  | 75-95                               | 455-475                                 | 70-95.3                                | 460-434.7                                  | 65-70                                  | 465-460                                    | -                  | 308                           | 270                           | 34.718640 | -114.494285 |
| MW-38D                     | 10-Apr-04      | D            | 523.0                           | 526.74                        | 195                                 | 2                           | -                           | 195                                 | 335.00                                  | 166-188                             | 364-384                                 | 152.8 - 188.3                          | 377.2-341.7                                | 147-152.8                              | 383-377.2                                  | -                  | 323                           | 280                           | 34.715851 | -114.494402 |
| PTR-1                      | 2-May-07       | S/D          | 554***                          | 560.21                        | 225                                 | 6                           | 10                          | 225                                 | 335.21                                  | 125-160                             | 435-470                                 | 123-162                                | 442-403                                    | 118-123                                | 442-437                                    | 2007040409         | 0                             | 138                           | 34.71666  | -114.49395  |
| PTR-2                      | 2-May-07       | S/D          | 554***                          | 564.94                        | 223                                 | 6                           | 10                          | 223                                 | 341.94                                  | 175-220                             | 385-340                                 | 173-225                                | 392-340                                    | 162-173                                | 398-387                                    | 2007040410         | 138                           | 0                             | 34.71634  | -114.49369  |
|                            |                |              |                                 |                               |                                     |                             |                             |                                     |                                         | 173-218                             | 392-347                                 | 172-223                                | 393-218                                    | 159-172                                | 406-393                                    |                    |                               |                               |           |             |

Notes:

|          |                                                                                                 |
|----------|-------------------------------------------------------------------------------------------------|
| feet bgs | Feet below ground surface                                                                       |
| feet msl | Feet mean sea level                                                                             |
| PTI-     | Pilot test injection well                                                                       |
| PT-      | Pilot test monitoring well                                                                      |
| S        | Shallow                                                                                         |
| M        | Middle                                                                                          |
| D        | Deep                                                                                            |
| TOC      | Top of casing                                                                                   |
| *        | Elevations are in feet, North American Vertical Datum of 1988 (NAVD 88), NGS data sheet EU0763. |
| **       | Reference elevation                                                                             |
| ***      | Elevations are approximate, resurvey in progress                                                |
| -        | Not available                                                                                   |

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PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Screen Interval (ft bgs) | ORP (mV)      | pH          | Specific Conductance (µS/cm) | Temperature (°C) | DO (mg/L)   | Depth to Water (feet below TOC) | Hexavalent Chromium Field (µg/L) |
|---------------|------------------|-------------|--------------------------|---------------|-------------|------------------------------|------------------|-------------|---------------------------------|----------------------------------|
| PT-7S         | 18-Jul-07        | N           | 130-150                  | -62.7         | 7.67        | 5,697                        | 31.25            | 4.13        | 103.58                          | 920                              |
|               | 22-Jan-08        | N           |                          | 132           | 7.60        | 4,369                        | 23.5             | 4.12        | 105.75                          | 1,760                            |
|               | 06-Mar-08        | N           |                          | -70.4         | 7.26        | 5,514                        | 29.47            | 0.54        | 105.11                          | 1,800                            |
|               | 13-Mar-08        | N           |                          | -112.4        | 7.32        | 4,860                        | 29.6             | 0.15        | 104.98                          | 1,400                            |
|               | 18-Mar-08        | N           |                          | -114.1        | 7.42        | 5,328                        | 29.6             | 0.075       | 104.89                          | 1,280                            |
|               | 25-Mar-08        | N           |                          | -55.9         | 7.43        | 5,235                        | 29.69            | 0.87        | 104.66                          | 1,680                            |
|               | 02-Apr-08        | N           |                          | -179.1        | 7.50        | 5,577                        | 29.68            | 0.41        | 104.78                          | 1,700                            |
|               | 17-Apr-08        | N           |                          | -161.8        | 7.37        | 5,682                        | 27.01            | 0.66        | 104.26                          | 1,340                            |
|               | 29-Apr-08        | N           |                          | -210.6        | 7.37        | 4,804                        | 29.75            | 0.35        | 103.33                          | 220                              |
|               | 15-May-08        | N           |                          | -155.6        | 7.35        | 5,090                        | 30.1             | 0.38        | 103.72                          | 1,040                            |
|               | 29-May-08        | N           |                          | -143          | 7.33        | 5,781                        | 29.88            | 0.33        | 103.77                          | 1,440                            |
|               | 11-Jun-08        | N           |                          | 41.6          | 7.27        | 5,694                        | 29.95            | 0.72        | 103.64                          | 1,800                            |
|               | 24-Jun-08        | N           |                          | 0.2           | 6.83        | 5,044                        | 30.11            | 0.16        | 103.55                          | 1,060                            |
|               | 23-Jul-08        | N           |                          | 22.8          | 7.47        | 5,503                        | 30.13            | 0.18        | 103.59                          | 201                              |
|               | 21-Aug-08        | N           |                          | -92.0         | 7.39        | 6,500                        | 30.15            | 0.67        | 103.53                          | 820                              |
|               | 18-Sep-08        | N           |                          | -165.8        | 7.54        | 5,479                        | 28.63            | 0.79        | 104.22                          | 489                              |
|               | <b>15-Oct-08</b> | <b>N</b>    |                          | <b>5363.0</b> | <b>7.20</b> | <b>5,362</b>                 | <b>29.97</b>     | <b>0.32</b> | <b>104.48</b>                   | <b>&lt;10</b>                    |
| PT-7M         | 19-Jul-07        | N           | 165-185                  | -40.2         | 7.76        | 7,224                        | 33.99            | 3.75        | 103.90                          | 1,480                            |
|               | 24-Jan-08        | N           |                          | 10.6          | 7.17        | 9,257                        | 30.06            | 0.85        | 105.79                          | 2,840                            |
|               | 06-Mar-08        | N           |                          | -487          | 7.34        | 6,818                        | 29.91            | 0.07        | 105.48                          | 22                               |
|               | 13-Mar-08        | N           |                          | -280.12       | 6.99        | 6,650                        | 29.99            | 0.08        | 105.06                          | 240                              |
|               | 18-Mar-08        | N           |                          | -324.9        | 6.85        | 6,870                        | 30.21            | 0.057       | 105.07                          | 86                               |
|               | 25-Mar-08        | N           |                          | -320.6        | 6.75        | 6,806                        | 30.25            | 0.46        | 104.67                          | 37                               |
|               | 02-Apr-08        | N           |                          | -338.3        | 7.01        | 7,208                        | 30.20            | 0.13        | 104.83                          | 220                              |
|               | 17-Apr-08        | N           |                          | -231.4        | 6.85        | 6,980                        | 28.00            | 0.55        | 104.31                          | 80                               |
|               | 29-Apr-08        | N           |                          | -278.6        | 6.89        | 6,610                        | 30.55            | 0.36        | 101.26                          | 1,020                            |
|               | 14-May-08        | N           |                          | -254.3        | 6.72        | 7,802                        | 30.82            | 0.13        | 103.80                          | 80                               |
|               | 29-May-08        | N           |                          | -213.9        | 6.76        | 7,526                        | 30.81            | 0.22        | 103.72                          | 60                               |
|               | 11-Jun-08        | N           |                          | -199.3        | 6.77        | 6,879                        | 31.07            | 0.27        | 83.83                           | 27                               |
|               | 19-Jun-08        | N           |                          | -239.1        | 6.74        | 8,241                        | 31.02            | 0.08        | 102.84                          | ---                              |
|               | 25-Jun-08        | N           |                          | -161.8        | 6.66        | 7,973                        | 31.11            | 0.13        | 79.51                           | 35                               |
|               | 01-Jul-08        | N           |                          | -217.2        | 6.61        | 7,604                        | 31.41            | 0.04        | 97.30                           | ---                              |
|               | 23-Jul-08        | N           |                          | -187.9        | 6.68        | 7,417                        | 31.48            | 0.13        | 88.72                           | 14                               |
|               | 21-Aug-08        | N           |                          | -189.2        | 6.72        | 8,498                        | 31.49            | 0.32        | 103.48                          | 160                              |
|               | 18-Sep-08        | N           |                          | -231.0        | 6.78        | 7,506                        | 31.57            | 0.57        | 104.51                          | 37                               |
|               | <b>15-Oct-08</b> | <b>N</b>    |                          | <b>-199.3</b> | <b>7.29</b> | <b>7,931</b>                 | <b>25.91</b>     | <b>1.05</b> | <b>103.89</b>                   | <b>419</b>                       |

**Table 2**  
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| Location Name | Sample Date      | Sample Type | Screen Interval (ft bgs) | ORP (mV)      | pH          | Specific Conductance (µS/cm) | Temperature (°C) | DO (mg/L)   | Depth to Water (feet below TOC) | Hexavalent Chromium Field (µg/L) |
|---------------|------------------|-------------|--------------------------|---------------|-------------|------------------------------|------------------|-------------|---------------------------------|----------------------------------|
| PT-7D         | 18-Jul-07        | N           | 197-217                  | -76.7         | 7.91        | 16,327                       | 31.46            | 1.9         | 103.65                          | 6,240                            |
|               | 24-Jan-08        | N           |                          | 10.9          | 7.86        | 19,260                       | 30.35            | 0.58        | 105.90                          | 9,280                            |
|               | 06-Mar-08        | N           |                          | -322.8        | 7.97        | 12,840                       | 30.3             | 0.05        | 105.53                          | 568                              |
|               | 13-Mar-08        | N           |                          | -189.4        | 7.76        | 1,138                        | 30.43            | 0.07        | 105.04                          | 360                              |
|               | 18-Mar-08        | N           |                          | -379.8        | 7.28        | 12,933                       | 30.46            | 0.58        | 105.00                          | 58                               |
|               | 25-Mar-08        | N           |                          | -320.4        | 7.19        | 13,090                       | 30.53            | 0.74        | 104.75                          | 35                               |
|               | 02-Apr-08        | N           |                          | -313          | 7.50        | 13,818                       | 30.53            | 0.05        | 104.83                          | 140                              |
|               | 17-Apr-08        | N           |                          | -310.1        | 7.01        | 10,406                       | 28.2             | 0.42        | 104.11                          | 360                              |
|               | 29-Apr-08        | N           |                          | -311.3        | 7.05        | 9,035                        | 30.79            | 0.63        | 94.86                           | 260                              |
|               | 15-May-08        | N           |                          | -424.7        | 6.68        | 10,224                       | 31.02            | 0.36        | 103.76                          | 100                              |
|               | 29-May-08        | N           |                          | -330.7        | 6.68        | 10,985                       | 31.03            | 0.32        | 101.80                          | 100                              |
|               | 11-Jun-08        | N           |                          | -274.9        | 6.78        | 8,920                        | 31.38            | 0.29        | 84.54                           | 23                               |
|               | 19-Jun-08        | N           |                          | -372.1        | 6.70        | 10,173                       | 31.44            | 0.09        | 102.18                          | ---                              |
|               | 24-Jun-08        | N           |                          | -248.9        | 6.51        | 8,952                        | 31.2             | 0.1         | 86.30                           | 54                               |
|               | 01-Jul-08        | N           |                          | -290.4        | 6.65        | 9,071                        | 31.44            | 0.05        | 102.94                          | ---                              |
|               | 23-Jul-08        | N           |                          | -189.2        | 6.67        | 8,509                        | 31.72            | 0.12        | 80.54                           | 18                               |
|               | 21-Aug-08        | N           |                          | -256.3        | 7.00        | 8,647                        | 32.01            | 0.15        | 103.69                          | 180                              |
|               | 18-Sep-08        | N           |                          | -258.8        | 6.65        | 9,188                        | 30.00            | 0.28        | 103.66                          | <10                              |
|               | <b>14-Oct-08</b> | <b>N</b>    |                          | <b>-205.6</b> | <b>6.14</b> | <b>8,508</b>                 | <b>28.54</b>     | <b>0.45</b> | <b>103.64</b>                   | <b>78</b>                        |
| PT-8S         | 16-Jul-07        | N           | 127-147                  | -66.4         | 7.90        | 5,389                        | 31.07            | 7.02        | 105.29                          | 1,670                            |
|               | 23-Jan-08        | N           |                          | 109.1         | 7.49        | 5,890                        | 29.44            | 5.68        | 107.38                          | 1,980                            |
|               | 05-Mar-08        | N           |                          | -68.6         | 7.71        | 5,440                        | 29.61            | 2.77        | 107.00                          | 1,040                            |
|               | 13-Mar-08        | N           |                          | 131           | 7.34        | 4,969                        | 29.72            | 0.26        | 106.61                          | 390                              |
|               | 18-Mar-08        | N           |                          | -145.9        | 7.64        | 5,024                        | 29.61            | 0.48        | 106.47                          | 162                              |
|               | 25-Mar-08        | N           |                          | -43           | 7.51        | 4,795                        | 29.54            | 0.49        | 106.39                          | 306                              |
|               | 02-Apr-08        | N           |                          | -176.3        | 7.53        | 5,101                        | 29.57            | 0.08        | 106.31                          | 1,080                            |
|               | 16-Apr-08        | N           |                          | 44.8          | 7.48        | 5,251                        | 27.89            | 0.56        | 105.91                          | 667                              |
|               | 29-Apr-08        | N           |                          | -132.9        | 7.19        | 6,017                        | 29.58            | 0.26        | 106.87                          | 180                              |
|               | 14-May-08        | N           |                          | -204.5        | 7.11        | 6,480                        | 29.78            | 0.21        | 105.41                          | 60                               |
|               | 28-May-08        | N           |                          | -276.3        | 7.72        | 6,949                        | 29.58            | 0.46        | 105.45                          | 32                               |
|               | 11-Jun-08        | N           |                          | -252.7        | 6.61        | 9,212                        | 29.63            | 0.36        | 105.41                          | 18                               |
|               | 19-Jun-08        | N           |                          | -296.4        | 6.90        | 9,079                        | 29.68            | 0.11        | 105.41                          | ---                              |
|               | 25-Jun-08        | N           |                          | -217.8        | 6.66        | 10,733                       | 30.1             | 0.14        | 105.29                          | 46                               |
|               | 01-Jul-08        | N           |                          | -178.9        | 6.85        | 9,835                        | 29.97            | 0.09        | 105.33                          | ---                              |
|               | 23-Jul-08        | N           |                          | -204.0        | 6.99        | 10,853                       | 30               | 0.13        | 105.16                          | 500                              |
|               | 20-Aug-08        | N           |                          | -188.9        | 6.94        | 9,860                        | 30               | 1.89        | 105.41                          | 12                               |
|               | 17-Sep-08        | N           |                          | -165.6        | 6.79        | 9,114                        | 30               | 6.79        | 103.60                          | <10                              |
|               | <b>15-Oct-08</b> | <b>N</b>    |                          | <b>-145.7</b> | <b>6.92</b> | <b>9,055</b>                 | <b>28</b>        | <b>0.49</b> | <b>106.10</b>                   | <b>28</b>                        |

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| Location Name | Sample Date      | Sample Type | Screen Interval (ft bgs) | ORP (mV)      | pH          | Specific Conductance (µS/cm) | Temperature (°C) | DO (mg/L)   | Depth to Water (feet below TOC) | Hexavalent Chromium Field (µg/L) |
|---------------|------------------|-------------|--------------------------|---------------|-------------|------------------------------|------------------|-------------|---------------------------------|----------------------------------|
| PT-8M         | 18-Jul-07        | N           | 162-182                  | 54.9          | 7.18        | 6,698                        | 29.67            | 2.9         | 105.18                          | 3,740                            |
|               | 23-Jan-08        | N           |                          | 36.1          | 7.17        | 8,047                        | 29.95            | 1.72        | 107.30                          | 4,660                            |
|               | 05-Mar-08        | N           |                          | -96.4         | 7.40        | 7,930                        | 29.89            | 1.68        | 107.10                          | 3,680                            |
|               | 13-Mar-08        | N           |                          | 145.3         | 7.14        | 6,886                        | 29.84            | 2.52        | 106.72                          | 4,060                            |
|               | 19-Mar-08        | N           |                          | 164.5         | 7.34        | 7,238                        | 29.87            | 3.64        | 106.65                          | 3,340                            |
|               | 25-Mar-08        | N           |                          | -6.1          | 7.19        | 6,955                        | 29.99            | 2.77        | 106.30                          | 4,100                            |
|               | 02-Apr-08        | N           |                          | -129.7        | 7.23        | 7,308                        | 29.81            | 1.47        | 106.24                          | 4,100                            |
|               | 16-Apr-08        | N           |                          | 8.7           | 7.14        | 7,230                        | 28.4             | 1.55        | 105.98                          | 4,080                            |
|               | 29-Apr-08        | N           |                          | -49.6         | 7.04        | 6,453                        | 29.81            | 3.02        | 103.26                          | 4,120                            |
|               | 14-May-08        | N           |                          | -35.1         | 6.98        | 6,939                        | 30.00            | 2.90        | 105.59                          | 3,820                            |
|               | 28-May-08        | N           |                          | -69.4         | 7.13        | 7,094                        | 29.93            | 3.95        | 105.37                          | 4,220                            |
|               | 11-Jun-08        | N           |                          | -38.0         | 7.06        | 6,769                        | 29.95            | 2.23        | 105.35                          | 3,860                            |
|               | 19-Jun-08        | N           |                          | -75.5         | 7.02        | 7,437                        | 29.99            | 0.15        | 105.73                          | ---                              |
|               | 25-Jun-08        | N           |                          | 23            | 6.89        | 6,634                        | 30.19            | 0.85        | 76.50                           | 4,140                            |
|               | 01-Jul-08        | N           |                          | -22.2         | 6.98        | 6,438                        | 30.03            | 0.07        | 105.30                          | ---                              |
|               | 23-Jul-08        | N           |                          | -0.6          | 7.13        | 6,511                        | 29.93            | 0.31        | 105.47                          | 4,000                            |
|               | 20-Aug-08        | N           |                          | -37.0         | 7.22        | 6,769                        | 29.97            | 0.32        | 105.71                          | 3,140                            |
|               | 17-Sep-08        | N           |                          | -80.1         | 7.01        | 6,884                        | 29.87            | 1.11        | 105.93                          | 2,460                            |
|               | <b>15-Oct-08</b> | <b>N</b>    |                          | <b>-101.0</b> | <b>6.99</b> | <b>6,277</b>                 | <b>29.99</b>     | <b>0.24</b> | <b>106.19</b>                   | <b>2,940</b>                     |
| PT-8D         | 16-Jul-07        | N           | 190-210                  | -54.6         | 7.99        | 16,042                       | 33.76            | 6.39        | 105.09                          | 6,120                            |
|               | 23-Jan-08        | N           |                          | 24.1          | 7.86        | 17,790                       | 30.23            | 0.97        | 107.34                          | 6,980                            |
|               | 05-Mar-08        | N           |                          | -128.4        | 8.13        | 18,118                       | 30.18            | 0.78        | 107.09                          | 6,220                            |
|               | 13-Mar-08        | N           |                          | 195           | 7.85        | 1,589                        | 30.3             | 1.21        | 106.80                          | 5,740                            |
|               | 18-Mar-08        | N           |                          | -57.3         | 7.93        | 17,392                       | 30.28            | 1.34        | 106.77                          | 5,460                            |
|               | 25-Mar-08        | N           |                          | -34           | 7.87        | 16,250                       | 30.32            | 0.77        | 106.45                          | 5,700                            |
|               | 02-Apr-08        | N           |                          | -169.2        | 7.90        | 16,964                       | 30.15            | 0.29        | 107.17                          | 4,800                            |
|               | 16-Apr-08        | N           |                          | -39.1         | 7.85        | 17,458                       | 28.44            | 0.90        | 106.13                          | 6,480                            |
|               | 29-Apr-08        | N           |                          | -108.1        | 7.74        | 15,000                       | 30.39            | 0.71        | 105.91                          | 4,940                            |
|               | 14-May-08        | N           |                          | -99.5         | 7.57        | 14,622                       | 30.37            | 0.32        | 105.89                          | 3,800                            |
|               | 28-May-08        | N           |                          | -52.9         | 7.79        | 16,139                       | 30.24            | 0.39        | 105.50                          | 1,220                            |
|               | 11-Jun-08        | N           |                          | -89.7         | 7.75        | 15,420                       | 30.36            | 0.43        | 106.56                          | 3,960                            |
|               | 19-Jun-08        | N           |                          | -129.8        | 7.76        | 16,400                       | 30.4             | 0.26        | 105.63                          | ---                              |
|               | 25-Jun-08        | N           |                          | -163.9        | 7.49        | 14,750                       | 30.38            | 0.23        | 104.57                          | 2,920                            |
|               | 01-Jul-08        | N           |                          | -155.5        | 7.71        | 15,337                       | 30.47            | 0.18        | 105.20                          |                                  |
|               | 23-Jul-08        | N           |                          | -110.3        | 7.93        | 15,325                       | 30.41            | 0.20        | 104.97                          | 3,660                            |
|               | 20-Aug-08        | N           |                          | -156.0        | 8.04        | 16,099                       | 30.35            | 0.38        | 105.69                          | 4,100                            |
|               | 17-Sep-08        | N           |                          | -192.7        | 7.86        | 15,196                       | 30.24            | 0.42        | 106.06                          | 3,820                            |
|               | <b>15-Oct-08</b> | <b>N</b>    |                          | <b>-244.3</b> | <b>7.25</b> | <b>13,194</b>                | <b>30.10</b>     | <b>0.73</b> | <b>106.76</b>                   | <b>512</b>                       |

**Table 2**  
**Summary of Field Parameters**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Screen Interval (ft bgs) | ORP (mV)     | pH          | Specific Conductance (µS/cm) | Temperature (°C) | DO (mg/L)   | Depth to Water (feet below TOC) | Hexavalent Chromium Field (µg/L) |
|---------------|------------------|-------------|--------------------------|--------------|-------------|------------------------------|------------------|-------------|---------------------------------|----------------------------------|
| PT-9S         | 17-Jul-07        | N           | 128-148                  | -61.5        | 7.86        | 4,919                        | 33.28            | 4.97        | 102.33                          | 2,620                            |
|               | 22-Jan-08        | N           |                          | 157.1        | 7.53        | 4,784                        | 27.16            | 3.97        | 104.50                          | 1,580                            |
|               | 05-Mar-08        | N           |                          | 41.8         | 7.71        | 4,942                        | 25.95            | 4.21        | 104.08                          | 1,360                            |
|               | 12-Mar-08        | N           |                          | 144.6        | 7.62        | 4,280                        | 27.81            | 3.12        | 103.80                          | 1,480                            |
|               | 19-Mar-08        | N           |                          | 125.6        | 7.73        | 4,819                        | 27.07            | 2.68        | 103.71                          | 1,200                            |
|               | 26-Mar-08        | N           |                          | 25.1         | 7.54        | 4,106                        | 27.92            | 3.1         | 103.47                          | 1,580                            |
|               | 02-Apr-08        | N           |                          | -34.4        | 7.60        | 4,822                        | 27.91            | 3.2         | 103.38                          | 1,540                            |
|               | 16-Apr-08        | N           |                          | 149.3        | 7.50        | 4,800                        | 27.79            | 2.79        | 103.09                          | 1,640                            |
|               | 29-Apr-08        | N           |                          | 180.4        | 7.44        | 4,350                        | 28.55            | 5.99        | 107.00                          | 1,360                            |
|               | 14-May-08        | N           |                          | -57.5        | 7.44        | 4,369                        | 28.23            | 2.91        | 102.56                          | 1,240                            |
|               | 28-May-08        | N           |                          | 2.0          | 7.52        | 4,840                        | 28.61            | 2.78        | 102.48                          | 1,540                            |
|               | 11-Jun-08        | N           |                          | 146.1        | 7.50        | 4,511                        | 26.51            | 4.74        | 102.50                          | 1,540                            |
|               | 25-Jun-08        | N           |                          | 21.4         | 7.30        | 4,778                        | 28.86            | 3.91        | 102.27                          | 1,420                            |
|               | 24-Jul-08        | N           |                          | 123.4        | 7.63        | 4,490                        | 29.7             | 4.79        | 102.54                          | 1,740                            |
|               | 20-Aug-08        | N           |                          | -9.6         | 7.74        | 4,499                        | 29.97            | 4.54        | 102.87                          | 1,760                            |
|               | 17-Sep-08        | N           |                          | 154.4        | 7.43        | 4,908                        | 27.72            | 2.86        | 103.00                          | 1,880                            |
|               | <b>15-Oct-08</b> | <b>N</b>    |                          | <b>114.0</b> | <b>7.47</b> | <b>4,660</b>                 | <b>28.37</b>     | <b>4.94</b> | <b>103.32</b>                   | <b>1,100</b>                     |
| PT-9M         | 17-Jul-07        | N           | 162-182                  | -57.0        | 7.34        | 6,605                        | 31.74            | 4.09        | 102.34                          | 3,460                            |
|               | 22-Jan-08        | N           |                          | 58.8         | 7.03        | 7,963                        | 30.05            | 3.34        | 104.49                          | 3,000                            |
|               | 05-Mar-08        | N           |                          | -41.7        | 7.37        | 7,982                        | 29.99            | 3.06        | 104.10                          | 2,100                            |
|               | 12-Mar-08        | N           |                          | 120.5        | 7.14        | 7,080                        | 29.87            | 3.46        | 103.86                          | 2,740                            |
|               | 19-Mar-08        | N           |                          | 48.9         | 7.28        | 7,710                        | 30.08            | 3.03        | 103.69                          | 2,420                            |
|               | 26-Mar-08        | N           |                          | 110.2        | 7.10        | 6,572                        | 29.88            | 3.56        | 103.48                          | 2,480                            |
|               | 02-Apr-08        | N           |                          | 55.7         | 7.08        | 7,798                        | 29.81            | 2.34        | 77.22                           | 2,800                            |
|               | 16-Apr-08        | N           |                          | 40.3         | 7.09        | 7,653                        | 29.28            | 2.07        | 78.96                           | 2,940                            |
|               | 29-Apr-08        | N           |                          | -1.2         | 7.04        | 6,791                        | 29.96            | 3.95        | 98.07                           | 2,760                            |
|               | 14-May-08        | N           |                          | -17.0        | 6.94        | 7,633                        | 30.13            | 3.59        | 102.80                          | 2,760                            |
|               | 28-May-08        | N           |                          | -6.8         | 7.09        | 7,593                        | 29.99            | 3.65        | 102.40                          | 2,640                            |
|               | 11-Jun-08        | N           |                          | 70.1         | 7.00        | 7,238                        | 30.13            | 4           | 90.56                           | 2,980                            |
|               | 25-Jun-08        | N           |                          | 23.1         | 6.91        | 6,977                        | 30.08            | 4.1         | 102.75                          | 2,800                            |
|               | 24-Jul-08        | N           |                          | 198.7        | 7.27        | 6,706                        | 30.01            | 4.57        | 102.47                          | 2,800                            |
|               | 20-Aug-08        | N           |                          | 6.3          | 7.20        | 7,282                        | 30.02            | 3.83        | 102.82                          | 2,800                            |
|               | 17-Sep-08        | N           |                          | 111.3        | 7.07        | 7,304                        | 29.85            | 4.04        | 103.06                          | 2,860                            |
|               | <b>15-Oct-08</b> | <b>N</b>    |                          | <b>66.9</b>  | <b>7.11</b> | <b>6,726</b>                 | <b>29.73</b>     | <b>3.73</b> | <b>103.27</b>                   | <b>3,280</b>                     |

**Table 2**  
**Summary of Field Parameters**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Screen Interval (ft bgs) | ORP (mV)    | pH          | Specific Conductance (µS/cm) | Temperature (°C) | DO (mg/L)   | Depth to Water (feet below TOC) | Hexavalent Chromium Field (µg/L) |
|---------------|------------------|-------------|--------------------------|-------------|-------------|------------------------------|------------------|-------------|---------------------------------|----------------------------------|
| PT-9D         | 17-Jul-07        | N           | 190-210                  | -74.8       | 7.87        | 14,027                       | 31.46            | 1.14        | 102.18                          | 10,050                           |
|               | 22-Jan-07        | N           |                          | 47.9        | 7.76        | 17,070                       | 30.4             | 1.23        | 104.38                          | 17,080                           |
|               | 05-Mar-08        | N           |                          | -85.7       | 8.05        | 17,396                       | 30.44            | 0.98        | 104.12                          | 15,820                           |
|               | 12-Mar-08        | N           |                          | 198.4       | 7.78        | 1,541                        | 30.16            | 1.52        | 103.89                          | 14,060                           |
|               | 19-Mar-08        | N           |                          | 71.3        | 7.94        | 16,747                       | 30.35            | 0.97        | 103.80                          | 13,580                           |
|               | 26-Mar-08        | N           |                          | 35.2        | 7.81        | 13,975                       | 30.39            | 0.98        | 103.50                          | 12,220                           |
|               | 02-Apr-08        | N           |                          | -93         | 7.83        | 16,109                       | 30.41            | 0.51        | 105.17                          | 13,980                           |
|               | 16-Apr-08        | N           |                          | 44.1        | 7.76        | 12,223                       | 29.4             | 1.25        | 103.31                          | 14,130                           |
|               | 29-Apr-08        | N           |                          | -53.9       | 7.60        | 14,014                       | 30.31            | 0.96        | 102.82                          | 10,790                           |
|               | 14-May-08        | N           |                          | -89.2       | 7.56        | 15,231                       | 30.44            | 0.7         | 102.92                          | 10,850                           |
|               | 28-May-08        | N           |                          | 101.2       | 7.68        | 15,667                       | 30.34            | 0.8         | 102.51                          | 14,450                           |
|               | 11-Jun-08        | N           |                          | 107.6       | 7.62        | 15,590                       | 30.11            | 1.15        | 85.69                           | 13,660                           |
|               | 25-Jun-08        | N           |                          | 14.2        | 7.45        | 14,474                       | 30.46            | 0.68        | 102.49                          | 10,400                           |
|               | 24-Jul-08        | N           |                          | 162.4       | 7.65        | 14,681                       | 30.34            | 0.77        | 102.05                          | 10,780                           |
|               | 20-Aug-08        | N           |                          | 17.7        | 7.84        | 16,555                       | 30.46            | 1.15        | 102.87                          | 14,400                           |
|               | 17-Sep-08        | N           |                          | 136.6       | 7.73        | 15,588                       | 30.32            | 1.2         | 103.11                          | 15,180                           |
|               | <b>15-Oct-08</b> | <b>N</b>    |                          | <b>80.0</b> | <b>7.52</b> | <b>13,691</b>                | <b>30.06</b>     | <b>2.56</b> | <b>103.36</b>                   | <b>9,300</b>                     |
| MW-11         | 17-Jul-07        | N           | 63-88                    | -23.7       | 7.56        | 2,176                        | 30.15            | 8.81        | 65.60                           | 260                              |
|               | 24-Jan-08        | N           |                          | 137.3       | 7.40        | 2,312                        | 28710            | 7.61        | 67.67                           | 342                              |
|               | 04-Mar-08        | N           |                          | 51.6        | 7.47        | 2,262                        | 28.79            | 0.93        | 67.09                           | 350                              |
|               | 11-Mar-08        | N           |                          | 149.2       | 7.44        | 2,169                        | 29.81            | 7.1         | 66.97                           | 319                              |
|               | 19-Mar-08        | N           |                          | 29.5        | 7.61        | 2,279                        | 29.27            | 5.59        | 66.85                           | 340                              |
|               | 26-Mar-08        | N           |                          | 110.2       | 7.37        | 2,205                        | 29.52            | 7.91        | 66.62                           | 360                              |
|               | 01-Apr-08        | N           |                          | -48.8       | 7.47        | 4,194                        | 29.17            | 6.44        | 66.60                           | 334                              |
|               | 15-Apr-08        | N           |                          | 66.5        | 7.24        | 2,097                        | 30.06            | 5.66        | 66.06                           | 326                              |
|               | 28-Apr-08        | N           |                          | -23.2       | 7.41        | 20                           | 29.86            | 9.03        | 65.82                           | 322                              |
|               | 13-May-08        | N           |                          | -35.9       | 7.24        | 2,351                        | 30.04            | 6.76        | 65.83                           | 420                              |
|               | 27-May-08        | N           |                          | 32.1        | 7.24        | 2,208                        | 29.87            | 9.66        | 65.64                           | 380                              |
|               | 10-Jun-08        | N           |                          | -11.3       | 7.20        | 2,196                        | 30.73            | 8.14        | 65.49                           | 302                              |
|               | 24-Jun-08        | N           |                          | 54.6        | 7.01        | 2,287                        | 29.17            | 8.96        | 65.54                           | 252                              |
|               | 22-Jul-08        | N           |                          | 125.8       | 7.40        | 2,370                        | 29.35            | 6.71        | 65.63                           | 299                              |
|               | 21-Aug-08        | N           |                          | 151.7       | 7.43        | 2,210                        | 29.49            | 8.68        | 65.84                           | 285                              |
|               | 16-Sep-08        | N           |                          | -43.3       | 7.32        | 2,203                        | 29.37            | 7.51        | 66.10                           | 269                              |
|               | <b>14-Oct-08</b> | <b>N</b>    |                          | <b>43.0</b> | <b>7.42</b> | <b>2,120</b>                 | <b>29.37</b>     | <b>6.43</b> | <b>66.36</b>                    | <b>337</b>                       |



