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March 10, 2006

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Subject: Fourth Quarter 2005 Groundwater and Surface Water Monitoring Report  
PG&E Topock Compressor Station, Needles, California

Dear Mr. Shopay:

Enclosed is the Fourth Quarter 2005 groundwater and surface water monitoring report for the Topock project. This quarterly report also serves as an annual report and provides a summary of the 2005 quarterly monitoring event activities. The fourth quarter monitoring event was conducted by PG&E during December 12-16, 2005. The event included monitoring and sampling of 60 groundwater wells and 8 surface water locations along the Colorado River. If you have any questions on the groundwater and surface water monitoring report, please call me at (805) 546-5243.

Sincerely,



Enclosure

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# **Groundwater and Surface Water Monitoring Report, Fourth Quarter 2005 and Annual Summary**

**PG&E Topock Compressor Station  
Needles, California**

Prepared for  
**California Department of Toxic Substances  
Control**

On Behalf of  
**Pacific Gas and Electric Company**

March 10, 2006

**CH2MHILL**  
155 Grand Avenue, Suite 1000  
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**Groundwater and Surface Water Monitoring Report  
Fourth Quarter 2005 and Annual Summary**

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Needles, California**

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**March 10, 2006**

**This report was prepared under the supervision of a  
California Certified Engineering Geologist**

*Paul Bertucci*

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Paul Bertucci, C.E.G. No. 1977  
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# Contents

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Section	Page
<b>Acronyms and Abbreviations .....</b>	<b>v</b>
1.0 <b>Introduction and Background.....</b>	<b>1-1</b>
1.1   Background .....	1-1
1.2   2005 GMP Monitoring Plan.....	1-1
1.3   Sampling Procedure Modification .....	1-2
1.4   Surface Water Monitoring Modification .....	1-3
1.5   Access Routes.....	1-3
1.6   Current GMP Monitoring Activity .....	1-3
2.0 <b>Fourth Quarter 2005 Monitoring Activities .....</b>	<b>2-1</b>
2.1   Summary of Monitoring and Sampling .....	2-1
2.1.1   Site COC Analyses .....	2-2
2.1.2   Title 22 Metals .....	2-2
2.1.3   IM Performance Monitoring and Additional Water Quality Characterization .....	2-2
2.1.4   In-Channel Surface Water Analyses .....	2-3
3.0 <b>Fourth Quarter 2005 Monitoring Results .....</b>	<b>3-1</b>
3.1   Site COC Analytical Results.....	3-1
3.1.1   Groundwater.....	3-1
3.1.2   Surface Water .....	3-1
3.1.3   Hexavalent Chromium Results .....	3-1
3.2   Additional Analytes Results .....	3-2
3.2.1   IM Performance Monitoring and Additional Water Quality Characterization .....	3-2
3.2.2   CCR Title 22 Metals.....	3-2
3.3   Analytical Data Quality Review.....	3-2
3.4   Water Level Monitoring .....	3-3
3.5   Field Parameter Data .....	3-4
4.0 <b>Summary of 2005 Quarterly Monitoring Results .....</b>	<b>4-1</b>
4.1   Site COC Analytical Results.....	4-1
4.1.1   Groundwater.....	4-1
4.1.2   Surface Water .....	4-1
4.1.3   Hexavalent Chromium Results .....	4-1
4.2   Additional Analytes Results .....	4-2
4.2.1   IM Performance Monitoring and Additional Water Quality Characterization .....	4-2
4.2.2   CCR Title 22 Metals.....	4-2
4.3   Water Level Monitoring .....	4-3
5.0 <b>Status of Monitoring Activities .....</b>	<b>5-1</b>

5.1	Quarterly Monitoring - First Quarter 2006 Event .....	5-1
5.2	Monthly Monitoring .....	5-1
5.3	Biweekly Well Sampling .....	5-1
6.0	<b>References.....</b>	<b>6-1</b>

## Appendices

- A Field Data Sheets and Chain of Custody Records, December 2005
- B Additional Water Quality Characterization, June 2005 through October 2005
- C Hydrographs, January through December 2005

## Tables

- 1 Well Construction and Sampling Summary, December 2005
- 2 Groundwater COC Sampling Results, December 2004 through December 2005
- 3 Surface Water COC Sampling Results, December 2004 through December 2005
- 4 In-Channel Surface Water COC and Additional Parameters Sampling Results, July 2005 through December 2005
- 5 Interim Measures Performance Monitoring Analytical Results, March 2004 through December 2005
- 6 Title 22 Metals, September 2004 through December 2005
- 7 Manual Water Level Measurements, December 2004 through December 2005
- 8 Field Water Quality Measurements, December 2004 through December 2005
- 9 Summary of 2005 Quarterly Monitoring Activities

## Figures

- 1 Site Location Map
- 2 Monitoring Locations and Sampling Frequency for GMP, December 2005
- 3 Depth-Specific Surface Water Monitoring Locations, December 2005
- 4A Cr(VI) Sampling Results, Upper Depth Interval of Aquifer, 4<sup>th</sup> Quarter 2005 Monitoring Event
- 4B Cr(VI) Sampling Results, Middle Depth Interval of Aquifer, 4<sup>th</sup> Quarter 2005 Monitoring Event
- 4C Cr(VI) Sampling Results, Lower Depth Interval of Aquifer, 4<sup>th</sup> Quarter 2005 Monitoring Event
- 5 Groundwater Elevation Contours for Shallow Wells, December 20, 2005 Water Level Survey, 4<sup>th</sup> Quarter 2005 Monitoring Event
- 6 Cr(VI) Sampling Results, Hydrogeologic Cross Section A

# Acronyms and Abbreviations

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CACA	Corrective Action Consent Agreement
CCR	California Code of Regulations
COC	constituent of concern
Cr(T)	total dissolved chromium
Cr(VI)	hexavalent chromium
DTSC	California Department of Toxic Substances Control
GMP	Groundwater and Surface Water Monitoring Program
IM	Interim Measures
µg/L	micrograms per liter
MCL	maximum contaminant level
ORP	oxidation-reduction potential
PG&E	Pacific Gas and Electric Company
RCRA	Resource Conservation and Recovery Act of 1976
RFI	RCRA facility investigation
SAP	Sampling and Analysis Plan
TDS	Total dissolved solids
TSS	Total suspended solids
USEPA	United States Environmental Protection Agency

# 1.0 Introduction and Background

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This report presents the results of the fourth quarter 2005 groundwater and surface water monitoring event conducted at Pacific Gas and Electric Company's (PG&E) Topock Compressor Station in December 2005. This quarterly report also serves as an annual report and provides a summary of all 2005 quarterly monitoring event activities. The Topock Groundwater and Surface Water Monitoring Program (GMP) is part of a Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) being performed under a Corrective Action Consent Agreement (CACA) issued by the California Department of Toxic Substances Control (DTSC) in 1996 for the Topock site (United States Environmental Protection Agency [USEPA] ID No. CAT080011729). The Topock Compressor Station is located in eastern San Bernardino County, 15 miles southeast of the city of Needles, California, as shown on Figure 1.

## 1.1 Background

The groundwater and surface water monitoring activities at the Topock site were initiated in 1998 as a continuation of the RFI groundwater investigations (CH2M HILL 2005a). In July 2004, at the request of DTSC (DTSC 2004a), PG&E submitted a *Sampling and Analysis Plan, Groundwater and Surface Water Monitoring* (SAP) (CH2M HILL 2004) that described the scope, schedule, and sampling and analysis procedures for the GMP. The SAP additionally recommended modifications to the monitoring locations, analyses, and sampling frequency for the GMP. On August 26, 2004, PG&E received verbal DTSC approval to implement the sampling plan modifications proposed in the July 2004 SAP.

Before August 26, 2004, the wells and surface water monitoring locations were sampled for the site constituents of concern (COCs) defined in the 1996 CACA. The site COCs listed in the CACA include hexavalent chromium [Cr(VI)], total dissolved chromium [Cr(T)], copper, nickel, zinc, electrical conductivity (also referred to as specific conductance), and pH.

As proposed in the July 2004 SAP and approved by DTSC, the parameters analyzed in this quarterly GMP include the primary site COCs (Cr(VI), Cr(T), specific conductance, and pH), and the California Code of Regulations (CCR) Title 22 full list of metals (including copper, nickel, and zinc) at selected groundwater monitoring wells. Groundwater and surface water elevation data and field water quality data are also measured during the monitoring events.

Beginning in March 2004, as directed by DTSC (DTSC 2004b), PG&E initiated groundwater extraction at the MW-20 bench, located adjacent to the floodplain area of the site, as part of an Interim Measures (IM) program. One of the provisions for the IM activity requested by DTSC was the collection of analytical data from selected sampling locations near the pumping operation. The performance monitoring initiated under the IM program is being performed as part of the GMP quarterly monitoring and reporting activity.

The wells screened in the unconsolidated alluvial fan and fluvial deposits, which comprise the Alluvial Aquifer, have been separated into three depth intervals to present groundwater quality and groundwater level data. The depth intervals of the Alluvial Aquifer –

designated upper, middle, and lower—are based on grouping the monitoring wells screened at common elevations and do not represent distinct hydrostratigraphic units or separate aquifer zones. The subdivision of the aquifer into three depth intervals is an appropriate construct for presenting and evaluating groundwater quality data in the floodplain. The three-interval concept is also useful for presenting and evaluating lateral gradients while minimizing effects of vertical gradients and observing the influence of pumping from partially-penetrating wells. It should be noted, however, that these divisions do not correspond to any lithostratigraphic layers within the aquifer. The floodplain aquifer is considered to be hydraulically undivided.

## 1.2 2005 GMP Monitoring Plan

During January and February 2005, new groundwater monitoring wells were installed in the floodplain area of the site under the IM program. A DTSC-approved IM *Contingency Plan for Sentry Well Groundwater Monitoring* (DTSC 2005a) was initiated in February 2005, as directed by DTSC in response to elevated levels of Cr(VI) in one of the new monitoring wells. The Contingency Plan included the weekly sampling of four sentry wells in the floodplain and four consecutive weeks of sampling of three surface water stations. In May 2005, DTSC approved a revised sampling frequency for the Contingency Plan that resulted in the weekly sampling of one sentry well and the biweekly sampling of six sentry wells in the floodplain (DTSC 2005b).

An updated Monitoring Plan, describing the objectives, scope, and schedule for the GMP, was submitted to DTSC on April 11, 2005 (CH2M HILL 2005b). DTSC provided preliminary comments on May 24, 2005 (DTSC 2005c) that approved the inclusion of 11 additional monitoring wells in the GMP. DTSC has not yet provided final comments or approval of the April 2005 Monitoring Plan.

## 1.3 Sampling Procedure Modification

In the spring of 2005, a chromium filtration comparison test was performed at DTSC's request to evaluate the effects, if any, of field filtering versus laboratory filtering of samples collected for chromium analysis. The chromium results of groundwater samples collected from 16 wells during the March 2005 and April 2005 monthly monitoring events were statistically analyzed and evaluated to determine the effects of the two filtering approaches. From the results of the filtration comparison test, it was recommended that samples analyzed for Cr(VI) by USEPA Methods 7199 and 7196A should be filtered in the laboratory and that samples analyzed for Cr(T) by USEPA Method 6010B should be filtered and preserved in the field after sample collection (CH2M HILL 2005c). In a June 2005 letter, DTSC agreed with the recommendations and directed the changes to be initiated for the July 2005 monthly event (DTSC 2005d). Since July 2005, all groundwater samples analyzed for Cr(T) by USEPA Method 6010B are being filtered and preserved in the field after sample collection.

## 1.4 Surface Water Monitoring Modification

In an April 26, 2005 letter (DTSC 2005e), DTSC directed PG&E to submit a revised Section 5.0 of the Monitoring Plan (CH2M HILL 2005b) to include a plan for depth-specific surface water sampling in the Colorado River. A *Revised Sampling Plan and Standard Operating Procedure for Depth-Specific Surface Water Sampling* was submitted to DTSC on May 16, 2005 (CH2M HILL 2005d). DTSC provided conditional approval and comments on the revised Section 5.0 on June 30, 2005 (DTSC 2005f). A Revised Sampling Plan and Standard Operating Procedure (CH2M HILL 2005e) that incorporated the comments was submitted on July 13, 2005. The depth-specific surface water sampling program was initiated in July 2005 with eight in-channel stations and continued in September, November and December 2005 with nine in-channel stations (CH2M HILL 2005f). The depth-specific surface water sampling will occur quarterly during normal river stages and monthly during low river stages (anticipated November 2005 through January 2006) through June 2006, at which time the surface water sampling program will be re-evaluated.

## 1.5 Access Routes

On September 14, 2005, a *Site Access and Sampling Procedures for Groundwater Monitoring Wells Located Near Potential Southwestern Willow Flycatcher Habitat, Rev 2* (CH2M HILL 2005g) was submitted to DTSC outlining access route requirements to be followed during the Southwestern Willow Flycatcher nesting season (typically June through September). These procedures were observed during the summer monitoring events through September 2005.

## 1.6 Current GMP Monitoring Activity

DTSC revised the sampling frequency for monitoring wells in the GMP initially through September 2005 (DTSC 2005g), and subsequently for the long term (DTSC 2005h). Under the GMP as of December 2005, samples are collected from monitoring wells and surface water stations according to the following schedule:

- Seventy-six monitoring wells are sampled semi-annually (twice a year).
- Sixty-two monitoring wells (including one active water supply well), nine shoreline surface water stations, and nine in-channel depth-specific surface water stations are sampled quarterly.
- Twelve monitoring wells on the floodplain and nine surface water stations are sampled monthly. Nine in-channel depth-specific surface water stations are sampled monthly during low river stages.
- One monitoring well on the floodplain is sampled biweekly (every 2 weeks).
- Four inactive supply wells are sampled biennially (every 2 years).

Figure 2 shows the locations and sampling frequencies of the groundwater and shoreline surface water monitoring stations in the GMP, as well as the locations of the PG&E Topock Compressor Station, site features, and other monitoring wells. Table 1 summarizes information on well construction and sampling methods for all wells in the GMP, and other

monitoring wells at the site. Figure 3 presents the locations of the depth-specific surface water sampling locations as of December 2005.

## 2.0 Fourth Quarter 2005 Monitoring Activities

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This section provides a summary of the monitoring and sampling activities completed during the fourth quarter 2005 reporting period and the specific groundwater and surface water analyses performed for the fourth quarter monitoring event.

### 2.1 Summary of Monitoring and Sampling

The fourth quarter 2005 monitoring event was conducted from December 12 through 16, 2005 and consisted of:

- Sixty monitoring wells and eight shoreline surface water stations (Figure 2) were sampled for Cr(VI), Cr(T), specific conductance, and pH. Samples were not collected from monitoring well MW-39-50 due to a field sampling error. Inactive extraction well TW-2S was not sampled due to concurrent plumbing work on TW-3D and PE-1 that prevented sampling of TW-2S. Active extraction well TW-2D is sampled routinely as part of the IM operations. Shoreline surface water station RRB was not sampled due to the location being dry.
- Nine wells were sampled for the full list of CCR Title 22 metals, in accordance with the July 2004 SAP (MW-10, MW-11, MW-12, MW-20-70, MW-20-130, MW-25, MW-34-55, MW-34-80, and MW-37D).
- Fourteen wells and two surface water locations were sampled for the IM performance monitoring parameters: total dissolved solids (TDS), oxygen 18, deuterium, chloride, sulfate, nitrate, bromide, alkalinity, calcium, magnesium, potassium, sodium, and boron.
- Nine in-channel surface water stations were sampled for Cr(VI), Cr(T), specific conductance, pH, hardness, TDS, and total suspended solids (TSS). All of the in-channel stations were sampled at three depths, except for the ninth station C-MAR, where only one depth could be sampled due to the shallow water column.
- Duplicate samples were collected at seven monitoring wells (MW-13, MW-25, MW-33-90, MW-34-100, MW-35-60, MW-37S, and MW-41S) to assess field sampling and analytical procedures.
- A sitewide groundwater level survey was performed on December 20, 2005 to generate a groundwater elevation contour map of the shallow-depth interval of the alluvial aquifer for the fourth quarter 2005.

The sampling methods, procedures, field documentation of sampling, water level measurements, and field water quality monitoring were performed in accordance with the July 2004 SAP (CH2M HILL 2004) and the *Sampling, Analysis, and Field Procedures Manual, Revision 1*, dated March 31, 2005 (CH2M HILL 2005h).

During the fourth quarter 2005 monitoring period, other monitoring events conducted in addition to the December event were: one quarterly/semi-annual/biennial event (October),

one monthly sampling event (November), four biweekly sampling events, and one depth-specific surface water event (November). The results of these other monitoring events have been issued in periodic data reports to DTSC and project stakeholders during the reporting period. The monitoring data presented in this report (Tables 2 through 8) include the results from all events in the fourth quarter 2005; however, only the data from the December 2005 quarterly event are discussed.

### 2.1.1 Site COC Analyses

All monitoring wells and surface water stations sampled during this event were analyzed for Cr(VI), Cr(T), specific conductance, and pH. The analyses for the site COC parameters were performed by Truesdail Laboratories, Inc., a California-certified analytical laboratory in Tustin, California. In accordance with the SAP, Cr(VI) and Cr(T) were analyzed using the following analytical methods:

- Method SW 7196A was used for samples collected from monitoring wells where prior monitoring has detected Cr(VI) concentrations above 100 micrograms per liter ( $\mu\text{g}/\text{L}$ ). The minimum reporting limit for Method SW 7196A for undiluted samples is 10  $\mu\text{g}/\text{L}$ .
- Method SW 7199 was used for all surface water samples and all groundwater samples collected from monitoring wells where prior monitoring did not detect Cr(VI) concentrations above 100  $\mu\text{g}/\text{L}$ . The minimum reporting limit for Cr(VI) using Method SW 7199 is 0.2  $\mu\text{g}/\text{L}$  for undiluted samples.
- Dissolved Cr(T) was analyzed using Method SW 6010B or Method SW 6020A (both have reporting limits of 1  $\mu\text{g}/\text{L}$  for undiluted samples).
- Method USEPA 218.6 (equivalent to Method SW 7199), with a reporting limit of 0.2  $\mu\text{g}/\text{L}$ , was used for the Cr(VI) water analysis from the domestic supply well at Park Moabi.

### 2.1.2 Title 22 Metals

In addition to the site COCs, ten monitoring wells were sampled for antimony, arsenic, barium, beryllium, cadmium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc (CCR Title 22 full list of metals). A one time sample from MW-21 was collected and analyzed for Title 22 metals during the December quarterly event as per the November 11, 2005 technical memorandum to DTSC (CH2M HILL 2005i). The other nine wells are routinely sampled for the Title 22 metals on a quarterly basis. As required by DTSC (DTSC 2005i), the groundwater samples for CCR Title 22 dissolved metals analyses were field-filtered with a 0.45-micron in-line filter. The metals analyses were performed by Truesdail Laboratories Inc.

### 2.1.3 IM Performance Monitoring and Additional Water Quality Characterization

During the December 2005 monitoring event, 14 selected monitoring wells and two surface water locations were sampled and analyzed for specific parameters to monitor the performance and effects of IM pumping on groundwater chemistry in the floodplain area. The water samples were analyzed for:

- Total dissolved solids (USEPA Method 160.1).
- Chloride, sulfate, nitrate and bromide (anions; USEPA Method 300.0).
- Dissolved calcium, magnesium, potassium, sodium, and boron (cations; Method SW 6010B or SW 6020A).
- Alkalinity (USEPA Method 310.1).
- Stable isotopes oxygen 18 and deuterium (CF-IRMS methods).

The performance monitoring parameter analyses were performed by Truesdail Laboratories, Inc. (TDS and cations), Emax Laboratories (Torrance, anions and alkalinity), and Zymax Laboratory (San Luis Obispo, stable isotopes).

#### **2.1.4 In-Channel Surface Water Analyses**

Twenty-five depth-specific surface water samples were collected from the nine in-channel surface water stations. In addition to the site COCs, the in-channel surface water samples were analyzed for the following parameters:

- Hardness (USEPA Method 130.2)
- Total dissolved solids (USEPA Method 160.1)
- Total suspended solids (USEPA Method 160.2)

The in-channel samples were analyzed for these parameters, as well as pH and specific conductance, by Emax Laboratories, Inc. Truesdail Laboratories Inc. performed the Cr(VI) and Cr(T) analyses for the in-channel samples.

# 3.0 Fourth Quarter 2005 Monitoring Results

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This section summarizes the results of the groundwater and surface water sampling completed for the Topock GMP December 2005 quarterly monitoring event. Figure 2 shows the locations of the GMP monitoring wells and the nine shoreline surface water locations sampled along the Colorado River. Figure 3 shows the locations of the nine depth-specific surface water monitoring stations in the river channel.

The monitoring results and data presented for the December 2005 quarterly event include results for site COCs, the performance monitoring parameters, CCR Title 22 metals, and additional in-channel surface water sample parameters. Laboratory data quality review, water level measurements, and water quality field parameter data are also presented in this section. Complete laboratory reports and analytical documentation are maintained in the project file and are available upon request.

## 3.1 Site COC Analytical Results

### 3.1.1 Groundwater

Table 2 presents the results for chromium and other site COCs analytes in groundwater samples collected during this quarterly event and prior events from the past year. In December 2005, the maximum detected Cr(T) concentration was 9,340 µg/L and the maximum detected Cr(VI) concentration was 10,500 µg/L, both at well MW-20-130. Overall, the December 2005 chromium results are consistent with prior results at these locations (Table 2).

### 3.1.2 Surface Water

Table 3 presents the results of chromium and other analytes in shoreline surface water samples collected during this quarterly event and prior events. Cr(VI) and Cr(T) were not detected in any of the water samples collected at the nine shoreline surface water stations during the fourth quarter.

Table 4 presents the results of chromium, other site COCs, TDS, TSS, and hardness analyses for the depth-specific surface water sampling events performed from July through December 2005. Cr(VI) and Cr(T) were not detected in any of the water samples collected at the nine depth-specific surface water stations during the fourth quarter.

### 3.1.3 Hexavalent Chromium Results

Figures 4A through 4C present the Cr(VI) results for wells monitoring the upper, middle, and lower depth intervals of the Alluvial Aquifer, respectively, during the December 2005 quarterly sampling event. Figures 4A through 4C also show the approximate outline of the areas where the concentration of Cr(VI) in the groundwater is greater than 50 µg/L (the California drinking water standard for total chromium). The Cr(VI) results for the shoreline surface water sampling during the December 2005 quarterly event are shown on Figure 4A.

The overall distribution and concentrations of Cr(VI) in the groundwater during December 2005 (Figures 4A, 4B, and 4C) are generally consistent and comparable with the prior quarterly monitoring data. Although the overall distribution of Cr(VI) is similar to prior monitoring events, the December 2005 sampling results indicate increasing concentrations in MW-34-100 and declining concentrations in the well clusters MW-36 and MW-39 (see Table 2). The Cr(VI) concentration in well MW-34-100 increased from 732 µg/L in October 2005 to 808 µg/L in December 2005, while the two shallower screened intervals in the MW-34 cluster showed no detections of Cr(VI). The Cr(VI) concentration in well MW-36-100 decreased from 383 µg/L in October 2005 to 306 µg/L in December 2005. The Cr(VI) concentration in well MW-39-100 decreased from 4,010 µg/L in October 2005 to 3,640 µg/L in December 2005.

The Cr(VI) concentration from the sample collected from MW-27-85 was at an estimated value of 1.2J µg/L, just over the reporting limit of 1.0 µg/L. This result is estimated because the quality control criteria for matrix spike recovery was not met (see Section 3.3). Matrix interference has previously been encountered in this monitoring well, which has affected the sensitivity for hexavalent chromium by the SW7199 method.

Cr(VI) was not detected above the reporting limit (0.2 µg/L) in the water sample collected in December 2005 from the supply well at Park Moabi.

## 3.2 Additional Analytes Results

### 3.2.1 IM Performance Monitoring and Additional Water Quality Characterization

Table 5 presents the results of the general chemistry and stable isotope analyses for the 14 monitoring wells and two surface water stations in the IM performance monitoring area from March 2004 through December 2005. The general chemistry and stable isotope data collected under the GMP are used to assess water quality conditions and data trends in the IM performance monitoring floodplain area (see Section 4.2.1).

### 3.2.2 CCR Title 22 Metals

Table 6 presents the full list of CCR Title 22 metal results for the GMP monitoring wells sampled from September 2004 through December 2005. In addition to Cr(T), the trace metals detected in the December 2005 groundwater sampling event were arsenic, molybdenum, selenium, vanadium, and zinc. Excluding Cr(T) and arsenic, the dissolved concentrations of the trace metals detected during the December 2005 monitoring event are below the respective California drinking water standards. Arsenic was either non-detect or detected at concentrations below the California maximum contaminant level (MCL) in all wells, except in well MW-12. Arsenic was not detected above the analytical reporting limit in the one time sample collected from MW-21 (immediately downgradient of MW-12) in December, collected in order to confirm the spatial distribution of the occurrence of arsenic in MW-12.

## 3.3 Analytical Data Quality Review

The laboratory analytical data generated from the December 2005 monitoring event were independently reviewed by project chemists to assess data quality and identify deviations

from analytical requirements. A detailed discussion of data quality for GMP sampling data is presented in the data validation reports, which are kept in the project file and are available upon request.

As discussed below, the completeness objectives were met for all method and analyte combinations. No significant analytical deficiencies were identified in the December 2005 monitoring data. With minor exceptions (noted below), the analyses and data quality met the laboratory method quality control acceptance criteria. Overall, the analytical data for the December 2005 monitoring event are considered acceptable for the purpose of monitoring groundwater and surface water conditions at the site.

**Matrix Interference:** Matrix interference was encountered in groundwater samples from some of the monitoring wells, which affected the sensitivity for Cr(VI) when using Method SW 7199. Results from 33 wells reflect adjusted reporting limits (Table 2) as a result of serial dilutions that were required to overcome the matrix interference and provide acceptable matrix spike recoveries.

**Quantitation and Sensitivity:** All method and analyte combinations met the project reporting limit objectives, with the exception of the matrix interference issue explained above.

**Holding Time Data Qualification:** All method holding time requirements were met.

**Calibration:** All initial and continuing instrument calibration criteria were met.

**Matrix Spike Samples:** Matrix spike acceptance criteria were met, with the following exception: the Cr(VI) analysis for MW-27-85 and MW-40S samples had recovery that was below the criteria, and the results were estimated (J flagged).

For detections, the laboratory has been instructed to report the results from the dilution where both the peak detected in the unspiked and the spiked sample fall within the appropriate quality control limits. The reporting limits are subsequently raised to the level of the appropriate dilution.

**Chain of Custody:** Each sample was documented in a completed chain of custody and received at the laboratory in good condition. All discrepancies identified in laboratory custody were promptly resolved except.

**Field Duplicates:** All field duplicates acceptance criteria were met, with the following exception: the Cr(T) results for MW-33-90 and its field duplicate were outside acceptance criteria, and the results were estimated (J flagged).

**Laboratory Duplicates:** All laboratory duplicate acceptance criteria for all methods were met.

## 3.4 Water Level Monitoring

Table 7 presents the water level measurements and groundwater and surface water elevations from the December 2005 monitoring event. Water level measurements from prior monitoring events are summarized in this table for reference and comparison. Table 7 also lists salinity data for the wells where water levels were measured. Groundwater salinity

during this monitoring event ranged from 0.06 percent (MW-27-20) to 3.00 percent (well MW-30-30)—a range that is consistent with results of prior monitoring. To account for the groundwater density differences between wells with different salinities, all groundwater elevations measured in the monitoring wells have been normalized to an equivalent freshwater head.

Since March 2004, a network of pressure transducers has been used to collect continuous records of water elevation data in the Alluvial Aquifer (floodplain and IM No. 3 injection areas) and the Colorado River for the analysis and assessment of hydraulic data. This network currently includes over 70 transducers. This monitoring is ongoing and is being reported as part of the IM activities. The average groundwater elevation data for wells in the floodplain area are calculated monthly and are presented in the IM performance monitoring reports (CH2M HILL 2006a).

Beginning in June 2005 at DTSC's direction (DTSC 2005e), a sitewide water level data set has been collected quarterly to construct a groundwater elevation contour map for the upper depth interval of the Alluvial Aquifer. During the fourth quarter event, a sitewide water level survey was conducted on December 20, 2005. This survey involved the manual collection of groundwater level data at 31 shallow wells within a two-hour period. Figure 5 presents the groundwater elevation contours for the upper-depth interval of the Alluvial Aquifer (shallow monitoring wells). Because groundwater levels at the site fluctuate continuously in response to changes in the river stage, these groundwater elevation contours reflect transient conditions at the time of measurement and may not be representative of the average groundwater flow directions.

### 3.5 Field Parameter Data

A field water quality meter and flow-through cell were used to measure parameters during well purging and groundwater sampling (CH2M HILL 2004, 2005b). Water quality field measurements were also recorded during surface water sampling. The measured field parameters included specific conductance, temperature, pH, oxidation-reduction potential (ORP), and dissolved oxygen. Table 8 summarizes the field water quality data collected during the December 2005 quarterly event and prior monitoring events. Field data sheets and chain of custody records for the December event are presented in Appendix A.

# 4.0 Summary of 2005 Quarterly Monitoring Results

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This section summarizes the results of the four quarterly monitoring events completed for the Topock GMP in 2005. Key observations and data trends for the 2005 monitoring period are presented. Discussion of IM monitoring activities and assessment of trends in the floodplain area are covered by the IM performance monitoring reports (CH2M HILL 2006a). More extensive interpretation and analysis of groundwater and surface water conditions at the Topock site are reserved for the upcoming update to the RFI report.

Table 9 presents a summary of the 2005 GMP quarterly monitoring activities, including the number of wells sampled for site COCs, Title 22 metals, and IM performance parameters for each event.

## 4.1 Site COC Analytical Results

### 4.1.1 Groundwater

During the quarterly events of the 2005 monitoring period, the maximum detected Cr(T) concentration was 10,700 µg/L at well MW-20-130 (third quarter), and the maximum detected Cr(VI) concentration was 10,800 µg/L, at well MW-20-130 (second quarter) (Table 2).

### 4.1.2 Surface Water

Cr(VI) and Cr(T) were not detected in any of the water samples collected at the nine shoreline surface water stations during the 2005 monitoring period (Table 3).

Cr(VI) and Cr(T) were not detected in any of the water samples collected at the nine depth-specific in-channel river stations during the 2005 monitoring period (Table 4).

### 4.1.3 Hexavalent Chromium Results

The Cr(VI) groundwater plume limits (delineated by the 50 µg/L isoconcentration line) have remained generally stable over the course of 2005. The December 2005 results are shown on Figures 4A, 4B, and 4C and the complete Cr(VI) sampling results for 2005 monitoring are presented in Table 2.

The Cr(VI) concentrations detected at MW-34-100 have shown an increasing trend since the first sampling of this well in February 2005. The other two screened intervals in the MW-34 cluster showed no detections of Cr(VI) in 2005. The Cr(VI) concentrations at wells MW-10, MW-11, MW-19 and MW-20-70 have shown increasing trends during 2005 sampling (Table 2). The Cr(VI) concentrations in MW-40D at the western plume boundary have fluctuated from a low of 7.6 µg/L in the second quarter, to a high of 83.5 µg/L in the fourth quarter.

The MW-36 cluster has shown no detections of Cr(VI) in the shallow and middle depth interval wells, and a steadily decreasing trend in the Cr(VI) concentrations in the deep interval wells in 2005. The MW-39 cluster showed a general decreasing trend in Cr(VI) concentrations over 2005. Overall, Cr(VI) concentrations from wells within the plume have shown steady decreases over 2005, which are most noticeable in wells: MW-12, MW-20-70, MW-25, MW-26, MW-31-60, MW-31-135, MW-36-90, MW-36-100, MW-38S, MW-39-50, MW-39-60, MW-39-70, MW-39-80, and MW-39-100 (Table 2). Graphs of Cr(VI) concentrations for selected wells in the floodplain area over the reporting period are included in the quarterly (CH2M HILL 2005j) and annual IM performance monitoring reports (in preparation). The majority of the wells with decreasing Cr(VI) concentration trends are located in the floodplain, and the decreasing trend is likely a result of the groundwater extraction for the interim measures.

Figure 6 is a generalized site cross section that presents the groundwater sampling results from October 2005 semi-annual monitoring (cross section location shown on the inset map on Figure 6). This hydrogeologic section illustrates the elevations of the upper, middle, and lower depth intervals of the Alluvial Aquifer, the screened intervals of monitoring wells cluster and other key wells, and the Cr(VI) results from the October 2005 monitoring event. The sampling data show a wide range in concentrations within the Alluvial Aquifer sampling locations and depths. The wells that monitor groundwater in the Miocene and older bedrock formations (MW-24 cluster deep well, PGE-7, and PGE-8) were non-detect for Cr(VI) in 2005 sampling. More detailed cross sections showing Cr(VI) sampling results from monitoring wells in the floodplain area are presented in the IM performance monitoring reports (CH2M HILL 2006a).

## 4.2 Additional Analytes Results

### 4.2.1 IM Performance Monitoring and Additional Water Quality Characterization

The general chemistry and stable isotope analyses results for the 14 monitoring wells and two surface water stations in the IM performance monitoring area exhibited little variation during the 2005 monitoring period (Table 5). Discussion and evaluation of the stable isotope and groundwater data geochemical trends observed during 2005 in the IM floodplain area will be described in the annual IM performance monitoring report (in preparation).

To supplement the water quality site characterization, groundwater samples were collected from selected wells and analyzed for additional parameters during the June, September, and October 2005 monitoring events. The samples were analyzed by Emax Laboratories for additional parameters which are not part of the routine IM performance monitoring suite. These include: ammonia (USEPA Method 350.2), total organic carbon (USEPA Method 415.2), dissolved silica (USEPA Method 370.1), iron (USEPA Method 6010B or 6020A), and manganese (USEPA Method 6010B or 6020A). The results of these additional analyte results are presented in Appendix B.

### 4.2.2 CCR Title 22 Metals

Besides Cr(T), the trace Title 22 metals detected in the GMP monitoring wells in 2005 were arsenic, barium, cobalt, copper, lead, molybdenum, nickel, selenium, thallium, vanadium,

and zinc (Table 6). With the exception of Cr(VI) and arsenic, all of the trace metal detections in 2005 were below the respective California drinking water standards. Arsenic was detected above the MCL in only one well, MW-12, and in all samples from that well during 2005. The concentration of Title 22 metals that were consistently detected in monitoring wells remained fairly stable overall during the annual monitoring period. An exception was the high concentrations of vanadium in groundwater samples collected from the March 2005 quarterly event. As discussed in the November 2005 technical memorandum to DTSC (CH2M HILL 2005i), CH2M HILL project chemists found that some of the anomalous vanadium results were caused by matrix interferences.

## 4.3 Water Level Monitoring

The range of groundwater salinities measured in 2005 during water level monitoring remained stable, ranging from 0.03 percent in MW-27-20 to a maximum of 3.14 percent in well MW-30-30 (both first quarter) (Table 7).

Appendix C contains groundwater hydrographs for four representative wells in different regions of the site during 2005. Appendix Figures C1 through C4 present hydrographs from wells MW-20-70, MW-26, MW-10, and OW-1S, respectively (all wells equipped with pressure transducers). The Colorado River gage station I-3 2005 hydrograph is also shown on the groundwater hydrographs for the selected wells.

The hydrographs presented on Figures C1 through C4 represent well locations from east to west, moving away from the river. The four selected monitoring wells are all screened in the upper depth interval of the Alluvial Aquifer. The groundwater levels in each of the selected site areas show the seasonal trends of increasing and decreasing water levels associated with the river stage. Additionally, wells that are close to the river, such as MW-20-70, show pronounced groundwater elevation fluctuations in response to the daily river water elevation changes. In contrast, wells that are distant from the river, such as MW-10 and OW-1S, show more muted water level responses to the daily river stage fluctuations. The Topock IM No. 3 Compliance Monitoring Program reports provide hydrographs for observations wells and compliance wells in the injection well field that have transducers installed (CH2M HILL 2006b). Refer to the IM performance monitoring reports (CH2M HILL 2005j, 2006a) for more detailed discussion of the water level data and hydraulic gradients assessment for groundwater wells in the floodplain area at the Topock site.

# **5.0 Status of Monitoring Activities**

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This section summarizes the scope and status of ongoing monitoring activities scheduled for the Topock GMP. Monitoring activities up to and including the December 2005 quarterly event were conducted in accordance with the July 2004 SAP (CH2M HILL 2004a) and subsequent revisions. DTSC provided comments on the July 2004 SAP in a letter dated January 25, 2005 (DTSC 2005i). As described in Section 1.0, the GMP Monitoring Plan was submitted on April 11, 2005 (CH2M HILL 2005b). New wells were approved for inclusion in the GMP in May 2005, and the sampling frequency was revised in September 2005. Field filtration of Cr(VI) samples from monitoring wells and the depth-specific surface water sampling were initiated in July 2005. The Monitoring Plan will be revised in a future update to reflect the approved revisions.

## **5.1 Quarterly Monitoring – First Quarter 2006 Event**

The first quarter 2006 monitoring event is scheduled to be conducted in March 2006. This monitoring event will also serve as a semi-annual event. The groundwater and surface water monitoring report for the first quarter 2006 GMP event will be submitted approximately 10 weeks after sampling.

The surface water monitoring program has been augmented to include quarterly depth-specific sampling of nine in-channel surface water stations (CH2M HILL 2005e, f). The depth-specific sampling was initiated in July 2005 and occurs quarterly during normal river stages and monthly during low river stages (November 2005 through January 2006). The depth-specific surface water sampling will continue until June 2006, after which the surface water monitoring program will be re-evaluated and modified as warranted with DTSC approval.

## **5.2 Monthly Monitoring**

From October 2004 to May 2005, monthly sampling events included the sampling of 24 wells and nine surface water locations for Cr(VI) and Cr(T). After May 2005, monthly sampling events included the sampling of 35 wells and nine surface water locations for Cr(VI) and Cr(T). The sampling frequency was reduced from July through September 2005 to include the monthly sampling of 12 wells on the floodplain, with several floodplain wells requiring specially-modified procedures for low-impact sampling. In September 2005, the entire GMP sampling schedule was revised, retaining 12 wells for routine monthly sampling. This monthly monitoring frequency will continue in 2006.

## **5.3 Biweekly Well Sampling**

From January to August 2004, at the DTSC's request, PG&E conducted weekly sampling for Cr(VI) and Cr(T) at seven selected monitoring wells in the floodplain, as part of IM data collection (DTSC 2004c). In August 2004, DTSC approved the transition from weekly to

biweekly sampling for four select wells. The four floodplain wells included in biweekly sampling were MW-28-90, MW-33-90, MW-34-80, and MW-36-100.

In late February 2005, weekly sampling of selected floodplain monitoring wells and river sampling locations was resumed at DTSC direction. Weekly sampling of four wells (MW-27-60, MW-27-85, MW-34-80, and MW-34-100) was initiated during the week of February 23, 2005. The sampling frequencies were further revised in May 2005: MW-34-100 to weekly sampling, MW-27-85 and MW-34-80 to biweekly sampling, and MW-27-60 to monthly sampling (DTSC 2005b).

In July 2005, DTSC decreased the biweekly sampling schedule to one well (MW-34-100) for the period of July through September 2005 (DTSC 2005g). In September 2005, DTSC extended the reduced sampling frequency so that biweekly sampling of only MW-34-100 continues (DTSC 2005h). Groundwater monitoring of MW-34-100 and other sentry wells in the floodplain area will continue in accordance with the approved monitoring and contingency plans and as directed by DTSC.

## 6.0 References

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## **Tables**

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**Table 1**  
**Well Construction and Sampling Summary, December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Site Area	Measuring Point Elevation (ft MSL)	Screen Interval (ft bgs)	Well Casing (inches)	Well Depth (ft bgs)	Depth to Water (ft btoc)	Sampling System	Typical Purge Rate (gpm)	Typical Purge Volume (gallons)	Remarks
<b>GMP Monitoring Wells</b>										
MW-09	Bat Cave Wash	536.56	77 - 87	4 in PVC	89.4	80.9	CD pump	3	11	
MW-10	Bat Cave Wash	530.65	73.7 - 93.7	4 in PVC	96.9	75.3	CD pump	5	40	
MW-11	Bat Cave Wash	522.61	62.5 - 82.5	4 in PVC	86.1	67.0	CD pump	5	30	
MW-12	East of Station	484.01	27.5 - 47.5	4 in PVC	50.4	28.1	Ded. Redi-Flo AR	3	40	
MW-13	Bat Cave Wash	488.64	28.5 - 48.5	4 in PVC	52.0	32.4	CD pump	4	30	
MW-14	East Mesa	570.99	111 - 131	4 in PVC	133.8	115.8	CD pump	4	30	
MW-15	East of New Ponds	641.52	180.5 - 200.5	4 in PVC	203.0	186.2	CD pump	5	30	
MW-16	Near New Ponds	657.31	198 - 217	4 in PVC	218.1	202.0	CD pump	7	35	
MW-17	West of Mesa Area	589.96	130 - 149.5	4 in PVC	153.6	133.4	CD pump	5	32	
MW-18	West Mesa	545.32	85 - 104	4 in PVC	106.7	89.6	CD pump	5	30	
MW-19	Route 66	499.92	46 - 65	4 in PVC	65.8	45.7	CD pump	7	41	
MW-20-070	MW-20 bench	500.15	50 - 70	4 in PVC	69.6	45.7	CD pump	10	53	
MW-20-100	MW-20 bench	500.58	89.5 - 99.5	4 in PVC	101.4	48.1	CD pump	10	110	
MW-20-130	MW-20 bench	500.66	121 - 131	4 in PVC	132.3	49.1	CD pump	10	180	
MW-21	Route 66	505.55	39 - 59	4 in PVC	58.5	49.5	CD pump	10	10	low recharge well; purges dry at 1 casing volume
MW-22	Floodplain	460.72	5.5 - 10.5	2 in PVC	12.4	6.9	Peristaltic	0.2	4	
MW-23	East of Station	507.33	60 - 80	4 in PVC	81.4	52.6	CD Pump	5	20	low recharge well; purges dry at 1 casing volume
MW-24A	MW-24 Bench	567.16	104 - 123.5	4 in PVC	127.5	112.1	CD pump	3	30	
MW-24B	MW-24 Bench	564.76	193 - 213	4 in PVC	214.8	109.1	CD pump	7	210	
MW-24BR	MW-24 Bench	563.95	378 - 437	4 in PVC	441.0	108.2	CD pump	8	185	low recharge well; purges dry at 1 casing volume
MW-25	Near Bat Cave Wash	542.90	84.5 - 104.5	4 in PVC	106.5	86.5	CD pump	5	32	
MW-26	Route 66	502.22	51.5 - 71.5	2 in PVC	70.1	47.8	CD pump	7	50	
MW-27-020	Floodplain	460.56	7 - 17	2 in PVC	14.4	7.4	Ded. Redi-Flo AR	1	7	
MW-27-060	Floodplain	461.38	47.3 - 57.3	2 in PVC	59.0	8.8	Redi-Flo AR	2	25	
MW-27-085	Floodplain	460.99	77.5 - 87.5	2 in PVC	80.0	7.6	Redi-Flo AR	2	36	
MW-28-025	Floodplain	466.85	13 - 23	2 in PVC	21.1	13.6	Ded. Redi-Flo AR	1	5	
MW-28-090	Floodplain	467.51	70 - 90	2 in PVC	98.4	13.9	Ded. Redi-Flo AR	2	50	
MW-29	Floodplain	485.21	29.5 - 39.5	2 in PVC	41.5	31.2	Ded. Mini-Monsoon	0.5	6	
MW-30-030	Floodplain	468.12	12 - 32	2 in PVC	26.9	14.7	Ded. Redi-Flo AR	1	10	
MW-30-050	Floodplain	468.81	40.5 - 50.5	4 in PVC	52.6	15.8	Ded. Redi-Flo AR	2	75	
MW-31-060	MW-20 Bench	496.81	41.5 - 61.5	4 in PVC	64.0	45.9	CD pump	10	40	
MW-31-135	MW-20 Bench	498.11	113 - 133	2 in PVC	135.4	45.2	Redi-Flo AR	3	60	

**Table 1**  
**Well Construction and Sampling Summary, December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Site Area	Measuring Point Elevation (ft MSL)	Screen Interval (ft bgs)	Well Casing (inches)	Well Depth (ft bgs)	Depth to Water (ft btoc)	Sampling System	Typical Purge Rate (gpm)	Typical Purge Volume (gallons)	Remarks
<b>GMP Monitoring Wells</b>										
MW-32-020	Floodplain	461.51	10 - 19	2 in PVC	19.6	8.3	Ded. Redi-Flo AR	1.5	6	
MW-32-035	Floodplain	461.63	27.5 - 35	4 in PVC	37.2	8.6	Ded. Redi-Flo AR	2	60	
MW-33-040	Floodplain	487.38	29 - 38	4 in PVC	41.8	33.8	Ded. Mini-Monsoon	0.5	4	
MW-33-090	Floodplain	487.55	69 - 88	4 in PVC	88.3	33.8	Ded. Redi-Flo AR	2	110	
MW-33-150	Floodplain	487.77	132 - 152	2 in PVC	155.0	33.1	Redi-Flo AR	3	60	
MW-33-210	Floodplain	487.25	190 - 210	2 in PVC	223.0	33.8	Redi-Flo AR	3	90	
MW-34-055	Floodplain	460.95	45 - 55	4 in PVC	56.6	7.8	Ded. Redi-Flo AR	2	100	
MW-34-080	Floodplain	461.20	73 - 82	4 in PVC	84.3	7.4	Ded. Redi-Flo AR	3	150	
MW-34-100	Floodplain	460.96	89.5 - 99.5	2 in PVC	117.0	7.8	Redi-Flo AR	2	55	
MW-35-060	Route 66	484.19	38.5 - 58.5	2 in PVC	56.8	31.2	Redi-Flo AR	2	18	
MW-35-135	Route 66	483.57	120 - 140	2 in PVC	158.7	30.0	Redi-Flo AR	3	66	
MW-36-020	Floodplain	469.26	10 - 20	1 in PVC	22.7	16.6	Peristaltic	0.5	4	
MW-36-040	Floodplain	469.61	30 - 40	1 in PVC	42.8	17.0	Peristaltic	0.5	4	
MW-36-050	Floodplain	469.60	46 - 51	1 in PVC	53.3	17.0	Peristaltic	0.75	5	
MW-36-070	Floodplain	469.25	60 - 70	1 in PVC	72.5	15.8	Peristaltic	0.5	7	
MW-36-090	Floodplain	469.61	80 - 90	1 in PVC	92.5	16.9	Peristaltic	0.4	10	
MW-36-100	Floodplain	469.64	88 - 98	2 in PVC	110.2	17.2	Ded. Redi-Flo AR	2	45	
MW-37D	Bat Cave Wash	486.19	180 - 200	2 in PVC	226.7	31.9	Redi-Flo AR	3	100	
MW-37S	Bat Cave Wash	485.97	64 - 84	2 in PVC	87.0	31.8	Redi-Flo AR	2	30	
MW-38D	Bat Cave Wash	525.31	163.3 - 183.3	2 in PVC	190.9	70.4	Redi-Flo AR	3	60	
MW-38S	Bat Cave Wash	525.51	75 - 95	2 in PVC	98.1	70.9	Redi-Flo AR	1	13	
MW-39-040	Floodplain	468.02	30 - 40	1 in PVC	42.1	15.3	Peristaltic	0.5	3.5	
MW-39-050	Floodplain	467.93	45 - 50	1 in PVC	54.6	15.0	Peristaltic	0.5	5	
MW-39-060	Floodplain	468.00	49 - 59	1 in PVC	66.3	15.5	Peristaltic	0.5	6	
MW-39-070	Floodplain	468.02	60 - 70	1 in PVC	71.7	15.2	Peristaltic	0.5	7	
MW-39-080	Floodplain	467.92	70 - 80	1 in PVC	82.6	15.2	Peristaltic	0.5	9	
MW-39-100	Floodplain	468.01	80 - 100	2 in PVC	117.7	15.5	Ded. Redi-Flo AR	2	45	
MW-40D	I-40 Median	566.08	235 - 255	2 in PVC	266.0	111.3	Redi-Flo AR	3	75	
MW-40S	I-40 Median	566.04	115 - 135	2 in PVC	134.0	111.0	Redi-Flo AR	2	13	
MW-41D	Bat Cave Wash	479.42	271 - 291	2 in PVC	313.0	25.1	Redi-Flo AR	3	145	
MW-41M	Bat Cave Wash	479.83	170 - 190	2 in PVC	192.4	25.1	Redi-Flo AR	3	85	
MW-41S	Bat Cave Wash	480.07	40 - 60	2 in PVC	61.6	25.4	Redi-Flo AR	2	42	

**Table 1**  
**Well Construction and Sampling Summary, December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Site Area	Measuring Point Elevation (ft MSL)	Screen Interval (ft bgs)	Well Casing (inches)	Well Depth (ft bgs)	Depth to Water (ft btoc)	Sampling System	Typical Purge Rate (gpm)	Typical Purge Volume (gallons)	Remarks
<b>GMP Monitoring Wells</b>										
MW-42-030	Floodplain	463.81	9.8 - 29.8	2 in PVC	32.0	11.3	Redi-Flo AR	2	28	
MW-42-055	Floodplain	463.87	42.5 - 52.5	2 in PVC	56.0	11.3	Redi-Flo AR	3	21	
MW-42-065	Floodplain	463.37	56.2 - 66.2	2 in PVC	80.0	10.8	Redi-Flo AR	3	36	
MW-43-025	Floodplain	462.54	15 - 25	2 in PVC	27.0	9.6	Redi-Flo AR	1	9	
MW-43-075	Floodplain	462.71	65 - 75	2 in PVC	77.0	8.6	Redi-Flo AR	2	28	
MW-43-090	Floodplain	462.76	80 - 90	2 in PVC	102.0	9.7	Redi-Flo AR	2	47	
<b>IM3 Observation Wells</b>										
OW-03D	West Mesa	558.63	242 - 262	2 in PVC	274.0	102.1	Temp Redi-Flo AR	3	90	
OW-03M	West Mesa	558.90	180 - 200	2 in PVC	202.0	102.5	Temp Redi-Flo AR	3	54	
OW-03S	West Mesa	558.58	86 - 116	2 in PVC	118.0	102.9	Temp Redi-Flo AR	2	30	
<b>Other Site Wells not in GMP</b>										
MW-01	New Ponds	661.76	200 - 210	4 in PVC	217.0	206.0	air bladder pump	NA	NA	active PG&E pond monitoring well
MW-03	New Ponds	650.51	193 - 203	4 in PVC	205.0	195.5	air bladder pump	NA	NA	active PG&E pond monitoring well
MW-04	New Ponds	625.73	164.5 - 174.5	4 in PVC	176.3	170.1	air bladder pump	NA	NA	active PG&E pond monitoring well
MW-05	New Ponds	635.69	175.9 - 185.4	4 in PVC	186.2	180.0	air bladder pump	NA	NA	active PG&E pond monitoring well
MW-06	New Ponds	642.84	184.5 - 193.5	4 in PVC	194.9	186.8	air bladder pump	NA	NA	active PG&E pond monitoring well
MW-07	New Ponds	631.91	172.7 - 182.7	4 in PVC	185.0	176.0	air bladder pump	NA	NA	active PG&E pond monitoring well
MW-08	New Ponds	627.54	169 - 178	4 in PVC	179.9	171.5	air bladder pump	NA	NA	active PG&E pond monitoring well
MWP-08	Old Ponds	677.48	181 - 210	3 in PVC	213.0	189.5	---	NA	NA	inactive monitoring well
MWP-10	Old Ponds	675.81	195 - 235	3 in PVC	237.0	208.6	---	NA	NA	inactive monitoring well
MWP-12	Old Ponds	663.49	96 - 136	4 in PVC	143.0	107.8	---	NA	NA	inactive monitoring well
P-2	New Ponds	537.60	238.5 - 248.5	4 in PVC	251.0	169.8	---	NA	NA	inactive monitoring well
PGE-09N	East of River	462.21	25 - 95	12 in Steel	---	---	---	NA	NA	
PGE-09S	East of River	461.99	30 - 100	12 in Steel	---	---	---	NA	NA	
<b>Test and Extraction Wells</b>										
IW-02	East Mesa	550.10	170 - 330	6 in Steel	343.0	95.8	---	NA	NA	IM3 injection well
IW-03	East Mesa	554.44	160 - 320	6 in Steel	333.0	100.1	---	NA	NA	IM3 injection well
PE-01	Floodplain	457.52	79 - 89	6 in Steel	97.0	16.4	CD pump	3	400	
TW-01	Plan B Test	620.55	169 - 269	5 in PVC	240.2	164.5	CD pump	20	200	inactive pilot test well
TW-02D	MW-20 bench	499.57	113 - 148	6 in PVC	150.0	69.3	CD pump	70.1	160	active IM extraction well
TW-02S	MW-20 bench	499.05	42.5 - 92.5	6 in PVC	102.1	41.4	CD pump	6	75	IM extraction well

**Table 1**  
**Well Construction and Sampling Summary, December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Site Area	Measuring Point Elevation (ft MSL)	Screen Interval (ft bgs)	Well Casing (inches)	Well Depth (ft bgs)	Depth to Water (ft btoc)	Sampling System	Typical Purge Rate (gpm)	Typical Purge Volume (gallons)	Remarks
<b>Test and Extraction Wells</b>										
TW-03D	MW-20 bench	---	111 - 156	8 in PVC	157.0	46.5	Temp pump	NA	NA	IM extraction well
<b>Water Supply Wells</b>										
PGE-06	MW-24 Bench	563.32	110 - 180	14 in Steel	181.0	107.3	CD pump	24	650	inactive supply
PGE-07	MW-24 Bench	563.89	195 - 330	14 in Steel	332.0	108.1	CD pump	12	600	inactive supply
PGE-08	Station	596.01	405 - 554	8 in Steel	564.0	140.8	CD pump	20	1900	inactive injection
PM-03	Park Moabi	518.55	80 - 200	8 in Steel	252.0	61.3	active supply well	NA	NA	call Park Ranger to schedule sampling

**NOTES:**

BGS below ground surface  
 MSL mean sea level  
 BTOC below top of casing  
 NA not known or available  
 CD pump dedicated constant-discharge electric submersible pump  
 Redi-Flo AR adjustable-rate electric submersible pump  
 PVC polyvinyl chloride casing

Depth to water shown is the most recently measured depth to water.

All GMP wells except low recharge wells, active IM extraction wells, and Park Moabi well are purged and sampled using well-volume method.