**Table 2**  
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PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Screen Interval (ft bgs) | ORP (mV)      | pH          | Specific Conductance (µS/cm) | Temperature (°C) | DO (mg/L)   | Depth to Water (feet below TOC) | Hexavalent Chromium Field (µg/L) |
|---------------|------------------|-------------|--------------------------|---------------|-------------|------------------------------|------------------|-------------|---------------------------------|----------------------------------|
| MW-24A        | 18-Jul-07        | N           | 104-124                  | -43.9         | 7.67        | 2,707                        | 32.20            | 2.89        | 110.05                          | 1,100                            |
|               | 24-Jan-08        | N           |                          | 79.8          | 7.51        | 3,090                        | 28.51            | 1.95        | 112.20                          | 2,980                            |
|               | 06-Mar-08        | N           |                          | -119.7        | 7.45        | 10,486                       | 29.02            | 0.61        | 111.33                          | 325                              |
|               | 12-Mar-08        | N           |                          | -201.4        | 7.44        | 9,758                        | 31.2             | 0.2         | 111.50                          | 14,060                           |
|               | 19-Mar-08        | N           |                          | -250.7        | 7.04        | 9,950                        | 30.13            | 0.16        | 111.48                          | 111                              |
|               | 26-Mar-08        | N           |                          | -299.6        | 6.54        | 8,402                        | 30.7             | 0.39        | 111.25                          | 173                              |
|               | 01-Apr-08        | N           |                          | -299.1        | 7.06        | 1,638                        | 30.6             | 0.04        | ---                             | 440                              |
|               | 17-Apr-08        | N           |                          | -285.9        | 6.62        | 10,291                       | 30.9             | 1.39        | 110.85                          | 160                              |
|               | 30-Apr-08        | N           |                          | -315.7        | 6.45        | 10,294                       | 32.03            | 1.46        | 110.15                          | 220                              |
|               | 30-Apr-08        | FD          |                          | -315.7        | 6.45        | 10,294                       | 32.03            | 1.46        | 110.15                          | 220                              |
|               | 15-May-08        | N           |                          | -350.1        | 6.54        | 10,940                       | 33.47            | 0.44        | 109.82                          | 120                              |
|               | 27-May-08        | N           |                          | -278.1        | 6.33        | 10,759                       | 32.8             | 1.29        | 110.20                          | <10                              |
|               | 12-Jun-08        | N           |                          | -259.9        | 6.70        | 10,910                       | 32.6             | 0.8         | 111.66                          | <10                              |
|               | 19-Jun-08        | N           |                          | -222.4        | 6.49        | 11,469                       | 32.81            | 1.28        | 110.28                          | ---                              |
|               | 26-Jun-08        | N           |                          | -228.5        | 7.20        | 107                          | 30.84            | 0.17        | 110.13                          | 18                               |
|               | 01-Jul-08        | N           |                          | -320.4        | 6.82        | 10,282                       | 31.3             | 0.07        | 109.73                          | ---                              |
|               | 24-Jul-08        | N           |                          | -224.9        | 7.57        | 10,670                       | 32.38            | 0.32        | 110.26                          | 180                              |
|               | 19-Aug-08        | N           |                          | -302.5        | 7.20        | 10,311                       | 33.74            | 2.06        | 110.53                          | 17                               |
|               | 16-Sep-08        | N           |                          | -343.8        | 6.54        | 9,799                        | 30.03            | 0.31        | 110.78                          | 50                               |
|               | <b>16-Oct-08</b> | <b>N</b>    |                          | <b>-259.4</b> | <b>7.01</b> | <b>10,626</b>                | <b>30.91</b>     | <b>0.70</b> | <b>111.11</b>                   | <b>123</b>                       |
| MW-24B        | 18-Jul-07        | N           | 193-213                  | -57.9         | 7.86        | 15,371                       | 31.40            | 3.02        | 107.92                          | 2,340                            |
|               | 24-Jan-08        | N           |                          | -9.7          | 7.74        | 17,450                       | 29.91            | 0.85        | 109.75                          | 5,400                            |
|               | 06-Mar-08        | N           |                          | 28.1          | 7.73        | 17,751                       | 28.05            | 1.49        | 110.20                          | 4,400                            |
|               | 12-Mar-08        | N           |                          | -19.4         | 7.78        | 1,669                        | 30.62            | 1.11        | 109.47                          | 4,800                            |
|               | 19-Mar-08        | N           |                          | -32.7         | 7.90        | 17,369                       | 30.16            | 0.78        | 109.22                          | 4,460                            |
|               | 26-Mar-08        | N           |                          | -28           | 7.77        | 14,547                       | 30.91            | 88          | 109.23                          | 4,700                            |
|               | 02-Apr-08        | N           |                          | -292.2        | 7.77        | 17,340                       | 30.13            | 0.54        | 109.00                          | 4,420                            |
|               | 17-Apr-08        | N           |                          | -141.4        | 7.77        | 16,429                       | 30.42            | 1.09        | 108.60                          | 4,640                            |
|               | 30-Apr-08        | N           |                          | -222.7        | 7.79        | 15,539                       | 30.45            | 0.85        | 105.82                          | 3,800                            |
|               | 15-May-08        | N           |                          | -82.0         | 7.65        | 17,017                       | 30.36            | 0.80        | 108.57                          | 3,860                            |
|               | 28-May-08        | N           |                          | -105.4        | 7.76        | 16,854                       | 30.25            | 2.54        | 108.14                          | 3,940                            |
|               | 12-Jun-08        | N           |                          | -66.6         | 7.72        | 16,160                       | 30.23            |             | 111.23                          | 3,980                            |
|               | 26-Jun-08        | N           |                          | 24.7          | 7.68        | 10,275                       | 30.09            | 0.49        | 108.06                          | 3,400                            |
|               | 24-Jul-08        | N           |                          | -22.0         | 7.82        | 16,374                       | 30.19            | 0.39        | 108.29                          | 3,240                            |
|               | 19-Aug-08        | N           |                          | -25.7         | 7.61        | 16,302                       | 30.51            | 0.48        | 108.31                          | 3,400                            |
|               | 17-Sep-08        | N           |                          | -64.4         | 7.76        | 15,433                       | 29.49            | 0.79        | 108.56                          | 3,360                            |
|               | <b>16-Oct-08</b> | <b>N</b>    |                          | <b>88.6</b>   | <b>7.60</b> | <b>15,816</b>                | <b>31.18</b>     | <b>1.18</b> | <b>109.03</b>                   | <b>3,380</b>                     |

**Table 2**  
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Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Screen Interval (ft bgs) | ORP (mV)     | pH          | Specific Conductance (µS/cm) | Temperature (°C) | DO (mg/L)   | Depth to Water (feet below TOC) | Hexavalent Chromium Field (µg/L) |
|---------------|------------------|-------------|--------------------------|--------------|-------------|------------------------------|------------------|-------------|---------------------------------|----------------------------------|
| MW-38S        | 17-Jul-07        | N           | 75-95                    | 27.2         | 7.52        | 3,306                        | 29.00            | 6.02        | 69.04                           | 720                              |
|               | 23-Jan-08        | N           |                          | 36.6         | 7.56        | 3,175                        | 27.08            | 5.33        | 71.05                           | 1,140                            |
|               | 04-Mar-08        | N           |                          | 150          | 7.59        | 3,194                        | 27.72            | 0.57        | 70.71                           | 1,200                            |
|               | 11-Mar-08        | N           |                          | 56           | 7.70        | 3,094                        | 28.37            | 2.95        | 70.40                           | 1,300                            |
|               | 20-Mar-08        | N           |                          | 117.6        | 7.71        | 3,218                        | 27.3             | 5.31        | 70.43                           | 1,140                            |
|               | 26-Mar-08        | N           |                          | 24.1         | 7.39        | 2,687                        | 28.36            | 4.2         | 70.18                           | 1,260                            |
|               | 01-Apr-08        | N           |                          | -16.4        | 7.57        | 5,892                        | 28.48            | 4.6         | 70.10                           | 1,280                            |
|               | 15-Apr-08        | N           |                          | 116.4        | 7.41        | 2,958                        | 28.64            | 3.89        | 69.66                           | 1,180                            |
|               | 28-Apr-08        | N           |                          | -88.8        | 7.70        | 2,875                        | 29.05            | 5.22        | 69.45                           | 1,340                            |
|               | 13-May-08        | N           |                          | -41.3        | 7.38        | 3,213                        | 28.62            | 4.18        | 69.27                           | 1,120                            |
|               | 27-May-08        | N           |                          | -20.0        | 7.43        | 3,035                        | 28.39            | 4.82        | 69.17                           | 1,180                            |
|               | 10-Jun-08        | N           |                          | -14.1        | 7.50        | 2,569                        | 28.8             | 1.59        | 66.62                           | 1,320                            |
|               | 24-Jun-08        | N           |                          | 10.7         | 7.20        | 3,041                        | 28.65            | 4.82        | 69.12                           | 1,140                            |
|               | 22-Jul-08        | N           |                          | 185.1        | 7.54        | 3,045                        | 29.33            | 2.85        | 69.10                           | 1,280                            |
|               | 20-Aug-08        | N           |                          | 7.2          | 7.71        | 2,832                        | 28.88            | 1.49        | 65.66                           | 1,340                            |
|               | 16-Sep-08        | N           |                          | 80.9         | 7.46        | 2,811                        | 29.00            | 1.54        | 69.50                           | 1,360                            |
|               | <b>14-Oct-08</b> | <b>N</b>    |                          | <b>141.6</b> | <b>7.43</b> | <b>2,684</b>                 | <b>28.63</b>     | <b>0.67</b> | <b>69.94</b>                    | <b>1,540</b>                     |
| MW-38D        | 17-Jul-07        | N           | 166-188                  | -62.9        | 7.81        | 20,894                       | 30.63            | 1.2         | 69.37                           | 1,410                            |
|               | 23-Jan-08        | N           |                          | -32.8        | 7.78        | 23,020                       | 30.28            | 0.14        | 71.29                           | 69                               |
|               | 04-Mar-08        | N           |                          | -39          | 7.86        | 23,367                       | 30.09            | 0.11        | 71.01                           | 77                               |
|               | 11-Mar-08        | N           |                          | -54.0        | 7.80        | 2,260                        | 30.28            | 0.3         | 70.86                           | 72                               |
|               | 20-Mar-08        | N           |                          | 174.8        | 7.95        | 234                          | 30.18            | 0.14        | 70.79                           | 54                               |
|               | 26-Mar-08        | N           |                          | -47.9        | 7.77        | 19,673                       | 30.4             | 0.18        | 70.53                           | 54                               |
|               | 01-Apr-08        | N           |                          | -79.7        | 8.10        | 42,680                       | 30.22            | 0.10        | 67.43                           | 53                               |
|               | 15-Apr-08        | N           |                          | -56.2        | 7.65        | 21,852                       | 30.06            | 0.50        | 70.83                           | 62                               |
|               | 15-Apr-08        | FD          |                          | -56.2        | 7.65        | 21,852                       | 30.06            | 0.50        | 70.83                           | 62                               |
|               | 28-Apr-08        | N           |                          | -2.1         | 7.79        | 21,005                       | 30.26            | 0.45        | 69.96                           | 62                               |
|               | 13-May-08        | N           |                          | -106.5       | 7.62        | 23,691                       | 30.27            | 0.18        | 188.30                          | <10                              |
|               | 27-May-08        | N           |                          | 10.2         | 7.68        | 2,246                        | 30.27            | 0.57        | 69.63                           | 189                              |
|               | 10-Jun-08        | N           |                          | 36.9         | 7.74        | 21,879                       | 30.49            | 0.5         | 69.22                           | 64                               |
|               | 24-Jun-08        | N           |                          | -80.4        | 7.80        | 22,824                       | 30.32            | 0.17        | 69.58                           | 53                               |
|               | 22-Jul-08        | N           |                          | 110.6        | 7.81        | 23,605                       | 30.41            | 0.15        | 69.50                           | 69                               |
|               | 20-Aug-08        | N           |                          | 89.0         | 7.93        | 22,069                       | 30.33            | 0.20        | 69.81                           | 66                               |
|               | 16-Sep-08        | N           |                          | -118.3       | 7.73        | 21,191                       | 29.29            | 0.39        | 70.07                           | 70                               |
|               | <b>14-Oct-08</b> | <b>N</b>    |                          | <b>86.3</b>  | <b>7.72</b> | <b>21,347</b>                | <b>30.19</b>     | <b>2.56</b> | <b>70.38</b>                    | <b>87</b>                        |

**Table 2**  
**Summary of Field Parameters**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Screen Interval (ft bgs) | ORP (mV)      | pH          | Specific Conductance (µS/cm) | Temperature (°C) | DO (mg/L)   | Depth to Water (feet below TOC) | Hexavalent Chromium Field (µg/L) |
|---------------|------------------|-------------|--------------------------|---------------|-------------|------------------------------|------------------|-------------|---------------------------------|----------------------------------|
| PTR-1         | 19-Jul-07        | N           | *                        | -50.9         | 7.91        | 8,927                        | 31.2             | 1.6         | 102.65                          | 201                              |
|               | 25-Jan-08        | N           |                          | 228.7         | 7.48        | 7,093                        | 22.52            | 2.09        | ---                             | 920                              |
|               | 06-Mar-08        | N           |                          | 23.2          | 7.77        | 4,750                        | 26.9             | 1.2         | ---                             | 641                              |
|               | 11-Mar-08        | N           |                          | 114.3         | 6.74        | 4,453                        | 32.84            | 1.99        | ---                             | 380                              |
|               | 20-Mar-08        | N           |                          | -139.7        | 7.97        | 3,105                        | 37.50            | 1.54        | ---                             | 62                               |
|               | 27-Mar-08        | N           |                          | 185.1         | 7.46        | 1,489                        | 31.28            | 3.7         | ---                             | 654                              |
|               | 01-Apr-08        | N           |                          | -215.3        | 7.97        | 10,980                       | 33.58            | 1.39        | ---                             | 240                              |
|               | 16-Apr-08        | N           |                          | -42.4         | 7.63        | 4,019                        | 33.01            | 0.92        | ---                             | 52                               |
|               | 29-Apr-08        | N           |                          | -232.9        | 7.23        | 4,479                        | 28.91            | 0.54        | ---                             | 22                               |
|               | 15-May-08        | N           |                          | -221.6        | 6.98        | 5,158                        | 32.1             | 0.60        | ---                             | 120                              |
|               | 29-May-08        | N           |                          | -107.5        | 7.34        | 4,640                        | 36.35            | 0.80        | ---                             | 25                               |
|               | 12-Jun-08        | N           |                          | -159.4        | 7.69        | 5,661                        | 33.60            | 1.34        | ---                             | 1                                |
|               | 19-Jun-08        | N           |                          | -119.7        | 7.79        | 6,231                        | 38.28            | 0.78        | ---                             | ---                              |
|               | 26-Jun-08        | N           |                          | -113.6        | 7.58        | 5,640                        | 38.43            | 1.10        | ---                             | <10                              |
|               | 01-Jul-08        | N           |                          | -1115         | 7.62        | 5,868                        | 39.84            | 1.24        | ---                             | ---                              |
|               | 24-Jul-08        | N           |                          | 90.5          | 7.46        | 5,365                        | 37.00            | 1.24        | ---                             | 480                              |
|               | 19-Aug-08        | N           |                          | 40.8          | 7.44        | 5,752                        | 36.86            | 1.60        | ---                             | <10                              |
|               | 18-Sep-08        | N           |                          | -33.3         | 7.57        | 5,804                        | 31.94            | 0.96        | ---                             | <10                              |
|               | <b>16-Oct-08</b> | <b>N</b>    |                          | <b>-74.8</b>  | <b>7.28</b> | <b>6,139</b>                 | <b>38.5</b>      | <b>1.35</b> | ---                             | <b>11</b>                        |
| PTR-2         | 18-Jul-07        | N           | *                        | -56.7         | 7.40        | 9,367                        | 30.52            | 1.01        | 110.34                          | 2,020                            |
|               | 25-Jan-08        | N           |                          | 167.8         | 7.31        | 9,122                        | 28.41            | 2.37        | ---                             | 4,920                            |
|               | 06-Mar-08        | N           |                          | 33.8          | 7.31        | 1,007                        | 28.7             | 1.27        | ---                             | 4,800                            |
|               | 11-Mar-08        | N           |                          | 125           | 6.92        | 9,837                        | 28.21            | 1.59        | ---                             | 5,660                            |
|               | 20-Mar-08        | N           |                          | -27.2         | 7.70        | 4,116                        | 37.18            | 3.66        | ---                             | 19,500                           |
|               | 27-Mar-08        | N           |                          | 52.8          | 7.76        | 2,146                        | 32.21            | 4.4         | ---                             | 8,700                            |
|               | 01-Apr-08        | N           |                          | -46.9         | 7.45        | 1,953                        | 36.75            | 1.56        | ---                             | 4,240                            |
|               | 15-Apr-08        | N           |                          | -79.1         | 7.42        | 50                           | 33.21            | 2.24        | ---                             | 552                              |
|               | 29-Apr-08        | N           |                          | -82.4         | 7.20        | 10,168                       | 26.61            | 2.07        | ---                             | 5,320                            |
|               | 15-May-08        | N           |                          | 45.0          | 7.30        | 11,203                       | 29.69            | 1.43        | ---                             | 5,060                            |
|               | 28-May-08        | N           |                          | -60.0         | 7.73        | 8,988                        | 32.73            | 1.95        | ---                             | 4,280                            |
|               | 10-Jun-08        | N           |                          | 69.0          | 7.54        | 10,684                       | 37.77            | 1.46        | ---                             | 196                              |
|               | 19-Jun-08        | N           |                          | 170.6         | 7.55        | 9,106                        | 38.22            | 1.4         | ---                             | ---                              |
|               | 26-Jun-08        | N           |                          | 20.9          | 7.32        | 10,484                       | 31.34            | 0.79        | ---                             | 4,280                            |
|               | 01-Jul-08        | N           |                          | -54.3         | 7.20        | 10,163                       | 37.45            | 0.81        | ---                             | ---                              |
|               | 24-Jul-08        | N           |                          | 281.5         | 7.26        | 10,747                       | 33.07            | 1.18        | ---                             | 4,900                            |
|               | 19-Aug-08        | N           |                          | -19.6         | 7.30        | 5,956                        | 37.04            | ---         | ---                             | 2,000                            |
|               | 18-Sep-08        | N           |                          | 128.9         | 7.37        | 5,782                        | 30.6             | 1.49        | ---                             | 2,160                            |
|               | <b>16-Oct-08</b> | <b>N</b>    |                          | <b>-154.8</b> | <b>7.14</b> | <b>10,131</b>                | <b>28.5</b>      | <b>0.85</b> | ---                             | <b>4,440</b>                     |

**Table 2**  
**Summary of Field Parameters**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date | Sample Type | Screen Interval (ft bgs) | ORP (mV) | pH | Specific Conductance (µS/cm) | Temperature (°C) | DO (mg/L) | Depth to Water (feet below TOC) | Hexavalent Chromium Field (µg/L) |
|---------------|-------------|-------------|--------------------------|----------|----|------------------------------|------------------|-----------|---------------------------------|----------------------------------|
|---------------|-------------|-------------|--------------------------|----------|----|------------------------------|------------------|-----------|---------------------------------|----------------------------------|

Notes:

Most recent data indicated in **BOLD**

Depth to water recorded prior to any sampling activities. Recirculation wells PTR-1 and PTR-2 cannot be gauged post-construction due to necessary piping and well caps

ft bgs            Feet below ground surface

mV              Millivolts

µS/cm          Microsiemens per centimeter

°C               Degrees Celsius

µg/L            Micrograms per liter

mg/L            Milligrams per liter

ORP             Oxidation Reduction Potential

N                Normal

DO               Dissolved oxygen

TOC             Top of Casing

---              Not analyzed/Not available

\*                PTR-1 Screen: 125-160 and 175-220 ft bgs. PTR-2 Screen: 118-158 and 173-218 ft bgs.

Oct result for PT-7M & PT-7D are grab samples. Unable to effectively purge well because of gas buildup in the well.

Oct ORP value for PT-7S is under review; likely a mis-reading was recorded.

**Table 3**  
**Summary of Primary Analytical Parameters**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Hexavalent Chromium (µg/L) | Total Dissolved Chromium (µg/L) | Total Chromium (µg/L) | Fluorescein (ppb dye) | Rhodamine (ppb dye) | Nitrate-N (mg/L) | Nitrite-N (mg/L) | Total Iron (µg/L) | Dissolved Iron (µg/L) | Dissolved Manganese (µg/L) | Total Manganese (µg/L) | Sulfate (mg/L) | Total Organic Carbon (mg/L) |
|---------------|------------------|-------------|----------------------------|---------------------------------|-----------------------|-----------------------|---------------------|------------------|------------------|-------------------|-----------------------|----------------------------|------------------------|----------------|-----------------------------|
| PT-7S         | 18-Jul-07        | N           | 1,200                      | 1,260                           | 1,080                 | ---                   | ---                 | 22.0             | <0.1             | 6,160             | <500                  | 55.6                       | 1,050                  | 674            | 1.18                        |
|               | 23-Jan-08        | N           | 1,400                      | 1,390                           | ---                   | ---                   | ---                 | 18.7             | <0.1             | 558               | <2,500                | <2,500                     | 462                    | 608            | 2.99                        |
|               | 06-Mar-08        | N           | 1,420                      | 1,270                           | ---                   | ---                   | ND                  | 18.6             | <0.1             | <500              | <500                  | <500                       | 34                     | 637            | <1                          |
|               | 13-Mar-08        | N           | 1,100                      | 1,070                           | ---                   | 0.02                  | ND                  | 15.4             | <0.1             | <500              | <2,500                | <2,500                     | <10                    | 588            | 1.25                        |
|               | 18-Mar-08        | N           | 1,300                      | 1,280                           | ---                   | 0.64                  | ND                  | 17.7             | <0.1             | <500              | <2,500                | ---                        | 11                     | 606            | 1.17                        |
|               | 25-Mar-08        | N           | 1,420                      | 1,410                           | ---                   | 0.96                  | ND                  | 19.3             | <0.2             | <500              | <2,500                | <2,500                     | 23                     | 630            | 1.88                        |
|               | 02-Apr-08        | N           | 1,490                      | 1,510                           | ---                   | 0.24                  | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 665            | <1                          |
|               | 17-Apr-08        | N           | 1,320                      | 1,280                           | ---                   | 2.42                  | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 737            | <1                          |
|               | 29-Apr-08        | N           | 812                        | 855                             | ---                   | 5.71                  | ND                  | 13.5             | 0.95             | <500              | <500                  | <500                       | 189                    | 567            | 1.84                        |
|               | 15-May-08        | N           | 876                        | 868                             | ---                   | 2.89                  | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 563            | <1                          |
|               | 29-May-08        | N           | 1,230                      | 1,190                           | ---                   | 0.07                  | ND                  | 18.9             | <0.5             | <500              | <500                  | <500                       | 47.9                   | 675            | <1                          |
|               | 11-Jun-08        | N           | 1,580                      | 1,350                           | ---                   | 0.17                  | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 764            | ---                         |
|               | 24-Jun-08        | N           | 927                        | 801                             | ---                   | 1.04                  | ND                  | 13.2             | <0.5             | <500              | <500                  | <500                       | 134                    | 599            | 1.88                        |
|               | 23-Jul-08        | N           | 182                        | 190                             | ---                   | 25.28                 | 3.00                | 4.38             | <1               | <500              | <500                  | 1,450                      | 1,650                  | 547            | 14.3                        |
|               | 21-Aug-08        | N           | 401                        | 398                             | ---                   | 338.25                | 0.37                | 9.00             | <1               | <500              | <500                  | 2,230                      | 2,620                  | 486            | 896                         |
|               | 18-Sep-08        | N           | 429                        | 502                             | ---                   | 2.18                  | 0.12                | 15.00            | <0.5             | <500              | <500                  | 690                        | 855                    | 629            | 3.21                        |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>&lt;0.2</b>             | <b>39</b>                       | ---                   | <b>31.73</b>          | <b>2.80</b>         | <b>2.93</b>      | <b>&lt;0.5</b>   | <b>604</b>        | <b>&lt;500</b>        | <b>1,470</b>               | <b>1,710</b>           | <b>381</b>     | <b>47.8</b>                 |
| PT-7M         | 19-Jul-07        | N           | 2,320                      | 2,240                           | 2,110                 | ---                   | ---                 | 25.2             | <0.1             | 6,260             | <500                  | 31.6                       | 1,150                  | 1,250          | 1.02                        |
|               | 24-Jan-08        | N           | 2,440                      | 2,340                           | ---                   | ---                   | ---                 | 30.4             | <0.5             | <500              | <1,000                | <1,000                     | <10                    | 1,280          | <1                          |
|               | 06-Mar-08        | N           | 30                         | 16.5                            | ---                   | ND                    | ND                  | <0.5             | <0.1             | <500              | <500                  | 702                        | 711                    | 846            | 216                         |
|               | 06-Mar-08        | FD          | 33.3                       | 18.0                            | ---                   | 0.03                  | ND                  | <0.5             | <0.1             | <500              | <500                  | 703                        | 714                    | 832            | 213                         |
|               | 13-Mar-08        | N           | <0.2                       | <5                              | ---                   | 1,193                 | ND                  | <0.5             | <0.1             | <500              | <2,500                | 3,320                      | 3,540                  | 656            | 446                         |
|               | 18-Mar-08        | N           | <0.2                       | <5                              | ---                   | 3,390                 | ND                  | <5               | <1               | 1,040             | <2,500                | ---                        | 6,290                  | 205            | 1,550                       |
|               | 25-Mar-08        | N           | 6.9                        | <5                              | ---                   | 3,030                 | ND                  | <2.5             | <0.5             | 1,740             | <2,500                | 8,690                      | 9,500                  | 144            | 1,500                       |
|               | 02-Apr-08        | N           | 2                          | <5                              | ---                   | 2,820                 | ND                  | ---              | ---              | 2,660             | <2,500                | ---                        | ---                    | 105            | 1,270                       |
|               | 17-Apr-08        | N           | <1                         | <5                              | ---                   | 7,650                 | ND                  | ---              | ---              | 6,320             | 3,700                 | ---                        | ---                    | <10            | 4,640                       |
|               | 29-Apr-08        | N           | <1                         | 1.08                            | ---                   | 8,175                 | ND                  | <10              | <2               | 1,680             | 1,300                 | 11,300                     | 14,100                 | <10            | 8,050                       |
|               | 14-May-08        | N           | <1.1                       | 1.52                            | ---                   | 7,725                 | ND                  | ---              | ---              | 9,070             | 6,900                 | ---                        | ---                    | <20            | 8,040                       |
|               | 29-May-08        | N           | <1                         | 1.34                            | ---                   | 4,163                 | ND                  | <10              | <10              | 12,400            | 11,000                | 18,600                     | 18,400                 | <10            | 10,700                      |
|               | 11-Jun-08        | N           | 1.4                        | 1.98                            | ---                   | 3,000                 | ND                  | ---              | ---              | 15,100            | 10,900                | ---                        | ---                    | 11.2           | 8,530                       |
|               | 19-Jun-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 9,340                       |
|               | 25-Jun-08        | N           | <1                         | 1.02                            | ---                   | 1,898                 | ND                  | <2.5             | <2.5             | 18,500            | 13,200                | 21,900                     | 26,300                 | <2.5           | 8,630                       |
|               | 01-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 8,180                       |
|               | 08-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 6,980                       |
|               | 15-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 1,810                       |
|               | 23-Jul-08        | N           | <0.2                       | <1                              | ---                   | 12.375                | ND                  | <2.5             | <2.5             | 27,100            | 19,100                | 24,400                     | 26,500                 | 3.11           | 5,180                       |
|               | 28-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 4,930                       |
|               | 21-Aug-08        | N           | <0.2                       | <1                              | ---                   | 1,088                 | ND                  | <2.5             | <2.5             | 38,600            | 34,400                | 31,400                     | 31,300                 | 11.8           | 5,530                       |
|               | 03-Sep-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 2,870                       |
|               | 18-Sep-08        | N           | <0.2                       | <1                              | ---                   | 1,088                 | ND                  | <1               | <1               | 13,600            | 25,100                | 22,900                     | 29,200                 | 6.65           | 2,930                       |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>&lt;0.2</b>             | <b>&lt;1</b>                    | ---                   | <b>990</b>            | <b>ND</b>           | <b>&lt;2.5</b>   | <b>&lt;2.5</b>   | <b>33,600</b>     | <b>27,800</b>         | <b>16,100</b>              | <b>16,300</b>          | <b>57.8</b>    | <b>2,210</b>                |

**Table 3**  
**Summary of Primary Analytical Parameters**  
PG&E Topock  
Needles, California  
November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Hexavalent Chromium (µg/L) | Total Dissolved Chromium (µg/L) | Total Chromium (µg/L) | Fluorescein (ppb dye) | Rhodamine (ppb dye) | Nitrate-N (mg/L) | Nitrite-N (mg/L) | Total Iron (µg/L) | Dissolved Iron (µg/L) | Dissolved Manganese (µg/L) | Total Manganese (µg/L) | Sulfate (mg/L) | Total Organic Carbon (mg/L) |
|---------------|------------------|-------------|----------------------------|---------------------------------|-----------------------|-----------------------|---------------------|------------------|------------------|-------------------|-----------------------|----------------------------|------------------------|----------------|-----------------------------|
| PT-7D         | 18-Jul-07        | N           | 7,260                      | 7,890                           | 7,750                 | ---                   | ---                 | 7.4              | <0.1             | <500              | <500                  | 48.3                       | 54                     | 1,140          | <1                          |
|               | 24-Jan-08        | N           | 8,010                      | 7,920                           | ---                   | ---                   | ---                 | 9.9              | <0.5             | <500              | <1,000                | <1,000                     | 14                     | 1,150          | <1                          |
|               | 06-Mar-08        | N           | 506                        | 499                             | ---                   | ND                    | ND                  | <0.5             | <0.1             | <500              | <500                  | <500                       | 193                    | 903            | 234                         |
|               | 13-Mar-08        | N           | 80.6                       | 160                             | ---                   | 1,185                 | ND                  | <0.5             | <0.2             | <500              | <2,500                | <2,500                     | 1,050                  | 903            | 313                         |
|               | 18-Mar-08        | N           | <2.1                       | 69.3                            | ---                   | 780                   | ND                  | <1               | <0.2             | <500              | <2,500                | ---                        | 2,220                  | 621            | 309                         |
|               | 25-Mar-08        | N           | 4                          | 17.8                            | ---                   | 645                   | ND                  | <1               | <0.5             | <500              | <2,500                | 4,080                      | 4,320                  | 612            | 313                         |
|               | 02-Apr-08        | N           | <0.2                       | <5                              | ---                   | 578                   | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 633            | 256                         |
|               | 17-Apr-08        | N           | 22.6                       | 7.64                            | ---                   | 4,163                 | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 179            | 1,410                       |
|               | 29-Apr-08        | N           | <0.2                       | 17.2                            | ---                   | 5,010                 | ND                  | <10              | <2               | <500              | <500                  | 2,960                      | 3,380                  | 98             | 2,920                       |
|               | 15-May-08        | N           | <1.1                       | 1.48                            | ---                   | 4,088                 | ND                  | ---              | ---              | 2,280             | 1,730                 | ---                        | ---                    | 96             | 2,780                       |
|               | 29-May-08        | N           | <1                         | 1.14                            | ---                   | 3,945                 | ND                  | <10              | <10              | 2,660             | 2,000                 | 8,860                      | 8,850                  | 100            | 1,690                       |
|               | 11-Jun-08        | N           | 1.5                        | 1.48                            | ---                   | 6,293                 | ND                  | ---              | ---              | 4,920             | 2,740                 | ---                        | ---                    | 50.5           | 4,620                       |
|               | 19-Jun-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 4,520                       |
|               | 24-Jun-08        | N           | <1                         | 49.2                            | ---                   | 5,250                 | ND                  | <10              | <10              | 10,600            | 1,280                 | 9,700                      | 11,400                 | 12.7           | 4,450                       |
|               | 01-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 5,850                       |
|               | 08-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 4,580                       |
|               | 15-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 5,430                       |
|               | 23-Jul-08        | N           | <0.2                       | 2.18                            | ---                   | 2,048                 | ND                  | <5               | <5               | 7,870             | 5,380                 | 18,100                     | 19,900                 | <5             | 5,140                       |
|               | 28-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 5,140                       |
|               | 21-Aug-08        | N           | <0.2                       | 1.13                            | ---                   | 1,658                 | ND                  | <2.5             | <2.5             | 7,130             | 6,140                 | 19,100                     | 20,300                 | 30.1           | 4,500                       |
|               | 03-Sep-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 5,110                       |
|               | 18-Sep-08        | N           | <0.2                       | 3.07                            | ---                   | 758                   | ND                  | <1               | <1               | 25,900            | 10,000                | 27,000                     | 20,100                 | 11.3           | 2,890                       |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>&lt;0.2</b>             | <b>7.37</b>                     | <b>---</b>            | <b>528</b>            | <b>ND</b>           | <b>&lt;1</b>     | <b>&lt;1</b>     | <b>14,300</b>     | <b>6,150</b>          | <b>23,700</b>              | <b>25,400</b>          | <b>17.0</b>    | <b>1,640</b>                |

**Table 3**  
**Summary of Primary Analytical Parameters**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Hexavalent Chromium (µg/L) | Total Dissolved Chromium (µg/L) | Total Chromium (µg/L) | Fluorescein (ppb dye) | Rhodamine (ppb dye) | Nitrate-N (mg/L) | Nitrite-N (mg/L) | Total Iron (µg/L) | Dissolved Iron (µg/L) | Dissolved Manganese (µg/L) | Total Manganese (µg/L) | Sulfate (mg/L) | Total Organic Carbon (mg/L) |
|---------------|------------------|-------------|----------------------------|---------------------------------|-----------------------|-----------------------|---------------------|------------------|------------------|-------------------|-----------------------|----------------------------|------------------------|----------------|-----------------------------|
| PT-8S         | 16-Jul-07        | N           | 1,750                      | 1,660                           | 1,620                 | ---                   | ---                 | 25.1             | <0.1             | 2,670             | <500                  | 25.1                       | 269                    | 869            | 1.35                        |
|               | 23-Jan-08        | N           | 1,620                      | 1,680                           | ---                   | ---                   | ---                 | 24.9             | <0.1             | <500              | <2,500                | <2,500                     | <10                    | 734            | 1.03                        |
|               | 05-Mar-08        | N           | 1,430                      | 1,340                           | ---                   | ND                    | ND                  | 22.6             | <0.1             | <500              | <500                  | <500                       | <10                    | 727            | 1.10                        |
|               | 13-Mar-08        | N           | 657                        | 657                             | ---                   | ND                    | ND                  | 8.4              | 1.61             | <500              | <2,500                | <2,500                     | 333                    | 618            | 12.5                        |
|               | 18-Mar-08        | N           | 160                        | 164                             | ---                   | ND                    | ND                  | 1.7              | 0.82             | <500              | <2,500                | ---                        | 1,050                  | 561            | 7.18                        |
|               | 25-Mar-08        | N           | 455                        | 438                             | ---                   | 0.07                  | ND                  | 6.2              | 2.42             | <500              | <2,500                | <2,500                     | 973                    | 591            | 4.16                        |
|               | 02-Apr-08        | N           | 877                        | 884                             | ---                   | ND                    | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 634            | 1.39                        |
|               | 16-Apr-08        | N           | 775                        | 747                             | ---                   | 0.15                  | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 408            | <1                          |
|               | 29-Apr-08        | N           | 76.7                       | 95.7                            | ---                   | 18.60                 | ND                  | 1.4              | <0.2             | <500              | <500                  | 2,300                      | 2,910                  | 560            | 74.3                        |
|               | 14-May-08        | N           | <0.2                       | 18.1                            | ---                   | 9.60                  | 0.35                | ---              | ---              | <500              | <500                  | ---                        | ---                    | 481            | 36.0                        |
|               | 28-May-08        | N           | <0.2                       | 2.68                            | ---                   | 60.00                 | 6.92                | <0.5             | <2.5             | 532               | <500                  | 3,560                      | 3,930                  | 161            | 49.6                        |
|               | 28-May-08        | FD          | <0.2                       | 3.05                            | ---                   | 62.10                 | 6.72                | <0.5             | <2.5             | 544               | <500                  | 3,520                      | 3,950                  | 162            | 91.6                        |
|               | 11-Jun-08        | N           | 1.8                        | 4.97                            | ---                   | 322.5                 | 42.6                | ---              | ---              | 5,530             | 4,210                 | ---                        | ---                    | 12.7           | 1,100                       |
|               | 19-Jun-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 842                         |
|               | 25-Jun-08        | N           | <1                         | 1.8                             | ---                   | 123                   | 97.4                | <1               | <1               | 6,600             | 5,540                 | 15,600                     | 17,600                 | 2.6            | 1,710                       |
|               | 01-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 1,740                       |
|               | 08-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 1,090                       |
|               | 15-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 1,230                       |
|               | 23-Jul-08        | N           | <0.2                       | <1                              | ---                   | 83.25                 | 97.20               | <5               | <5               | 6,380             | 5,050                 | 17,200                     | 18,100                 | <5             | 1,210                       |
|               | 28-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 1,020                       |
|               | 20-Aug-08        | N           | <0.2                       | 16.0                            | ---                   | 89.25                 | 69.20               | <1               | <2.5             | 13,600            | 11,200                | 9,560                      | 10,700                 | 3.9            | 439                         |
|               | 17-Sep-08        | N           | <0.2                       | 3.7                             | ---                   | 72.83                 | 51.40               | <1               | <1               | 12,800            | 10,300                | 4,700                      | 5,380                  | 4.1            | 189                         |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>&lt;0.2</b>             | <b>1.0</b>                      | ---                   | <b>135.75</b>         | <b>69.00</b>        | <b>&lt;1</b>     | <b>&lt;2.5</b>   | <b>9,240</b>      | <b>8,200</b>          | <b>2,720</b>               | <b>3,040</b>           | <b>5.5</b>     | <b>164</b>                  |
| PT-8M         | 18-Jul-07        | N           | 3,960                      | 4,120                           | 4,140                 | ---                   | ---                 | 31.8             | <0.5             | <500              | <500                  | 15.5                       | 22.7                   | 1,330          | 1.40                        |
|               | 23-Jan-08        | N           | 4,050                      | 4,030                           | ---                   | ---                   | ---                 | 34.9             | <0.1             | <500              | <2,500                | <2,500                     | <10                    | 1,210          | 1.31                        |
|               | 05-Mar-08        | N           | 3,820                      | 3,910                           | ---                   | ND                    | ND                  | 33.9             | <0.1             | <500              | <500                  | <500                       | <10                    | 1,290          | 1.39                        |
|               | 13-Mar-08        | N           | 3,870                      | 3,870                           | ---                   | ND                    | ND                  | 32.4             | <0.1             | <500              | <2,500                | <2,500                     | <10                    | 1,250          | 1.34                        |
|               | 19-Mar-08        | N           | 4,030                      | 3,850                           | ---                   | ND                    | ND                  | 32.6             | <0.2             | <500              | <2,500                | ---                        | <10                    | 1,230          | 1.15                        |
|               | 25-Mar-08        | N           | 3,890                      | 3,820                           | ---                   | ND                    | ND                  | 32.8             | <0.2             | <500              | <2,500                | <2,500                     | <10                    | 1,230          | 1.02                        |
|               | 02-Apr-08        | N           | 3,880                      | 3,810                           | ---                   | ND                    | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 1,290          | 1.11                        |
|               | 16-Apr-08        | N           | 3,670                      | 3,730                           | ---                   | ND                    | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 1,280          | <1                          |
|               | 29-Apr-08        | N           | 3,570                      | 3,760                           | ---                   | ND                    | ND                  | 31.5             | <0.2             | <500              | <500                  | <500                       | <10                    | 1,250          | <1                          |
|               | 14-May-08        | N           | 3,880                      | 3,760                           | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 1,220          | 1.42                        |
|               | 28-May-08        | N           | 3,830                      | 3,660                           | ---                   | ND                    | ND                  | 12.6             | <2.5             | <500              | <500                  | <500                       | 12.8                   | 1,010          | <1                          |
|               | 11-Jun-08        | N           | 2,720                      | 3,500                           | ---                   | 0.32                  | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 1,220          | 1.38                        |
|               | 19-Jun-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | <2                          |
|               | 25-Jun-08        | N           | 3,710                      | 3,540                           | ---                   | 0.02                  | ND                  | 30.2             | <1               | <500              | <500                  | <500                       | <10                    | 1,190          | 1.53                        |
|               | 25-Jun-08        | FD          | 3,550                      | 3,470                           | ---                   | 0.02                  | ND                  | 30.9             | <1               | <500              | <500                  | <500                       | <10                    | 1,190          | 1.46                        |
|               | 01-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 1.58                        |
|               | 23-Jul-08        | N           | 3,620                      | 3,480                           | ---                   | 0.027                 | ND                  | 29.4             | <1               | <500              | <500                  | <500                       | <10                    | 1,130          | 1.55                        |
|               | 20-Aug-08        | N           | 2,770                      | 2,740                           | ---                   | 1.92                  | ND                  | 21.8             | <1               | <500              | <500                  | <500                       | 80                     | 1,090          | 2.21                        |
|               | 17-Sep-08        | N           | 1,950                      | 2,310                           | ---                   | 0.49                  | 0.07                | 18.5             | <1               | <500              | <500                  | <500                       | 231                    | 1,040          | 2.40                        |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>2,900</b>               | <b>2,780</b>                    | ---                   | <b>0.50</b>           | <b>0.99</b>         | <b>26.5</b>      | <b>&lt;1</b>     | <b>&lt;500</b>    | <b>&lt;500</b>        | <b>&lt;500</b>             | <b>16</b>              | <b>1,110</b>   | <b>1.64</b>                 |

**Table 3**  
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 PG&E Topock  
 Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Hexavalent Chromium (µg/L) | Total Dissolved Chromium (µg/L) | Total Chromium (µg/L) | Fluorescein (ppb dye) | Rhodamine (ppb dye) | Nitrate-N (mg/L) | Nitrite-N (mg/L) | Total Iron (µg/L) | Dissolved Iron (µg/L) | Dissolved Manganese (µg/L) | Total Manganese (µg/L) | Sulfate (mg/L) | Total Organic Carbon (mg/L) |
|---------------|------------------|-------------|----------------------------|---------------------------------|-----------------------|-----------------------|---------------------|------------------|------------------|-------------------|-----------------------|----------------------------|------------------------|----------------|-----------------------------|
| PT-8D         | 16-Jul-07        | N           | 6,540                      | 7,260                           | 7,290                 | ---                   | ---                 | 9.72             | <0.2             | 2,620             | <500                  | 23.5                       | 186                    | 1,110          | <1                          |
|               | 23-Jan-08        | N           | 6,210                      | 6,340                           | ---                   | ---                   | ---                 | 11.4             | <0.5             | <500              | <5,000                | <5,000                     | <10                    | 1,080          | <1                          |
|               | 05-Mar-08        | N           | 6,510                      | 6,600                           | ---                   | ND                    | ND                  | 10.7             | <0.2             | <500              | <2,500                | <2,500                     | <10                    | 1,110          | <1                          |
|               | 13-Mar-08        | N           | 6,560                      | 5,030                           | ---                   | ND                    | ND                  | 12.7             | <0.5             | <500              | <2,500                | <2,500                     | <10                    | 1,270          | <1                          |
|               | 18-Mar-08        | N           | 5,750                      | 5,280                           | ---                   | ND                    | ND                  | 11.8             | <0.5             | <500              | <2,500                | ---                        | <10                    | 1,130          | <1                          |
|               | 25-Mar-08        | N           | 5,380                      | 5,310                           | ---                   | ND                    | ND                  | 12.3             | <0.5             | <500              | <2,500                | <2,500                     | <10                    | 1,160          | <1                          |
|               | 02-Apr-08        | N           | 2,640                      | 5,180                           | ---                   | ND                    | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 1,180          | <1                          |
|               | 16-Apr-08        | N           | 6,340                      | 6,270                           | ---                   | ND                    | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 1,100          | <1                          |
|               | 29-Apr-08        | N           | 4,570                      | 4,380                           | ---                   | 2.20                  | ND                  | 12.9             | <0.5             | <500              | <500                  | <500                       | <10                    | 1,240          | <1                          |
|               | 14-May-08        | N           | 2,300                      | 3,470                           | ---                   | 10.58                 | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 1,210          | 8.24                        |
|               | 28-May-08        | N           | 3,940                      | 3,790                           | ---                   | 4.52                  | ND                  | 11.2             | <2.5             | <500              | <500                  | <500                       | 82.1                   | 1,170          | <1                          |
|               | 11-Jun-08        | N           | 3,310                      | 3,530                           | ---                   | 6.92                  | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 1,190          | 1.5                         |
|               | 19-Jun-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 2.26                        |
|               | 25-Jun-08        | N           | 2,120                      | 2,550                           | ---                   | 48.68                 | ND                  | 7.2              | <2.5             | <500              | <500                  | 929                        | 975                    | 1,140          | 91.1                        |
|               | 01-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 4.17                        |
|               | 08-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 50.9                        |
|               | 15-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 1.67                        |
|               | 23-Jul-08        | N           | 3,000                      | 2,700                           | ---                   | 8.78                  | ND                  | 9.6              | <2.5             | <500              | <500                  | <500                       | 72.4                   | 1,170          | 2.42                        |
|               | 28-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 24.6                        |
|               | 20-Aug-08        | N           | 3,710                      | 3,550                           | ---                   | 4.67                  | ND                  | 9.3              | <2.5             | <500              | <500                  | <500                       | 107.0                  | 1,130          | 1.39                        |
|               | 17-Sep-08        | N           | 3,130                      | 3,430                           | ---                   | ND                    | ND                  | 10.1             | <2.5             | <500              | <2,500                | <2,500                     | 45.0                   | 1,180          | <1                          |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>18</b>                  | <b>1,420</b>                    | ---                   | <b>65.48</b>          | <b>ND</b>           | <b>7.0</b>       | <b>&lt;2.5</b>   | <b>&lt;500</b>    | <b>&lt;2,500</b>      | <b>&lt;2,500</b>           | <b>1,410</b>           | <b>1,120</b>   | <b>58.1</b>                 |
| PT-9S         | 17-Jul-07        | N           | 1,180                      | 1,150                           | 1,170                 | ---                   | ---                 | 16.4             | <0.1             | 1,080             | <500                  | 29.0                       | 125                    | 689            | 1.24                        |
|               | 22-Jan-08        | N           | 1,380                      | 1,250                           | ---                   | ---                   | ---                 | 17.3             | <0.5             | 917               | 1,000                 | <500                       | 36.7                   | 644            | <1                          |
|               | 05-Mar-08        | N           | 1,380                      | 1,340                           | ---                   | 0.01                  | ND                  | 17.7             | <0.1             | 1,060             | <500                  | <500                       | 145                    | 718            | <1                          |
|               | 12-Mar-08        | N           | 1,140                      | 1,010                           | ---                   | ND                    | ND                  | 16.3             | <0.1             | <500              | <500                  | <500                       | 12.5                   | 525            | <1                          |
|               | 19-Mar-08        | N           | 1,390                      | 1,380                           | ---                   | ND                    | ND                  | 17.6             | <0.1             | <500              | <2,500                | ---                        | 21.7                   | 633            | <1                          |
|               | 26-Mar-08        | N           | 1,350                      | 1,310                           | ---                   | ND                    | ND                  | 17.5             | <0.1             | <500              | <2,500                | <2,500                     | 16.5                   | 668            | <1                          |
|               | 02-Apr-08        | N           | 1,340                      | 1,300                           | ---                   | ND                    | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 670            | <1                          |
|               | 16-Apr-08        | N           | 1,410                      | 1,350                           | ---                   | 0.04                  | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 424            | <1                          |
|               | 29-Apr-08        | N           | 1,050                      | 1,080                           | ---                   | ND                    | ND                  | 17.3             | <0.1             | <500              | <500                  | <500                       | 16.6                   | 559            | <1                          |
|               | 14-May-08        | N           | 1,060                      | 1,030                           | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 563            | <1                          |
|               | 28-May-08        | N           | 1,280                      | 1,210                           | ---                   | ND                    | ND                  | 17.5             | <0.5             | 635               | <500                  | <500                       | 52.1                   | 643            | <1                          |
|               | 11-Jun-08        | N           | 1,270                      | 1,180                           | ---                   | ND                    | ND                  | ---              | ---              | 719               | <500                  | ---                        | ---                    | 678            | ---                         |
|               | 25-Jun-08        | N           | 1,030                      | 1,060                           | ---                   | 0.02                  | ND                  | 15.9             | <0.5             | <500              | <500                  | <500                       | 33.3                   | 595            | <1                          |
|               | 24-Jul-08        | N           | 1,450                      | 1,240                           | ---                   | ND                    | ND                  | 16.6             | <1               | 1,310             | <500                  | <500                       | 194.0                  | 627            | 1.25                        |
|               | 20-Aug-08        | N           | 1,460                      | 1,390                           | ---                   | 1.55                  | 2.2                 | 17.0             | <1               | 1,240             | <500                  | <500                       | 164.0                  | 667            | 1.25                        |
|               | 17-Sep-08        | N           | 1,290                      | 1,400                           | ---                   | 4.36                  | ND                  | 16.0             | <0.5             | <500              | <500                  | <500                       | 22.2                   | 689            | 1.22                        |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>929</b>                 | <b>889</b>                      | ---                   | <b>2.93</b>           | <b>0.81</b>         | <b>11.4</b>      | <b>&lt;0.5</b>   | <b>&lt;500</b>    | <b>&lt;500</b>        | <b>&lt;500</b>             | <b>28.3</b>            | <b>558</b>     | <b>1.15</b>                 |



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| Location Name | Sample Date      | Sample Type | Hexavalent Chromium (µg/L) | Total Dissolved Chromium (µg/L) | Total Chromium (µg/L) | Fluorescein (ppb dye) | Rhodamine (ppb dye) | Nitrate-N (mg/L) | Nitrite-N (mg/L) | Total Iron (µg/L) | Dissolved Iron (µg/L) | Dissolved Manganese (µg/L) | Total Manganese (µg/L) | Sulfate (mg/L) | Total Organic Carbon (mg/L) |
|---------------|------------------|-------------|----------------------------|---------------------------------|-----------------------|-----------------------|---------------------|------------------|------------------|-------------------|-----------------------|----------------------------|------------------------|----------------|-----------------------------|
| PT-9M         | 17-Jul-07        | N           | 2,340                      | 2,270                           | 2,250                 | ---                   | ---                 | 24.4             | <0.1             | <500              | <500                  | 18.7                       | 27.2                   | 1,410          | 1.17                        |
|               | 17-Jul-07        | FD          | 2,240                      | 2,270                           | 2,220                 | ---                   | ---                 | 24.6             | <0.1             | <500              | <500                  | 18.2                       | 32.3                   | 1,410          | 1.21                        |
|               | 22-Jan-08        | N           | 2,940                      | 2,400                           | ---                   | ---                   | ---                 | 24.3             | <0.5             | <500              | <500                  | <500                       | <10                    | 1,390          | 1.02                        |
|               | 05-Mar-08        | N           | 2,310                      | 2,400                           | ---                   | ND                    | ND                  | 24.5             | <0.1             | <500              | <500                  | <500                       | <10                    | 1,460          | <1                          |
|               | 12-Mar-08        | N           | 2,590                      | 2,360                           | ---                   | ND                    | ND                  | 22.3             | <0.1             | <500              | <500                  | <500                       | <10                    | 1,370          | <1                          |
|               | 19-Mar-08        | N           | 2,660                      | 2,570                           | ---                   | 0.06                  | ND                  | 23.0             | <0.2             | <500              | <2,500                | ---                        | <10                    | 1,430          | <1                          |
|               | 26-Mar-08        | N           | 2,610                      | 2,490                           | ---                   | 0.13                  | ND                  | 23.5             | <0.2             | <500              | <2,500                | <2,500                     | <10                    | 1,340          | <1                          |
|               | 26-Mar-08        | FD          | 2,500                      | 2,500                           | ---                   | ND                    | ND                  | 23.5             | <0.2             | <500              | <2,500                | <2,500                     | <10                    | 1,340          | <1                          |
|               | 02-Apr-08        | N           | 2,520                      | 2,510                           | ---                   | ND                    | ND                  | ---              | ---              | 1,260             | <2,500                | ---                        | ---                    | 1,510          | <1                          |
|               | 16-Apr-08        | N           | 2,550                      | 2,570                           | ---                   | ND                    | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 908            | <1                          |
|               | 29-Apr-08        | N           | 2,370                      | 2,360                           | ---                   | ND                    | ND                  | 22.2             | <0.2             | <500              | <500                  | <500                       | <10                    | 1,460          | <1                          |
|               | 14-May-08        | N           | 2,550                      | 2,430                           | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 1,450          | <1                          |
|               | 28-May-08        | N           | 2,500                      | 2,300                           | ---                   | 0.05                  | ND                  | 23.6             | <1               | <500              | <500                  | <500                       | <10                    | 1,410          | <1                          |
|               | 11-Jun-08        | N           | 2,500                      | 2,330                           | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 1,460          | ---                         |
|               | 25-Jun-08        | N           | 2,460                      | 2,260                           | ---                   | ND                    | ND                  | 21.3             | <1               | <500              | <500                  | <500                       | <10                    | 1,450          | 1.28                        |
|               | 24-Jul-08        | N           | 2,620                      | 2,230                           | ---                   | ND                    | ND                  | 20.7             | <1               | <500              | <500                  | <500                       | <10                    | 1,400          | 1.47                        |
|               | 20-Aug-08        | N           | 2,500                      | 2,400                           | ---                   | 0.06                  | ND                  | 21.5             | <1               | <500              | <500                  | <500                       | <10                    | 1,420          | 1.38                        |
|               | 17-Sep-08        | N           | 2,260                      | 2,590                           | ---                   | ND                    | 0.04                | 22.1             | <1               | <500              | <2,500                | <2,500                     | <10                    | 1,480          | <1                          |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>2,660</b>               | <b>2,630</b>                    | ---                   | <b>ND</b>             | <b>ND</b>           | <b>26.1</b>      | <b>&lt;1</b>     | <b>&lt;500</b>    | <b>&lt;500</b>        | <b>&lt;500</b>             | <b>&lt;10</b>          | <b>1,490</b>   | <b>1.07</b>                 |
| PT-9D         | 17-Jul-07        | N           | 15,700                     | 15,600                          | <1                    | ---                   | ---                 | 9.3              | <0.2             | <500              | <500                  | 29.4                       | 33.8                   | 1,260          | 1.14                        |
|               | 22-Jan-08        | N           | 17,400                     | 15,300                          | ---                   | ---                   | ---                 | 11.8             | <0.5             | <500              | <5,000                | <5,000                     | <10                    | 1,390          | <1                          |
|               | 22-Jan-08        | FD          | 16,400                     | 15,500                          | ---                   | ---                   | ---                 | 10.9             | <0.5             | <500              | <5,000                | <5,000                     | <10                    | 1,310          | <1                          |
|               | 05-Mar-08        | N           | 16,000                     | 15,600                          | ---                   | ND                    | ND                  | 9.9              | <0.2             | <500              | <2,500                | <2,500                     | 15.8                   | 1,470          | <1                          |
|               | 12-Mar-08        | N           | 13,500                     | 12,500                          | ---                   | ND                    | ND                  | 12.5             | <0.5             | <500              | <2,500                | <2,500                     | <10                    | 1,390          | <1                          |
|               | 19-Mar-08        | N           | 14,800                     | 14,300                          | ---                   | ND                    | ND                  | 12.4             | <0.5             | <500              | <2,500                | ---                        | <10                    | 1,370          | <1                          |
|               | 26-Mar-08        | N           | 14,600                     | 14,100                          | ---                   | ND                    | ND                  | 12.4             | <0.5             | <500              | <2,500                | <2,500                     | <10                    | 1,320          | <1                          |
|               | 02-Apr-08        | N           | 13,900                     | 14,400                          | ---                   | ND                    | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 1,430          | <1                          |
|               | 16-Apr-08        | N           | 14,900                     | 15,400                          | ---                   | ND                    | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 1,350          | <1                          |
|               | 29-Apr-08        | N           | 11,000                     | 10,600                          | ---                   | ND                    | ND                  | 12.9             | <1               | <500              | <500                  | <500                       | <10                    | 1,400          | <1                          |
|               | 14-May-08        | N           | 10,600                     | 10,700                          | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 1,340          | <1                          |
|               | 28-May-08        | N           | 12,000                     | 11,700                          | ---                   | ND                    | ND                  | 12.9             | <2.5             | <500              | <500                  | <500                       | <10                    | 1,330          | <10                         |
|               | 11-Jun-08        | N           | 13,600                     | 12,300                          | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 1,400          | <2                          |
|               | 11-Jun-08        | FD          | 14,500                     | 12,200                          | ---                   | 0.29                  | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 1,380          | <2                          |
|               | 25-Jun-08        | N           | 10,500                     | 9,680                           | ---                   | ND                    | ND                  | 13.6             | <2.5             | <500              | <500                  | <500                       | <10                    | 1,330          | <5                          |
|               | 24-Jul-08        | N           | 10,900                     | 9,920                           | ---                   | ND                    | ND                  | 13.1             | <2.5             | <500              | <500                  | <500                       | <10                    | 1,320          | 11.9                        |
|               | 20-Aug-08        | N           | 13,000                     | 14,900                          | ---                   | 0.02                  | ND                  | 10.7             | <2.5             | <500              | <500                  | <500                       | <10                    | 1,320          | 1.15                        |
|               | 20-Aug-08        | FD          | 7,090                      | 14,800                          | ---                   | ---                   | ---                 | 10.8             | <2.5             | <500              | <500                  | <500                       | <10                    | 1,310          | 1.17                        |
|               | 17-Sep-08        | N           | 12,100                     | 14,000                          | ---                   | ND                    | ND                  | 11.4             | <2.5             | <500              | <2,500                | <2,500                     | <10                    | 1,440          | <1                          |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>9,920</b>               | <b>9,650</b>                    | ---                   | <b>ND</b>             | <b>ND</b>           | <b>14.6</b>      | <b>&lt;1</b>     | <b>&lt;500</b>    | <b>&lt;2,500</b>      | <b>&lt;2,500</b>           | <b>&lt;10</b>          | <b>1,440</b>   | <b>&lt;2</b>                |

**Table 3**  
**Summary of Primary Analytical Parameters**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Hexavalent Chromium (µg/L) | Total Dissolved Chromium (µg/L) | Total Chromium (µg/L) | Fluorescein (ppb dye) | Rhodamine (ppb dye) | Nitrate-N (mg/L) | Nitrite-N (mg/L) | Total Iron (µg/L) | Dissolved Iron (µg/L) | Dissolved Manganese (µg/L) | Total Manganese (µg/L) | Sulfate (mg/L) | Total Organic Carbon (mg/L) |
|---------------|------------------|-------------|----------------------------|---------------------------------|-----------------------|-----------------------|---------------------|------------------|------------------|-------------------|-----------------------|----------------------------|------------------------|----------------|-----------------------------|
| MW-11         | 17-Jul-07        | N           | 321                        | 314                             | 339                   | ---                   | ---                 | 8.4              | <0.1             | <500              | <500                  | <5                         | <10                    | 251            | 1.06                        |
|               | 24-Jan-08        | N           | 321                        | 310                             | ---                   | ---                   | ---                 | 8.7              | <0.1             | <500              | <500                  | <500                       | <10                    | 241            | <1                          |
|               | 04-Mar-08        | N           | 299                        | 290                             | ---                   | ND                    | ---                 | 9.7              | <0.1             | <500              | <500                  | <500                       | <10                    | 236            | <1                          |
|               | 11-Mar-08        | N           | 289                        | 288                             | ---                   | ND                    | ND                  | 8.9              | <0.1             | <500              | <500                  | <500                       | <10                    | 240            | <1                          |
|               | 11-Mar-08        | FD          | 286                        | 285                             | ---                   | ND                    | ND                  | 9.0              | <0.1             | <500              | <500                  | <500                       | <10                    | 248            | <1                          |
|               | 19-Mar-08        | N           | 340                        | 332                             | ---                   | ND                    | ND                  | 9.3              | <0.1             | <500              | <2,500                | ---                        | <10                    | 231            | <1                          |
|               | 27-Mar-08        | N           | 331                        | 308                             | ---                   | 0.04                  | ND                  | 8.9              | <0.1             | <500              | <500                  | <500                       | <10                    | 238            | <1                          |
|               | 01-Apr-08        | N           | 316                        | 306                             | ---                   | 0.03                  | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 237            | <1                          |
|               | 15-Apr-08        | N           | 311                        | 319                             | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 222            | <1                          |
|               | 28-Apr-08        | N           | 284                        | 266                             | ---                   | ND                    | ND                  | 8.6              | <0.1             | <500              | <500                  | <500                       | <10                    | 226            | <1                          |
|               | 13-May-08        | N           | 280                        | 281                             | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 229            | <1                          |
|               | 27-May-08        | N           | 286                        | 238                             | ---                   | ND                    | ND                  | 8.6              | <0.5             | <500              | <500                  | <500                       | <10                    | 220            | <1                          |
|               | 10-Jun-08        | N           | 275                        | 265                             | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 227            | <1                          |
|               | 24-Jun-08        | N           | 286                        | 244                             | ---                   | 0.02                  | ND                  | 8.7              | <0.5             | <500              | <500                  | <500                       | <10                    | 226            | <1                          |
|               | 22-Jul-08        | N           | 296                        | 256                             | ---                   | ND                    | ND                  | 8.6              | <0.5             | <500              | <500                  | <500                       | <10                    | 220            | <1                          |
|               | 21-Aug-08        | N           | 281                        | 240                             | ---                   | ND                    | ND                  | 8.3              | <0.5             | <500              | <500                  | <500                       | <10                    | 223            | <1                          |
|               | 16-Sep-08        | N           | 262                        | 256                             | ---                   | ND                    | ND                  | 8.5              | <0.5             | <500              | <500                  | <500                       | <10                    | 227            | <1                          |
|               | <b>14-Oct-08</b> | <b>N</b>    | <b>264</b>                 | <b>312</b>                      | ---                   | <b>ND</b>             | <b>ND</b>           | <b>8.4</b>       | <b>&lt;0.5</b>   | <b>&lt;500</b>    | <b>&lt;500</b>        | <b>&lt;500</b>             | <b>&lt;10</b>          | <b>217</b>     | <b>&lt;1</b>                |
| MW-24A        | 18-Jul-07        | N           | 2,480                      | 2,550                           | 2,600                 | ---                   | ---                 | 18.3             | <0.1             | <500              | <500                  | <5                         | <10                    | 372            | 3.82                        |
|               | 24-Jan-08        | N           | 2,620                      | 2,570                           | ---                   | ---                   | ---                 | 18.5             | <0.1             | <500              | <500                  | <500                       | <10                    | 380            | 3.79                        |
|               | 06-Mar-08        | N           | 3,890                      | 4,190                           | ---                   | ND                    | ND                  | 13.5             | <1               | <500              | <500                  | <500                       | 401                    | 1,210          | 367                         |
|               | 12-Mar-08        | N           | 1,650                      | 2,510                           | ---                   | 8.55                  | 458                 | <10              | <2               | <500              | <2,500                | <2,500                     | 417                    | 1,170          | 1,160                       |
|               | 19-Mar-08        | N           | 1.6                        | 5.76                            | ---                   | 1,320                 | 296                 | <2.5             | <0.5             | <500              | <2,500                | ---                        | 1,280                  | 854            | 2,460                       |
|               | 26-Mar-08        | N           | 10.6                       | 12.9                            | ---                   | 9,450                 | 776                 | <5               | <1               | 1,030             | <2,500                | <2,500                     | 2,380                  | 347            | 4,890                       |
|               | 01-Apr-08        | N           | <1                         | 5.46                            | ---                   | 10,650                | 1,994               | ---              | ---              | 2,080             | <2,500                | ---                        | ---                    | 129            | 12,900                      |
|               | 17-Apr-08        | N           | 15.7                       | 9.79                            | ---                   | 190.5                 | 496                 | ---              | ---              | 1,820             | <2,500                | ---                        | ---                    | 46.1           | 3,690                       |
|               | 30-Apr-08        | N           | <1                         | 7.18                            | ---                   | 21.5                  | 38.80               | <5               | <1               | 670               | <500                  | 1,320                      | 1,360                  | 624            | 1,160                       |
|               | 30-Apr-08        | FD          | <1                         | 8.19                            | ---                   | 21.5                  | 53                  | <5               | <1               | 680               | <500                  | 1,330                      | 1,350                  | 624            | 1,160                       |
|               | 15-May-08        | N           | <0.2                       | 5.04                            | ---                   | 41.0                  | 42.80               | ---              | ---              | 1,520             | 853                   | ---                        | ---                    | 831            | 1,650                       |
|               | 15-May-08        | FD          | <0.2                       | 4.88                            | ---                   | 42                    | 39                  | ---              | ---              | 1,540             | 861                   | ---                        | ---                    | 821            | 1,660                       |
|               | 27-May-08        | N           | <2.1                       | 5.42                            | ---                   | 14                    | 70.60               | <1               | <2.5             | 2,160             | 1,560                 | 3,550                      | 3,740                  | 21             | 1,350                       |
|               | 12-Jun-08        | N           | 2.3                        | 4.56                            | ---                   | 21.23                 | 65.20               | ---              | ---              | 2,440             | 671                   | ---                        | ---                    | 267            | 1,130                       |
|               | 19-Jun-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 1,500                       |
|               | 26-Jun-08        | N           | <0.2                       | 26.0                            | ---                   | 2.41                  | 2.98                | 5.4              | <2.5             | 1,890             | 758                   | 1,550                      | 1,630                  | 1,110          | 42.6                        |
|               | 01-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | <400                        |
|               | 24-Jul-08        | N           | <1.0                       | 39.1                            | ---                   | 2.74                  | 4.08                | 4.2              | <2.5             | 2,370             | 527                   | 647                        | 653                    | 1,230          | <1                          |
|               | 24-Jul-08        | FD          | <1.0                       | 43.4                            | ---                   | 2.55                  | 4.66                | 3.2              | <2.5             | 2,350             | 560                   | 672                        | 768                    | 1,190          | 12.1                        |
|               | 19-Aug-08        | N           | 1.5                        | 1.46                            | ---                   | 5.38                  | 73.0                | <1               | <1               | 548               | <500                  | 1,430                      | 1,670                  | 982            | 9.4                         |
|               | 16-Sep-08        | N           | <0.2                       | 4.38                            | ---                   | 2.62                  | 41.6                | <1               | <1               | <500              | <500                  | 1,510                      | 1,720                  | 16             | 800.0                       |
|               | <b>16-Oct-08</b> | <b>N</b>    | <b>5.8</b>                 | <b>6.72</b>                     | ---                   | <b>1.61</b>           | <b>0.7</b>          | <b>&lt;0.5</b>   | <b>&lt;1</b>     | <b>2,380</b>      | <b>519</b>            | <b>1,100</b>               | <b>1,330</b>           | <b>868</b>     | <b>89.5</b>                 |