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Total Chromium (µg/L)	Specific Conductance (µS/cm)	pH
MW-9	17-Dec-04	---	294	3,450	7.51
	11-Jan-05	279	UF	---	---
	08-Mar-05	343	316	3,010	7.74
	07-Apr-05	338	318	---	---
	16-Jun-05	320	304	2,800	7.94
	16-Jun-05 FD	322	298	2,820	7.82
	03-Oct-05	309	287 FF	2,740	7.50
MW-10	17-Dec-04	---	1320	3,400	7.53
	11-Jan-05	1210	UF	---	---
	08-Mar-05	1140	1020	3,370	7.66
	08-Mar-05 FD	1030	1020	3,420	7.72
	16-Jun-05	1490	1210	3,290	8.03
	03-Oct-05	4570	4900 FF	1,690	7.74
MW-11	17-Dec-04	---	387	2,500	7.52
	11-Jan-05	323	UF	---	---
	08-Mar-05	396	392	2,310	7.89
	16-Jun-05	362	334	2,200	8.02
	03-Oct-05	649	617 FF	2,330	7.33
MW-12	10-Mar-05	925	883	3,980	8.62
	10-Mar-05 FD	925	841	4,000	8.65
	06-Apr-05	810	871	---	---
	06-Apr-05 FD	810	868	---	---
	13-Jun-05	852	835	3,910	8.45
	16-Sep-05	698	618 FF	3,630	8.64
	04-Oct-05	660	644 FF	2,980	8.70
	04-Oct-05 FD	670	613 FF	2,970	8.70
	13-Dec-05	626	602 FF	2,930	8.41
MW-13	16-Dec-04	19.3	16.0	1,910	7.78
	11-Mar-05	19.2	19.0	1,850	8.00
	14-Jun-05	14.8	19.1	1,850	7.62
	04-Oct-05	20.3	24.5 FF	1,770	7.08
	13-Dec-05	21.4	20.0 FF	1,740	7.51
	13-Dec-05 FD	21.5	22.1 FF	1,750	7.52
MW-14	16-Dec-04	31.3	24.2	1,530	7.82
	09-Mar-05	32.0	32.5	1,510	7.89
	07-Apr-05	34.3	38.0	---	---
	15-Jun-05	30.0	30.4	1,450	8.27
	15-Jun-05 FD	28.4	29.2	1,450	8.30
	06-Oct-05	35.4	34.8 FF	1,430	7.71
	15-Dec-05	31.7	30.0 FF	1,440	7.24
MW-15	17-Dec-04	7.70	6.50	1,330	7.76
	09-Mar-05	8.40	8.40	1,350	7.81
	17-Jun-05	7.70	8.00	1,500	7.83
	06-Oct-05	7.60	14.0 J FF	1,410	7.75

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium ( $\mu\text{g/L}$ )	Dissolved Total Chromium ( $\mu\text{g/L}$ )	Specific Conductance ( $\mu\text{S/cm}$ )	pH
MW-16	16-Dec-04	10.4	10.9	1,230	7.99
	06-Oct-05	4.10	21.8 J FF	1,020	7.97
MW-17	16-Dec-04	11.8	9.80	1,800	7.90
	05-Oct-05	13.6	11.7 FF	1,670	7.63
MW-18	16-Dec-04	30.6	25.2	1,270	7.80
	09-Mar-05	34.1	34.6	1,190	7.81
	09-Mar-05 FD	33.3	36.0	1,180	7.84
	15-Jun-05	23.2	22.2	1,420	8.10
	06-Oct-05	34.7 J	29.9 FF	1,210	7.68
MW-19	17-Dec-04	796	786	2,240	7.63
	07-Mar-05	1080	1010	2,150	7.73
	14-Jun-05	1150	1140	2,000	7.71
	04-Oct-05	1060	996 FF	1,970	7.65
	12-Dec-05	1240	1270 FF	2,040	7.52
MW-20-70	16-Dec-04	7800	7840	3,250	7.62
	10-Mar-05	8280	8630	3,240	7.76
	07-Apr-05	8740	9020	---	---
	15-Jun-05	6680	6450	2,980	8.02
	15-Jun-05 FD	7000	7080	3,020	7.96
	11-Oct-05	6060	5930 FF	2,950	7.49
	15-Dec-05	4640	4310 FF	2,850	7.72
MW-20-100	16-Dec-04	8130	7910	4,470	7.69
	10-Mar-05	8440	7770	4,180	8.03
	15-Jun-05	9600	10100	3,790	8.16
	11-Oct-05	10200	9430 FF	3,600	7.57
	15-Dec-05	9460	9010 FF	3,550	7.68
MW-20-130	27-Jan-05	8600	9400	12,300	7.88
	09-Mar-05	8730	8900	11,000	7.90
	09-Mar-05 FD	8810	8170	10,900	7.81
	07-Apr-05	8980	8870	---	---
	15-Jun-05	10800	10300	11,000	8.15
	07-Oct-05	9590	10700 FF	12,000	7.71
	16-Dec-05	10500	9340 FF	13,000	7.53
MW-21	17-Dec-04	ND (0.2) J	ND (1.0)	9,460	7.17
	08-Mar-05	ND (1.0)	ND (1.0)	8,890	7.39
	14-Jun-05	ND (1.0)	ND (1.0)	12,500	7.31
	05-Oct-05	ND (1.0) J	ND (1.0) J FF	13,400	7.03
	14-Dec-05	ND (1.0)	ND (1.0) FF	8,960	7.08
MW-22	16-Dec-04	ND (1.0) J	7.00	34,300	6.88
	10-Mar-05	ND (2.0)	ND (1.0)	42,600	6.88
	17-Jun-05	ND (1.0)	ND (1.0)	31,100	6.95
	04-Oct-05	ND (2.0)	ND (1.0) J FF	44,600	6.88
	16-Dec-05	ND (2.0)	ND (1.0) FF	34,500	6.89

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Total Chromium (µg/L)	Specific Conductance (µS/cm)	pH
MW-23	17-Dec-04	1.10	1.50	17,300	7.14
	08-Mar-05	ND (1.0)	2.90	17,000	7.35
	14-Jun-05	8.90	7.70	15,900	7.26
	04-Oct-05	ND (1.0)	ND (1.0) FF	19,100	7.18
	14-Dec-05	8.80	10.5 FF	16,400	7.17
MW-24A	17-Dec-04	---	2890	3,400	7.63
	11-Jan-05	3040	UF	---	---
	07-Mar-05	3390	3180	3,330	7.88
	07-Mar-05 FD	3360	3290	3,380	7.96
	16-Jun-05	3280	2640	3,180	8.09
	03-Oct-05	3120	2930 FF	3,200	7.63
	03-Oct-05 FD	3040	2630 FF	3,190	7.61
MW-24B	17-Dec-04	---	4470	13,400	7.53
	17-Dec-04 FD	4790	4420	13,400	7.79
	11-Jan-05	5260	UF	---	---
	07-Mar-05	5320	4950	13,400	8.13
	16-Jun-05	5640	5660	12,700	8.29
	03-Oct-05	5240	4930 FF	14,900	7.84
MW-24BR	17-Dec-04	ND (1.0)	3.50	14,500	7.83
	08-Mar-05	ND (1.0)	ND (1.0)	14,000	8.14
	15-Dec-05	ND (1.0)	ND (1.0) FF	13,600	8.34
MW-25	09-Mar-05	1740	1600	1,410	7.67
	07-Apr-05	1620	1700	---	---
	14-Jun-05	1730	1670	1,500	7.65
	14-Jun-05 FD	1760	1660	1,510	7.54
	04-Oct-05	1540	1470 FF	1,390	7.63
	04-Oct-05 FD	1540	1480 FF	1,190	7.61
	14-Dec-05	1460	1370 FF	1,360	7.39
	14-Dec-05 FD	1450	1350 FF	1,350	7.41
MW-26	16-Dec-04	3790	3800	3,410	7.60
	08-Mar-05	2990	3160	3,180	7.84
	08-Mar-05 FD	2990	3050	3,090	7.77
	13-Jun-05	3370	3140	3,420	7.57
	04-Oct-05	3040	2990 FF	3,120	7.60
	12-Dec-05	3220	3160 FF	3,850	7.43
MW-27-20	02-Dec-04	ND (0.2)	UF	---	---
	15-Dec-04	ND (0.2)	ND (1.0)	1,130	7.91
	10-Jan-05	ND (0.2)	ND (1.0)	---	---
	09-Feb-05	ND (0.2)	ND (1.0)	---	---
	08-Mar-05	ND (0.2)	ND (1.0)	1,830	7.75
	04-Apr-05	ND (0.2)	ND (1.0)	---	---
	04-May-05	ND (0.2)	ND (1.0)	---	---
	18-Jul-05	ND (0.2)	ND (1.0) FF	1,060	7.70
	05-Oct-05	ND (0.21)	ND (1.0) FF	1,040	7.56

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium ( $\mu\text{g/L}$ )	Dissolved Total Chromium ( $\mu\text{g/L}$ )	Specific Conductance ( $\mu\text{S/cm}$ )	pH
MW-27-20	14-Dec-05	ND (0.2)	ND (1.0) FF	1,340	7.42
MW-27-60	01-Mar-05	ND (1.0)	ND (1.0) J	---	---
	08-Mar-05	ND (1.0)	ND (1.0)	---	---
	23-Mar-05	ND (1.0)	ND (1.0)	---	---
	29-Mar-05	ND (1.0)	ND (1.0)	---	---
	05-Apr-05	ND (1.0)	ND (1.0)	13,500	---
	12-Apr-05	ND (1.0)	ND (1.0)	---	---
	19-Apr-05	ND (1.0)	ND (1.0)	---	---
	26-Apr-05	ND (1.0)	ND (1.0)	---	---
	04-May-05	ND (1.0)	ND (1.0)	---	---
	18-Jul-05	ND (1.0)	1.80 FF	14,200	7.70
	05-Oct-05	ND (1.0)	ND (1.0) FF	13,900	7.18
	15-Dec-05	ND (1.0)	ND (1.0) FF	13,700	7.28
MW-27-85	01-Mar-05	ND (1.0)	ND (1.0) J	---	---
	08-Mar-05	ND (2.0)	ND (1.0)	---	---
	23-Mar-05	ND (1.0)	ND (1.0)	---	---
	29-Mar-05	ND (1.0)	ND (1.0)	---	---
	05-Apr-05	ND (1.0)	ND (1.0)	17,200	---
	12-Apr-05	ND (1.0)	ND (1.0)	---	---
	19-Apr-05	ND (1.0)	ND (1.0)	---	---
	26-Apr-05	ND (1.0)	ND (1.0)	---	---
	04-May-05	ND (1.0)	ND (1.0)	---	---
	19-May-05	ND (1.0)	ND (1.0)	---	---
	02-Jun-05	ND (1.0)	ND (1.0)	---	---
	19-Jul-05	ND (1.0)	3.00 FF	16,700	7.33
	16-Aug-05	ND (1.0)	ND (2.6) FF	---	---
	08-Sep-05	ND (1.0)	ND (1.0) FF	---	---
	05-Oct-05	ND (1.0)	ND (1.0) FF	19,800	7.12
MW-28-25	03-Nov-05	ND (2.0) J	ND (1.0) FF	---	---
	15-Dec-05	1.20 J	6.60 FF	17,500	7.29
MW-28-90	02-Dec-04	ND (0.2)	UF	---	---
	14-Dec-04	ND (0.2)	ND (1.0)	1,260	7.80
	11-Jan-05	ND (0.2)	UF	---	---
	08-Feb-05	ND (0.2)	ND (1.0)	---	---
	10-Mar-05	ND (0.2)	ND (1.0)	1,290	7.75
	04-Apr-05	ND (0.2)	ND (1.0)	---	---
	03-May-05	ND (0.2)	ND (1.0)	---	---
	15-Jun-05	ND (0.2)	ND (1.0)	1,300	7.90
	13-Jul-05	ND (0.2)	ND (1.0) FF	---	---
	06-Oct-05	ND (0.2)	ND (1.0) FF	1,210	7.36
	16-Dec-05	ND (0.2)	ND (1.0) FF	1,430	7.28
	02-Dec-04	ND (1.0)	ND (1.0)	---	---
MW-28-90	13-Dec-04	ND (0.2) J	ND (1.0)	9,900	7.87
	29-Dec-04	ND (1.0)	ND (1.0)	---	---
	11-Jan-05	ND (1.0)	UF	---	---

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium ( $\mu\text{g/L}$ )	Dissolved Total Chromium ( $\mu\text{g/L}$ )	Specific Conductance ( $\mu\text{S/cm}$ )	pH
MW-28-90	27-Jan-05	ND (1.0)	5.10	---	---
	08-Feb-05	ND (1.0)	ND (1.0)	---	---
	22-Feb-05	ND (1.0)	ND (1.0)	---	---
	07-Mar-05	ND (1.0)	ND (1.0)	9,520	7.89
	22-Mar-05	ND (1.0)	ND (1.0)	---	---
	04-Apr-05	ND (1.0)	ND (1.0)	---	---
	20-Apr-05	ND (1.0)	ND (1.0)	---	---
	03-May-05	ND (1.0)	ND (1.0)	---	---
	19-May-05	ND (1.0)	ND (1.0)	---	---
	02-Jun-05	ND (1.0)	ND (1.0)	---	---
	15-Jun-05	ND (1.0)	ND (1.0)	9,860	8.04
	01-Jul-05	ND (1.0)	ND (1.0)	---	---
	13-Jul-05	ND (1.0)	ND (1.0) FF	---	---
	18-Aug-05	ND (1.0)	1.10 FF	---	---
	09-Sep-05	ND (1.0)	ND (1.0) FF	---	---
MW-29	06-Oct-05	ND (1.0)	ND (1.0) FF	8,230	7.80
	02-Nov-05	ND (1.0)	ND (1.0) FF	---	---
	16-Dec-05	ND (1.0)	ND (1.0) FF	8,400	7.57
	02-Dec-04	ND (0.2)	UF	---	---
MW-30-30	14-Dec-04	ND (0.2) J	ND (1.0)	8,050	7.51
	11-Jan-05	ND (1.0)	UF	---	---
	07-Feb-05	ND (1.0)	3.00	---	---
	09-Mar-05	ND (2.0)	ND (1.0)	24,900	7.32
	06-Apr-05	ND (1.0)	ND (1.0)	---	---
	05-May-05	ND (0.2)	ND (1.0)	---	---
	15-Jun-05	ND (0.2)	ND (1.0)	3,760	7.87
	04-Oct-05	ND (0.2)	ND (1.0) FF	4,620	7.37
	12-Dec-05	ND (0.2)	ND (1.0) FF	5,620	7.38
	15-Dec-04	ND (5.0)	ND (1.0)	56,800	6.97
MW-30-50	11-Jan-05	ND (5.0)	UF	---	---
	09-Feb-05	ND (5.0)	ND (1.0)	---	---
	10-Mar-05	ND (5.0)	ND (1.0)	57,300	7.00
	06-Apr-05	ND (2.0)	ND (1.0)	---	---
	09-May-05	ND (2.0)	ND (1.0)	---	---
	07-Oct-05	ND (0.2)	ND (1.0) FF	57,100	7.09
	15-Dec-05	ND (5.0)	ND (1.0) FF	61,500	7.05
	15-Dec-04	29.4	33.9	10,500	7.48
MW-30-50	15-Dec-04 FD	26.2	36.5	10,500	7.43
	11-Jan-05	ND (10)	UF	---	---
	11-Jan-05 FD	ND (1.0)	UF	---	---
	09-Feb-05	ND (10)	1.60 J	---	---
	09-Feb-05 FD	ND (1.0)	11.2 J	---	---
	10-Mar-05	ND (1.0)	ND (1.0)	10,200	7.29
	06-Apr-05	18.5	15.5	---	---
	06-Apr-05 FD	17.1 J	13.0	---	---

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium ( $\mu\text{g/L}$ )	Dissolved Total Chromium ( $\mu\text{g/L}$ )	Specific Conductance ( $\mu\text{S/cm}$ )	pH
MW-30-50	09-May-05	ND (1.0)	ND (1.0)	---	---
	09-May-05 FD	ND (1.0)	ND (1.0)	---	---
	07-Oct-05	ND (1.0)	ND (1.0) FF	9,340	7.40
	16-Dec-05	ND (1.0)	ND (1.0) FF	10,200	7.38
MW-31-60	16-Dec-04	2910	2680	2,750	7.75
	09-Mar-05	2700	2550	2,530	7.93
	07-Apr-05	1910	2030	---	---
	13-Jun-05	1790	1810	2,960	7.60
	06-Oct-05	1430	1470 FF	2,600	7.80
	13-Dec-05	1300	1250 FF	2,570	7.60
MW-31-135	14-Dec-04	410 J	407	11,300	7.90
	10-Mar-05	422	403	10,900	8.09
	13-Jun-05	318	344	11,500	7.94
	13-Jun-05 FD	318	338	11,400	8.07
	06-Oct-05	271	251 FF	9,400	7.98
	14-Dec-05	221	198 FF	9,240	7.62
MW-32-20	02-Dec-04	ND (1.0)	UF	---	---
	14-Dec-04	ND (1.0) J	ND (1.0)	24,600	7.08
	10-Jan-05	ND (1.0)	ND (1.0)	---	---
	07-Feb-05	ND (1.0)	ND (1.0)	---	---
	09-Mar-05	ND (2.0)	ND (1.0)	22,100	7.09
	04-Apr-05	ND (1.0)	ND (1.0)	---	---
	09-May-05	ND (1.0)	ND (1.0)	---	---
	17-Jun-05	ND (1.0)	ND (1.0)	15,800	6.91
	04-Oct-05	ND (2.0)	ND (1.0) J FF	44,100	6.90
	16-Dec-05	ND (2.0)	ND (1.0) FF	39,400	6.86
MW-32-35	02-Dec-04	ND (1.0)	UF	---	---
	15-Dec-04	ND (1.0)	ND (1.0)	6,580	7.61
	10-Jan-05	ND (1.0)	ND (1.0)	---	---
	07-Feb-05	ND (1.0)	ND (1.0)	---	---
	09-Mar-05	ND (1.0)	ND (1.0)	6,460	7.42
	04-Apr-05	ND (1.0)	ND (1.0)	---	---
	09-May-05	ND (1.0)	ND (1.0)	---	---
	17-Jun-05	ND (1.0)	ND (1.0)	12,200	7.19
	04-Oct-05	ND (1.0)	ND (1.0) FF	13,100	7.29
	16-Dec-05	ND (1.0)	ND (1.0) FF	12,600	7.19
MW-33-40	15-Dec-04	ND (0.2) J	ND (1.0)	8,380	7.98
	11-Jan-05	ND (1.0)	UF	---	---
	07-Feb-05	ND (1.0)	ND (1.0)	---	---
	09-Mar-05	ND (1.0)	ND (1.0)	5,530	8.23
	04-Apr-05	ND (0.2)	ND (1.0)	---	---
	05-May-05	ND (0.2)	ND (1.0)	---	---
	17-Jun-05	ND (0.2)	ND (1.0)	23300 R	7.91
	07-Oct-05	0.68	ND (1.0) FF	5,480	8.19

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Total Chromium (µg/L)	Specific Conductance (µS/cm)	pH
MW-33-40	12-Dec-05	ND (1.0)	1.70 FF	9,380	7.78
MW-33-90	02-Dec-04	15.6	13.1	---	---
	14-Dec-04	16.0	14.8	8,130	7.83
	29-Dec-04	16.7	13.7	---	---
	11-Jan-05	18.2	UF	---	---
	27-Jan-05	17.7	14.4	---	---
	07-Feb-05	20.2	14.9	---	---
	22-Feb-05	19.0	18.3	---	---
	09-Mar-05	18.6	18.2	8,090	7.80
	22-Mar-05	18.9	19.2	---	---
	04-Apr-05	21.3	17.2	---	---
	19-Apr-05	20.3	17.9	---	---
	19-Apr-05 FD	20.0	18.2	---	---
	05-May-05	17.4	16.8	---	---
	18-May-05	15.5	16.3	---	---
	01-Jun-05	17.8	14.0	---	---
	01-Jun-05 FD	16.0	12.7	---	---
	16-Jun-05	15.0	14.2	9,540	8.06
	16-Jun-05 FD	15.7 J	13.4	9,580	8.01
	20-Jul-05	16.1	17.3 FF	---	---
	20-Jul-05 FD	16.5	17.3 FF	---	---
	06-Oct-05	15.5	13.0 FF	8,300	7.72
	13-Dec-05	16.4	21.8 J FF	8,540	7.50
	13-Dec-05 FD	16.5	14.0 J FF	8,520	7.55
MW-33-150	02-Mar-05	ND (1.0)	ND (1.0)	15,600	---
	02-Mar-05 FD	ND (1.0)	ND (1.0)	15,800	---
	16-Mar-05	ND (1.0)	ND (1.0)	16,900	---
	17-Jun-05	3.10 J	6.40	17,700	7.55
	20-Jul-05	5.20	5.60 FF	---	---
	17-Aug-05	4.00	6.10 FF	---	---
	09-Sep-05	3.90	2.80 FF	---	---
	06-Oct-05	4.50	3.90 FF	17,600	7.77
	06-Oct-05 FD	5.30	4.90 FF	17,800	7.79
	02-Nov-05	5.50	4.70 FF	---	---
	12-Dec-05	6.60	5.70 FF	15,600	7.60
MW-33-210	24-Feb-05	ND (1.0)	ND (2.1) J	18,900	---
	16-Mar-05	1.40	ND (1.0)	18,800	---
	16-Jun-05	5.10 J	1.70 J	21,600	7.89
	20-Jul-05	5.60	6.70 FF	---	---
	17-Aug-05	2.50	8.00 FF	---	---
	06-Sep-05	3.50	2.90 FF	---	---
	06-Oct-05	4.00	4.20 FF	20,800	7.58
	02-Nov-05	6.50	5.40 FF	---	---
	12-Dec-05	6.90	5.60 FF	18,000	7.53
MW-34-55	15-Dec-04	ND (0.2) J	ND (1.0)	9,120	7.68

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium ( $\mu\text{g/L}$ )	Dissolved Total Chromium ( $\mu\text{g/L}$ )	Specific Conductance ( $\mu\text{S/cm}$ )	pH
MW-34-55	12-Jan-05	ND (1.0)	ND (1.0)	---	---
	09-Feb-05	ND (1.0)	ND (1.0)	---	---
	10-Mar-05	ND (1.0)	ND (1.0)	9,140	7.80
	05-Apr-05	ND (1.0)	ND (1.0)	---	---
	05-May-05	ND (1.0)	ND (1.0)	---	---
	15-Jul-05	ND (1.0)	ND (1.3) FF	8,690	7.58
	05-Oct-05	ND (1.0)	ND (1.0) FF	7,600	7.36
	14-Dec-05	ND (1.0)	ND (1.0) FF	7,620	7.39
MW-34-80	02-Dec-04	ND (1.0)	ND (1.0)	---	---
	13-Dec-04	ND (1.0)	ND (1.0)	13,700	7.60
	29-Dec-04	ND (1.0)	ND (1.0)	---	---
	12-Jan-05	ND (1.0)	ND (1.0)	---	---
	27-Jan-05	ND (1.0)	ND (1.0)	---	---
	08-Feb-05	ND (1.0)	ND (1.0)	---	---
	22-Feb-05	ND (1.0)	ND (1.0)	---	---
	01-Mar-05	ND (1.0)	ND (1.0) J	---	---
	08-Mar-05	ND (1.0) J	ND (1.0)	14,200	7.73
	22-Mar-05	ND (1.0)	ND (1.0)	---	---
	29-Mar-05	ND (1.0)	ND (1.0)	---	---
	05-Apr-05	ND (1.0)	ND (1.0)	---	---
	12-Apr-05	ND (1.0)	ND (1.0)	---	---
	19-Apr-05	ND (1.0)	ND (1.0)	---	---
	26-Apr-05	ND (1.0)	ND (1.0)	---	---
	04-May-05	ND (1.0)	ND (1.0)	---	---
	18-May-05	ND (1.0)	ND (1.0)	---	---
	01-Jun-05	ND (1.0)	ND (1.0)	---	---
	30-Jun-05	ND (1.0)	ND (1.0)	15,000	7.52
	14-Jul-05	ND (1.0)	2.00 FF	---	---
	15-Aug-05	ND (1.0)	2.40 FF	---	---
	07-Sep-05	ND (1.0)	ND (1.0) FF	---	---
	05-Oct-05	ND (1.0)	ND (1.0) FF	15,000	7.16
	03-Nov-05	ND (1.0)	ND (1.0) FF	---	---
	14-Dec-05	ND (1.0)	ND (1.0) FF	12,500	7.24
MW-34-100	14-Feb-05	357	328	---	---
	16-Feb-05	354	294	---	---
	23-Feb-05	417	391	16,000	---
	01-Mar-05	402	374	---	---
	01-Mar-05 FD	411	332	---	---
	08-Mar-05	425 J	490	---	---
	23-Mar-05	421	548	---	---
	29-Mar-05	73.9 J	110	---	---
	29-Mar-05 FD	56.7 J	106	---	---
	05-Apr-05	452	488	16,100	---
	05-Apr-05 FD	455	454	15,900	---
	12-Apr-05	482	502	---	---

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium ( $\mu\text{g/L}$ )	Dissolved Total Chromium ( $\mu\text{g/L}$ )	Specific Conductance ( $\mu\text{S/cm}$ )	pH
MW-34-100	12-Apr-05	499	562	---	---
	19-Apr-05	473	599	---	---
	26-Apr-05	476	573	---	---
	26-Apr-05 FD	480	602	---	---
	04-May-05	491	530	---	---
	10-May-05	513	492	---	---
	10-May-05 FD	501	552	---	---
	18-May-05	524	564	---	---
	25-May-05	559	478	---	---
	01-Jun-05	527	609	---	---
	08-Jun-05	552	583	---	---
	21-Jun-05	560	477	17,300	7.97
	21-Jun-05 FD	578	480	18,000	8.00
	07-Jul-05	583	639	---	---
	14-Jul-05	617	701 FF	---	---
	27-Jul-05	597	504 FF	---	---
	10-Aug-05	574	589 FF	---	---
	10-Aug-05 FD	571	597 FF	---	---
	15-Aug-05	633	660 FF	---	---
	31-Aug-05	649	693 FF	---	---
	31-Aug-05 FD	658	604 FF	---	---
	07-Sep-05	673	868 FF	---	---
	20-Sep-05	675	891 FF	---	---
	05-Oct-05	732	732 FF	17,400	7.46
	05-Oct-05 FD	708	703 FF	16,900	7.39
	25-Oct-05	752	628 FF	---	---
	25-Oct-05 FD	752	650 FF	---	---
	03-Nov-05	748 J	897 FF	---	---
	16-Nov-05	759	762 FF	---	---
	16-Nov-05 FD	763	725 FF	---	---
	30-Nov-05	791	797 FF	---	---
	30-Nov-05 FD	802	721 FF	---	---
	14-Dec-05	808	751 FF	15,000	7.52
	14-Dec-05 FD	811	791 FF	15,000	7.50
	28-Dec-05	804	824 FF	---	---
MW-35-60	13-Dec-04	26.8	27.0	6,700	7.67
	15-Mar-05	33.8	37.5	6,280	7.64
	13-Jun-05	33.6	34.1	7,170	7.54
	07-Oct-05	32.5	28.0 FF	6,590	7.57
	07-Oct-05 FD	35.1 J	32.0 FF	6,510	7.52
	14-Dec-05	32.5	32.5 FF	6,350	7.42
	14-Dec-05 FD	33.3	28.6 FF	6,430	7.41
MW-35-135	13-Dec-04	15.6 J	16.0	9,790	7.90
	13-Dec-04 FD	15.7 J	14.1	10,100	7.91
	15-Mar-05	23.0	21.4	9,960	7.80

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Total Chromium (µg/L)	Specific Conductance (µS/cm)	pH
MW-35-135	13-Jun-05	17.6	17.6	12,600	7.64
	07-Oct-05	21.2	17.8 FF	9,460	7.72
	14-Dec-05	25.7	22.8 FF	9,550	7.54
MW-36-20	14-Dec-04	ND (2.0) J	ND (1.0)	27,700	7.34
	11-Jan-05	ND (2.0)	ND (1.0)	---	---
	07-Feb-05	ND (1.0)	1.40	---	---
	09-Mar-05	ND (2.0)	ND (1.0)	24,400	7.43
	05-Apr-05	ND (1.0)	ND (1.0)	---	---
	03-May-05	ND (1.0)	ND (1.0)	---	---
	03-Oct-05	ND (1.0)	ND (1.0) FF	16,300	7.35
	15-Dec-05	ND (2.0)	ND (1.0) FF	3260 R	7.14
MW-36-40	14-Dec-04	ND (1.0)	ND (1.0)	13,300	7.55
	12-Jan-05	ND (0.2)	ND (1.0)	---	---
	07-Feb-05	ND (1.0)	ND (1.0)	---	---
	08-Mar-05	ND (1.0)	ND (1.0)	12,400	7.55
	05-Apr-05	ND (1.0)	ND (1.0)	---	---
	05-May-05	ND (1.0)	ND (1.0)	---	---
	03-Oct-05	ND (1.0)	ND (1.0) FF	14,800	7.28
	15-Dec-05	ND (1.0)	ND (1.0) FF	12,300	7.38
MW-36-50	14-Dec-04	ND (0.2) J	ND (1.0)	9,080	7.66
	12-Jan-05	ND (1.0)	ND (1.0)	---	---
	07-Feb-05	ND (1.0)	ND (1.0)	---	---
	08-Mar-05	ND (1.0)	ND (1.0)	9,430	7.39
	05-Apr-05	ND (1.0)	ND (1.0)	---	---
	05-May-05	ND (1.0)	ND (1.0)	---	---
	03-Oct-05	ND (1.0)	ND (1.0) FF	8,090	7.34
	15-Dec-05	ND (1.0)	ND (1.0) FF	11,000	7.28
MW-36-70	14-Dec-04	ND (0.2) J	ND (1.0)	10,600	7.37
	11-Jan-05	ND (1.0)	ND (1.0)	---	---
	07-Feb-05	ND (0.21)	1.20	---	---
	08-Mar-05	ND (1.0)	ND (1.0)	10,400	7.44
	05-Apr-05	ND (1.0)	ND (1.0)	---	---
	03-May-05	ND (1.0)	ND (1.0)	---	---
	03-Oct-05	ND (1.0)	ND (1.0) FF	8,540	7.30
	15-Dec-05	ND (1.0)	ND (1.0) FF	8,220	7.40
MW-36-90	14-Dec-04	2270	2130	15,600	7.77
	14-Dec-04 FD	2270	2180	15,800	7.76
	12-Jan-05	1970	1780	---	---
	12-Jan-05 FD	1860	1800	---	---
	07-Feb-05	1720	1610	---	---
	09-Mar-05	1480	1380	15,800	7.55
	05-Apr-05	1040	946	---	---
	03-May-05	705	623	---	---
	25-Jul-05	344	343 FF	---	---

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium ( $\mu\text{g/L}$ )	Dissolved Total Chromium ( $\mu\text{g/L}$ )	Specific Conductance ( $\mu\text{S/cm}$ )	pH
MW-36-90	17-Aug-05	346	336 FF	---	---
	08-Sep-05	267	301 FF	---	---
	03-Oct-05	302	286 FF	16,800	7.28
	02-Nov-05	256	247 FF	---	---
	15-Dec-05	240	219 FF	13,900	7.27
MW-36-100	02-Dec-04	1860	1620	---	---
	02-Dec-04 FD	1750	1570	---	---
	14-Dec-04	1790	1810	14,700	7.72
	29-Dec-04	1690	1580	---	---
	29-Dec-04 FD	1720	1530	---	---
	12-Jan-05	1520 ~	1470 ~	---	---
	12-Jan-05 FD	1550	1510	---	---
	27-Jan-05	1500	1420	---	---
	27-Jan-05 FD	1420	1490	---	---
	09-Feb-05	1440	1420	---	---
	22-Feb-05	1430	1230	---	---
	22-Feb-05 FD	1390	1250	---	---
	09-Mar-05	1380	1200	16,600	7.74
	22-Mar-05	1250	1180	---	---
	22-Mar-05 FD	1230	1160	---	---
	04-Apr-05	1110	981	---	---
	20-Apr-05	825	844	---	---
	03-May-05	705	679	---	---
	18-May-05	617	796 J	---	---
	18-May-05 FD	620	624 J	---	---
	02-Jun-05	518	441	---	---
	19-Jul-05	398	635 FF	---	---
	15-Aug-05	391	410 FF	---	---
	15-Aug-05 FD	390	392 FF	---	---
	08-Sep-05	396 J	380 FF	---	---
	08-Sep-05 FD	397	454 FF	---	---
	05-Oct-05	383	370 FF	15,500	7.18
	03-Nov-05	315	368 FF	---	---
	13-Dec-05	306	333 FF	15,800	7.25
MW-37D	14-Dec-04	1480	1520	13,900	7.81
	14-Dec-04 FD	1480	1490	13,900	7.80
	11-Mar-05	1610	1530	13,800	7.72
	15-Jun-05	1390	1540	13,200	8.20
	04-Oct-05	1800	1970 FF	14,900	7.77
	14-Dec-05	1680	1610 FF	13,300	7.67
MW-37S	13-Dec-04	6.20	7.00	4,480	7.93
	11-Mar-05	7.40	5.40	4,260	7.84
	07-Apr-05	5.90	5.40	---	---
	15-Jun-05	2.10	2.60	3,700	8.19
	04-Oct-05	7.00	6.60 FF	4,210	7.98

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium ( $\mu\text{g/L}$ )	Dissolved Total Chromium ( $\mu\text{g/L}$ )	Specific Conductance ( $\mu\text{S/cm}$ )	pH
MW-37S	04-Oct-05	7.00	6.50 FF	4,180	7.90
	14-Dec-05	8.00	7.10 FF	4,220	7.60
	14-Dec-05	7.60	7.00 FF	4,230	7.62
MW-38D	14-Dec-04	279	264	20,500	7.87
	11-Mar-05	328	323	20,000	8.01
	17-Jun-05	202	175	4980 R	8.50
	07-Oct-05	227	227 FF	21,500	7.95
MW-38S	14-Dec-04	964	1010	4,310	7.82
	11-Mar-05	919	938	3,840	7.80
	17-Jun-05	807	730	3,790	7.72
	07-Oct-05	776	825 FF	3,430	7.47
MW-39-40	15-Dec-04	ND (0.2)	ND (1.0)	5,920	7.70
	12-Jan-05	ND (1.0)	2.60	---	---
	08-Feb-05	ND (0.2)	ND (1.0)	---	---
	09-Mar-05	ND (1.0)	ND (1.0)	6,040	7.62
	05-Apr-05	ND (1.0)	ND (1.0)	---	---
	05-May-05	ND (0.2)	ND (1.0)	---	---
	16-Jun-05	ND (0.2)	ND (1.0)	6,430	8.03
	04-Oct-05	ND (0.2)	ND (1.0) FF	5,640	7.58
	16-Dec-05	ND (0.2)	ND (1.0) FF	6,010	7.45
MW-39-50	15-Dec-04	1470	1480	11,000	7.48
	14-Jan-05	1000	1020	---	---
	08-Feb-05	819	800	---	---
	09-Mar-05	422	372	12,100	7.51
	06-Apr-05	282 J	237	---	---
	03-May-05	206	204	---	---
	16-Jun-05	66.2	55.4	10,700	7.82
	04-Oct-05	ND (10)	4.70 FF	12,000	7.52
MW-39-60	15-Dec-04	2800	2650	9,110	7.54
	14-Jan-05	1640	2880	---	---
	08-Feb-05	1880	1650	---	---
	09-Mar-05	1450	1300	11,200	7.45
	06-Apr-05	914	1080	---	---
	06-Apr-05	FD	907	---	---
	05-May-05	450	455	---	---
	05-May-05	FD	460	---	---
	16-Jun-05	213	198	13,100	7.72
	04-Oct-05	72.3	79.6 J FF	13,200	7.37
	16-Dec-05	20.4	20.4 FF	14,400	7.16
MW-39-70	15-Dec-04	5040	5860	9,190	7.61
	12-Jan-05	5310	4860	---	---
	08-Feb-05	6640	6800	---	---
	09-Mar-05	4310	4010 J	10,600	7.60
	09-Mar-05	FD	5310 J	10,500	7.56

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Total Chromium (µg/L)	Specific Conductance (µS/cm)	pH
MW-39-70	05-Apr-05	2280	2080	---	---
	05-May-05	1320	1270	---	---
	16-Jun-05	799	576	11,700	7.65
	04-Oct-05	840	754 FF	11,900	7.34
	16-Dec-05	1240	1080 FF	12,800	7.24
MW-39-80	15-Dec-04	9430	8320	12,500	7.47
	14-Jan-05	8270	11200	---	---
	08-Feb-05	7750	8220	---	---
	08-Feb-05 FD	7890	7750	---	---
	09-Mar-05	7460	7240	12,400	7.56
	06-Apr-05	4820	4570	---	---
	03-May-05	3430	3510	---	---
	16-Jun-05	2220	1930	15,700	7.59
	25-Jul-05	2060	1990 FF	---	---
	17-Aug-05	2370	2460 FF	---	---
	06-Sep-05	2990	4880 FF	---	---
	04-Oct-05	3000	2770 FF	15,000	7.38
	02-Nov-05	3200	3020 FF	---	---
	15-Dec-05	2740	2570 FF	12,600	7.34
MW-39-100	15-Dec-04	10900	11000	14,800	7.69
	12-Jan-05	10100 ~	9820 ~	---	---
	27-Jan-05	9930	10200	---	---
	09-Feb-05	9180	9480	---	---
	09-Feb-05 FD	9260	9710	---	---
	10-Mar-05	8940	8160	15,500	7.64
	06-Apr-05	8220	8230	---	---
	09-May-05	7980	8490	---	---
	09-May-05 FD	7720	8250	---	---
	17-Jun-05	6980	6030	18,700	7.41
	19-Jul-05	5500	5490 FF	---	---
	19-Jul-05 FD	5450	5450 FF	---	---
	17-Aug-05	4230	4050 FF	---	---
	06-Sep-05	4540	6480 FF	---	---
	04-Oct-05	4010	3950 FF	16,300	7.40
	02-Nov-05	3580	3480 FF	---	---
	02-Nov-05 FD	3650	3410 FF	---	---
	13-Dec-05	3640	3440 FF	16,700	7.22
MW-40D	16-Dec-04	38.5	33.2	14,900	7.57
	16-Dec-04 FD	36.8	32.4	15,000	7.59
	10-Mar-05	58.6	63.7	15,200	7.82
	16-Jun-05	7.60	6.40	14,100	7.96
	05-Oct-05	57.4	67.0 FF	16,700	7.54
	13-Dec-05	83.5	78.1 FF	14,600	7.43
MW-40S	16-Dec-04	8.20	7.80	1,970	7.77
	10-Mar-05	5.50	5.50	1,910	7.61

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Total Chromium (µg/L)	Specific Conductance (µS/cm)	pH
MW-40S	07-Apr-05	4.60	4.40	---	---
	16-Jun-05	6.30	5.30	1,870	8.08
	05-Oct-05	4.90	4.40 FF	1,890	7.65
	13-Dec-05	5.10 J	5.10 FF	1,850	7.54
MW-41D	15-Dec-04	ND (1.0)	ND (1.0)	19,500	7.49
	11-Mar-05	ND (1.0)	ND (1.0)	20,700	7.90
	14-Jun-05	ND (1.0)	2.80	23,000	7.73
	05-Oct-05	ND (1.0)	ND (1.0) FF	19,200	7.71
	16-Dec-05	ND (1.0)	ND (1.0) FF	19,600	7.59
MW-41M	15-Dec-04	5.30	5.20	13,800	7.64
	11-Mar-05	8.10	4.90	14,500	8.04
	14-Jun-05	4.80	5.40 J	12,600	7.59
	14-Jun-05 FD	4.60	7.90 J	12,700	7.76
	05-Oct-05	5.40	5.00 FF	13,200	7.69
	16-Dec-05	8.90	6.50 FF	15,900	7.64
MW-41S	16-Dec-04	11.8	11.0	4,950	7.90
	10-Mar-05	16.8	15.6	4,830	8.12
	14-Jun-05	11.3	19.0	4,460	7.90
	05-Oct-05	17.0	17.7 FF	4,520	7.81
	05-Oct-05 FD	17.3	15.3 FF	4,470	7.87
	16-Dec-05	18.2	15.8 FF	4,620	7.74
	16-Dec-05 FD	18.4	16.1 FF	4,650	7.77
MW-42-30	23-Feb-05	ND (1.0)	ND (1.0)	11,300	---
	16-Mar-05	ND (1.0)	ND (1.0)	13,100	---
	07-Oct-05	ND (1.0)	ND (1.0) FF	17,200	7.26
	15-Dec-05	ND (1.0)	ND (1.0) FF	17,800	7.14
MW-42-55	23-Feb-05	ND (1.0)	ND (1.0)	12,600	---
	16-Mar-05	ND (1.0)	ND (1.0)	15,600	---
	07-Oct-05	ND (1.0)	ND (1.0) FF	19,500	7.25
	15-Dec-05	ND (1.0)	ND (1.0) FF	12,100	7.28
MW-42-65	24-Feb-05	ND (1.0)	ND (2.8) J	15,400	---
	16-Mar-05	ND (1.0)	ND (1.0)	12,500	---
	07-Oct-05	ND (1.0)	ND (1.0) FF	20,000	6.99
	15-Dec-05	ND (1.0)	ND (1.0) FF	16,100	7.10
MW-43-25	07-Mar-05	ND (0.2)	ND (1.0)	1,440	---
	15-Mar-05	ND (0.2)	ND (1.0)	1,440	---
	20-Jun-05	ND (0.2)	ND (1.0)	1,740	7.75
	04-Oct-05	ND (0.2)	ND (1.0) FF	1,170	7.32
	16-Dec-05	ND (0.2)	ND (1.0) FF	1,340	7.20
MW-43-75	07-Mar-05	ND (1.0)	ND (1.0)	13,300	---
	15-Mar-05	ND (1.0)	ND (1.0)	13,800	---
	20-Jun-05	ND (1.0)	ND (1.0)	14,700	7.84
	26-Jul-05	ND (1.0)	ND (1.0) FF	---	---
	16-Aug-05	ND (1.0)	5.40 FF	---	---

**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Well ID	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Total Chromium (µg/L)	Specific Conductance (µS/cm)	pH
MW-43-75	08-Sep-05	ND (1.0)	ND (1.0) FF	---	---
	04-Oct-05	ND (1.0)	ND (1.0) J FF	15,000	7.46
	03-Nov-05	ND (2.0)	ND (1.0) FF	---	---
	16-Dec-05	ND (1.0)	ND (1.0) FF	13,100	7.37
MW-43-90	07-Mar-05	ND (1.0)	ND (1.0)	19,900	---
	15-Mar-05	ND (1.0)	ND (1.0)	20,100	---
	15-Mar-05 FD	ND (1.0)	ND (1.0)	20,000	---
	20-Jun-05	ND (1.0)	ND (1.0)	25,100	7.38
	20-Jun-05 FD	ND (1.0)	ND (1.0)	24,400	7.37
	26-Jul-05	ND (2.0)	ND (1.6) FF	---	---
	16-Aug-05	ND (2.0)	ND (5.2) FF	---	---
	08-Sep-05	ND (1.0)	ND (1.0) FF	---	---
	04-Oct-05	ND (1.0)	ND (1.0) FF	22,000	6.95
	03-Nov-05	ND (2.0)	ND (1.0) FF	---	---
	16-Dec-05	ND (1.0)	ND (1.0) FF	19,900	6.93
OW-3D	06-Oct-05	0.30	ND (1.0) FF	6,900	8.19
OW-3M	06-Oct-05	16.7	14.3 FF	4,680	8.12
OW-3S	06-Oct-05	19.3	16.6 FF	1,740	7.79
PE-1	03-Oct-05	ND (1.0)	ND (1.0) FF	11,800	7.14
	13-Dec-05	ND (1.0)	ND (1.0)	11,800	7.21
PGE-6	12-Oct-05	1630	2070 FF	3,730	7.65
PGE-7	13-Oct-05	ND (1.0)	ND (1.0) FF	10,800	9.44
PGE-8	13-Oct-05	ND (1.0) J	2.10 FF	16,900	8.52
Park Moabi	15-Dec-04	ND (0.2)	ND (1.0)	1,300	8.08
	11-Mar-05	0.35	ND (1.0)	1,260	8.03
	15-Jun-05	9.90	8.60	1,200	8.16
	05-Oct-05	9.20	7.60 FF	1,280	7.69
	16-Dec-05	ND (0.2)	ND (1.0) FF	2,100	7.38
TW-1	21-Dec-04	3820	3290	6,260	7.80
	11-Oct-05	3990	4340 FF	6,200	7.32
TW-2D	16-Dec-04	6280	6270	9,620	7.69
	09-Mar-05	5800	5620	9,400	7.87
	15-Jun-05	5050	4780	9,230	7.98
	16-Aug-05	4220	4750 UF	9,230	7.55
	16-Sep-05	3920	3910 UF	9,440	7.70
	05-Oct-05	3960	3790 UF	9,020	7.35
	02-Nov-05	3750	3630 UF	10,300	7.41
	07-Dec-05	3600	3670 UF	8,780	7.40
TW-2S	16-Dec-04	5080	5050	3,270	7.70
	11-Mar-05	4400	4240	3,150	7.65
	07-Oct-05	3360	3340 FF	2,790	7.72

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**Table 2**  
**Groundwater COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

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NOTES:

µg/L micrograms per liter  
µS/cm microSiemens per centimeter  
ND not detected at listed reporting limit  
J concentration or reporting limit estimated by laboratory or data validation  
R result exceeded analytical criteria for precision and accuracy; should not be used for project decision-making  
+ the reporting limit (RL) for hexavalent chromium is estimated and might be as high as the total chromium RL data  
(---) not collected or not available  
FD field duplicate sample  
FF field filtered  
UF unfiltered  
~ Review of the sample and field duplicate data for wells MW-36-100 and MW-39-100 collected on January 12, 2005 indicate that the sampler switched the pre-printed labels for these two locations.

Hexavalent chromium analysis methods: SW 7196A (reporting limit 10 µg/L) and SW 7199 (reporting limit 0.2 µg/L for undiluted samples).

Other analysis methods: total chromium (dissolved concentrations, Methods SW 6020A and SW 6010B), specific conductance (SW 9050), pH (SW 9040).

The following monitoring wells were not sampled during the June 2005 quarterly event due to floodplain inaccessibility: MW-27 cluster, MW-30 cluster, MW-34-55, MW-36 cluster and MW-42 cluster. Monitoring well MW-24BR was not sampled due to problems involving the pump.

Beginning in July 2005, samples analyzed for total chromium by EPA Method 6010B or 6020A were filtered and preserved in the field after sample collection, as per DTSC's June 30, 2005 letter.

Monitoring well MW-24BR was not sampled during the October 2005 monitoring event due to equipment problems.

The analytical results for TW-2D from August through December 2005 were obtained from a sample point (SC-100B) on the influent conveyance system at the IM3 treatment system. The TW-2D results from SC-100B are presented here on a monthly basis, for samples that were collected closest in time to the GMP monthly events.

Groundwater samples were not collected from MW-39-50 in December 2005 due to a field sampling error. Extraction well TW-2S was not sampled in December 2005 due to concurrent plumbing work for TW-3D and PE-1.