**Table 3**  
**Summary of Primary Analytical Parameters**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Hexavalent Chromium (µg/L) | Total Dissolved Chromium (µg/L) | Total Chromium (µg/L) | Fluorescein (ppb dye) | Rhodamine (ppb dye) | Nitrate-N (mg/L) | Nitrite-N (mg/L) | Total Iron (µg/L) | Dissolved Iron (µg/L) | Dissolved Manganese (µg/L) | Total Manganese (µg/L) | Sulfate (mg/L) | Total Organic Carbon (mg/L) |
|---------------|------------------|-------------|----------------------------|---------------------------------|-----------------------|-----------------------|---------------------|------------------|------------------|-------------------|-----------------------|----------------------------|------------------------|----------------|-----------------------------|
| MW-24B        | 18-Jul-07        | N           | 5,540                      | 6,020                           | 5,680                 | ---                   | ---                 | 12.1             | <0.1             | <500              | <500                  | 22.7                       | 25.1                   | 1,060          | <1                          |
|               | 24-Jan-08        | N           | 4,870                      | 4,760                           | ---                   | ---                   | ---                 | 11.3             | <0.5             | <500              | <1,000                | <1,000                     | 20.3                   | 1,050          | <1                          |
|               | 06-Mar-08        | N           | 4,510                      | 4,110                           | ---                   | ND                    | ND                  | 11.2             | <0.2             | <500              | <500                  | <500                       | 15.4                   | 1,030          | <1                          |
|               | 12-Mar-08        | N           | 4,530                      | 4,310                           | ---                   | ND                    | ND                  | 12.0             | <0.2             | <500              | <2,500                | <2,500                     | 12.9                   | 996            | <1                          |
|               | 19-Mar-08        | N           | 4,690                      | 4,470                           | ---                   | ND                    | ND                  | 12.6             | <0.5             | <500              | <2,500                | ---                        | 15.7                   | 1,010          | <1                          |
|               | 26-Mar-08        | N           | 4,160                      | 4,220                           | ---                   | ND                    | ND                  | 12.0             | <0.5             | <500              | <2,500                | <2,500                     | 13.6                   | 1,020          | <1                          |
|               | 03-Apr-08        | N           | 4,310                      | 4,240                           | ---                   | 0.15                  | ND                  | ---              | ---              | <500              | <2,500                | ---                        | 15                     | 1,040          | <1                          |
|               | 17-Apr-08        | N           | 4,180                      | 4,260                           | ---                   | 0.02                  | ND                  | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 1,120          | <1                          |
|               | 30-Apr-08        | N           | 3,400                      | 3,790                           | ---                   | ND                    | ND                  | 9.96             | <0.2             | <500              | <500                  | <500                       | 14.2                   | 1,050          | 4.42                        |
|               | 15-May-08        | N           | 3,580                      | 3,780                           | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 1,050          | <1                          |
|               | 28-May-08        | N           | 3,620                      | 3,530                           | ---                   | 0.07                  | ND                  | 31.0             | <1               | <500              | <500                  | <500                       | <10                    | 1,180          | 1.02                        |
|               | 12-Jun-08        | N           | 3,690                      | 3,730                           | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 1,080          | <1                          |
|               | 26-Jun-08        | N           | 3,720                      | 3,280                           | ---                   | 0.03                  | ND                  | 12.5             | <2.5             | <500              | <500                  | <500                       | 14.7                   | 995            | <1                          |
|               | 24-Jul-08        | N           | 3,180                      | 2,690                           | ---                   | ND                    | ND                  | 12.2             | <5               | <500              | <500                  | <500                       | 13.5                   | 1,010          | 1.03                        |
|               | 19-Aug-08        | N           | 3,200                      | 2,730                           | ---                   | ND                    | ND                  | 11.9             | <1               | <500              | <500                  | <500                       | 11.3                   | 1,020          | 1.21                        |
|               | 17-Sep-08        | N           | 2,680                      | 2,820                           | ---                   | ND                    | ND                  | 11.8             | <2.5             | <500              | <2,500                | <2,500                     | 19.5                   | 1,070          | 1.09                        |
|               | <b>16-Oct-08</b> | <b>N</b>    | <b>2,700</b>               | <b>2,640</b>                    | ---                   | <b>ND</b>             | <b>ND</b>           | <b>13.0</b>      | <b>&lt;2.5</b>   | <b>&lt;500</b>    | <b>&lt;2,500</b>      | <b>&lt;2,500</b>           | <b>13.4</b>            | <b>1,060</b>   | <b>&lt;1</b>                |
|               | <b>16-Oct-08</b> | <b>FD</b>   | <b>2,560</b>               | <b>2,610</b>                    | ---                   | <b>ND</b>             | <b>ND</b>           | <b>13.0</b>      | <b>&lt;2.5</b>   | <b>&lt;500</b>    | <b>&lt;2,500</b>      | <b>&lt;2,500</b>           | <b>13.9</b>            | <b>1,060</b>   | <b>&lt;1</b>                |
| MW-38S        | 17-Jul-07        | N           | 911                        | 920                             | 948                   | ---                   | ---                 | 10.5             | <0.1             | 1,910             | <500                  | <5                         | 234                    | 465            | 1.07                        |
|               | 23-Jan-08        | N           | 899                        | 885                             | ---                   | ---                   | ---                 | 10.7             | <0.1             | <500              | <500                  | <500                       | <10                    | 366            | <1                          |
|               | 04-Mar-08        | N           | 900                        | 912                             | ---                   | ND                    | ND                  | 11.5             | <0.1             | <500              | <500                  | <500                       | 14.7                   | 399            | <1                          |
|               | 11-Mar-08        | N           | 948                        | 942                             | ---                   | ND                    | ND                  | 11.2             | <0.1             | <500              | <500                  | <500                       | 12.6                   | 429            | <1                          |
|               | 20-Mar-08        | N           | 993                        | 1,040                           | ---                   | 0.05                  | 0.05                | 10.9             | <0.1             | <500              | <2,500                | ---                        | <10                    | 404            | <1                          |
|               | 26-Mar-08        | N           | 958                        | 984                             | ---                   | ND                    | ND                  | 10.9             | <0.1             | <500              | <2,500                | <2,500                     | <10                    | 404            | <1                          |
|               | 01-Apr-08        | N           | 999                        | 852                             | ---                   | 0.08                  | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 419            | <1                          |
|               | 15-Apr-08        | N           | 995                        | 987                             | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 396            | <1                          |
|               | 28-Apr-08        | N           | 1,020                      | 956                             | ---                   | 0.17                  | ND                  | 10.7             | <0.1             | <500              | <500                  | <500                       | <10                    | 414            | <1                          |
|               | 13-May-08        | N           | 1,000                      | 977                             | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 404            | <1                          |
|               | 27-May-08        | N           | 984                        | 895                             | ---                   | ND                    | ND                  | 10.7             | <0.5             | <500              | <500                  | <500                       | <10                    | 399            | <1                          |
|               | 10-Jun-08        | N           | 992                        | 959                             | ---                   | ND                    | ND                  | ---              | ---              | 1,140             | <500                  | ---                        | ---                    | 410            | <1                          |
|               | 24-Jun-08        | N           | 1,040                      | 942                             | ---                   | 0.02                  | ND                  | 10.4             | <0.5             | <500              | <500                  | <500                       | <10                    | 396            | <1                          |
|               | 22-Jul-08        | N           | 1,020                      | 945                             | ---                   | ND                    | ND                  | 10.1             | <0.5             | <500              | <500                  | <500                       | <10                    | 390            | <1                          |
|               | 20-Aug-08        | N           | 1,020                      | 1,020                           | ---                   | 0.02                  | ND                  | 9.9              | <0.5             | <500              | <500                  | <500                       | <10                    | 371            | <1                          |
|               | 16-Sep-08        | N           | 987                        | 999                             | ---                   | ND                    | ND                  | 9.9              | <0.5             | <500              | <500                  | <500                       | <10                    | 391            | <1                          |
|               | <b>14-Oct-08</b> | <b>N</b>    | <b>1,100</b>               | <b>1,090</b>                    | ---                   | <b>ND</b>             | <b>ND</b>           | <b>9.6</b>       | <b>0.60</b>      | <b>&lt;500</b>    | <b>&lt;500</b>        | <b>&lt;500</b>             | <b>&lt;10</b>          | <b>383</b>     | <b>&lt;1</b>                |

**Table 3**  
**Summary of Primary Analytical Parameters**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Hexavalent Chromium (µg/L) | Total Dissolved Chromium (µg/L) | Total Chromium (µg/L) | Fluorescein (ppb dye) | Rhodamine (ppb dye) | Nitrate-N (mg/L) | Nitrite-N (mg/L) | Total Iron (µg/L) | Dissolved Iron (µg/L) | Dissolved Manganese (µg/L) | Total Manganese (µg/L) | Sulfate (mg/L) | Total Organic Carbon (mg/L) |
|---------------|------------------|-------------|----------------------------|---------------------------------|-----------------------|-----------------------|---------------------|------------------|------------------|-------------------|-----------------------|----------------------------|------------------------|----------------|-----------------------------|
| MW-38D        | 17-Jul-07        | N           | 104                        | 72.1                            | 66.2                  | ---                   | ---                 | 0.70             | <0.5             | <500              | <500                  | 10.4                       | 20.4                   | 724            | <1                          |
|               | 23-Jan-08        | N           | 58.8                       | 67.7                            | ---                   | ---                   | ---                 | <2.5             | <0.5             | <500              | <10,000               | <10,000                    | <10                    | 723            | <1                          |
|               | 04-Mar-08        | N           | 49.8                       | 47.0                            | ---                   | ND                    | ND                  | 0.56             | <0.5             | <500              | <500                  | <500                       | <10                    | 735            | <1                          |
|               | 11-Mar-08        | N           | 50.4                       | 53.8                            | ---                   | ND                    | ND                  | 0.58             | <0.5             | <500              | <2,500                | <2,500                     | <10                    | 734            | <1                          |
|               | 20-Mar-08        | N           | 49.6                       | 50.7                            | ---                   | ND                    | ND                  | <2.5             | <0.5             | <500              | <2,500                | ---                        | 13                     | 724            | <1                          |
|               | 20-Mar-08        | FD          | 51                         | 50.9                            | ---                   | ND                    | ND                  | <2.5             | <0.5             | <500              | <2,500                | ---                        | 11.9                   | 711            | <1                          |
|               | 26-Mar-08        | N           | 48.7                       | 50.1                            | ---                   | ND                    | ND                  | <1               | <0.5             | <500              | <2,500                | <2,500                     | 12.5                   | 723            | <1                          |
|               | 01-Apr-08        | N           | 45.6                       | 42.4                            | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 746            | <1                          |
|               | 01-Apr-08        | FD          | 47.6                       | 41.8                            | ---                   | 0.02                  | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 746            | <1                          |
|               | 15-Apr-08        | N           | 43.8                       | 45.8                            | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 738            | <1                          |
|               | 15-Apr-08        | FD          | 46.1                       | 45.8                            | ---                   | 0.04                  | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 748            | <1                          |
|               | 28-Apr-08        | N           | 48                         | 46.2                            | ---                   | ND                    | ND                  | 0.54             | <0.5             | <500              | <2,500                | <2,500                     | 16.6                   | 734            | <1                          |
|               | 13-May-08        | N           | 53                         | 50.1                            | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 743            | <1                          |
|               | 27-May-08        | N           | 53                         | 48.3                            | ---                   | ND                    | ND                  | 0.59             | <5               | <500              | <500                  | <500                       | 12.7                   | 748            | <1                          |
|               | 10-Jun-08        | N           | 50.9                       | 47.7                            | ---                   | 0.05                  | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | 741            | <1                          |
|               | 24-Jun-08        | N           | 55.5                       | 48.3                            | ---                   | ND                    | ND                  | 0.57             | <0.5             | <500              | <500                  | <500                       | 13.3                   | 737            | <1                          |
|               | 22-Jul-08        | N           | 56.3                       | 52.3                            | ---                   | ND                    | ND                  | <0.5             | <5               | <500              | <500                  | <500                       | <10                    | 734            | <1                          |
|               | 20-Aug-08        | N           | 54.1                       | 47.2                            | ---                   | ND                    | ND                  | <2.5             | <2.5             | <500              | <500                  | 6,950                      | <10                    | 721            | <1                          |
|               | 16-Sep-08        | N           | 48.8                       | 52.5                            | ---                   | ND                    | ND                  | <0.5             | <2.5             | <500              | <500                  | <500                       | <10                    | 763            | <1                          |
|               | 16-Sep-08        | FD          | 50.5                       | 57.0                            | ---                   | ND                    | ND                  | 0.54             | <2.5             | <500              | <2,500                | <2,500                     | <10                    | 760            | <1                          |
|               | <b>14-Oct-08</b> | <b>N</b>    | <b>71.7</b>                | <b>70.2</b>                     | ---                   | <b>ND</b>             | <b>ND</b>           | <b>0.68</b>      | <b>&lt;2.5</b>   | <b>&lt;500</b>    | <b>&lt;2,500</b>      | <b>&lt;2,500</b>           | <b>&lt;10</b>          | <b>672</b>     | <b>&lt;1</b>                |
| PTR-1         | 19-Jul-07        | N           | 538                        | 713                             | 1,240                 | ---                   | ---                 | 18.4             | <0.1             | 6,010             | <500                  | 92.2                       | 119                    | 983            | <1                          |
|               | 25-Jan-08        | N           | 904                        | 991                             | ---                   | ---                   | ---                 | 20.4             | <0.1             | 2,920             | <500                  | <500                       | 25.8                   | 742            | 3.82                        |
|               | 06-Mar-08        | N           | 356                        | 334                             | ---                   | 333,750               | ND                  | <500             | <100             | <500              | <2,500                | <2,500                     | 1,070                  | 1,460          | 11,200                      |
|               | 11-Mar-08        | N           | 945                        | 846                             | ---                   | 2,070                 | ND                  | 11.4             | <1               | <500              | <2,500                | <2,500                     | 633                    | 671            | 29,700                      |
|               | 20-Mar-08        | N           | 76.8                       | 125                             | ---                   | 30,375                | ND                  | <50              | <10              | 540               | <2,500                | ---                        | 437                    | 440            | 63,400                      |
|               | 27-Mar-08        | N           | <1                         | <5                              | ---                   | 8,700                 | ND                  | <20              | <4               | 1,660             | <2,500                | <2,500                     | 867                    | 122            | 122,000                     |
|               | 01-Apr-08        | N           | <1                         | <5                              | ---                   | 12,525                | ND                  | ---              | ---              | 2,160             | <2,500                | ---                        | ---                    | 356            | 2,890                       |
|               | 16-Apr-08        | N           | 20.2                       | 99.2                            | ---                   | 84                    | ND                  | ---              | ---              | 750               | <2,500                | ---                        | ---                    | 386            | 37,200                      |
|               | 28-Apr-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 208,000                     |
|               | 29-Apr-08        | N           | <0.2                       | 93.9                            | ---                   | 1,320                 | ND                  | 5.9              | <1               | <500              | <500                  | 5,350                      | 5,890                  | 359            | 205,000                     |
|               | 15-May-08        | N           | <2.1                       | 170                             | ---                   | 364                   | ND                  | ---              | ---              | 524               | <500                  | ---                        | ---                    | 428            | 2,360                       |
|               | 29-May-08        | N           | <2                         | 3.1                             | ---                   | 24                    | ND                  | 1.5              | <0.5             | 2,670             | <500                  | 708                        | 919                    | 520            | 27,900                      |
|               | 12-Jun-08        | N           | <2                         | 1.75                            | ---                   | 31.8                  | ---                 | ---              | ---              | 2,310             | 1,040                 | ---                        | ---                    | 644            | 80.3                        |
|               | 19-Jun-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 107                         |
|               | 26-Jun-08        | N           | <0.2                       | 5.24                            | ---                   | 25.95                 | ND                  | 5.3              | 6.04             | 718               | <500                  | 1,050                      | 1,200                  | 658            | 28.2                        |
|               | 01-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 12.3                        |
|               | 24-Jul-08        | N           | <1.0                       | 49.3                            | ---                   | 29.55                 | ND                  | 3.5              | 7.44             | 998               | <500                  | 1,770                      | 2,200                  | 586            | 18.7                        |
|               | 19-Aug-08        | N           | <0.2                       | 30.9                            | ---                   | 8.33                  | ND                  | 2.0              | 0.72             | 5,210             | <500                  | 507                        | 623                    | 659            | 968.0                       |
|               | 18-Sep-08        | N           | 1.2                        | 96.0                            | ---                   | 4.66                  | ND                  | 9.3              | 0.71             | 8,970             | <500                  | <500                       | 519                    | 731            | 6.5                         |
|               | <b>16-Oct-08</b> | <b>N</b>    | <b>0.29</b>                | <b>16.5</b>                     | ---                   | <b>4.75</b>           | <b>ND</b>           | <b>11.1</b>      | <b>&lt;1</b>     | <b>15,400</b>     | <b>&lt;500</b>        | <b>&lt;500</b>             | <b>322</b>             | <b>713</b>     | <b>3.5</b>                  |

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November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name   | Sample Date      | Sample Type | Hexavalent Chromium (µg/L) | Total Dissolved Chromium (µg/L) | Total Chromium (µg/L) | Fluorescein (ppb dye) | Rhodamine (ppb dye) | Nitrate-N (mg/L) | Nitrite-N (mg/L) | Total Iron (µg/L) | Dissolved Iron (µg/L) | Dissolved Manganese (µg/L) | Total Manganese (µg/L) | Sulfate (mg/L) | Total Organic Carbon (mg/L) |
|-----------------|------------------|-------------|----------------------------|---------------------------------|-----------------------|-----------------------|---------------------|------------------|------------------|-------------------|-----------------------|----------------------------|------------------------|----------------|-----------------------------|
| PTR-2           | 18-Jul-07        | N           | 3,190                      | 3,380                           | 4,020                 | ---                   | ---                 | 25.8             | <0.1             | 3,720             | <500                  | 68.7                       | 73.6                   | 1,200          | 1.63                        |
|                 | 25-Jan-08        | N           | 4,240                      | 4,310                           | ---                   | ---                   | ---                 | 32.8             | <0.1             | 6,920             | <1,000                | <1,000                     | 29.4                   | 1,280          | 6.35                        |
|                 | 06-Mar-08        | N           | 4,960                      | 5,120                           | ---                   | 4,118                 | ND                  | 29.1             | <0.2             | <500              | <2,500                | <2,500                     | <10                    | 1,220          | 675                         |
|                 | 11-Mar-08        | N           | 5,120                      | 5,150                           | ---                   | 0                     | 0.16                | 29.6             | <0.2             | <500              | <500                  | <500                       | <10                    | 1,280          | 1,060                       |
|                 | 20-Mar-08        | N           | 3,170                      | 3,160                           | ---                   | 2,228                 | 96,400              | <250             | <50              | <500              | <2,500                | ---                        | 55.1                   | 514            | 83,000                      |
|                 | 27-Mar-08        | N           | 1,800                      | 1,720                           | ---                   | 1,403                 | 39,000              | <500             | <100             | <500              | <2,500                | <2,500                     | 131                    | <500           | 117,000                     |
|                 | 01-Apr-08        | N           | 4,190                      | 4,370                           | ---                   | 848                   | 81.80               | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 1,190          | 3,090                       |
|                 | 15-Apr-08        | N           | 2,030                      | 2,080                           | ---                   | 20                    | 39.00               | ---              | ---              | <500              | <2,500                | ---                        | ---                    | 762            | 31,900                      |
|                 | 28-Apr-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 220,000                     |
|                 | 29-Apr-08        | N           | 4,900                      | 4,870                           | ---                   | 3.49                  | 21.40               | 26.9             | <0.2             | <500              | <500                  | <500                       | 95.3                   | 1,250          | 206,000                     |
|                 | 15-May-08        | N           | 4,790                      | 4,840                           | ---                   | 0.86                  | 8.88                | ---              | ---              | <500              | <500                  | ---                        | ---                    | 1,240          | 8.38                        |
|                 | 28-May-08        | N           | 3,870                      | 3,920                           | ---                   | 0.33                  | 16.98               | 10.7             | <1               | <500              | <500                  | <500                       | 183                    | 1,010          | 25,200                      |
|                 | 10-Jun-08        | N           | 4,350                      | 4,970                           | ---                   | 0.36                  | 8.58                | ---              | ---              | <500              | <500                  | ---                        | ---                    | 1,200          | 201                         |
|                 | 19-Jun-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | 39                          |
|                 | 26-Jun-08        | N           | 4,570                      | 4,240                           | ---                   | 1.06                  | 1.54                | 26.1             | <2.5             | <500              | <500                  | <500                       | 31.2                   | 1,160          | <20                         |
|                 | 01-Jul-08        | N           | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | <10                         |
|                 | 24-Jul-08        | N           | 4,620                      | 4,420                           | ---                   | 2.02                  | 1.41                | 24.4             | <2.5             | <500              | <500                  | <500                       | 18.6                   | 1,160          | 54                          |
|                 | 19-Aug-08        | N           | 1,620                      | 1,900                           | ---                   | ND                    | 4.90                | <0.5             | <1               | 2,370             | <5,000                | <5,000                     | 79.8                   | 782            | 29,100                      |
|                 | 18-Sep-08        | N           | 719                        | 2,070                           | ---                   | 0.87                  | 3.44                | 8.9              | 0.83             | 1,110             | <500                  | <500                       | 145                    | 654            | 47,400                      |
|                 | <b>16-Oct-08</b> | <b>N</b>    | <b>3,900</b>               | <b>3,780</b>                    | ---                   | <b>1.19</b>           | <b>0.38</b>         | <b>19.7</b>      | <b>&lt;2.5</b>   | <b>&lt;500</b>    | <b>&lt;2,500</b>      | <b>&lt;2,500</b>           | <b>49.3</b>            | <b>1,180</b>   | <b>2,690</b>                |
| Equipment Bails | 17-Jul-07        | EB          | <0.2                       | <1                              | <1                    | ---                   | ---                 | <0.5             | <0.1             | <500              | <500                  | <5                         | <10                    | <0.5           | <1                          |
|                 | 22-Jan-08        | EB          | <0.2                       | <1                              | ---                   | ---                   | ---                 | <0.5             | <0.1             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|                 | 05-Mar-08        | EB          | <0.2                       | 1.70                            | ---                   | ND                    | ND                  | <0.5             | <0.1             | <500              | <500                  | <500                       | <10                    | 0.63           | <1                          |
|                 | 11-Mar-08        | EB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | <0.5             | <0.1             | <500              | <500                  | <500                       | <10                    | 0.69           | <1                          |
|                 | 18-Mar-08        | EB          | <1                         | <1                              | ---                   | ND                    | ND                  | <0.5             | <0.1             | <500              | <500                  | ---                        | <10                    | <0.5           | <1                          |
|                 | 25-Mar-08        | EB          | <42                        | 3.31                            | ---                   | 0.02                  | ND                  | <0.5             | <0.1             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|                 | 03-Apr-08        | EB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | <10                    | <0.5           | <1                          |
|                 | 15-Apr-08        | EB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | <0.5           | 1.40                        |
|                 | 28-Apr-08        | EB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | <0.5             | <0.1             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|                 | 13-May-08        | EB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | <0.5           | <1                          |
|                 | 28-May-08        | EB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | <0.5             | <0.5             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|                 | 10-Jun-08        | EB          | <0.2                       | <1                              | ---                   | ---                   | ---                 | ---              | ---              | <500              | <500                  | ---                        | ---                    | <0.5           | <1                          |
|                 | 19-Jun-08        | EB          | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | <1                          |
|                 | 24-Jun-08        | EB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | <0.5             | <0.5             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|                 | 01-Jul-08        | EB          | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | <1                          |
|                 | 22-Jul-08        | EB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | <0.5             | <0.5             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|                 | 19-Aug-08        | EB          | <0.2                       | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | ---                         |
|                 | 20-Aug-08        | EB          | ---                        | <1                              | ---                   | ND                    | ND                  | 1.13             | <0.5             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|                 | 16-Sep-08        | EB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | <0.5             | <0.5             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|                 | 14-Oct-08        | EB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | <0.5             | <0.5             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |

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|---------------|-------------|-------------|----------------------------|---------------------------------|-----------------------|-----------------------|---------------------|------------------|------------------|-------------------|-----------------------|----------------------------|------------------------|----------------|-----------------------------|
| Field Blanks  | 17-Jul-07   | FB          | <0.2                       | <1                              | <1                    | ---                   | ---                 | <0.5             | <0.1             | <500              | <500                  | <5                         | <10                    | <0.5           | <1                          |
|               | 22-Jan-08   | FB          | <0.2                       | <1                              | ---                   | ---                   | ---                 | <0.5             | <0.1             | <500              | <500                  | <500                       | <10                    | 36.4           | <1                          |
|               | 05-Mar-08   | FB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | <0.5             | <0.1             | <500              | <500                  | <500                       | <10                    | 0.63           | <1                          |
|               | 11-Mar-08   | FB          | <0.2                       | 1.15                            | ---                   | ND                    | ND                  | <0.5             | <0.1             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|               | 18-Mar-08   | FB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | <0.5             | <0.1             | <500              | <500                  | ---                        | <10                    | <0.5           | <1                          |
|               | 25-Mar-08   | FB          | <0.2                       | <1                              | ---                   | 0.02                  | ND                  | <0.5             | <0.1             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|               | 03-Apr-08   | FB          | <0.2                       | <1                              | ---                   | 0.03                  | ND                  | ---              | ---              | <500              | <500                  | ---                        | <10                    | <0.5           | <1                          |
|               | 15-Apr-08   | FB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | <0.5           | <1                          |
|               | 28-Apr-08   | FB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | <0.5             | <0.1             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|               | 13-May-08   | FB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | ---              | ---              | <500              | <500                  | ---                        | ---                    | <0.5           | <1                          |
|               | 28-May-08   | FB          | <0.2                       | ---                             | ---                   | ND                    | ND                  | <0.5             | <0.5             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|               | 10-Jun-08   | FB          | ---                        | <1                              | ---                   | ---                   | ---                 | ---              | ---              | <500              | <500                  | ---                        | ---                    | <0.5           | <1                          |
|               | 19-Jun-08   | FB          | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | <1                          |
|               | 24-Jun-08   | FB          | <0.2                       | <1                              | 1                     | ND                    | ND                  | <0.5             | <0.5             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|               | 01-Jul-08   | FB          | ---                        | ---                             | ---                   | ---                   | ---                 | ---              | ---              | ---               | ---                   | ---                        | ---                    | ---            | <1                          |
|               | 22-Jul-08   | FB          | <0.2                       | <1                              | ---                   | 0.34                  | ND                  | <0.5             | <0.5             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|               | 19-Aug-08   | FB          | <.02                       | <1                              | ---                   | 0.024                 | ND                  | <0.5             | <0.5             | <500              | <500                  | <500                       | <10                    | <0.5           | 1.03                        |
|               | 16-Sep-08   | FB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | <0.5             | <0.5             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |
|               | 14-Oct-08   | FB          | <0.2                       | <1                              | ---                   | ND                    | ND                  | <0.5             | <0.5             | <500              | <500                  | <500                       | <10                    | <0.5           | <1                          |

Notes:

Most recent data indicated in **BOLD**

- a Samples were diluted in the laboratory
- Dissolved Samples were field filtered with a 0.45 micron filter.
- ft bgs Feet below ground surface
- mg/L Milligrams per liter
- µg/L Micrograms per liter
- < Symbol indicates not detected at or above laboratory detection limit as noted
- N Normal
- ND Non-detect
- EB Equipment blank
- FB Field blank
- FD Field duplicate
- Nitrate-N Nitrate as Nitrogen
- Nitrite-N Nitrite as Nitrogen
- Not analyzed/Not available
- \* PTR-1 Screen: 125-160 and 175-220 ft bgs. PTR-2 Screen: 118-158 and 173-218 ft bgs.
- \*\* Sample IDs were transcribed in the field. Data here are presented with the appropriate ID.

**Table 4**  
**Summary of Secondary Analytical Parameters**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Dissolved Calcium (µg/L) | Dissolved Magnesium (µg/L) | Dissolved Arsenic (µg/L) | Total Arsenic (µg/L) | Dissolved Potassium (µg/L) | Dissolved Sodium (µg/L) | Alkalinity bicarbonate (mg/L) | Alkalinity carbonate (mg/L) | Chloride (mg/L) | Orthophosphate-p (mg/L) | Sulfide (mg/L) |
|---------------|------------------|-------------|--------------------------|----------------------------|--------------------------|----------------------|----------------------------|-------------------------|-------------------------------|-----------------------------|-----------------|-------------------------|----------------|
| PT-7S         | 18-Jul-07        | N           | 159,000                  | ---                        | <5                       | 9.65                 | 14,500                     | 999,000                 | 125                           | <5                          | 1,250           | <0.5                    | <2             |
|               | 23-Jan-08        | N           | 259,000                  | 42,400                     | <25                      | ---                  | 13,600                     | 942,000                 | 135                           | ---                         | 1,060           | <0.5                    | <2             |
|               | 06-Mar-08        | N           | 147,000                  | 30,000                     | <5                       | ---                  | 12,300                     | 931,000                 | 153                           | ---                         | 1,170           | <0.5                    | <2             |
|               | 13-Mar-08        | N           | 141,000                  | 28,100                     | <25                      | ---                  | 11,900                     | 844,000                 | 153                           | ---                         | 1,110           | <0.5                    | <2             |
|               | 18-Mar-08        | N           | 179,000                  | 30,100                     | ---                      | ---                  | 12,900                     | 885,000                 | 160                           | <5                          | 1,230           | <0.5                    | <2             |
|               | 25-Mar-08        | N           | 160,000                  | 30,600                     | <25                      | ---                  | 12,900                     | 903,000                 | 153                           | ---                         | 1,240           | <0.5                    | <2             |
|               | 02-Apr-08        | N           | 163,000                  | 34,900                     | ---                      | ---                  | 13,400                     | 982,000                 | 135                           | <5                          | ---             | ---                     | <2             |
|               | 17-Apr-08        | N           | 172,000                  | 35,400                     | ---                      | ---                  | 13,900                     | 1,010,000               | 140                           | <5                          | ---             | ---                     | <2             |
|               | 29-Apr-08        | N           | 141,000                  | 30,300                     | <5                       | ---                  | 12,800                     | 897,000                 | 170                           | <5                          | ---             | <0.5                    | <2             |
|               | 15-May-08        | N           | 140,000                  | 28,900                     | ---                      | ---                  | 12,300                     | 873,000                 | 175                           | <5                          | ---             | ---                     | <2             |
|               | 29-May-08        | N           | 166,000                  | 34,000                     | <5                       | ---                  | 13,600                     | 1,010,000               | 145                           | ---                         | 1,270           | <0.5                    | <2             |
|               | 11-Jun-08        | N           | 170,000                  | 37,000                     | ---                      | ---                  | 13,600                     | 1,110,000               | 128                           | <5                          | ---             | ---                     | <2             |
|               | 24-Jun-08        | N           | 139,000                  | 27,100                     | <5                       | ---                  | 12,100                     | 872,000                 | 158                           | ---                         | 1,150           | <0.5                    | <2             |
|               | 23-Jul-08        | N           | 154,000                  | 36,200                     | <5                       | ---                  | 13,200                     | 96,700                  | 173                           | ---                         | 1,310           | <0.5                    | <2             |
|               | 21-Aug-08        | N           | 221,000                  | 42,800                     | 5.61                     | ---                  | 15,400                     | 1,330,000               | 580                           | ---                         | 1,310           | <1                      | 4.0            |
|               | 18-Sep-08        | N           | 149,000                  | 31,400                     | <5                       | ---                  | 12,900                     | 983,000                 | 130                           | ---                         | 1,260           | <0.5                    | <2             |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>151,000</b>           | <b>33,100</b>              | <b>12.1</b>              | ---                  | <b>11,900</b>              | <b>918,000</b>          | <b>352</b>                    | ---                         | <b>1,420</b>    | <b>&lt;0.5</b>          | <b>&lt;2</b>   |
| PT-7M         | 19-Jul-07        | N           | 419,000                  | ---                        | <5                       | 7.01                 | 23,900                     | 1,350,000               | 97.5                          | <5                          | 1,920           | <0.5                    | <2             |
|               | 24-Jan-08        | N           | 434,000                  | 58,100                     | <10                      | ---                  | 24,600                     | 1,460,000               | 80.0                          | ---                         | 2,180           | <0.5                    | <2             |
|               | 06-Mar-08        | N           | 236,000                  | 32,200                     | 10.1                     | ---                  | 19,200                     | 1,170,000               | 138                           | ---                         | 1,520           | <0.5                    | <2             |
|               | 06-Mar-08        | FD          | 236,000                  | 32,500                     | 10.8                     | ---                  | 19,200                     | 1,170,000               | 145                           | <5                          | 1,490           | <0.5                    | <2             |
|               | 13-Mar-08        | N           | 275,000                  | 37,500                     | 53.0                     | ---                  | 18,600                     | 1,150,000               | 360                           | ---                         | 1,530           | <0.5                    | <2             |
|               | 18-Mar-08        | N           | 273,000                  | 37,900                     | ---                      | ---                  | 17,300                     | 1,140,000               | 650                           | <5                          | 1,570           | <0.5                    | 8.0            |
|               | 25-Mar-08        | N           | 333,000                  | 42,400                     | <25                      | ---                  | 18,000                     | 1,170,000               | 920                           | ---                         | 1,560           | <2.5                    | <2             |
|               | 02-Apr-08        | N           | 340,000                  | 47,500                     | ---                      | ---                  | 17,200                     | 1,210,000               | 1,010                         | <5                          | ---             | ---                     | 8.0            |
|               | 17-Apr-08        | N           | 457,000                  | 59,500                     | ---                      | ---                  | 19,500                     | 1,310,000               | 1,380                         | <5                          | ---             | ---                     | <2             |
|               | 29-Apr-08        | N           | 503,000                  | 62,400                     | 16.3                     | ---                  | 19,400                     | 1,220,000               | 1,460                         | <5                          | ---             | <10                     | <2             |
|               | 14-May-08        | N           | 614,000                  | 75,200                     | ---                      | ---                  | 20,300                     | 1,230,000               | 1,930                         | <5                          | ---             | ---                     | <2             |
|               | 29-May-08        | N           | 697,000                  | 71,200                     | 28.6                     | ---                  | 19,900                     | 1,180,000               | 1,720                         | ---                         | 1,090           | <10                     | <2             |
|               | 11-Jun-08        | N           | 769,000                  | 87,900                     | ---                      | ---                  | 20,800                     | 1,220,000               | 1,400                         | <5                          | ---             | ---                     | <2             |
|               | 19-Jun-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 25-Jun-08        | N           | 874,000                  | 81,100                     | 35.4                     | ---                  | 20,800                     | 1,110,000               | 1,800                         | ---                         | 1,110           | <2.5                    | <2             |
|               | 01-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 08-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 15-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 23-Jul-08        | N           | 1,030,000                | 97,700                     | 29.7                     | ---                  | 20,200                     | 984,000                 | 1,980                         | ---                         | 863             | <2.5                    | <2             |
|               | 21-Aug-08        | N           | 1,380,000                | 133,000                    | 31.4                     | ---                  | 22,900                     | 1,290,000               | 2,780                         | ---                         | 1,020           | <2.5                    | 8.0            |
|               | 18-Sep-08        | N           | 994,000                  | 82,600                     | 46.9                     | ---                  | 20,600                     | 1,100,000               | 2,160                         | ---                         | 1,080           | <1                      | <2             |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>849,000</b>           | <b>80,200</b>              | <b>46.7</b>              | ---                  | <b>21,200</b>              | <b>1,090,000</b>        | <b>2,040</b>                  | ---                         | <b>1,280</b>    | <b>&lt;2.5</b>          | <b>&lt;2</b>   |