**Table 3**  
**Surface Water COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sample Date	Hexavalent Chromium ( $\mu\text{g/L}$ )	Total Chromium ( $\mu\text{g/L}$ )	Specific Conductance ( $\mu\text{S/cm}$ )	pH
CON	13-Dec-04	ND (0.2)	ND (1.0)	1,020	8.23
	10-Jan-05	ND (0.2)	ND (1.0)	---	---
	08-Feb-05	ND (0.2)	ND (1.0)	---	---
	24-Feb-05	ND (0.2)	ND (1.0)	---	---
	01-Mar-05	ND (0.2)	ND (1.0) J	---	---
	07-Mar-05	ND (0.2)	ND (1.0)	1,040	8.34
	14-Mar-05	ND (0.2)	ND (1.0)	---	---
	06-Apr-05	ND (0.2)	ND (1.0)	---	---
	04-May-05	ND (0.2)	ND (1.0)	---	---
	14-Jun-05	ND (0.2)	ND (1.0)	990	8.16
	13-Jul-05	ND (0.2)	ND (1.0)	---	---
	18-Aug-05	ND (0.2)	ND (1.0)	---	---
	07-Sep-05	ND (0.2)	ND (1.0)	---	---
	05-Oct-05	ND (0.2)	ND (1.0)	976	8.07
	01-Nov-05	ND (0.2)	ND (1.0)	---	---
	15-Dec-05	ND (0.2)	ND (1.0)	1,000	8.07
I-3	13-Dec-04	ND (0.2)	ND (1.0)	1,020	8.26
	10-Jan-05	ND (0.2)	ND (1.0)	---	---
	08-Feb-05	ND (0.2)	ND (1.0)	---	---
	08-Mar-05	ND (0.2)	ND (1.0)	1,050	8.31
	07-Apr-05	ND (0.2)	ND (1.0)	---	---
	04-May-05	ND (0.2)	ND (1.0)	---	---
	14-Jun-05	ND (0.2)	ND (1.0)	981	8.11
	13-Jul-05	ND (0.2)	ND (1.0)	---	---
	18-Aug-05	ND (0.2)	ND (1.0)	---	---
	07-Sep-05	ND (0.2)	ND (1.0)	---	---
	05-Oct-05	ND (0.2)	ND (1.0)	968	8.08
	01-Nov-05	ND (0.2)	ND (1.0)	---	---
	15-Dec-05	ND (0.2)	ND (1.0)	1,000	8.08
NR-1	13-Dec-04	ND (0.2)	ND (1.0)	1,040	8.36
	10-Jan-05	ND (0.2)	ND (1.0)	---	---
	08-Feb-05	ND (0.2)	ND (1.0)	---	---
	08-Mar-05	ND (0.2)	ND (1.0)	1,030	8.35
	06-Apr-05	ND (0.2)	ND (1.0)	---	---
	04-May-05	ND (0.2)	ND (1.0)	---	---
	14-Jun-05	ND (0.2)	ND (1.0)	987	8.04
	13-Jul-05	ND (0.2)	ND (1.0)	---	---
	18-Aug-05	ND (0.2)	ND (1.0)	---	---
	07-Sep-05	ND (0.2)	ND (1.0)	---	---
	05-Oct-05	ND (0.2)	ND (1.0)	972	8.10
	01-Nov-05	ND (0.2)	ND (1.0)	---	---
	15-Dec-05	ND (0.2)	ND (1.0)	1,010	8.13
NR-2	13-Dec-04	ND (0.2)	ND (1.0)	1,010	8.11
	10-Jan-05	ND (0.2)	ND (1.0)	---	---
	08-Feb-05	ND (0.2)	ND (1.0)	---	---

**Table 3**  
**Surface Water COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sample Date	Hexavalent Chromium (µg/L)	Total Chromium (µg/L)	Specific Conductance (µS/cm)	pH
NR-2	08-Mar-05	ND (0.2)	ND (1.0)	1,020	8.34
	06-Apr-05	ND (0.2)	ND (1.0)	---	---
	04-May-05	ND (0.2)	ND (1.0)	---	---
	14-Jun-05	ND (0.2)	ND (1.0)	961	8.22
	14-Jul-05	ND (0.2)	ND (1.0)	---	---
	18-Aug-05	ND (0.2)	ND (1.0)	---	---
	07-Sep-05	ND (0.2)	ND (1.0)	---	---
	05-Oct-05	ND (0.2)	ND (1.0)	971	8.12
	01-Nov-05	ND (0.2)	ND (1.0)	---	---
	15-Dec-05	ND (0.2)	ND (1.0)	1,000	8.18
NR-3	13-Dec-04	ND (0.2)	ND (1.0)	1,020	8.19
	10-Jan-05	ND (0.2)	ND (1.0)	---	---
	08-Feb-05	ND (0.2)	ND (1.0)	---	---
	08-Mar-05	ND (0.2)	ND (1.0)	1,030	8.38
	06-Apr-05	ND (0.2)	ND (1.0)	---	---
	04-May-05	ND (0.2)	ND (1.0)	---	---
	14-Jun-05	ND (0.2)	ND (1.0)	996	8.03
	14-Jul-05	ND (0.2)	ND (1.0)	---	---
	18-Aug-05	ND (0.2)	ND (1.0)	---	---
	07-Sep-05	ND (0.2)	ND (1.0)	---	---
	05-Oct-05	ND (0.2)	ND (1.0)	968	8.09
	01-Nov-05	ND (0.2)	ND (1.0)	---	---
	15-Dec-05	ND (0.2)	ND (1.0)	1,000	8.18
R-22	13-Dec-04	ND (0.2)	ND (1.0)	1,020	8.29
	10-Jan-05	ND (0.2)	ND (1.0)	---	---
	08-Feb-05	ND (0.2)	ND (1.0)	---	---
	24-Feb-05	ND (0.2)	ND (1.0)	---	---
	01-Mar-05	ND (0.2)	ND (1.0) J	---	---
	07-Mar-05	ND (0.2)	ND (1.0)	1,010	8.38
	14-Mar-05	ND (0.2)	ND (1.0)	---	---
	06-Apr-05	ND (0.2)	ND (1.0)	---	---
	04-May-05	ND (0.2)	ND (1.0)	---	---
	14-Jun-05	ND (0.2)	ND (1.0)	987	8.09
	13-Jul-05	ND (0.2)	ND (1.0)	---	---
	18-Aug-05	ND (0.2)	ND (1.0)	---	---
	07-Sep-05	ND (0.2)	ND (1.0)	---	---
	05-Oct-05	ND (0.2)	ND (1.0)	981	8.07
	01-Nov-05	ND (0.2)	ND (1.0)	---	---
	16-Dec-05	ND (0.2)	ND (1.0)	1,020	8.13
R-27	13-Dec-04	ND (0.2)	ND (1.0)	1,020	8.29
	10-Jan-05	ND (0.2)	ND (1.0)	---	---
	08-Feb-05	ND (0.2)	ND (1.0)	---	---
	24-Feb-05	ND (0.2)	ND (1.0)	---	---
	01-Mar-05	ND (0.2)	ND (1.0) J	---	---
	07-Mar-05	ND (0.2)	ND (1.0)	1,010	8.40

**Table 3**  
**Surface Water COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sample Date	Hexavalent Chromium (µg/L)	Total Chromium (µg/L)	Specific Conductance (µS/cm)	pH
R-27	14-Mar-05	ND (0.2)	ND (1.0)	---	---
	06-Apr-05	ND (0.2)	ND (1.0)	---	---
	04-May-05	ND (0.2)	ND (1.0)	---	---
	14-Jun-05	ND (0.2)	ND (1.0)	989	8.10
	13-Jul-05	ND (0.2)	ND (1.0)	---	---
	18-Aug-05	ND (0.2)	ND (1.0)	---	---
	07-Sep-05	ND (0.2)	ND (1.0)	---	---
	05-Oct-05	ND (0.2)	ND (1.0)	969	8.09
	01-Nov-05	ND (0.2)	ND (1.0)	---	---
	16-Dec-05	ND (0.2)	ND (1.0)	1,010	8.11
R-28	13-Dec-04	ND (0.2)	ND (1.0)	1,020	8.25
	10-Jan-05	ND (0.2)	ND (1.0)	---	---
	08-Feb-05	ND (0.2)	ND (1.0)	---	---
	08-Mar-05	ND (0.2)	ND (1.0)	1,020	8.34
	06-Apr-05	ND (0.2)	ND (1.0)	---	---
	04-May-05	ND (0.2)	ND (1.0)	---	---
	14-Jun-05	ND (0.2)	ND (1.0)	988	8.11
	14-Jul-05	ND (0.2)	ND (1.0)	---	---
	18-Aug-05	ND (0.2)	ND (1.0)	---	---
	07-Sep-05	ND (0.2)	ND (1.0)	---	---
	05-Oct-05	ND (0.2) J	ND (1.0)	970	8.08
	01-Nov-05	ND (0.2)	ND (1.0)	---	---
RRB	16-Dec-05	ND (0.2)	ND (1.0)	1,010	8.16
	13-Dec-04	ND (0.2)	ND (1.0)	1,080	8.16
	08-Feb-05	ND (0.2)	ND (1.0)	---	---
	07-Apr-05	ND (0.2)	ND (1.0)	---	---
	04-May-05	ND (0.2)	ND (1.0)	---	---
	14-Jun-05	ND (0.2)	ND (1.0)	986	8.05
	14-Jul-05	ND (0.2)	ND (1.0)	---	---
	18-Aug-05	ND (0.2)	ND (1.0)	---	---
	07-Sep-05	ND (0.2)	ND (1.0)	---	---
	05-Oct-05	ND (0.2)	ND (1.0)	998	7.88
	01-Nov-05	ND (0.2)	ND (1.0)	---	---

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**Table 3**  
**Surface Water COC Sampling Results**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

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NOTES:

µg/L micrograms per liter  
µS/cm microSiemens per centimeter  
ND not detected at listed reporting limit  
J concentration or reporting limit estimated by laboratory or data validation  
R result exceeded analytical criteria for precision and accuracy, should not be used for decision-making.  
(-) data not collected or not available  
FD field duplicate sample

Hexavalent chromium analysis method: SW7199 (reporting limit 0.2 µg/L)

Other analysis methods: total chromium (Methods SW 6020A and SW 6010B), specific conductance (EPA120.1), pH (EPA150.1)

Surface water station RRB was not sampled in December 2005 due to the location being dry

**Table 4**  
**In-Channel Surface Water COC and Additional Parameters Sampling Results**  
**July 2005 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Total Chromium (µg/L)	Specific Conductance (µS/cm)	pH	Hardness mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L
C-CON-S	13-Jul-05	ND (0.2)	ND (1.0)	1,090	8.11	344	635	ND (10)
C-CON-M	13-Jul-05	ND (0.2)	ND (1.0)	1,090	8.09	344	640	ND (10)
C-CON-D	13-Jul-05	ND (0.2)	ND (1.0)	1,090	8.10	324	655	ND (10)
C-CON-S	22-Sep-05	ND (0.2)	ND (1.0)	1,100	8.13	328	710	ND (10)
C-CON-M	22-Sep-05	ND (0.2)	ND (1.0)	1,110	8.10	328	730	ND (10)
C-CON-D	22-Sep-05	ND (0.2)	ND (1.0)	1,110	8.06	328	700	ND (10)
C-CON-S	08-Nov-05	ND (0.2)	ND (1.0)	---	---	328	---	---
C-CON-M	08-Nov-05	ND (0.2)	ND (1.0)	---	---	330	---	---
C-CON-D	08-Nov-05	ND (0.2)	ND (1.0)	---	---	320	---	---
C-CON-S	13-Dec-05	ND (0.2)	ND (1.0)	1,060	8.17	328	720	ND (10)
C-CON-M	13-Dec-05	ND (0.2)	ND (1.0)	1,060	8.17	332	730	ND (10)
C-CON-D	13-Dec-05	ND (0.2)	ND (1.0)	1,070	8.14	340	710	ND (10)
C-I-3-S	13-Jul-05	ND (0.2)	ND (1.0)	1,090	8.16	348	615	ND (10)
C-I-3-M	13-Jul-05	ND (0.2)	ND (1.0)	1,100	8.11	352	635	ND (10)
C-I-3-D	13-Jul-05	ND (0.2)	ND (1.0)	1,090	8.15	332	620	ND (10)
C-I-3-S	21-Sep-05	ND (0.2)	ND (1.0)	1,110	8.16	324	750	ND (10)
C-I-3-M	21-Sep-05	ND (0.2)	ND (1.0)	1,110	8.24	316	725	ND (10)
C-I-3-D	21-Sep-05	ND (0.2)	ND (1.0)	1,110	8.10	324	730	ND (10)
C-I-3-S	08-Nov-05	ND (0.2)	ND (1.0)	---	---	328	---	---
C-I-3-M	08-Nov-05	ND (0.2)	ND (1.0)	---	---	316	---	---
C-I-3-D	08-Nov-05	ND (0.2)	ND (1.0)	---	---	332	---	---
C-I-3-S	13-Dec-05	ND (0.2)	ND (1.0)	1,070	8.20	332	750	ND (10)
C-I-3-M	13-Dec-05	ND (0.2)	ND (1.0)	1,070	8.16	328	705	ND (10)

**Table 4**  
**In-Channel Surface Water COC and Additional Parameters Sampling Results**  
**July 2005 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sample Date	Hexavalent Chromium ( $\mu\text{g/L}$ )	Dissolved Total Chromium ( $\mu\text{g/L}$ )	Specific Conductance ( $\mu\text{S/cm}$ )	pH	Hardness mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L
C-I-3-D	13-Dec-05	ND (0.2)	ND (1.0)	1,060	8.18	336	730	ND (10)
C-MAR-M	21-Sep-05	ND (0.2)	ND (1.0)	1,150	8.11	336	740	103
C-MAR-S	09-Nov-05	ND (0.2)	ND (1.0)	---	---	360	---	---
C-MAR-M	09-Nov-05	ND (0.2)	ND (1.0)	---	---	364	---	---
C-MAR-D	09-Nov-05	ND (0.2)	ND (1.0)	---	---	348	---	---
C-MAR-M	13-Dec-05	ND (0.2)	ND (1.0)	1,380	7.95	422	950	20.0
C-NR1-S	13-Jul-05	ND (0.2)	ND (1.0)	1,100	8.19	336	610	ND (10)
C-NR1-M	13-Jul-05	ND (0.2)	ND (1.0)	1,090	8.16	348	600	ND (10)
C-NR1-D	13-Jul-05	ND (0.2)	ND (1.0)	1,080	8.18	336	605	ND (10)
C-NR1-S	22-Sep-05	ND (0.2)	ND (1.0)	1,110	8.18	324	725	ND (10)
C-NR1-M	22-Sep-05	ND (0.2)	ND (1.0)	1,100	8.13	324	730	ND (10)
C-NR1-D	22-Sep-05	ND (0.2)	ND (1.0)	1,110	8.13	320	740	ND (10)
C-NR1-S	09-Nov-05	ND (0.2)	ND (1.0)	---	---	300	---	---
C-NR1-M	09-Nov-05	ND (0.2)	ND (1.0)	---	---	320	---	---
C-NR1-D	09-Nov-05	ND (0.2)	ND (1.0)	---	---	324	---	---
C-NR1-S	14-Dec-05	ND (0.2)	ND (1.0)	1,070	8.18	336	705	ND (10)
C-NR1-M	14-Dec-05	ND (0.2)	ND (1.0)	1,060	8.21	340	695	ND (10)
C-NR1-D	14-Dec-05	ND (0.2)	ND (1.0)	1,060	8.11	332	700	ND (10)
C-NR3-S	14-Jul-05	ND (0.2)	ND (1.0)	1,090	8.05	344	695	ND (10)
C-NR3-M	14-Jul-05	ND (0.2)	ND (1.0)	1,090	8.06	352	730	ND (10)
C-NR3-D	14-Jul-05	ND (0.2)	ND (1.0)	1,090	8.07	348	710	ND (10)
C-NR3-S	22-Sep-05	ND (0.2)	ND (1.0)	1,110	8.18	328	735	ND (10)
C-NR3-M	22-Sep-05	ND (0.2)	ND (1.0)	1,110	8.20	324	725	ND (10)

**Table 4**  
**In-Channel Surface Water COC and Additional Parameters Sampling Results**  
**July 2005 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Total Chromium (µg/L)	Specific Conductance (µS/cm)	pH	Hardness mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L
C-NR3-D	22-Sep-05	ND (0.2)	ND (1.0)	1,110	8.17	320	750	ND (10)
C-NR3-S	09-Nov-05	ND (0.2)	ND (1.0)	---	---	328	---	---
C-NR3-M	09-Nov-05	ND (0.2)	ND (1.0)	---	---	308	---	---
C-NR3-D	09-Nov-05	ND (0.2)	ND (1.0)	---	---	324	---	---
C-NR3-S	14-Dec-05	ND (0.2)	ND (1.0)	1,060	8.15	336	730	ND (10)
C-NR3-M	14-Dec-05	ND (0.2)	ND (1.0)	1,060	8.20	332	690	ND (10)
C-NR3-D	14-Dec-05	ND (0.2)	ND (1.0)	1,060	8.18	336	665	ND (10)
C-NR4-S	14-Jul-05	ND (0.2)	ND (1.0)	1,090	8.09	340	715	ND (10)
C-NR4-M	14-Jul-05	ND (0.2)	ND (1.0)	1,080	7.96	344	700	ND (10)
C-NR4-D	14-Jul-05	ND (0.2)	ND (1.0)	1,080	8.07	348	670	ND (10)
C-NR4-S	22-Sep-05	ND (0.2)	ND (1.0)	1,110	8.10	324	735	ND (10)
C-NR4-M	22-Sep-05	ND (0.2)	ND (1.0)	1,110	8.12	324	745	ND (10)
C-NR4-D	22-Sep-05	ND (0.2)	ND (1.0)	1,100	8.11	324	720	ND (10)
C-NR4-S	09-Nov-05	ND (0.2)	ND (1.0)	---	---	328	---	---
C-NR4-M	09-Nov-05	ND (0.2)	ND (1.0)	---	---	324	---	---
C-NR4-D	09-Nov-05	ND (0.2)	ND (1.0)	---	---	336	---	---
C-NR4-S	14-Dec-05	ND (0.2)	ND (1.0)	1,060	8.04	336	715	ND (10)
C-NR4-M	14-Dec-05	ND (0.2)	ND (1.0)	1,060	8.17	340	690	ND (10)
C-NR4-D	14-Dec-05	ND (0.2)	ND (1.0)	1,060	8.15	336	680	ND (10)
C-R22-S	13-Jul-05	ND (0.2)	ND (1.0)	1,090	8.18	352	630	ND (10)
C-R22-M	13-Jul-05	ND (0.2)	ND (1.0)	1,090	8.11	352	610	ND (10)
C-R22-D	13-Jul-05	ND (0.2)	ND (1.0)	1,100	8.17	352	590	ND (10)
C-R22-S	21-Sep-05	ND (0.2)	ND (1.0)	1,110	8.19	336	720	ND (10)

**Table 4**  
**In-Channel Surface Water COC and Additional Parameters Sampling Results**  
**July 2005 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Total Chromium (µg/L)	Specific Conductance (µS/cm)	pH	Hardness mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L
C-R22-M	21-Sep-05	ND (0.2)	ND (1.0)	1,110	8.17	336	735	ND (10)
C-R22-D	21-Sep-05	ND (0.2)	ND (1.0)	1,110	8.17	328	715	ND (10)
C-R22-S	08-Nov-05	ND (0.2)	ND (1.0)	---	---	320	---	---
C-R22-M	08-Nov-05	ND (0.2)	ND (1.0)	---	---	324	---	---
C-R22-D	08-Nov-05	ND (0.2)	ND (1.0)	---	---	330	---	---
C-R22-S	13-Dec-05	ND (0.2)	ND (1.0)	1,070	8.18	332	710	ND (10)
C-R22-M	13-Dec-05	ND (0.2)	ND (1.0)	1,070	8.17	336	705	ND (10)
C-R22-D	13-Dec-05	ND (0.2)	ND (1.0)	1,070	8.21	336	720	ND (10)
C-R27-S	13-Jul-05	ND (0.2)	ND (1.0)	1,090	8.14	340	625	ND (10)
C-R27-M	13-Jul-05	ND (0.2)	ND (1.0)	1,090	8.15	356	630	ND (10)
C-R27-D	13-Jul-05	ND (0.2)	ND (1.0)	1,100	8.13	348	635	ND (10)
C-R27-S	21-Sep-05	ND (0.2)	ND (1.0)	1,110	8.07	324	745	ND (10)
C-R27-M	21-Sep-05	ND (0.2)	ND (1.0)	1,110	8.22	320	730	ND (10)
C-R27-D	21-Sep-05	ND (0.2)	ND (1.0)	1,100	8.10	320	750	ND (10)
C-R27-S	08-Nov-05	ND (0.2)	ND (1.0)	---	---	332	---	---
C-R27-M	08-Nov-05	ND (0.2)	ND (1.0)	---	---	316	---	---
C-R27-D	08-Nov-05	ND (0.2)	ND (1.0)	---	---	332	---	---
C-R27-S	13-Dec-05	ND (0.2)	ND (1.0)	1,070	8.18	340	715	ND (10)
C-R27-M	13-Dec-05	ND (0.2)	ND (1.0)	1,070	8.18	357	700	ND (10)
C-R27-D	13-Dec-05	ND (0.2)	ND (1.0)	1,060	8.14	340	710	ND (10)
C-TAZ-S	13-Jul-05	ND (0.2)	ND (1.0)	1,090	8.21	328	650	ND (10)
C-TAZ-M	13-Jul-05	ND (0.2)	ND (1.0)	1,080	8.17	348	655	ND (10)
C-TAZ-D	13-Jul-05	ND (0.2)	ND (1.0)	1,090	8.18	344	615	ND (10)

**Table 4**  
**In-Channel Surface Water COC and Additional Parameters Sampling Results**  
**July 2005 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Total Chromium (µg/L)	Specific Conductance (µS/cm)	pH	Hardness mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L
C-TAZ-S	21-Sep-05	ND (0.2)	ND (1.0)	1,110	8.12	316	710	ND (10)
C-TAZ-M	21-Sep-05	ND (0.2)	ND (1.0)	1,110	8.06	324	730	ND (10)
C-TAZ-D	21-Sep-05	ND (0.2)	ND (1.0)	1,110	8.13	320	705	ND (10)
C-TAZ-S	08-Nov-05	ND (0.2)	ND (1.0)	---	---	340	---	---
C-TAZ-M	08-Nov-05	ND (0.2)	ND (1.0)	---	---	324	---	---
C-TAZ-D	08-Nov-05	ND (0.2)	ND (1.0)	---	---	320	---	---
C-TAZ-S	13-Dec-05	ND (0.2)	ND (1.0)	1,070	8.15	344	715	ND (10)
C-TAZ-M	13-Dec-05	ND (0.2)	ND (1.0)	1,070	8.20	340	705	ND (10)
C-TAZ-D	13-Dec-05	ND (0.2)	ND (1.0)	1,070	8.21	340	730	ND (10)

NOTES:

µg/L micrograms per liter

µS/cm microSiemens per centimeter

ND not detected at listed reporting limit

J concentration or reporting limit estimated by laboratory or data validation

R result exceeded analytical criteria for precision and accuracy, should not be used for decision-making

(--) data not collected or not available

FD field duplicate sample

Hexavalent chromium analysis method: SW 7199 (reporting limit 0.2 µg/L)

Other analysis methods: total chromium (dissolved concentrations, Methods SW 6020A and SW 6010B, reporting limit 1 µg/L for undiluted samples), specific conductance (EPA120.1), pH (EPA150.1), hardness (EPA130.2), total dissolved solids (EPA160.1), and total suspended solids (EPA160.2).

The sample ID's for the depth-specific surface water samples are:

S = shallow (1 foot from water surface)

M = middle (mid-point of water column)

D = deep (1 foot from river bottom)

**Table 5**  
**Interim Measures Performance Monitoring Analytical Results, March 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
<b>Monitoring Wells</b>														
MW-20-70	03-Mar-04	2300	-6.5	-39.0	890	440	9.7	0.6	230	52	11	480	0.3	75
	03-Mar-04 FD	2300	-6.5	-53.0	890	440	9.7	0.6	220	51	11	460	0.3	72
	11-May-04	2100	-5.5	-53.0	800	450	10	ND (0.5)	210	48	9.7	490	0.4	76
	24-Sep-04	2200	-6.5	-57.0	824	402	9.7	ND (1)	180	58.5	12	430	0.2	74
	16-Dec-04	2080	-7.3	-60.0	753	374	9.68	0.604	177 J	52.5	9.05	410	0.497	70
	10-Mar-05	1940	-7.1	-59.0	740	378	9.98	ND (1)	198	55.4	9.89	431	0.412	81.7
	15-Jun-05	1980	-7	-60.0	749	388	9.79	ND (1)	189	55.4	10.5	433	0.414	73.8
	15-Jun-05 FD	2050	-8.3	-57.0	760	392	9.81	ND (1)	204	60.7	11.4	468	0.445	71.3
	11-Oct-05	1950	-7.2	-57.0	737	359	9.48	0.641	198	49.9	14.6	323	0.402	69.9
	15-Dec-05	1830	-7.1	-49.0	645	326	9.9	ND (1)	138	42.3	14.5	267	0.441	77.8
MW-20-100	03-Mar-04	3400	-4.2	-38.0	1300	740	9.6	0.7	170	20	11	1100	1	82
	11-May-04	3600	-2.7	-37.0	1300	700	9.6	0.5	150	18	10	1100	1	81
	24-Sep-04	3000	-4.8	-44.0	1180	621	8.85	ND (1)	140	23	13	860	0.8	100
	16-Dec-04	2840	-5	-47.0	1050	562	8.5	0.654	152	23.4	16.6	772	0.971	90
	10-Mar-05	2490	-5.2	-49.0	466	511	9.98	ND (1)	133	19.8	8.98	712	0.859	84.2
	15-Jun-05	2500	-4.7	-46.0	921	506	9.02	ND (1)	137	21.3	9.06	592	0.713	84
	11-Oct-05	2400	-5.3	-48.0	887	484	8.87	0.731	170	23.7	15.2	500	0.718	82.3
	15-Dec-05	2340	-5.4	-40.0	813	404	9.65	ND (1)	136	21.4	14.8	406	0.709	82.7
MW-20-130	03-Mar-04	11000	-6.6	-60.0	6200	960	6.2	ND (2.5)	400	19	35	3500	1.7	45
	11-May-04	8300	-5	-49.0	3300	1000	9.8	ND (0.5)	280	14	26	2500	1.7	62
	24-Sep-04	7800	-4.4	-45.0	7240	2280	9.8	ND (4)	240	15	33	2400	1.9	66
	27-Jan-05	7350	-5.7	-48.0	3790	1140	10.4	3.16	313	16.1	43.5	2260	2.03	66
	09-Mar-05	5520	-5.8	-56.0	3120	1080	10.9	ND (1)	219	12.1	24.7	2250	1.9	68.9
	09-Mar-05 FD	6200	-5.4	-51.0	3080	1080	10.9	ND (1)	231	12.8	25.4	2390	1.99	68.9
	15-Jun-05	7790	-5	-48.0	3410	1230	11.1	ND (1)	352	23.2	31.3	2980	2.75	68.7
	07-Oct-05	7330	-5	-47.0	3010	1210	10.9	1.04 J	349	13.9	38.4	2070	2.41	72.4
	16-Dec-05	7860	-5.8	-43.0	3260	1000	10.7	ND (2.5)	324	16.3	44.4	1780	1.98	63.2
MW-25	03-Mar-04	970	-7.7	-56.0	300	220	4.2	ND (0.5)	92	18	7.8	230	0.4	140
	14-May-04	1000	-8.9	-59.0	310	210	4.2	ND (0.5)	89	19	8	230	0.4	130
	09-Jun-04	---	---	---	---	---	---	---	108	17.1	---	---	0.376	---
	22-Sep-04	1000	-7.6	-58.0	296	196	3.93	0.42	81	16.6	7.4	230	ND (0.2)	140

**Table 5**  
**Interim Measures Performance Monitoring Analytical Results, March 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
<b>Monitoring Wells</b>														
MW-25	09-Mar-05	877	-8.4	-62.0	247	169	3.64	ND (0.5)	77.6	16.1	6.24	211	0.441	158
	14-Jun-05	942	-8.6	-61.0	289	183	3.89	ND (0.5)	93.5	20	8.91	253	0.464	137
	14-Jun-05 FD	980	-7.2	-59.0	294	185	3.94	ND (0.5)	100	20.9	9.06	268	0.475	137
	04-Oct-05	950	-8.2	-68.0	252	171	3.77	ND (0.5)	83.3	14.9	9.93	164	0.362	141
	04-Oct-05 FD	910	-8.3	-60.0	251	171	3.75	ND (0.5)	94.6	15.3	10.2	185	0.371	146
	14-Dec-05	838	-8.4	-55.0	224	158	3.74	ND (0.5)	75.5	14.5	9.8	143	0.396	153
	14-Dec-05 FD	896	-8.4	-50.0	219	155	3.75	ND (0.5)	73	14.1	9.71	151	0.382	156
MW-26	03-Mar-04	1900	-6.7	-54.0	770	400	4.6	ND (0.5)	170	40	12	470	0.5	110
	14-May-04	9300 R	-8.4	-60.0	850	480	5.1	ND (0.5)	190	50	14	490	0.6	110
	22-Sep-04	2300	-6.7	-59.0	821	472	5.65	ND (1)	170	46	13	390	0.4	98
	16-Dec-04	2130	-8.6	-64.0	835	388	5	0.578	176	45.7	17.8	466	0.662	100
	08-Mar-05	1840	-8.8	-70.0	756	370	4.48	ND (0.5)	166	41.6	10.7	439	0.557	98.7
	08-Mar-05 FD	1800	-8.7	-70.0	708	338	4.45	ND (0.5)	166	40.9	11.4	438	0.559	96.1
	13-Jun-05	2130	-8.2	-65.0	847	371	4.9	ND (0.5)	178	44.6	14	511	0.663	103
	04-Oct-05	2120	-7.8	-68.0	779	372	4.88	0.601	166	40.4	19.8	352	0.526	109
	12-Dec-05	2610	-8.5	-55.0	788	372	4.88	0.546	162	39.9	20.3	349	0.613	99.7
MW-27-20	03-Mar-04	640	-11.7	-100.0	74	200	ND (0.4)	ND (0.5)	79	26	4	84	ND (0.2)	180
	12-May-04	570	-11.3	-98.0	72	200	ND (0.4)	ND (0.5)	77	25	3.7	87	ND (0.2)	170
	21-Sep-04	670	-12.3	-92.0	77.2	212	ND (0.2)	ND (0.2)	76	26	5	82	ND (0.2)	160
	15-Dec-04	692	-11.9	-101.0	87.2	236	ND (0.5)	ND (0.5)	91.5	32.6	4.61	88.4	ND (0.2)	169
	08-Mar-05	1250	-12	-102.0	190	432	ND (0.5)	ND (0.5)	137	56.6	4.89	195	ND (0.2)	215
	18-Jul-05	---	-11.9	-98.0	81.9	228	ND (0.5)	ND (0.5)	96.1	30.1	4.27	94.8	ND (0.2)	160
	05-Oct-05	742	-11.8	-102.0	91.1	252	ND (0.5)	ND (0.5)	88.6	31.4	5.48	81	ND (0.2)	175
	14-Dec-05	1020	-11.7	-91.0	118	347	ND (0.5)	ND (0.5)	116	41.8	6.96	116	ND (0.2)	216
MW-28-25	04-Mar-04	1000	-11.3	-95.0	220	290	ND (0.4)	ND (0.5)	120	33	3.8	210	0.2	260
	11-May-04	800	-11.3	-95.0	110	270	ND (0.4)	ND (0.5)	110	29	3.9	120	ND (0.2)	240
	07-Jun-04	890	-12.5	-100.0	150	220	ND (0.4)	---	---	---	---	---	---	---
	20-Sep-04	850 J	-11.7	-89.0	99.1	286	ND (0.4)	ND (0.2)	110	30	4.6	120	ND (0.2)	210
	14-Dec-04	810	-12	-99.0	110	310	ND (0.5)	ND (0.5)	122	35.7	4.78	103	ND (0.2) J	202
	10-Mar-05	880	-12.2	-95.0	112	302	ND (0.5)	ND (0.5)	129	36.3	3.5	122	ND (0.2)	204
	15-Jun-05	974	-11.6	-91.0	108	359	ND (0.5)	ND (0.5)	133	38.9	6.54	117	ND (0.2)	221

**Table 5**  
**Interim Measures Performance Monitoring Analytical Results, March 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
<b>Monitoring Wells</b>														
MW-28-25	06-Oct-05	884	-11.7	-95.0	99.8	300	ND (0.5)	ND (0.5)	123	37	6.61	88.7	ND (0.2)	197
	16-Dec-05	1010	-11.4	-90.0	128	348	ND (0.5)	ND (0.5)	134	41.5	6.46	107	ND (0.2)	212
MW-30-30	04-Mar-04	36000	-9	-76.0	19000	4100	ND (4)	5.2	1000	1000	50	9600	3.6	570
	12-May-04	30000	-7.8	-71.0	14000	3000	ND (4)	ND (50)	1300	800	47	8300	2.8	610
	23-Sep-04	42000	-9.5	-73.0	22000	4500	ND (200)	ND (100)	900	890	76	11000	4.1	570
	15-Dec-04	45500	-9.5	-79.0	19900	4730	ND (5)	8.14	1300	1400	118	6110	7.84	458
	10-Mar-05	38800	-9.8	-79.0	16000	4270	ND (5)	7.91	1590	1600	95.4	13600	4.97	421
	07-Oct-05	36400	-8.5	-75.0	17600	4000	ND (0.5)	ND (10)	1020	842	93.6	7650	5.2	521
	15-Dec-05	35700	-8.7	-59.0	19700	4070	ND (1)	3.13	1060	894	110	8540	6.14	504
MW-30-50	05-Mar-04	6100	-6.4	-58.0	3000	750	1.2	ND (5)	280	120	16	1600	0.9	280
	05-Mar-04 FD	5900	-6.6	-56.0	2900	730	1.2	ND (5)	290	120	15	1600	0.9	280
	14-May-04	6300	-7.7	-54.0	2700	800	3.5	ND (5)	270	100	15	1700	1.2	180
	14-May-04 FD	6500	-7.5	-54.0	2600	800	3.5	ND (5)	270	110	16	1700	1.1	180
	23-Sep-04	6600	-7.3	-58.0	3330	742	1.58	ND (10)	290	100	18	1800	0.9	240
	23-Sep-04 FD	6800	-6.7	-58.0	3220	694	1.64	ND (10)	310	110	19	1900	0.9	240
	15-Dec-04	6750	-7.9	-63.0	3040	716	ND (0.5)	1.14	378	117	36.5	1720	1.39	249
	15-Dec-04 FD	6690	-7.8	-64.0	2920	725	ND (0.5)	1.13	372	114	37.8	1700	1.43	249
	10-Mar-05	6470 J	-8.3	-68.0	4660	672	ND (0.5)	1.03	335	107	16.5	2040	1.15	324
	07-Oct-05	6860	-9.4	-79.0	3060	857	ND (0.5)	0.899 J	438	101	37	1780	1.27	252
	16-Dec-05	5850	-10.5	-65.0	2360	578	ND (0.5)	0.645	265	77.9	32.9	1260	1.19	212
MW-31-60	03-Mar-04	1700	-8.1	-60.0	750	280	6.2	ND (0.5)	160	22	7.9	420	0.4	72
	14-May-04	1900	-9	-59.0	750	260	5.5	ND (0.5)	150	22	7.5	420	0.4	74
	22-Sep-04	1700	-8	-61.0	691	236	5.45	0.46	130	19	7.9	430	ND (0.2)	79
	16-Dec-04	1640	-8.7	-64.0	691	246	5.36	ND (0.5)	118	18.5	9.67	421	0.44	80
	09-Mar-05	1540	-8.6	-63.0	649	210	4.94	ND (0.5)	108	17.3	5.97	424	0.401	76.6
	13-Jun-05	1660	-8.2	-65.0	745	207	4.12	ND (0.5)	121	18.9	6.57	403	0.388	70
	06-Oct-05	1660	-8.6	-65.0	691	206	4.01	ND (0.5)	109	16.5	9.75	308	0.462	77.3
	13-Dec-05	1620	-8.7	-54.0	669	199	4.14	ND (0.5)	87	15.4	9.32	275	0.359	73
MW-32-20	04-Mar-04	6200	-8	-64.0	2900	540	ND (0.4)	ND (5)	520	180	13	1500	1.1	570
	12-May-04	5000	-7.1	-70.0	2100	130	ND (0.4)	ND (5)	510	180	16	1100	0.8	600
	20-Sep-04	21000 J	-7.3	-63.0	10200	3800	ND (0.4)	ND (100)	1100	420	45	4900	3	920

**Table 5**  
**Interim Measures Performance Monitoring Analytical Results, March 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
<b>Monitoring Wells</b>														
MW-32-20	14-Dec-04	16100	-8.2	-66.0	8890	1990	ND (5)	ND (5)	1140	400	46.8	3500	4.22 J	784
	09-Mar-05	12500	-7.2	-65.0	6930	1660	ND (0.5)	3.51	838	302	36.9	4000	2.76	123
	17-Jun-05	10200	-9	-67.0	4810	690	ND (0.5)	ND (2.5)	566	231	23.3	2620	1.75	676
	04-Oct-05	28800	-7.8	-65.0	14200	2420	ND (5)	6.19	1380 J	613 J	91.1 J	5400 J	4.75 J	733
	16-Dec-05	24600	-7.8	-61.0	12200	2140	ND (1)	3.48	1470	552	90.4	4950	4.16	861
MW-32-35	04-Mar-04	4200	-8	-65.0	1900	470	ND (0.4)	ND (5)	340	99	13	1100	1	310
	12-May-04	4500	-6.9	-64.0	1900	460	ND (0.4)	ND (5)	330	94	12	1100	0.9	320
	21-Sep-04	4500	-8.7	-63.0	2150	422	ND (0.2)	ND (10)	320	89	14	990	0.9	310
	15-Dec-04	4120	-8.5	-67.0	1760	524	ND (0.5)	0.89	351	96.3	24.7 J	954	1.28	276
	09-Mar-05	3560	-8.2	-68.0	1770	465	ND (0.5)	0.845	312	85.5	13	944	1.07	260
	17-Jun-05	7550	-9.5	-72.0	3520	787	ND (0.5)	ND (2.5)	506	120	14.8	2110	1.18	223
	04-Oct-05	8340	-8.3	-70.0	3840	765	ND (0.5)	ND (5)	567	134	29.3	1530	1.26	208
	16-Dec-05	7660	-8.8	-63.0	3510	710	ND (1)	1.02	606	128	30	1580	1.25	219
MW-34-55	04-Mar-04	6700	-9.6	-77.0	3200	850	ND (0.4)	ND (5)	360	97	13	2000	1.2	270
	13-May-04	5700	-10.3	-77.0	2700	770	ND (0.4)	ND (5)	310	77	15	1900	1	270
	08-Jun-04	---	---	---	---	---	---	---	246	68.3	---	---	1.18	---
	22-Sep-04	5800	-11	-82.0	2700	732	ND (0.2)	ND (10)	260	85.2	17	1800	0.9	250
	15-Dec-04	5860	-10.9	-83.0	2390	743	ND (0.5)	0.743	288	69.9	33	1540	1.34	234
	10-Mar-05	6230	-10.8	-82.0	2620	739	ND (0.5)	0.654	366	71.3	29.1	1900	1.19	240
	15-Jul-05	---	-10.3	-84.0	2250	607	ND (0.5)	ND (0.5)	247	52	16.5	1420	1.02	242
	05-Oct-05	5150	-10.6	-88.0	2170	619	ND (0.5)	ND (0.5)	272	59.1	25.8	1230	1.2	232
	14-Dec-05	5100	-10.8	-74.0	2150	552	ND (0.5)	0.588	217	45	27.2	965	0.937	236
MW-34-80	05-Mar-04	8800	-8.9	-75.0	4700	1000	ND (0.4)	ND (5)	280	24	25	2600	1.7	180
	13-May-04	8800	-10.2	-77.0	3900	1000	ND (4)	ND (5)	390	54	27	2800	1.4	270
	13-May-04 FD	9100	-10.2	-76.0	4000	1000	ND (4)	ND (5)	390	53	27	2700	1.5	280
	08-Jun-04	---	---	---	---	---	---	---	396	56.6	---	---	1.72	---
	23-Sep-04	8900	-9.9	-79.0	4050	997	ND (10)	ND (10)	410	76	32	2800	1.4	290
	23-Sep-04 FD	9900	-9.6	-78.0	4170	998	ND (10)	ND (10)	410	84.3	35	2800	1.5	290
	13-Dec-04	---	---	---	---	---	---	---	455	55	40.4	2220	1.63	---
	08-Mar-05	6940	-10.4	-83.0	4180	1040	ND (0.5)	1.01	439	68.1	28	2750	1.65	304
	15-Mar-05	8980	---	---	3920	ND (5)	ND (1)	---	445	65.7	29.7	2990	---	288

**Table 5**  
**Interim Measures Performance Monitoring Analytical Results, March 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
<b>Monitoring Wells</b>														
MW-34-80	30-Jun-05	7840	-8.4	-82.0	3910	979	ND (0.5)	ND (0.5)	497	76.5	27.7	2670	1.66	302
	05-Oct-05	10200	-10.1	-85.0	3880	1060	ND (0.5)	ND (0.5)	429	72.5	47.4	1660	1.57	302
	14-Dec-05	8800	-10.2	-71.0	3700	880	ND (0.5)	0.854	432	68.3	54.9	1710	1.54	297
<b>Surface Water Stations</b>														
R-27	03-Mar-04	630	-11.4	-86.0	87	250	ND (0.4)	ND (0.5)	77	28	4.4	94	ND (0.2)	140
	12-May-04	590	-11.4	-96.0	84	240	ND (0.4)	ND (0.5)	74	27	4.8	96	ND (0.2)	140
	22-Sep-04	680	-12.1	-98.0	88.4	237	0.38	ND (0.2)	77	29	4.8	99	ND (0.2)	130
	13-Dec-04	632	-11.4	-95.0	84.4	235	ND (0.5) R	ND (0.5)	79.6	31.4	4.95	86.5	ND (0.2) J	125
	07-Mar-05	669	-12.3	-102.0	92.7	244	ND (0.5)	ND (0.5)	82.8	31.3	4.72	108	ND (0.2)	136
	14-Jun-05	686	-11.4	-92.0	90.9	266	ND (0.5)	ND (0.5)	81.9	29.8	6.04	98.9	ND (0.2)	127
	05-Oct-05	678	-11.6	-94.0	85.1	255	ND (0.5)	ND (0.5)	101	36.2	6.56	91.2	ND (0.2)	130
	16-Dec-05	718	-11.7	-87.0	87.9	253	ND (0.5)	ND (0.5)	85.5	29.5	5.99	75.6	ND (0.2)	126
R-28	03-Mar-04	670	-11.3	-90.0	87	250	0.5	ND (0.5)	78	28	4.4	93	ND (0.2)	140
	12-May-04	580	-11.5	-98.0	84	240	ND (0.4)	ND (0.5)	72	26	4.2	92	ND (0.2)	140
	22-Sep-04	680	-12.1	-99.0	104	240	0.38	ND (0.2)	79	30	4.9	99	ND (0.2)	130
	13-Dec-04	652	-11.1	-95.0	84.8	236	ND (0.5) R	ND (0.5)	79.9	31.5	4.93	86	ND (0.2) J	133
	08-Mar-05	651	-12.5	-102.0	90.4	231	ND (12.5)	ND (0.5)	83.7	31.4	5.02	107	ND (0.2)	132
	14-Jun-05	680	-11.6	-95.0	91.2	268	ND (0.5)	ND (0.5)	78.5	28.5	5.08	94.5	ND (0.2)	127
	05-Oct-05	672	-11.6	-94.0	85.5	255	ND (0.5)	ND (0.5)	85.7	30.4	6.3	77	ND (0.2)	122
	16-Dec-05	710	-11.5	-83.0	88.1	254	ND (0.5)	ND (0.5)	87.2	29.8	6.11	76.8	ND (0.2)	126

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**Table 5**  
**Interim Measures Performance Monitoring Analytical Results, March 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

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NOTES:

FD field duplicate sample

ND parameter not detected at the listed reporting limit

J concentration or reporting estimated by laboratory or data validation

R result exceeded analytical criteria for precision and accuracy; should not be used for project decision-making

(---) parameter not analyzed

Results in milligrams per liter (mg/L), except Oxygen-18 and Deuterium, which are expressed as differences from global standards in parts per thousand.

Alkalinity reported as carbonate (CaCO<sub>3</sub>). Nitrate reported as Nitrogen (N).

All metal results are dissolved concentrations.

**Table 6**  
**Title 22 Metals, September 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

California MCL:		6	50	1000	4	5	NE	50	1000 *	NE	2	NE	100	50	100*	2	NE	5000 *
Well ID	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
MW-10	9/21/2004	ND (5.0)	ND (10)	45.8	ND (3.0)	ND (3.0)	ND (3.0)	<b>1960</b>	6.40	ND (5.0)	ND (0.2)	115	ND (5.0)	ND (10)	ND (3.0)	ND (15)	25.2	22.7
	12/17/2004	ND (5.0)	ND (10)	44.9	ND (3.1)	ND (3.1)	ND (3.1)	<b>1300</b>	ND (5.0)	ND (2.1)	ND (0.2)	100	ND (5.0)	ND (10)	61.8	ND (15)	40.0	54.9
	3/8/2005	ND (5.0)	ND (10)	42.0	ND (3.1)	ND (3.1)	ND (3.1)	<b>1110</b>	ND (5.0)	ND (2.1)	ND (0.2)	83.3	ND (5.0)	ND (10)	ND (3.1)	ND (15)	141	56.2
	FD 3/8/2005	ND (5.0)	ND (10)	49.3	ND (3.1)	ND (3.1)	ND (3.1)	<b>1100</b>	ND (5.0)	ND (2.1)	ND (0.2)	81.1	ND (5.0)	ND (10)	ND (3.1)	ND (15)	165	65.6
	6/16/2005	ND (2.0)	6.39	45.5	ND (1.0)	ND (1.0)	ND (1.0)	<b>1400</b>	ND (1.0)	1.53	ND (0.2)	114	1.70	4.90	ND (1.0)	ND (1.0)	33.5	ND (10)
	10/3/2005	ND (2.0)	14.3	ND (300)	ND (1.0)	ND (1.0)	ND (1.0)	<b>4900</b>	ND (10)	1.53	ND (0.2)	301	ND (20)	1.93	ND (1.0)	ND (1.0)	49.7	79.4
	12/12/2005	ND (3.0)	ND (5.0)	ND (300)	ND (1.0)	ND (2.0)	ND (5.0)	<b>3040</b>	ND (10)	ND (2.0)	ND (0.2)	168	ND (20)	ND (5.0)	ND (5.0)	ND (1.0)	40.2	ND (20)
MW-11	9/21/2004	ND (5.0)	ND (10)	45.1	ND (3.0)	ND (3.0)	ND (3.0)	<b>431</b>	ND (5.0)	ND (5.0)	ND (0.2)	8.80	ND (5.0)	ND (10)	ND (3.0)	ND (15)	5.80	ND (10)
	12/17/2004	ND (5.0)	ND (10)	38.8	ND (3.1)	ND (3.1)	ND (3.1)	<b>393</b>	ND (5.0)	ND (2.1)	ND (0.2)	9.40	ND (5.0)	13.6	ND (3.1)	ND (15)	9.90	27.4
	3/8/2005	ND (5.0)	ND (10)	38.3	ND (3.1)	ND (3.1)	ND (3.1)	<b>357</b>	ND (5.0)	ND (2.1)	ND (0.2)	9.00	ND (5.0)	ND (10)	ND (3.1)	ND (15)	85.9	56.7
	6/16/2005	ND (2.0)	1.53	42.1	ND (1.0)	ND (1.0)	ND (1.0)	<b>379</b>	ND (1.0)	ND (1.0)	ND (0.2)	11.5	1.03	4.50	ND (1.0)	ND (1.0)	8.31	13.4
	10/3/2005	ND (2.0)	1.68	ND (300)	ND (1.0)	ND (1.0)	ND (1.0)	<b>617</b>	ND (10)	ND (1.0)	ND (0.2)	16.4	ND (20)	5.31	ND (1.0)	ND (1.0)	6.30	ND (20)
	12/12/2005	ND (3.0)	ND (5.0)	ND (300)	ND (1.0)	ND (2.0)	ND (5.0)	<b>449</b>	ND (10)	ND (2.0)	ND (0.2)	9.40	ND (20)	ND (5.0)	ND (5.0)	ND (1.0)	8.30	ND (20)
MW-12	9/20/2004	<b>20.9</b>	<b>68.6</b>	62.8	ND (3.0)	ND (3.0)	ND (3.0)	<b>1490</b>	ND (5.0)	ND (5.0)	ND (0.2)	41.2	ND (5.0)	ND (10)	ND (3.0)	ND (15)	24.6	19.2
	3/10/2005	ND (5.0)	<b>53.4</b>	38.9	ND (3.1)	ND (3.1)	ND (3.1)	<b>945</b>	ND (5.0)	ND (2.1)	ND (0.2)	36.1	ND (5.0)	ND (10)	ND (3.1)	ND (15)	218	37.5
	FD 3/10/2005	ND (5.0)	<b>64.2</b>	39.9	ND (3.1)	ND (3.1)	ND (3.1)	<b>912</b>	ND (5.0)	ND (2.1)	ND (0.2)	40.7	ND (5.0)	ND (10)	ND (3.1)	ND (15)	202	54.6
	6/13/2005	ND (2.0)	<b>110</b>	44.1	ND (1.0)	ND (1.0)	ND (1.0)	<b>957</b>	ND (1.0)	ND (1.0)	ND (0.2)	77.3	11.7	5.73	ND (1.0)	1.11	34.2	24.4
	9/16/2005	ND (5.0)	<b>103</b>	110	ND (3.0)	ND (3.0)	ND (3.0)	<b>618</b>	ND (5.0)	5.70	ND (0.2)	63.5	17.9	ND (10)	ND (3.0)	ND (15)	52.2	75.5
	10/4/2005	ND (2.0)	<b>146</b>	ND (300)	ND (1.0)	ND (1.0)	ND (1.0)	<b>644</b>	ND (10)	ND (1.0)	ND (0.2)	76.9	ND (20)	3.92	ND (1.0)	ND (1.0)	41.6	ND (20)
	FD 10/4/2005	ND (2.0)	<b>151</b>	ND (300)	ND (1.0)	ND (1.0)	ND (1.0)	<b>613</b>	ND (10)	ND (1.0)	ND (0.2)	79.1	ND (20)	4.06	ND (1.0)	ND (1.0)	39.7	ND (20)
	12/13/2005	ND (3.0)	<b>157</b>	ND (300)	ND (1.0)	ND (2.0)	ND (5.0)	<b>602</b>	ND (10)	ND (2.0)	ND (0.2)	62.8	ND (20)	ND (5.0)	ND (5.0)	ND (1.0)	45.9	ND (20)
MW-20-70	9/24/2004	ND (5.0)	ND (10)	59.1	ND (3.0)	ND (3.0)	ND (3.0)	<b>7550</b>	10.8	ND (5.0)	ND (0.2)	20.6	ND (5.0)	18.1	ND (3.0)	ND (15)	ND (3.0)	24.8
	12/16/2004	ND (5.0)	ND (10)	36.6	ND (3.1)	ND (3.1)	ND (3.1)	<b>7230</b>	ND (5.0)	ND (2.1)	ND (0.2)	18.1	ND (5.0)	ND (10)	ND (3.1)	ND (15)	9.40	25.6
	3/10/2005	ND (5.0)	ND (10)	51.0	ND (3.1)	ND (3.1)	ND (3.1)	<b>8120</b>	ND (5.0)	ND (2.1)	ND (0.2)	13.0	5.20	ND (10)	ND (3.1)	ND (15)	91.6	136
	6/15/2005	ND (2.0)	1.59	47.4	ND (1.0)	ND (1.0)	ND (1.0)	<b>6430</b>	ND (1.0)	ND (1.0)	ND (0.2)	17.5	2.41	7.36	ND (1.0)	ND (1.0)	7.46	43.1 J
	FD 6/15/2005	ND (2.0)	1.62	51.8	ND (1.0)	ND (1.0)	ND (1.0)	<b>7130</b>	1.86	1.37	ND (0.2)	17.9	2.28	7.83	ND (1.0)	ND (1.0)	8.24	159 J
	10/11/2005	ND (2.0)	2.04	ND (300)	ND (1.0)	ND (1.0)	ND (1.0)	<b>5930</b>	ND (10)	ND (1.0)	ND (0.2)	23.0	ND (20)	8.81	ND (1.0)	ND (1.0)	117	ND (20)
	12/15/2005	ND (3.0)	ND (5.0)	ND (300)	ND (1.0)	ND (2.0)	ND (5.0)	<b>4310</b>	ND (10)	ND (2.0)	ND (0.2)	21.8	ND (20)	ND (5.0)	ND (5.0)	ND (1.0)	10.2	ND (20)
MW-20-130	9/24/2004	ND (5.0)	ND (10)	40.3	ND (3.0)	ND (3.0)	ND (3.0)	<b>7000</b>	15.0	ND (5.0)	ND (0.2)	47.2	ND (5.0)	23.0	ND (3.0)	ND (15)	ND (3.0)	43.7
	1/27/2005	ND (5.0)	ND (10)	26.8	ND (3.0)	ND (3.0)	ND (3.0)	<b>8410</b>	ND (5.0)	ND (2.1)	ND (0.2)	44.4	ND (5.0)	13.0	ND (3.0)	ND (15)	11.6	24.6
	3/9/2005	ND (5.0)	ND (10)	21.5	ND (3.1)	ND (3.1)	ND (3.1)	<b>8170</b>	ND (5.0)	ND (2.1)	ND (0.2)	33.6	ND (5.0)	ND (10)	ND (3.1)	ND (15)	172	84.5 J
	FD 3/9/2005	ND (5.0)	ND (10)	20.0	ND (3.1)	ND (3.1)	ND (3.1)	<b>7050</b>	ND (5.0)	ND (2.1)	ND (0.2)	29.0	5.30	ND (10)	ND (3.1)	ND (15)	162	173 J
	6/15/2005	ND (2.0)	7.42	26.5	ND (1.0)	ND (1.0)	ND (1.0)	<b>11300</b>	1.62	ND (1.0)	ND (0.2)	57.6	ND (1.0)	10.7	ND (1.0)	ND (1.0)	4.13	31.9
	10/7/2005	ND (2.0)	6.58	ND (300)	ND (1.0)	ND (1.0)	ND (1.0)	<b>10700</b>	ND (5.0)	ND (1.0)	ND (0.2)	41.3	ND (21)	10.8	ND (1.0)	ND (1.0)	ND (3.0)	ND (20)
	12/16/2005	ND (3.0)	5.80	ND (300)	ND (1.0)	ND (2.0)	ND (5.0)	<b>9340</b>	ND (10)	ND (2.0)	ND (0.2)	32.6	ND (20)	18.4	ND (5.0)	ND (1.0)	10.1	445
MW-21	12/14/2005	ND (3.0)	ND (5.0)	ND (300)	ND (1.0)	ND (2.0)												

**Table 6**  
**Title 22 Metals, September 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

California MCL:		6	50	1000	4	5	NE	50	1000 *	NE	2	NE	100	50	100*	2	NE	5000 *
Well ID	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
MW-25	FD 6/14/2005	ND (2.0)	1.93	48.9	ND (1.0)	ND (1.0)	ND (1.0)	<b>1930</b>	1.34	ND (1.0)	ND (0.2)	4.13	1.68	2.65	ND (1.0)	ND (1.0)	11.8	16.1 J
MW-25	10/4/2005	ND (2.0)	1.94	ND (300)	ND (1.0)	ND (1.0)	ND (1.0)	<b>1470</b>	ND (10)	ND (1.0)	ND (0.2)	3.49	ND (20)	2.38	ND (1.0)	ND (1.0)	6.00	ND (20)
MW-25	FD 10/4/2005	ND (2.0)	2.15	ND (300)	ND (1.0)	ND (1.0)	ND (1.0)	<b>1480</b>	ND (10)	ND (1.0)	ND (0.2)	3.53	ND (20)	2.35	ND (1.0)	ND (1.0)	6.60	ND (20)
MW-25	12/14/2005	ND (3.0)	ND (5.0)	ND (300)	ND (1.0)	ND (2.0)	ND (5.0)	<b>1370</b>	ND (10)	ND (2.0)	ND (0.2)	ND (5.0)	ND (20)	ND (5.0)	ND (5.0)	ND (1.0)	9.70	ND (20)
MW-25	FD 12/14/2005	ND (3.0)	ND (5.0)	ND (300)	ND (1.0)	ND (2.0)	ND (5.0)	<b>1350</b>	ND (10)	ND (2.0)	ND (0.2)	ND (5.0)	ND (20)	ND (5.0)	ND (5.0)	ND (1.0)	9.40	ND (20)
MW-34-55	9/22/2004	ND (5.0)	ND (10)	87.6	ND (3.0)	ND (3.0)	ND (3.0)	ND (1.0)	12.0	ND (5.0)	ND (0.2)	13.0	ND (5.0)	12.5	ND (3.0)	ND (15)	ND (3.0)	22.7
MW-34-55	12/15/2004	ND (5.0)	ND (10)	71.8	ND (3.1)	ND (3.1)	ND (3.1)	ND (1.0)	6.60	12.2	ND (0.2)	13.7	ND (5.0)	ND (10)	40.4	ND (15)	6.50	25.1
MW-34-55	3/10/2005	ND (5.0)	ND (10)	66.9	ND (3.1)	ND (3.1)	ND (3.1)	ND (1.0)	ND (5.0)	ND (2.1)	ND (0.2)	12.4	9.10	ND (10)	ND (3.1)	ND (15)	227	87.7
MW-34-55	10/5/2005	ND (2.0)	2.01	ND (300)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (10)	ND (1.0)	ND (0.2)	15.7	ND (20)	ND (1.0)	ND (1.0)	ND (1.0)	ND (5.0)	22.7
MW-34-55	12/14/2005	ND (3.0)	ND (5.0)	ND (300)	ND (1.0)	ND (2.0)	ND (5.0)	ND (1.0)	ND (10)	ND (2.0)	ND (0.2)	12.7	ND (20)	ND (5.0)	ND (5.0)	ND (1.0)	7.00	ND (20)
MW-34-80	9/23/2004	ND (5.0)	ND (10)	54.1	ND (3.0)	ND (3.0)	ND (3.0)	ND (1.0)	10.1	ND (5.0)	ND (0.2)	14.9	ND (5.0)	ND (10)	ND (3.0)	ND (15)	ND (3.0)	23.2
MW-34-80 FD	9/23/2004	ND (5.0)	ND (10)	52.8	ND (3.0)	ND (3.0)	ND (3.0)	ND (1.0)	10.6	ND (5.0)	ND (0.2)	14.4	ND (5.0)	ND (10)	ND (3.0)	ND (15)	ND (3.0)	22.0
MW-34-80	12/13/2004	ND (5.0)	ND (10)	42.0	ND (3.1)	ND (3.1)	ND (3.1)	ND (1.0)	ND (5.0)	ND (2.1)	ND (0.2)	14.7	8.60	ND (10)	ND (3.1)	ND (15)	15.3	29.7
MW-34-80	3/8/2005	ND (5.0)	ND (10)	51.8	ND (3.1)	ND (3.1)	ND (3.1)	ND (1.0)	ND (5.0)	ND (2.1)	ND (0.2)	13.3	15.5	ND (10)	ND (3.1)	ND (15)	238	41.7
MW-34-80	6/30/2005	ND (2.0)	2.09	46.4	ND (1.0)	ND (1.0)	ND (1.0)	1.39	ND (1.0)	2.25	ND (0.2)	11.1	2.23	ND (1.0)	ND (1.0)	ND (1.0)	2.74	37.0
MW-34-80	10/5/2005	ND (2.0)	2.06	ND (300)	ND (1.0)	ND (1.0)	ND (1.0)	1.23	ND (1.0)	ND (10)	ND (0.2)	10.8	ND (20)	ND (1.0)	ND (1.0)	ND (1.0)	ND (5.0)	ND (20)
MW-34-80	12/14/2005	ND (3.0)	ND (5.0)	ND (300)	ND (1.0)	ND (2.0)	ND (5.0)	ND (1.0)	ND (10)	ND (2.0)	ND (0.2)	10.2	ND (20)	ND (5.0)	ND (5.0)	ND (1.0)	13.5	ND (20)
MW-37D	9/24/2004	ND (5.0)	ND (10)	65.0	ND (3.0)	ND (3.0)	ND (3.0)	<b>1220</b>	8.50	ND (5.0)	ND (0.2)	47.3	ND (5.0)	ND (10)	ND (3.0)	ND (15)	ND (3.0)	17.2
MW-37D FD	9/24/2004	ND (5.0)	ND (10)	65.9	ND (3.0)	ND (3.0)	ND (3.0)	<b>1160</b>	9.60	ND (5.0)	ND (0.2)	46.3	ND (5.0)	10.0	ND (3.0)	ND (15)	ND (3.0)	24.8
MW-37D	12/14/2004	ND (5.0)	ND (10)	46.4	ND (3.1)	ND (3.1)	ND (3.1)	<b>1490</b>	ND (5.0)	ND (2.1)	ND (0.2)	43.3	ND (5.0)	ND (10)	ND (3.1)	ND (15)	31.4 J	33.0 J
MW-37D FD	12/14/2004	ND (5.0)	ND (10)	49.9	ND (3.1)	ND (3.1)	ND (3.1)	<b>1440</b>	ND (5.0)	ND (2.1)	ND (0.2)	44.6	8.30	ND (10)	ND (3.1)	ND (15)	20.5 J	91.8 J
MW-37D	3/11/2005	ND (5.0)	ND (10)	53.9	ND (3.1)	ND (3.1)	ND (3.1)	<b>1540</b>	ND (5.0)	ND (2.1)	ND (0.2)	34.1	9.20	ND (10)	ND (3.1)	ND (15)	326	38.7
MW-37D	6/15/2005	ND (2.0)	3.63	54.9	ND (1.0)	ND (1.0)	ND (1.0)	<b>1420</b>	ND (1.0)	ND (1.0)	ND (0.2)	51.8	25.4	3.10	ND (1.0)	ND (1.0)	4.00	11.0
MW-37D	10/4/2005	ND (2.0)	3.42	ND (300)	ND (1.0)	ND (1.0)	ND (1.0)	<b>1970</b>	ND (10)	ND (1.0)	ND (0.2)	45.5	ND (20)	3.24	ND (1.0)	ND (1.0)	6.00	ND (20)
MW-37D	12/14/2005	ND (3.0)	ND (5.0)	ND (300)	ND (1.0)	ND (2.0)	ND (5.0)	<b>1610</b>	ND (10)	ND (2.0)	ND (0.2)	36.6	ND (20)	ND (5.0)	ND (5.0)	ND (1.0)	14.5	ND (20)

**NOTES:**

ND not detected at listed reporting limit  
 FD field duplicate sample

Title 22 metals are the metals listed in California Code of Regulations, Title 22, Section 66261.24(a)(2)(A)  
 The maximum contaminant levels (MCLs) listed, in micrograms per liter ( $\mu\text{g/L}$ ), are the California primary drinking water standards, or California secondary MCLs, where noted \*. NE = not established

All results are dissolved metals concentrations in  $\mu\text{g/L}$  from field-filtered samples.

Metals analyzed by Methods SW6010B, SW6020A, and SW7470A.

Analytes detected above MCL are in bold.

A one-time sample from MW-21 was collected and analyzed in December 2005 for Title 22 metals to confirm the spatially isolated occurrence of arsenic in MW-12.

Groundwater samples from MW-34-55 in July 2005 were not analyzed for Title 22 metals due to a chain of custody error.

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-9	89	536.56	17-Dec-04 11:23 AM	81.68	0.20	454.86
			11-Jan-05 9:24 AM	81.76	0.20	454.78
			08-Mar-05 2:43 PM	82.04	0.20	454.50
			07-Apr-05 11:51 AM	82.07	0.19	454.47
			18-May-05 6:36 AM	81.10	0.19	455.43
			16-Jun-05 1:32 PM	80.45	0.19	456.08
			03-Oct-05 12:17 PM	80.22	0.20	456.31
MW-10	97	530.65	17-Dec-04 10:52 AM	75.92	0.20	454.68
			11-Jan-05 9:51 AM	76.00	0.39	454.63
			08-Mar-05 1:56 PM	76.35	0.39	454.28
			18-May-05 6:32 AM	75.21	0.21	455.38
			16-Jun-05 1:07 PM	74.66	0.21	455.93
			03-Oct-05 11:41 AM	74.46	0.21	456.13
			12-Dec-05 10:39 AM	75.09	0.21	455.51
MW-11	86	522.61	17-Dec-04 10:37 AM	67.99	0.10	454.54
			11-Jan-05 10:20 AM	68.12	0.10	454.42
			08-Mar-05 1:04 PM	68.50	0.10	454.04
			18-May-05 6:24 AM	67.12	0.16	455.42
			16-Jun-05 12:22 PM	66.69	0.16	455.85
			03-Oct-05 10:17 AM	66.65	0.15	455.89
			12-Dec-05 9:56 AM	67.30	0.15	455.25
MW-12	50	484.01	08-Mar-05 2:55 PM	30.09	0.20	453.87
			06-Apr-05 1:20 PM	30.07	0.22	453.89
			18-May-05 7:15 AM	28.81	0.22	455.15
			13-Jun-05 9:30 AM	28.54	0.22	455.42
			16-Sep-05 9:05 AM	28.35	0.22	455.61
			04-Oct-05 7:30 AM	28.52	0.23	455.44
			13-Dec-05 11:00 AM	29.09	0.23	454.87
MW-13	52	488.64	16-Dec-04 12:24 PM	32.00	0.10	456.58
			11-Mar-05 11:14 AM	35.38	0.10	453.21
			18-May-05 6:12 AM	32.81	0.12	455.77
			14-Jun-05 11:10 AM	32.59	0.12	455.99
			04-Oct-05 10:46 AM	33.10	0.13	455.48
			13-Dec-05 1:26 PM	33.10	0.13	455.48
MW-14	134	570.99	16-Dec-04 12:59 PM	116.50	0.10	454.43
			09-Mar-05 12:43 PM	117.05	0.10	453.88
			07-Apr-05 9:04 AM	116.48	0.10	454.45
			18-May-05 7:25 AM	115.29	0.10	455.64
			15-Jun-05 8:58 AM	114.90	0.10	456.02
			06-Oct-05 9:03 AM	115.15	0.10	455.77
			15-Dec-05 11:55 AM	115.58	0.10	455.35
MW-15	203	641.52	17-Dec-04 11:59 AM	186.45	0.10	455.01

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-15	203	641.52	08-Mar-05 10:23 AM	187.18	0.10	454.28
			18-May-05 6:43 AM	185.43	0.10	456.02
			17-Jun-05 9:49 AM	185.38	0.10	456.07
			06-Oct-05 7:21 AM	185.25	0.10	456.20
MW-16	218	657.31	16-Dec-04 2:40 PM	201.57	0.09	455.68
			18-May-05 6:52 AM	201.74	0.09	455.51
			06-Oct-05 7:58 AM	200.76	0.09	456.48
MW-17	154	589.96	16-Dec-04 2:00 PM	134.12	0.10	455.78
			18-May-05 6:51 AM	133.82	0.11	456.07
			05-Oct-05 10:27 AM	133.27	0.11	456.62
MW-18	107	545.32	16-Dec-04 2:12 PM	90.42	0.10	454.83
			09-Mar-05 11:21 AM	91.03	0.10	454.22
			18-May-05 6:56 AM	89.41	0.09	455.83
			15-Jun-05 8:15 AM	89.05	0.09	456.19
			06-Oct-05 8:32 AM	89.06	0.09	456.18
MW-19	66	499.92	17-Dec-04 12:49 PM	46.00	0.11	453.86
			07-Mar-05 1:53 PM	47.07	0.22	452.80
			18-May-05 6:05 AM	44.20	0.15	455.66
			14-Jun-05 8:55 AM	43.91	0.15	455.95
			04-Oct-05 9:45 AM	45.03	0.13	454.83
			12-Dec-05 2:03 PM	45.97	0.13	453.89
MW-20-70	70	500.15	16-Dec-04 9:53 AM	47.07	0.20	453.02
			10-Mar-05 9:35 AM	48.44	0.14	451.64
			07-Apr-05 10:04 AM	46.15	0.14	453.93
			15-Jun-05 8:51 AM	45.02	0.14	455.05
			11-Oct-05 9:33 AM	45.96	0.20	454.12
			15-Dec-05 1:29 PM	47.29	0.20	452.80
MW-20-100	101	500.58	16-Dec-04 11:13 AM	47.78	0.30	452.70
			10-Mar-05 12:30 PM	49.08	0.30	451.40
			15-Jun-05 11:12 AM	45.77	0.30	454.71
			11-Oct-05 8:42 AM	46.04	0.25	454.42
			15-Dec-05 12:53 PM	48.13	0.25	452.33
MW-20-130	132	500.66	27-Jan-05 1:48 PM	49.20	0.67	451.53
			09-Mar-05 12:18 PM	72.90	0.67	427.79
			07-Apr-05 10:55 AM	47.28	0.75	453.50
			15-Jun-05 9:51 AM	46.28	0.75	454.49
			07-Oct-05 9:35 AM	47.65	0.63	453.05
			16-Dec-05 8:38 AM	49.11	0.60	451.60
MW-21	58	505.55	16-Dec-04 10:50 AM	50.80	0.87	454.77
			07-Mar-05 1:22 PM	50.98	0.87	454.59
			18-May-05 7:02 AM	50.47	0.87	455.10

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-21	58	505.55	14-Jun-05 9:43 AM	50.05	0.87	455.52
			04-Oct-05 8:46 AM	50.10	0.75	455.46
			13-Dec-05 12:24 PM	50.65	0.75	454.91
MW-22	12	460.72	16-Dec-04 1:16 PM	7.00	1.91	453.78
			10-Mar-05 12:54 PM	7.53	1.91	453.25
			17-Jun-05 8:42 AM	5.52	1.88	455.28
			04-Oct-05 9:41 AM	6.17	2.20	454.64
			16-Dec-05 12:17 PM	6.93	2.20	453.86
MW-23	81	507.33	16-Dec-04 10:05 AM	53.23	1.17	454.23
			16-Dec-04 10:05 AM	53.23	1.17	454.23
			07-Mar-05 12:48 PM	53.00	1.17	454.46
			14-Jun-05 9:00 AM	51.86	1.16	455.60
			04-Oct-05 8:29 AM	54.08	1.16	453.37
			14-Dec-05 11:58 AM	52.64	1.16	454.82
MW-24A	127	567.16	17-Dec-04 8:34 AM	112.55	0.20	454.58
			11-Jan-05 12:00 PM	112.65	0.20	454.48
			07-Mar-05 11:44 AM	113.08	0.20	454.05
			18-May-05 6:13 AM	111.75	0.23	455.38
			16-Jun-05 11:21 AM	111.28	0.23	455.84
			03-Oct-05 9:45 AM	111.25	0.22	455.87
MW-24B	215	564.76	17-Dec-04 8:50 AM	110.35	0.83	454.60
			11-Jan-05 11:05 AM	110.37	0.83	454.58
			07-Mar-05 10:41 AM	110.83	0.83	454.12
			18-May-05 6:11 AM	109.51	0.82	455.43
			16-Jun-05 10:23 AM	109.01	0.82	455.92
			03-Oct-05 9:02 AM	109.10	0.82	455.83
MW-24BR	441	563.95	16-Dec-04 9:23 AM	109.10	0.92	455.46
			16-Dec-04 9:23 AM	109.10	0.92	455.46
			07-Mar-05 10:04 AM	109.54	0.92	455.03
			18-May-05 6:08 AM	108.29	0.92	456.28
			15-Dec-05 2:25 PM	108.20	0.93	456.41
MW-25	107	542.90	09-Mar-05 1:46 PM	89.52	0.10	453.32
			07-Apr-05 10:04 AM	88.80	0.11	454.04
			18-May-05 6:08 AM	87.52	0.11	455.31
			14-Jun-05 10:08 AM	87.10	0.11	455.74
			04-Oct-05 10:18 AM	87.58	0.11	455.25
			14-Dec-05 1:07 PM	88.30	0.11	454.54
MW-26	70	502.22	16-Dec-04 12:54 PM	48.30	0.20	453.85
			08-Mar-05 11:20 AM	48.98	0.20	453.17
			18-May-05 6:54 AM	47.08	0.23	455.07
			13-Jun-05 10:04 AM	46.70	0.23	455.46

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-26	70	502.22	04-Oct-05 9:05 AM	47.18	0.23	454.97
			12-Dec-05 1:16 PM	47.85	0.23	454.32
MW-27-20	14	460.56	02-Dec-04 1:15 PM	6.58	0.01	453.96
			15-Dec-04 1:57 PM	7.16	0.01	453.38
			10-Jan-05 3:01 PM	7.93	0.03	452.62
			09-Feb-05 8:40 AM	7.58	0.03	452.97
			08-Mar-05 10:50 AM	8.68	0.03	451.87
			04-Apr-05 1:42 PM	5.87	0.05	454.68
			04-May-05 9:56 AM	4.39	0.05	456.15
			18-Jul-05 9:57 AM	4.14	0.12	456.41
			05-Oct-05 9:20 AM	5.80	0.06	454.74
			14-Dec-05 2:12 PM	7.40	0.06	453.15
MW-27-60	59	461.38	01-Mar-05 11:57 AM	8.86	0.95	452.77
			08-Mar-05 9:10 AM	9.73	0.95	451.89
			23-Mar-05 10:00 AM	7.45	0.95	454.16
			29-Mar-05 12:52 PM	7.35	0.95	454.26
			05-Apr-05 9:07 AM	7.33	0.95	454.30
			12-Apr-05 8:27 AM	5.03	0.95	456.61
			19-Apr-05 8:44 AM	5.30	0.95	456.32
			26-Apr-05 8:05 AM	5.04	0.95	456.58
			04-May-05 9:13 AM	5.42	0.95	456.20
			18-Jul-05 7:50 AM	4.83	0.95	456.80
			05-Oct-05 7:53 AM	6.71	0.87	454.86
			15-Dec-05 10:59 AM	8.80	0.87	452.79
MW-27-85	80	460.99	01-Mar-05 12:39 PM	8.60	1.31	452.92
			08-Mar-05 9:54 AM	9.42	1.31	452.09
			23-Mar-05 10:32 AM	7.24	1.31	454.27
			29-Mar-05 12:12 PM	7.04	1.31	454.46
			05-Apr-05 8:04 AM	7.00	1.31	454.52
			12-Apr-05 9:06 AM	4.93	1.31	456.61
			19-Apr-05 7:50 AM	5.00	1.31	456.52
			26-Apr-05 8:53 AM	5.41	1.31	456.11
			04-May-05 8:17 AM	5.02	1.31	456.50
			19-May-05 8:39 AM	5.04	1.31	456.48
			02-Jun-05 10:21 AM	5.30	1.31	456.22
			19-Jul-05 6:00 AM	4.46	1.13	457.01
			16-Aug-05 5:12 AM	6.00	1.13	455.46
			08-Sep-05 8:21 AM	6.14	1.13	455.31
			05-Oct-05 8:35 AM	6.65	1.20	454.78
			03-Nov-05 10:22 AM	6.95	1.20	454.53
			15-Dec-05 10:20 AM	8.58	1.20	452.89
MW-28-25	21	466.85	02-Dec-04 9:38 AM	12.48	0.09	454.34

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-28-25	21	466.85	14-Dec-04 1:42 PM	13.42	0.09	453.40
			11-Jan-05 2:45 PM	14.11	0.09	452.72
			10-Mar-05 9:09 AM	14.91	0.09	451.92
			04-Apr-05 8:08 AM	11.91	0.10	454.92
			03-May-05 8:40 AM	10.45	0.10	456.37
			15-Jun-05 9:45 AM	10.60	0.10	456.23
			13-Jul-05 9:12 AM	10.24	0.10	456.58
			06-Oct-05 8:13 AM	11.96	0.08	454.86
			16-Dec-05 10:00 AM	13.56	0.08	453.27
MW-28-90	98	467.66	02-Dec-04 10:00 AM	12.95	0.40	454.74
			13-Dec-04 11:30 AM	14.40	0.40	453.28
			29-Dec-04 9:38 AM	14.43	0.40	453.25
			11-Jan-05 2:05 PM	14.94	0.55	452.84
			27-Jan-05 12:17 PM	15.52	0.55	452.26
			08-Feb-05 9:56 AM	14.74	0.55	453.04
		467.51	22-Feb-05 10:12 AM	15.48	0.55	452.31
			07-Mar-05 2:32 PM	15.87	0.55	451.77
			22-Mar-05 1:46 PM	13.78	0.56	453.86
			04-Apr-05 8:43 AM	13.24	0.58	454.43
			20-Apr-05 7:56 AM	11.30	0.58	456.36
			03-May-05 9:48 AM	11.61	0.58	456.05
			19-May-05 7:25 AM	11.24	0.58	456.42
			02-Jun-05 8:30 AM	11.43	0.58	456.23
			15-Jun-05 10:41 AM	11.93	0.58	455.75
			01-Jul-05 9:53 AM	11.39	0.68	456.36
			13-Jul-05 10:04 AM	11.40	0.68	456.35
			18-Aug-05 5:05 AM	11.88	0.68	455.87
			09-Sep-05 7:11 AM	12.14	0.68	455.60
			06-Oct-05 7:21 AM	12.72	0.58	454.93
			02-Nov-05 2:30 PM	13.72	0.58	453.95
			16-Dec-05 9:15 AM	14.33	0.58	453.32
MW-29	42	485.21	02-Dec-04 11:16 AM	31.27	0.25	453.93
			14-Dec-04 12:10 PM	31.47	0.25	453.73
			11-Jan-05 9:42 AM	31.79	0.24	453.41
			07-Feb-05 10:34 AM	31.90	0.24	453.30
			09-Mar-05 10:27 AM	32.38	0.24	452.82
			06-Apr-05 7:50 AM	30.73	0.30	454.47
			05-May-05 7:56 AM	29.29	0.30	455.91
			15-Jun-05 8:45 AM	29.11	0.30	456.09
			04-Oct-05 1:45 PM	30.11	0.32	455.09
			12-Dec-05 10:19 AM	31.23	0.32	453.97
MW-30-30	27	468.12	15-Dec-04 11:25 AM	14.76	3.13	453.72

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-30-30	27	468.12	11-Jan-05 12:19 PM	15.08	3.14	453.40
			09-Feb-05 11:56 AM	15.35	3.14	453.13
			10-Mar-05 9:56 AM	15.78	3.14	452.68
			06-Apr-05 11:09 AM	14.07	2.97	454.41
			09-May-05 11:46 AM	13.05	2.97	455.44
			07-Oct-05 10:15 AM	14.73	3.00	453.73
			15-Dec-05 2:23 PM	14.73	3.00	453.61
MW-30-50	53	468.81	15-Dec-04 11:53 AM	15.35	0.55	453.48
			11-Jan-05 12:50 PM	16.10	0.58	452.74
			09-Feb-05 11:12 AM	16.15	0.58	452.69
			10-Mar-05 11:33 AM	17.09	0.58	451.75
			06-Apr-05 9:54 AM	14.00	0.54	454.83
			09-May-05 10:37 AM	13.38	0.54	455.45
			07-Oct-05 9:19 AM	14.42	0.77	454.47
			16-Dec-05 11:47 AM	15.82	0.77	453.07
MW-31-60	64	496.81	16-Dec-04 12:00 AM	43.28	0.20	453.48
			09-Mar-05 2:49 PM	44.65	0.16	452.11
			07-Apr-05 11:06 AM	42.15	0.20	454.61
			13-Jun-05 11:35 AM	40.96	0.20	455.79
			06-Oct-05 12:35 PM	42.20	0.16	454.55
			13-Dec-05 2:15 PM	43.20	0.16	453.55
MW-31-135	135	498.11	14-Dec-04 10:59 AM	44.92	0.73	453.31
			10-Mar-05 12:19 PM	46.40	0.69	451.77
			16-Jun-05 10:20 AM	42.84	0.74	455.39
			06-Oct-05 12:56 PM	44.33	0.55	453.74
			14-Dec-05 8:26 AM	45.21	0.53	452.90
MW-32-20	20	461.51	02-Dec-04 1:45 PM	7.89	0.45	453.62
			14-Dec-04 2:30 PM	8.25	0.45	453.26
			10-Jan-05 1:42 PM	8.58	1.12	453.00
			07-Feb-05 2:43 PM	8.56	1.12	453.03
			09-Mar-05 2:16 PM	9.29	1.12	452.28
			04-Apr-05 1:02 PM	7.78	1.75	453.87
			09-May-05 1:05 PM	6.30	1.75	455.36
			17-Jun-05 11:28 AM	6.10	1.75	455.56
			04-Oct-05 11:44 AM	7.21	1.50	454.41
			16-Dec-05 2:59 PM	8.31	1.50	453.29
MW-32-35	37	461.63	02-Dec-04 2:13 PM	7.58	0.39	454.04
			15-Dec-04 9:05 AM	8.18	0.39	453.44
			10-Jan-05 2:11 PM	8.85	0.41	452.78
			07-Feb-05 1:55 PM	8.72	0.41	452.91
			09-Mar-05 2:50 PM	10.06	0.41	451.57
			04-Apr-05 12:17 PM	7.47	0.45	454.17

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-32-35	37	461.63	09-May-05 12:20 PM	6.10	0.45	455.53
			17-Jun-05 10:52 AM	5.93	0.45	455.70
			04-Oct-05 10:57 AM	7.27	0.73	454.43
			16-Dec-05 2:16 PM	8.57	0.73	453.12
MW-33-40	42	487.41	15-Dec-04 1:20 PM	33.73	0.42	453.68
			11-Jan-05 10:24 AM	34.27	0.60	453.15
			07-Feb-05 11:17 AM	34.15	0.60	453.27
		487.38	10-Mar-05 11:20 AM	35.53	0.60	451.88
			04-Apr-05 9:40 AM	32.93	0.34	454.44
			05-May-05 9:54 AM	31.55	0.34	455.82
			17-Jun-05 8:36 AM	31.35	0.34	456.02
			06-Oct-05 8:56 AM	32.50	0.37	454.87
			06-Oct-05 8:56 AM	32.50	0.37	454.87
			12-Dec-05 2:10 PM	33.80	0.37	453.57
MW-33-90	88	487.57	02-Dec-04 11:25 AM	33.14	0.53	454.43
			14-Dec-04 10:00 AM	33.86	0.53	453.73
			29-Dec-04 12:30 PM	34.18	0.55	453.41
		487.55	11-Jan-05 10:58 AM	34.45	0.55	453.13
			27-Jan-05 8:47 AM	34.79	0.55	452.79
			07-Feb-05 12:10 PM	34.43	0.55	453.17
			22-Feb-05 1:09 PM	34.98	0.55	452.62
			09-Mar-05 12:05 PM	35.82	0.55	451.76
			22-Mar-05 12:25 PM	33.90	0.53	453.67
			04-Apr-05 10:00 AM	33.15	0.52	454.42
			19-Apr-05 11:24 AM	32.08	0.52	455.47
			05-May-05 11:06 AM	31.84	0.52	455.71
			18-May-05 12:02 PM	31.80	0.52	455.77
			01-Jun-05 8:40 AM	31.30	0.52	456.27
			16-Jun-05 10:28 AM	31.70	0.52	455.87
			20-Jul-05 5:42 AM	31.08	0.60	456.52
			06-Oct-05 9:51 AM	32.84	0.58	454.73
			13-Dec-05 12:09 PM	33.85	0.58	453.74
MW-33-150	155	487.77	02-Mar-05 9:15 AM	34.89	1.10	453.42
			16-Mar-05 9:17 AM	35.40	1.10	452.90
			16-Jun-05 8:38 AM	32.00	1.10	456.31
			20-Jul-05 5:43 AM	31.76	1.06	456.48
			17-Aug-05 8:47 AM	32.70	1.13	455.63
			09-Sep-05 6:11 AM	32.58	1.13	455.75
			06-Oct-05 11:54 AM	33.70	1.09	454.58
			02-Nov-05 1:49 PM	33.85	1.09	454.45
			12-Dec-05 1:33 PM	34.57	1.08	453.72
MW-33-210	223	487.25	24-Feb-05 8:39 AM	34.75	1.38	453.67

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-33-210	223	487.25	16-Mar-05 9:45 AM	35.43	1.38	453.00
			16-Jun-05 12:07 PM	32.28	1.38	456.18
			20-Jul-05 5:40 AM	31.78	1.38	456.67
			17-Aug-05 7:47 AM	32.49	1.38	455.95
			06-Sep-05 9:05 AM	32.70	1.38	455.73
			06-Oct-05 11:02 AM	33.35	1.25	454.83
			02-Nov-05 1:05 PM	33.54	1.25	454.71
			12-Dec-05 11:29 AM	34.13	1.25	454.14
MW-34-55	57	460.88	15-Dec-04 10:00 AM	7.32	0.53	453.62
			12-Jan-05 9:13 AM	8.38	0.58	452.58
			09-Feb-05 9:11 AM	7.98	0.58	452.99
			10-Mar-05 11:52 AM	9.23	0.58	451.73
		460.95	05-Apr-05 10:00 AM	6.88	0.54	454.14
			05-May-05 12:50 PM	5.53	0.54	455.48
			15-Jul-05 6:58 AM	3.95	0.55	457.09
			05-Oct-05 12:03 PM	6.80	0.55	454.21
			14-Dec-05 10:15 AM	7.84	0.55	453.19
MW-34-80	84	460.99	02-Dec-04 8:25 AM	6.68	0.89	454.60
			13-Dec-04 1:00 PM	8.18	0.89	453.10
			29-Dec-04 10:45 AM	8.19	0.89	453.09
			12-Jan-05 10:32 AM	8.68	0.87	452.59
			27-Jan-05 11:00 AM	8.93	0.87	452.34
			08-Feb-05 11:45 AM	8.33	0.87	452.93
			22-Feb-05 2:33 PM	8.90	0.87	452.38
			01-Mar-05 9:30 AM	8.62	0.87	452.66
			08-Mar-05 1:22 PM	9.85	0.87	451.42
			22-Mar-05 11:00 AM	7.45	0.87	453.82
			29-Mar-05 9:15 AM	7.08	0.87	454.19
		461.20	05-Apr-05 11:06 AM	7.31	0.77	454.15
			12-Apr-05 11:07 AM	5.52	0.77	455.95
			19-Apr-05 10:35 AM	5.34	0.77	456.09
			26-Apr-05 11:00 AM	5.68	0.77	455.74
			04-May-05 11:09 AM	5.57	0.77	455.86
			18-May-05 9:38 AM	5.18	0.77	456.27
			01-Jun-05 10:43 AM	5.23	0.77	456.22
			30-Jun-05 11:56 AM	5.48	0.77	455.97
			14-Jul-05 9:00 AM	4.63	0.89	456.89
			15-Aug-05 7:36 AM	6.12	0.89	455.36
			07-Sep-05 7:11 AM	5.66	0.89	455.86
			05-Oct-05 12:00 PM	7.03	0.82	454.42
			03-Nov-05 8:24 AM	6.50	0.73	454.90
			14-Dec-05 9:10 AM	7.83	0.73	453.58

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Groundwater/Water Elevation	
					Salinity (percent)	Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-34-100	117	460.90	14-Feb-05 10:22 AM	8.19	1.17	453.34
			14-Feb-05 11:34 AM	8.21	1.17	453.32
			16-Feb-05 12:13 PM	9.15	1.17	452.37
			16-Feb-05 1:10 PM	9.18	1.17	452.34
			23-Feb-05 9:27 AM	8.79	1.17	452.77
			01-Mar-05 10:52 AM	8.70	1.17	452.85
			08-Mar-05 12:15 PM	9.56	1.17	451.97
			23-Mar-05 11:16 AM	7.31	1.17	454.21
			29-Mar-05 10:37 AM	7.05	1.17	454.50
			05-Apr-05 1:00 PM	6.98	1.17	454.60
			12-Apr-05 10:05 AM	5.21	1.17	456.38
			19-Apr-05 9:55 AM	5.36	1.17	456.23
			26-Apr-05 10:04 AM	5.52	1.17	456.07
			04-May-05 1:02 PM	5.94	1.17	455.65
			10-May-05 7:04 AM	4.79	1.17	456.81
			18-May-05 8:52 AM	5.16	1.17	456.43
			25-May-05 9:20 AM	5.00	1.17	456.61
			01-Jun-05 12:24 PM	5.65	1.17	455.97
			08-Jun-05 8:23 AM	4.96	1.17	456.67
			21-Jun-05 10:08 AM	5.25	1.17	456.34
			07-Jul-05 9:22 AM	5.02	1.07	456.50
			14-Jul-05 6:52 AM	4.63	1.07	456.86
			27-Jul-05 5:21 AM	5.49	1.07	456.05
			10-Aug-05 5:17 AM	5.77	1.07	455.71
			15-Aug-05 5:58 AM	6.20	1.07	455.34
			31-Aug-05 6:30 AM	5.86	1.07	455.68
			07-Sep-05 8:41 AM	5.98	1.07	455.55
			20-Sep-05 6:48 AM	5.60	1.07	455.86
			05-Oct-05 11:00 AM	6.90	1.01	454.61
			03-Nov-05 9:25 AM	6.74	1.01	454.78
			16-Nov-05 10:50 AM	7.15	1.01	454.37
			30-Nov-05 10:35 AM	7.23	1.01	454.25
			14-Dec-05 12:48 PM	8.24	1.01	453.25
			28-Dec-05 8:30 AM	8.78	1.01	452.72
MW-35-60	57	484.19	13-Dec-04 2:01 PM	30.68	0.35	453.48
			15-Mar-05 12:04 PM	32.00	0.35	452.16
			13-Jun-05 11:53 AM	27.95	0.41	456.22
			07-Oct-05 11:56 AM	29.35	0.44	454.82
			14-Dec-05 9:45 AM	30.47	0.44	453.71
MW-35-135	159	483.57	13-Dec-04 12:03 PM	30.19	0.71	453.60
			15-Mar-05 12:20 PM	31.38	0.71	452.36
			13-Jun-05 12:44 PM	28.00	0.67	455.73
			07-Oct-05 11:06 AM	28.98	0.70	454.75

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-35-135	159	483.57	14-Dec-05 10:26 AM	30.02	0.70	453.78
MW-36-20	23	469.32	14-Dec-04 12:44 PM	15.97	0.66	453.36
			11-Jan-05 2:15 PM	16.66	1.11	452.69
			07-Feb-05 11:44 AM	16.49	1.11	452.86
			08-Mar-05 9:11 AM	18.01	1.11	451.33
			03-May-05 8:40 AM	13.40	1.90	455.96
			03-Oct-05 12:12 PM	14.96	0.71	454.32
			15-Dec-05 12:27 PM	16.56	0.71	452.71
MW-36-40	43	469.64	15-Dec-04 9:20 AM	16.11	0.49	453.54
			12-Jan-05 10:36 AM	17.15	0.74	452.54
			07-Feb-05 1:22 PM	16.90	0.74	452.80
			08-Mar-05 11:03 AM	18.01	0.74	451.68
			05-May-05 11:33 AM	14.10	0.62	455.55
			03-Oct-05 10:25 AM	15.06	0.64	454.60
			15-Dec-05 10:42 AM	17.00	0.64	452.65
MW-36-50	53	469.65	15-Dec-04 8:41 AM	16.10	0.50	453.56
			12-Jan-05 11:15 AM	17.15	0.68	452.56
			07-Feb-05 2:05 PM	16.92	0.68	452.79
			08-Mar-05 10:02 AM	18.00	0.68	451.71
			05-May-05 12:07 PM	14.17	0.54	455.45
			03-Oct-05 12:34 PM	15.00	0.44	454.60
			15-Dec-05 9:57 AM	17.01	0.44	452.59
MW-36-70	72	469.31	14-Dec-04 1:58 PM	16.04	0.70	453.37
			11-Jan-05 2:15 PM	16.54	0.63	452.85
			07-Feb-05 10:22 AM	16.38	0.63	453.01
			08-Mar-05 12:02 PM	17.70	0.63	451.69
			03-May-05 10:02 AM	13.44	0.73	455.93
			03-Oct-05 10:59 AM	14.78	0.53	454.52
			15-Dec-05 1:07 PM	16.64	0.53	452.65
MW-36-90	92	469.68	15-Dec-04 9:52 AM	16.24	0.92	453.69
			12-Jan-05 9:04 AM	17.49	1.27	452.64
			07-Feb-05 12:25 PM	17.23	1.27	452.89
			09-Mar-05 9:15 AM	18.65	1.27	451.47
			03-May-05 10:57 AM	14.53	1.16	455.48
			25-Jul-05 9:53 AM	14.19	1.16	455.84
			17-Aug-05 6:50 AM	14.73	1.16	455.30
			08-Sep-05 7:30 AM	14.74	1.16	455.28
			03-Oct-05 9:17 AM	9.25	0.98	460.69
			02-Nov-05 11:10 AM	16.07	0.98	453.84
			15-Dec-05 11:13 AM	17.45	0.98	452.47
MW-36-100	110	469.69	02-Dec-04 12:06 PM	15.78	0.93	454.23
			14-Dec-04 10:55 AM	16.66	0.93	453.35

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-36-100	110	469.69	29-Dec-04 1:30 PM	17.10	0.93	452.91
			12-Jan-05 12:48 PM	17.52	0.89	452.46
			27-Jan-05 12:50 PM	17.85	0.89	452.13
			09-Feb-05 10:35 AM	17.35	0.89	452.64
			22-Feb-05 11:54 AM	17.95	0.89	452.04
			09-Mar-05 1:28 PM	18.88	0.89	451.10
			22-Mar-05 2:41 PM	16.69	0.97	453.35
			04-Apr-05 11:28 AM	16.08	1.30	454.13
			20-Apr-05 8:34 AM	14.35	1.30	455.87
			03-May-05 12:35 PM	14.82	1.30	455.40
			18-May-05 1:22 PM	14.94	1.30	455.31
			02-Jun-05 9:22 AM	14.26	1.30	455.96
			19-Jul-05 8:18 AM	13.86	1.30	456.39
			17-Aug-05 9:30 AM	15.00	1.30	455.24
			08-Sep-05 6:41 AM	14.81	1.30	455.43
			05-Oct-05 9:57 AM	15.35	1.10	454.71
			03-Nov-05 11:03 AM	15.54	1.10	454.55
			13-Dec-05 2:02 PM	17.06	1.10	453.03
MW-37D	227	486.19	14-Dec-04 12:07 PM	32.39	0.75	453.96
			11-Mar-05 10:48 AM	33.28	0.75	453.07
			18-May-05 6:18 AM	31.25	0.93	455.35
			15-Jun-05 11:55 AM	30.88	0.93	455.72
			04-Oct-05 11:45 AM	31.25	0.89	455.29
			14-Dec-05 1:40 PM	31.92	0.89	454.64
MW-37S	87	485.97	13-Dec-04 1:00 PM	32.42	0.20	453.40
			11-Mar-05 10:15 AM	34.29	0.20	451.53
			07-Apr-05 12:57 PM	32.20	0.25	453.63
			18-May-05 6:20 AM	31.00	0.25	454.83
			15-Jun-05 10:53 AM	30.67	0.25	455.15
			04-Oct-05 11:43 AM	31.00	0.25	454.82
			14-Dec-05 2:26 PM	31.83	0.25	454.00
MW-38D	191	525.31	14-Dec-04 9:18 AM	71.68	1.36	454.24
			11-Mar-05 9:18 AM	72.34	1.36	453.58
			18-May-05 6:29 AM	70.93	1.32	454.96
			17-Jun-05 8:46 AM	70.48	1.32	455.40
			07-Oct-05 7:34 AM	70.45	1.24	455.37
MW-38S	98	525.51	14-Dec-04 10:11 AM	71.44	0.22	454.00
			11-Mar-05 8:40 AM	72.10	0.22	453.34
			18-May-05 6:27 AM	70.72	0.25	454.73
			17-Jun-05 8:01 AM	70.25	0.25	455.19
			07-Oct-05 8:27 AM	70.18	0.24	455.26
MW-39-40	42	468.02	15-Dec-04 1:06 PM	14.80	0.30	453.18

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-39-40	42	468.02	12-Jan-05 1:48 PM	15.51	0.50	452.51
			08-Feb-05 12:38 PM	15.36	0.50	452.67
			09-Mar-05 11:18 AM	16.77	0.50	451.25
			05-May-05 8:59 AM	12.25	0.38	455.75
			16-Jun-05 10:10 AM	12.00	0.38	456.01
			04-Oct-05 7:40 AM	13.50	0.38	454.50
			16-Dec-05 10:30 AM	15.33	0.38	452.67
MW-39-50	55	467.93	15-Dec-04 12:17 PM	14.72	0.50	453.21
			14-Jan-05 9:51 AM	15.79	0.80	452.22
			08-Feb-05 10:49 AM	15.27	0.80	452.74
			09-Mar-05 10:59 AM	16.75	0.80	451.26
			06-Apr-05 7:55 AM	13.21	0.67	454.77
			03-May-05 12:45 PM	13.80	0.67	454.18
			16-Jun-05 12:35 PM	12.00	0.67	455.99
			04-Oct-05 10:14 AM	13.86	0.85	454.16
			16-Dec-05 9:36 AM	15.33	0.85	452.79
MW-39-60	66	468.00	15-Dec-04 10:41 AM	14.41	0.40	453.56
			14-Jan-05 1:20 PM	15.96	0.67	452.11
			08-Feb-05 8:48 AM	15.42	0.67	452.66
			09-Mar-05 12:35 PM	16.92	0.67	451.15
			05-May-05 9:41 AM	12.69	0.77	455.42
			16-Jun-05 11:43 AM	12.00	0.77	456.13
			04-Oct-05 11:03 AM	14.16	0.90	453.99
			16-Dec-05 8:52 AM	15.51	0.90	452.65
MW-39-70	72	468.02	15-Dec-04 1:52 PM	15.13	0.40	452.86
			12-Jan-05 12:54 PM	15.82	0.63	452.26
			08-Feb-05 11:45 AM	15.65	0.63	452.44
			09-Mar-05 1:09 PM	17.04	0.63	451.04
			05-May-05 8:10 AM	12.89	0.65	455.21
			16-Jun-05 10:53 AM	12.00	0.65	456.11
			04-Oct-05 8:21 AM	14.19	0.85	453.99
			16-Dec-05 11:02 AM	15.79	0.85	452.38
MW-39-80	83	467.92	15-Dec-04 11:34 AM	14.42	0.60	453.56
			14-Jan-05 8:55 AM	16.00	0.97	452.15
			08-Feb-05 9:44 AM	15.55	0.97	452.62
			09-Mar-05 3:07 PM	17.01	0.97	451.14
			03-May-05 1:16 PM	13.35	0.90	454.78
			16-Jun-05 1:10 PM	12.00	0.90	456.16
			25-Jul-05 8:40 AM	12.55	0.90	455.60
			17-Aug-05 5:56 AM	13.22	0.90	454.93
			06-Sep-05 6:45 AM	13.36	0.90	454.79
			04-Oct-05 9:03 AM	14.23	1.03	453.96

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-39-80	83	467.92	02-Nov-05 10:42 AM	14.55	1.03	453.65
			15-Dec-05 2:02 PM	15.74	1.03	452.46
MW-39-100	118	468.01	15-Dec-04 2:30 PM	14.30	0.95	454.05
			12-Jan-05 11:55 AM	15.88	0.89	452.43
			27-Jan-05 10:00 AM	16.04	0.89	452.26
			09-Feb-05 12:36 PM	15.80	0.89	452.52
			10-Mar-05 1:48 PM	16.80	0.89	451.50
			06-Apr-05 11:35 AM	14.10	1.30	454.51
			09-May-05 9:30 AM	13.07	1.30	455.54
			17-Jun-05 9:50 AM	13.60	1.30	455.00
			19-Jul-05 7:02 AM	12.52	1.40	456.22
			17-Aug-05 5:10 AM	13.45	1.40	455.28
			06-Sep-05 7:48 AM	13.62	1.40	455.11
			04-Oct-05 12:50 PM	14.79	1.20	453.73
			02-Nov-05 9:32 AM	14.68	1.20	453.88
			13-Dec-05 2:50 PM	15.66	1.20	452.89
MW-40D	266	566.08	16-Dec-04 9:53 AM	112.17	0.89	454.12
			10-Mar-05 10:54 AM	112.74	0.89	453.56
			18-May-05 7:09 AM	111.26	0.97	455.13
			16-Jun-05 8:48 AM	110.81	0.97	455.57
			05-Oct-05 8:48 AM	110.90	0.95	455.46
			13-Dec-05 9:36 AM	111.25	0.95	455.12
MW-40S	134	566.04	16-Dec-04 9:09 AM	111.82	0.10	454.14
			10-Mar-05 9:46 AM	112.30	0.10	453.66
			07-Apr-05 7:50 AM	112.00	0.12	453.96
			18-May-05 7:11 AM	110.80	0.12	455.16
			16-Jun-05 8:00 AM	110.36	0.12	455.59
			05-Oct-05 9:38 AM	110.30	0.12	455.65
			13-Dec-05 8:38 AM	110.86	0.12	455.10
MW-41D	313	479.42	15-Dec-04 11:16 AM	25.32	1.43	455.83
			11-Mar-05 8:55 AM	26.25	1.43	454.88
			18-May-05 6:25 AM	24.36	1.36	456.65
			14-Jun-05 8:10 AM	23.98	1.36	456.98
			05-Oct-05 11:38 AM	24.55	1.35	456.36
			16-Dec-05 10:34 AM	25.08	1.35	455.84
MW-41M	192	479.83	15-Dec-04 12:28 PM	25.21	1.12	455.34
			11-Mar-05 10:08 AM	26.14	1.12	454.37
			18-May-05 6:26 AM	24.16	1.11	456.35
			14-Jun-05 9:31 AM	23.83	1.11	456.65
			05-Oct-05 11:37 AM	24.40	0.98	455.91
			16-Dec-05 11:44 AM	25.14	0.98	455.17
MW-41S	62	480.07	16-Dec-04 11:26 AM	25.92	0.49	454.14

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
MW-41S	62	480.07	10-Mar-05 2:51 PM	26.87	0.49	453.19
			18-May-05 6:27 AM	24.13	0.16	455.84
			14-Jun-05 10:21 AM	23.86	0.16	456.10
			05-Oct-05 11:36 AM	24.58	0.28	455.41
			16-Dec-05 12:30 PM	25.57	0.28	454.43
MW-42-30	32	463.90	23-Feb-05 1:27 PM	11.60	0.88	452.38
			16-Mar-05 11:02 AM	12.10	0.88	451.78
			07-Oct-05 8:40 AM	9.34	1.04	454.57
			15-Dec-05 1:07 PM	11.28	1.04	452.62
MW-42-55	56	464.00	23-Feb-05 2:03 PM	11.63	0.93	452.51
			16-Mar-05 11:45 AM	12.12	0.93	451.92
			07-Oct-05 7:58 AM	9.32	1.08	454.77
			15-Dec-05 12:43 PM	11.25	1.08	452.83
MW-42-65	80	463.49	24-Feb-05 9:58 AM	11.13	1.21	452.75
			16-Mar-05 12:15 PM	11.75	1.21	452.02
			07-Oct-05 7:24 AM	8.86	1.09	454.86
			15-Dec-05 12:11 PM	10.77	1.04	452.92
MW-43-25	27	462.54	07-Mar-05 10:34 AM	10.62	0.10	451.90
			15-Mar-05 10:10 AM	10.72	0.09	451.80
			20-Jun-05 10:30 AM	6.23	0.10	456.29
			04-Oct-05 8:48 AM	7.90	0.07	454.61
			16-Dec-05 2:17 PM	9.56	0.07	452.96
MW-43-75	77	462.71	07-Mar-05 10:37 AM	10.74	0.88	452.24
			15-Mar-05 10:43 AM	10.27	0.88	452.72
			20-Jun-05 8:21 AM	6.18	0.91	456.84
			26-Jul-05 7:31 AM	7.05	0.91	455.98
			16-Aug-05 6:45 AM	7.38	0.91	455.64
			08-Sep-05 9:45 AM	7.95	0.91	455.05
			04-Oct-05 8:25 AM	8.22	0.93	454.75
			03-Nov-05 12:02 PM	8.74	0.93	454.28
			16-Dec-05 2:07 PM	9.89	0.93	453.09
MW-43-90	102	462.76	07-Mar-05 10:39 AM	10.94	1.32	452.46
			15-Mar-05 11:13 AM	11.11	1.32	452.30
			20-Jun-05 8:21 AM	6.18	1.33	457.27
			26-Jul-05 5:39 AM	6.56	1.31	456.91
			16-Aug-05 8:12 AM	7.73	1.31	455.72
			08-Sep-05 9:41 AM	8.15	1.31	455.28
			04-Oct-05 7:52 AM	8.36	1.20	454.93
			03-Nov-05 12:30 PM	9.04	1.20	454.31
			16-Dec-05 1:00 PM	10.05	1.20	453.24
OW-3D	274	558.63	18-May-05 6:06 AM	102.60	0.29	455.62

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Monitoring Wells</b>						
OW-3D	274	558.63	06-Oct-05 10:12 AM	102.14	0.45	456.26
OW-3M	202	558.90	18-May-05 6:05 AM	102.95	0.24	455.70
			06-Oct-05 11:06 AM	102.48	0.33	456.23
OW-3S	118	558.58	18-May-05 6:03 AM	102.61	0.13	455.92
			06-Oct-05 11:53 AM	102.18	0.13	456.35
PE-1	97	469.65	03-Oct-05 9:49 AM	15.20	0.75	454.68
			13-Dec-05 8:50 AM	16.42	0.75	453.43
PGE-6	181	563.32	18-May-05 6:20 AM	107.93	0.26	455.24
			12-Oct-05 5:53 AM	107.34	0.28	455.84
PGE-7	332	563.89	18-May-05 6:16 AM	108.65	0.88	455.78
			13-Oct-05 9:37 AM	108.11	1.00	456.52
PGE-8	564	596.01	18-May-05 5:52 AM	140.75	1.11	456.71
TW-1	240	620.55	11-Oct-05 10:43 AM	164.53	0.35	455.87
<b>Other Wells not in GMP</b>						
CW-1D	322	566.46	18-May-05 6:37 AM	110.86	0.71	455.88
CW-1M	191	566.07	18-May-05 6:36 AM	110.35	0.24	455.56
CW-2D	355	549.43	18-May-05 6:33 AM	93.89	0.93	456.27
CW-2M	202	549.45	18-May-05 6:35 AM	93.60	0.42	455.79
CW-3D	342	534.14	18-May-05 6:40 AM	78.84	1.17	456.50
CW-3M	224	534.10	18-May-05 6:42 AM	78.31	0.56	455.83
CW-4D	305	518.55	18-May-05 6:11 AM	63.11	0.95	456.14
CW-4M	171	518.55	18-May-05 6:12 AM	62.69	0.40	455.77
MW-1	217	661.76	18-May-05 6:27 AM	206.81	0.04	454.91
MW-3	205	650.51	18-May-05 6:02 AM	195.92	0.09	454.56
MW-4	176	625.73	18-May-05 6:14 AM	170.41	0.07	455.29
MW-5	186	635.69	18-May-05 6:07 AM	180.10	0.09	455.56
MW-6	195	642.84	18-May-05 6:23 AM	187.22	0.04	455.58
MW-7	185	631.91	18-May-05 6:20 AM	176.86	0.07	455.02
MW-8	180	627.54	18-May-05 6:07 AM	171.75	0.07	455.75
MWP-8	213	677.48	18-May-05 6:17 AM	189.51	0.00	---
MWP-10	237	675.81	18-May-05 6:33 AM	208.64	0.00	---
MWP-12	143	663.49	18-May-05 6:43 AM	107.85	0.00	555.52
OW-1D	281	550.36	18-May-05 6:30 AM	94.83	0.65	455.58
OW-1M	189	550.36	18-May-05 6:32 AM	94.61	0.34	455.60
OW-1S	114	550.15	18-May-05 6:31 AM	94.37	0.17	455.75

**Table 7**  
**Manual Water Level Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Well Depth (feet BMP)	Measuring Point Elevation (feet AMSL) <sup>1</sup>	Monitoring Date & Time	Water Level Measurement (feet BMP)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
<b>Other Wells not in GMP</b>						
OW-2D	342	549.01	18-May-05 6:27 AM	93.82	0.96	455.80
OW-2M	211	548.52	18-May-05 6:24 AM	92.88	0.50	455.59
OW-2S	121	548.75	18-May-05 6:26 AM	92.95	0.14	455.73
OW-5D	352	552.35	18-May-05 6:20 AM	96.93	0.66	455.49
OW-5M	254	551.75	18-May-05 6:19 AM	96.07	0.46	455.58
OW-5S	113	551.75	18-May-05 6:18 AM	95.95	0.13	455.74
<b>Surface Water Stations</b>						
I-3	---	460.30	17-Sep-04 12:18 PM 16-Dec-04 12:53 PM 01-Mar-05 12:18 PM 07-Apr-05 8:08 AM 04-May-05 12:57 PM 18-Aug-05 7:09 AM 05-Oct-05 7:53 AM	6.05 7.16 7.80 4.27 5.35 4.55 5.37	0.00 0.00 0.00 0.00 0.00 0.00 0.00	454.25 453.14 452.50 456.03 454.95 455.75 454.93
RRB	---	476.63	17-Sep-04 10:30 AM 16-Dec-04 11:40 AM 01-Mar-05 2:38 PM 07-Apr-05 9:03 AM 14-Jun-05 11:15 AM 18-Aug-05 7:48 AM 05-Oct-05 9:59 AM	21.85 23.35 23.09 20.35 20.99 20.66 22.14	0.00 0.00 0.00 0.00 0.00 0.00 0.00	454.78 453.28 453.54 456.28 455.64 455.97 454.49

**NOTES:**

BGS below ground surface

AMSL above mean sea level

BMP below well measure point

(--) data not collected or available.

<sup>1</sup> Measuring Point Elevations were re-surveyed in February 2004.

Well depths rounded off to whole foot.

Salinity used to adjust water level to freshwater equivalent. Salinity values have been averaged in accordance with the Performance Monitoring Program.

The water levels measured in the MW-20 monitoring well cluster may be affected by active IM pumping in the TW-2D extraction well.

I-3 water elevation data not available from 9/1/05 to 10/4/05 due to transducer damage from river.

Surface water station RRB was not sampled in December 2005 due to the location being dry.