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**Summary of Secondary Analytical Parameters**  
PG&E Topock  
Needles, California  
November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Dissolved Calcium (µg/L) | Dissolved Magnesium (µg/L) | Dissolved Arsenic (µg/L) | Total Arsenic (µg/L) | Dissolved Potassium (µg/L) | Dissolved Sodium (µg/L) | Alkalinity bicarbonate (mg/L) | Alkalinity carbonate (mg/L) | Chloride (mg/L) | Orthophosphate-p (mg/L) | Sulfide (mg/L) |
|---------------|------------------|-------------|--------------------------|----------------------------|--------------------------|----------------------|----------------------------|-------------------------|-------------------------------|-----------------------------|-----------------|-------------------------|----------------|
| PT-7D         | 18-Jul-07        | N           | 321,000                  | ---                        | 8.0                      | 8.12                 | 38,600                     | 3,630,000               | 52.5                          | <5                          | 5,490           | <0.5                    | <2             |
|               | 24-Jan-08        | N           | 339,000                  | 9,350                      | <10                      | ---                  | 39,100                     | 3,890,000               | 47.5                          | ---                         | 5,540           | <1                      | <2             |
|               | 06-Mar-08        | N           | 153,000                  | 4,530                      | 18.8                     | ---                  | 25,200                     | 2,660,000               | 85.0                          | ---                         | 3,480           | <0.5                    | <2             |
|               | 13-Mar-08        | N           | 141,000                  | <5,000                     | <25                      | ---                  | 23,400                     | 2,460,000               | 150                           | ---                         | 3,540           | <0.5                    | <2             |
|               | 18-Mar-08        | N           | 174,000                  | 5,650                      | ---                      | ---                  | 24,100                     | 2,620,000               | 280                           | <5                          | 3,690           | <1                      | 10.4           |
|               | 25-Mar-08        | N           | 217,000                  | 6,970                      | 97.4                     | ---                  | 25,400                     | 2,940,000               | 360                           | ---                         | 3,980           | <1                      | 17.6           |
|               | 02-Apr-08        | N           | 210,000                  | 7,980                      | ---                      | ---                  | 25,500                     | 3,030,000               | 340                           | <5                          | ---             | ---                     | 6.8            |
|               | 17-Apr-08        | N           | 178,000                  | 5,700                      | ---                      | ---                  | 19,800                     | 2,340,000               | 840                           | <5                          | ---             | ---                     | 20.8           |
|               | 29-Apr-08        | N           | 155,000                  | 4,780                      | 41.9                     | ---                  | 18,100                     | 2,130,000               | 805                           | <5                          | ---             | <10                     | 4.4            |
|               | 15-May-08        | N           | 188,000                  | 6,370                      | ---                      | ---                  | 19,300                     | 2,110,000               | 920                           | <5                          | ---             | ---                     | 5.6            |
|               | 29-May-08        | N           | 215,000                  | 6,640                      | 27.7                     | ---                  | 20,400                     | 2,280,000               | 1,040                         | ---                         | 2,670           | <10                     | 7.2            |
|               | 11-Jun-08        | N           | 286,000                  | 7,090                      | ---                      | ---                  | 19,300                     | 2,170,000               | 1,330                         | <5                          | ---             | ---                     | <2             |
|               | 19-Jun-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 24-Jun-08        | N           | 257,000                  | 6,700                      | 17.5                     | ---                  | 21,400                     | 2,110,000               | 1,370                         | ---                         | 2,030           | <10                     | 5.6            |
|               | 01-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 08-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 15-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 23-Jul-08        | N           | 400,000                  | 11,000                     | 23.2                     | ---                  | 19,800                     | 1,940,000               | 1,640                         | ---                         | 1,480           | <5                      | <2             |
|               | 21-Aug-08        | N           | 472,000                  | 14,300                     | 33.0                     | ---                  | 21,200                     | 2,270,000               | 2,080                         | ---                         | 1,480           | <2.5                    | 40.0           |
|               | 18-Sep-08        | N           | 433,000                  | 11,400                     | 23.3                     | ---                  | 21,600                     | 198,000                 | 1,960                         | ---                         | 1,460           | <1                      | <2             |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>320,000</b>           | <b>11,000</b>              | <b>31.6</b>              | ---                  | <b>20,300</b>              | <b>1,780,000</b>        | <b>1,490</b>                  | ---                         | <b>1,650</b>    | <b>&lt;1</b>            | <b>6.4</b>     |
| PT-8S         | 16-Jul-07        | N           | 132,000                  | ---                        | <5                       | 5.13                 | 12,500                     | 955,000                 | 125                           | <5                          | 1,190           | <0.5                    | <2             |
|               | 23-Jan-08        | N           | 141,000                  | 30,000                     | <25                      | ---                  | 12,600                     | 1,040,000               | 128                           | ---                         | 1,220           | <0.5                    | 2.0            |
|               | 05-Mar-08        | N           | 120,000                  | 26,000                     | <5                       | ---                  | 11,400                     | 1,060,000               | 158                           | ---                         | 1,100           | <0.5                    | <2             |
|               | 13-Mar-08        | N           | 114,000                  | 23,900                     | <25                      | ---                  | 11,100                     | 934,000                 | 215                           | ---                         | 1,110           | <0.5                    | <2             |
|               | 18-Mar-08        | N           | 97,500                   | 21,500                     | ---                      | ---                  | 10,600                     | 894,000                 | 225                           | <5                          | 1,010           | <0.5                    | <2             |
|               | 25-Mar-08        | N           | 101,000                  | 21,300                     | <25                      | ---                  | 10,600                     | 876,000                 | 230                           | ---                         | 1,070           | <0.5                    | <2             |
|               | 02-Apr-08        | N           | 110,000                  | 25,200                     | ---                      | ---                  | 11,400                     | 965,000                 | 200                           | <5                          | ---             | ---                     | <2             |
|               | 16-Apr-08        | N           | 125,000                  | 26,700                     | ---                      | ---                  | 11,700                     | 1,010,000               | 205                           | <5                          | ---             | ---                     | <2             |
|               | 29-Apr-08        | N           | 160,000                  | 35,500                     | 10.4                     | ---                  | 13,000                     | 1,130,000               | 283                           | <5                          | ---             | <0.5                    | <2             |
|               | 14-May-08        | N           | 148,000                  | 34,100                     | ---                      | ---                  | 12,300                     | 1,140,000               | 323                           | <5                          | ---             | ---                     | <2             |
|               | 28-May-08        | N           | 155,000                  | 33,300                     | 25.6                     | ---                  | 11,200                     | 1,220,000               | 550                           | ---                         | 1,760           | <0.5                    | 2.0            |
|               | 11-Jun-08        | N           | 402,000                  | 72,100                     | ---                      | ---                  | 15,600                     | 1,840,000               | 950                           | <5                          | ---             | ---                     | <2             |
|               | 19-Jun-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 25-Jun-08        | N           | 502,000                  | 77,100                     | 18.6                     | ---                  | 17,400                     | 1,940,000               | 1,370                         | ---                         | 2,440           | <1                      | <2             |
|               | 01-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 08-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 15-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 23-Jul-08        | N           | 459,000                  | 84,800                     | 21.4                     | ---                  | 16,200                     | 1,910,000               | 1,150                         | ---                         | 2,660           | <5                      | <2             |
|               | 20-Aug-08        | N           | 358,000                  | 62,500                     | 27.9                     | ---                  | 14,500                     | 1,780,000               | 1,000                         | ---                         | 2,640           | <1                      | 40.0           |
|               | 17-Sep-08        | N           | 264,000                  | 58,600                     | 30.7                     | ---                  | 14,500                     | 1,750,000               | 830                           | ---                         | 2,580           | <1                      | <2             |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>251,000</b>           | <b>57,500</b>              | <b>27.2</b>              | ---                  | <b>13,900</b>              | <b>1,700,000</b>        | <b>1,180</b>                  | ---                         | <b>2,550</b>    | <b>&lt;1</b>            | <b>&lt;2</b>   |



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| Location Name | Sample Date      | Sample Type | Dissolved Calcium (µg/L) | Dissolved Magnesium (µg/L) | Dissolved Arsenic (µg/L) | Total Arsenic (µg/L) | Dissolved Potassium (µg/L) | Dissolved Sodium (µg/L) | Alkalinity bicarbonate (mg/L) | Alkalinity carbonate (mg/L) | Chloride (mg/L) | Orthophosphate-p (mg/L) | Sulfide (mg/L) |
|---------------|------------------|-------------|--------------------------|----------------------------|--------------------------|----------------------|----------------------------|-------------------------|-------------------------------|-----------------------------|-----------------|-------------------------|----------------|
| PT-8M         | 18-Jul-07        | N           | 353,000                  | ---                        | <5                       | 1.53                 | 22,200                     | 1,130,000               | 103                           | <5                          | 1,510           | <2.5                    | <2             |
|               | 23-Jan-08        | N           | 403,000                  | 41,800                     | <25                      | ---                  | 24,100                     | 1,230,000               | 100                           | ---                         | 1,700           | <0.5                    | 4.0            |
|               | 05-Mar-08        | N           | 422,000                  | 42,200                     | <5                       | ---                  | 24,000                     | 1,350,000               | 108                           | ---                         | 1,650           | <0.5                    | <2             |
|               | 13-Mar-08        | N           | 364,000                  | 44,100                     | <25                      | ---                  | 22,300                     | 1,130,000               | 120                           | ---                         | 1,400           | <0.5                    | <2             |
|               | 19-Mar-08        | N           | 362,000                  | 43,000                     | ---                      | ---                  | 22,400                     | 1,120,000               | 123                           | <5                          | 1,400           | <0.5                    | <2             |
|               | 25-Mar-08        | N           | 376,000                  | 41,500                     | <25                      | ---                  | 22,200                     | 1,110,000               | 130                           | ---                         | 1,570           | <0.5                    | 4.0            |
|               | 02-Apr-08        | N           | 367,000                  | 45,400                     | ---                      | ---                  | 22,900                     | 1,160,000               | 130                           | <5                          | ---             | ---                     | <2             |
|               | 16-Apr-08        | N           | 392,000                  | 45,100                     | ---                      | ---                  | 23,200                     | 1,190,000               | 125                           | <5                          | ---             | ---                     | <2             |
|               | 29-Apr-08        | N           | 356,000                  | 43,900                     | <5                       | ---                  | 22,000                     | 1,070,000               | 145                           | <5                          | ---             | <1                      | <2             |
|               | 14-May-08        | N           | 350,000                  | 42,900                     | ---                      | ---                  | 21,800                     | 1,040,000               | 135                           | <5                          | ---             | ---                     | <2             |
|               | 28-May-08        | N           | 321,000                  | 6,750                      | 7.0                      | ---                  | 34,000                     | 3,200,000               | 50                            | ---                         | 4,820           | <1                      | <2             |
|               | 11-Jun-08        | N           | 381,000                  | 48,900                     | ---                      | ---                  | 21,400                     | 1,160,000               | 110                           | <5                          | ---             | ---                     | <2             |
|               | 19-Jun-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 25-Jun-08        | N           | 362,000                  | 42,600                     | <5                       | ---                  | 21,200                     | 104,000                 | 113                           | ---                         | 1,360           | <0.5                    | <2             |
|               | 01-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 23-Jul-08        | N           | 356,000                  | 49,300                     | <5                       | ---                  | 20,100                     | 1,020,000               | 115                           | ---                         | 1,300           | <1                      | <2             |
|               | 20-Aug-08        | N           | 364,000                  | 43,900                     | <5                       | ---                  | 20,000                     | 1,050,000               | 155                           | ---                         | 1,510           | <0.5                    | 80.0           |
|               | 17-Sep-08        | N           | 371,000                  | 47,400                     | <5                       | ---                  | 21,800                     | 1,120,000               | 180                           | ---                         | 1,650           | <0.5                    | <2             |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>357,000</b>           | <b>45,000</b>              | <b>&lt;5</b>             | ---                  | <b>20,400</b>              | <b>978,000</b>          | <b>168</b>                    | ---                         | <b>1,480</b>    | <b>&lt;1</b>            | <b>&lt;2</b>   |
| PT-8D         | 16-Jul-07        | N           | 281,000                  | ---                        | 7.1                      | 9.00                 | 35,100                     | 3,300,000               | 45.0                          | <5                          | 5,360           | <0.5                    | <2             |
|               | 23-Jan-08        | N           | 325,000                  | 11,800                     | <50                      | ---                  | 35,200                     | 3,420,000               | 50.0                          | ---                         | 5,190           | <1                      | <2             |
|               | 05-Mar-08        | N           | 322,000                  | 10,000                     | <25                      | ---                  | 37,700                     | 3,850,000               | 50.0                          | ---                         | 5,240           | <0.5                    | <2             |
|               | 13-Mar-08        | N           | 284,000                  | 9,560                      | <25                      | ---                  | 32,900                     | 3,340,000               | 55.0                          | ---                         | 5,090           | <2.5                    | <2             |
|               | 18-Mar-08        | N           | 292,000                  | 9,470                      | ---                      | ---                  | 33,900                     | 3,480,000               | 48.0                          | <5                          | 5,480           | <2.5                    | <2             |
|               | 25-Mar-08        | N           | 306,000                  | 10,200                     | <25                      | ---                  | 34,300                     | 3,550,000               | 50.0                          | ---                         | 5,010           | <0.5                    | <2             |
|               | 02-Apr-08        | N           | 298,000                  | 10,700                     | ---                      | ---                  | 33,800                     | 3,550,000               | 52.5                          | <5                          | ---             | ---                     | <2             |
|               | 16-Apr-08        | N           | 312,000                  | 9,020                      | ---                      | ---                  | 36,000                     | 3,840,000               | 50.0                          | <5                          | ---             | ---                     | <2             |
|               | 29-Apr-08        | N           | 292,000                  | 9,830                      | 7.7                      | ---                  | 33,500                     | 3,290,000               | 60.0                          | <5                          | ---             | <1                      | <2             |
|               | 14-May-08        | N           | 281,000                  | 13,300                     | ---                      | ---                  | 32,000                     | 2,820,000               | 87.5                          | <5                          | ---             | ---                     | <2             |
|               | 28-May-08        | N           | 267,000                  | 9,020                      | 6.8                      | ---                  | 32,100                     | 3,050,000               | 57.5                          | ---                         | 4,530           | <1                      | <2             |
|               | 11-Jun-08        | N           | 288,000                  | 11,100                     | ---                      | ---                  | 32,200                     | 3,390,000               | 55.0                          | <5                          | ---             | ---                     | <2             |
|               | 19-Jun-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 25-Jun-08        | N           | 280,000                  | 12,100                     | 11.6                     | ---                  | 30,600                     | 2,960,000               | 143                           | ---                         | 4,200           | <0.5                    | <2             |
|               | 01-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 08-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 15-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 23-Jul-08        | N           | 264,000                  | 11,000                     | 8.9                      | ---                  | 30,700                     | 3,080,000               | 60                            | ---                         | 4,390           | <1                      | <2             |
|               | 20-Aug-08        | N           | 284,000                  | 10,500                     | 7.2                      | ---                  | 31,400                     | 3,220,000               | 46.3                          | ---                         | 4,870           | <1                      | 40.0           |
|               | 17-Sep-08        | N           | 286,000                  | 10,000                     | <25                      | ---                  | 34,000                     | 3,250,000               | 47.5                          | ---                         | 4,730           | <1                      | <2             |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>333,000</b>           | <b>24,200</b>              | <b>&lt;25</b>            | ---                  | <b>31,300</b>              | <b>2,530,000</b>        | <b>197</b>                    | ---                         | <b>4,140</b>    | <b>&lt;0.5</b>          | <b>&lt;2</b>   |

**Table 4**  
**Summary of Secondary Analytical Parameters**  
PG&E Topock  
Needles, California  
November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Dissolved Calcium (µg/L) | Dissolved Magnesium (µg/L) | Dissolved Arsenic (µg/L) | Total Arsenic (µg/L) | Dissolved Potassium (µg/L) | Dissolved Sodium (µg/L) | Alkalinity bicarbonate (mg/L) | Alkalinity carbonate (mg/L) | Chloride (mg/L) | Orthophosphate-p (mg/L) | Sulfide (mg/L) |
|---------------|------------------|-------------|--------------------------|----------------------------|--------------------------|----------------------|----------------------------|-------------------------|-------------------------------|-----------------------------|-----------------|-------------------------|----------------|
| PT-9S         | 17-Jul-07        | N           | 108,000                  | ---                        | <5                       | 5.36                 | 11,800                     | 820,000                 | 155                           | <5                          | 895             | <0.5                    | <2             |
|               | 22-Jan-08        | N           | 107,000                  | 21,100                     | 5.6                      | ---                  | 9,140                      | 848,000                 | 205                           | ---                         | 924             | <0.5                    | <2             |
|               | 05-Mar-08        | N           | 120,000                  | 24,500                     | 5.2                      | ---                  | 9,990                      | 962,000                 | 168                           | ---                         | 977             | <0.5                    | <2             |
|               | 12-Mar-08        | N           | 87,500                   | 17,800                     | 5.5                      | ---                  | 8,270                      | 836,000                 | 190                           | ---                         | 916             | <0.5                    | <2             |
|               | 19-Mar-08        | N           | 115,000                  | 23,100                     | ---                      | ---                  | 9,930                      | 884,000                 | 163                           | <5                          | 889             | <0.5                    | <2             |
|               | 26-Mar-08        | N           | 116,000                  | 23,000                     | <25                      | ---                  | 9,370                      | 843,000                 | 175                           | ---                         | 977             | <0.5                    | <2             |
|               | 02-Apr-08        | N           | 118,000                  | 25,100                     | ---                      | ---                  | 9,570                      | 871,000                 | 178                           | <5                          | ---             | ---                     | <2             |
|               | 16-Apr-08        | N           | 126,000                  | 25,100                     | ---                      | ---                  | 9,980                      | 891,000                 | 170                           | <5                          | ---             | ---                     | <2             |
|               | 29-Apr-08        | N           | 113,000                  | 24,900                     | 5.3                      | ---                  | 9,590                      | 837,000                 | 185                           | <5                          | ---             | <0.5                    | <2             |
|               | 14-May-08        | N           | 101,000                  | 21,000                     | ---                      | ---                  | 8,940                      | 821,000                 | 168                           | <5                          | ---             | ---                     | <2             |
|               | 28-May-08        | N           | 111,000                  | 22,000                     | <5                       | ---                  | 9,420                      | 825,000                 | 158                           | ---                         | 917             | <0.5                    | <2             |
|               | 11-Jun-08        | N           | 107,000                  | 23,500                     | ---                      | ---                  | 9,150                      | 867,000                 | 160                           | <5                          | ---             | ---                     | <2             |
|               | 25-Jun-08        | N           | 102,000                  | 20,000                     | <5                       | ---                  | 8,910                      | 820,000                 | 163                           | ---                         | 908             | <0.5                    | <2             |
|               | 24-Jul-08        | N           | 105,000                  | 22,600                     | 5.1                      | ---                  | 9,070                      | 855,000                 | 165                           | ---                         | 890             | <0.5                    | <2             |
|               | 20-Aug-08        | N           | 99,200                   | 21,100                     | 5.1                      | ---                  | 9,050                      | 844,000                 | 160                           | ---                         | 922             | <0.5                    | 320.0          |
|               | 17-Sep-08        | N           | 114,000                  | 23,500                     | <5                       | ---                  | 9,930                      | 920,000                 | 155                           | ---                         | 989             | <0.5                    | <2             |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>103,000</b>           | <b>21,400</b>              | <b>5.2</b>               | <b>---</b>           | <b>9,180</b>               | <b>849,000</b>          | <b>188</b>                    | <b>---</b>                  | <b>1,090</b>    | <b>&lt;0.5</b>          | <b>&lt;2</b>   |
| PT-9M         | 17-Jul-07        | N           | 485,000                  | ---                        | <5                       | 1.40                 | 30,200                     | 1,030,000               | 97.5                          | <5                          | 1,400           | <0.5                    | <2             |
|               | 17-Jul-07        | FD          | 476,000                  | ---                        | <5                       | 1.42                 | 29,800                     | 1,020,000               | 100                           | <5                          | 1,400           | <0.5                    | <2             |
|               | 22-Jan-08        | N           | 525,000                  | 22,700                     | <5                       | ---                  | 29,800                     | 1,140,000               | 97.5                          | ---                         | 1,640           | <0.5                    | <2             |
|               | 05-Mar-08        | N           | 553,000                  | 25,100                     | <5                       | ---                  | 32,100                     | 1,220,000               | 100                           | ---                         | 1,650           | <0.5                    | <2             |
|               | 12-Mar-08        | N           | 483,000                  | 22,800                     | <5                       | ---                  | 30,700                     | 1,140,000               | 113                           | ---                         | 1,520           | <0.5                    | <2             |
|               | 19-Mar-08        | N           | 517,000                  | 26,400                     | ---                      | ---                  | 32,100                     | 1,190,000               | 97.5                          | <5                          | 1,510           | <0.5                    | <2             |
|               | 26-Mar-08        | N           | 526,000                  | 26,200                     | <25                      | ---                  | 31,900                     | 1,160,000               | 100                           | ---                         | 1,610           | <0.5                    | <2             |
|               | 26-Mar-08        | FD          | 543,000                  | 26,400                     | <25                      | ---                  | 33,200                     | 1,190,000               | 103                           | ---                         | 1,600           | <0.5                    | <2             |
|               | 02-Apr-08        | N           | 513,000                  | 27,700                     | ---                      | ---                  | 31,800                     | 1,150,000               | 105                           | <5                          | ---             | ---                     | <2             |
|               | 16-Apr-08        | N           | 556,000                  | 28,000                     | ---                      | ---                  | 32,900                     | 1,220,000               | 105                           | <5                          | ---             | ---                     | <2             |
|               | 29-Apr-08        | N           | 475,000                  | 23,900                     | <5                       | ---                  | 30,900                     | 1,100,000               | 120                           | <5                          | ---             | <1                      | <2             |
|               | 14-May-08        | N           | 496,000                  | 26,100                     | ---                      | ---                  | 33,500                     | 1,130,000               | 120                           | <5                          | ---             | ---                     | <2             |
|               | 28-May-08        | N           | 479,000                  | 22,800                     | <5                       | ---                  | 29,800                     | 1,070,000               | 108                           | ---                         | 1,530           | <0.5                    | <2             |
|               | 11-Jun-08        | N           | 492,000                  | 25,900                     | ---                      | ---                  | 31,200                     | 1,150,000               | 97.5                          | <5                          | ---             | ---                     | <2             |
|               | 25-Jun-08        | N           | 452,000                  | 21,800                     | <5                       | ---                  | 29,900                     | 1,090,000               | 103                           | ---                         | 1,380           | <1                      | <2             |
|               | 24-Jul-08        | N           | 426,000                  | 22,700                     | <5                       | ---                  | 26,600                     | 1,050,000               | 108                           | ---                         | 1,240           | <0.5                    | <2             |
|               | 20-Aug-08        | N           | 488,000                  | 23,500                     | <5                       | ---                  | 28,900                     | 1,100,000               | 97.5                          | ---                         | 1,530           | <0.5                    | 40.0           |
|               | 17-Sep-08        | N           | 504,000                  | 26,100                     | <25                      | ---                  | 32,300                     | 1,110,000               | 92.5                          | ---                         | 1,660           | <0.5                    | <2             |
|               | <b>15-Oct-08</b> | <b>N</b>    | <b>431,000</b>           | <b>22,300</b>              | <b>&lt;5</b>             | <b>---</b>           | <b>27,600</b>              | <b>1,010,000</b>        | <b>105</b>                    | <b>---</b>                  | <b>1,450</b>    | <b>&lt;1</b>            | <b>&lt;2</b>   |

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**Summary of Secondary Analytical Parameters**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date | Sample Type | Dissolved Calcium (µg/L) | Dissolved Magnesium (µg/L) | Dissolved Arsenic (µg/L) | Total Arsenic (µg/L) | Dissolved Potassium (µg/L) | Dissolved Sodium (µg/L) | Alkalinity bicarbonate (mg/L) | Alkalinity carbonate (mg/L) | Chloride (mg/L) | Orthophosphate-p (mg/L) | Sulfide (mg/L) |
|---------------|-------------|-------------|--------------------------|----------------------------|--------------------------|----------------------|----------------------------|-------------------------|-------------------------------|-----------------------------|-----------------|-------------------------|----------------|
| PT-9D         | 17-Jul-07   | N           | 368,000                  | ---                        | 6.3                      | 6.11                 | 34,200                     | 2,840,000               | 52.5                          | <5                          | 4,350           | <1                      | <2             |
|               | 22-Jan-08   | N           | 399,000                  | 8,380                      | <50                      | ---                  | 35,500                     | 3,230,000               | 50.0                          | ---                         | 4,790           | <1                      | <2             |
|               | 22-Jan-08   | FD          | 404,000                  | 9,160                      | <50                      | ---                  | 35,400                     | 3,260,000               | 55.0                          | ---                         | 4,940           | <1                      | <2             |
|               | 05-Mar-08   | N           | 438,000                  | 9,240                      | <25                      | ---                  | 37,000                     | 3,540,000               | 41.0                          | ---                         | 4,890           | <0.5                    | <2             |
|               | 12-Mar-08   | N           | 407,000                  | 10,100                     | <25                      | ---                  | 35,000                     | 3,210,000               | 52.5                          | ---                         | 4,920           | <2.5                    | <2             |
|               | 19-Mar-08   | N           | 432,000                  | 10,400                     | ---                      | ---                  | 36,800                     | 3,320,000               | 42.0                          | <5                          | 4,650           | <1                      | <2             |
|               | 26-Mar-08   | N           | 436,000                  | 10,100                     | <25                      | ---                  | 36,700                     | 3,300,000               | 52.5                          | ---                         | 4,810           | <1                      | 12.0           |
|               | 02-Apr-08   | N           | 419,000                  | 10,400                     | ---                      | ---                  | 36,000                     | 3,320,000               | 50.0                          | <5                          | ---             | ---                     | <2             |
|               | 16-Apr-08   | N           | 445,000                  | 10,300                     | ---                      | ---                  | 36,600                     | 3,440,000               | 55.0                          | <5                          | ---             | ---                     | <2             |
|               | 29-Apr-08   | N           | 431,000                  | 11,900                     | 7.3                      | ---                  | 35,500                     | 2,940,000               | 57.5                          | <5                          | ---             | <5                      | <2             |
|               | 14-May-08   | N           | 408,000                  | 12,400                     | ---                      | ---                  | 35,800                     | 2,750,000               | 65.0                          | <5                          | ---             | ---                     | <2             |
|               | 28-May-08   | N           | 421,000                  | 11,200                     | 6.8                      | ---                  | 35,100                     | 2,800,000               | 55.0                          | ---                         | 4,320           | <1                      | <2             |
|               | 11-Jun-08   | N           | 460,000                  | 12,800                     | ---                      | ---                  | 37,300                     | 3,270,000               | 47.5                          | <5                          | ---             | ---                     | <2             |
|               | 11-Jun-08   | FD          | 466,000                  | 13,200                     | ---                      | ---                  | 37,100                     | 3,340,000               | 47.5                          | <5                          | ---             | ---                     | <2             |
|               | 25-Jun-08   | N           | 439,000                  | 12,500                     | 7.4                      | ---                  | 35,000                     | 2,830,000               | 52.5                          | ---                         | 4,050           | <1                      | <2             |
|               | 24-Jul-08   | N           | 452,000                  | 15,200                     | 6.5                      | ---                  | 33,600                     | 2,910,000               | 53.8                          | ---                         | 4,090           | <2.5                    | 8              |
|               | 20-Aug-08   | N           | 451,000                  | 11,900                     | 7.3                      | ---                  | 36,700                     | 3,250,000               | 47.5                          | ---                         | 4,810           | <2.5                    | 40.0           |
|               | 20-Aug-08   | FD          | 451,000                  | 12,000                     | 7.2                      | ---                  | 36,200                     | 3,280,000               | 47.5                          | ---                         | 4,820           | <2.5                    | 160.0          |
|               | 17-Sep-08   | N           | 431,000                  | 11,200                     | <25                      | ---                  | 36,900                     | 3,250,000               | 47.5                          | ---                         | 4,880           | <2.5                    | <2             |
|               | 15-Oct-08   | N           | 458,000                  | 18,400                     | <25                      | ---                  | 36,300                     | 2,640,000               | 55.5                          | ---                         | 3,990           | <1                      | <2             |
| MW-11         | 17-Jul-07   | N           | 125,000                  | ---                        | <5                       | 1.54                 | 8,330                      | 280,000                 | 87.5                          | <5                          | 470             | <0.5                    | <2             |
|               | 24-Jan-08   | N           | 122,000                  | 16,100                     | <5                       | ---                  | 8,160                      | 280,000                 | 103                           | ---                         | 442             | <0.5                    | <2             |
|               | 04-Mar-08   | N           | 123,000                  | 17,700                     | <5                       | ---                  | 8,300                      | 302,000                 | 92.5                          | ---                         | 434             | <0.5                    | <2             |
|               | 11-Mar-08   | N           | 116,000                  | 16,100                     | <5                       | ---                  | 7,990                      | 278,000                 | 110                           | ---                         | 439             | <0.5                    | <2             |
|               | 11-Mar-08   | FD          | 120,000                  | 16,700                     | <5                       | ---                  | 8,160                      | 296,000                 | 105                           | ---                         | 453             | <0.5                    | <2             |
|               | 19-Mar-08   | N           | 125,000                  | 17,400                     | ---                      | ---                  | 8,800                      | 302,000                 | 103                           | <5                          | 427             | <0.5                    | <2             |
|               | 27-Mar-08   | N           | 124,000                  | 15,900                     | <5                       | ---                  | 8,480                      | 295,000                 | 110                           | ---                         | 467             | <0.5                    | <2             |
|               | 01-Apr-08   | N           | 118,000                  | 15,800                     | ---                      | ---                  | 8,340                      | 283,000                 | 103                           | <5                          | ---             | ---                     | <2             |
|               | 15-Apr-08   | N           | 122,000                  | 16,400                     | ---                      | ---                  | 8,260                      | 299,000                 | 108                           | <5                          | ---             | ---                     | 4.0            |
|               | 28-Apr-08   | N           | 116,000                  | 16,100                     | <5                       | ---                  | 8,230                      | 276,000                 | 140                           | <5                          | ---             | <0.5                    | <2             |
|               | 13-May-08   | N           | 120,000                  | 16,800                     | ---                      | ---                  | 8,290                      | 289,000                 | 113                           | <5                          | ---             | ---                     | 2.4            |
|               | 27-May-08   | N           | 117,000                  | 16,100                     | <5                       | ---                  | 8,220                      | 272,000                 | 100.0                         | ---                         | 466             | <0.5                    | <2             |
|               | 10-Jun-08   | N           | 119,000                  | 17,600                     | ---                      | ---                  | 8,230                      | 282,000                 | 90.0                          | <5                          | ---             | ---                     | <2             |
|               | 24-Jun-08   | N           | 120,000                  | 16,700                     | <5                       | ---                  | 8,560                      | 284,000                 | 90.0                          | ---                         | 477             | <0.5                    | <2             |
|               | 22-Jul-08   | N           | 114,000                  | 17,900                     | <5                       | ---                  | 8,120                      | 275,000                 | 92.5                          | ---                         | 473             | <0.5                    | <2             |
|               | 21-Aug-08   | N           | 116,000                  | 19,000                     | <5                       | ---                  | 8,450                      | 300,000                 | 92.5                          | ---                         | 465             | <0.5                    | <2             |
|               | 16-Sep-08   | N           | 114,000                  | 16,500                     | <5                       | ---                  | 8,360                      | 268,000                 | 87.5                          | ---                         | 474             | <0.5                    | <2             |
|               | 14-Oct-08   | N           | 120,000                  | 16,300                     | <5                       | ---                  | 8,140                      | 278,000                 | 94.3                          | ---                         | 459             | <0.5                    | <2             |