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
MW-9	17-Dec-04	---	27.80	7.27	124	7.19
	11-Jan-05	3,180	29.00	7.14	169	8.71
	08-Mar-05	3,490	29.51	7.44	164	8.65
	07-Apr-05	---	30.60	7.33	117	6.59
	16-Jun-05	2,760	36.29	7.48	78	4.93
	03-Oct-05	2,550	30.00	7.49	142	5.85
MW-10	17-Dec-04	---	27.50	7.34	113	2.64
	11-Jan-05	3,190	28.60	7.37	148	1.77
	08-Mar-05	3,850	29.10	7.35	124	2.92
	16-Jun-05	3,370	31.69	7.57	59	3.71
	03-Oct-05	1,610	29.10	7.73	136	5.23
	12-Dec-05	2,470	28.20	7.46	165	5.94
MW-11	17-Dec-04	---	27.80	7.29	111	5.70
	11-Jan-05	2,800	27.10	7.39	143	6.69
	08-Mar-05	2,670	29.36	7.31	133	7.02
	16-Jun-05	2,230	32.54	7.46	65	5.60
	03-Oct-05	2,190	29.70	7.42	142	5.91
	12-Dec-05	2,460	27.80	7.16	181	8.10
MW-12	10-Mar-05	---	28.43	8.90	34	7.04
	06-Apr-05	---	28.30	8.27	56	6.34
	13-Jun-05	4,060	29.70	8.39	60	6.97
	16-Sep-05	3,290	29.00	8.49	---	6.58
	04-Oct-05	3,040	28.20	8.63	55	6.13
	13-Dec-05	3,260	27.74	9.49	97	6.99
MW-13	16-Dec-04	1,750	28.16	7.64	152	7.57
	11-Mar-05	1,950	29.17	7.47	69	5.57
	14-Jun-05	1,820	31.28	7.42	65	8.47
	04-Oct-05	1,910	28.44	7.74	16	6.41
	13-Dec-05	2,000	28.05	8.43	76	6.73
MW-14	16-Dec-04	1,350	26.48	7.76	156	8.20
	09-Mar-05	1,640	28.90	7.68	160	6.52
	07-Apr-05	---	28.70	7.66	75	6.58
	15-Jun-05	1,460	33.56	7.30	177	---
	06-Oct-05	1,660	28.53	7.82	26	7.12
	15-Dec-05	1,640	27.60	7.74	106	7.54
MW-15	17-Dec-04	---	28.80	7.56	-30	6.81
	09-Mar-05	1,470	29.57	7.64	94	8.33
	17-Jun-05	2,220	30.90	7.79	-30	7.73
	06-Oct-05	1,670	29.54	7.26	-19	8.11
MW-16	16-Dec-04	1,690	28.80	7.89	-6	5.54
	06-Oct-05	1,210	29.29	7.81	-74	6.79
MW-17	16-Dec-04	1,540	30.00	7.82	187	---
	05-Oct-05	1,590	30.70	7.63	72	6.51

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
MW-18	16-Dec-04	1,120	26.01	7.76	183	8.66
	09-Mar-05	1,290	28.60	7.58	150	8.30
	15-Jun-05	1,540	30.18	7.24	165	---
	06-Oct-05	1,420	28.56	7.68	62	8.08
MW-19	17-Dec-04	---	28.40	7.35	13	6.33
	07-Mar-05	2,200	28.43	7.49	100	6.67
	14-Jun-05	2,170	29.30	7.61	65	6.80
	04-Oct-05	2,150	28.50	7.75	30	6.87
	12-Dec-05	2,140	26.90	7.51	153	7.68
MW-20-70	16-Dec-04	3,440	22.61	8.00	150	---
	10-Mar-05	---	29.40	7.46	151	8.77
	07-Apr-05	3,820	29.30	7.75	92	6.63
	15-Jun-05	3,160	29.69	7.72	152	6.85
	11-Oct-05	3,330	28.66	7.53	151	6.90
	15-Dec-05	3,210	27.60	7.59	149	7.97
MW-20-100	16-Dec-04	4,770	26.57	8.29	126	---
	10-Mar-05	7,100	29.70	7.64	110	0.40
	15-Jun-05	3,870	29.50	7.77	136	3.44
	11-Oct-05	4,140	28.96	7.45	157	1.54
	15-Dec-05	3,980	28.00	7.62	140	3.03
MW-20-130	27-Jan-05	---	27.80	7.66	38	1.81
	09-Mar-05	12,800	29.00	6.63	126	0.02
	07-Apr-05	11,000	29.40	7.88	99	4.89
	15-Jun-05	10,600	29.65	7.73	145	4.66
	07-Oct-05	12,300	30.31	7.65	53	2.46
	16-Dec-05	11,700	27.35	7.99	123	3.32
MW-21	17-Dec-04	---	25.40	7.19	-97	4.71
	08-Mar-05	11,300	28.01	7.04	-86	6.00
	14-Jun-05	12,000	30.30	7.30	81	6.80
	05-Oct-05	11,400	28.26	7.24	-149	2.42
	14-Dec-05	12,100	26.22	7.94	-90	5.35
MW-22	16-Dec-04	32,600	23.97	7.33	-113	---
	10-Mar-05	46,300	22.00	7.13	-150	4.74
	17-Jun-05	33,700	23.99	6.93	-57	3.23
	04-Oct-05	35,500	32.96	6.66	-86	2.51
	16-Dec-05	31,200	24.64	6.65	-90	2.31
MW-23	16-Dec-04	---	26.90	7.01	-72	2.24
	08-Mar-05	19,100	27.98	7.01	-48	3.64
	14-Jun-05	19,500	28.70	7.43	23	7.80
	04-Oct-05	19,400	27.90	7.25	-19	2.19
	14-Dec-05	15,800	26.35	8.13	94	8.54
MW-24A	17-Dec-04	---	28.00	7.51	118	2.35
	11-Jan-05	4,700	28.80	7.62	111	1.43

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
MW-24A	07-Mar-05	3,460	28.76	7.51	49	3.09
	16-Jun-05	3,470	31.73	7.70	52	2.70
	03-Oct-05	3,040	29.20	7.70	157	3.26
MW-24B	17-Dec-04	---	27.10	7.77	104	1.01
	11-Jan-05	14,000	29.40	7.87	105	1.02
	07-Mar-05	14,300	29.65	7.87	-2	1.70
	16-Jun-05	13,100	35.51	7.93	-4	2.20
	03-Oct-05	14,000	30.20	7.93	153	3.19
MW-24BR	16-Dec-04	---	27.90	7.82	-343	0.19
	08-Mar-05	15,200	30.04	7.72	-351	1.31
	15-Dec-05	18,500	28.20	7.71	-291	2.25
MW-25	09-Mar-05	1,570	29.54	7.42	181	8.63
	07-Apr-05	---	29.70	7.41	95	7.30
	14-Jun-05	1,620	30.30	7.56	107	6.90
	04-Oct-05	1,510	29.23	7.65	55	6.72
	14-Dec-05	1,220	28.85	8.40	156	7.97
MW-26	16-Dec-04	4,000	29.60	7.40	55	9.52
	08-Mar-05	3,450	29.77	7.47	123	10.03
	13-Jun-05	3,820	32.12	7.49	119	9.16
	04-Oct-05	3,380	29.90	7.54	45	8.79
	12-Dec-05	3,440	29.00	7.33	161	9.93
MW-27-20	02-Dec-04	1,030	20.04	8.25	-179	6.37
	15-Dec-04	1,320	19.01	8.07	-186	7.40
	10-Jan-05	3,140	17.40	7.33	-178	0.16
	09-Feb-05	3,500	16.60	7.61	-198	0.07
	08-Mar-05	2,180	17.60	7.57	-178	0.00
	04-Apr-05	2,580	18.50	7.58	-194	0.00
	04-May-05	1,280	19.10	7.54	-176	0.40
	18-Jul-05	1,040	34.94	7.68	-190	1.08
	05-Oct-05	1,170	22.21	7.10	-158	1.82
	14-Dec-05	1,120	18.69	7.58	-171	2.19
MW-27-60	01-Mar-05	13,400	22.20	7.36	-143	5.09
	08-Mar-05	18,000	21.30	7.22	-144	1.06
	23-Mar-05	12,700	21.98	7.35	-124	1.74
	29-Mar-05	16,800	22.90	7.29	-154	0.26
	05-Apr-05	16,700	22.30	7.24	-157	0.05
	12-Apr-05	13,800	22.30	7.16	-146	0.20
	19-Apr-05	---	21.38	7.93	---	---
	26-Apr-05	22,100	22.48	7.24	-111	7.00
	04-May-05	14,400	23.20	7.28	-114	0.40
	18-Jul-05	13,500	34.25	7.19	-125	2.62
	05-Oct-05	13,200	21.69	6.48	-97	3.16
	15-Dec-05	10,000	20.71	6.52	-134	2.89

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**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
MW-27-85	01-Mar-05	18,600	22.50	7.61	-155	4.94
	08-Mar-05	22,000	22.70	7.47	-152	0.15
	23-Mar-05	16,100	22.48	7.50	-145	1.03
	29-Mar-05	19,700	23.50	7.21	-167	0.52
	05-Apr-05	19,700	22.30	7.11	-134	1.97
	12-Apr-05	16,900	22.60	7.09	-134	0.09
	19-Apr-05	---	21.52	7.90	---	---
	26-Apr-05	18,100	21.84	7.41	-138	5.72
	04-May-05	18,500	23.00	7.12	-128	0.40
	19-May-05	19,600	23.00	7.60	-131	1.00
	02-Jun-05	19,500	23.00	7.08	-100	0.95
	19-Jul-05	19,100	27.90	6.90	-106	0.88
	16-Aug-05	13,700	23.60	7.14	-156	1.33
	08-Sep-05	20,500	30.50	7.14	-158	1.70
	05-Oct-05	18,100	22.49	6.51	-82	2.11
	03-Nov-05	23,100	22.04	7.17	-150	1.13
	15-Dec-05	14,300	21.18	6.34	-124	2.76
MW-28-25	02-Dec-04	1,260	23.91	8.04	-170	5.63
	14-Dec-04	---	24.70	7.35	-43	---
	11-Jan-05	1,560	23.14	7.53	-115	7.15
	10-Mar-05	1,400	23.52	7.62	60	5.63
	04-Apr-05	1,590	22.40	7.31	-108	0.10
	03-May-05	1,280	23.00	7.41	-59	0.40
	15-Jun-05	1,460	23.70	7.71	-54	2.70
	13-Jul-05	1,690	24.60	7.51	19	4.92
	06-Oct-05	1,300	25.22	6.98	-35	2.01
	16-Dec-05	1,390	23.10	7.16	-69	2.52
MW-28-90	02-Dec-04	9,120	21.25	8.46	-201	5.85
	13-Dec-04	9,000	22.46	7.80	-137	---
	29-Dec-04	15,900	21.70	7.70	-175	0.34
	11-Jan-05	14,200	22.01	7.95	-193	7.11
	27-Jan-05	12,100	22.60	7.87	-203	0.13
	08-Feb-05	9,430	21.70	7.79	-181	0.03
	22-Feb-05	9,300	22.22	8.23	-54	5.84
	07-Mar-05	12,300	23.30	7.83	-190	0.05
	22-Mar-05	12,200	23.00	7.81	-203	0.18
	04-Apr-05	12,600	22.10	7.56	-172	0.44
	20-Apr-05	9,990	22.14	7.88	-93	3.94
	03-May-05	10,600	23.40	7.68	-208	0.40
	19-May-05	9,110	24.40	7.60	-147	0.80
	02-Jun-05	---	23.70	7.62	-141	1.01
	15-Jun-05	9,410	23.50	8.19	-205	2.50
	01-Jul-05	12,700	28.40	7.67	-174	1.76
	13-Jul-05	8,850	26.02	7.76	-142	4.31

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
MW-28-90	18-Aug-05	9,740	22.10	7.60	-178	1.15
	09-Sep-05	8,190	22.70	7.62	-190	1.71
	06-Oct-05	9,070	21.86	6.94	-138	2.02
	02-Nov-05	9,720	22.62	7.65	-183	1.39
	16-Dec-05	8,430	21.80	7.42	-176	2.47
MW-29	02-Dec-04	6,420	24.76	7.84	-208	5.62
	14-Dec-04	---	---	---	---	---
	11-Jan-05	1,700	25.27	7.29	-147	6.45
	07-Feb-05	20,100	25.40	7.12	-150	0.46
	09-Mar-05	32,900	25.70	7.02	-127	1.72
	06-Apr-05	22,700	25.20	7.01	-128	2.03
	05-May-05	4,840	27.70	7.38	-142	0.05
	15-Jun-05	6,580	29.80	7.10	-108	3.10
	04-Oct-05	5,240	26.71	7.31	-110	3.20
	12-Dec-05	4,280	24.07	7.89	-40	5.49
MW-30-30	15-Dec-04	---	25.76	7.26	-116	4.38
	11-Jan-05	---	26.19	6.93	-118	4.62
	09-Feb-05	59,700	25.20	7.10	-121	0.23
	10-Mar-05	65,900	24.62	7.25	-84	4.11
	06-Apr-05	38,000	26.70	6.90	-143	0.32
	09-May-05	47,700	27.20	6.87	-131	0.31
	07-Oct-05	45,000	27.60	6.94	-146	2.54
	15-Dec-05	38,900	26.41	6.29	-100	2.95
MW-30-50	15-Dec-04	10,300	25.26	7.62	-115	5.84
	11-Jan-05	13,600	25.42	7.25	-215	6.36
	09-Feb-05	13,300	25.60	7.39	-155	0.00
	10-Mar-05	9,000	26.87	7.55	-230	4.66
	06-Apr-05	14,000	26.40	7.22	-252	0.49
	09-May-05	14,200	27.40	7.15	-100	0.33
	07-Oct-05	12,300	26.80	7.22	-236	2.81
	16-Dec-05	8,840	25.10	7.16	-263	2.49
MW-31-60	16-Dec-04	3,240	28.00	7.62	5	6.12
	09-Mar-05	2,860	28.99	7.64	192	6.87
	07-Apr-05	---	30.50	7.54	102	5.25
	13-Jun-05	3,060	29.52	7.70	122	8.00
	06-Oct-05	2,990	28.73	7.80	54	6.36
	13-Dec-05	2,870	27.95	8.46	119	6.75
MW-31-135	14-Dec-04	13,700	28.59	7.70	-23	6.15
	10-Mar-05	12,500	30.00	7.86	42	1.49
	13-Jun-05	14,600	30.90	7.85	42	4.46
	06-Oct-05	10,100	29.62	8.00	-4	2.02
	14-Dec-05	7,980	27.90	8.77	124	4.13
MW-32-20	02-Dec-04	24,700	25.73	7.30	-145	4.92

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
MW-32-20	14-Dec-04	28,500	25.40	6.86	-161	2.10
	10-Jan-05	26,900	23.40	6.68	-157	0.13
	07-Feb-05	25,900	22.60	6.94	-155	0.02
	09-Mar-05	29,900	22.80	6.84	-161	0.03
	04-Apr-05	26,000	25.30	6.95	-178	0.02
	09-May-05	20,600	24.70	6.73	-121	0.18
	17-Jun-05	15,500	25.70	7.13	-188	2.40
	04-Oct-05	36,000	29.51	6.69	-115	2.35
	16-Dec-05	33,900	24.50	7.19	-107	2.65
MW-32-35	02-Dec-04	7,700	24.34	7.78	-159	5.62
	15-Dec-04	---	24.47	7.61	-169	6.04
	10-Jan-05	7,510	24.80	7.05	-176	0.13
	07-Feb-05	10,000	25.10	7.29	-175	0.52
	09-Mar-05	12,400	25.80	7.23	-183	0.07
	04-Apr-05	9,800	25.90	7.36	-197	0.10
	09-May-05	13,600	26.50	7.17	-164	0.24
	17-Jun-05	12,800	27.70	7.57	-202	2.30
	04-Oct-05	11,600	25.55	7.25	-159	2.06
	16-Dec-05	11,200	24.68	7.71	-141	2.43
MW-33-40	15-Dec-04	9,000	26.60	8.34	-110	6.54
	11-Jan-05	8,600	26.69	7.97	-174	6.23
	07-Feb-05	7,540	27.20	7.96	-162	0.65
	09-Mar-05	7,050	27.90	7.97	-125	3.28
	04-Apr-05	9,900	26.60	8.15	-160	0.73
	05-May-05	5,760	28.00	8.22	-90	0.55
	17-Jun-05	5,460	27.80	8.61	-94	5.40
	12-Dec-05	14,500	22.02	8.23	45	4.85
MW-33-90	02-Dec-04	7,730	24.32	8.38	-199	5.46
	29-Dec-04	15,000	26.80	7.64	-115	0.54
	11-Jan-05	8,840	27.08	7.75	-113	---
	27-Jan-05	10,100	26.20	7.70	-138	0.71
	07-Feb-05	9,320	27.20	7.69	-75	0.54
	22-Feb-05	8,930	27.25	8.17	10	5.22
	09-Mar-05	13,700	28.30	7.59	-101	0.66
	22-Mar-05	14,600	28.10	7.73	-92	4.74
	04-Apr-05	13,300	27.40	7.72	-98	0.34
	19-Apr-05	8,830	28.04	7.99	---	4.00
	05-May-05	8,250	29.00	7.75	-244	0.28
	18-May-05	17,200	28.80	7.50	-141	1.61
	01-Jun-05	12,000	29.50	7.61	-53	0.41
	16-Jun-05	9,500	29.90	8.22	-209	2.10
	20-Jul-05	8,440	29.80	7.49	-23	0.61
	06-Oct-05	9,210	28.40	7.18	-33	1.86
	13-Dec-05	9,310	26.60	7.66	-43	2.29

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
MW-33-150	02-Mar-05	15,900	26.50	7.70	-120	4.57
	16-Mar-05	21,600	26.00	7.30	-175	1.60
	17-Jun-05	18,300	29.40	7.80	-172	3.00
	20-Jul-05	16,100	29.09	7.45	-59	0.70
	17-Aug-05	17,000	28.80	7.53	-72	1.32
	09-Sep-05	17,000	28.60	7.60	-108	1.68
	06-Oct-05	15,800	28.83	7.19	-41	2.05
	02-Nov-05	20,800	27.78	7.55	-81	1.41
	12-Dec-05	19,200	27.24	8.15	21	3.88
MW-33-210	24-Feb-05	22,200	27.19	7.98	-116	4.91
	16-Mar-05	25,300	27.00	7.59	-103	0.58
	16-Jun-05	22,400	30.60	7.87	-216	2.00
	20-Jul-05	19,200	29.14	7.15	-40	0.76
	17-Aug-05	19,900	28.70	7.29	-88	1.24
	06-Sep-05	22,600	29.10	7.23	-109	1.68
	06-Oct-05	18,800	29.14	6.96	-30	1.78
	02-Nov-05	24,900	28.15	7.40	-73	1.39
	12-Dec-05	21,900	27.15	7.90	40	3.60
MW-34-55	15-Dec-04	9,000	22.21	7.70	-94	6.31
	12-Jan-05	12,100	21.86	7.24	-101	6.37
	09-Feb-05	12,600	22.00	7.50	-112	0.00
	10-Mar-05	9,000	23.12	7.66	-191	5.13
	05-Apr-05	12,400	23.10	7.35	-110	0.68
	05-May-05	8,860	22.60	7.37	-99	0.06
	15-Jul-05	9,180	26.03	7.46	-77	3.60
	05-Oct-05	8,610	21.94	6.83	-93	1.69
	14-Dec-05	6,610	20.28	7.30	-124	2.08
MW-34-80	02-Dec-04	10,400	21.39	7.83	-238	5.72
	13-Dec-04	12,700	22.52	7.66	-174	6.07
	29-Dec-04	19,600	22.60	7.17	-99	0.19
	12-Jan-05	17,300	22.45	7.16	-181	6.21
	27-Jan-05	14,800	23.10	7.24	-134	0.11
	08-Feb-05	15,500	22.70	7.30	-162	0.00
	22-Feb-05	14,100	22.14	7.64	-95	5.77
	01-Mar-05	13,300	22.52	7.33	-127	5.14
	08-Mar-05	17,600	24.00	7.24	-84	0.04
	22-Mar-05	15,200	24.10	7.21	-83	0.16
	29-Mar-05	16,800	22.90	7.23	-214	0.00
	05-Apr-05	17,200	23.30	7.19	-207	0.01
	12-Apr-05	14,200	23.60	7.17	-86	0.08
	19-Apr-05	13,800	22.95	7.45	4	5.09
	26-Apr-05	13,700	23.56	7.34	-94	3.55
	04-May-05	15,900	23.70	7.20	-241	0.30
	18-May-05	16,000	24.40	6.99	-138	1.33

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**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
MW-34-80	01-Jun-05	17,800	27.30	6.98	-117	0.37
	30-Jun-05	18,300	33.70	7.28	-61	1.57
	14-Jul-05	17,900	33.40	7.11	-104	1.19
	15-Aug-05	14,600	26.90	7.12	-137	1.49
	07-Sep-05	17,100	26.90	7.12	-148	1.55
	05-Oct-05	13,800	22.34	6.67	-58	2.21
	03-Nov-05	16,300	22.72	7.12	-117	1.11
	14-Dec-05	10,400	22.47	7.02	-88	2.28
MW-34-100	14-Feb-05	25,000	23.00	7.63	-246	0.18
	16-Feb-05	20,400	23.62	7.95	-159	5.32
	23-Feb-05	18,000	22.09	7.34	-35	1.37
	01-Mar-05	15,700	23.40	7.58	-86	5.04
	08-Mar-05	19,900	24.90	7.47	-60	0.41
	23-Mar-05	14,600	23.66	7.58	-98	0.76
	29-Mar-05	18,100	24.90	7.46	-96	0.46
	05-Apr-05	20,000	24.50	7.43	-115	0.31
	12-Apr-05	15,500	24.80	7.40	-61	0.18
	19-Apr-05	16,200	24.20	7.68	8	5.96
	26-Apr-05	21,000	24.12	7.60	-45	4.09
	04-May-05	18,700	24.40	7.48	-98	0.60
	10-May-05	15,800	22.59	7.37	21	3.01
	18-May-05	19,000	24.60	7.22	50	3.01
	25-May-05	18,700	25.30	7.47	-93	1.20
	01-Jun-05	20,000	25.60	7.45	-59	0.42
	08-Jun-05	20,300	23.70	7.93	-15	2.30
	21-Jun-05	20,500	27.90	7.33	-26	1.93
	07-Jul-05	18,800	32.65	7.50	-88	3.76
	14-Jul-05	20,200	29.50	7.38	-26	1.93
	27-Jul-05	17,800	27.41	7.38	-2	1.12
	10-Aug-05	19,700	24.70	7.40	-83	1.40
	15-Aug-05	16,600	25.70	7.40	-17	1.24
	31-Aug-05	16,900	28.50	7.39	-42	1.89
	07-Sep-05	19,500	27.80	7.37	-60	1.53
	20-Sep-05	14,000	30.20	7.39	-28	1.99
	05-Oct-05	15,900	24.02	6.89	-13	1.91
	03-Nov-05	19,900	23.16	7.45	-49	1.12
	16-Nov-05	16,100	23.30	7.31	-2	4.63
	30-Nov-05	19,900	22.60	7.39	-55	2.59
	14-Dec-05	12,400	21.75	7.38	-26	2.33
	28-Dec-05	19,300	22.40	7.22	-28	2.38
MW-35-60	13-Dec-04	7,010	27.10	7.46	-53	1.08
	15-Mar-05	6,510	26.63	7.89	-18	2.22
	13-Jun-05	---	29.60	7.27	-8	2.47
	07-Oct-05	7,560	27.98	7.49	-1	1.90

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
MW-35-60	14-Dec-05	5,800	25.95	8.34	95	3.97
MW-35-135	13-Dec-04	---	27.10	7.71	-75	0.12
	15-Mar-05	10,800	27.00	8.09	-108	2.11
	13-Jun-05	15,000	28.50	7.60	-138	1.75
	07-Oct-05	10,800	28.17	7.75	-55	1.29
	14-Dec-05	8,480	26.27	8.76	38	3.17
MW-36-20	14-Dec-04	29,500	26.07	7.57	-151	5.97
	11-Jan-05	38,900	24.70	7.02	-112	0.88
	07-Feb-05	31,400	24.84	6.96	-62	6.16
	09-Mar-05	22,600	25.39	7.61	-88	7.59
	05-Apr-05	20,000	24.55	7.63	-92	5.26
	03-May-05	10,200	25.13	7.63	-180	3.51
	03-Oct-05	13,000	26.68	7.42	-165	3.02
	15-Dec-05	---	24.89	7.39	-112	2.36
MW-36-40	14-Dec-04	---	23.70	7.36	-168	0.11
	12-Jan-05	8,500	25.30	7.35	-191	0.26
	07-Feb-05	11,300	25.19	7.21	-151	6.60
	08-Mar-05	9,000	25.53	7.82	-194	5.54
	05-Apr-05	11,200	25.61	7.67	-162	5.34
	05-May-05	10,300	25.62	7.58	-180	2.74
	03-Oct-05	10,800	25.72	7.28	-162	3.79
	15-Dec-05	15,400	24.70	7.87	-190	2.68
MW-36-50	14-Dec-04	---	24.10	7.28	-151	0.31
	12-Jan-05	5,630	25.10	7.29	-163	0.22
	07-Feb-05	11,000	25.06	7.02	-131	5.61
	08-Mar-05	8,800	25.42	7.70	-168	5.53
	05-Apr-05	9,320	25.68	7.60	-129	5.55
	05-May-05	9,330	25.64	7.52	-137	2.10
	03-Oct-05	7,500	26.23	7.45	-133	2.87
	15-Dec-05	13,700	24.70	7.61	-136	2.80
MW-36-70	14-Dec-04	9,200	25.27	7.64	-131	6.52
	11-Jan-05	12,100	24.70	7.19	-130	0.30
	07-Feb-05	18,500	24.74	6.94	-60	7.19
	08-Mar-05	11,300	26.81	7.60	-115	5.17
	05-Apr-05	9,990	25.02	7.37	-48	5.55
	03-May-05	12,300	25.70	7.28	-103	0.00
	03-Oct-05	7,680	26.12	7.37	-112	2.54
	15-Dec-05	9,310	24.43	7.73	-108	2.27
MW-36-90	14-Dec-04	---	23.50	7.43	-8	1.06
	12-Jan-05	11,900	24.10	7.35	-137	0.21
	07-Feb-05	19,300	24.99	7.14	51	5.37
	09-Mar-05	18,100	25.35	7.74	49	5.10
	05-Apr-05	15,100	25.23	7.63	64	5.27

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
MW-36-90	03-May-05	17,600	25.90	7.39	55	0.00
	25-Jul-05	18,400	25.90	7.26	129	1.13
	17-Aug-05	16,600	25.60	7.15	152	1.27
	08-Sep-05	17,500	25.60	7.22	49	1.63
	03-Oct-05	12,700	25.66	7.15	174	3.44
	02-Nov-05	19,300	25.25	7.14	69	1.39
	15-Dec-05	18,000	24.62	7.54	34	2.48
MW-36-100	02-Dec-04	14,000	24.86	8.22	-67	5.50
	29-Dec-04	---	25.10	7.48	-40	0.21
	12-Jan-05	22,300	24.78	7.46	-9	6.06
	27-Jan-05	19,300	25.40	7.52	-33	0.21
	09-Feb-05	20,900	24.20	7.66	-12	0.02
	22-Feb-05	18,700	24.79	7.92	55	5.16
	09-Mar-05	22,600	27.30	7.34	-20	0.26
	22-Mar-05	19,900	26.10	7.46	-16	0.19
	04-Apr-05	19,600	25.40	7.42	-20	0.07
	20-Apr-05	17,500	25.27	7.63	2	3.12
	03-May-05	18,700	26.90	7.36	4	0.40
	18-May-05	34,800	27.00	7.16	12	1.52
	02-Jun-05	18,800	27.20	7.38	23	2.48
	19-Jul-05	17,700	33.96	7.11	17	1.02
	15-Aug-05	16,800	30.20	7.17	-15	1.62
	08-Sep-05	18,300	27.50	7.20	21	1.70
	05-Oct-05	16,500	25.70	6.66	4	2.78
	03-Nov-05	21,100	25.81	7.20	-19	1.31
	13-Dec-05	16,500	25.18	7.22	5	2.20
MW-37D	14-Dec-04	17,000	29.76	7.70	3	6.22
	11-Mar-05	---	30.80	7.99	21	4.37
	04-Oct-05	15,100	30.46	8.09	4	2.76
	14-Dec-05	13,100	28.94	8.70	71	4.03
MW-37S	13-Dec-04	4,470	28.70	7.74	-66	2.62
	11-Mar-05	---	29.38	7.88	36	5.15
	07-Apr-05	---	31.10	7.67	-68	1.99
	15-Jun-05	3,930	33.65	7.70	-71	8.07
	04-Oct-05	4,460	29.28	7.98	-33	3.01
	14-Dec-05	3,860	27.67	8.78	69	4.20
MW-38D	14-Dec-04	---	28.77	7.25	99	5.44
	11-Mar-05	23,500	30.47	8.00	56	3.95
	17-Jun-05	22,200	31.90	8.01	68	1.66
	07-Oct-05	25,700	30.47	7.82	-2	1.07
MW-38S	14-Dec-04	4,500	28.82	7.25	53	6.24
	11-Mar-05	4,650	28.38	7.36	120	5.36
	17-Jun-05	4,540	30.20	7.48	55	2.87
	07-Oct-05	4,290	29.50	7.45	47	2.17

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
MW-39-40	15-Dec-04	---	26.20	7.69	-173	0.52
	12-Jan-05	4,180	25.60	7.50	-180	0.40
	08-Feb-05	7,390	26.33	8.03	-160	5.38
	09-Mar-05	8,290	26.78	7.86	-177	5.01
	05-Apr-05	6,200	26.51	7.82	-179	5.42
	05-May-05	6,070	26.53	7.75	-179	1.78
	16-Jun-05	9,600	27.10	7.59	-202	2.09
	04-Oct-05	5,640	26.50	7.41	-203	2.87
	16-Dec-05	5,680	25.94	7.34	-177	2.07
MW-39-50	15-Dec-04	---	25.90	7.40	18	3.01
	14-Jan-05	11,900	25.70	7.69	77	0.80
	08-Feb-05	14,500	26.14	7.91	76	5.35
	09-Mar-05	14,400	26.68	7.65	11	4.96
	06-Apr-05	12,400	25.88	7.23	81	4.43
	03-May-05	14,300	27.20	7.33	56	0.04
	16-Jun-05	15,200	27.30	7.33	-44	1.98
	04-Oct-05	13,600	26.90	7.21	-78	2.59
	16-Dec-05	11,300	25.97	7.07	-57	2.01
MW-39-60	15-Dec-04	---	25.70	7.45	29	0.34
	14-Jan-05	10,500	25.50	7.64	95	---
	08-Feb-05	12,900	26.09	7.87	106	5.17
	09-Mar-05	15,200	26.84	7.58	65	4.95
	06-Apr-05	12,600	26.27	7.21	84	4.30
	05-May-05	14,600	26.56	7.27	43	1.98
	16-Jun-05	17,600	27.30	7.13	19	1.86
	04-Oct-05	14,100	27.00	7.05	-20	2.15
	16-Dec-05	11,200	25.15	6.83	-40	2.34
MW-39-70	15-Dec-04	---	25.70	7.56	11	0.43
	12-Jan-05	8,000	24.90	7.39	53	0.88
	08-Feb-05	11,400	26.00	7.99	89	5.53
	09-Mar-05	13,800	26.50	7.74	71	5.25
	05-Apr-05	11,500	26.28	7.44	61	5.76
	05-May-05	12,500	26.09	7.27	98	1.92
	16-Jun-05	16,000	26.70	7.15	22	1.81
	04-Oct-05	13,800	26.60	7.05	31	2.72
	16-Dec-05	10,000	25.97	7.10	22	2.19
MW-39-80	15-Dec-04	---	25.30	7.43	66	1.59
	14-Jan-05	11,600	25.70	7.80	163	0.50
	08-Feb-05	14,900	25.68	7.98	99	5.80
	09-Mar-05	16,800	26.51	7.75	82	5.01
	06-Apr-05	13,800	26.03	7.32	88	4.65
	03-May-05	14,900	27.00	7.23	106	0.37
	16-Jun-05	16,800	27.60	7.17	52	1.99
	25-Jul-05	17,400	26.70	7.09	169	1.23

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
MW-39-80	17-Aug-05	15,600	26.50	7.07	164	1.34
	06-Sep-05	17,700	26.50	7.00	149	1.97
	04-Oct-05	15,900	26.90	7.09	76	2.73
	02-Nov-05	17,600	26.11	7.17	148	1.44
	15-Dec-05	15,400	25.72	7.55	78	2.24
MW-39-100	15-Dec-04	---	26.32	8.11	24	6.19
	12-Jan-05	20,200	25.86	7.56	63	6.24
	27-Jan-05	20,200	26.60	7.61	45	2.14
	09-Feb-05	22,000	26.80	7.78	33	2.19
	10-Mar-05	24,500	27.57	7.95	28	5.05
	06-Apr-05	---	27.40	7.40	54	1.53
	09-May-05	20,400	28.30	7.33	159	1.75
	17-Jun-05	19,200	29.30	7.89	14	2.80
	19-Jul-05	18,400	29.23	7.17	80	1.34
	17-Aug-05	18,600	26.40	7.15	170	1.53
	06-Sep-05	21,000	26.90	7.11	134	2.22
	04-Oct-05	15,900	26.84	7.29	73	2.32
	02-Nov-05	23,000	26.52	7.04	168	1.67
	13-Dec-05	20,100	26.70	7.06	139	3.00
MW-40D	16-Dec-04	16,800	28.81	7.56	-80	5.63
	10-Mar-05	17,200	30.93	7.59	-19	1.49
	16-Jun-05	14,500	33.36	7.60	-149	1.96
	05-Oct-05	16,100	31.90	7.51	-60	2.64
	13-Dec-05	18,300	30.39	8.39	-6	2.80
MW-40S	16-Dec-04	1,780	28.53	7.44	70	7.93
	10-Mar-05	2,080	29.22	7.57	134	7.33
	07-Apr-05	---	30.00	7.56	26	7.65
	16-Jun-05	1,900	32.27	7.72	143	5.97
	05-Oct-05	1,940	30.90	7.64	7	6.81
	13-Dec-05	2,130	28.79	8.34	157	8.02
MW-41D	15-Dec-04	---	29.81	7.80	-222	5.05
	11-Mar-05	22,700	29.61	7.90	-244	0.62
	14-Jun-05	21,000	31.67	7.75	-212	3.17
	05-Oct-05	21,100	31.40	7.77	-225	2.38
	16-Dec-05	20,200	29.05	8.31	-163	2.15
MW-41M	15-Dec-04	18,800	29.15	7.68	-102	5.30
	11-Mar-05	16,100	29.95	7.74	-66	0.82
	14-Jun-05	13,800	30.90	7.62	-106	2.78
	05-Oct-05	15,100	30.40	7.63	-85	2.42
	16-Dec-05	14,400	28.50	8.14	-38	2.08
MW-41S	16-Dec-04	4,260	28.67	7.91	-19	6.35
	10-Mar-05	5,080	29.46	7.83	87	2.46
	14-Jun-05	4,460	30.36	7.79	-45	4.28

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
MW-41S	05-Oct-05	4,660	29.50	7.84	-47	3.29
	16-Dec-05	4,420	27.86	8.37	-3	2.86
MW-42-30	23-Feb-05	12,600	23.31	7.20	-175	1.47
	16-Mar-05	17,800	24.71	7.29	-136	1.21
	07-Oct-05	16,700	26.20	7.20	-139	2.92
	15-Dec-05	14,500	25.01	6.43	-129	2.39
MW-42-55	23-Feb-05	13,600	23.71	7.36	-188	0.95
	16-Mar-05	17,100	25.46	7.51	-191	0.51
	07-Oct-05	18,100	25.50	7.14	-126	5.62
	15-Dec-05	11,100	24.44	6.50	-143	2.38
MW-42-65	24-Feb-05	20,500	24.64	7.41	-119	5.03
	16-Mar-05	21,400	25.51	7.10	-126	0.55
	07-Oct-05	17,300	25.80	6.81	-121	2.85
	15-Dec-05	13,200	23.43	6.29	-78	2.49
MW-43-25	07-Mar-05	1,690	20.30	7.17	-161	6.05
	15-Mar-05	1,660	19.68	7.67	-177	4.59
	20-Jun-05	1,800	21.00	7.36	-174	1.88
	04-Oct-05	1,220	21.42	7.50	-159	1.95
	16-Dec-05	1,420	20.00	7.25	-184	2.53
MW-43-75	07-Mar-05	15,200	21.70	7.29	-150	5.60
	15-Mar-05	14,900	20.86	7.60	-178	0.49
	20-Jun-05	18,100	21.80	7.31	-165	1.78
	26-Jul-05	15,600	29.07	7.36	-160	1.13
	16-Aug-05	13,800	25.90	7.26	-168	1.33
	08-Sep-05	16,400	28.20	7.29	-176	1.68
	04-Oct-05	12,900	22.09	7.20	-126	2.27
	03-Nov-05	16,700	21.86	7.36	-168	1.38
	16-Dec-05	15,900	20.90	7.19	-179	2.40
MW-43-90	07-Mar-05	21,500	22.20	6.94	-185	0.23
	15-Mar-05	22,000	20.93	7.28	-153	0.47
	20-Jun-05	26,200	22.30	6.86	-140	1.79
	26-Jul-05	23,800	27.20	6.90	-129	2.09
	16-Aug-05	19,400	27.30	6.79	-136	1.33
	08-Sep-05	23,100	30.10	6.87	-152	1.69
	04-Oct-05	18,400	22.65	6.70	-78	4.85
	03-Nov-05	27,700	22.43	6.88	-127	1.15
	16-Dec-05	22,300	21.30	6.72	-127	2.51
OW-3D	06-Oct-05	7,890	31.10	8.23	-178	1.29
OW-3M	06-Oct-05	5,440	30.66	8.16	-90	1.82
OW-3S	06-Oct-05	2,040	30.12	7.84	-9	7.07
PE-1	03-Oct-05	11,600	26.10	7.37	-202	0.77
	13-Dec-05	12,400	23.07	7.21	-148	2.19

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Monitoring Wells</b>						
PGE-6	12-Oct-05	4,240	28.14	7.48	-23	1.59
PGE-8	13-Oct-05	22,300	31.50	8.26	-338	1.08
Park Moabi	15-Dec-04	1,570	19.84	8.04	-235	7.18
	11-Mar-05	1,330	26.17	7.72	-59	3.65
	15-Jun-05	1,440	31.08	8.13	158	5.93
	05-Oct-05	1,430	28.98	7.83	93	6.76
	16-Dec-05	2,860	28.83	7.96	-26	3.67
TW-1	21-Dec-04	---	27.90	7.31	126	4.05
	11-Oct-05	7,120	30.39	7.30	148	4.90
TW-2D	16-Dec-04	9,200	25.38	8.39	143	7.10
TW-2S	16-Dec-04	3,540	26.03	8.23	155	7.96
	11-Mar-05	---	29.30	7.65	90	4.83
	07-Oct-05	3,320	22.10	6.24	204	8.57
<b>Surface Water Stations</b>						
CON	13-Dec-04	1,170	15.42	7.55	143	11.50
	10-Jan-05	1,060	13.14	7.83	171	11.30
	08-Feb-05	1,100	12.97	7.90	210	14.11
	24-Feb-05	1,200	14.19	8.02	188	9.62
	01-Mar-05	1,270	16.86	8.14	198	10.55
	07-Mar-05	1,210	17.02	8.56	94	11.85
	14-Mar-05	1,570	16.40	8.25	191	9.88
	06-Apr-05	1,120	16.41	8.48	125	10.08
	04-May-05	1,080	19.40	8.24	141	9.84
	14-Jun-05	2,170	21.80	8.27	132	9.65
	13-Jul-05	980	22.60	8.21	179	10.50
	18-Aug-05	1,190	20.80	8.00	29	8.92
	07-Sep-05	1,190	21.37	7.91	58	12.58
	05-Oct-05	1,120	19.17	7.97	120	9.43
	01-Nov-05	---	18.94	8.17	99	9.20
	15-Dec-05	1,160	11.30	8.02	186	13.61
I-3	13-Dec-04	1,160	15.35	8.08	131	11.10
	10-Jan-05	1,060	13.81	8.06	181	12.03
	08-Feb-05	1,090	14.24	8.30	178	14.30
	08-Mar-05	1,170	15.11	---	191	8.98
	07-Apr-05	1,160	15.51	8.22	117	11.63
	04-May-05	1,090	18.90	8.20	181	9.84
	14-Jun-05	2,040	21.20	8.17	101	9.72
	13-Jul-05	980	22.10	8.06	189	9.98
	18-Aug-05	1,180	20.30	8.06	61	8.97
	07-Sep-05	1,180	20.68	8.21	59	13.20
	05-Oct-05	1,100	18.49	7.18	125	8.87
	01-Nov-05	---	18.82	7.96	105	9.26
	15-Dec-05	1,160	11.40	8.18	182	11.33

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Surface Water Stations</b>						
NR-1	13-Dec-04	1,220	15.06	6.25	174	11.28
	10-Jan-05	1,200	13.45	7.31	191	12.18
	08-Feb-05	1,090	13.14	8.08	199	12.91
	08-Mar-05	1,170	16.23	---	156	7.90
	06-Apr-05	1,130	16.50	8.47	116	10.28
	04-May-05	1,090	18.80	8.17	165	9.77
	14-Jun-05	2,090	20.20	8.07	134	9.03
	13-Jul-05	980	22.60	8.20	180	10.60
	18-Aug-05	1,210	20.10	7.98	56	8.97
	07-Sep-05	1,180	20.34	8.22	77	13.40
	05-Oct-05	1,110	18.92	8.02	108	9.91
	01-Nov-05	---	18.99	8.17	108	9.19
	15-Dec-05	1,160	11.20	6.52	222	11.52
NR-2	13-Dec-04	1,160	15.85	7.16	155	11.23
	10-Jan-05	1,090	13.01	7.53	178	11.68
	08-Feb-05	1,080	12.69	8.11	226	13.64
	08-Mar-05	1,160	15.89	---	144	10.74
	06-Apr-05	1,140	16.43	8.44	124	10.41
	03-May-05	1,090	18.80	8.24	172	9.83
	14-Jun-05	1,900	20.00	8.17	126	9.20
	14-Jul-05	1,140	21.40	8.21	194	11.10
	18-Aug-05	1,190	20.30	7.96	63	8.84
	07-Sep-05	1,180	20.23	8.18	67	11.76
	05-Oct-05	1,100	18.83	8.04	93	9.44
	01-Nov-05	---	19.07	8.22	106	9.18
	15-Dec-05	1,130	11.40	7.23	199	11.28
NR-3	13-Dec-04	1,150	15.92	7.44	142	11.33
	10-Jan-05	1,070	12.96	7.71	176	11.20
	08-Feb-05	1,080	12.71	8.26	224	13.93
	08-Mar-05	1,160	15.70	---	152	9.26
	06-Apr-05	1,120	16.42	8.46	124	9.92
	04-May-05	1,090	18.80	8.25	175	9.83
	14-Jun-05	1,890	20.10	8.23	121	9.14
	13-Jul-05	1,170	21.30	8.17	187	11.20
	18-Aug-05	1,220	20.20	8.00	67	8.72
	07-Sep-05	1,180	20.28	8.17	66	12.80
	05-Oct-05	1,100	18.80	8.11	101	9.59
	01-Nov-05	---	17.15	8.35	106	9.21
	15-Dec-05	1,120	11.50	7.62	194	11.44
R-22	13-Dec-04	1,150	15.39	8.05	128	11.22
	10-Jan-05	1,060	14.09	8.15	192	11.65
	08-Feb-05	1,170	13.21	6.35	165	13.41
	24-Feb-05	986	13.97	7.10	170	10.13
	01-Mar-05	1,260	19.36	6.80	161	16.92

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature (°C)	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Surface Water Stations</b>						
R-22	07-Mar-05	1,070	16.99	8.14	139	12.12
	14-Mar-05	1,650	16.24	8.19	156	10.49
	06-Apr-05	1,120	16.69	8.15	110	10.20
	04-May-05	1,080	18.60	8.10	176	9.58
	14-Jun-05	1,960	21.40	8.18	128	9.58
	13-Jul-05	980	22.90	8.13	202	10.40
	18-Aug-05	1,090	20.70	8.02	44	8.83
	07-Sep-05	1,210	20.56	7.31	127	13.08
	05-Oct-05	1,110	18.52	7.37	95	9.32
	01-Nov-05	1,920	19.73	6.76	133	9.44
	16-Dec-05	919	12.10	8.15	-28	10.95
R-27	13-Dec-04	1,150	15.19	8.00	117	11.50
	10-Jan-05	1,060	14.16	8.26	200	11.12
	08-Feb-05	1,080	12.65	7.02	181	13.50
	24-Feb-05	1,190	14.16	7.82	179	9.62
	01-Mar-05	1,260	18.30	7.77	174	10.71
	07-Mar-05	1,060	18.13	8.18	102	11.43
	14-Mar-05	1,450	16.30	8.20	172	10.15
	06-Apr-05	1,150	18.35	8.44	96	9.90
	04-May-05	1,080	18.80	8.23	167	9.51
	14-Jun-05	1,770	22.20	8.24	121	9.43
	13-Jul-05	980	23.00	8.19	180	11.30
	18-Aug-05	---	20.50	8.00	33	8.87
	07-Sep-05	1,160	20.81	7.52	77	11.63
	05-Oct-05	1,120	19.34	7.65	92	9.50
	01-Nov-05	---	19.06	7.28	94	9.21
	16-Dec-05	1,020	11.50	8.09	---	10.99
R-28	13-Dec-04	1,160	15.75	7.86	108	11.32
	10-Jan-05	1,060	14.50	8.22	194	11.43
	08-Feb-05	1,060	13.05	7.59	192	13.04
	08-Mar-05	1,180	16.75	---	168	9.40
	06-Apr-05	1,230	17.01	8.43	73	10.55
	04-May-05	1,080	18.90	8.24	167	9.72
	14-Jun-05	1,610	21.70	8.25	120	9.42
	14-Jul-05	1,170	21.80	8.16	224	10.80
	18-Aug-05	1,340	20.50	7.97	-16	8.54
	07-Sep-05	1,180	20.60	7.69	59	13.03
	05-Oct-05	1,110	18.82	7.84	95	9.78
	01-Nov-05	---	19.08	7.64	88	9.37
	16-Dec-05	914	11.10	8.08	28	11.20
RRB	13-Dec-04	1,200	16.44	7.68	-48	10.88
	08-Feb-05	1,400	12.67	8.01	197	13.76
	07-Apr-05	1,170	16.91	8.22	78	10.78
	04-May-05	1,090	21.00	8.04	106	9.58

**Table 8**  
**Field Water Quality Measurements**  
**December 2004 through December 2005**  
**PG&E Topock Groundwater and Surface Water Monitoring Program**

Location	Sampling Date	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Temperature ( $^{\circ}\text{C}$ )	pH	ORP (mV)	Dissolved Oxygen (mg/L)
<b>Surface Water Stations</b>						
RRB	14-Jun-05	---	26.20	8.23	121	8.90
	14-Jul-05	1,180	24.30	8.24	203	10.60
	18-Aug-05	---	24.60	7.38	4	6.38
	07-Sep-05	1,270	21.97	7.74	82	12.16
	05-Oct-05	1,190	18.65	7.84	146	9.22
	01-Nov-05	---	18.07	8.10	103	9.36

NOTES:

$\mu\text{S}/\text{cm}$  microSiemens per centimeter

ORP oxidation reduction potential, results rounded off to whole point

mV millivolts

mg/L milligrams per liter

(--) data not collected, not available, or rejected

All field measurements were collected during groundwater / surface water sampling using a Horiba U-22 water quality meter and/or Orion pH/ORP meter.

Field water quality parameters from MW-33-40 and PGE-7 are not available for October 2005 monitoring event because wells went dry very soon after pumping began.

Surface water station RRB was not sampled in December 2005 due to the location being dry.

Extraction well TW-2S was not sampled in December 2005 due to concurrent plumbing work for TW-3D and PE-1.

**TABLE 9****Summary of 2005 Quarterly Monitoring Activities***Topock Groundwater and Surface Water Monitoring Program**PG&E Topock Compressor Station*

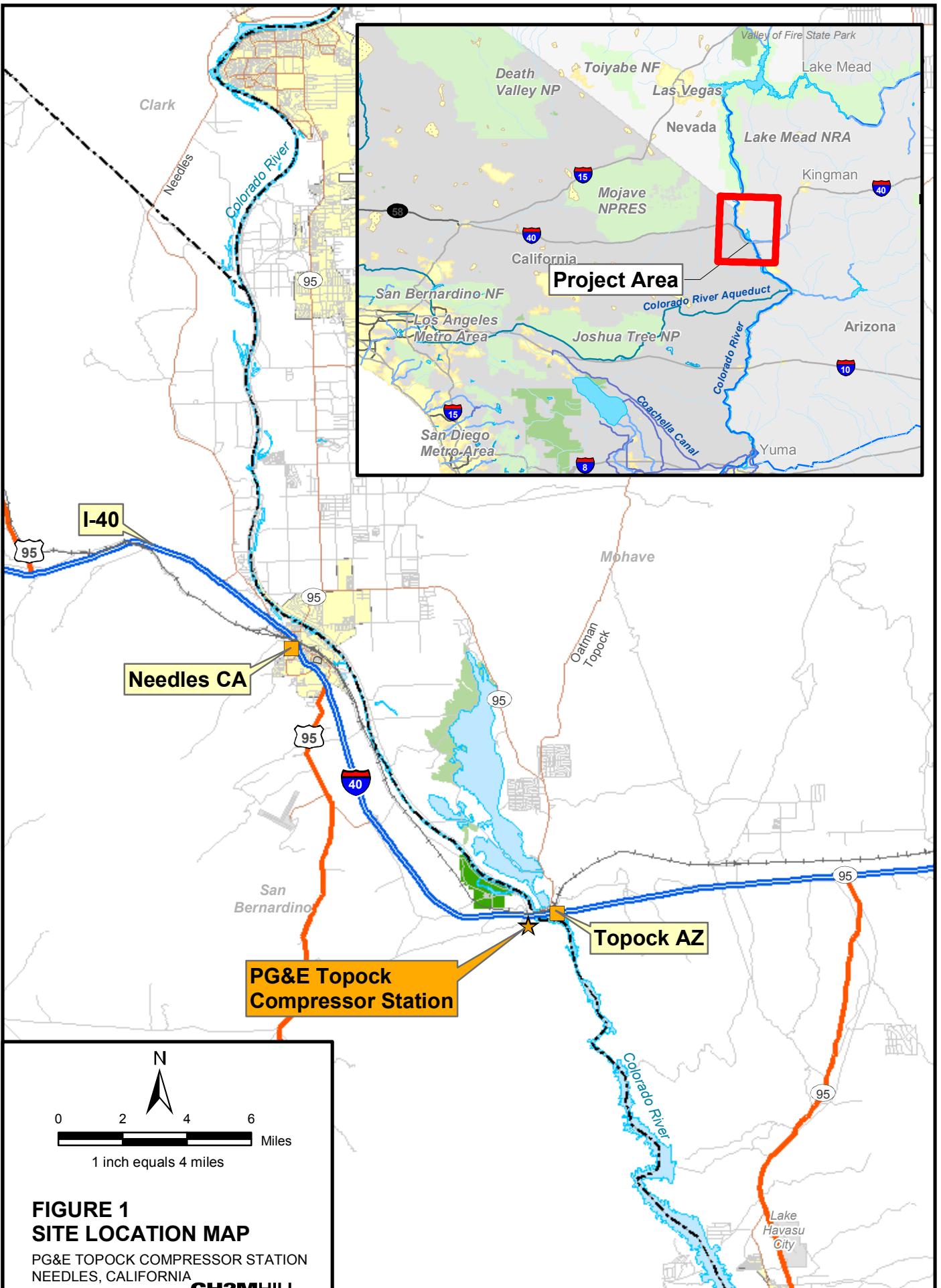
<b>Analytical Parameters</b>	<b>1st Quarter Event</b>	<b>2nd Quarter Event</b>	<b>3rd Quarter Event</b>	<b>4th Quarter Event</b>
	March 7-11, 2005	June 13-17, 2005	October 3-13, 2005	December 12-16, 2005
<b>COCs</b>	55 monitoring wells 8 surface water locations	51 monitoring wells 9 surface water locations	79 monitoring wells 9 surface water locations 9 in-channel surface water stations	61 monitoring wells 8 surface water locations 9 in-channel surface water stations
<b>Title 22 Metals</b>	9 monitoring wells	8 monitoring wells	9 monitoring wells	9 monitoring wells
<b>IM General Chemistry</b>	14 monitoring wells 2 surface water locations	28 monitoring wells 2 surface water locations	14 monitoring wells 2 surface water locations	14 monitoring wells 2 surface water locations

Notes:

Site constituents of concern (COCs) include hexavalent chromium [Cr(VI)], total chromium [Cr(T)], pH, and specific conductance.

Interim Measures (IM) performance monitoring general chemistry parameters include: total dissolved solids (TDS), chloride, sulfate, nitrate, bromide, calcium, magnesium, potassium, sodium, boron, alkalinity, oxygen 18, and deuterium.

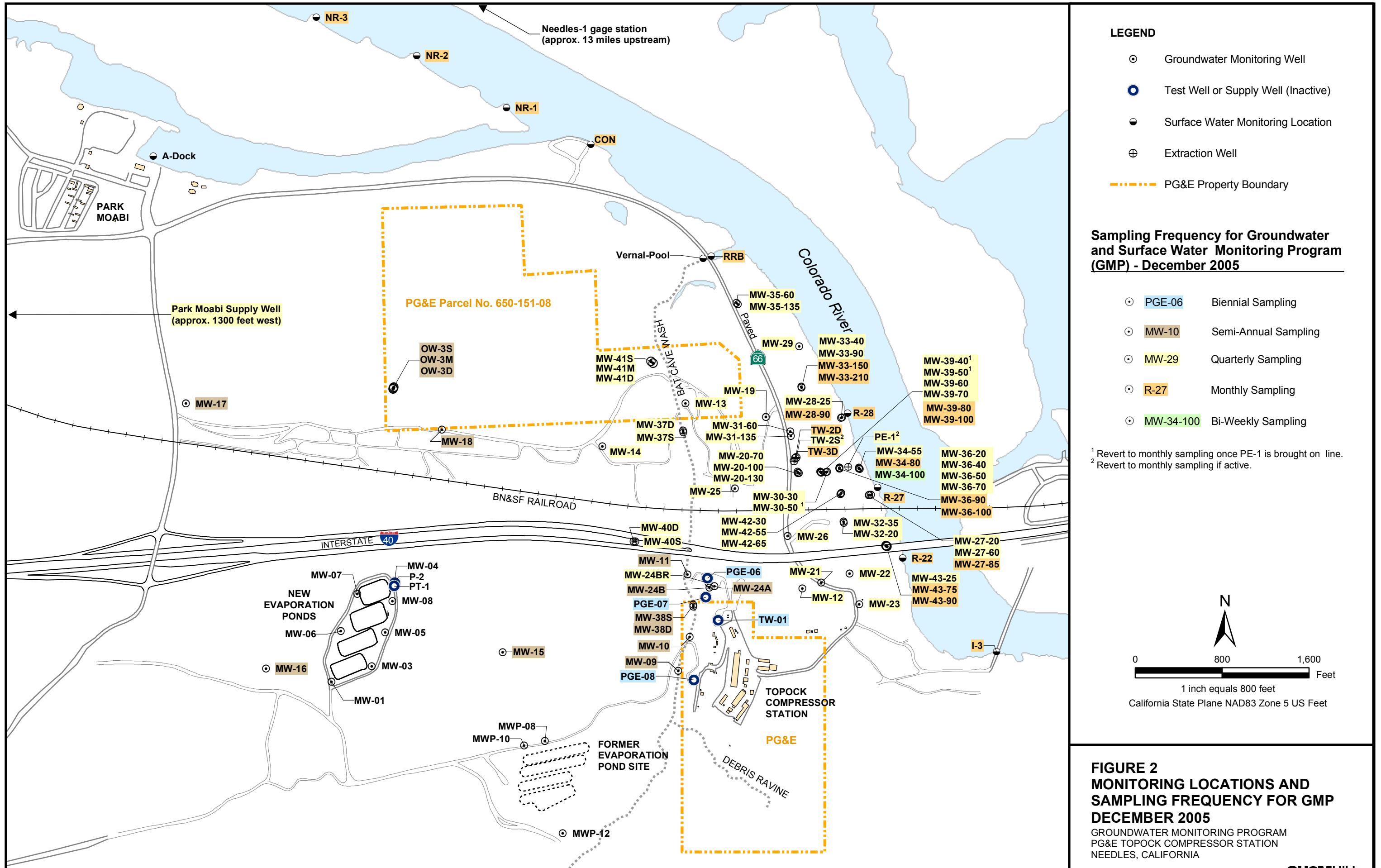
## **Figures**

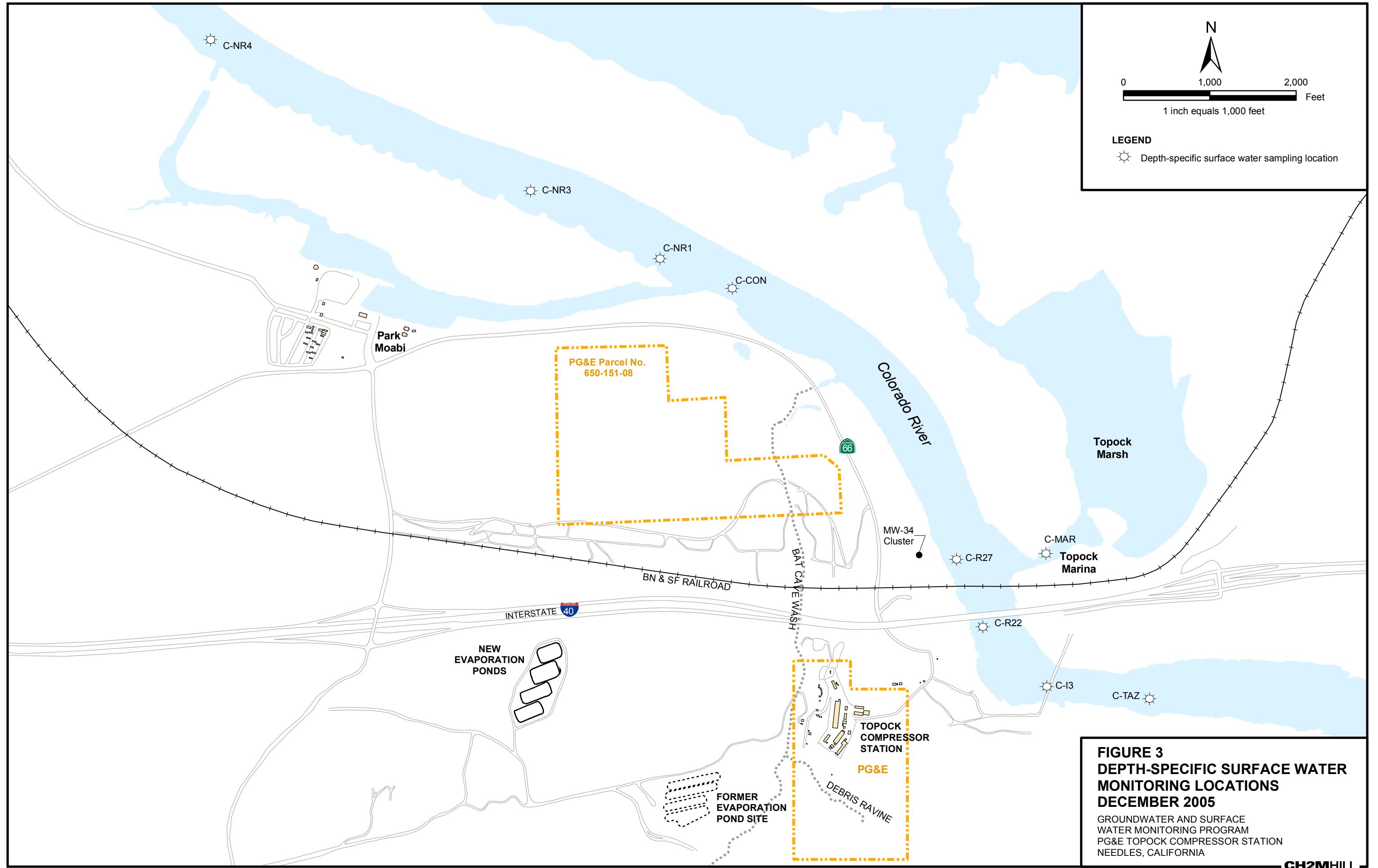


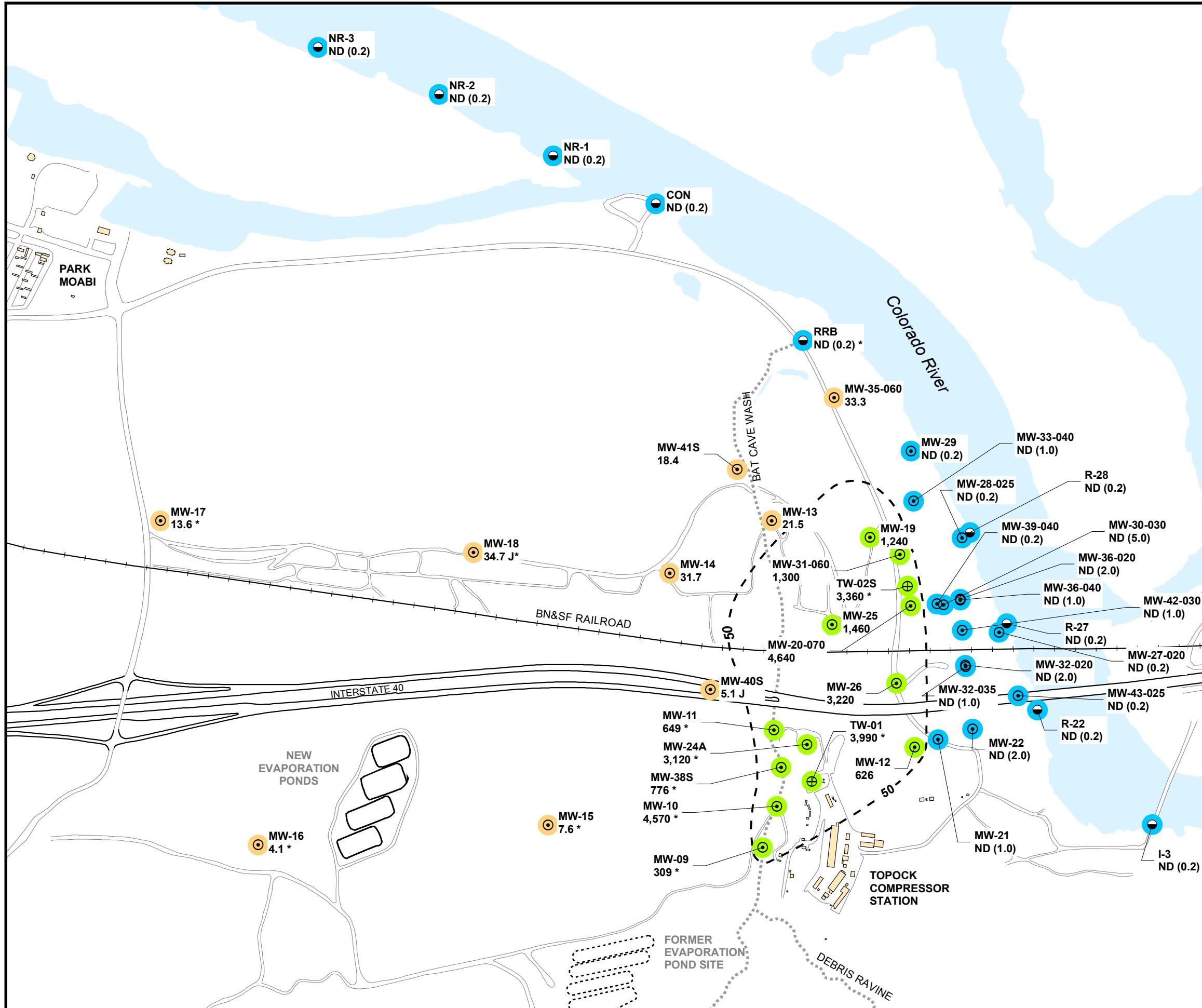
**FIGURE 1**  
**SITE LOCATION MAP**

PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA

**CH2MHILL**



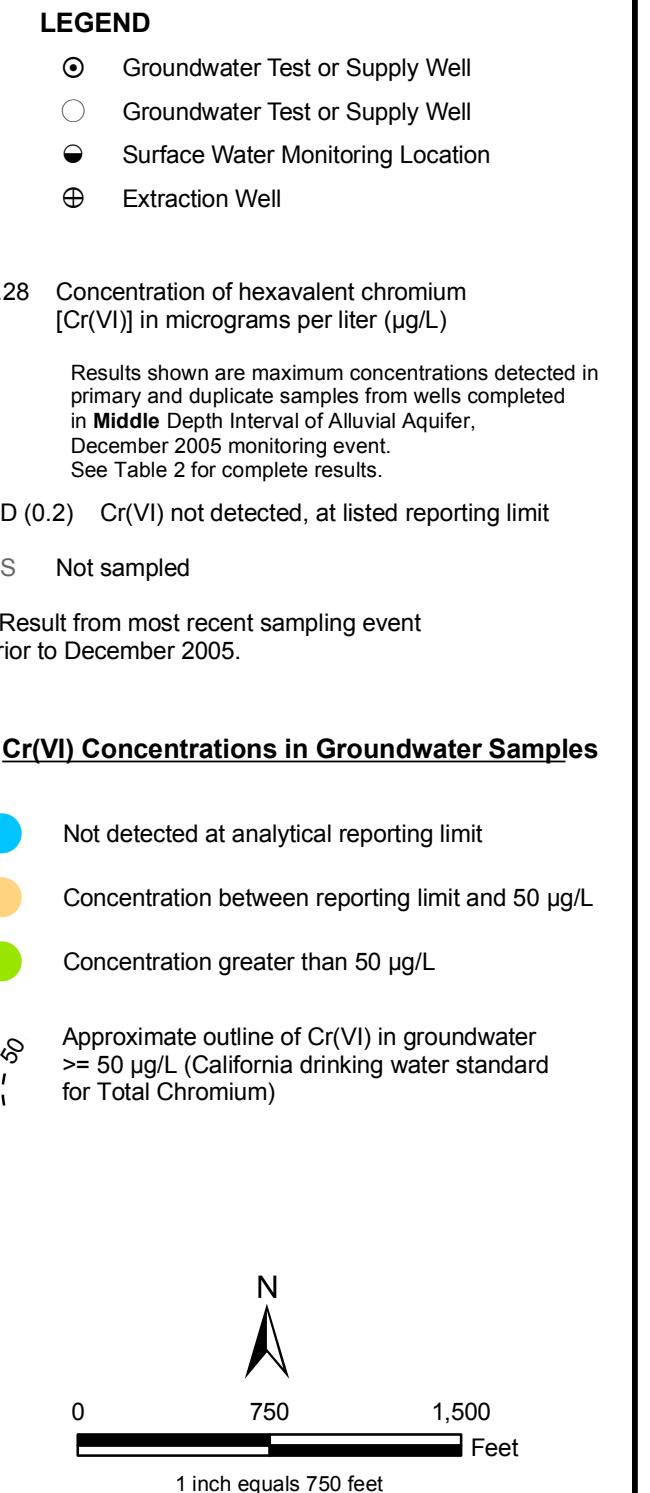
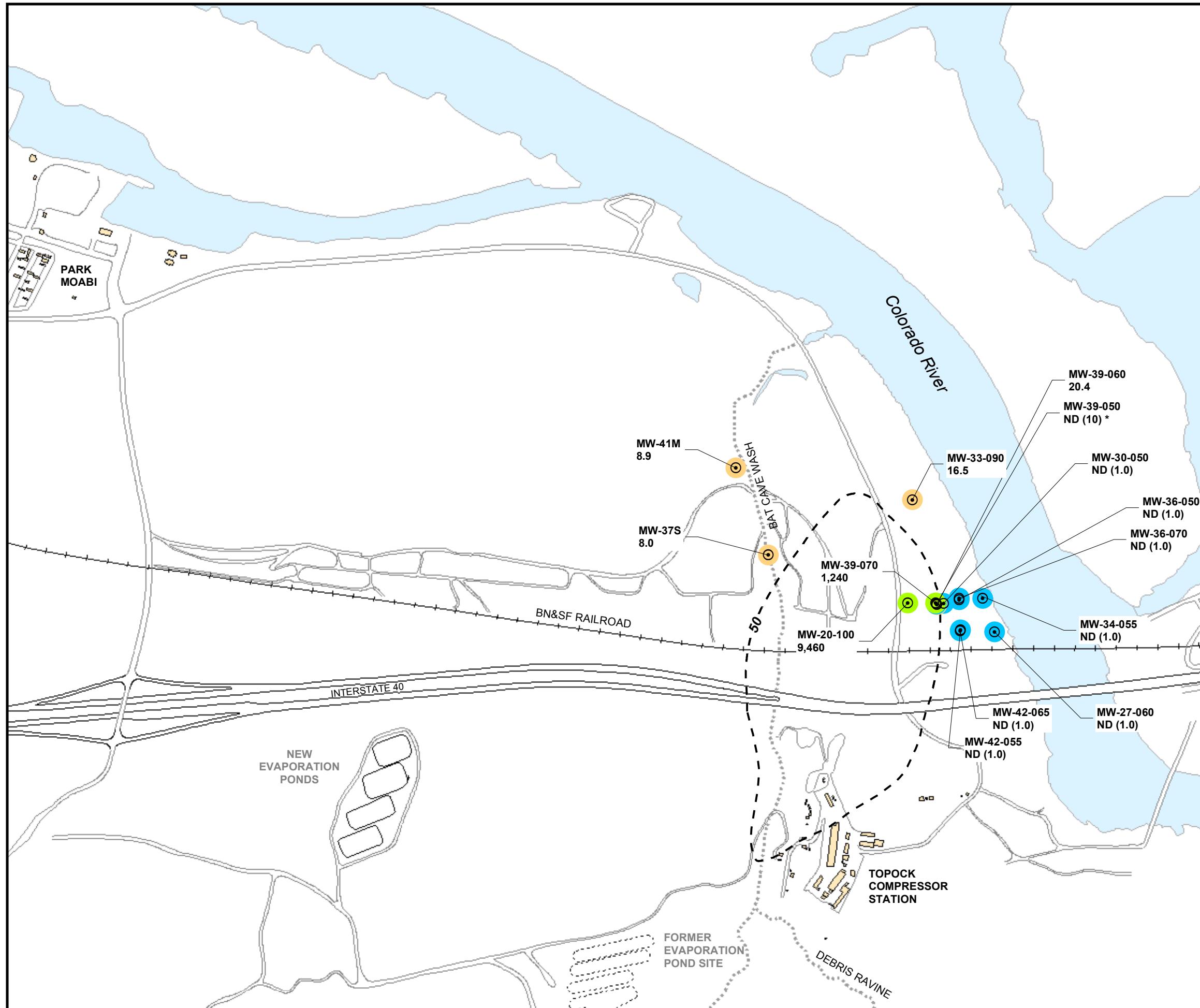




**FIGURE 4A**  
**CR(VI) SAMPLING RESULTS**  
**UPPER DEPTH INTERVAL OF AQUIFER**  
**4TH QUARTER 2005 MONITORING EVENT**

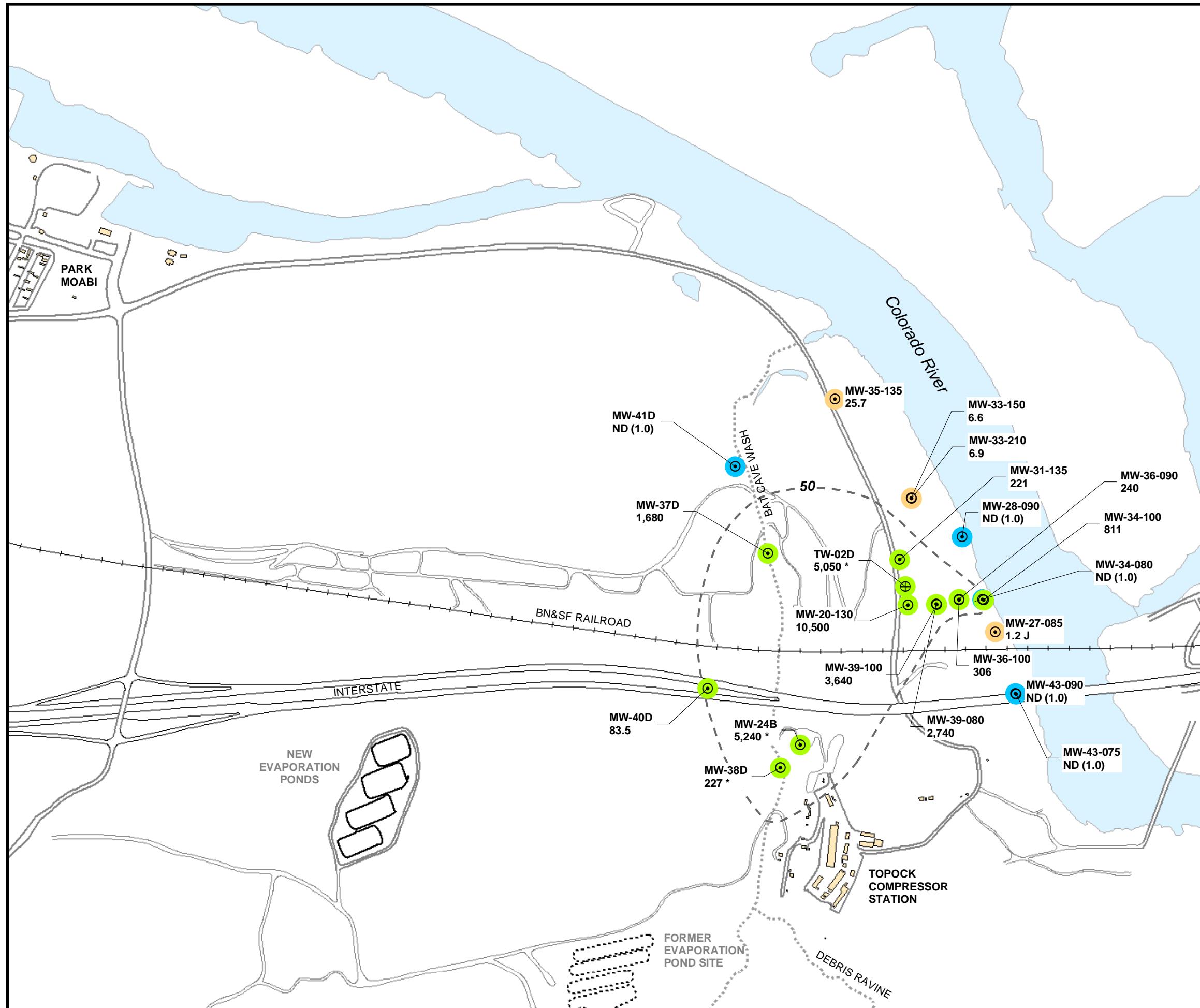
GROUNDWATER MONITORING PROGRAM  
PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA

CH2MHILL



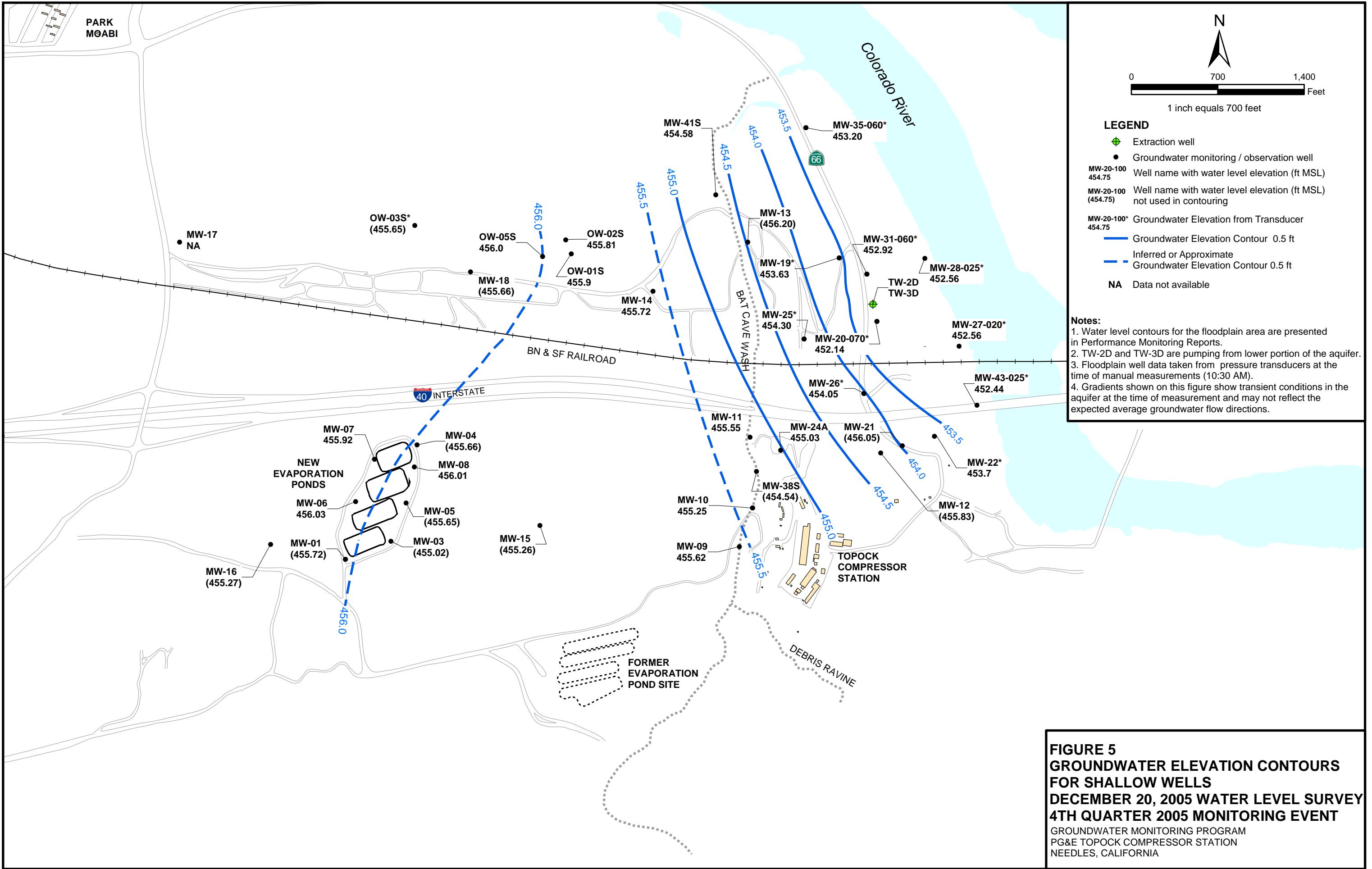
**FIGURE 4B**  
**CR(VI) SAMPLING RESULTS**  
**MIDDLE DEPTH INTERVAL OF AQUIFER**  
**4TH QUARTER 2005 MONITORING EVENT**

GROUNDWATER MONITORING PROGRAM  
PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA



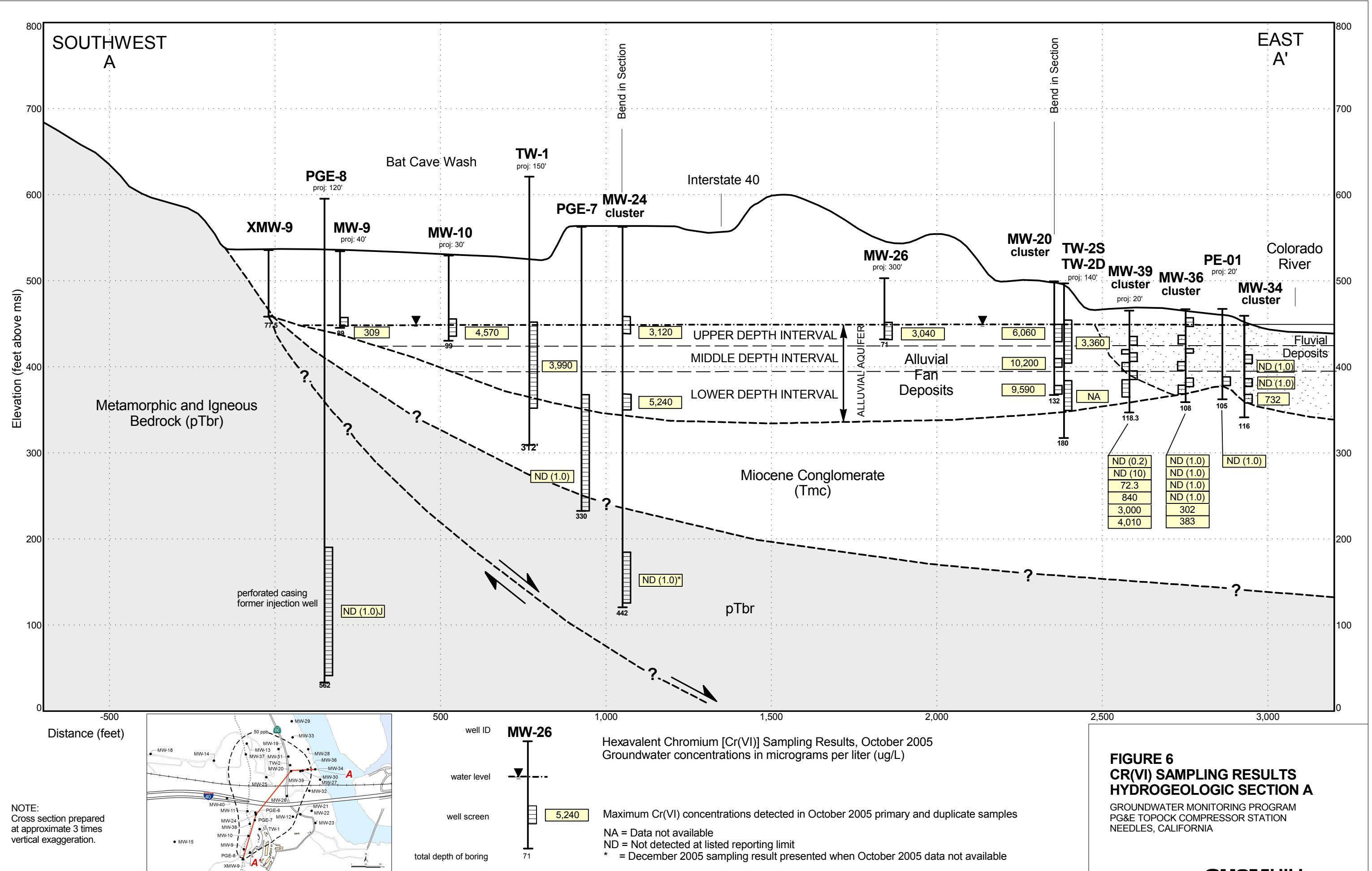
**FIGURE 4C**  
**CR(VI) SAMPLING RESULTS**  
**LOWER DEPTH INTERVAL OF AQUIFER**  
**4TH QUARTER 2005 MONITORING EVENT**

GROUNDWATER MONITORING PROGRAM  
PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA



**FIGURE 5**  
**GROUNDWATER ELEVATION CONTOURS**  
**FOR SHALLOW WELLS**  
**DECEMBER 20, 2005 WATER LEVEL SURVEY**  
**4TH QUARTER 2005 MONITORING EVENT**

GROUNDWATER MONITORING PROGRAM  
PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA



## **FIGURE 6 CR(VI) SAMPLING RESULTS HYDROGEOLOGIC SECTION A**

GROUNDWATER MONITORING PROGRAM  
PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA

**NOTE:**  
Cross section prepared  
at approximate 3 times  
vertical exaggeration.

well ID **MW-26**

water level

well screen

total depth of boring 71

500 1,000 1,500 2,000

Hexavalent Chromium [Cr(VI)] Sampling Results, October 2005  
Groundwater concentrations in micrograms per liter (ug/L)

Maximum Cr(VI) concentrations detected in October 2005 primary and duplicate samples 5,240

NA = Data not available

ND = Not detected at listed reporting limit

\* = December 2005 sampling result presented when October 2005 data not available

**Appendix A**  
**Field Data Sheets and Chain of Custody Records,**  
**December 2005**

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## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-12-05						
Field Team	1	Field Conditions			Page	of _____					
Well/Sample Number	MW-10-087			QC Sample ID	NA		QC Sample Time	1102			
Purge Start Time	1047			Purge Method	Ded. Pump						
Flow Cell: Y / N				Min. Purge Volume(gal)/(L)	45	Purge Rate (gpm)/(mL.ppm)	7.30				
Water Level	Time	Vol. Purged gallons/ liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. oC	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
1050	10	7.51	2.15	45.2	4.29	28.0	0.1	1.4	107		
1052	30	7.49	2.24	23.8	4.23	28.2	0.1	0.5	107		
1054	40	7.48	2.35	9.72	4.14	28.2	0.1	1.5	104		
1057	65	7.47	2.43	4.23	4.03	28.1	0.1	1.6	105		
1059	78	7.40	2.44	4.104	5.99	28.1	0.1	1.6	105		
1100	95	7.46	2.47	NA	5.94	28.2	0.1	1.4	105		
				4.64	RF						
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?	Y	Y	NA	Y	NA	Y	Y	Y			
Previous Field measurement (10/3/2005)	7.73	1610	0.98	5.23	29.1	0.1		136			
Are measurements consistent with previous?	Y	Y	N	Y	NA	Y	-	Y			

Sample Time 1102 Sample Location: pump tubing X well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOC): 75.09

WD (Well Depth - from table) ft btc (98)

SWH (Standing Water Height) = WD-Initial Depth 22.91

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 14.89

Three Casing Volumes = 44.67

Color: clear, grey, yellow, brown, black, cloudy, green

Measure Point: Well TOC		If Transducer			
Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal	
Time	Initial DTW	Time	Final DTW	Time of Reinstallation	
1039	75.09	1104	75.11	NO TRANSDUCER	
Comments: WELL NEEDS NEW SPCKET					

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name PGE Topock GMP  
 Job Number 328225.GM.02.00  
 Field Team 1

Sampling Event 2005-GMP-087-Q4  
 Date 12-12-05  
 Page \_\_\_\_\_ of \_\_\_\_\_

Well/Sample Number MW-11-087

QC Sample ID NA

QC Sample Time \_\_\_\_\_

Purge Start Time 1002

Purge Method Ded. Pump

Flow Cell:  N

Min. Purge Volume (gal)/(L) 47

Purge Rate (gpm)/(mLpm) 11

Water Level	Time	Vol. Purged gallons/liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
1004	15	6.58	2.62	75	6.71	27.4	0.1	1.7	199		
1006	31	6.85	2.61	22	7.31	27.4	0.1	1.7	190		
1008	425	6.93	0.2	7	7.59	27.5	0.1	1.7	184		
1011	60	7.04	1.5	3	7.48	28.0	0.1	1.6	184		
1012	75	7.08	2.47	3	7.82	28.1	0.1	1.6	182		
1015	95	7.14	2.47	9	8.07	27.9	0.1	1.6	181		
1016	110	7.14	2.46	4	8.10	27.8	0.1	1.6	181		
		136									
Parameter Stabilization Criteria		+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV		
Did Parameters Stabilize prior to sampling?		Y	Y	Y	Y	NA	Y	Y	Y		
Previous Field measurement (10/3/2005)	7.42	2190	12.1	5.91	29.7	0.1			142		
Are measurements consistent with previous?	Y	Y	N	N	NA	Y	—	N			

Sample Time 1020 Sample Location: pump tubing  well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 67.30

WD (Well Depth - from table) ft btc (91)

SWH (Standing Water Height) = WD-Initial Depth 23.7

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 15.40

Three Casing Volumes = 46.21

Measure Point: Well TOC Steel Casing

HACH SERIAL # 2005-01A  
 Horiba SERIAL # 404014  
 WATER LEVEL METER SERIAL NUMBER: 36293

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Approx. 5 min After Reinstallation	Time of Removal
0950	67.30	67.29	1025
Comments: NO TRANSDUCER			

Color:  clear, grey, yellow, brown, black, cloudy, green

Odor:  none sulphur, organic, other

Solids:  Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-13-05						
Field Team	1	Field Conditions			Page	1	of	1			
Well/Sample Number MW-12-087			QC Sample ID	NA	QC Sample Time 1135						
Purge Start Time 1109			Purge Method	3WV	Ded. Pump	NO					
Flow Cell: Y / N			Min. Purge Volume (gal)/(L)	45	Purge Rate (gpm)/(mlpm)	3					
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. oC	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
29.42	1111	4	9.57	3.16	11.4	8.10	27.35	0.15	2.0	71	
29.44	1115	18	9.41	2.94	5.55	7.21	27.40	0.15	1.9	75	
29.44	1119	30	9.57	3.03	3.47	7.04	27.84	0.15	2.0	82	
29.45	1123	42	9.53	3.18	1.85	6.82	27.84	0.14	2.0	88	
29.46	1127	54	9.51	3.24	1.37	6.84	27.77	0.16	2.1	93	
29.46	1131	60	9.49	3.26	1.27	6.99	27.74	0.16	2.1	97	
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?							NA				
Previous Field measurement (10/4/2005)			8.63	3040	2.14	6.13	28.2	0.2		55	
Are measurements consistent with previous?							NA				

Sample Time 1135 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 29.09

WD (Well Depth - from table) ft bto (52)

SWH (Standing Water Height) = WD-Initial Depth 22.91

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 14.89

Three Casing Volumes = 44.67

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: 670

HACH - 2005 - 01B  
HORIBA - C100870

NO JF Transducer

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation
1100	29.09	1143	29.11	
Comments:				

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

Topock Sampling Log

Sample Time: 1400 Sample Location: pump tubing well port spigot bailer other

**Comments:** \_\_\_\_\_

Initial Depth to Water (ft BTOC): 33.10

WD (Well Depth - from table) ft btc (52)

SWH (Standing Water Height) = WD-Initial Depth 18.9

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

$$\text{One Casing Volume} = D^2 \cdot SWH \quad | 2.28$$

Three Casing Volumes = 36,85

Color: clear, grey, yellow, brown, black, cloudy, green

Measure Point:	Well TOC	Steel Casing	WATER LEVEL METER SERIAL NUMBER:	4070
		No Transducer		
Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation
324	33.10			
Comments: Root growth inside of well				

Odor: none, sulphur, organic, other

**Solids:** Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-15-05						
Field Team	1	Field Conditions			Page	1 of 1					
Well/Sample Number	MW-14-087			QC Sample ID	NA		QC Sample Time				
Purge Start Time	1202			Purge Method	Ded. Pump						
Flow Cell: Y / N				Min. Purge Volume (gal/L)	38	Purge Rate (gpm)/(mLpm)	7				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
1205	1	7.75	1.65	6.76	6.75	27.6	0.1	1.1	119		
1206	14	7.73	1.65	6.49	6.99	27.4	0.1	1.1	118		
1207	21	7.74	1.64	3.62	7.29	27.7	0.1	1.1	118		
1208	28	7.73	1.64	7.44	7.39	27.7	0.1	1.1	117		
1209	35	7.74	1.64	5.28	7.53	27.7	0.1	1.1	109		
1210	42	7.74	1.64	7.64	7.54	27.4	0.1	1.1	106		
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
<b>Parameter Stabilization Criteria</b>											
Did Parameters Stabilize prior to sampling?						NA					
Previous Field measurement (10/6/2005)			7.82	1660	4.98	7.12	28.53	0.1	26		
Are measurements consistent with previous?						NA					

Sample Time 1212 Sample Location: pump tubing well port ✓ spigot bailer other

Comments:

Initial Depth to Water (ft BTOC): 115.58

WD (Well Depth - from table) ft btc (135)

SWH (Standing Water Height) = WD-Initial Depth 19.42

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 12.62

Three Casing Volumes = 37.86

Measure Point: Well TOC Steel Casing		If Transducer			
Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal	Time of Reinstallation
Time	Initial DTW	Time	Final DTW		
1155	115.58	1218	115.70		
Comments:					

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name PGE Topock GMP  
 Job Number 328225.GM.02.00  
 Field Team 1

Sampling Event 2005-GMP-087-Q4  
 Date 12-12-05  
 Page \_\_\_\_\_ of \_\_\_\_\_

Well/Sample Number MW-19-087

QC Sample ID NA

QC Sample Time 1430

Purge Start Time 1410

Purge Method Ded. Pump

Min. Purge Volume (gal/L) 4.42

Purge Rate (gpm)/(mLpm)

Flow Cell: Y / N

Water Level	Time	Vol. Purged gallons/liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
	1412	15	7.57	2.20	10.6	8.21	26.4	0.1	1.4	154	
	1414	30	7.57	2.17	6.35	7.97	26.8	0.1	1.4	155	
	1417	45	7.52	2.16	4.00	7.81	26.8	0.1	1.4	155	
	1420	60	7.52	2.15	4.09	7.70	26.8	0.1	1.4	154	
	1422	75	7.52	2.15	3.80	7.70	26.9	0.1	1.4	154	
	1424	90	7.51	2.14	3.90	7.68	26.9	0.1	1.4	154	
	1427	105	7.51	2.14	3.08	7.68	26.9	0.1	1.4	153	
<b>Parameter Stabilization Criteria</b>		+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV		
Did Parameters Stabilize prior to sampling?						NA					
Previous Field measurement (10/4/2005)	7.75	2150	2	6.87	28.5	0.1			30		
Are measurements consistent with previous?					NA						

Sample Time 1430 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 45.95

WD (Well Depth - from table) ft btc (67)

SWH (Standing Water Height) = WD-Initial Depth 21.05

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 13.48

Three Casing Volumes = 41.04

Measure Point: Well TOC Steel Casing

HACH SERIAL # 2005-01A  
 HORIBA SERIAL # 404014  
 WATER LEVEL METER SERIAL NUMBER: 36293

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation
1403	45.97			
Comments:				

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name Job Number Field Team	PGE Topock GMP 328225.GM.02.00 3		Field Conditions		Sampling Event Date Page	2005-GMP-087-Q4 12-15-05 1 of 1					
Well/Sample Number	MW-20-070-087		QC Sample ID	NA		QC Sample Time					
Purge Start Time	1332		Purge Method	Ded. Pump							
Flow Cell: Y / N			Min. Purge Volume (gal/L)	47		Purge Rate (gpm) (mLpm)					
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
1334	10	7.62	3.17	2.16	8.11	27.4	0.2	2.1	147		
1335	20	7.60	3.14	29.4	8.08	27.6	0.2	2.1	148		
1336	30	7.58	3.17	15.9	8.16	27.7	0.2	2.1	149		
1337	40	7.57	3.19	9.77	8.02	27.8	0.2	2.1	149		
1338	50	7.58	3.19	6.67	8.03	27.4	0.2	2.1	149		
1339	40	7.59	3.21	7.33	7.97	27.4	0.2	2.1	149		
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?						NA					
Are measurements consistent with previous?						NA					

Sample Time 1342 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 47.29

WD (Well Depth - from table) ft btc (71)

SWH (Standing Water Height) = WD-Initial Depth 23.71

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 15.04

Three Casing Volumes = 46.94

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: 100469

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		If Transducer	
Time	Initial DTW	Time	Final DTW	Time of Removal	Time of Reinstallation
1329	47.29				
Comments:					

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP		Sampling Event	2005-GMP-087-Q4							
Job Number	328225.GM.02.00		Date	12-15-05							
Field Team	3	Field Conditions	Page	of _____							
Well/Sample Number MW-20-100-087			QC Sample ID	NA	QC Sample Time _____						
Purge Start Time 1256			Purge Method	Ded. Pump							
Flow Cell: Y / N			Min. Purge Volume (gal/L)	104	Purge Rate (gpm) (mLpm)	8					
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
1300	20	7.56	3.87	3.91	3.55	27.7	0.2	2.5	140		
1302	40	7.59	3.92	21.0	3.33	27.9	0.2	2.6	140		
1307	60	7.61	3.96	14.4	3.24	27.3	0.2	2.6	140		
1310	80	7.62	3.97	10.9	3.18	27.3	0.2	2.6	140		
1313	100	7.61	3.97	9.04	3.07	27.9	0.2	2.6	140		
1315	120	7.62	3.98	7.15	3.03	28.0	0.2	2.6	140		
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?						NA					
Are measurements consistent with previous?						NA					

Sample Time 1320 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 48.13

WD (Well Depth - from table) ft btc (101)

SWH (Standing Water Height) = WD-Initial Depth 52.87

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 34.34

Three Casing Volumes = 103.09

Measure Point: Well TOC Steel Casing

HACH - 2005 01A  
HORIBA - 404014  
WATER LEVEL METER SERIAL NUMBER: 100467

Initial DTW / Before Removal		If Transducer			
Time	Initial DTW	Time	Final DTW	Time of Removal	Time of Reinstallation
1253	48.13	1325	50.00		
Comments:					

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP				Sampling Event	2005-GMP-087-Q4					
Job Number	328225.GM.02.00				Date	12-16-05					
Field Team	3 Field Conditions				Page	1 of 1					
Well/Sample Number		MW-20-130-087		QC Sample ID	NA	QC Sample Time					
Purge Start Time		0844		Purge Method	GRUNDfos	Ded. Pump					
Flow Cell: Y / N				Min. Purge Volume (gal)/(L)	167	Purge Rate (gpm)/(mLpm)	3				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
55.60	0854	30	7.82	7.36	1.58	2.49	26.63	0.40	4.6	178	
55.60	0904	60	7.96	11.4	1.33	3.27	27.18	0.65	7	146	
55.60	0914	90	7.99	11.5	0.59	3.37	26.88	0.40	7	137	
55.60	0924	120	7.99	11.6	0.49	3.31	27.37	0.40	7	131	
55.60	0934	150	8.00	11.7	0.37	3.33	27.16	0.40	7	126	
55.60	0941	160	7.99	11.7	0.38	3.32	27.35	0.67	7	123	
49.58 0949											
Parameter Stabilization Criteria		+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV		
Did Parameters Stabilize prior to sampling?						NA					
Are measurements consistent with previous?						NA					

Sample Time 0945 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 49.11

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

WD (Well Depth - from table) ft btc (133)

If Transducer

SWH (Standing Water Height) = WD-Initial Depth 84

Initial DTW / Before Removal

Approx. 5 min After Reinstallation

Time of Removal 0939

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

Time Initial DTW

Time Final DTW

Time of Reinstallation 0950

One Casing Volume = D\*SWH 55.44

0838 49.11

Three Casing Volumes = 166.32

Comments:

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name Job Number Field Team	PGE Topock GMP 328225.GM.02.00 1	Sampling Event Date Page	2005-GMP-087-Q4 12-13-05 1 of 1								
Well/Sample Number	MW-21-087	QC Sample ID	NA								
Purge Start Time		Purge Method	Ded. Pump								
Flow Cell: Y / N		Min. Purge Volume (gal)/(L)	17								
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
1228	2	7.94	12.1	4.23	5.35	26.22	0.71	8	-90		
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?							NA				
Previous Field measurement (10/5/2005)			7.24	11400	6.66	2.42	28.26	0.6		-149	
Are measurements consistent with previous?							NA				

Sample Time 12/14/05 12:18 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: WELL WENT DRY AFTER 2 GAL., WILL BE SAMPLED ON 12-14-05

Initial Depth to Water (ft BTOC): 50.65

WD (Well Depth - from table) ft btc (59)

SWH (Standing Water Height) = WD-Initial Depth 8.35

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 5.42

Three Casing Volumes = 16.28

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

Initial DTW / Before Removal		If Transducer			
		Approx. 5 min After Reinstallation		Time of Removal _____	
Time	Initial DTW	Time	Final DTW	Time of Reinstallation _____	
1224	50.65				
Comments:					

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/16/05						
Field Team	2	Field Conditions	Sunny, 52°F, Light Breeze								
Well/Sample Number	MW-22-087			QC Sample ID	NA			QC Sample Time			
Purge Start Time	1217			Purge Method	Parastatic Dredge Pump			Tubing			
Flow Cell	(Y) N			Min. Purge Volume (gal)/(L)	1			Purge Rate (gpm)/(mLpm)	.5 = .3		
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
7.62	1217	0	6.90	30.0	62.2	7.42	22.78	1.87	18	-95	Cloudy Clear/Yellowish
8.95	1219	.5	6.60	30.0	131	3.68	23.25	1.87	18	-96	Turbid/Orangish
8.87	1221	1.0	6.74	30.8	216	3.06	23.64	1.91	19	-96	Turbid/Slight orangish
8.67	1225	1.5	6.74	31.0	118	3.85	23.66	1.94	19	-92	Turbid / "
9.06	1228	2.0	6.70	31.1	79.2	2.71	24.05	1.95	19	-90	Cloudy / "
9.26	1231	2.5	6.68	31.1	57.1	2.51	24.29	1.97	19	-91	Cloudy / "
9.34	1236	3.0	6.66	31.1	41.5	2.37	24.47	1.95	19	-92	Cloudy / "
9.42	1242	4.0	6.65	31.1	29.7	2.31	24.58	1.95	19	-91	Semi-Clear
9.51	1248	5.0	6.65	31.2	22.6	2.31	24.64	1.96	19	-90	Clear
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?	✓		✓		✓	✓	NA	✓	✓	✓	✓
Previous Field measurement (10/4/2005)	6.66		35500		999	2.51	32.96	2.27	-86		
Are measurements consistent with previous?							NA				

Sample Time 12:50 Sample Location: pump tubing ✓ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 6.93

WD (Well Depth - from table) ft btc (13)

SWH (Standing Water Height) = WD-Initial Depth 6.07

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH

Three Casing Volumes = 3

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

If Transducer

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation

Comments: \_\_\_\_\_

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP				Sampling Event	2005-GMP-087-Q4					
Job Number	328225.GM.02.00				Date	12-13-05					
Field Team	1	Field Conditions				Page	1 of 1				
Well/Sample Number		MW-23-087		QC Sample ID	NA	QC Sample Time					
Purge Start Time		1202		Purge Method	Ded. Pump						
Flow Cell: Y / N				Min. Purge Volume (gal)/(L)	58	Purge Rate(gpm)/(mLpm)					
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
	1202	3	8.00	18.4	223	6.76	27.57	1.11	12	9	
	1203	5	7.89	19.0	0.62	5.00	27.69	1.14	12	22	
	1205	10	7.86	19.2	2.74	4.19	27.76	1.15	12	35	
	1207	14	7.85	19.3	<del>10.4</del>	4.57	27.15	1.19	12	39	
	12 - 14 - 05	DTW	54.00	1130		0.92					
	1143	13	8.12	15.8	5.44	7.89	27.35	0.92	10	94	
	1144	16	8.13	15.8	17.4	8.54	26.35	0.93	10	94	
Parameter Stabilization Criteria		+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV		
Did Parameters Stabilize prior to sampling?						NA					
Previous Field measurement (10/4/2005)		7.25	19400	16.7	2.19	27.9	1.2		-19		
Are measurements consistent with previous?						NA					

Sample Time 12/14/05 1145 Sample Location: pump tubing well port spigot bailer other

Comments: WELL DRY AT 14 GAL, WILL BE SAMPLED ON 12-14-05

Initial Depth to Water (ft BTOC): 52.64

WD (Well Depth - from table) ft btc (82)

SWH (Standing Water Height) = WD-Initial Depth 29.36

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 19.08

Three Casing Volumes = 57.25

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: 670

HACH - 2005-01B

HORIBA - 100876

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation
1158	52.64			
Comments:				

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-15-05						
Field Team	1	Field Conditions			Page	1 of 1					
Well/Sample Number MW-24BR-087			QC Sample ID NA		QC Sample Time _____						
Purge Start Time 1441			Purge Method GRUNDfos Ded. Pump								
Flow Cell: Y / N			Min. Purge Volume (gal)(L) 659		Purge Rate (gpm)(mlpm) 2						
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. oC	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
1444	6	7.76	18.1	8.03	3.17	27.2	1.1	12	-249		
1444	10	769	18.1	7.60	2.27	28.3	1.1	12	-279		
1448	14	7.70	18.1	8.10	2.15	28.3	1.1	12	-295		
1451	20	7.71	18.0	9.97	2.25	28.2	1.1	12	-307		
1453	24	7.72	18.8	13.4	2.15	28.3	1.1	12	-318		
1456	30	7.71	18.4	16.0	2.27	28.3	1.1	12	-325		
1459	36	7.71	18.5	13.6	2.23	28.2	1.1	12	-330		
1501	40	7.71	18.5	20.2	2.25	28.2	1.1	12	-311		
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?						NA					
Previous Field measurement (3/8/2005)			7.72	15200	1.11	1.31	30.04	0.71		-351	
Are measurements consistent with previous?						NA					

Sample Time 1450 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 108.20

WD (Well Depth - from table) ft btc (441)

SWH (Standing Water Height) = WD-Initial Depth 332.8

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 219.64

Three Casing Volumes = 658.94

Measure Point: Well TOT Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation
1425	108.20			
Comments:				

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name Job Number Field Team	PGE Topock GMP 328225.GM.02.00 1		Field Conditions		Sampling Event Date Page	2005-GMP-087-Q4 12-14-05 1 of 1					
Well/Sample Number	MW-25-087		QC Sample ID	MW-92-087		QC Sample Time	<del>BX5</del> 1330				
Purge Start Time	1310		Purge Method	Ded. Pump							
Flow Cell: Y / N			Min. Purge Volume (gal)/(L)	31		Purge Rate (gpm)/(mLpm)	10				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
1313	15	8.44	0.914	3.30	7.13	28.08	0.04	0.59	154		
1315	30	8.43	0.993	6.65	7.84	28.72	0.04	0.63	154		
1817	45	8.43	1.23	3.53	8.03	28.75	0.04	0.8	155		
1319	60	8.40	1.22	6.13	7.97	28.85	0.04	0.8	156		
88.92											
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?						NA					
Previous Field measurement (10/4/2005)	7.65	1510	11	6.72	29.23	0.1			55		
Are measurements consistent with previous?					NA						

Sample ~~1315~~ 1330 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 88.30

WD (Well Depth - from table) ft btc (107)

SWH (Standing Water Height) = WD-Initial Depth 12.7

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 12.15

Three Casing Volumes = 36.46

Measure Point: Well TOC Steel Casing

HACH C 10115  
HORIBA - C10087  
WATER LEVEL METER SERIAL NUMBER: C100468

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation
13.07	08.30	13.20	88.92	
Comments:				

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-12-05						
Field Team	1	Field Conditions			Page	of					
Well/Sample Number	MW-26-087			QC Sample ID	NA		QC Sample Time	1345			
Purge Start Time	1317			Purge Method	Ded. Pump						
Flow Cell: Y / N				Min. Purge Volume (gal)/(L)	51	Purge Rate (gpm)/(mLpm)	5				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
1318	15	7.44	3.31	59.0	4.36	28.3	0.2	1.9	171	PUMP IS PULLING IN	
1320	30	7.42	2.95	248	0.57	28.7	0.2	2.0	165	RECHARGED WATER,	
1324	45	7.39	3.40	94	9.53	29.1	0.2	2.2	161	WILL CAUSE DO TO	
1327	65	7.37	3.41	76.2	9.51	28.8	0.2	2.2	161	VARY, LIKEWISE	
1329	65	7.36	3.41	48.5	9.42	28.7	0.2	2.2	161	WITH TURBIDITY	
1332	75	7.35	3.43	70.8	9.30	28.9	0.2	2.2	161		
1334	85	7.34	3.43	83.7	9.54	28.9	0.2	2.2	162		
1337	95	7.33	3.44	82.8	10.30	29.1	0.2	2.2	161		
1339	105	7.33	3.44	79.1	9.93	29.0	0.2	2.2	161		
Parameter Stabilization Criteria		+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV		
Did Parameters Stabilize prior to sampling?					NA						
Previous Field measurement (10/4/2005)		7.54	3380	213	8.79	29.9	0.2		45		
Are measurements consistent with previous?					NA						

Sample Time \_\_\_\_\_ Sample Location: pump tubing A well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 47.85

WD (Well Depth - from table) ft bto (74)

SWH (Standing Water Height) = WD-Initial Depth 26.15

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 10.99Three Casing Volumes = 50.99

Measure Point: Well TOC Steel Casing HACH SERIAL # 2005-01A

HORIBA SERIAL # 404014

WATER LEVEL METER SERIAL NUMBER: 36293

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation
1319	47.85			
Comments:				

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/14/05						
Field Team	2	Field Conditions	Sunny, cool	Page	1	of	1				
Well/Sample Number	MW-27-020-087			QC Sample ID	NA		QC Sample Time				
Purge Start Time	1415			Purge Method	Ded. Pump						
Flow Cell	(Y)	N		Min. Purge Volume (gal)/(L)	5.9	Purge Rate (gpm)/(mLpm)					
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
7.90	1416	1	8.25	1.14	—	5.33	18.99	0.05	0.7	-140	
8.91	1419	4	7.86	1.11	1.89	3.04	19.06	0.05	0.7	-156	
8.92	1422	7	7.75	1.11	2.09	2.68	18.80	0.05	0.7	-163	
8.93	1425	10	7.66	1.11	0.82	2.44	18.73	0.05	0.7	-167	
8.94	1428	13	7.61	1.11	0.75	2.29	18.66	0.05	0.7	-169	
8.94	1431	16	7.58	1.12	0.74	2.19	18.69	0.05	0.7	-171	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?	(Y)	(Y)	—	(Y)	NA	(Y)		(Y)			
Previous Field measurement (10/5/2005)	7.1	1170	1.05	1.82	22.21	0.05			-158		
Are measurements consistent with previous?	(Y)	(Y)	(Y)	(Y)	NA	(Y)		(Y)			

Sample Time 1432 Sample Location: pump tubing X well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 7.40

WD (Well Depth - from table) ft btc (19)

SWH (Standing Water Height) = WD-Initial Depth

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 1.972

Three Casing Volumes = 5.9 g+l

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: PGE-2005-03

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
1412	7.40		
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/15/05						
Field Team	2	Field Conditions	(00), windy								
Well/Sample Number	MW-27-060-087			QC Sample ID	NA			QC Sample Time			
Purge Start Time	1106			Purge Method				Ded. Pump	N		
Flow Cell:	O	/ N		Min. Purge Volume (gal)/(L)	26 gal	Purge Rate (gpm)/(mLpm)	2 gpm				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
9.4	1108	4	6.69	9.3	35.9	5.06	20.43	0.52	6	-52	
9.4	1111	10	6.57	9.9	1.75	3.52	20.62	0.55	6	-124	
9.4	1113	14	6.55	9.9	0.75	3.25	20.65	0.56	6	-129	
9.4	1115	18	6.53	10.0	0.95	3.10	20.64	0.56	6	-132	
9.42	1117	22	6.52	10.0	0.56	2.99	20.66	0.56	6	-133	
9.42	1119	26	6.52	10.0	0.68	2.89	20.71	0.56	6	-134	
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?			Y	Y	Y	Y	NA	Y	Y	Y	
Previous Field measurement (10/5/2005)			6.48	13200	1.02	3.16	21.69	0.76	-	-97	
Are measurements consistent with previous?			Y			Y	NA	Y	Y	N	

Sample Time 1120 Sample Location: pump tubing X well port spigot bailer other

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 8.80

WD (Well Depth - from table) ft btc (59)

SWH (Standing Water Height) = WD-Initial Depth 56.2

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 8.53

Three Casing Volumes = 25.6

Color: clear, grey, yellow, brown, black, cloudy, green

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: PGE Solinst 300'

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
1059	8.80	1128	8.85
Comments: _____			

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4							
Job Number	328225.GM.02.00			Date	12 / 15 / 05							
Field Team	2	Field Conditions	cool, windy			Page	1 of 1					
Well/Sample Number	MW-27-085-087			QC Sample ID	NA		QC Sample Time					
Purge Start Time	1027			Purge Method			Ded. Pump	N				
Flow Cell	(Y) N			Min. Purge Volume (gal)/(L)	36		Purge Rate (gpm)/(mLpm)	2 gpm				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)	
10.17	1029	4	6.18	13.3	4.88	8.09	12.84	0.77	9	197		
10.17	1031	8	6.07	14.3	2.36	4.58	17.37	0.83	9	-82		
10.18	1033	12	6.09	14.1	1.03	3.19	20.36	0.83	9	-115		
10.17	1038	22	6.22	14.5	0.99	2.88	21.12	0.84	9	-125		
10.18	1041	28	6.28	14.4	0.65	2.83	21.09	0.83	9	-126		
10.19	1043	32	6.31	14.4	0.63	2.80	21.16	0.83	9	-125		
10.19	1046	38	6.34	14.3	0.31	2.76	21.18	0.83	9	-124		
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV		
Parameter Stabilization Criteria												
Did Parameters Stabilize prior to sampling?	Y		Y		Y		Y		Y			
Previous Field measurement (11/3/2005)	7.17		23100		1.09		1.13		22.04		1.4	-150
Are measurements consistent with previous?	N		N		Y		N		N		-	Y

Sample Time 1047 Sample Location: pump tubing X well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOC): 8.58

WD (Well Depth - from table) ft btc (80)

SWH (Standing Water Height) = WD-Initial Depth 71.42

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 12.14

Three Casing Volumes = 36.4

Color clear, grey, yellow, brown, black, cloudy, green

Measure Point: Well TOC Steel Casing

WATER LEVEL METER SERIAL NUMBER: PGE Soltast 300

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
1020	8.58	1057	8.60
Comments:			

Odo: none sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4							
Job Number	328225.GM.02.00			Date	12/16/05							
Field Team	2	Field Conditions	sunny	Page	1	of	1					
Well/Sample Number MW-28-025-087				QC Sample ID	NA	QC Sample Time						
Purge Start Time 1001				Purge Method	Ded. Pump Y							
Flow Cell N				Min. Purge Volume (gal/L)	5.8	Purge Rate (gpm)/(mLpm)	1					
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. oC	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)	
14.63	1003	2	7.23	1.44	15.6	2.42	23.7	0.1	0.9	-91		
14.66	1006	5	7.17	1.39	75.9	2.34	23.8	0.1	0.9	-78		
14.66	1009	8	7.16	1.39	15.2	2.46	23.2	0.1	0.9	-72		
14.65	1012	11	7.16	1.39	10.9	2.49	23.2	0.1	0.9	-70		
14.66	1015	14	7.16	1.39	7.57	2.52	23.1	0.1	0.9	-69		
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV		
Did Parameters Stabilize prior to sampling?			Y	Y	—	Y	NA	X	—	—		
Previous Field measurement (10/6/2005)			6.98	1300	2.99	2.01	25.22	0.06		-35		
Are measurements consistent with previous?			Y	Y	N	Y	NA	Y	—	N		