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| Location Name | Sample Date      | Sample Type | Dissolved Calcium (µg/L) | Dissolved Magnesium (µg/L) | Dissolved Arsenic (µg/L) | Total Arsenic (µg/L) | Dissolved Potassium (µg/L) | Dissolved Sodium (µg/L) | Alkalinity bicarbonate (mg/L) | Alkalinity carbonate (mg/L) | Chloride (mg/L) | Orthophosphate-p (mg/L) | Sulfide (mg/L) |
|---------------|------------------|-------------|--------------------------|----------------------------|--------------------------|----------------------|----------------------------|-------------------------|-------------------------------|-----------------------------|-----------------|-------------------------|----------------|
| MW-24A        | 18-Jul-07        | N           | 42,000                   | ---                        | 5.4                      | 5.58                 | 5,610                      | 565,000                 | 310                           | <5                          | 410             | <0.5                    | <2             |
|               | 24-Jan-08        | N           | 46,300                   | 8,660                      | 5.1                      | ---                  | 5,860                      | 585,000                 | 365                           | ---                         | 452             | <0.5                    | <2             |
|               | 06-Mar-08        | N           | 367,000                  | 46,000                     | 8.0                      | ---                  | 19,900                     | 1,840,000               | 118                           | ---                         | 2,450           | <5                      | <2             |
|               | 12-Mar-08        | N           | 387,000                  | 39,900                     | <25                      | ---                  | 22,700                     | 1,680,000               | 198                           | ---                         | 2,680           | <10                     | <2             |
|               | 19-Mar-08        | N           | 407,000                  | 46,200                     | ---                      | ---                  | 21,200                     | 1,710,000               | 423                           | <5                          | 2,370           | <2.5                    | <2             |
|               | 26-Mar-08        | N           | 491,000                  | 50,500                     | 82.8                     | ---                  | 18,900                     | 1,690,000               | 970                           | ---                         | 2,380           | <5                      | 4.8            |
|               | 01-Apr-08        | N           | 423,000                  | 47,700                     | ---                      | ---                  | 18,100                     | 1,620,000               | 1,020                         | <5                          | ---             | ---                     | <2             |
|               | 17-Apr-08        | N           | 517,000                  | 43,400                     | ---                      | ---                  | 23,100                     | 2,030,000               | 1,110                         | <5                          | ---             | ---                     | 10.4           |
|               | 30-Apr-08        | N           | 432,000                  | 37,200                     | 72.2                     | ---                  | 24,700                     | 1,860,000               | 590                           | <5                          | ---             | <5                      | <2             |
|               | 30-Apr-08        | FD          | 437,000                  | 35,800                     | 70.4                     | ---                  | 23,700                     | 1,860,000               | 570                           | <5                          | ---             | <5                      | <2             |
|               | 15-May-08        | N           | 494,000                  | 59,900                     | ---                      | ---                  | 24,000                     | 1,750,000               | 450                           | <5                          | ---             | ---                     | <2             |
|               | 15-May-08        | FD          | 502,000                  | 59,100                     | ---                      | ---                  | 24,800                     | 1,780,000               | 480                           | <5                          | ---             | ---                     | <2             |
|               | 27-May-08        | N           | 493,000                  | 42,200                     | 9.8                      | ---                  | 24,300                     | 1,870,000               | 880                           | ---                         | 2,790           | <1                      | 11.2           |
|               | 12-Jun-08        | N           | 521,000                  | 45,900                     | ---                      | ---                  | 25,300                     | 1,960,000               | 970                           | <5                          | ---             | ---                     | 4.0            |
|               | 19-Jun-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 26-Jun-08        | N           | 398,000                  | 29,700                     | 23.7                     | ---                  | 23,700                     | 192,000                 | 153                           | ---                         | 2,780           | <0.5                    | <2             |
|               | 01-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 24-Jul-08        | N           | 384,000                  | 27,800                     | 24.5                     | ---                  | 24,000                     | 1,980,000               | 115                           | ---                         | 2,730           | <1                      | 6.4            |
|               | 24-Jul-08        | FD          | 397,000                  | 28,300                     | 25.7                     | ---                  | 24,300                     | 2,020,000               | 118                           | ---                         | 2,670           | <1                      | <2             |
|               | 19-Aug-08        | N           | 376,000                  | 34,500                     | 21.0                     | ---                  | 22,400                     | 1,800,000               | 288                           | ---                         | 2,690           | <1                      | 2.0            |
|               | 16-Sep-08        | N           | 355,000                  | 29,100                     | 8.1                      | ---                  | 23,100                     | 1,930,000               | 670                           | ---                         | 2,720           | <1                      | 117.0          |
|               | <b>16-Oct-08</b> | <b>N</b>    | <b>353,000</b>           | <b>30,400</b>              | <b>25.9</b>              | ---                  | <b>24,300</b>              | <b>1,940,000</b>        | <b>353</b>                    | ---                         | <b>2,870</b>    | <b>&lt;0.5</b>          | <b>22.0</b>    |
| MW-24B        | 18-Jul-07        | N           | 329,000                  | ---                        | 7.1                      | 7.08                 | 34,500                     | 3,270,000               | 50.0                          | <5                          | 4,820           | <0.5                    | <2             |
|               | 24-Jan-08        | N           | 341,000                  | 8,050                      | <10                      | ---                  | 36,400                     | 3,470,000               | 50.0                          | ---                         | 5,270           | <1                      | 2.0            |
|               | 06-Mar-08        | N           | 338,000                  | 7,970                      | 8.8                      | ---                  | 37,200                     | 3,430,000               | 42.0                          | ---                         | 5,160           | <1                      | <2             |
|               | 12-Mar-08        | N           | 332,000                  | 7,610                      | <25                      | ---                  | 34,800                     | 3,290,000               | 52.5                          | ---                         | 5,870           | <1                      | <2             |
|               | 19-Mar-08        | N           | 351,000                  | 8,410                      | ---                      | ---                  | 37,100                     | 3,650,000               | 44.0                          | <5                          | 5,120           | <0.5                    | <2             |
|               | 26-Mar-08        | N           | 358,000                  | 8,240                      | <25                      | ---                  | 37,200                     | 3,580,000               | 42.0                          | ---                         | 5,150           | <0.5                    | <2             |
|               | 03-Apr-08        | N           | 345,000                  | 8,130                      | ---                      | ---                  | 36,200                     | 3,470,000               | 44.0                          | <5                          | ---             | ---                     | 3.2            |
|               | 17-Apr-08        | N           | 345,000                  | 8,280                      | ---                      | ---                  | 36,700                     | 3,530,000               | 50.0                          | <5                          | ---             | ---                     | <2             |
|               | 30-Apr-08        | N           | 304,000                  | 7,020                      | 6.8                      | ---                  | 68,200                     | 3,420,000               | 57.5                          | <5                          | ---             | <1                      | <2             |
|               | 15-May-08        | N           | 338,000                  | 8,130                      | ---                      | ---                  | 37,100                     | 3,350,000               | 55.0                          | <5                          | ---             | ---                     | <2             |
|               | 28-May-08        | N           | 360,000                  | 38,900                     | <5                       | ---                  | 20,800                     | 1,050,000               | 118.0                         | ---                         | 1,420           | <1                      | <2             |
|               | 12-Jun-08        | N           | 336,000                  | 7,570                      | ---                      | ---                  | 34,800                     | 3,340,000               | 45.0                          | <5                          | ---             | ---                     | <2             |
|               | 26-Jun-08        | N           | 326,000                  | 6,960                      | 8.3                      | ---                  | 35,400                     | 3,300,000               | 46.3                          | ---                         | 4,950           | <1                      | <2             |
|               | 24-Jul-08        | N           | 323,400                  | 7,730                      | 7.4                      | ---                  | 33,000                     | 3,420,000               | 46.3                          | ---                         | 4,860           | <2.5                    | 3.2            |
|               | 19-Aug-08        | N           | 296,000                  | 7,150                      | 7.6                      | ---                  | 31,900                     | 3,210,000               | 46.3                          | ---                         | 4,910           | <1                      | 2.0            |
|               | 17-Sep-08        | N           | 308,000                  | 7,770                      | <25                      | ---                  | 34,900                     | 3,260,000               | 45.0                          | ---                         | 4,950           | <0.5                    | <2             |
|               | <b>16-Oct-08</b> | <b>N</b>    | <b>307,000</b>           | <b>7,990</b>               | <b>&lt;25</b>            | ---                  | <b>34,700</b>              | <b>3,130,000</b>        | <b>47.6</b>                   | ---                         | <b>4,870</b>    | <b>&lt;0.5</b>          | <b>&lt;2</b>   |
|               | <b>16-Oct-08</b> | <b>FD</b>   | <b>310,000</b>           | <b>7,880</b>               | <b>&lt;25</b>            | ---                  | <b>34,700</b>              | <b>3,190,000</b>        | <b>47.8</b>                   | ---                         | <b>4,880</b>    | <b>&lt;0.5</b>          | <b>&lt;2</b>   |

**Table 4**  
**Summary of Secondary Analytical Parameters**  
PG&E Topock  
Needles, California  
November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date      | Sample Type | Dissolved Calcium (µg/L) | Dissolved Magnesium (µg/L) | Dissolved Arsenic (µg/L) | Total Arsenic (µg/L) | Dissolved Potassium (µg/L) | Dissolved Sodium (µg/L) | Alkalinity bicarbonate (mg/L) | Alkalinity carbonate (mg/L) | Chloride (mg/L) | Orthophosphate-p (mg/L) | Sulfide (mg/L) |
|---------------|------------------|-------------|--------------------------|----------------------------|--------------------------|----------------------|----------------------------|-------------------------|-------------------------------|-----------------------------|-----------------|-------------------------|----------------|
| MW-38S        | 17-Jul-07        | N           | 84,200                   | ---                        | <5                       | 6.10                 | 8,710                      | 627,000                 | 175                           | <5                          | 680             | <0.5                    | <2             |
|               | 23-Jan-08        | N           | 63,900                   | 12,200                     | <5                       | ---                  | 7,400                      | 546,000                 | 175                           | ---                         | 546             | <0.5                    | <2             |
|               | 04-Mar-08        | N           | 67,600                   | 13,300                     | <5                       | ---                  | 7,910                      | 607,000                 | 185                           | ---                         | 534             | <0.5                    | <2             |
|               | 11-Mar-08        | N           | 66,100                   | 13,300                     | <5                       | ---                  | 7,920                      | 586,000                 | 175                           | ---                         | 571             | <0.5                    | <2             |
|               | 20-Mar-08        | N           | 70,900                   | 13,400                     | ---                      | ---                  | 8,190                      | 593,000                 | 200                           | 200                         | ---             | <0.5                    | <2             |
|               | 26-Mar-08        | N           | 71,000                   | 13,500                     | <25                      | ---                  | 8,160                      | 583,000                 | 183                           | ---                         | 583             | <0.5                    | <2             |
|               | 01-Apr-08        | N           | 60,500                   | 11,600                     | ---                      | ---                  | 7,010                      | 57,500                  | 290                           | <5                          | ---             | ---                     | <2             |
|               | 15-Apr-08        | N           | 67,100                   | 13,000                     | ---                      | ---                  | 7,710                      | 590,000                 | 190                           | <5                          | ---             | ---                     | <2             |
|               | 28-Apr-08        | N           | 67,000                   | 13,000                     | <5                       | ---                  | 8,030                      | 575,000                 | 200                           | <5                          | ---             | <0.5                    | <2             |
|               | 13-May-08        | N           | 63,400                   | 12,700                     | ---                      | ---                  | 7,780                      | 571,000                 | 185                           | <5                          | ---             | ---                     | <2             |
|               | 27-May-08        | N           | 62,600                   | 12,200                     | <5                       | ---                  | 7,420                      | 540,000                 | 193                           | ---                         | 551             | <0.5                    | <2             |
|               | 10-Jun-08        | N           | 63,000                   | 12,400                     | ---                      | ---                  | 7,670                      | 620,000                 | 180                           | <5                          | ---             | ---                     | <2             |
|               | 24-Jun-08        | N           | 65,700                   | 12,200                     | <5                       | ---                  | 7,690                      | 570,000                 | 185                           | ---                         | 533             | <0.5                    | <2             |
|               | 22-Jul-08        | N           | 59,700                   | 12,600                     | <5                       | ---                  | 7,270                      | 534,000                 | 183                           | ---                         | 523             | <0.5                    | <2             |
|               | 20-Aug-08        | N           | 56,400                   | 11,200                     | <5                       | ---                  | 7,160                      | 540,000                 | 175                           | ---                         | 487             | <0.5                    | 160.0          |
|               | 16-Sep-08        | N           | 54,200                   | 10,900                     | <5                       | ---                  | 7,150                      | 560,000                 | 160                           | ---                         | 496             | <0.5                    | <2             |
|               | <b>14-Oct-08</b> | <b>N</b>    | <b>53,700</b>            | <b>10,400</b>              | <b>&lt;5</b>             | <b>---</b>           | <b>6,840</b>               | <b>535,000</b>          | <b>189</b>                    | <b>---</b>                  | <b>467</b>      | <b>&lt;0.5</b>          | <b>&lt;2</b>   |
| MW-38D        | 17-Jul-07        | N           | 352,000                  | ---                        | 7.9                      | 7.49                 | 45,600                     | 4,710,000               | 35.0                          | <5                          | 7,240           | <0.5                    | <2             |
|               | 23-Jan-08        | N           | 353,000                  | <20,000                    | <100                     | ---                  | 43,100                     | 4,560,000               | 40.0                          | ---                         | 7,690           | <2.5                    | <2             |
|               | 04-Mar-08        | N           | 343,000                  | 7,150                      | 8.6                      | ---                  | 44,500                     | 5,070,000               | 31.0                          | ---                         | 7,390           | <0.5                    | <2             |
|               | 11-Mar-08        | N           | 363,000                  | 7,580                      | <25                      | ---                  | 47,000                     | 4,970,000               | 32.0                          | ---                         | 7,710           | <0.5                    | <2             |
|               | 20-Mar-08        | N           | 361,000                  | 7,720                      | ---                      | ---                  | 44,900                     | 5,020,000               | 32.0                          | 32                          | ---             | <2.5                    | <2             |
|               | 20-Mar-08        | FD          | 359,000                  | 7,720                      | ---                      | ---                  | 45,100                     | 4,920,000               | 33.0                          | 33                          | ---             | <2.5                    | <2             |
|               | 26-Mar-08        | N           | 362,000                  | 7,580                      | <25                      | ---                  | 44,700                     | 4,940,000               | 31.0                          | ---                         | 7,830           | <1                      | <2             |
|               | 01-Apr-08        | N           | 353,000                  | 7,040                      | ---                      | ---                  | 46,100                     | 4,870,000               | 31.0                          | <5                          | ---             | ---                     | <2             |
|               | 01-Apr-08        | FD          | 335,000                  | 6,680                      | ---                      | ---                  | 44,000                     | 4,900,000               | 32.0                          | <5                          | ---             | ---                     | <2             |
|               | 15-Apr-08        | N           | 38,500                   | 7,440                      | ---                      | ---                  | 45,200                     | 5,010,000               | 31.0                          | <5                          | ---             | ---                     | <2             |
|               | 15-Apr-08        | FD          | 405,000                  | 7,500                      | ---                      | ---                  | 46,300                     | 5,330,000               | 32.0                          | <5                          | ---             | ---                     | <2             |
|               | 28-Apr-08        | N           | 346,000                  | 7,700                      | <25                      | ---                  | 43,700                     | 4,740,000               | 32.0                          | <5                          | ---             | <0.5                    | <2             |
|               | 13-May-08        | N           | 360,000                  | 7,020                      | ---                      | ---                  | 46,400                     | 4,690,000               | 36.0                          | <5                          | ---             | ---                     | 2.0            |
|               | 27-May-08        | N           | 337,000                  | 6,670                      | 7.7                      | ---                  | 44,500                     | 4,600,000               | 32.0                          | ---                         | 7,580           | <0.5                    | <2             |
|               | 10-Jun-08        | N           | 352,000                  | 6,960                      | ---                      | ---                  | 44,900                     | 4,860,000               | ---                           | ---                         | ---             | ---                     | <2             |
|               | 24-Jun-08        | N           | 377,000                  | 6,610                      | 9.0                      | ---                  | 45,200                     | 5,000,000               | 32.5                          | ---                         | 7,420           | <0.5                    | <2             |
|               | 22-Jul-08        | N           | 369,000                  | 7,300                      | 8.5                      | ---                  | 45,100                     | 4,900,000               | 32.5                          | ---                         | 7,490           | <0.5                    | <2             |
|               | 20-Aug-08        | N           | 364,000                  | 6,950                      | 8.9                      | ---                  | 43,200                     | 3,200,000               | 31.3                          | ---                         | 7,230           | <2.5                    | 80.0           |
|               | 16-Sep-08        | N           | 367,000                  | 7,240                      | 8.6                      | ---                  | 44,700                     | 4,870,000               | 32.0                          | ---                         | 7,390           | <0.5                    | <2             |
|               | 16-Sep-08        | FD          | 339,000                  | 7,750                      | <25                      | ---                  | 44,400                     | 4,910,000               | 33.0                          | ---                         | 7,430           | <0.5                    | <2             |
|               | <b>14-Oct-08</b> | <b>N</b>    | <b>361,000</b>           | <b>8,180</b>               | <b>&lt;25</b>            | <b>---</b>           | <b>45,100</b>              | <b>5,080,000</b>        | <b>33.3</b>                   | <b>---</b>                  | <b>7,360</b>    | <b>&lt;0.5</b>          | <b>&lt;2</b>   |

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PG&E Topock  
Needles, California  
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| Location Name | Sample Date      | Sample Type | Dissolved Calcium (µg/L) | Dissolved Magnesium (µg/L) | Dissolved Arsenic (µg/L) | Total Arsenic (µg/L) | Dissolved Potassium (µg/L) | Dissolved Sodium (µg/L) | Alkalinity bicarbonate (mg/L) | Alkalinity carbonate (mg/L) | Chloride (mg/L) | Orthophosphate-p (mg/L) | Sulfide (mg/L) |
|---------------|------------------|-------------|--------------------------|----------------------------|--------------------------|----------------------|----------------------------|-------------------------|-------------------------------|-----------------------------|-----------------|-------------------------|----------------|
| PTR-1         | 19-Jul-07        | N           | 254,000                  | ---                        | <5                       | 1.94                 | 21,500                     | 1,500,000               | 97.5                          | <5                          | 1,940           | <0.5                    | <2             |
|               | 25-Jan-08        | N           | 206,000                  | 37,500                     | <5                       | ---                  | 16,400                     | 1,190,000               | 123                           | ---                         | 1,610           | <0.5                    | <2             |
|               | 06-Mar-08        | N           | 171,000                  | 36,500                     | <25                      | ---                  | 12,800                     | 882,000                 | 208                           | ---                         | 1,360           | <500                    | <2             |
|               | 11-Mar-08        | N           | 166,000                  | 36,100                     | <25                      | ---                  | 13,000                     | 872,000                 | 158                           | ---                         | 1,190           | <5                      | <2             |
|               | 20-Mar-08        | N           | 155,000                  | 32,800                     | ---                      | ---                  | 11,500                     | 758,000                 | 203                           | 203                         | ---             | <50                     | <2             |
|               | 27-Mar-08        | N           | 112,000                  | 21,600                     | <25                      | ---                  | 6,680                      | 461,000                 | 185                           | ---                         | 608             | <20                     | 3.2            |
|               | 01-Apr-08        | N           | 254,000                  | 47,500                     | ---                      | ---                  | 15,600                     | 1,050,000               | 600                           | <5                          | ---             | ---                     | <2             |
|               | 16-Apr-08        | N           | 175,000                  | 40,900                     | ---                      | ---                  | 12,500                     | 833,000                 | 138                           | <5                          | ---             | ---                     | <2             |
|               | 29-Apr-08        | N           | 170,000                  | 35,100                     | 13.4                     | ---                  | 11,300                     | 767,000                 | 298                           | <5                          | ---             | <5                      | 4.8            |
|               | 15-May-08        | N           | 188,000                  | 37,800                     | ---                      | ---                  | 11,800                     | 818,000                 | 300                           | <5                          | ---             | ---                     | 3.6            |
|               | 29-May-08        | N           | 157,000                  | 35,700                     | <5                       | ---                  | 13,800                     | 856,000                 | 183                           | ---                         | 1,190           | <0.5                    | 4.0            |
|               | 12-Jun-08        | N           | 171,000                  | 38,900                     | ---                      | ---                  | 14,200                     | 965,000                 | 148                           | <5                          | ---             | ---                     | <2             |
|               | 19-Jun-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 26-Jun-08        | N           | 173,000                  | 36,100                     | 7.5                      | ---                  | 13,600                     | 942,000                 | 150                           | ---                         | 1,290           | <0.5                    | <2             |
|               | 01-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 24-Jul-08        | N           | 163,000                  | 37,700                     | <5                       | ---                  | 12,300                     | 916,000                 | 160                           | ---                         | 1,180           | <0.5                    | 16.0           |
|               | 19-Aug-08        | N           | 170,000                  | 37,500                     | 6.0                      | ---                  | 14,200                     | 979,000                 | 140                           | ---                         | 1,330           | <0.5                    | 320.0          |
|               | 18-Sep-08        | N           | 182,000                  | 40,200                     | 8.5                      | ---                  | 15,000                     | 1,040,000               | 115                           | ---                         | 1,450           | <0.5                    | <2             |
|               | <b>16-Oct-08</b> | <b>N</b>    | <b>176,000</b>           | <b>40,600</b>              | <b>&lt;5</b>             | <b>---</b>           | <b>16,300</b>              | <b>992,000</b>          | <b>106</b>                    | <b>---</b>                  | <b>1,440</b>    | <b>&lt;0.5</b>          | <b>2.0</b>     |
| PTR-2         | 18-Jul-07        | N           | 335,000                  | ---                        | <5                       | 1.99                 | 23,200                     | 1,610,000               | 92.5                          | <5                          | 2,200           | <0.5                    | <2             |
|               | 25-Jan-08        | N           | 427,000                  | 34,400                     | <10                      | ---                  | 25,000                     | 1,450,000               | 103                           | ---                         | 2,060           | <0.5                    | 2.0            |
|               | 06-Mar-08        | N           | 407,000                  | 29,200                     | <25                      | ---                  | 26,800                     | 1,780,000               | 92.5                          | ---                         | 2,460           | <1                      | <2             |
|               | 11-Mar-08        | N           | 393,000                  | 27,200                     | <5                       | ---                  | 26,300                     | 1,770,000               | 92.5                          | ---                         | 2,470           | <0.5                    | <2             |
|               | 20-Mar-08        | N           | 151,000                  | 18,000                     | ---                      | ---                  | 17,300                     | 1,220,000               | 148                           | 148                         | ---             | <250                    | <2             |
|               | 27-Mar-08        | N           | 88,500                   | 13,000                     | <25                      | ---                  | 11,100                     | 830,000                 | 120                           | ---                         | 1,090           | <500                    | <2             |
|               | 01-Apr-08        | N           | 404,000                  | 28,900                     | ---                      | ---                  | 28,500                     | 2,120,000               | 145                           | <5                          | ---             | ---                     | <2             |
|               | 15-Apr-08        | N           | 241,000                  | 23,900                     | ---                      | ---                  | 13,900                     | 919,000                 | 143                           | <5                          | ---             | ---                     | <2             |
|               | 29-Apr-08        | N           | 410,000                  | 25,300                     | 5.6                      | ---                  | 26,200                     | 1,920,000               | 120                           | <5                          | ---             | <1                      | <2             |
|               | 15-May-08        | N           | 396,000                  | 26,900                     | ---                      | ---                  | 28,800                     | 1,970,000               | 105                           | <5                          | ---             | ---                     | <2             |
|               | 28-May-08        | N           | 302,000                  | 19,700                     | 7.7                      | ---                  | 22,800                     | 1,730,000               | 82.5                          | ---                         | 2,620           | <1                      | <2             |
|               | 10-Jun-08        | N           | 397,000                  | 25,200                     | ---                      | ---                  | 26,200                     | 203,000                 | 95.0                          | <5                          | ---             | ---                     | <2             |
|               | 19-Jun-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 26-Jun-08        | N           | 397,000                  | 24,000                     | <5                       | ---                  | 26,700                     | 1,910,000               | 82.5                          | ---                         | 2,650           | <1                      | <2             |
|               | 01-Jul-08        | N           | ---                      | ---                        | ---                      | ---                  | ---                        | ---                     | ---                           | ---                         | ---             | ---                     | ---            |
|               | 24-Jul-08        | N           | 396,000                  | 26,400                     | <5                       | ---                  | 25,900                     | 1,960,000               | 95                            | ---                         | 2,660           | <2.5                    | 4              |
|               | 19-Aug-08        | N           | 254,000                  | 26,100                     | <25                      | ---                  | 17,800                     | 1,050,000               | 125                           | ---                         | 1,580           | <0.5                    | 80.0           |
|               | 18-Sep-08        | N           | 281,000                  | 23,400                     | 7.8                      | ---                  | 21,000                     | 1,520,000               | 75.0                          | ---                         | 1,380           | <0.5                    | <2             |
|               | <b>16-Oct-08</b> | <b>N</b>    | <b>354,000</b>           | <b>26,600</b>              | <b>&lt;25</b>            | <b>---</b>           | <b>26,100</b>              | <b>1,740,000</b>        | <b>86.9</b>                   | <b>---</b>                  | <b>2,630</b>    | <b>&lt;0.5</b>          | <b>&lt;2</b>   |

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| Location Name   | Sample Date | Sample Type | Dissolved Calcium (µg/L) | Dissolved Magnesium (µg/L) | Dissolved Arsenic (µg/L) | Total Arsenic (µg/L) | Dissolved Potassium (µg/L) | Dissolved Sodium (µg/L) | Alkalinity bicarbonate (mg/L) | Alkalinity carbonate (mg/L) | Chloride (mg/L) | Orthophosphate-p (mg/L) | Sulfide (mg/L) |
|-----------------|-------------|-------------|--------------------------|----------------------------|--------------------------|----------------------|----------------------------|-------------------------|-------------------------------|-----------------------------|-----------------|-------------------------|----------------|
| Equipment Blank | 17-Jul-07   | EB          | <1,000                   | ---                        | <5                       | <1                   | <1,000                     | <1,000                  | <5                            | <5                          | <0.5            | <0.5                    | <2             |
|                 | 22-Jan-08   | EB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | <2             |
|                 | 05-Mar-08   | EB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | <2             |
|                 | 11-Mar-08   | EB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | <2             |
|                 | 18-Mar-08   | EB          | <1,000                   | <1,000                     | ---                      | ---                  | <1,000                     | <1,000                  | <5                            | <5                          | <0.5            | <0.5                    | <2             |
|                 | 25-Mar-08   | EB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | <2             |
|                 | 03-Apr-08   | FB          | <1,000                   | <1,000                     | ---                      | ---                  | <1,000                     | <1,000                  | <5                            | <5                          | ---             | ---                     | <2             |
|                 | 15-Apr-08   | EB          | <1,000                   | <1,000                     | ---                      | ---                  | <1,000                     | <1,000                  | <5                            | <5                          | ---             | ---                     | <2             |
|                 | 28-Apr-08   | EB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | <5                          | ---             | <0.5                    | <2             |
|                 | 13-May-08   | EB          | <1,000                   | <1,000                     | ---                      | ---                  | <1,000                     | <1,000                  | <5                            | <5                          | ---             | ---                     | <2             |
|                 | 28-May-08   | EB          | <1,000                   | <1,000                     | ---                      | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | <2             |
|                 | 10-Jun-08   | EB          | <1,000                   | <1,000                     | ---                      | ---                  | <1,000                     | <1,000                  | <5                            | <5                          | ---             | ---                     | <2             |
|                 | 24-Jun-08   | EB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | 2.0            |
|                 | 22-Jul-08   | EB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | 1.38            | <0.5                    | <2             |
|                 | 20-Aug-08   | EB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | 1.77            | <0.5                    | <2             |
|                 | 16-Sep-08   | EB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | <2             |
|                 | 14-Oct-08   | EB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | <2             |
| Field Blank     | 17-Jul-07   | FB          | <1,000                   | ---                        | <5                       | <1                   | <1,000                     | <1,000                  | <5                            | <5                          | <0.5            | <0.5                    | <2             |
|                 | 22-Jan-08   | FB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | 116             | <0.5                    | <2             |
|                 | 05-Mar-08   | FB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | <2             |
|                 | 11-Mar-08   | FB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | 1,590                   | <5                            | ---                         | <0.5            | <0.5                    | <2             |
|                 | 18-Mar-08   | FB          | <1,000                   | <1,000                     | ---                      | ---                  | <1,000                     | <1,000                  | <5                            | <5                          | 0.78            | <0.5                    | <2             |
|                 | 25-Mar-08   | FB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | <2             |
|                 | 03-Apr-08   | FB          | <1,000                   | <1,000                     | ---                      | ---                  | <1,000                     | <1,000                  | <5                            | <5                          | ---             | ---                     | <2             |
|                 | 15-Apr-08   | FB          | <1,000                   | <1,000                     | ---                      | ---                  | <1,000                     | <1,000                  | <5                            | <5                          | ---             | ---                     | <2             |
|                 | 28-Apr-08   | FB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | <5                          | ---             | <0.5                    | <2             |
|                 | 13-May-08   | FB          | <1,000                   | <1,000                     | ---                      | ---                  | <1,000                     | <1,000                  | 1.0                           | <5                          | ---             | ---                     | <2             |
|                 | 28-May-08   | FB          | <1,000                   | <1,000                     | ---                      | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | <2             |
|                 | 10-Jun-08   | FB          | <1,000                   | <1,000                     | ---                      | ---                  | <1,000                     | <1,000                  | <5                            | <5                          | ---             | ---                     | <2             |
|                 | 24-Jun-08   | FB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | 1.15            | <0.5                    | <2             |
|                 | 22-Jul-08   | FB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | 1.45            | <0.5                    | <2             |
|                 | 19-Aug-08   | FB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | <2             |
|                 | 16-Sep-08   | FB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | <2             |
|                 | 14-Oct-08   | FB          | <1,000                   | <1,000                     | <5                       | ---                  | <1,000                     | <1,000                  | <5                            | ---                         | <0.5            | <0.5                    | <2             |

**Table 4**  
**Summary of Secondary Analytical Parameters**

PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test

| Location Name | Sample Date | Sample Type | Dissolved Calcium (µg/L) | Dissolved Magnesium (µg/L) | Dissolved Arsenic (µg/L) | Total Arsenic (µg/L) | Dissolved Potassium (µg/L) | Dissolved Sodium (µg/L) | Alkalinity bicarbonate (mg/L) | Alkalinity carbonate (mg/L) | Chloride (mg/L) | Orthophosphate-p (mg/L) | Sulfide (mg/L) |
|---------------|-------------|-------------|--------------------------|----------------------------|--------------------------|----------------------|----------------------------|-------------------------|-------------------------------|-----------------------------|-----------------|-------------------------|----------------|
|---------------|-------------|-------------|--------------------------|----------------------------|--------------------------|----------------------|----------------------------|-------------------------|-------------------------------|-----------------------------|-----------------|-------------------------|----------------|

Notes:

Most recent data indicated in **BOLD**

- a Samples were diluted in the laboratory
- ft bgs Feet below ground surface
- mg/L Milligrams per liter
- µg/L Micrograms per liter
- < Symbol indicates not detected at or above laboratory detection limit as noted.
- EB Equipment blank
- FB Field blank
- FD Field duplicate
- J Reported value is estimated.
- N Normal
- NA Not applicable
- Dissolved Samples were field filtered with a 0.45 micron filter.
- Not analyzed/not sampled
- \* PTR-1 Screen: 125-160 and 175-220 ft bgs. PTR-2 Screen: 118-158 and 173-218 ft bgs.