Sample Time 1016 Sample Location: pump tubing X well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOC): 13.56

WD (Well Depth - from table) ft btc (25)

SWH (Standing Water Height) = WD-Initial Depth 11.44

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 1.9

Three Casing Volumes = 5.8

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: PGE 2005-01A

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
1000	13.56	1020	13.6
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP				Sampling Event	2005-GMP-087-Q4					
Job Number	328225.GM.02.00				Date	12/12/05					
Field Team	2	Field Conditions <u>Sunny, cool</u>				Page	1 of 1				
Well/Sample Number		MW-28-090-087		QC Sample ID	NA		QC Sample Time				
Purge Start Time		0930		Purge Method	Ded. Pump Y						
Flow Cell		Y	N	Min. Purge Volume (gal)/(L)	43 gal	Purge Rate (gpm)/(mLpm)	2 gpm				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
15.80	0933	6	6.89	7.46	1.78	2.44	20.7	0.4	4.8	-177	
15.80	0938	16	7.27	8.42	1.30	2.30	22.0	0.5	5.5	-180	
15.81	0941	22	7.33	8.50	0.53	2.36	22.0	0.5	5.5	-177	
15.81	0946	32	7.38	8.47	0.38	2.43	22.0	0.5	5.5	-177	
15.82	0949	38	7.41	8.45	0.45	2.45	22.0	0.5	5.5	-176	
15.80	0952	44	7.42	8.43	0.59	2.47	21.8	0.5	5.5	-176	
Parameter Stabilization Criteria		+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV		
Did Parameters Stabilize prior to sampling?		Y	Y	Y	Y	NA			Y		
Previous Field measurement (11/2/2005)		7.65	9720	0.37	1.39	22.62	0.5		-183		
Are measurements consistent with previous?		Y	N	Y	N	NA	Y		Y		

Sample Time 0954 Sample Location: pump tubing X well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOC): 14.33

WD (Well Depth - from table) ft btc (98)

SWH (Standing Water Height) = WD-Initial Depth 83.67

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 14.22Three Casing Volumes = 42.7

Measure Point: Well TOP Steel Casing WATER LEVEL METER SERIAL NUMBER: PGE 2005-01A

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
0915	14.33	0957	14.39
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/12/05						
Field Team	2	Field Conditions	Cool, cloudy								
Well/Sample Number MW-29-087			QC Sample ID NA			QC Sample Time _____					
Purge Start Time	1027		Purge Method Grundfos			Ded. Pump	No				
Flow Cell	Y	N	Min. Purge Volume (gal)/(L) 6 gal			Purge Rate (gpm)/(mLpm) 0.5 gpm					
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
35.49	1029	1 gal	6.33	9.54	12.0	6.14	11.48	0.62	6.0	181	brown, cloudy
36.95	1131	2 gal	7.18	9.0	>999	3.87	18.13	0.38	4.2	-72	" "
37.23	1133	3	7.65	4.83	>999	2.99	22.34	0.26	3.2	-108	slightly cloudy
	1135	4	7.78	5.60	923	3.04					Well went dry
36.12	1146	5	7.78	6.97	>999	3.50	21.47	0.42	5.0	-108	brown, cloudy
38.23	1148	6	7.92	4.49	592	4.64	23.80	0.4	2.6	-74	slightly brown & cloudy
39.15	1150	7	7.89	4.28	221	5.49	24.07	0.22	2.8	-40	Well went dry
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?	Y	Y	N	N		NA	NA	NA	N		
Previous Field measurement (10/4/2005)	7.31	5240	24.7	3.2	26.71	0.27			-110		
Are measurements consistent with previous?	Y	N	N	N	NA	Y	N/A	N			

Sample Time 1102 Sample Location: pump tubing \_\_\_\_\_ well port X spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: restart pump @ 1045

Initial Depth to Water (ft BTOC): 31.23

WD (Well Depth - from table) ft btc (42)

SWH (Standing Water Height) = WD-Initial Depth 10.77

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 10.77 \* 0.17 = 1.83

Three Casing Volumes = 5.49

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: PGE-2005-C3

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal	1020
Time	Initial DTW	Time	Final DTW	Time of Reinstallation 1109	
1019	31.23	1114	31.45		
Comments:					

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/15/05						
Field Team	2	Field Conditions	Sunny, cool, windy								
Well/Sample Number	MW-30-030-087			QC Sample ID	NA		QC Sample Time				
Purge Start Time	1425			Purge Method	Ded. Pump		Y				
Flow Cell	Y N			Min. Purge Volume (gal)/(L)	10 gal		Purge Rate (gpm)/(mLpm)	1 gpm			
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
	1426	1	6.41	36.9	>999	4.48	26.05	2.37	23	-61	brown
16.80	1429	4	6.31	38.1	JB 99306	3.49	26.27	2.44	23	-84	
16.84	1431	6	6.29	38.4	31	3.14	26.32	2.46	23	-91	
16.88	1433	8	6.29	38.6	6.07	3.06	26.38	2.48	24	-95	
16.88	1435	10	6.29	38.7	4.83	3.01	26.40	2.48	24	-97	
16.89	1437	12	6.29	38.9	5.47	2.96	26.41	2.49	24	-100	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
<b>Parameter Stabilization Criteria</b>											
Did Parameters Stabilize prior to sampling?	Y		Y		Y		Y		Y		
Previous Field measurement (10/7/2005)	6.94		45000		5.79		2.54		27.6		2.9
Are measurements consistent with previous?	Y		YN		Y		Y		Y		N

Sample Time 1438 Sample Location: pump tubing X well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 14.73

WD (Well Depth - from table) ft btc (34)

SWH (Standing Water Height) = WD-Initial Depth 19.27

D (Volume as per diameter) 2" = 0.17, 4" = 0.66, 1" = 0.04 (2 in)

One Casing Volume = D\*SWH 3.3

Three Casing Volumes = 9.9

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: PGE Solini 300

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
1423	14.73	1443	14.90
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-16-05						
Field Team	2	Field Conditions	sunny	Page	of _____						
Well/Sample Number MW-30-050-087			QC Sample ID	NA	QC Sample Time _____						
Purge Start Time	1050			Purge Method	Ded. Pump	X					
Flow Cell	Y	N		Min. Purge Volume (gal/L)	72	Purge Rate (gpm/mlpm)	72				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
16.16	1051	2	7.23	8.54	4.10	4.94	23.7	0.5	5.7	-264	
16.20	1054	8	7.17	8.81	0.95	2.14	25.1	0.5	5.7	-274	
16.23	1059	18	7.16	8.99	1.36	2.33	25.0	0.5	5.9	-258	
16.23	1104	28	7.16	8.92	1.24	2.44	24.9	0.5	5.8	-263	
16.23	1109	38	7.16	8.86	0.34	2.50	24.8	0.5	5.8	-258	
16.25	1114	48	7.16	8.86	0.29	2.49	25.0	0.5	5.7	-255	
16.25	1119	58	7.16	8.83	0.39	2.51	25.0	0.5	5.8	-258	
16.25	1124	68	7.16	8.82	0.25	2.50	25.0	0.5	5.7	-261	
	1129	78	7.16	8.84	0.24	2.49	25.1	0.5	5.7	-263	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?	Y	Y	Y	Y	NA	Y		Y			
Previous Field measurement (10/7/2005)	7.22	12300	1.2	2.81	26.8	0.7			-236		
Are measurements consistent with previous?	Y	N	N	Y	NA	Y		Y			

Sample Time 1130 Sample Location: pump tubing X well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 15.82

WD (Well Depth - from table) ft btc (52)

SWH (Standing Water Height) = WD-Initial Depth 36.18

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 23.87

Three Casing Volumes = 72 gal

Hach: PGE 2005-013  
Horiba: PGiE  
WATER LEVEL METER SERIAL NUMBER: PGE 2005-014

Measure Point: Well TOC		If Transducer	
Initial DTW / Before Removal		Approx. 5 min After Reinstallation	
Time	Initial DTW	Time	Final DTW
1147	15.82	1134	16.90
Comments: 5			

Color: clear grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/13/05						
Field Team	1	Field Conditions			Page	of					
Well/Sample Number		MW-31-060-087			QC Sample ID	NA	QC Sample Time			1430	
Purge Start Time		1418			Purge Method	Ded. Pump					
Flow Cell: Y / N					Min. Purge Volume (gal)/(L)	41	Purge Rate(gpm)/(mLpm)				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
	1419	10	8.42	2.77	4.37	7.70	28.02	0.14	1.8	117	
	1420	20	8.45	2.78	6.20	7.04	27.89	0.14	1.8	116	
	1421	30	8.45	2.79	3.88	6.90	28.20	0.14	1.8	116	
	1423	45	8.46	2.84	5.15	6.84	27.96	0.14	1.8	117	
	1425	60	8.46	2.80	5.33	6.60	28.02	0.14	1.8	118	
	1424	75	8.44	2.81	4.71	6.75	27.95	0.14	1.8	119	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?						NA					
Previous Field measurement (10/6/2005)			7.8	2990	3.45	6.36	28.73	0.1		54	
Are measurements consistent with previous?						NA					

Sample Time \_\_\_\_\_ Sample Location: \_\_\_\_\_ pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 43.20

WD (Well Depth - from table) ft btc (64)

SWH (Standing Water Height) = WD-Initial Depth 20.8

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 13.52

Three Casing Volumes = 40.56

Measure Point: Well TOC Steel Casing

HACH - 2005-B1B  
HORIBA - 400874  
WATER LEVEL METER SERIAL NUMBER: 670

Initial DTW / Before Removal		If Transducer			
		Approx. 5 min After Reinstallation		Time of Removal	Time of Reinstallation
Time	Initial DTW	Time	Final DTW		
1415	4320	1435	43.36		
Comments:					

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-14-05						
Field Team	1	Field Conditions	CLEAR	Page	1 of 1						
Well/Sample Number	MW-31-135-087			QC Sample ID	NA		QC Sample Time	0913			
Purge Start Time	0842			Purge Method	GRUNDFUS		Ded. Pump	3			
Flow Cell: Y / N				Min. Purge Volum (gal)(L)	46		Purge Rate(gpm)(mlpm)	2			
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. oC	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
46.73	0846	8	7.85	6.14	235	4.42	25.12	0.33	3.9	222	
46.76	0850	14	8.31	7.56	291	4.09	27.41	0.42	4.8	198	
46.78	0854	24	8.51	7.85	29.3	4.09	27.66	0.43	4.9	170	
46.78	0858	32	8.72	8.00	201	4.08	27.58	0.44	5.1	154	
46.78	0902	40	8.74	8.16	62.9	4.26	27.00	0.45	5.1	146	
46.78	0906	48	8.75	8.14	13.1	3.94	27.11	0.45	5.1	134	
46.78	0910	56	8.77	7.98	4.53	4.13	27.90	0.46	5.2	124	
45.30	0921	—	—	—	—	—	—	—	—	—	
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?							NA				
Previous Field measurement (10/6/2005)			8	10100	1.32	2.02	29.62	0.6		-4	
Are measurements consistent with previous?							NA				

Sample Time 0913 Sample Location: pump tubing well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOC): 45.21

WD (Well Depth - from table) ft btc (134)

SWH (Standing Water Height) = WD-Initial Depth 88.79

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 15.09

Three Casing Volumes = 45.28

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: C100468

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal	0827
Time	Initial DTW	Time	Final DTW	Time of Reinstallation 0923	
0826	45.21	0932	45.30		
Comments:					

Color: clear, grey yellow brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

8.31

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/14/05						
Field Team	2	Field Conditions	Sunny	Page	1	of					
Well/Sample Number	MW-32-020-087			QC Sample ID	NA		QC Sample Time				
Purge Start Time	1459			Purge Method	Grav/so		Ded. Pump	<del>Yes</del> No Yes			
Flow Cell	<input checked="" type="checkbox"/> Y	N		Min. Purge Volume (gal)/(L)	2.3		Purge Rate (gpm)/(mLpm)	1			
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
10.84	1459	0	7.21	34.5	42.0	3.85	23.39	2.18	21	-90	Clear/Cloudy
10.88	1500	1	7.20	33.8	40.8	3.32	23.77	2.12	20	-92	Cloudy
10.88	1501	2	7.18	33.7	50.7	3.02	24.29	2.13	21	-101	Cloudy
10.80	1502	3	7.18	33.8	57.7	2.86	24.10	2.14	21	-103	Cloudy
10.82	1503	4	7.18	33.7	>100	2.72	24.50	2.13	21	-105	Cloudy/Sandy
10.82	1504	5	7.18	33.9	>100	2.68	24.54	2.14	21	-106	" "
10.81	1505	6	7.19	33.8	>100	2.67	24.39	2.14	21	-107	" "
10.78	1506	7	7.19	33.9	260	2.65	24.50	2.14	21	-107	" "
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?							NA				
Previous Field measurement (10/4/2005)			6.69	36000	140	2.35	29.51	2.3		-115	
Are measurements consistent with previous?							NA				

Sample Time 1510 Sample Location: pump tubing ✓ well port spigot bailer other  
 Comments: Very Sandy/Cloudy - Broken well screen suspected

Initial Depth to Water (ft BTOC): 8.31  
 WD (Well Depth - from table) ft bto (22)  
 SWH (Standing Water Height) = WD-Initial Depth  
 D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)  
<sup>1</sup> One Casing Volume = D\*SWH 2.3  
 Three Casing Volumes = 6.98

Measure Point: Well TOC Steel Casing		WATER LEVEL METER SERIAL NUMBER: _____			
Initial DTW / Before Removal		Approx. 5 min After Reinstallation		If Transducer	
Time	Initial DTW	Time	Final DTW	Time of Removal	Time of Reinstallation
Comments:					

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/16/05						
Field Team	2			Field Conditions	Sunny, Calm, 58°F						
Well/Sample Number	MW-32-035-087			QC Sample ID	NA			QC Sample Time			
Purge Start Time	1416			Purge Method	Circumferential			Ded. Pump	Circumferential Yes		
Flow Cell	Y	N		Min. Purge Volume (gal)/(L)	20			Purge Rate (gpm)/(mLpm)	32		
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
10.72	1416	0	7.63	8.02	8.48	3.29	25.38	0.44	5.1	-121	Clear
11.10	1424	10	7.63	9.07	4.24	3.06	24.43	0.53	6.0	-132	Clear
10.88	1436	20	7.67	11.6	1.39	2.71	24.80	0.66	7.0	-132	Clear
10.85	1431	30	7.69	11.5	0.55	2.56	24.80	0.65	7.0	-137	Clear
10.86	1436	40	7.69	11.4	0.57	2.50	24.81	0.65	7.0	-139	Clear
10.84	1441	50	7.70	11.2	0.44	2.47	24.80	0.64	7.0	-141	Clear
10.84	1446	60	7.71	11.2	0.64	2.43	24.68	0.64	7.0	-141	Clear
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
<b>Parameter Stabilization Criteria</b>											
Did Parameters Stabilize prior to sampling?	✓		✓		✓		NA	✓	✓	✓	✓
Previous Field measurement (10/4/2005)	7.25		11600		1.44		2.06	25.55	0.66		-159
Are measurements consistent with previous?							NA				

Sample Time 1450 Sample Location: pump tubing ✓ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 8.57

WD (Well Depth - from table) ft bto (39)

SWH (Standing Water Height) = WD-Initial Depth 30.43

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 19.39

Three Casing Volumes = 60

Measure Point:	Well TOC	Steel Casing	WATER LEVEL METER SERIAL NUMBER:
Initial DTW / Before Removal		If Transducer	
Approx. 5 min After Reinstallation		Time of Removal	_____
Time	Initial DTW	Time	Final DTW
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/12/05						
Field Team	2	Field Conditions	WARM, sunny								
Well/Sample Number	MW-33-040-087			QC Sample ID	NA	QC Sample Time					
Purge Start Time	1415			Purge Method	3 WV	Ded. Pump	no				
Flow Cell	Y / N			Min. Purge Volume (gal)/(L)	16.24g	Purge Rate (gpm)/(mLpm)	0.5 gpm				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
N/A	1417										
35.21	1431										Well is pumped dry; pump off well still has not recovered.
35.57	1433		8.23	14.5	565	4.85	22.02	.78	8	95	Jerry says well takes reading and sample before it goes dry again
1436	well dry again, waiting for it to recharge - pump off										
1445	pump back on, completing sampling										
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?	N/A	N/A	N/A	N/A	NA	NA			N/A		
Previous Field measurement (6/17/2005)	8.61	5460		5.4	27.8	0.29			-94		
Are measurements consistent with previous?	yes	no	n/a	yes	NA	yes	n/a	yes			

Sample Time 1434 Sample Location: pump tubing \_\_\_\_\_ well port X spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 33.8

WD (Well Depth - from table) ft bto (42)

SWH (Standing Water Height) = WD-Initial Depth 8.2

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 5.412

Three Casing Volumes = 16.24

Measure Point: Well TOC		Steel Casing	WATER LEVEL METER SERIAL NUMBER:
Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
1410	33.8	1454	36.11
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/13/05						
Field Team	2	Field Conditions:	Sunny	Page	1 of 1						
Well/Sample Number	MW-33-090-087			QC Sample ID	NA MW-96-087		QC Sample Time	1230			
Purge Start Time	1213			Purge Method	3 Well Vol.	Ded. Pump	N				
Flow Cell	(Y)	N		Min. Purge Volume (gal)/(L)	113 gal	Purge Rate (gpm)/(mLpm)	2 gpm				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
34.30	1218	10	7.66	8.80	# 9	3.63	24.77	0.48	5.5	-68	
34.30	1228	30	7.40	9.03	4	2.69	25.37	0.50	5.7	-62	
34.31	1238	50	7.61	9.21	2	2.33	26.03	0.51	5.8	-51	
34.31	1248	70	7.62	9.29	1	2.28	25.73	0.52	5.9	-47	
34.33	1258	90	7.61	9.22	1.69	2.16	26.95	0.51	5.8	-46	
34.33	1308	110	7.62	9.30	0.55	2.13	26.77	0.52	5.9	-44	
34.34	1313	120	7.66	9.31	0.94	2.29	26.60	0.52	5.9	-43	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?	Y		Y		Y		Y		Y		
Previous Field measurement (10/6/2005)	7.18		9210		1.12		1.86		28.4		0.51 -33
Are measurements consistent with previous?	Y		Y		Y		Y		N/A		Y

Sample Time 1315 Sample Location: pump tubing X well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOC): 33.85

WD (Well Depth - from table) ft bto (91)

SWH (Standing Water Height) = WD-Initial Depth 57.15

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 37.72

Three Casing Volumes = 113.2

Color: clear, grey, yellow, brown, black, cloudy, green

Measure Point: Well TOC		Steel Casing	WATER LEVEL METER SERIAL NUMBER: PGE-2005-03		
Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal	N/A
Time	Initial DTW	Time	Final DTW	Time of Reinstallation N/A	
1209	33.85	1320	33.93		
Comments:					

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/12/05						
Field Team	2	Field Conditions	Sunny, cool	Page	1	of	1				
Well/Sample Number	MW-33-150-087			QC Sample ID	MW-96-087			QC Sample Time			
Purge Start Time	1335			Purge Method	grundfos	Ded. Pump	N				
Flow Cell	Y	N		Min. Purge Volume (gal)/(L)	42 g	Purge Rate (gpm)/(mLpm)	3 gpm				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
37.24	1340	15	8.04	17.8	3.80	5.85	27.01	1.07	11	20	
37.35	1345	30	8.16	19.2	2.73	4.10	27.17	1.15	12	23	
37.38	1350	45	8.19	19.2	1.97	4.02	27.20	1.15	12	3	
37.37	1355	60	8.16	19.1	1.70	4.09	27.25	1.15	12	17	
37.40	1350	75	8.15	19.2	4.9	3.88	27.24	1.15	12	21	
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?			yes	yes	yes	yes	NA		Y	yes	
Previous Field measurement (11/2/2005)			7.55	20800	0.83	1.41	27.78	1.3	Y	-81	
Are measurements consistent with previous?			yes	yes	yes	yes	NA		yes		

Sample Time 1401 Sample Location: pump tubing X well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOC): 34.57  
 WD (Well Depth - from table) ft btc (155)  
 SWH (Standing Water Height) = WD-Initial Depth 121  
 D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)  
 One Casing Volume = D\*SWH 20.5  
 Three Casing Volumes = 61.5

Measure Point: Well TOC		Steel Casing	WATER LEVEL METER SERIAL NUMBER: PGE-2005-C3
Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
1333	34.57	1410	34.63
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/12/05						
Field Team	2	Field Conditions	Sunny, cool	Page	1	of					
Well/Sample Number	MW-33-210-087			QC Sample ID	NA	QC Sample Time					
Purge Start Time	1242	Purge Method	Grundfos	Ded. Pump	Y						
Flow Cell	(Y) N	Min. Purge Volume (gal)/(L)	96 gal	Purge Rate (gpm)/(mLpm)	3 gpm						
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
36.71	1244	6	8.05	21.4	1.78	5.82	26.54	1.3	13	51	clear,
36.56	1249	21	7.95	21.9	1.19	3.53	26.95	1.30	14	60	"
36.59	1254	36	7.95	21.9	0.76	3.27	27.12	1.33	14	19	
36.61	1259	51	7.94	21.7	1.37	3.85	27.10	1.32	14	24	
36.64	1204	66	7.92	21.9	1.15	3.24	26.88	1.33	14	27	
36.64	1209	81	7.91	21.9	0.85	3.84	26.98	1.32	14	37	
36.66	1214	96	7.90	21.9	1.12	3.60	27.15	1.33	14	40	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?							NA				
Previous Field measurement (11/2/2005)			7.4	24900	1.54	1.39	28.15	1.5		-73	
Are measurements consistent with previous?							NA				

Sample Time 1215 Sample Location: pump tubing X well port spigot bailer other  
 Comments: Pump New pump installed

Initial Depth to Water (ft BTOC): 34.13  
 WD (Well Depth - from table) ft btc (223)  
 SWH (Standing Water Height) = WD-Initial Depth 188.87  
 D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)  
 One Casing Volume = D\*SWH 32.11  
 Three Casing Volumes = 96.32 gal

Measure Point: Well TOC		Steel Casing	WATER LEVEL METER SERIAL NUMBER: PGE-2005-C3		
Initial DTW / Before Removal		If Transducer			
Time	Initial DTW	Time	Final DTW	Time of Removal	1131
1129	34.13	13.06 +2.27st	34.18	Time of Reinstallation	1222-46
Comments: transducer would not go to previous depth b/c of pump.					
Odor: none, sulphur, organic, other			Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand		
talked to Erica Mathews, said to install ~ 1' above pump.					

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12.14.05						
Field Team	2	Field Conditions	sunny / windy								
Well/Sample Number	MW-34-055-087			QC Sample ID	NA		QC Sample Time				
Purge Start Time	1150			Purge Method	Ded. Pump <input checked="" type="checkbox"/>						
Flow Cell: Y N				Min. Purge Volume (gal)(L)	95.9		Purge Rate (gpm)/(mLpm)	2 gpm			
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
8.02	1153	6gal	7.29	6.42	4.16	3.42	20.89	0.36	4.2	-111	
8.02	1203	26 gal	7.29	6.41	1.35	2.67	20.80	0.35	4.2	-144	
8.06	1213	46 gal	7.30	6.40	1.51	2.32	20.67	0.35	4.2	-133	
8.07	1223	66 gal	7.30	6.40	0.39	2.24	20.36	0.35	4.2	-128	
8.09	1228	76 gal	7.30	6.41	0.74	2.17	20.43	0.35	4.2	-127	
8.10	1238	96 gal	7.30	6.41	0.45	2.08	20.28	0.35	4.2	-124	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?	Y		Y		Y		Y		Y		
Previous Field measurement (10/5/2005)	6.83		8610		0.99		1.69		21.94		0.47 -93
Are measurements consistent with previous?	Y		N		Y		Y		NA		- N

Sample Time 1242 Sample Location: pump tubing  well port \_\_\_\_\_ spigot \_\_\_\_\_ baller \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

C101552  
HATCH - P6+E 2005/1A  
P6+E 2005-03

Initial Depth to Water (ft BTOC): 7.89

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: P6+E 2005-03

WD (Well Depth - from table) ft btc (56)

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
1015	7.84	1146	7.92
Comments:			

SWH (Standing Water Height) = WD-Initial Depth 48.16

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 31.78

Three Casing Volumes = 95.3

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-14-05						
Field Team	2	Field Conditions	sunny / windy	Page	of _____						
Well/Sample Number MW-34-080-087			QC Sample ID	NA	QC Sample Time _____						
Purge Start Time 0914			Purge Method	Ded. Pump <input checked="" type="checkbox"/>							
Flow Cell: Y / N			Min. Purge Volume (gal)/L	150.8	Purge Rate (gpm)/(mLpm)						
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
10.31	0916	6	6.63	9.9	2.02	3.58	22.75	0.56	6	-139	
10.33	0926	36	6.89	9.9	2.62	2.62	22.20	0.57	6	-147	
10.35	0936	66	6.94	10.4	0.58	2.49	22.51	0.58	6	-118	
10.34	0946	96	6.97	10.4	0.47	2.39	22.57	0.58	6	-109	
10.34	0956	126	7.01	10.4	0.50	2.31	22.63	0.58	6	-94	
10.34	1001	141	7.01	10.4	0.47	2.29	22.57	0.59	6	-91	
10.34	1006	156	7.02	10.4	0.52	2.28	22.47	0.59	6	-88	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?			Y	Y	Y	Y	NA	Y		Y	
Previous Field measurement (11/3/2005)			7.12	16300	1.28	1.11	22.72	1		-117	
Are measurements consistent with previous?			Y	N	N	N	NA	N		Y	

Sample Time 1007 Sample Location: pump tubing  well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

HORIBA CH2M HILL C10557  
HACH P6+E 2005-01A

Initial Depth to Water (ft BTOC): 7.83

WD (Well Depth - from table) ft btc (84)

SWH (Standing Water Height) = WD-Initial Depth 76.17

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (4 in)

One Casing Volume = D\*SWH 50.27

Three Casing Volumes = 150.8

Measure Point	Well TOC	Steel Casing	WATER LEVEL METER SERIAL NUMBER: P6+E 2005-03			
			If Transducer			
Initial DTW / Before Removal			Approx. 5 min After Reinstallation		Time of Removal	—
Initial DTW	Time		Time	Final DTW	Time of Removal	—
7.83	0910	1012	7.83		Time of Reinstallation	—
Comments:						

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/14/05						
Field Team	2	Field Conditions	Sunny, Windy								
Well/Sample Number	MW-34-100-087			QC Sample ID	MW-93-087		QC Sample Time	1306			
Purge Start Time	1323			Purge Method	Ded. Pump Y						
Flow Cell	(Y) N			Min. Purge Volume (gal)/(L)	56 gal	Purge Rate (gpm)/(mLpm)	2 gpm				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
9.30	1324	m 2	7.13	12.1	2.68	3.42	21.02	0.69	7	-65	
9.36	1329	12	7.27	12.1	5.30	2.51	21.70	0.69	8	-43	
9.37	1334	22	7.34	12.3	2.24	2.37	21.98	0.70	8	-32	
9.38	1339	32	7.36	12.3	0.57	2.37	21.96	0.70	8	-27	
9.40	1344	42	7.37	12.4	1.71	2.35	21.82	0.71	8	-27	
9.40	1349	52	7.37	12.4	0.63	2.37	21.77	0.71	8	-26	
9.42	1354	62	7.38	12.4	1.36	2.33	21.75	0.71	8	-26	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?	Y	N	Y	Y	NA	Y	Y	Y			
Previous Field measurement (11/30/2005)	7.39	19900	0.55	2.59	22.6	1.2			-55		
Are measurements consistent with previous?	Y	N	Y	Y	NA	N	N/A	N			

Sample Time 1355 Sample Location: pump tubing X well port spigot baller other  
 Comments: Final DTW = 8.33 feet bgs

C 100552

Initial Depth to Water (ft BTOC): 8.24  
 WD (Well Depth - from table) ft btc (117)  
 SWH (Standing Water Height) = WD-Initial Depth 10 8.76  
 D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)  
 One Casing Volume = D\*SWH 18.49  
 Three Casing Volumes = 55.47

Color: clear grey, yellow, brown, black, cloudy, green

Measure Point	Well TOC	Steel Casing	WATER LEVEL METER SERIAL NUMBER: PGE-2005-03			
			If Transducer		Time of Removal	Time of Reinstallation
Initial DTW / Before Removal	Approx. 5 min After Reinstallation	Time	Initial DTW	Time	Final DTW	
1248	8.24	+2	1255	8.22		
Comments: Installed new dedicated pump in well.						
Odor: none		Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand				

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-14-05						
Field Team	2	Field Conditions	CLEAR	Page	1 of 1						
Well/Sample Number	MW-35-060-087			QC Sample ID	MW-97-087		QC Sample Time	1025			
Purge Start Time	0954			Purge Method	GRUNDfos						
Flow Cell: Y / N				Min. Purge Volume (gal/L)	10	Purge Rate (gpm/mLpm)	2				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
41.09	0957	6	8.39	6.03	2.00	6.72	25.54	0.32	3.8	122	
41.10	1000	12	8.36	5.86	1.54	4.67	26.04	0.31	3.7	115	
41.10	1003	18	8.35	5.81	0.40	4.20	26.16	0.31	3.7	107	
41.10	1006	24	8.35	5.85	0.34	4.04	26.08	0.31	3.7	99	
41.10	1009	30	8.34	5.80	0.32	3.97	25.95	0.31	3.7	95	
30.43	1022	—	—	—	—	—	—	—	—	—	
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?						NA					
Previous Field measurement (10/7/2005)			7.49	7560	0.68	1.9	27.98	0.4		-1	
Are measurements consistent with previous?						NA					

Sample Time 1010 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 30.47

WD (Well Depth - from table) ft bto (60)

SWH (Standing Water Height) = WD-Initial Depth 29.53

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 5.02

Three Casing Volumes = 15.06

Measure Point: Well TOC Steel Casing

HACH-C10115  
HORIBA-C100876  
WATER LEVEL METER SERIAL NUMBER: C100468

Initial DTW / Before Removal		If Transducer			
		Approx. 5 min After Reinstallation		Time of Removal	0946
Time	Initial DTW	Time	Final DTW	Time of Reinstallation 1023	
0945	30.47	1028	30.46		
Comments:					

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-14-05						
Field Team	2	Field Conditions	CLEAR	Page	1	of	1				
Well/Sample Number	MW-35-135-087			QC Sample ID	NA		QC Sample Time				
Purge Start Time	1038			Purge Method	GRUNDFUS Ded. Pump						
Flow Cell: Y / N				Min. Purge Volume(gal)(L)	60	Purge Rate(gpm)(mLpm)	3				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
31.73	10482	12	8.04	8.79	0.52	3.53	26.18	0.49	5.5	80	
31.73	1046	24	8.72	8.61	0.22	3.43	26.29	0.47	5.4	48	
31.74	1050	36	8.75	8.55	0.33	3.32	26.39	0.46	5.4	53	
31.75	1054	48	8.76	8.52	0.11	3.25	26.27	0.47	5.4	48	
31.76	1058	60	8.76	8.50	0.30	3.21	26.22	0.47	5.4	42	
31.76	1102	72	8.76	8.48	0.05	3.17	26.27	0.47	5.3	38	
30.01	1113										
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?							NA				
Previous Field measurement (10/7/2005)			7.75	10800	0.34	1.29	28.17	0.6		-55	
Are measurements consistent with previous?							NA				

Sample Time 1105 Sample Location: pump tubing well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOS): 30.02

WD (Well Depth - from table) ft btc (159)

SWH (Standing Water Height) = WD-Initial Depth 128.98

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 21.92

Three Casing Volumes = 65.77

Measure Point: Well TOC Steel Casing

HACH-C101151  
HOP13A-C160876  
WATER LEVEL METER SERIAL NUMBER: C100468

Initial DTW / Before Removal		If Transducer			
		Approx. 5 min After Reinstallation		Time of Removal	Time of Reinstallation
Time	Initial DTW	Time	Final DTW		
1026	30.02	1113	29.99	1026	1114
Comments:					

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/15/05						
Field Team	3	Field Conditions	Cloudy, Windy, 50°F								
Well/Sample Number	MW-36-020-087			QC Sample ID	NA	QC Sample Time _____					
Purge Start Time	1227			Purge Method	Parastaltic Dred. Pump Tubing						
Flow Cell	Y / N			Min. Purge Volume (gal)/(L)	4	Purge Rate (gpm)/(mLpm)	5				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
16.56'	1227	0	7.30	45.2	1.27	3.04	24.86	2.95	28	-78	Clear/Green Tint
-	1231	1	7.32	45.5	1.29	2.47	25.02	2.97	28	-90	Clear "
-	1236	2	7.35	44.8	1.18	2.39	25.03	2.91	27	-101	Clear "
-	1244	3	7.38	42.7	0.64	2.35	25.12	2.75	26	-110	Clear "
-	1249	4	7.39	41.6	2.47	2.35	24.94	2.68	25	-111	Clear "
-	1254	5	7.39	41.0	0.56	2.36	24.89	2.65	25	-112	Clear "
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?			✓	✓	✓	✓	NA	✓	✓	✓	✓
Are measurements consistent with previous?							NA				

Sample Time 1255 Sample Location: pump tubing ✓ well port spigot bailer other

Comments: 1" Well SWL Info from trans. Download talk

Initial Depth to Water (ft BTOC): 16.56

WD (Well Depth - from table) ft btc (23)

SWH (Standing Water Height) = WD-Initial Depth 6.44

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (1 in)

One Casing Volume = D\*SWH

Three Casing Volumes = 4

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation
Comments:				

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP		Sampling Event	2005-GMP-087-Q4							
Job Number	328225.GM.02.00		Date	12/15/05							
Field Team	3	Field Conditions	Cloudy, Windy, 50°F								
Well/Sample Number	MW-36-040-087		QC Sample ID	NA	QC Sample Time _____						
Purge Start Time	1042		Purge Method	Parastatic	Ded. Pump	Tubing					
Flow Cell	Y	N	Min. Purge Volume (gal)/(L)	4	Purge Rate (gpm)/(mLpm)		0.5 gpm				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
-	1042	0	7.72	13.7	3.21	4.51	24.76	0.81	9	-173	Clear/odor
-	1046	1	7.80	15.3	1.61	2.96	24.75	0.90	9	-180	Clear/odor
-	1050	2	7.85	15.4	3.89	2.78	24.82	0.90	10	-186	Clear/odor
-	1056	3	7.87	15.4	4.89	2.71	24.74	0.90	10	-188	Clear/odor
-	1050	4	7.87	15.4	1.80	2.68	24.70	0.90	10	-190	Clear/slight odor
-	1102										
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?			✓	✓	✓	✓	NA	✓	✓	✓	✓
Are measurements consistent with previous?							NA				

Sample Time 1055/105

Sample Location: pump tubing ✓ well port spigot bailed other

Comments: 1" well - Unable to get SWL - Transducer &amp; Tubing in well

Initial Depth to Water (ft BTOC): 75 17.0

WD (Well Depth - from table) ft btc (43)

SWH (Standing Water Height) = WD-Initial Depth 28

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (1 in)

One Casing Volume = D\*SWH 4

Three Casing Volumes =

Color: clear grey, yellow, brown, black, cloudy, green

NA

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
Comments:			

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name PGE Topock GMP  
 Job Number 328225.GM.02.00  
 Field Team 3

Sampling Event 2005-GMP-087-Q4  
 Date 12/5/05  
 Page 1 of 1

Well/Sample Number MW-36-050-087

QC Sample ID NA

QC Sample Time

Purge Start Time 0957

Purge Method Peristaltic Ded. Pump Turbidity

Flow Cell: Y / N

Min. Purge Volume (gal)/(L) 6.0 Purge Rate (gpm)/(mLpm) .75

Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
-	0957	0	7.43	8.80	1.89	4.14	24.3	0.49	5.5	-140	Clear / odor
-	1002	1	7.65	13.8	0.43	2.89	24.7	0.81	9	-148	Clear / odor
-	1006	2.5	7.64	13.8	1.54	2.86	24.8	0.80	9	-139	Clear / odor
-	1011	3.0	7.61	13.7	2.26	2.83	24.7	0.79	8	-135	Clear / odor
-	1015	3.5	7.61	13.7	1.24	2.80	24.7	0.79	8	-136	Clear / odor
-											
-											
-											
-											
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?			✓	✓	✓	✓	NA	✓	✓	✓	✓
Are measurements consistent with previous?							NA				

Sample Time 1020 Sample Location: pump tubing ✓ well port spigot bailer other  
 Comments: 1" well w/ transducer & Dedicated Tubing - unable to get SWL - NO ROOM

Initial Depth to Water (ft BTOC): 15 17.01

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER:

WD (Well Depth - from table) ft btc (53)

SWH (Standing Water Height) = WD-Initial Depth 38

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (1 in)

One Casing Volume = D\*SWH 1.5

Three Casing Volumes = 1.5

Color: clear, grey, yellow, brown, black, cloudy, green

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		If Transducer
Time	Initial DTW	Time	Final DTW	Time of Removal
				Time of Reinstallation
Comments:				

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/15/05						
Field Team	3	Field Conditions	Cloudy, Windy, Soothing								
Well/Sample Number	MW-36-070-087			QC Sample ID	NA	QC Sample Time					
Purge Start Time	1307			Purge Method	Peristaltic Dedi. Pump Tubing						
Flow Cell	Y	N		Min. Purge Volume (gal)/(L)	7.0	Purge Rate (gpm)/(mLpm)	0.59 gpm				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
-	1307	0	7.86	11.1	3.08	3.10	23.99	0.60	7	-106	Clear / Slight Green Tint
-	1316	2	7.76	9.26	81.82	2.38	24.51	0.51	5.8	-101	Clear / organic odor "
-	1325	4	7.76	9.26	1.24	2.33	24.51	0.51	5.8	-103	Clear
-	1330	5	7.74	9.31	1.15	2.31	24.49	0.46	5.9	-105	Clear
-	1335	6	7.74	9.32	0.21	2.30	24.45	0.52	5.8	-106	Clear
-	1340	7	7.73	9.31	3.15	2.27	24.43	0.52	5.8	-108	Clear
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?			✓	✓	✓	✓	NA	✓	✓	✓	✓
Are measurements consistent with previous?						NA					

Sample Time 1345 Sample Location: pump tubing ✓ well port spigot bailer other

Comments: 1" well - SWL taken by Trans. Download from Transducer in hole.

Initial Depth to Water (ft BTOC): 16.64'

WD (Well Depth - from table) ft btc (73)

SWH (Standing Water Height) = WD-Initial Depth 50.36

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (1 in)

One Casing Volume = D\*SWH

Three Casing Volumes = 7.0

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER:

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/15/05						
Field Team	3	Field Conditions	Cloudy, Windy, 50°F								
Well/Sample Number	MW-36-090-087			QC Sample ID	NA	QC Sample Time _____					
Purge Start Time	1113			Purge Method	Peristaltic Dedi. Pump, Tubing						
Flow Cell	(Y) N			Min. Purge Volume (gal)/(L)	10	Purge Rate (gpm)/(mLpm)	0.4				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
-	1113	0	7.80	15.8	5.8	3.90	24.56	0.93	10	-34	Clear / Slight odor
-	1118	2	7.66	16.0	9.97	2.74	24.58	0.94	10	-61	Clear / "
-	1128	4	7.56	17.8	5.19	2.60	24.62	1.06	11	-18	Clear
-	1140	6	7.55	18.1	7.55	2.58	24.65	1.07	11	18	Clear
-	1150	8	7.54	18.0	1.05	2.51	24.69	1.07	11	32	Clear
-	+138	10	7.54	18.0	1.35	2.48	24.62	1.07	11	34	Clear
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?			✓	✓	✓	✓	NA	✓	✓	✓	✓
Are measurements consistent with previous?							NA				

Sample Time 1200 Sample Location: pump tubing ✓ well port spigot bailer other  
 Comments: 1" well - w/ Transducer + dedicated Tubing - No room to get SWL

Initial Depth to Water (ft BTOC): 16 17.45  
 WD (Well Depth - from table) ft btc (93)  
 SWH (Standing Water Height) = WD-Initial Depth 77  
 D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (1 in)  
 One Casing Volume = D\*SWH 10  
 Three Casing Volumes =

Measure Point: Well TOC Steel Casing		WATER LEVEL METER SERIAL NUMBER: _____			
Initial DTW / Before Removal		Approx. 5 min After Reinstallation		If Transducer	
Time	Initial DTW	Time	Final DTW	Time of Removal	Time of Reinstallation
Comments:					

Color (clear, grey, yellow, brown, black, cloudy, green)

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP				Sampling Event	2005-GMP-087-Q4					
Job Number	328225.GM.02.00				Date	12/13/05					
Field Team	2 Field Conditions				Page	1 of 1					
Well/Sample Number	MW-36-100-087				QC Sample ID	NA		QC Sample Time NA			
Purge Start Time	1407				Purge Method	grundfos		Ded. Pump			
Flow Cell:	Y	N			Min. Purge Volume (gal)/(L)	47.4	Purge Rate (gpm)/(mLpm)	2			
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
19.69	1410	62	7.74	9.39	5.42	5.11	24.13	0.54	6.3	6	
19.71	1415	16	7.39	16.0	4.26	3.36	23.26	0.93	10	30	
19.74	1420	26	7.28	16.5	2.23	2.47	25.27	0.98	10	17	
19.75	1425	36	7.24	16.5	1.09	2.33	25.23	0.97	10	8	
19.75	1430	46	7.22	16.5	0.54	2.23	25.21	0.97	10	6	
19.75	1433	52	7.22	16.5	0.51	2.20	25.18	0.97	10	5	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?	Y	Y	Y	Y	Y	NA	Y	Y	Y		
Previous Field measurement (11/3/2005)	7.2	21100	1.8	1.31	25.81	1.3			-19		
Are measurements consistent with previous?	Y	N	Y	Y	NA	Y		N			

Sample Time 1435 Sample Location: pump tubing X well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOC): 17.06

WD (Well Depth - from table) ft btc (110)

SWH (Standing Water Height) = WD-Initial Depth 92.94

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 15.8

Three Casing Volumes = 47.4

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER:

Initial DTW / Before Removal		If Transducer			
Time	Initial DTW	Approx. 5 min After Reinstallation		Time of Removal	1400
		Time	Final DTW	Time of Reinstallation 1436	
17.06	1402	1441	17.10		
Comments:					

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP				Sampling Event	2005-GMP-087-Q4					
Job Number	328225.GM.02.00				Date	12-14-05					
Field Team	2 Field Conditions				Page	1 of 1					
Well/Sample Number		MW-37D-087		QC Sample ID	NA		QC Sample Time				
Purge Start Time		1348		Purge Method	GROUNDFUS Ded. Pump						
Flow Cell: Y / N				Min. Purge Volume (gal)/(L)	100		Purge Rate (gpm)/(mLpm)	3			
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
32.65	1353	15	9.31	13.1	0.81	6.02	28.33	0.76	8	-28	
32.62	1358	30	8.92	13.3	0.48	4.04	29.08	0.76	8	28	
32.63	1403	45	8.78	13.2	0.30	4.25	28.95	0.76	8	55	
32.63	1408	60	8.74	13.0	0.13	4.10	28.99	0.76	8	62	
32.62	1413	75	8.72	13.2	0.71	4.12	28.98	0.76	8	66	
32.62	1418	90	8.71	13.1	0.20	4.07	29.01	0.76	8	71	
32.63	1423	105	8.70	13.1	0.07	4.03	28.94	0.76	8	71	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?							NA				
Previous Field measurement (10/4/2005)		8.09	15100	1.63	2.76	30.46	0.9		4		
Are measurements consistent with previous?						NA					

Sample Time 1421 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 31.92

WD (Well Depth - from table) ft btc (227)

SWH (Standing Water Height) = WD-Initial Depth 195.08

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 33.16

Three Casing Volumes = 99.49

Color: clear, grey, yellow, brown, black, cloudy, green

Measure Point: Well Top Steel Casing WATER LEVEL METER SERIAL NUMBER: 6100468

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation
134	31.92	1430	31.90	
Comments:				

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-14-05						
Field Team	2			Page	1 of 1						
Field Conditions											
Well/Sample Number MW-37S-087			QC Sample ID MW-94-087			QC Sample Time 1450					
Purge Start Time 1440			Purge Method GRUNDFUS Ded. Pump								
Flow Cell: Y / N			Min. Purge Volume (gal)(L) 29			Purge Rate (gpm)/(mLpm) 2					
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
32.15	1443	6	8.71	4.18	2.43	4.47	26.52	0.21	2.7	78	
32.16	1446	12	8.72	3.94	0.33	4.16	27.57	0.20	2.5	71	
32.16	1449	18	8.71	3.89	0.11	4.18	27.46	0.20	2.5	70	
32.17	1452	24	8.78	3.88	0.16	4.14	27.77	0.20	2.5	70	
32.16	1455	30	8.78	3.86	0.20	4.20	27.67	0.20	2.5	69	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?							NA				
Previous Field measurement (10/4/2005)			7.98	4460	1.02	3.01	29.28	0.2		-33	
Are measurements consistent with previous?							NA				

Sample Time 1500 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 31.83

WD (Well Depth - from table) ft btc (87)

SWH (Standing Water Height) = WD-Initial Depth 55.17

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 9.37

Three Casing Volumes = 28.13

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

No Transducer

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation
1426	31.83			
Comments:				

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4							
Job Number	328225.GM.02.00			Date	12/10/05							
Field Team	3	Field Conditions	Sunny, 50°F, slight breeze									
Well/Sample Number	MW-39-040-087			QC Sample ID	NA	QC Sample Time						
Purge Start Time	1030			Purge Method	Peristaltic	Ded. Pump	Tubing					
Flow Cell	Y	N		Min. Purge Volume (gal)/(L)	3.5	Purge Rate (gpm)/(mLpm)	15					
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)	
-	1030	0	7.01	5.70	2.37	5.19	24.48	0.31	3.6	-143	Clear/Slight Yellowish	
-	1032	.5	7.43	5.82	0.67	2.43	25.29	0.31	3.6	-101	Clear	
-	1036	1.0	7.37	5.82	0.42	2.31	25.91	0.31	3.7	-104	Clear   Slight Odor	
-	1038	2.0	7.35	5.75	0.33	2.14	25.99	0.30	3.6	-171	Clear	
-	1043	3.0	7.33	5.69	0.57	2.09	25.95	0.30	3.6	-175	Clear	
-	1046	3.5	7.34	5.68	0.46	2.07	25.94	0.30	3.6	-177	Clear	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV		
Parameter Stabilization Criteria												
Did Parameters Stabilize prior to sampling?			✓	✓	✓	✓	NA	✓	✓	✓	✓	
Are measurements consistent with previous?						NA						

Sample Time 1050 Sample Location: pump tubing ✓ well port spigot bailer other  
 Comments: 1" well - Transducer & Tubing in well - no Room SWL. SWL collected 12/15/05 by download group

Initial Depth to Water (ft BTOC): 15.33 12/15/05

WD (Well Depth - from table) ft btc (42)

SWH (Standing Water Height) = WD-Initial Depth 20.47

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (1 in)

One Casing Volume = D\*SWH

Three Casing Volumes = 3.5

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER:

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation
Comments:				

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/15/05						
Field Team	3	Field Conditions	Sunny, Calm, 55°F								
Well/Sample Number	MW-39-050-087			QC Sample ID	NA	QC Sample Time _____					
Purge Start Time	0936			Purge Method	parastaltic	Ded. Pump	Tubing				
Flow Cell:	Y / N			Min. Purge Volume (gal)/(L)	5	Purge Rate (gpm)/(mLpm)	59pm				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
-	0936	0	7.07	9.2	4.01	3.42	25.11	0.51	6	-132	Clear/sulfur odor
-	0942	1	7.13	9.4	1.53	1.96	25.83	0.53	5.9	-152	Clear/odor
-	0948	2	7.06	11.2	.47	2.06	25.93	.64	7.0	-108	CLEAR/ODOR
-	0954	3	7.05	11.3	.37	2.03	25.95	.65	7.0	-84	CLEAR/ODOR
-	10:01	4	7.06	11.4	.35	2.02	26.00	.65	7.0	-70	CLEAR/ODOR
-	10.09	5	7.07	11.3	.57	2.01	25.91	.64	7.0	-57	CLEAR/odor
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?			✓	✓	✓	✓	NA	✓	✓	✓	✓
Are measurements consistent with previous?							NA				

Sample Time 10:15 Sample Location: pump tubing ✓ well port spigot bailer other  
 Comments: Well - Transducer & tubing in well - No room for SWL. SWL Collected 12/15/05

Initial Depth to Water (ft BTOC): 15.33 12/15/05  
 WD (Well Depth - from table) ft btc (50)  
 SWH (Standing Water Height) = WD-Initial Depth 34.67  
 D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (1 in)  
 One Casing Volume = D\*SWH  
 Three Casing Volumes = 5

Measure Point: Well TOC		Steel Casing	WATER LEVEL METER SERIAL NUMBER: _____	
Initial DTW / Before Removal		If Transducer		Time of Removal _____
Time	Initial DTW	Time	Final DTW	Time of Reinstallation _____
Comments: _____				

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/16/05						
Field Team	3	Field Conditions	Sunny, 50°F, calm								
Well/Sample Number	MW-39-060-087			QC Sample ID	NA	QC Sample Time					
Purge Start Time	0852			Purge Method	Parastatic	Ded. Pump	Tubing				
Flow Cell:	Y	N		Min. Purge Volume (gal)/(L)	6	Purge Rate (gpm)/(mLpm)	.59pm				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
-	0852	0	6.73	10.4	2.81	7.14	21.23	0.59	6	112	Clear   sulfur odor
-	0854	1	6.64	9.6	2.64	2.64	24.94	0.53	6	-98	Clear   odor
-	0858	2	6.71	9.6	4.83	2.54	25.14	0.54	6	-109	Clear   odor
-	0858	3	6.73	10.9	1.86	2.59	25.04	0.62	7	-73	Clear   odor
-	0900	4	6.81	11.1	1.91	2.42	24.91	0.63	7	-47	Clear   odor
-	0902	5	6.82	11.2	1.52	2.34	25.17	0.64	7	-42	Clear   odor
-	0904	6	6.83	11.2	0.77	2.34	25.15	0.64	7	-40	Clear   odor
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?			✓	✓	✓	✓	NA	✓	✓	✓	✓
Are measurements consistent with previous?							NA				

Sample Time 0915 Sample Location: pump tubing ✓ well port spigot bailer other

Comments: 1" well - Transducer & Tubing in well no room for SWL

Initial Depth to Water (ft BTOC): 15.51 12/15/05

WD (Well Depth - from table) ft btc (66)

SWH (Standing Water Height) = WD-Initial Depth 50.49

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (1 in)

One Casing Volume = D\*SWH

Three Casing Volumes = 6

Measure Point: Well TOC		Steel Casing	WATER LEVEL METER SERIAL NUMBER:	
Initial DTW / Before Removal		If Transducer		
Time	Initial DTW	Time	Final DTW	Time of Removal
				Time of Reinstallation
Comments:				

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/16/05						
Field Team	3	Field Conditions	Sum, 50°F, Breeze								
Well/Sample Number	MW-39-070-087			QC Sample ID	NA	QC Sample Time					
Purge Start Time	1102			Purge Method	Parastaltic Dred. Pump - Tubing						
Flow Cell	Y	N		Min. Purge Volume (gal)/(L)	7	Purge Rate (gpm)/(mLpm)	.5				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
-	1102	0	7.31	9.20	2.75	5.34	23.92	0.51	5.7	-53	Clear / Greenish
-	1106	1	7.21	9.11	1.77	2.10	25.67	0.51	5.7	-46	Clear / "
-	1114	3	7.11	10.0	2.76	2.20	25.90	0.56	6	6	Clear / "
-	1122	5	7.12	10.1	0.59	2.21	25.79	0.57	6	15	Clear / "
-	1130	6	7.11	10.0	1.24	2.20	25.86	0.56	6	21	Clear / "
-	1135	7	7.10	10.0	0.62	2.19	25.97	0.56	6	22	Clear / "
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?			✓	✓	✓	✓	NA	✓	✓	✓	✓
Are measurements consistent with previous?							NA				

Sample Time 1140 Sample Location: pump tubing ✓ well port spigot bailer other  
 Comments: 1" well - Transducer tubing down well - unable to get SWL. SWL collected 12/15/05 -  
 by download group

Initial Depth to Water (ft BTOC): 15.79 12/15/05

WD (Well Depth - from table) ft btc (72)

SWH (Standing Water Height) = WD-Initial Depth 56.21

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (1 in)

One Casing Volume = D\*SWH

Three Casing Volumes = 7

Color: clear, grey, yellow, brown, black, cloudy, green

Measure Point:	Well TOC	Steel Casing	WATER LEVEL METER SERIAL NUMBER:
Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
Comments:			
Odor: none, sulphur, organic, other			
Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand			

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/15/05						
Field Team	3	Field Conditions	Cloudy, Windy, 50°F								
Well/Sample Number	MW-39-080-087			QC Sample ID	NA	QC Sample Time					
Purge Start Time	1402			Purge Method	Parastatic Ded. Pump Turbidity						
Flow Cell:	Y	N		Min. Purge Volume (gal)/(L)	9	Purge Rate (gpm)/(mLpm)	25				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
-	1402	0	7.49	14.3	1.01	3.08	25.530.83	9	63	Clear/Slight Green Tint	
-	1412	2	7.44	14.3	0.68	2.46	25.560.83	9	67	Clear   "	
-	1422	4	7.46	15.1	0.31	2.33	25.600.89	9	70	Clear   "	
-	1432	6	7.55	15.3	0.23	2.28	25.660.90	9	73	Clear   "	
-	1442	8	7.55	15.4	0.30	2.25	25.690.90	10	76	Clear   "	
-	1447	9	7.55	15.4	0.30	2.24	25.720.91	10	78	Clear   "	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?			✓	✓	✓	✓	NA	✓	✓	✓	✓
Are measurements consistent with previous?							NA				

Sample Time 1500 Sample Location: pump tubing ✓ well port spigot bailer other  
 Comments: 1" well with Transducer & Dedicated Turbidity - no room to get SWL or SWL collected  
 By Transducer down-hole folks.