**Table 5**  
**Summary of Monitoring Information**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Uplands Reductive Zone In-Situ Pilot Test

| Location | Sample ID    | Sampler        | Sample Date | Sample Time | Laboratory | Test Method | Analyte                    | Analysis Date | Analyst Name         |
|----------|--------------|----------------|-------------|-------------|------------|-------------|----------------------------|---------------|----------------------|
| PT-7S    | PT-7S-081015 | Mike Gallagher | 10/15/2008  | 13:10       | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.8      | Arsenic                    | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Calcium                    | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Chromium                   | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Magnesium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Manganese                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Potassium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |              |                |             |             | EMXT       | E300.0      | Chloride-cl                | 18-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Sulfate                    | 18-Oct-08     | Ha Le                |
|          |              |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |              |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
| PT-7M    | PT-7M-081015 | Mike Gallagher | 10/15/2008  | 15:00       | EMXT       | SM4500S     | Sulfide                    | 20-Oct-08     | Romy Marasigan       |
|          |              |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 20-Oct-08     | Emmery Lee           |
|          |              |                |             |             | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.8      | Arsenic                    | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Calcium                    | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Chromium                   | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Magnesium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Manganese                  | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Potassium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |              |                |             |             | EMXT       | E300.0      | Chloride-cl                | 18-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 17-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 17-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 17-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Sulfate                    | 17-Oct-08     | Ha Le                |
|          |              |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |              |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
|          |              |                |             |             | EMXT       | SM4500S     | Sulfide                    | 20-Oct-08     | Romy Marasigan       |
|          |              |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 21-Oct-08     | Emmery Lee           |
|          |              |                |             |             |            |             |                            |               |                      |

**Table 5**  
**Summary of Monitoring Information**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Uplands Reductive Zone In-Situ Pilot Test

| Location | Sample ID    | Sampler        | Sample Date | Sample Time | Laboratory | Test Method | Analyte                    | Analysis Date | Analyst Name         |
|----------|--------------|----------------|-------------|-------------|------------|-------------|----------------------------|---------------|----------------------|
| PT-7D    | PT-7D-081015 | Mike Gallagher | 10/15/2008  | 14:15       | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.8      | Arsenic                    | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Calcium                    | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Chromium                   | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Magnesium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Manganese                  | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Potassium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |              |                |             |             | EMXT       | E300.0      | Chloride-cl                | 18-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 17-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 17-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 17-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Sulfate                    | 17-Oct-08     | Ha Le                |
|          |              |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |              |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
| PT-8S    | PT-8S-081015 | Mike Gallagher | 10/15/2008  | 10:15       | EMXT       | SM4500S     | Sulfide                    | 20-Oct-08     | Romy Marasigan       |
|          |              |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 21-Oct-08     | Emmery Lee           |
|          |              |                |             |             | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.8      | Arsenic                    | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Calcium                    | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Chromium                   | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Magnesium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Manganese                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Potassium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |              |                |             |             | EMXT       | E300.0      | Chloride-cl                | 18-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 17-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Sulfate                    | 16-Oct-08     | Ha Le                |
|          |              |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |              |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
|          |              |                |             |             | EMXT       | SM4500S     | Sulfide                    | 20-Oct-08     | Romy Marasigan       |
|          |              |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 21-Oct-08     | Emmery Lee           |

**Table 5**  
**Summary of Monitoring Information**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Uplands Reductive Zone In-Situ Pilot Test

| Location | Sample ID    | Sampler        | Sample Date | Sample Time | Laboratory | Test Method | Analyte                    | Analysis Date | Analyst Name         |
|----------|--------------|----------------|-------------|-------------|------------|-------------|----------------------------|---------------|----------------------|
| PT-8M    | PT-8M-081015 | Mike Gallagher | 10/15/2008  | 11:30       | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.8      | Arsenic                    | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Calcium                    | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Chromium                   | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Magnesium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Manganese                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Potassium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |              |                |             |             | EMXT       | E300.0      | Chloride-cl                | 18-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 18-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Sulfate                    | 18-Oct-08     | Ha Le                |
|          |              |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |              |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
| PT-8D    | PT-8D-081015 | Mike Gallagher | 10/15/2008  | 10:50       | EMXT       | SM4500S     | Sulfide                    | 20-Oct-08     | Romy Marasigan       |
|          |              |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 20-Oct-08     | Emmery Lee           |
|          |              |                |             |             | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.8      | Arsenic                    | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Calcium                    | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Chromium                   | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Magnesium                  | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Manganese                  | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Potassium                  | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |              |                |             |             | EMXT       | E300.0      | Chloride-cl                | 19-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 17-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Sulfate                    | 19-Oct-08     | Ha Le                |
|          |              |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |              |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
|          |              |                |             |             | EMXT       | SM4500S     | Sulfide                    | 20-Oct-08     | Romy Marasigan       |
|          |              |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 20-Oct-08     | Emmery Lee           |

**Table 5**  
**Summary of Monitoring Information**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Uplands Reductive Zone In-Situ Pilot Test

| Location | Sample ID    | Sampler        | Sample Date | Sample Time | Laboratory | Test Method | Analyte                    | Analysis Date | Analyst Name         |
|----------|--------------|----------------|-------------|-------------|------------|-------------|----------------------------|---------------|----------------------|
| PT-9S    | PT-9S-081015 | Mike Gallagher | 10/15/2008  | 8:10        | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.8      | Arsenic                    | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Calcium                    | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Chromium                   | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Magnesium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Manganese                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Potassium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |              |                |             |             | EMXT       | E300.0      | Chloride-cl                | 19-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 19-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Sulfate                    | 19-Oct-08     | Ha Le                |
|          |              |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |              |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
| PT-9M    | PT-9M-081015 | Mike Gallagher | 10/15/2008  | 9:30        | EMXT       | SM4500S     | Sulfide                    | 20-Oct-08     | Romy Marasigan       |
|          |              |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 20-Oct-08     | Emmery Lee           |
|          |              |                |             |             | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.8      | Arsenic                    | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Calcium                    | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Chromium                   | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Magnesium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Manganese                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Potassium                  | 23-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |              |                |             |             | EMXT       | E300.0      | Chloride-cl                | 19-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 19-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Sulfate                    | 19-Oct-08     | Ha Le                |
|          |              |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |              |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
|          |              |                |             |             | EMXT       | SM4500S     | Sulfide                    | 20-Oct-08     | Romy Marasigan       |
|          |              |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 27-Oct-08     | Emmery Lee           |

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November 2008 Monitoring Report for the Uplands Reductive Zone In-Situ Pilot Test

| Location | Sample ID    | Sampler        | Sample Date | Sample Time | Laboratory | Test Method | Analyte                    | Analysis Date | Analyst Name         |
|----------|--------------|----------------|-------------|-------------|------------|-------------|----------------------------|---------------|----------------------|
| PT-9D    | PT-9D-081015 | Mike Gallagher | 10/15/2008  | 8:55        | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.8      | Arsenic                    | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Calcium                    | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Chromium                   | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Magnesium                  | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Manganese                  | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Potassium                  | 24-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|          |              |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |              |                |             |             | EMXT       | E300.0      | Chloride-cl                | 27-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Sulfate                    | 19-Oct-08     | Ha Le                |
|          |              |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |              |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
| MW-11    | MW-11-081014 | Mike Gallagher | 10/14/2008  | 13:15       | EMXT       | SM4500S     | Sulfide                    | 20-Oct-08     | Romy Marasigan       |
|          |              |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 27-Oct-08     | Emmery Lee           |
|          |              |                |             |             | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |              |                |             |             | EMXT       | E200.8      | Arsenic                    | 21-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Calcium                    | 21-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Chromium                   | 21-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 21-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Magnesium                  | 21-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Manganese                  | 21-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Potassium                  | 21-Oct-08     | Christopher Capulong |
|          |              |                |             |             | EMXT       | E200.8      | Sodium                     | 21-Oct-08     | Christopher Capulong |
|          |              |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |              |                |             |             | EMXT       | E300.0      | Chloride-cl                | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 15-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 15-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 15-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E300.0      | Sulfate                    | 16-Oct-08     | Ha Le                |
|          |              |                |             |             | EMXT       | E376.1      | Sulfide                    | 17-Oct-08     | Romy Maragisan       |
|          |              |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |              |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |              |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 17-Oct-08     | Jadelyn Chun         |
|          |              |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 18-Oct-08     | Emmery Lee           |

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November 2008 Monitoring Report for the Uplands Reductive Zone In-Situ Pilot Test

| Location | Sample ID     | Sampler        | Sample Date | Sample Time | Laboratory | Test Method | Analyte                    | Analysis Date | Analyst Name         |
|----------|---------------|----------------|-------------|-------------|------------|-------------|----------------------------|---------------|----------------------|
| MW-24A   | MW-24A-081016 | Mike Gallagher | 10/16/2008  | 9:10        | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |               |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |               |                |             |             | EMXT       | E200.8      | Arsenic                    | 24-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Calcium                    | 22-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Chromium                   | 24-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 24-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Magnesium                  | 24-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Manganese                  | 24-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Potassium                  | 24-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|          |               |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |               |                |             |             | EMXT       | E300.0      | Chloride-cl                | 21-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 17-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 17-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 17-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Sulfate                    | 21-Oct-08     | Ha Le                |
|          |               |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |               |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |               |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |               |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
| MW-24B   | MW-24B-081016 | Mike Gallagher | 10/16/2008  | 8:25        | EMXT       | SM4500S     | Sulfide                    | 21-Oct-08     | Romy Marasigan       |
|          |               |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 21-Oct-08     | Emmery Lee           |
|          |               |                |             |             | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |               |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |               |                |             |             | EMXT       | E200.8      | Arsenic                    | 24-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Calcium                    | 24-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Chromium                   | 24-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 24-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Magnesium                  | 24-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Manganese                  | 24-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Potassium                  | 24-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|          |               |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |               |                |             |             | EMXT       | E300.0      | Chloride-cl                | 21-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 17-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 17-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 17-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Sulfate                    | 21-Oct-08     | Ha Le                |
|          |               |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |               |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |               |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |               |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
|          |               |                |             |             | EMXT       | SM4500S     | Sulfide                    | 21-Oct-08     | Romy Marasigan       |
|          |               |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 20-Oct-08     | Emmery Lee           |

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PG&E Topock  
Needles, California  
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| Location | Sample ID      | Sampler        | Sample Date | Sample Time | Laboratory | Test Method | Analyte                    | Analysis Date | Analyst Name         |
|----------|----------------|----------------|-------------|-------------|------------|-------------|----------------------------|---------------|----------------------|
| MW-24B   | MW-24B-081016D | Mike Gallagher | 10/16/2008  | 8:30        | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |                |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |                |                |             |             | EMXT       | E200.8      | Arsenic                    | 24-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Calcium                    | 24-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Chromium                   | 24-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 24-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Magnesium                  | 24-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Manganese                  | 24-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Potassium                  | 24-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|          |                |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |                |                |             |             | EMXT       | E300.0      | Chloride-cl                | 21-Oct-08     | Ha Le                |
|          |                |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 17-Oct-08     | Ha Le                |
|          |                |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 17-Oct-08     | Ha Le                |
|          |                |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 17-Oct-08     | Ha Le                |
|          |                |                |             |             | EMXT       | E300.0      | Sulfate                    | 21-Oct-08     | Ha Le                |
|          |                |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |                |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |                |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
|          |                |                |             |             | EMXT       | SM4500S     | Sulfide                    | 21-Oct-08     | Romy Marasigan       |
|          |                |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 21-Oct-08     | Emmery Lee           |
| MW-38S   | MW-38S-081014  | Mike Gallagher | 10/14/2008  | 11:35       | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |                |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |                |                |             |             | EMXT       | E200.8      | Arsenic                    | 21-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Calcium                    | 21-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Chromium                   | 21-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 21-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Magnesium                  | 21-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Manganese                  | 21-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Potassium                  | 21-Oct-08     | Christopher Capulong |
|          |                |                |             |             | EMXT       | E200.8      | Sodium                     | 20-Oct-08     | Christopher Capulong |
|          |                |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |                |                |             |             | EMXT       | E300.0      | Chloride-cl                | 16-Oct-08     | Ha Le                |
|          |                |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 15-Oct-08     | Ha Le                |
|          |                |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 15-Oct-08     | Ha Le                |
|          |                |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 15-Oct-08     | Ha Le                |
|          |                |                |             |             | EMXT       | E300.0      | Sulfate                    | 16-Oct-08     | Ha Le                |
|          |                |                |             |             | EMXT       | E376.1      | Sulfide                    | 17-Oct-08     | Romy Maragisan       |
|          |                |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |                |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |                |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |                |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 17-Oct-08     | Jadelyn Chun         |
|          |                |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 18-Oct-08     | Emmery Lee           |

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| Location | Sample ID     | Sampler        | Sample Date | Sample Time | Laboratory | Test Method | Analyte                    | Analysis Date | Analyst Name         |
|----------|---------------|----------------|-------------|-------------|------------|-------------|----------------------------|---------------|----------------------|
| MW-38D   | MW-38D-081014 | Mike Gallagher | 10/14/2008  | 12:30       | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |               |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |               |                |             |             | EMXT       | E200.8      | Arsenic                    | 22-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Calcium                    | 22-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Chromium                   | 22-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 22-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Magnesium                  | 22-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Manganese                  | 22-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Potassium                  | 22-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Sodium                     | 20-Oct-08     | Christopher Capulong |
|          |               |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |               |                |             |             | EMXT       | E300.0      | Chloride-cl                | 17-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 15-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 16-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 15-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Sulfate                    | 16-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E376.1      | Sulfide                    | 17-Oct-08     | Romy Maragisan       |
|          |               |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |               |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |               |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |               |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 17-Oct-08     | Jadelyn Chun         |
|          |               |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 18-Oct-08     | Emmery Lee           |
| PTR-1    | PTR-1-081016  | Mike Gallagher | 10/16/2008  | 9:30        | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|          |               |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|          |               |                |             |             | EMXT       | E200.8      | Arsenic                    | 23-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Calcium                    | 23-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Chromium                   | 23-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 23-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Magnesium                  | 23-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Manganese                  | 23-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Potassium                  | 23-Oct-08     | Christopher Capulong |
|          |               |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|          |               |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|          |               |                |             |             | EMXT       | E300.0      | Chloride-cl                | 21-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 17-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 17-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 17-Oct-08     | Ha Le                |
|          |               |                |             |             | EMXT       | E300.0      | Sulfate                    | 21-Oct-08     | Ha Le                |
|          |               |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|          |               |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|          |               |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|          |               |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
|          |               |                |             |             | EMXT       | SM4500S     | Sulfide                    | 21-Oct-08     | Romy Maragisan       |
|          |               |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 20-Oct-08     | Emmery Lee           |



**Table 5**  
**Summary of Monitoring Information**  
PG&E Topock  
Needles, California

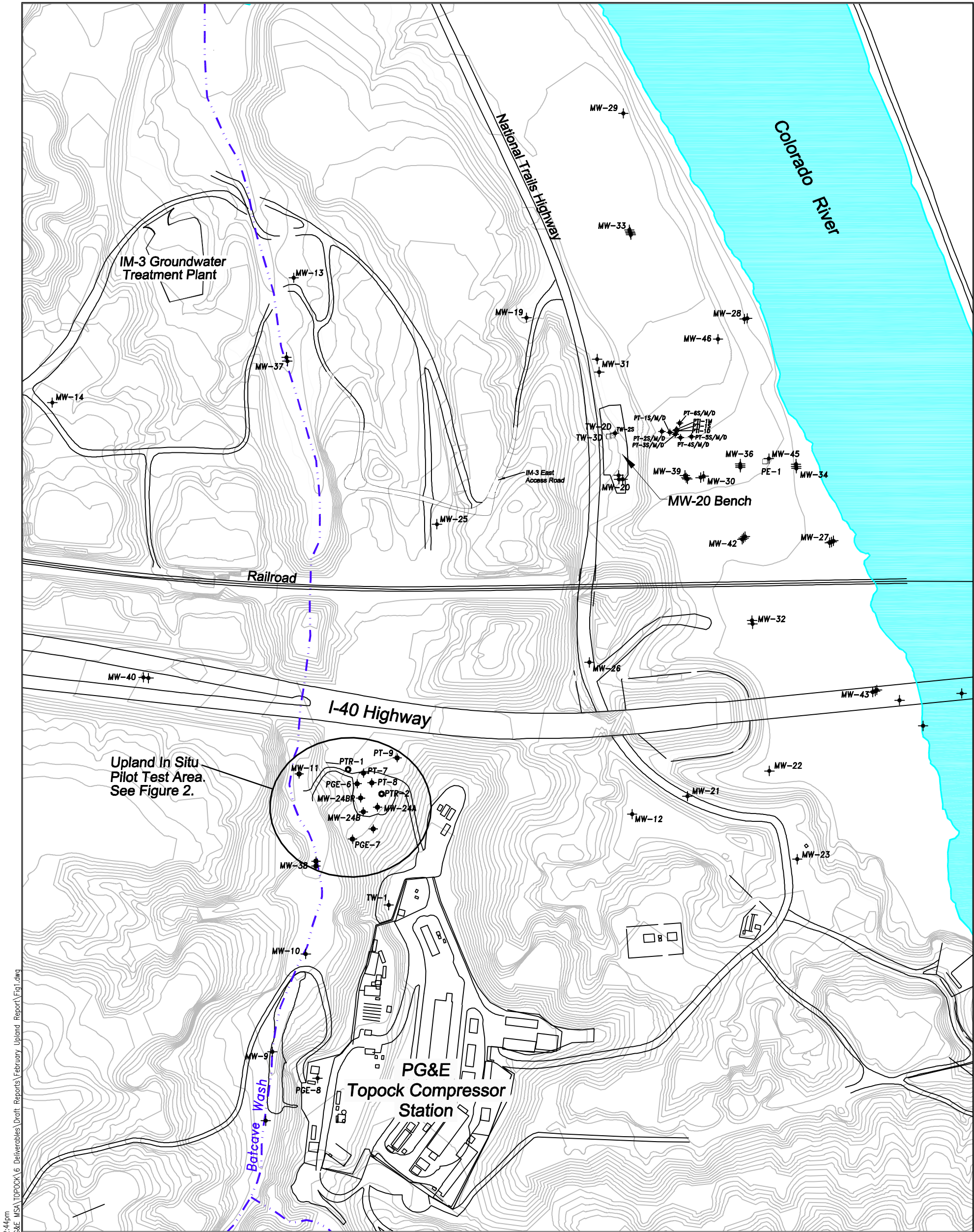
November 2008 Monitoring Report for the Uplands Reductive Zone In-Situ Pilot Test

| Location        | Sample ID    | Sampler        | Sample Date | Sample Time | Laboratory | Test Method | Analyte                    | Analysis Date | Analyst Name         |
|-----------------|--------------|----------------|-------------|-------------|------------|-------------|----------------------------|---------------|----------------------|
| PTR-2           | PTR-2-081016 | Mike Gallagher | 10/16/2008  | 9:20        | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|                 |              |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|                 |              |                |             |             | EMXT       | E200.8      | Arsenic                    | 24-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Calcium                    | 24-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Chromium                   | 24-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 24-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Magnesium                  | 24-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Manganese                  | 24-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Potassium                  | 24-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Sodium                     | 22-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|                 |              |                |             |             | EMXT       | E300.0      | Chloride-cl                | 21-Oct-08     | Ha Le                |
|                 |              |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 17-Oct-08     | Ha Le                |
|                 |              |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 17-Oct-08     | Ha Le                |
|                 |              |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 17-Oct-08     | Ha Le                |
|                 |              |                |             |             | EMXT       | E300.0      | Sulfate                    | 21-Oct-08     | Ha Le                |
|                 |              |                |             |             |            | IM-3        | Chromium, hexavalent-Field |               |                      |
|                 |              |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|                 |              |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|                 |              |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 23-Oct-08     | Jadelyn Chun         |
| EB-Upland Wells | EB-081014    | Mike Gallagher | 10/14/2008  | 12:00       | EMXT       | SM4500S     | Sulfide                    | 21-Oct-08     | Romy Marasigan       |
|                 |              |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 23-Oct-08     | Emmery Lee           |
|                 |              |                |             |             | EMXT       | E200.7      | Iron-Total                 | 23-Oct-08     | Tina Hoang           |
|                 |              |                |             |             | EMXT       | E200.7      | Manganese                  | 23-Oct-08     | Tina Hoang           |
|                 |              |                |             |             | EMXT       | E200.8      | Arsenic                    | 20-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Calcium                    | 20-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Chromium                   | 20-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Iron-Dissolved             | 20-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Magnesium                  | 20-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Manganese                  | 20-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Potassium                  | 20-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | EMXT       | E200.8      | Sodium                     | 20-Oct-08     | Christopher Capulong |
|                 |              |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent       | 17-Oct-08     | Michael Nonezyan     |
|                 |              |                |             |             | EMXT       | E300.0      | Chloride-cl                | 15-Oct-08     | Ha Le                |
|                 |              |                |             |             | EMXT       | E300.0      | Nitrate-n                  | 15-Oct-08     | Ha Le                |
|                 |              |                |             |             | EMXT       | E300.0      | Nitrite-n                  | 15-Oct-08     | Ha Le                |
|                 |              |                |             |             | EMXT       | E300.0      | Orthophosphate-p           | 15-Oct-08     | Ha Le                |
|                 |              |                |             |             | EMXT       | E300.0      | Sulfate                    | 15-Oct-08     | Ha Le                |
|                 |              |                |             |             | EMXT       | E376.1      | Sulfide                    | 17-Oct-08     | Romy Marasigan       |
|                 |              |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc            | 24-Oct-08     | Margaret Ridinger    |
|                 |              |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc              | 24-Oct-08     | Margaret Ridinger    |
|                 |              |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate     | 17-Oct-08     | Jadelyn Chun         |
|                 |              |                |             |             | EMXT       | SW5310B     | Total Organic Carbon       | 18-Oct-08     | Emmery Lee           |

**Table 5**  
**Summary of Monitoring Information**  
PG&E Topock  
Needles, California

November 2008 Monitoring Report for the Uplands Reductive Zone In-Situ Pilot Test

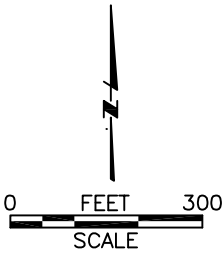
| Location        | Sample ID | Sampler        | Sample Date | Sample Time | Laboratory | Test Method | Analyte                | Analysis Date | Analyst Name         |
|-----------------|-----------|----------------|-------------|-------------|------------|-------------|------------------------|---------------|----------------------|
| FB-Upland Wells | FB-081014 | Mike Gallagher | 10/14/2008  | 10:00       | EMXT       | E200.7      | Iron-Total             | 23-Oct-08     | Tina Hoang           |
|                 |           |                |             |             | EMXT       | E200.7      | Manganese              | 23-Oct-08     | Tina Hoang           |
|                 |           |                |             |             | EMXT       | E200.8      | Arsenic                | 20-Oct-08     | Christopher Capulong |
|                 |           |                |             |             | EMXT       | E200.8      | Calcium                | 20-Oct-08     | Christopher Capulong |
|                 |           |                |             |             | EMXT       | E200.8      | Chromium               | 20-Oct-08     | Christopher Capulong |
|                 |           |                |             |             | EMXT       | E200.8      | Iron-Dissolved         | 20-Oct-08     | Christopher Capulong |
|                 |           |                |             |             | EMXT       | E200.8      | Magnesium              | 20-Oct-08     | Christopher Capulong |
|                 |           |                |             |             | EMXT       | E200.8      | Manganese              | 20-Oct-08     | Christopher Capulong |
|                 |           |                |             |             | EMXT       | E200.8      | Potassium              | 20-Oct-08     | Christopher Capulong |
|                 |           |                |             |             | EMXT       | E200.8      | Sodium                 | 20-Oct-08     | Christopher Capulong |
|                 |           |                |             |             | Truesdail  | E218.6      | Chromium, hexavalent   | 17-Oct-08     | Michael Nonezyan     |
|                 |           |                |             |             | EMXT       | E300.0      | Chloride-cl            | 15-Oct-08     | Ha Le                |
|                 |           |                |             |             | EMXT       | E300.0      | Nitrate-n              | 15-Oct-08     | Ha Le                |
|                 |           |                |             |             | EMXT       | E300.0      | Nitrite-n              | 15-Oct-08     | Ha Le                |
|                 |           |                |             |             | EMXT       | E300.0      | Orthophosphate-p       | 15-Oct-08     | Ha Le                |
|                 |           |                |             |             | EMXT       | E300.0      | Sulfate                | 15-Oct-08     | Ha Le                |
|                 |           |                |             |             | EMXT       | E376.1      | Sulfide                | 17-Oct-08     | Romy Maragisan       |
|                 |           |                |             |             | Ozark      | OHM-InHouse | Fluorescein-clc        | 24-Oct-08     | Margaret Ridinger    |
|                 |           |                |             |             | Ozark      | OHM-InHouse | Rhodamine-clc          | 24-Oct-08     | Margaret Ridinger    |
|                 |           |                |             |             | EMXT       | SM2320B     | Alkalinity bicarbonate | 17-Oct-08     | Jadelyn Chun         |
|                 |           |                |             |             | EMXT       | SW5310B     | Total Organic Carbon   | 18-Oct-08     | Emmery Lee           |



Date/Time : Wed, 05 Mar 2008 - 2:44pm  
User Name : mchiu  
Path Name : G:\Projects- Active\PG&E MSA\TOPOCK\6 Deliverables\Draft Reports\February Upland Report\Fig1.dwg  
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**Legend**

- ✦ Monitoring Well Locations
- Extraction Well Locations
- ✧ Injection Well Locations
- Recirculation Well Locations



|                  |                  |
|------------------|------------------|
| Project Director | Area Manager     |
| L. KELLOGG       | J. PETERS        |
| Task Manager     | Technical Review |
| J. ELY           | J. GILLOW        |
| Drawing Date     | Drawn By         |
| 4 MAR 08         | M. CHIU          |

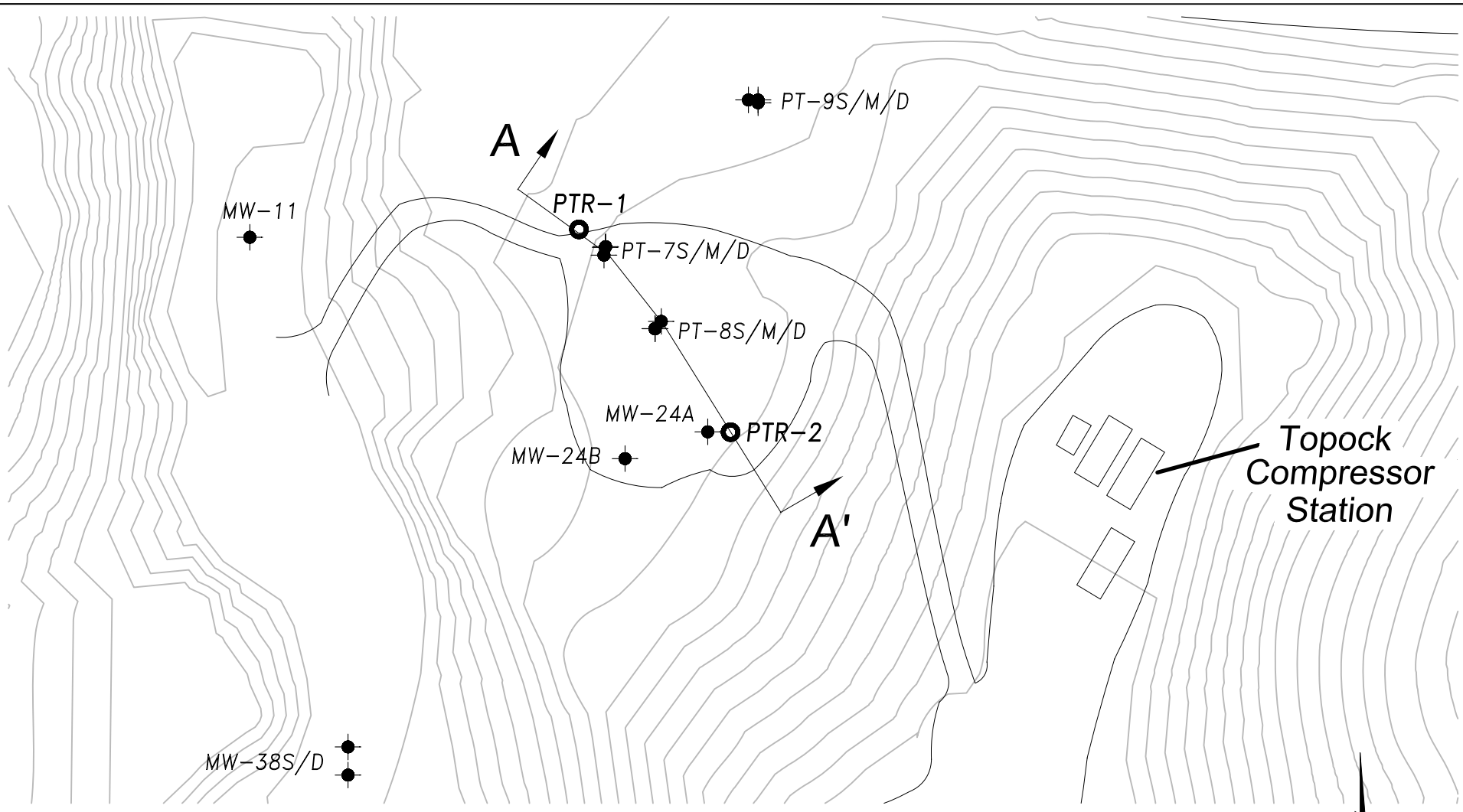
**ARCADIS**

ARCADIS, Inc.  
1050 Marina Way South  
Richmond, CA 94804  
Tel: 510-233-3200 Fax: 510-233-3204  
www.arcadis-us.com

**SITE PLAN  
PG&E TOPOCK FACILITY  
NEEDLES, CALIFORNIA**

|                |
|----------------|
| Project Number |
| RC000689.0001  |
| Figure         |
| 1              |

Acad Version : R17.0a (LMS Tech)  
 User Name : M100der  
 Date/Time : Tue, 06 May 2008 - 1:55pm  
 Path/Name : G:\Project\PG&E - Topock\Topock\_Fig2.dwg



### Legend

-  **Monitoring Well Locations**
-  **Recirculation Well Locations**
- S/M/D** **Shallow/Middle/Deep**

|                  |                  |
|------------------|------------------|
| Project Director | Area Manager     |
| L. KELLOGG       | J. PETERS        |
| Task Manager     | Technical Review |
| J. LUTRICK       | M. GENTILE       |
| Drawing Date     | Drawn By         |
| 29 APR 08        | M. CHIU          |



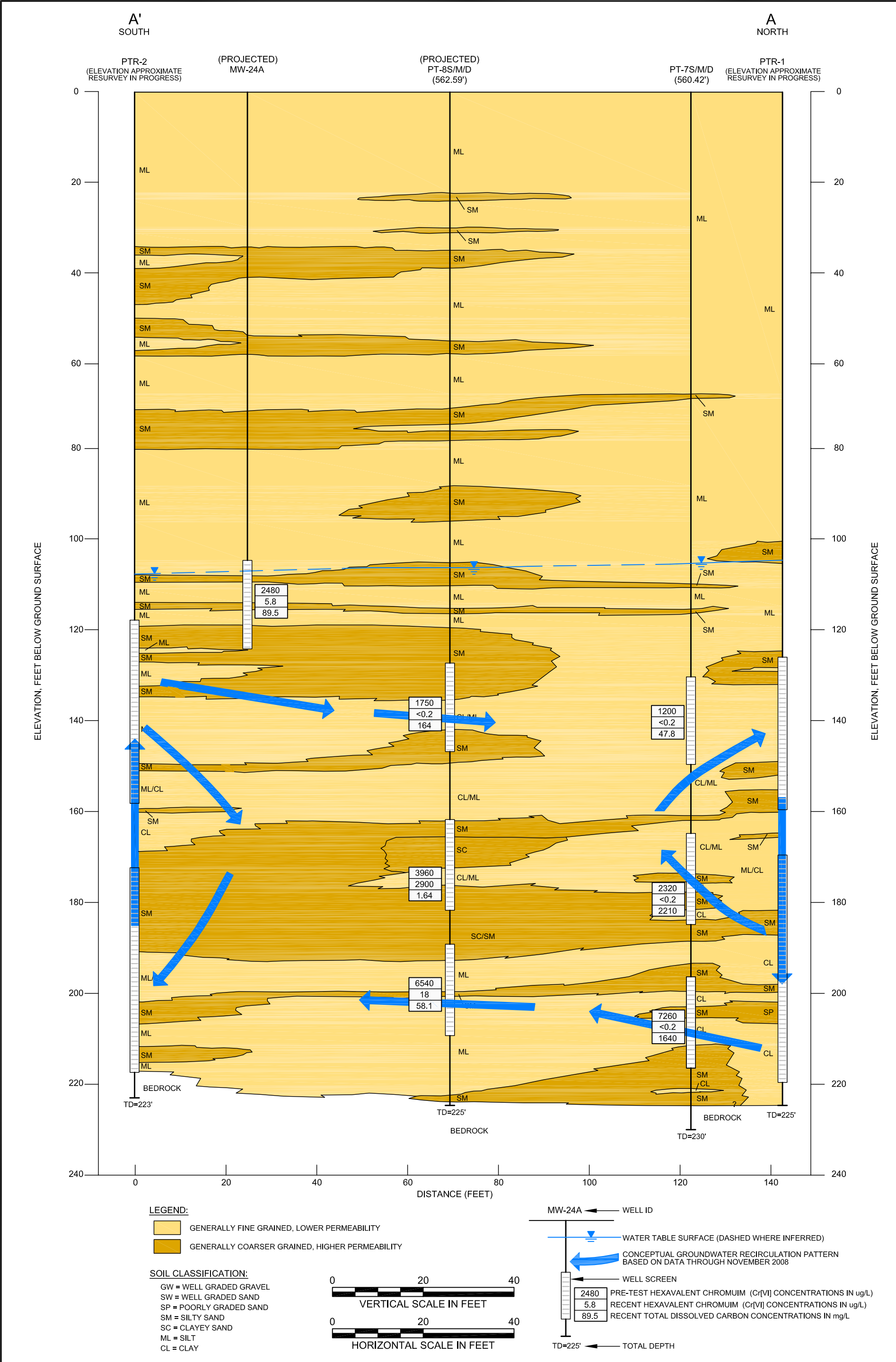
ARCADIS, Inc.  
 1050 Marina Way South  
 Richmond, CA 94804  
 Tel: 510-233-3200 Fax: 510-233-3204  
 www.arcadis-us.com

**UPLAND ISPT AREA**  
**PG&E TOPOCK FACILITY**  
**NEEDLES, CALIFORNIA**

Project Number  
 RC000689.0004

Figure  
 2





Appendix A

Communications



**Pacific Gas and  
Electric  
Company**

---

**Yvonne Meeks**  
Manager

Environmental Remediation  
Gas T&D Department

*Mailing Address*  
4325 South Higuera Sreet  
San Luis Obispo, CA 93401  
*Location*  
6588 Ontario Road  
San Luis Obispo, CA 93405  
Tel: (805) 234-2257  
Email: [yjm1@pge.com](mailto:yjm1@pge.com)

May 29, 2008

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

**Subject: Board Order R7-2007-0015  
PG&E Topock Compressor Station, Needles, California  
Upland In-Situ Pilot Test  
Changes in Pilot Test Operations**

Dear Mr. Purdue:

As we discussed yesterday, PG&E is submitting this letter is to notify the Regional Water Quality Control Board (RWQCB) that PG&E would like to temporarily discontinue injection of reagent for the Upland In-Situ Pilot Test (ISPT) operating under Board Order No. R7-2007-0015. Currently, the concentration of total dissolved carbon (TOC) within the aquifer is sufficient to sustain a viable in-situ reactive zone (IRZ). The plan is to withhold treatment discharge (reagent dosing via the recirculation wells) for approximately one month to monitor the recirculation systems ability to distribute the TOC sufficiently through the recirculation cell. There will be no change in the recirculation rate - the system will continue to circulate water during this time period.

To evaluate the TOC distribution, PG&E is recommending that weekly sampling of TOC be collected from eight wells: PT-7M, PT-7D, PT-8S, PT-8M, PT-8D, MW-24A, PTR-1, and PTR-2 during the one month evaluation period. After the evaluation period, PG&E will identify a path forward to continue the dosing of the Upland ISPT, potentially at a reduced rate, or will discuss other options with the RWQCB. All supplemental data collected and the plan for continued dosing the Upland ISPT will be communicated to the RWQCB.

From an engineering perspective, because of the continual evaluation inherent in any pilot test, the optimal approach to the Upland ISPT was anticipated to be conducted in a semi-continuous manner, with breaks as needed to assess progress or fine-tune approaches. PG&E discussed this type of phasing with the RWQCB during the preparation of the Waste Discharge Requirement (WDR), e.g. as described in Finding II.A.1, the pilot test "...is expected to take up to six months and will be conducted within a nine-month calendar period".

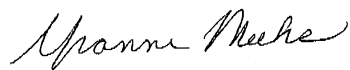
Based on our review of the Waste Discharge Requirements, it does not appear as though the proposed actions fall under the Effluent Limitations and Discharge Specifications IV.A.5 that states, "Any changes in the type of amount of treatment chemicals added to the process water, duration of the pilot test, or other specific design elements as described in this Board Order shall be made with prior written approval of the Regional Water Board's Executive Officer." or Provision V.A.1.e that states, "Prior to modifications in this facility, which would results in material change in the quality or quantity of wastewater treated or discharged, or any material change in the location of discharge, the Discharger shall report all pertinent information in writing to the RWQCB and obtain revised requirements before modifications are implemented."

We understand however that you will determine if the proposal to temporarily discontinue discharge, and subsequent restart requires a simple notification to the RWQCB or if the permit requires that Board or Executive Officer approval is necessary. If such approval is necessary, please consider this letter our request for approval.

We have a scheduled ethanol delivery on June 2nd that we may be able to reschedule if we are allowed to cease the dosing operation per the information provided above. We appreciate your timely consideration of this letter.

If you have any questions regarding this information, please call me at (805) 234-2257.

Sincerely,



Yvonne Meeks  
Topock Project Manager

cc: Cliff Raley, Water Board  
Tom Vandenberg, Water Board  
Aaron Yue, DTSC





# California Regional Water Quality Control Board

## Colorado River Basin Region



Linda S. Adams  
Secretary for  
Environmental Protection

73-720 Fred Waring Drive, Suite 100, Palm Desert, California 92260  
(760) 346-7491 • Fax (760) 341-6820  
<http://www.waterboards.ca.gov/coloradoriver>

Arnold Schwarzenegger  
Governor

May 29, 2008

Yvonne J. Meeks, Project Manager  
Pacific Gas & Electric Company  
4325 S. Higuera Street  
San Luis Obispo, CA 93401

**SUBJECT: APPROVAL OF A CESSATION IN THE REAGENT INJECTION PROCESS, WASTE DISCHARGE REQUIREMENTS BOARD ORDER NO. R7-2007-0015 (WDRs), PG&E TOPOCK COMPRESSOR STATION**

We received your letter, dated May 29, 2008 (Letter), requesting approval to temporarily discontinue reagent injections while continuing to pump and monitor recirculation wells associated with the Upland In-situ Pilot Test (Upland ISPT) at the subject facility. You explain the reason for your request by stating: "Currently, the concentration of total dissolved carbon (TOC) within the aquifer is sufficient to sustain a viable in-situ reactive zone (IRZ)." You explain further that PG&E would like "to withhold treatment discharge for approximately one month to monitor the recirculation systems ability to distribute the TOC sufficiently through the recirculation cell." You add that no change in the recirculation rate will occur during this time period. Also, you indicate that to evaluate the TOC distribution, weekly sampling of TOC will be conducted from eight specified monitoring wells. Following this one-month evaluation period, you state that PG&E would continue the dosing of the Upland ISPT, potentially at a reduced rate, or would discuss other options with the Colorado River Basin Regional Water Quality Control Board (Board), and that the monitoring data and continued dosing plans would be communicated to the Board.

The latter part of your letter discusses your view that the proposed temporary cessation of reagent injection appears to be the type of testing approach to the Upland ISPT that was anticipated to be conducted in a semi-continuous manner, with breaks as needed to assess progress or fine-tune approaches. You point out that this type of phasing was discussed with Board staff during the drafting of the subject Board Order, as reflected in Finding II.A.1, which provides that the Upland ISPT "is expected to take up to six months and will be conducted within a nine-month calendar period." Based on this Finding, you conclude that the proposed temporary cessation and subsequent "fine-tuning" for determining the optimal dosing rate for the reagent injections do not appear to fall under Effluent Limitations and Discharge Specifications IV.A.5 to require

May 29, 2008

formal written approval by the Regional Board's Executive Officer.<sup>1</sup> In the event that the Executive Officer does not share this conclusion, you requested that your letter be considered a request for the Executive Officer's approval.

I have concluded that the temporary cessation of reagent injection for one month in a testing protocol that envisions that the injection portion of the pilot test would take up to six months and be conducted within a nine-month calendar period (Finding II.A.1) is a significant enough delay to be considered a "change[ ] in the amount of treatment chemicals added to the process water" or, at a minimum, a "change[ ] in ... other specific design elements as described in [the Board Order]." (Specification IV.A.5.) Thus, the proposed temporary cessation of reagent injection is subject to Specification IV.A.5. As such, my written approval is required. Accordingly, I have treated your letter as requesting that approval, which is hereby granted.

As for the "fine-tuning" of the dosing rate, which is proposed to occur upon restart of the reagent injection process, I agree that the starts/stops and breaks involved for this fine-tuning work are of a short-term nature and thus, would not rise to the level of specific design element changes that would require my written approval. Therefore, with respect to the fine-tuning phase of the Upland ISPT, your notice regarding this phase of the work is sufficient.

Please keep in mind, however, that it is necessary that you keep the Regional Board and the Department of Toxic Substances Control staff apprised, at the earliest practicable time, of all design and operational parameters involved in the Upland ISPT.

The subject Board Order remains in full effect and is not modified by this letter. If you have any questions, or require additional information regarding this matter, please call Cliff Raley at (760) 776-8962.

  
\_\_\_\_\_  
ROBERT PERDUE  
Executive Officer

CR/tab

<sup>1</sup> Specification IV.A.5 states: "Any changes in the type or amount of treatment chemicals added to the process water, duration of the pilot test, or other specific design elements as described in this Board Order shall be made with prior written approval of the Regional Water Board's Executive Officer."

May 29, 2008

cc: Curt Russell, Onsite Project Manager, PG&E Topock  
Julie Eakins, PE, CH2M HILL,  
Lisa Kellogg, PE, ARCADIS, Inc.,  
Aaron Yue, Project Manager, DTSC

File: WDID No. 7B 36 2186 001, PG&E Topock Compressor Station,  
Board Order No. R7-2007-0015

-----Original Message-----

From: Meeks, Yvonne J [mailto:YJM1@pge.com]

Sent: Monday, August 04, 2008 4:12 PM

To: Robert Perdue; Cliff Raley; Tom Vandenberg

Cc: Gilbert, David; Doss, Robert; Jayo, Juan (Law); Kellogg, Lisa; Robert Lucas

Subject: PGE Uplands ISPT Reagent Dosing

Robert and all -- Per the attached letter from the RWQCB, we are providing this notice that PG&E intends to re-start ethanol dosing in uplands pilot study well PTR-2 at a rate of between 15 and 45 gallons per day (a reduction from the 100 gallons per day specified in the WDR).

As you recall, with your approval, we temporarily discontinued reagent injection in both injection wells in late May. At that time, we proposed to evaluate the data results and make a recommendation for the restarting reagent dosing. PG&E has evaluated the recent monitoring data and intends to begin recirculation with ethanol dosing in PTR-2 within the next week. PG&E will continue to review the data and plans to make a recommendation regarding dosing in PTR-1 at the end of August.

We will continue to keep the RWQCB informed. Let me know if you have any questions.

Yvonne Meeks

**From:** Meeks, Yvonne J [mailto:YJM1@pge.com]

**Sent:** Thursday, October 23, 2008 4:07 PM

**To:** Robert Perdue; Tom Vandenberg; Cliff Raley

**Cc:** Gilbert, David; Doss, Robert; Robert Lucas; Ayue@dtsc.ca.gov; Christopher Guerre

**Subject:** Topock - Notification request to the RWQCB regarding Uplands dosing

Robert --

In accordance with the attached letter from the RWQCB, we are providing this notice that tomorrow, October 24, PG&E intends to increase the ethanol dosing in uplands pilot study wells , PTR-1 and PTR-2 , to a rate of 100 gallons per day for each well. We are essentially going back to the injection rate as was originally specified in Board Order No. R7-2007-0015. You will recall that we had decreased the rate back in August to 15-45 gallons per day.

Looking ahead, we plan to complete the ethanol dosing on November 6, the final day per the WDR permit. After that we will just be recirculating groundwater until December 3rd , also consistent with the WDR. Since these timeframes are consistent with the timeframes in the WDR permit, these completion activities didn't require notification, but I thought you might like to know that we are finishing up another (successful) pilot test.

Let me know if you have any questions, Yvonne

**Preston, Kelli Jo**

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**From:** Meeks, Yvonne J [YJM1@pge.com]  
**Sent:** Monday, November 24, 2008 8:57 PM  
**To:** Robert Perdue; Tom Vandenberg; Cliff Raley  
**Cc:** Aaron Yue; Kellogg, Lisa; Sullivan, Kevin M; Doss, Robert; Gilbert, David  
**Subject:** Notification regarding PG&E Topock Uplands pilot test  
**Attachments:** Appendix A-Communications.pdf

Robert --

In accordance with the attached letter from the RWQCB, we are providing this notice that PG&E intends to modify the flow pattern in uplands pilot study well PTR-2 to perform a hydraulic extraction test. PTR-1 will be brought off-line and the recirculation pattern in PTR-2 will be reversed. This reversal will be allowed to run for 4-6 hours to evaluate the extraction capacity of the well. Once the 4-6 hour test is complete, the downhole equipment will be removed. As specified within Board Order No. R7-2007-0015, the pilot will be concluded on December 3<sup>rd</sup>, after 9 months of operation.

Let me me know if you have any questions regarding this email or any other aspect of the uplands test.

Yvonne Meeks

## Appendix B

Calibration Logs for Field Monitoring  
Instruments

**ARCADIS**

# MULTIPARAMETER INSTRUMENT CALIBRATION RECORD

Project No.: RC000689.0004 Task 8

Location: Torock

Instrument: 451 556

Serial Number: 06F1362 AS

[illegible]



Appendix C

Groundwater Sampling Logs

## Groundwater Sampling Form

|                      |       |          |       |
|----------------------|-------|----------|-------|
| Task:                | 00008 | Well ID: | PTR-1 |
| Sampled By:          | MG    |          |       |
| Recorded By:         | JA    |          |       |
| Coded Duplicate No.: | -     |          |       |

|           | PID | Water Quality Meter(s) |
|-----------|-----|------------------------|
| Model     | 1   | VSI 556                |
| Serial #: | 1   | 06 F 1362 AS           |

Purge Technique (circle one): Low-Flow    Remove ~~3~~ Volumes    Bail Dry

Purge Equipment (circle one): Submersible    Centrifugal    Bladder    Peristaltic    Bailor

Screen Interval: From: \_\_\_\_\_ To: \_\_\_\_\_

Pump Intake Setting: \_\_\_\_\_

Volumes to be Purged: \_\_\_\_\_

Total Volume Purged: \_\_\_\_\_

Pump on: \_\_\_\_\_ Off: \_\_\_\_\_

### Field Parameter Measurements Taken During Purging

[illegible]

Well Condition: — Purge Water Disposal: —  
 Color: ~~Green~~ Turbidity(qualitative): Cloudy  
 Odor: None Other (OVA, HNU, etc.): —

Sample Date & Time: 10-16-08, 0930

## Groundwater Sampling Form

Task: 00008 Well ID: PTR-2  
 Sampled By: MG  
 Recorded By: JA  
 Coded Duplicate No.: —

|           |     |                        |
|-----------|-----|------------------------|
|           | PID | Water Quality Meter(s) |
| Model     | 1   | YSI 556                |
| Serial #: | ✓   | 06F1362 A5             |

Purge Technique (circle one):    Low-Flow    Remove 3 Well Volumes    Bail Dry

Purge Equipment (circle one):    Submersible    Centrifugal    Bladder    Peristaltic    Bailor

Screen Interval:    From: \_\_\_\_\_    To: \_\_\_\_\_

Pump Intake Setting: \_\_\_\_\_

Volumes to be Purged: \_\_\_\_\_

Total Volume Purged: \_\_\_\_\_

Pump on: \_\_\_\_\_    Off: \_\_\_\_\_

$C_{6+} \quad 4.44 \text{ mg/L}$

|                                      |               |           |
|--------------------------------------|---------------|-----------|
| <b>Well Casing Volumes (gal/ft):</b> | 2" = 0.16     | 3" = 0.37 |
|                                      | 3 1/2" = 0.50 | 4" = 0.65 |
|                                      | 6" = 1.46     |           |

[illegible]

Purge Water Disposal: 1  
Turbidity(qualitative): 8  
Other (OVA, HNU,etc.): 1

Sample Date & Time: 10-16-08, 0920

# Groundwater Sampling Form

Task: 00008 Well ID: PT-7S  
 Sampled By: MG  
 Recorded By: JA  
 Coded Duplicate No.: -

|           |       |                        |
|-----------|-------|------------------------|
|           | PID   | Water Quality Meter(s) |
| Model     | _____ | YSI 55C                |
| Serial #: | _____ | 06F1362 AS             |

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry  
Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailer Grouters  
Screen Interval: From: 130' To: 150'  
Pump Intake Setting: 3 gpm  
Volumes to be Purged: 3 case Volumes  
Total Volume Purged: 24 gal  
Pump on: 1300 Off: 1304

|                               |               |           |
|-------------------------------|---------------|-----------|
| Well Casing Volumes (gal/ft): | 2" = 0.16     | 3" = 0.37 |
|                               | 3 1/2" = 0.50 | 4" = 0.65 |
|                               | 6" = 1.46     |           |

[illegible]

Purge Water Disposal: Tank  
Turbidity(qualitative): Clear  
Other (OVA, HNU, etc.):                     

Sample Date & Time: 10-15-08 JA 1310

# Groundwater Sampling Form

Task: 00008 Well ID: PT-7M  
 Sampled By: MG  
 Recorded By: DA  
 Coded Duplicate No.: 1

|           |     |                        |
|-----------|-----|------------------------|
|           | PID | Water Quality Meter(s) |
| Model     | 1   | YSI 556                |
| Serial #: | 1   | 06F136Z AS             |

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry

Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Other

Screen Interval: From: 165' To: 185'

Pump Intake Setting: —

Volumes to be Purged: 3 raw volumes

Total Volume Purged: 3 gal

Pump on: — Off: —

$C_r = 0.419 \text{ mg/L}$

Well Casing Volumes (gal/ft):

|               |           |
|---------------|-----------|
| 2" = 0.16     | 3" = 0.37 |
| 3 1/2" = 0.50 | 4" = 0.65 |
| 6" = 1.46     |           |

[illegible]

Purge Water Disposal: Tank  
Turbidity(qualitative): Clear  
Other (OVA, HNU, etc.): —

Sample Date & Time: 10-15-08, 1500

# ARCADIS

## Groundwater Sampling Form

Project Number: RC000689.0004.  
 Date: 10-14-08  
 Weather: Sun, Wind

Task: 00008 Well ID: PT-7D  
 Sampled By: MG  
 Recorded By: JA  
 Coded Duplicate No.: DUP-1

### Instrument Identification

|           | PID      | Water Quality Meter(s) |
|-----------|----------|------------------------|
| Model     | <u>—</u> | <u>YSI 556</u>         |
| Serial #: | <u>—</u> | <u>06F1362 AS</u>      |

### Purging Information

Casing Material: PVC  
 Casing Diameter: 2"  
 Total Depth: 217'  
 Depth to Water: 103.64  
 Water Column: 113.36  
 Gallons/Foot: .16  
 Gallons in Well: 18.2

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry  
 Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailer  
 Screen Interval: From: 197' To: 217'  
 Pump Intake Setting: 37m  
 Volumes to be Purged: 3 Case Volumes  
 Total Volume Purged: 46 gal 3 gal  
 Pump on: 10:14 Off: 14:55

Cr<sup>6+</sup> 0.078 mg/L

| Well Casing Volumes (gal/ft): | 2" = 0.16     | 3" = 0.37 |
|-------------------------------|---------------|-----------|
|                               | 3 1/2" = 0.50 | 4" = 0.65 |
|                               | 6" = 1.46     |           |

### Field Parameter Measurements Taken During Purging

| Time                                                                                                                                                                     | Minutes Elapsed | Flow Rate (gpm) | Volume Purged (gal) | DTW (ft btoc) | Turbidity (NTUs) | ORP (mV) | pH (SI Units) | Spec Cond (µmhos/cm) | Temp (°C) | DO (mg/L) | Comments |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|---------------------|---------------|------------------|----------|---------------|----------------------|-----------|-----------|----------|
| 1455                                                                                                                                                                     | 0               | 4               | 0                   | 103.64        | 12               | -200.9   | 6.04          | 8267                 | 25.82     | 1.49      | Green    |
|                                                                                                                                                                          |                 |                 |                     |               | 12               | -223.7   | 6.26          | 8003                 | 26.50     | 0.84      | SDOR     |
|                                                                                                                                                                          |                 |                 |                     |               | 12               | -223.0   | 6.25          | 8022                 | 26.40     | 0.88      |          |
|                                                                                                                                                                          |                 |                 |                     |               | 60               | -231.9   | 6.63          | 8161                 | 26.48     | 0.74      |          |
|                                                                                                                                                                          |                 |                 |                     |               | 54               | -244.5   | 6.83          | 8444                 | 26.70     | 1.03      |          |
|                                                                                                                                                                          |                 |                 |                     |               | 49               | -241.4   | 6.90          | 8650                 | 26.40     | 2.05      |          |
| 10-15-08 1330                                                                                                                                                            | 0               | —               | 0                   | 103.64        | 93               | -153.2   | 6.73          | 8616                 | 27.07     | 4.99      | *        |
| 1415                                                                                                                                                                     | —               | —               | 3                   |               | 106              | -205.6   | 6.14          | 8508                 | 28.51     | 0.75      | *        |
| 10/15/08 * Grab Sample, purged 3 gals and used bailer to sample. Unable to purge due to water with air, unable to water due to well characteristics (depth, DTW, etc...) |                 |                 |                     |               |                  |          |               |                      |           |           |          |

### Observations During Sampling

Well Condition: Good  
 Color: Dark Green  
 Odor: Yes

Purge Water Disposal: Tank  
 Turbidity(qualitative): Opaque  
 Other (OVA, HNU, etc.): —

Sample ID: PT-7D  
 Samples Analyzed For: See the COC

Sample Date & Time: 10-15-08, 1415

# ARCADIS

## Groundwater Sampling Form

Project Number: RC000689.0004.  
 Date: 10-15-08  
 Weather: Warm

Task: 00008 Well ID: PT-8S  
 Sampled By: MG  
 Recorded By: JA  
 Coded Duplicate No.: -

### Instrument Identification

|           | PID      | Water Quality Meter(s) |
|-----------|----------|------------------------|
| Model     | <u>-</u> | <u>YSI 556</u>         |
| Serial #: | <u>-</u> | <u>06 F1362 AS</u>     |

### Purging Information

Casing Material: PVC  
 Casing Diameter: 2"  
 Total Depth: 147'  
 Depth to Water: 106.10  
 Water Column: 40.90  
 Gallons/Foot: 16  
 Gallons in Well: 6.6

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry  
 Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailer Groundhog  
 Screen Interval: From: 127' To: 147'  
 Pump Intake Setting: 3gpm  
 Volumes to be Purged: 3 well volumes  
 Total Volume Purged: 21 gal  
 Pump on: 1005 Off: 1015

C<sup>6+</sup> 0.028 mg/L

|                               |                      |           |
|-------------------------------|----------------------|-----------|
| Well Casing Volumes (gal/ft): | <u>2" = 0.16</u>     | 3" = 0.37 |
|                               | <u>3 1/2" = 0.50</u> | 4" = 0.65 |
|                               | <u>6" = 1.46</u>     |           |

### Field Parameter Measurements Taken During Purging

| Time | Minutes Elapsed | Flow Rate (gpm) | Volume Purged (gal) | DTW (ft bto) | Turbidity (NTUs) | ORP (mV) | pH (SI Units) | Spec Cond (umhos/cm) | Temp (°C) | DO (mg/L) | Comments |
|------|-----------------|-----------------|---------------------|--------------|------------------|----------|---------------|----------------------|-----------|-----------|----------|
| 1005 | 0               | 3               | 3                   | 106.10       | 31               | -127.1   | 6.97          | 8832                 | 26.30     | 0.67      | ODOR     |
| 1007 | 2               | ↓               | 6                   |              | 32               | -140.2   | 6.93          | 8950                 | 26.32     | 0.56      |          |
| 1009 | 4               | ↓               | 12                  |              | 30               | -144.4   | 6.92          | 8969                 | 26.32     | 0.54      |          |
| 1012 | 7               | ↓               | 21                  |              | 28               | -145.7   | 6.92          | 9055                 | 26.35     | 0.49      |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |
|      |                 |                 |                     |              |                  |          |               |                      |           |           |          |

### Observations During Sampling

Well Condition: Good  
 Color: Purple  
 Odor: Yes

Purge Water Disposal: Tank  
 Turbidity(qualitative): Clear  
 Other (OVA, HNU, etc.): -

Sample ID: PT-8S  
 Samples Analyzed For: See the COC

Sample Date & Time: 10-15-08, 1015

## Groundwater Sampling Form

|                      |              |          |              |
|----------------------|--------------|----------|--------------|
| Task:                | <b>00008</b> | Well ID: | <b>PT-8M</b> |
| Sampled By:          | <b>MG</b>    |          |              |
| Recorded By:         | <b>JA</b>    |          |              |
| Coded Duplicate No.: | <b>-</b>     |          |              |

|           | PID | Water Quality Meter(s) |
|-----------|-----|------------------------|
| Model     | 1   | YSI 556                |
| Serial #: | 1   | 06F1362 AS             |

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry  
Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailer *Grundfos*  
Screen Interval: From: 162' To: 182'  
Pump Intake Setting: 4 gpm  
Volumes to be Purged: 3 case volumes  
Total Volume Purged: 40 gal  
Pump on: 1117 Off: 1127

$\text{Cr}^{6+}$  2.94 mg/L

| Well Casing Volumes (gal/ft): | 2" = 0.16     | 3" = 0.37 |
|-------------------------------|---------------|-----------|
|                               | 3 1/2" = 0.50 | 4" = 0.65 |
|                               | 6" = 1.46     |           |

[illegible]

Purge Water Disposal: Tank  
Turbidity(qualitative): Clear  
Other (OVA, HNU, etc.):                     

Sample Date & Time: 10-15-08 1130



## Groundwater Sampling Form

Task: 00008 Well ID: PT-8D  
 Sampled By: MG  
 Recorded By: J A  
 Coded Duplicate No.: —

|           |     |                        |
|-----------|-----|------------------------|
|           | PID | Water Quality Meter(s) |
| Model     | —   | YSI 556                |
| Serial #: | —   | 06F136Z AS             |

Purge Technique (circle one): Low-Flow Remove Well Volumes Bail Dry

Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailor 6 minutes

Screen Interval: From: 190' To: 210'

Pump Intake Setting: 4 gpm

Volumes to be Purged: 3 case Volumes

Total Volume Purged: 52 ga.

Pump on: 1035 Off: 1048

$C_{\text{Gt}} = \underline{0.512} \text{ mg/L}$

Well Casing Volumes (gal/ft):

|               |           |
|---------------|-----------|
| 2" = 0.16     | 3" = 0.37 |
| 3 1/2" = 0.50 | 4" = 0.65 |
| 6" = 1.46     |           |

[illegible]

Purge Water Disposal: Tank  
Turbidity(qualitative): Clear  
Other (OVA, HNU, etc.):

Sample Date & Time: 10-15-08, 1050

# Groundwater Sampling Form

Task: 00008 Well ID: PT-9S  
 Sampled By: MG  
 Recorded By: JA  
 Coded Duplicate No.: —

|           |     |                        |
|-----------|-----|------------------------|
|           | PID | Water Quality Meter(s) |
| Model     | —   | YSI 556                |
| Serial #: | —   | 06F1363 AS             |

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry

Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailor

Screen Interval: From: 128' To: 147'

Pump Intake Setting: 2 gpm

Volumes to be Purged: 3 raw volumes

Total Volume Purged: 22 gal

Pump on: 0757 Off: 0810

$C^{6+} \xrightarrow{1.10} \text{mg/C}$

|                               |               |           |
|-------------------------------|---------------|-----------|
| Well Casing Volumes (gal/ft): | 2" = 0.16     | 3" = 0.37 |
|                               | 3 1/2" = 0.50 | 4" = 0.65 |
|                               | 6" = 1.46     |           |

[illegible]

Purge Water Disposal: Tank  
Turbidity(qualitative): opaque  
Other (OVA, HNU, etc.): —

Sample Date & Time: 10-15-08, 0810

## Groundwater Sampling Form

|                      |       |          |       |
|----------------------|-------|----------|-------|
| Task:                | 00008 | Well ID: | PT-9M |
| Sampled By:          | MG    |          |       |
| Recorded By:         | JA    |          |       |
| Coded Duplicate No.: |       |          |       |

|           |     |                        |
|-----------|-----|------------------------|
|           | PID | Water Quality Meter(s) |
| Model     | 11  | YSI 556                |
| Serial #: | 11  | 06F1362 AS             |

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry  
Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailer *Grouters*  
Screen Interval: From: 162' To: 182'  
Pump Intake Setting: 4 gpm  
Volumes to be Purged: 3 Case Volumes  
Total Volume Purged: 40 gal  
Pump on: 0916 Off: 0930

Well Casing Volumes (gal/ft): 2" = 0.16 3" = 0.37  
3 1/2" = 0.50 4" = 0.65  
6" = 1.46

[illegible]

Purge Water Disposal: 100%  
Turbidity(qualitative): Clear  
Other (OVA, HNU, etc.): -

Sample Date & Time: 10-15-08, 0930

## Groundwater Sampling Form

|                      |       |          |       |
|----------------------|-------|----------|-------|
| Task:                | 00008 | Well ID: | PT-9D |
| Sampled By:          | MG    |          |       |
| Recorded By:         | JA    |          |       |
| Coded Duplicate No.: | -     |          |       |

|           |     |                        |
|-----------|-----|------------------------|
|           | PID | Water Quality Meter(s) |
| Model     | 1   | YSI 55C                |
| Serial #: | 1   | 126F1362 AS            |

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry  
Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailer Grundfos  
Screen Interval: From: 190' To: 210'  
Pump Intake Setting: 4 gpm  
Volumes to be Purged: 3 or 4 volumes  
Total Volume Purged: 52 gal  
Pump on: 0838 Off: 0855

$\text{Cr}^{6+}$  9.30 mg/L

|                               |               |           |
|-------------------------------|---------------|-----------|
| Well Casing Volumes (gal/ft): | 2" = 0.16     | 3" = 0.37 |
|                               | 3 1/2" = 0.50 | 4" = 0.65 |
|                               | 6" = 1.46     |           |

[illegible]

Purge Water Disposal: Tank  
Turbidity(qualitative): Clear  
Other (OVA, HNU,etc.): —

Sample ID: PT-9D  
 Samples Analyzed For: See the COC

Sample Date & Time: 10-15-08, 0855

## Groundwater Sampling Form

|                      |       |          |       |
|----------------------|-------|----------|-------|
| Task:                | 00008 | Well ID: | MW-11 |
| Sampled By:          | MG    |          |       |
| Recorded By:         | JA    |          |       |
| Coded Duplicate No.: | -     |          |       |

|           |     |                        |
|-----------|-----|------------------------|
|           | PiD | Water Quality Meter(s) |
| Model     | 1   | YSI 556                |
| Serial #: | 1   | 06F136Z AS             |

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry  
Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailor *Brunkfs*  
Screen Interval: From: 63' 88' *W of*  
Pump Intake Setting: 4 gpm *Dedicated*  
Volumes to be Purged: 3 case volumes  
Total Volume Purged: 44 gal  
Pump on: 1300 Off: 1315

C<sup>6+</sup> 0.337 mg/L

**Well Casing Volumes (gal/ft):**

|               |           |
|---------------|-----------|
| 2" = 0.16     | 3" = 0.37 |
| 3 1/2" = 0.50 | 4" = 0.65 |
| 6" = 1.46     |           |

[illegible]

Purge Water Disposal: Tank  
Turbidity(qualitative): Clear  
Other (OVA, HNU, etc.): —

Sample ID: MW-11  
 Samples Analyzed For: See the COC

Sample Date & Time: 10-14-08, 1315

## Groundwater Sampling Form

|                      |       |          |        |
|----------------------|-------|----------|--------|
| Task:                | 00008 | Well ID: | MW-24A |
| Sampled By:          | MG    |          |        |
| Recorded By:         | JA    |          |        |
| Coded Duplicate No.: | -     |          |        |

|           |     |                        |
|-----------|-----|------------------------|
|           | PID | Water Quality Meter(s) |
| Model     | 1   | YSI 556                |
| Serial #: | 1   | 0681362 AS             |

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry  
Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailer *Dedicated*  
Screen Interval: From: 104' 124'  
Pump Intake Setting: 2 gpm  
Volumes to be Purged: 3 raw volumes  
Total Volume Purged: 26 ga  
Pump on: 0835 Off: 0910

$C_{\text{Cr}}^{6+} \quad 0.123 \text{ mg/L}$

Well Casing Volumes (gal/ft):

|               |                      |
|---------------|----------------------|
| 2" = 0.16     | 3" = 0.37            |
| 3 1/2" = 0.50 | <del>4" = 0.65</del> |
| 6" = 1.46     |                      |

[illegible]

Purge Water Disposal: Tap water  
Turbidity(qualitative): clear  
Other (OVA, HNU, etc.): —

Sample Date & Time: 10-16-08 0916

## Groundwater Sampling Form

Task: 00008 Well ID: MW-24B  
 Sampled By: MG  
 Recorded By: JA  
 Coded Duplicate No.: DUP-1

|           |     |                        |
|-----------|-----|------------------------|
|           | PID | Water Quality Meter(s) |
| Model     | -   | YSI 556                |
| Serial #: | -   | 06F1363 AS             |

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry  
Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailor Redundant  
Screen Interval: From: 193' 213'  
Pump Intake Setting: 4 gpm  
Volumes to be Purged: 3 brace Volumes  
Total Volume Purged: 204  
Pump on: 0730 Off: 0925

$C_r^{64}$  3.38  $\text{mg/L}$

Well Casing Volumes (gal/ft):

|               |           |
|---------------|-----------|
| 2" = 0.16     | 3" = 0.37 |
| 3 1/2" = 0.50 | 4" = 0.63 |
| 6" = 1.46     |           |

[illegible]

Purge Water Disposal: Tank  
Turbidity(qualitative): Cloudy  
Other (OVA, HNU, etc.):

Sample Date & Time: 10-16-08, JA, 0825

DUP-1, 0830

## Groundwater Sampling Form

|                      |       |          |        |
|----------------------|-------|----------|--------|
| Task:                | 00008 | Well ID: | MW-38S |
| Sampled By:          | MG    |          |        |
| Recorded By:         | JA    |          |        |
| Coded Duplicate No.: | -     |          |        |

|           |     |                        |
|-----------|-----|------------------------|
|           | PID | Water Quality Meter(s) |
| Model     | -   | YSI 556                |
| Serial #: | -   | 06F1362 AS             |

|                  |       |
|------------------|-------|
| Casing Material: | PVC   |
| Casing Diameter: | 2"    |
| Total Depth:     | 95.3' |
| Depth to Water:  | 69.94 |
| Water Column:    | 25.36 |
| Gallons/Foot:    | .16   |
| Gallons in Well: | 4.1   |

Purge Technique (circle one): Low-Flow Remove 3 Well Volumes Bail Dry

Purge Equipment (circle one): Submersible Centrifugal Bladder Peristaltic Bailer Water

Screen Interval: From: 75' 95'

Pump Intake Setting: 1 gpm

Volumes to be Purged: 3 case Volumes

Total Volume Purged: 13

Pump on: 1116 Off: 1135

$C^{6+}$  1.54 mg/L

Well Casing Volumes (gal/ft):

|               |           |
|---------------|-----------|
| 2" = 0.16     | 3" = 0.37 |
| 3 1/2" = 0.50 | 4" = 0.65 |
| 6" = 1.46     |           |

[illegible]

Well Condition: Good  
Color: None  
Odor: None

Purge Water Disposal: Tank  
Turbidity(qualitative): Clear  
Other (OVA, HNU, etc.): —

Sample Date & Time: 10-14-08, 1135



## Groundwater Sampling Form

Weather: Hot, w. ind

Coded Duplicate No.:     

|           |     |                        |
|-----------|-----|------------------------|
|           | PID | Water Quality Meter(s) |
| Model     | 1   | YS1556                 |
| Serial #: | 1   | 06F1362 AS             |

Gallons in Well: 146.9

Pump on: 1212 Off: 1230

|                               |               |           |
|-------------------------------|---------------|-----------|
| Well Casing Volumes (gal/ft): | 2" = 0.16     | 3" = 0.37 |
|                               | 3 1/2" = 0.50 | 4" = 0.65 |
|                               | 6" = 1.46     |           |

[illegible]

Odor: LONG

Other (OVA, HNU, etc.):

Samples Analyzed For: See the COC

## **Appendix D**

Analytical Reports and Chain-of-Custody Documentation (on Compact Disc)