Initial Depth to Water (ft BTOC): 15.74  
 WD (Well Depth - from table) ft btc (83)  
 SWH (Standing Water Height) = WD-Initial Depth 17.26  
 D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (1 in)  
 One Casing Volume = D\*SWH 9  
 Three Casing Volumes = 9  
 Color: clear, grey, yellow, brown, black, cloudy, green; sh

Measure Point: Well TOC	Steel Casing	WATER LEVEL METER SERIAL NUMBER:	
Initial DTW / Before Removal		If Transducer	
Approx. 5 min After Reinstallation		Time of Removal	
Time	Initial DTW	Time	Final DTW
Comments:			
Odor: none sulphur, organic, other		Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand	

## Topock Sampling Log

Project Name	PGE Topock GMP				Sampling Event	2005-GMP-087-Q4					
Job Number	328225.GM.02.00				Date	12-13-05					
Field Team	2	Field Conditions sunny				Page	of _____				
Well/Sample Number	MW-39-100-087				QC Sample ID	NA	QC Sample Time _____				
Purge Start Time	12:55				Purge Method	Ded. Pump <input checked="" type="checkbox"/>					
Flow Cell: Y / N					Min. Purge Volume (gal)/(L)	52.2	Purge Rate (gpm) (mLpm)	2			
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
16.51	1457	4	7.25	18.4	0.51	2.87	26.6	1.1	12	176	
16.53	1502	14	7.13	20.1	0.41	3.03	26.8	1.2	13	164	
16.54	1507	24	7.10	20.1	0.27	3.03	26.7	1.2	13	156	
16.55	1507 12	34	7.08	20.1	0.34	3.04	26.8	1.2	13	148	
16.55	1517	44	7.07	20.1	0.42	2.98	26.8	1.2	13	142	
16.55	1522	54	7.06	20.1		3.00	26.7	1.2	13	139	
Parameter Stabilization Criteria		+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV		
Did Parameters Stabilize prior to sampling?		Y	Y	—	Y	NA	Y		Y		
Previous Field measurement (11/2/2005)		7.04	23000	0.53	1.67	26.52	1.4		168		
Are measurements consistent with previous?		Y	Y	Y	N	NA	Y		Y		

Sample Time 1523 Sample Location: pump tubing  well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 15.66

WD (Well Depth - from table) ft btc (118)

SWH (Standing Water Height) = WD-Initial Depth 102.34

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 17.4

Three Casing Volumes = 52.2

Color: clear, grey, yellow, brown, black, cloudy, green

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: P6E 2005-01A

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Approx. 5 min After Reinstallation	Time of Removal
102.34	1450	1530	15.70
			Time of Reinstallation
Comments:			

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/13/05						
Field Team	1	Field Conditions (00), sunny			Page	1 of 1					
Well/Sample Number	MW-40D-087			QC Sample ID	NA		QC Sample Time	1045			
Purge Start Time	0945			Purge Method	3WV		Ded. Pump	NC			
Flow Cell: Y	N	Min. Purge Volume (gal)/(L) 79			Purge Rate (gpm)/(mLpm) 3						
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
113.0	0949	12	9.11	17.3	0.87	3.40	29.53	1.04	11	-103	
113.0	0954	27	8.28	17.8	0.94	2.74	30.18	1.08	11	-39	
113.05	0959	42	8.39	18.8	0.94	2.82	30.52	1.13	12	-18	
113.10	1004	57	8.39	17.5	0.31	2.82	30.42	1.03	11	-10	
113.10	1009	72	8.39	18.1	0.24	2.81	30.57	1.07	11	-8	
113.10	1014	87	8.39	18.3	0.16	2.80	30.39	1.09	11	-6	
113.20	1022										
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?							NA				
Previous Field measurement (10/5/2005)			7.51	16100	1.94	2.64	31.9	0.9		-60	
Are measurements consistent with previous?							NA				

Sample Time 1020 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 111.25

WD (Well Depth - from table) ft btc (266)

SWH (Standing Water Height) = WD-Initial Depth 154.75

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 26.30

Three Casing Volumes = 78.92

Measure Point: Well TOC Steel Casing HACH - 2005 - 01B

HORIBA - C100 876 WATER LEVEL METER SERIAL NUMBER: 670

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation
0934	111.25	1049	111.39	

Comments:

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/13/05						
Field Team	1 Field Conditions			Page	1 of 1						
Well/Sample Number	MW-40S-087			QC Sample ID	NA		QC Sample Time				
Purge Start Time	0839			Purge Method	3WV		Ded. Pump				
Flow Cell	(Y) N			Min. Purge Volume (gal)/(L)	12		Purge Rate (gpm)/(mlpm)	1.5			
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
111.05	0902	3	7.90	2.07	26.6	8.22	27.4	0.10	1.4	194	
111.06	0904	6	8.14	2.16	6.16	8.00	28.35	0.10	1.4	184	
111.06	0906	9	8.25	2.17	2.99	7.92	29.52	0.10	1.4	173	
111.06	0908	12	8.29	2.17	2.32	8.00	28.72	0.10	1.4	166	
111.06	0910	15	8.34	2.19	1.37	8.02	28.79	0.11	1.4	157	
110.86	0917										
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
<b>Parameter Stabilization Criteria</b>											
Did Parameters Stabilize prior to sampling?						NA					
Previous Field measurement (10/5/2005)			7.64	1940	3.46	6.81	30.9	0.1	7		
Are measurements consistent with previous?						NA					

Sample Time 0915 Sample Location: pump tubing \_\_\_\_\_ well port X spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 110.86

WD (Well Depth - from table) ft bto (134)

SWH (Standing Water Height) = WD-Initial Depth 23.14

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 3.93

Three Casing Volumes = 11.80

HACH-PGE 2005-01B  
HORIBA-CH2MHILL CI100-B74 WATER LEVEL METER SERIAL NUMBER: 670

Measure Point: Well TOC Steel Casing		NO <u>X</u> Transducer	
Initial DTW / Before Removal		Approx. 5 min After Reinstallation	
Time	Initial DTW	Time	Final DTW
<u>0838</u>	<u>110.86</u>	<u>0917</u>	<u>110.8</u>
Comments:			

Color: clear, grey yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-16-05						
Field Team	1	Field Conditions			Page	1 of 1					
Well/Sample Number MW-41D-087			QC Sample ID	NA	QC Sample Time						
Purge Start Time 1044			Purge Method	GRUNDfos	Ded. Pump						
Flow Cell: Y / N			Min. Purge Volume (gal)/(L)	147 GRUNDfos	Purge Rate (gpm)/(mLpm)	3					
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
26.18	1052	25	8.43	3.67	0.63	4.61	28.34	1.21	12	-220	
26.19	1100	50	8.30	20.4	0.44	2.38	29.66	1.23	13	-172	
26.23	1108	75	8.34	20.4	0.63	2.21	29.76	1.23	13	-164	
26.22	1129	100	8.33	20.4	0.78	2.15	28.62	1.23	13	-163	
26.19	1132	125	8.32	20.3	0.53	2.13	29.09	1.22	13	-163	
	1145	150	8.31	20.2	0.34	2.15	29.05	1.21	13	-163	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?							NA				
Previous Field measurement (10/5/2005)			7.77	21100	1.2	2.38	31.4	1.3		-225	
Are measurements consistent with previous?							NA				

Sample Time 1135 Sample Location: pump tubing well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOC): 25.08

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER:

WD (Well Depth - from table) ft btc (313)

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
1034	25.08	1141	25.05
Comments:			

SWH (Standing Water Height) = WD-Initial Depth 287.92

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 43.95

Three Casing Volumes = 146.85

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP				Sampling Event	2005-GMP-087-Q4					
Job Number	328225.GM.02.00				Date	12-10-05					
Field Team	1 Field Conditions				Page	1 of 1					
Well/Sample Number	MW-41M-087				QC Sample ID	NA		QC Sample Time			
Purge Start Time	1155				Purge Method	860 GRUNDfos Ded. Pump					
Flow Cell: Y / N					Min. Purge Volume (gal)/(L)	86	Purge Rate (gpm)/(mlpm)	3			
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
25.69	1155	15	8.11	14.1	0.54	3.22	27.46	0.82	9	-12	
25.69	1200	30	8.13	14.5	0.58	2.31	28.10	0.84	9	-20	
25.69	1205	45	8.16	14.4	0.39	2.18	27.96	0.84	9	-35	
25.69	1210	60	8.16	14.4	0.30	2.11	28.25	0.84	9	-38	
25.69	1215	75	8.15	14.4	0.47	2.11	28.11	0.84	9	-39	
25.69	1220	90	8.14	14.4	0.44	2.08	28.50	0.84	9	-38	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?							NA				
Previous Field measurement (10/5/2005)			7.63	15100	0.8	2.42	30.4	0.9		-85	
Are measurements consistent with previous?							NA				

Sample Time 1220 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 25.14Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_WD (Well Depth - from table) ft btc (192)

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
<u>1244</u>	<u>25.14</u>	<u>1228</u>	<u>25.11</u>
Comments:			

SWH (Standing Water Height) = WD-Initial Depth 1464.86

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 28.37Three Casing Volumes = 85.11

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-16-05						
Field Team	1	Field Conditions			Page	1 of 1					
Well/Sample Number	MW-41S-087			QC Sample ID	MW-95-087		QC Sample Time	1315			
Purge Start Time	1235			Purge Method	GRUNDENS Dedi. Pump						
Flow Cell: Y / N				Min. Purge Volume (gal)/(L)	(19)	Purge Rate (gpm)/(mlpm)	2				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
25.77	1237	4	8.47	5.00	57.9	4.00	26.48	0.25	3.1	-1	
25.78	1239	8	8.41	4.53	13.1	2.97	27.05	0.23	2.9	-5	
25.78	1241	12	8.40	4.48	6.05	2.87	27.67	0.23	2.9	-5	
25.79	1243	16	8.38	4.44	2.91	2.88	27.66	0.23	2.8	-4	
25.79	1245	20	8.37	4.42	1.85	2.86	27.86	0.23	2.8	-3	
<b>Parameter Stabilization Criteria</b>			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?						NA					
Previous Field measurement (10/5/2005)	7.84	4660	5.7	3.29	29.5	0.2			-47		
Are measurements consistent with previous?					NA						

Sample Time 1250 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 25.57

WD (Well Depth - from table) ft btc (62)

SWH (Standing Water Height) = WD-Initial Depth 36.43

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 0.19

Three Casing Volumes = 18.57

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
<u>1230</u>	<u>25.57</u>	<u>1254</u>	<u>25.59</u>
Comments: _____			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-15-05						
Field Team	2	Field Conditions	overcast	Page	of						
Well/Sample Number	MW-42-030-087			QC Sample ID	NA	QC Sample Time					
Purge Start Time	1311			Purge Method	Grundfos	Ded. Pump	N				
Flow Cell	(Y)	N		Min. Purge Volume (gal/L)	10.5	Purge Rate (gpm)/(mLpm)	2				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
12.18	1312	2	6.37	17.2	56.1	2.43	24.58	0.98	11	-108	
12.20	1315	8	6.43	15.0	4033.3	2.39	24.56	0.88	9	-116	
12.22	1318	14	6.44	14.5	17.1	2.42	24.59	0.85	9	-121	
12.22	1321	20	6.43	14.4	14.5	2.41	24.57	0.84	9	-123	
12.22	1324	26	6.44	14.4	10.5	2.43	24.48	0.83	9	-125	
12.23	1327	32	6.44	14.6	16.5	2.43	24.35	0.85	9	-126	
12.23	1330	38	6.43	14.5	9.6	2.39	25.01	0.85	9	-129	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?	(Y)	(Y)				(Y)	NA	(Y)		(Y)	
Previous Field measurement (10/7/2005)	7.2	16700		43.6	2.92	26.2	1			-139	
Are measurements consistent with previous?	(N)	(N)	(N)	(Y)	NA	(Y)		(Y)		(Y)	

Sample Time 1331 Sample Location: pump tubing (Y) well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOC): 11.28

WD (Well Depth - from table) ft btc (32)

SWH (Standing Water Height) = WD-Initial Depth 20.72

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 3.52

Three Casing Volumes = 10.5

Measure Point: Well Toe Steel Casing WATER LEVEL METER SERIAL NUMBER: P6 + E 501st 30

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
1307	11.28	1343	11.23
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

Sample Time 1257 Sample Location: pump tubing well port spigot bailer other

**Comments:** \_\_\_\_\_

Initial Depth to Water (ft BTOC): 11.25

WD (Well Depth - from table) ft btc (56)

SWH (Standing Water Height) = WD-Initial Depth 54.7

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"

$$\text{One Casing Volume} = D^2 \cdot SWH$$

Three Casing Volumes = 22.8

These Sustaining Variables

Measure Point: Well TOC Steel Casing

WATER LEVEL METER SERIAL NUMBER: P6-E Salinst 300

Initial DTW / Before Removal		If Transducer			
		Approx. 5 min After Reinstallation		Time of Removal	1243
Time DTW	Initial DTW Time	Time	Final DTW	Time of Reinstallation	1300
11.25	1243	1305	11.26		

Comments:

### Sulfone-sulphur-organic-ether

**Salts:** Trace, Small Qu., Med Qu., Large Qu., Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/15/05						
Field Team	2	Field Conditions Sunny, cool, windy			Page	1	of 1				
Well/Sample Number	MW-42-065-087			QC Sample ID	NA	QC Sample Time					
Purge Start Time	1217			Purge Method	Ded. Pump	N					
Flow Cell: Y N				Min. Purge Volume (gal)/(L)	35 gal	Purge Rate (gpm)/(mLpm)	2 gpm				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
5	11.68	2	6.79	11.0	4.59	5.39	19.92	0.60	7	-118	
58	11.62	8	6.66	12.2	2.20	3.13	21.73	0.70	8	-116	
58	11.62	14	6.45	13.0	3.55	2.85	22.28	0.75	8	-97	
58	11.58	20	6.38	13.1	1.74	2.57	23.46	0.76	8	-88	
55	11.55	26	6.33	13.1	1.50	2.51	23.56	0.76	8	-84	
55	11.55	32	6.31	13.1	1.23	2.49	23.54	0.76	8	-81	
55	11.55	38	6.29	13.2	0.84	2.49	23.43	0.76	8	-78	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?	Y		Y		~	Y	NA			Y	
Previous Field measurement (10/7/2005)	6.81		17300		2.71	2.85	25.8	1		-121	
Are measurements consistent with previous?	Y		N		N		NA			N	

Sample Time 1237 Sample Location: pump tubing X well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOC): 10.77

WD (Well Depth - from table) ft btc (80)

SWH (Standing Water Height) = WD-Initial Depth 69.23

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 11.77

Three Casing Volumes = 35.31

Color: clear, grey, yellow, brown, black, cloudy, green

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: PGE Saitrist 300

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
1211	10.77	1243	10.85
Comments:			

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

Topock Sampling Log

Sample Time 1450 Sample Location: pump tubing 8 well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_  
Comments: 1001-01 - PG E

Initial Depth to Water (ft BTOC): 9.36

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER:

WATER LEVEL METER SERIAL NUMBER: 182E 2003-03

WD (Well Depth - from table) ft btc (27)

SWH (Standing Water Height) = WD-Initi.

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

$$\text{True Gasoline Volume} = \text{RtSWh} \quad 3.96$$

Three Casing Volumes =  $\frac{D}{4} \pi h$

Three Casing Volumes = \_\_\_\_\_

Initial DTW / Before Removal		If Transducer			
		Approx. 5 min After Reinstallation		Time of Removal	Time of Reinstallation
Time	Initial DTW	Time	Final DTW		
1417	9.56	1501	9.55		1456
Comments:					

**Color:** clear, grey, yellow, brown, black, cloudy, green

**Odor:** none, sulphur, organic, other

**Solids:** Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-16-05						
Field Team	2	Field Conditions	sunny	Page	of _____						
Well/Sample Number	MW-43-075-087			QC Sample ID	NA	QC Sample Time					
Purge Start Time	1410			Purge Method	Ded. Pump	installed 1409					
Flow Cell	(D)	N		Min. Purge Volume (gal)/(L)	35	Purge Rate (gpm)/(mLpm)	2				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
10.31	1411	2	7.20	15.5	1.90	2.57	20.5	0.9	10	-178	
10.32	1414	8	7.27	15.5	1.12	2.51	20.7	0.9	10	-188	
10.31	1417	14	7.22	15.7	1.38	2.50	20.8	0.9	10	-182	
10.33	1422	24	7.20	15.9	0.85	2.43	20.9	0.9	10	-178	
10.33	1425	30	7.20	15.9	0.86	2.41	20.8	0.9	10	-179	
10.33	1428	36	7.19	15.9	0.79	2.40	20.9	0.9	10	-179	
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?			Y	Y	Y	Y	NA	Y	Y	Y	
Previous Field measurement (11/3/2005)			7.36	16700	0.99	1.38	21.86	1		-168	
Are measurements consistent with previous?			Y	Y	Y	N	NA	Y	Y		

Sample Time 1429 Sample Location: pump tubing Y well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): 9.89

WD (Well Depth - from table) ft btc (77)

SWH (Standing Water Height) = WD-Initial Depth 67.11

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 11.4

Three Casing Volumes = 34.2

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: P62-2005-Q3

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
1407	9.89	1445	9.92
Comments:			

Color clear, grey, yellow, brown, black, cloudy, green

Odor: none sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12-16-05						
Field Team	2	Field Conditions	Sunny	Page	of _____						
Well/Sample Number	MW-43-090-087			QC Sample ID	NA		QC Sample Time				
Purge Start Time	1311			Purge Method	Ded. Pump	X - New pump installed @ 1300					
Flow Cell	Y	N		Min. Purge Volume (gal/L)	47	Purge Rate (gpm) (mL.pm)	2				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. oC	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
11.65	1313	4	6.91	18.8	2.35	4.31	19.9	1.1	12	-125	
11.05	1316	10	6.81	19.3	1.06	3.53	20.4	1.2	13	-137	generator stopped @ 1319
11.13	1345	16	6.76	22.1	2.08	3.40	20.8	1.3	14	-112	Started @ 1345
11.15	1350	26	6.74	22.1	1.27	2.86	21.2	1.3	14	-118	
11.16	1355	36	6.73	22.1	2.07	2.72	21.3	1.3	14	-125	
11.18	1358	42	6.73	22.2	0.84	2.65	21.3	1.3	14	-127	
11.18	1401	48	6.72	22.3	1.99	2.51	21.3	1.3	14	-127	
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Parameter Stabilization Criteria											
Did Parameters Stabilize prior to sampling?			Y	Y	Y	Y	NA			Y	
Previous Field measurement (11/3/2005)			6.88	27700	1.48	1.15	22.43	1.7		-127	
Are measurements consistent with previous?			Y	N	Y	Y	NA			Y	

Sample Time 1402 Sample Location: pump tubing X well port spigot bailer other

Comments:

HAC-H - PGE 2005-01B  
HORIBA - PGE

Initial Depth to Water (ft BTOP): 10.05

WD (Well Depth - from table) ft btc (102)

SWH (Standing Water Height) = WD-Initial Depth 91.95

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (2 in)

One Casing Volume = D\*SWH 15.63

Three Casing Volumes = 47

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: P68-E 2005-03

Initial DTW / Before Removal		If Transducer	
DTW Time	Initial DTW	Approx. 5 min After Reinstallation	Time of Removal
10.05	1300	1405	1301
			1304

Comments:

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4							
Job Number	328225.GM.02.00			Date	12/13/05							
Field Team	2	Field Conditions	Sunny, cool	Page	1	of	1					
Well/Sample Number	PE-01-087			QC Sample ID	NA		QC Sample Time					
Purge Start Time	0858			Purge Method	3 Well Vol. Ded. Pump N							
Flow Cell	(Y)	N		Min. Purge Volume (gal)/(L)	355	Purge Rate (gpm)/(mLpm)	6.8 gpm	→ 4 gpm				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)	
20.66	0900	12 gal	6.55	99	>999	9.07	17.12	0.54	6	-46	drawing water down @ 6gpm, turned down to 4 gpm.	
20.98	0910	586 gal	6.80	10.9	296	2.91	22.38	0.63	7	-145	slightly cloudy; brown	
20.99	0920	96 gal	6.58	11.7	14	2.67	22.46	0.67	7	-154		
21.00	0930	136 gal	7.07	11.9	7	2.47	22.90	0.68	7	-156		
21.05	0940	176 gal	7.12	12.1	4	2.42	22.86	0.69	8	-156		
21.07	0955	236 gal	7.17	12.3	4	2.33	23.00	0.70	8	-152		
21.08	1010	296 gal	7.19	12.4	2	2.23	22.85	0.71	8	-150		
21.08	1025	356 gal	7.21	12.4	2	2.19	23.07	0.71	8	-148		
			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV		
Parameter Stabilization Criteria												
Did Parameters Stabilize prior to sampling?	Y		Y		Y		Y		Y			
Previous Field measurement (10/3/2005)	7.37		11600		0.85		0.77		26.1		0.7	-202
Are measurements consistent with previous?	Y		Y		Y		N		NA		Y	N

Sample Time 1026 Sample Location: pump tubing X well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOC): 16.42

WD (Well Depth - from table) ft bto (97)

SWH (Standing Water Height) = WD-Initial Depth 80.58

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (6 in)

$6" = 1.449$

One Casing Volume = D\*SWH 118.37

Three Casing Volumes = 355.1

Color: clear, grey, yellow, brown, black, cloudy, green

Measure Point: Well TOC		Steel Casing		WATER LEVEL METER SERIAL NUMBER: PGE-2005-03	
Initial DTW / Before Removal		Approx. 5 min After Reinstallation		If Transducer	
Time	Initial DTW	Time	Final DTW	Time of Removal	N/A
0850	16.42	1032	16.66	Time of Reinstallation	N/A
Comments:					

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/16/05						
Field Team	3 Field Conditions			Page	of _____						
Well/Sample Number	PM-03-087			QC Sample ID	NA		QC Sample Time				
Purge Start Time				Purge Method	Ded. Pump						
Flow Cell: Y / N				Min. Purge Volume (gal)/(L)	Purge Rate (gpm)/(mLpm)						
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
1325		7.96	2.86	1.85	3.67	28.83	.14	1.8	-26		
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?							NA				
Are measurements consistent with previous?							NA				

Sample Time 1330 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): \_\_\_\_\_

WD (Well Depth - from table) ft btc (252)

SWH (Standing Water Height) = WD-Initial Depth \_\_\_\_\_

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 (8 in)

One Casing Volume = D\*SWH \_\_\_\_\_

Three Casing Volumes = \_\_\_\_\_

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
Comments: _____			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP				Sampling Event	2005-GMP-087-Q4					
Job Number	328225.GM.02.00				Date	12/15/05					
Field Team	3 Field Conditions				Page	1 of 6					
Well/Sample Number	CON-087				QC Sample ID	NA					
Purge Start Time					Purge Method	Ded. Pump					
Flow Cell: Y / N					Min. Purge Volume (gal)/(L)	Purge Rate (gpm)/(mLpm)					
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
		8.02	1.16	1.80	11.61	11.3	6.1	0.8	186		
Parameter Stabilization Criteria		+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV		
Did Parameters Stabilize prior to sampling?						NA					
Are measurements consistent with previous?						NA					

Sample Time 10:15 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): \_\_\_\_\_

WD (Well Depth - from table) ft btoc \_\_\_\_\_

SWH (Standing Water Height) = WD-Initial Depth \_\_\_\_\_

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 \_\_\_\_\_

One Casing Volume = D\*SWH \_\_\_\_\_

Three Casing Volumes = \_\_\_\_\_

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name Job Number Field Team	PGE Topock GMP 328225.GM.02.00 3			Sampling Event Date Page	2005-GMP-087-Q4 12/15/05 1 of 1							
Well/Sample Number	I-3-087			QC Sample ID	NA			QC Sample Time				
Purge Start Time				Purge Method				Ded. Pump				
Flow Cell: Y / N				Min. Purge Volume (gal)/(L)				Purge Rate (gpm)/(mLpm)				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)	
1045	8.18	1.16			16.33	11.4	0.1	0.8	172			
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV		
Did Parameters Stabilize prior to sampling?							NA					
Are measurements consistent with previous?							NA					

Sample Time 1045 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOP): \_\_\_\_\_

WD (Well Depth - from table) ft btc \_\_\_\_\_

SWH (Standing Water Height) = WD-Initial Depth \_\_\_\_\_

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 \_\_\_\_\_

One Casing Volume = D\*SWH \_\_\_\_\_

Three Casing Volumes = \_\_\_\_\_

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

Initial DTW / Before Removal		Approx. 5 min After Reinstallation		Time of Removal
Time	Initial DTW	Time	Final DTW	Time of Reinstallation
Comments: _____				

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/15/05						
Field Team	3 Field Conditions			Page	1 of 1						
Well/Sample Number	NR-1-087			QC Sample ID	NA			QC Sample Time			
Purge Start Time				Purge Method				Ded. Pump			
Flow Cell: Y / N				Min. Purge Volume (gal)/(L)				Purge Rate (gpm)/(mLpm)			
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
0930		6.52	1.16	2.55	11.52	11.2	-1	.8	222		
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?						NA					
Are measurements consistent with previous?						NA					

Sample Time 0730 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): \_\_\_\_\_

WD (Well Depth - from table) ft btc \_\_\_\_\_

SWH (Standing Water Height) = WD-Initial Depth \_\_\_\_\_

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 \_\_\_\_\_

One Casing Volume = D\*SWH \_\_\_\_\_

Three Casing Volumes = \_\_\_\_\_

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

Initial DTW / Before Removal		If Transducer	
Approx. 5 min After Reinstallation		Time of Removal _____	
Time	Initial DTW	Time	Final DTW
Comments: _____			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/15/05						
Field Team	3 Field Conditions			Page	1 of 1						
Well/Sample Number NR-2-087			QC Sample ID	NA		QC Sample Time					
Purge Start Time			Purge Method	Ded. Pump							
Flow Cell: Y / N			Min. Purge Volume (gal)/(L)	Purge Rate (gpm)/(mLpm)							
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
	0940		7.23	1.13	1.85	11.28	11.4	0.0	0.7	199	
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?							NA				
Are measurements consistent with previous?							NA				

Sample Time 0940 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): \_\_\_\_\_

WD (Well Depth - from table) ft btc \_\_\_\_\_

SWH (Standing Water Height) = WD-Initial Depth \_\_\_\_\_

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 \_\_\_\_\_

One Casing Volume = D\*SWH \_\_\_\_\_

Three Casing Volumes = \_\_\_\_\_

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

Initial DTW / Before Removal		If Transducer	
Approx. 5 min After Reinstallation		Time of Removal _____	
Time	Initial DTW	Time	Final DTW
Comments: _____			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/15/05						
Field Team	3 Field Conditions			Page	1 of 1						
Well/Sample Number NR-3-087			QC Sample ID	NA	QC Sample Time _____						
Purge Start Time _____			Purge Method	Ded. Pump							
Flow Cell: Y / N			Min. Purge Volume (gal)/(L)	Purge Rate (gpm)/(mLpm)							
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
0950	7.62	1.12	11.44	11.5	0.0	0.7	194				
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?							NA				
Are measurements consistent with previous?							NA				

Sample Time 0950 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other \_\_\_\_\_

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): \_\_\_\_\_

WD (Well Depth - from table) ft btc \_\_\_\_\_

SWH (Standing Water Height) = WD-Initial Depth \_\_\_\_\_

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 \_\_\_\_\_

One Casing Volume = D\*SWH \_\_\_\_\_

Three Casing Volumes = \_\_\_\_\_

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/16/05						
Field Team	3 Field Conditions			Page	1 of 1						
Well/Sample Number	R-22-087			QC Sample ID	NA						
Purge Start Time				Purge Method	surface water						
Flow Cell: Y / N				Min. Purge Volume (gal)/(L)	N/A	Purge Rate (gpm)/(mLpm)	N/A				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. oC	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
N/A	1241	N/A	8.15	0.919	1.03	10.95	12.1	0.0	0.6	-28	
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?							NA				
Are measurements consistent with previous?							NA				

Sample Time 1238 Sample Location: pump/tubing well port spigot bailer other

Comments:

Initial Depth to Water (ft BTOC):

WD (Well Depth - from table) ft btc

SWH (Standing Water Height) = WD-Initial Depth

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04

One Casing Volume = D\*SWH

Three Casing Volumes =

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: N/A

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/16/05						
Field Team	3	Field Conditions	sunny, cool	Page	1	of	1				
Well/Sample Number R-27-087			QC Sample ID	NA	QC Sample Time						
Purge Start Time			Purge Method	surface water bled. Pump	N						
Flow Cell: Y N			Min. Purge Volume (gal)/(L)	N/A	Purge Rate (gpm)/(mLpm)	N/A					
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
N/A	1153	N/A	8.09	1,02	2.41	10.99	11.5	0.0	0.7	-57	
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?							NA				
Are measurements consistent with previous?							NA				

Sample Time 1246 Sample Location: pump tubing well port spigot bailer other grab sample

Comments:

Initial Depth to Water (ft BTOC):

WD (Well Depth - from table) ft btc

SWH (Standing Water Height) = WD-Initial Depth

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04

One Casing Volume = D\*SWH

Three Casing Volumes =

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: N/A

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/16/05						
Field Team	3	Field Conditions	Sunny, cool	Page	1	of	1				
Well/Sample Number	R-28-087			QC Sample ID	NA	QC Sample Time	N/A				
Purge Start Time	N/A			Purge Method	surface water	Ded. Pump	N				
Flow Cell: Y	N			Min. Purge Volume (gal)/(L)	N/A	Purge Rate (gpm)/(mLpm)	N/A				
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. oC	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
—	1030	—	8.08	0.914	11.20 0.85	11.20	11.1	0.0	0.59	28	
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?							NA				
Are measurements consistent with previous?							NA				

Sample Time 1030 Sample Location: pump tubing \_\_\_\_\_ well port \_\_\_\_\_ spigot \_\_\_\_\_ bailer \_\_\_\_\_ other sample pole

Comments: \_\_\_\_\_

Initial Depth to Water (ft BTOC): N/A

WD (Well Depth - from table) ft btc N/A

SWH (Standing Water Height) = WD-Initial Depth N/A

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 N/A

One Casing Volume = D\*SWH N/A

Three Casing Volumes = N/A

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: N/A

Initial DTW / Before Removal		If Transducer	
Time	Initial DTW	Time	Final DTW
N/A	N/A	N/A	N/A
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand

## Topock Sampling Log

Project Name	PGE Topock GMP			Sampling Event	2005-GMP-087-Q4						
Job Number	328225.GM.02.00			Date	12/15/05						
Field Team	3 Field Conditions			Page	1 of 1						
Well/Sample Number RRB-087				QC Sample ID	NA	QC Sample Time _____					
Purge Start Time _____				Purge Method _____	Ded. Pump _____						
Flow Cell: Y / N				Min. Purge Volume (gal)/(L) _____	Purge Rate (gpm)/(mLpm) _____						
Water Level	Time	Vol. Purged gallons / liters	pH	Conductivity mS/cm	Turbidity NTU	Diss. Oxygen mg/L	Temp. °C	Salinity %	TDS g/L	Eh/ORP mv	Comments (See description below)
Parameter Stabilization Criteria			+/- 0.1 pH units	+/- 3%	+/- 10% NTU units when >10 NTUs	+/- 0.3 mg/L	NA	NA	NA	+/- 10 mV	
Did Parameters Stabilize prior to sampling?							NA				
Are measurements consistent with previous?							NA				

Sample Time \_\_\_\_\_ Sample Location: pump tubing well port spigot bailer other \_\_\_\_\_

Comments: no + enough water to sample!

Initial Depth to Water (ft BTOC): \_\_\_\_\_

WD (Well Depth - from table) ft btc \_\_\_\_\_

SWH (Standing Water Height) = WD-Initial Depth \_\_\_\_\_

D (Volume as per diameter) 2"= 0.17, 4"= 0.66, 1"=0.04 \_\_\_\_\_

One Casing Volume = D\*SWH \_\_\_\_\_

Three Casing Volumes = \_\_\_\_\_

Measure Point: Well TOC Steel Casing WATER LEVEL METER SERIAL NUMBER: \_\_\_\_\_

Initial DTW / Before Removal		If Transducer	
Approx. 5 min After Reinstallation		Time of Removal _____	
Time	Initial DTW	Time	Final DTW
Comments:			

Color: clear, grey, yellow, brown, black, cloudy, green

Odor: none, sulphur, organic, other

Solids: Trace, Small Qu, Med Qu, Large Qu, Particulate, Silt, Sand



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949769

CHAIN OF CUSTODY RECORD  
[2005-GMP-087-Q4]

Corrected by Shawn  
MILIA

COC Number  
TURNAROUND TIME  
DATE 12-12-05

10 Days

PAGE 1 OF 1

COMPANY CH2M HILL  
PROJECT NAME PG&E Topock  
PHONE (510) 251-2888 FAX (510) 622-7086  
ADDRESS 155 Grand Ave Ste 1000  
Oakland, CA 94612  
P.O. NUMBER 328225.GM.02.00  
SAMPLERS (SIGNATURE) *Kate Ebel*

SAMPLE I.D.	DATE	TIME	DESCRIPTION	NUMBER OF CONTAINERS								COMMENTS		
				CRG (218.6) Lab Filtered	CRG (7195A) Lab Filtered	CRG (7199) Lab Filtered	Diss Metals (6010B) Field Filtered Chromium	Diss Metals (6010B) Field Filtered Ca Mg K Na B	Diss Metals (6010B) Field Filtered Cd Fe Mn	Diss Metals (6010B) Field Filtered Ti Fe Zn Ca Mg K	Total Metals (7470A) Field Filtered Chromium	Specific Conductance (120.1)	pH (150.1)	TDS (160.1)
1 MW-11-087	12-12-05	1020	GW				1	1					2	pH=2
2 MW-10-087	12-12-05	1102	GW				1	1					2	pH=2
3 MW-26-087	12-12-05	1345	GW	1	1					1	1	1	5	pH=2
4 MW-19-087	12-12-05	1430	GW	1	X	No				1	1		4	pH=2

ALERT!!  
Level III QC

For Sample Conditions  
See Form Attached

Rec'd 12/12/05  
s12 949769

CHAIN OF CUSTODY SIGNATURE RECORD				
Signature (Relinquished) <i>Kate Ebel</i>	Printed Name <i>Kate Ebel</i>	Company/ Agency <i>CH2M HILL</i>	Date/ Time <i>12-12-05 1500</i>	
Signature (Received) <i>Shawn MILIA</i>	Printed Name <i>Shawn MILIA</i>	Company/ Agency <i>EXECUTIVE COURSE</i>	Date/ Time <i>12-12-05 2015</i>	
Signature (Relinquished) <i>Jacqueline Brown</i>	Printed Name <i>Jacqueline Brown</i>	Company/ Agency <i>TLI</i>	Date/ Time <i>12-12-05 2010</i>	
Signature (Relinquished) <i>Jacqueline Brown</i>	Printed Name <i>Jacqueline Brown</i>	Company/ Agency <i>TLI</i>	Date/ Time	
Signature (Received) <i>Jacqueline Brown</i>	Printed Name <i>Jacqueline Brown</i>	Company/ Agency <i>TLI</i>	Date/ Time	

SAMPLE CONDITIONS				
RECEIVED	COOL <input type="checkbox"/>	WARM <input type="checkbox"/>	°F	
CUSTODY SEALED	YES <input type="checkbox"/>	NO <input type="checkbox"/>		
SPECIAL REQUIREMENTS:				

Zymax Forensics.  
71 Zaca Ln. San Luis Obispo, CA 93401  
phone: (805) 544-4696  
Alan Jeffrey

CHAIN OF CUSTODY RECORD  
[2005-GMP-087-Q4]

COC Number  
TURNAROUND TIME 10 Days  
DATE 12-12-05 PAGE 1 OF 1

COMPANY	CH2M HILL			COMMENTS
PROJECT NAME	PG&E Topack GWM			
PHONE	(510) 251-2888	FAX	(510) 622-7086	
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612			
P.O. NUMBER	328225.GM.02.00			TEAM 3
SAMPLERS (SIGNATURE)	<u>Kate Ebel</u>			
SAMPLE I.D.	DATE	TIME	DESCRIPTION	
MW-26-087	12-12-05	1345	Groundwater	1
			Groundwater	

Oxygen 18 & Deuterium (CF-IRMS)

NUMBER OF CONTAINERS

CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished)	Printed Name	Company/ Agency	Date/ 12-12-05	RECEIVED <input type="checkbox"/> COOL <input type="checkbox"/> WARM <input type="checkbox"/>	°F
			Time 1300		
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	CUSTODY SEALED <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/>	
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time	SPECIAL REQUIREMENTS:	
Signature (Received)	Printed Name	Company/ Agency	Date/ Time		
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time		
Signature (Received)	Printed Name	Company/ Agency	Date/ Time		

Kate Ebel	Printed Name	Kate Ebel	Company/ Agency	CH2M HILL	Date/ 12-12-05	Time 1300

EMAX Laboratories, Inc.  
1835 W. 205th Street, Torrance, CA 90501  
Tel: (310) 618 8889 Ext. 119 Fax: (310) 618 0818  
Joe Kelbley jkelbley@emaxlabs.com

### CHAIN OF CUSTODY RECORD

[2005-GMP-087-Q4]

COC Number \_\_\_\_\_  
TURNAROUND TIME \_\_\_\_\_  
DATE 12-12-05 PAGE 1 OF 1  
12 Days

COMPANY	CH2M HILL	COMMENTS					
PROJECT NAME	PG&E Topock GWM						
PHONE	(510) 251-2888	FAX (510) 622-7086					
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612						
P.O. NUMBER	328225.GM.02.00 <i>Kate a eb</i>						
SAMPLERS (SIGNATURE)							
SAMPLE I.D.	DATE	TIME	DESCRIPTION	Alkalinity (310.1)	Anions (300)	Bromide Chloride Sulfate Nitrate	NUMBER OF CONTAINERS
MW-26-087	12-12-05	1345	Groundwater	1	1		2
			Groundwater				
			Groundwater				
			Groundwater				
			Groundwater				
			Groundwater				
			Groundwater				
			Groundwater				
			Groundwater				
			Groundwater				2

### CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished) <i>Kate a eb</i>	Printed Name <i>Kate Eber</i>	Company/ Agency <i>CH2M HILL</i>	Date/ Time <i>12-12-05 1500</i>
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

### SAMPLE CONDITIONS

RECEIVED COOL  WARM  \_\_\_\_ °F  
CUSTODY SEALED YES  NO

### SPECIAL REQUIREMENTS:

949768



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## CHAIN OF CUSTODY RECORD

[2005-GMP-087-Q4]

MILA

COC Number

TURNAROUND TIME

10 Days

DATE 12/12/05

PAGE 1 OF 1

COMPANY	CH2M HILL											COMMENTS	
PROJECT NAME	PG&E Topock												
PHONE	(510) 251-2888	FAX	(510) 622-7086										
ADDRESS	155 Grand Ave Ste 1000												
P.O. NUMBER	328225.GM.02.00												
SAMPLERS (SIGNATURE)													
SAMPLE I.D.	DATE	TIME	DESCRIPTION	CR6 (7/18/96) Lab Filtered	CR6 (7/18/96) Lab Filtered	Diss Metals (6/01/03) Field Filtered Chromium	Diss Metals (6/01/03) Field Filtered O Ca Mg K Na B	Diss Metals (6/01/03) Field Filtered Fe Mn	Total Metals (7/17/04) Field Filtered Chromium	Specific Conductance (200.7) Field Filtered Chromium	PH (1/15/01)	NUMBER OF CONTAINERS	
MW-33-210-087	12/12/05	1215	GW	X X					X X	X X	1	3	pH=2
MW-29-087	12/12/05	1102	GW	X X					X X	X X	1	3	pH=2
MW-33-046-087	12/12/05	1434	GW	X X					X X	X X	1	3	pH=2
MW-33-150-087	12/12/05	1401	GW	X X					X X	X X	1	3	pH=2
EB-121205A-087	12/12/05	1511	GW	X X					X X	X X	1	2	KAC pH=2

For Sample Conditions  
See Form Attached

ALERT!!

Level III OC

14

## CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished) <i>Jenny Brantner</i>	Printed Name Jenny Brantner	Company/ Agency CH2M HILL	Dated 12/12/05 Time 1527
Signature (Received) <i>SPARROW 8774</i>	Printed Name SPARROW 8774	Company/ Agency EXECUTIVE COURIER	Dated 12/12/05 Time 1527
Signature (Relinquished) <i>SPARROW 8774</i>	Printed Name SPARROW 8774	Company/ Agency EXECUTIVE COURIER	Dated 12/12/05 Time 2:00:00
Signature (Received) <i>J. Brodin</i>	Printed Name J. Brodin	Company/ Agency TLI	Dated 12-12-05 Time 20:00
Signature (Relinquished)	Printed Name	Company/ Agency	Dated Time
Signature (Received)	Printed Name	Company/ Agency	Dated Time

RECEIVED	COOL <input type="checkbox"/>	WARM <input type="checkbox"/>	°F
CUSTODY SEALED	YES <input type="checkbox"/>	NO <input type="checkbox"/>	

## SPECIAL REQUIREMENTS:

Corrected by Shawn.

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## CHAIN OF CUSTODY RECORD

[2005-GMP-087-Q4]

COC Number

10 Days

TURNAROUND TIME

DATE 12/13/05PAGE 1 OF 1

949837

COMPANY	CH2M HILL											COMMENTS				
PROJECT NAME	PG&E Topock															
HOME	(510) 251-2888	FAX	(510) 622-7086													
ADDRESS	155 Grand Ave Ste 1000															
PHONE NUMBER	Oakland, CA 94612															
AMPLERS (SIGNATURE)	<u>Z Elliott</u>															
SAMPLE I.D.		DATE	TIME	DESCRIPTION	C66 (7186) Lab Filtered	C66 (7194) Lab Filtered	C66 (7199) Lab Filtered	Diss Metals (6010B) Field Filtered Chromium	Diss Metals (6010B) Field Filtered Cr-Ca-Mg-K-Na-S	Diss Metals (6010B) Field Filtered Title 22	Diss Metals (6010B) Field Filtered Title 22 Ca-Mg-K	Total Metals (74704) Field Filtered Chromium	Specific Conductance (120.1)	pH (150.1)	TDS (160.1)	NUMBER OF CONTAINERS
MW-40D-087	12/13/05	1020	groundwater		X X							X X			3	
MW-40S-087	12/13/05	0915	groundwater		X X							X X			3	
MW-12-087	12/13/05	1135	groundwater	X	No	X		X				X X			3	
MW-13-087	12/13/05	1400	groundwater		X X							X X			3	
MW-31-DLO-087	12/13/05	1430	groundwater	X	No	X						X X X			3	
															15	

## CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished)	<u>Z Elliott</u>	Printed Name	<u>Laura Elliott</u>	Company/ Agency	CH2M HILL	Date/ Time	<u>12/13/05</u>
Signature (Received)	<u>J. Shabana</u>	Printed Name	<u>J. Shabana</u>	Company/ Agency	T21	Date/ Time	<u>12/13/05</u>
Signature (Relinquished)		Printed Name		Company/ Agency		Date/ Time	<u>20.1.20</u>
Signature (Received)		Printed Name		Company/ Agency		Date/ Time	
Signature (Relinquished)		Printed Name		Company/ Agency		Date/ Time	
Signature (Received)		Printed Name		Company/ Agency		Date/ Time	
				ALERT!!	Date/ Time		
				LEVEL III QC	Date/ Time		

SAMPLE CONDITIONS	
RECEIVED	COOL <input type="checkbox"/> WARM <input type="checkbox"/> _____ °F
CUSTODY SEALED YES <input type="checkbox"/> NO <input type="checkbox"/>	
SPECIAL REQUIREMENTS:	
For Sample Conditions See Form Attached	

FROM TRUESDAIL LABS 11/14 7/30 6462

(WED) DEC 14 2005 8:00/1/SI. 8:05/MN. 6828828128 P 0

EMAX Laboratories, Inc.  
1835 W. 205th Street, Torrance, CA 90504  
Tel: (310) 818 8889 Ext. 119 Fax: (310) 818 0818  
Joe Kelbley jkelbley@emaxlabs.com

### CHAIN OF CUSTODY RECORD

[2005-GMP-087-Q4]

COC Number

TURNAROUND TIME

DATE 12/13/05 PAGE 1 OF 1

12 Days

COMPANY	CH2M HILL	COMMENTS									
PROJECT NAME	PG&E Topock GWM										
PHONE	(510) 251-2888 FAX (510) 622-7086										
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612										
P.O. NUMBER	328225.GM.02.00										
SAMPLERS (SIGNATURE)	L.M.Elliott										
SAMPLE I.D.	DATE	TIME	DESCRIPTION	Alkalinity (3101)	Atrons (300)	Bromide Chloride Sulfate Nitrate	Chloride	Cadmium	Copper	Manganese	Phosphate
MW-31-060-087	12/13/05	1430	Groundwater	X	X						
			Groundwater								
			Groundwater								
			Groundwater								
			Groundwater								
			Groundwater								
			Groundwater								
			Groundwater								
			Groundwater								
			Surfacewater								
			Surfacewater								

### CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
L.M.Elliott	Laura Elliott	CH2M Hill	12/13/05 1520
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

### SAMPLE CONDITIONS

RECEIVED COOL  WARM  °F

CUSTODY SEALED YES  NO

### SPECIAL REQUIREMENTS:

12/13/2005 20:58 FAX 9288552379  
THE HAMPTON INN

Zymax Forensics.  
71 Zaca Ln. San Luis Obispo, CA 93401  
phone: (805) 544-4696  
Alan Jeffrey

## CHAIN OF CUSTODY RECORD

[2005-GMP-087-Q4]

COC Number

TURNAROUND TIME

10 Days

DATE 12/13/05 PAGE 1 OF 1

COMPANY	CH2M HILL	PROJECT NAME	PG&E Topock GWM	PHONE	(510) 251-2888	FAX	(510) 622-7086	Oxygen/18 & Deuterium (CF/IRMS)	NUMBER OF CONTAINERS	COMMENTS
ADDRESS	155 Grand Ave Ste 1000	OAKLAND, CA 94612	P.O. NUMBER	328225.GM.02.00	TEAM	1				
SAMPLERS (SIGNATURE)	<u>ZM Elliott</u>									
SAMPLE I.D.		DATE		TIME		DESCRIPTION				
MW-31-DL0-087		12/13/05		1430		Groundwater	X			
						Groundwater				
						Groundwater				
						Groundwater				
						Groundwater				
						Groundwater				
						Groundwater				
						Groundwater				
						Surfacewater				
						Surfacewater				

## CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished) <u>ZM Elliott</u>	Printed Name <u>Laura Elliott</u>	Company/ Agency <u>CH2M Hill</u>	Date/ Time <u>12/13/05 1520</u>
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

## SAMPLE CONDITIONS

RECEIVED COOL  WARM  °FCUSTODY SEALED YES  NO 

## SPECIAL REQUIREMENTS:



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### CHAIN OF CUSTODY RECORD

[2005-GMP-087-Q4]

COC Number

TURNAROUND TIME

10 Days

DATE 12/13/05

PAGE 1 OF 1

**949837**

COMPANY	CH2M HILL													COMMENTS				
PROJECT NAME	PG&E Topock																	
PHONE	(510) 251-2888	FAX	(510) 622-7086															
ADDRESS	155 Grand Ave Ste 1000																	
P.O. NUMBER	328225.GM.02.00																	
SAMPLERS (SIGNATURE)	Z. Melliott																	
SAMPLE I.D.	DATE	TIME	DESCRIPTION	CR6 (2/86) Lab Filtered	CR6 (7/1984) Lab Filtered	CR6 (7/199) Lab Filtered	Diss Metals (6/07/05) Field Filtered	Diss Metals (6/07/05) Field Filtered Chromium	Diss Metals (6/07/05) Field Filtered Cr, Ca, Mg, K, Na, B	Diss Metals (6/07/05) Field Filtered Total 22	Diss Metals (6/07/05) Field Filtered Total 22 Ca, Mg, K	Diss Metals (6/07/05) Lab Filtered Na, B, Fe, Mn	Total Metals (7/17/04) Field Filtered	Specific Conductance (120.1)	pH (150.1)	TDS (160.1)	NUMBER OF CONTAINERS	COMMENTS
EB-121305-087	12/13/05	0930	groundwater	X	X										2	pH = 2		
MW-90-087	12/13/05	1350	groundwater		X	No	X		X	X	X				3	pH = 2		
															5			

### CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished) <i>Z. Melliott</i>	Printed Name <i>Laura Elliott</i>	Company/ Agency <i>CH2M Hill</i>	Date/ Time <i>12/13/05 1520</i>
Signature (Received) <i>Hugh Douglas</i>	Printed Name <i>Hugh Douglas</i>	Company/ Agency	Date/ Time <i>12/13/05</i>
Signature (Relinquished) <i>J. Shaberman</i>	Printed Name <i>J. Shaberman</i>	Company/ Agency	Date/ Time
Signature (Received) <i>J. Shaberman</i>	Printed Name <i>J. Shaberman</i>	Company/ Agency <i>TCL</i>	Date/ Time <i>12/13/05</i>
Signature (Relinquished) <i>J. Shaberman</i>	Printed Name <i>J. Shaberman</i>	Company/ Agency	Date/ Time <i>12/13/05</i>
Signature (Received) <i>J. Shaberman</i>	Printed Name <i>J. Shaberman</i>	Company/ Agency	Date/ Time <i>12/13/05</i>

### SAMPLE CONDITIONS

RECEIVED COOL  WARM  °F

CUSTODY SEALED YES  NO

### SPECIAL REQUIREMENTS:

**ALERT!!**

**Level III QC**



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### CHAIN OF CUSTODY RECORD

[2005-GMP-087-Q4]

COC Number

10 Days

TURNAROUND TIME

DATE 12.13.05

PAGE \_\_\_\_ OF \_\_\_\_

949 837

COMPANY	CH2M HILL			COMMENTS												
PROJECT NAME	PG&E Topock															
PHONE	(510) 251-2888		FAX (510) 622-7086													
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612															
P.O. NUMBER	328225.GM.02.00															
SAMPLERS (SIGNATURE)	<i>Kate Ebel</i>															
SAMPLE I.D.	DATE	TIME	DESCRIPTION	CR6 (218.6) Lab Filtered	CR6 (71964) Lab Filtered	CR6 (7198) Lab Filtered	Diss Metals (60108) Field Filtered	Total Metals (74704) Field Filtered	Specific Conductance (720.1)	pH (150.1)	TDS (160.1)	NUMBER OF CONTAINERS				
PE-01-087	12.13.05	1026	GW	X								X	X		1	
MW-33-90-087	12.13.05	1315	GW		X	X						X	X	3	7 PM = 2	
MW-36-100-087	12.13.05	1435	GW		X	X						X	X	3		
MW-39-100-087	12.13.05	1523	GW		X	X						X	X	3		
MW-96-087	12.13.05	1230	GW		X	X						X	X	3		
EB-121305A-087	12.13.05	1205	GW		X	X								2		

### CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished) <i>Kate Ebel</i>	Printed Name Kate Ebel	Company/ Agency CH2M HILL	Date/ Time 12.13.05 1530
Signature (Received) <i>J. Shabotwski</i>	Printed Name J. Shabotwski	Company/ Agency T2I	Date/ Time 12/13/05 20:20
Signature (Relinquished) " "	Printed Name " "	Company/ Agency " "	Date/ Time " "
Signature (Received) " "	Printed Name " "	Company/ Agency " "	Date/ Time " "
Signature (Relinquished) " "	Printed Name " "	Company/ Agency " "	Date/ Time " "
Signature (Received) " "	Printed Name " "	Company/ Agency " "	Date/ Time " "
Signature (Relinquished) " "	Printed Name " "	Company/ Agency " "	Date/ Time " "
Signature (Received) " "	Printed Name " "	Company/ Agency " "	Date/ Time " "

RECEIVED	COOL <input type="checkbox"/>	WARM <input type="checkbox"/>	_____ °F
CUSTODY SEALED	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
SPECIAL REQUIREMENTS:			

ALERT!!  
Level III QC



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## **CHAIN OF CUSTODY RECORD**

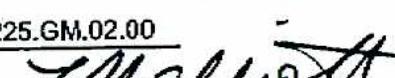
F2005-GMP-087-Q4

**COC Number**

**TURNAROUND TIME**  
**DATE 12/14/05**

10 Days

PAGE 1 OF 1

COMPANY	CH2M HILL		
PROJECT NAME	PG&E Topock		
PHONE	(510) 251-2888	FAX	(510) 622-7086
ADDRESS	155 Grand Ave Ste 1000		
	Oakland, CA 94612		
P.O. NUMBER	328225.GM.02.00		
SAMPLERS (SIGNATURE)			
SAMPLE I.D.	DATE	TIME	DESCRIPTION

**CHAIN OF CUSTODY SIGNATURE RECORD**

Signature (Relinquished)	Printed Name	Laura Elliott	Company/ Agency	12/14/05 10:30
Signature (Received)	Printed Name	J.Brown	Company/ Agency	12/14/05 2:00
Signature (Relinquished)	Printed Name		Company/ Agency	Date/ Time
Signature (Received)	Printed Name		Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Spencer E714	Company/ Agency	12/14/05 2:00
Signature (Received)	Printed Name		Company/ Agency	Date/ Time

## SAMPLE CONDITIONS

RECEIVED COOL  WARM  °F

CUSTODY SEALED YES  NO

~~FOR SAMPLE CONCERN~~  
SPECIAL REQUIREMENTS:  
**See Form Attached**

**EMAX Laboratories, Inc.**  
1835 W. 205th Street, Torrance, CA 90501  
Tel: (310) 618 8889 Ext: 119 Fax: (310) 618 0818  
Joe Kelbley [jkelbley@emaxlab.com](mailto:jkelbley@emaxlab.com)

**CHAIN OF CUSTODY RECORD**

[2005-GMP-08]-Q4]

COC Number

#### **TURNAROUND TIME**

DATE 12/14/0

12 Days

PAGE 1 OF

Zymax Forensics,  
71 Zaca Ln., San Luis Obispo, CA 93401  
phone: (805) 544-4696  
Alan Jeffrey

CHAIN OF CUSTODY RECD RD  
[2005-GMP-087-Q4]

COG Number

TURNAROUND TIME  
DATE 12/14/02

**10 Days**

PAGE 1 OF 1

COMPANY CH2M HILL  
PROJECT NAME PG&E Topock GWM  
PHONE (510) 251-2888 FAX (510) 622-7086  
ADDRESS 156 Grand Ave Ste 1000  
Oakland, CA 94612  
PO NUMBER 328225.GM.02.00 TEAM 3

SAMPLERS SIGNATURES \_\_\_\_\_

NUMBER OF CONTAINERS COMMENTS

**CHAIN OF CUSTODY SIGNATURE RECORD**

<u>Signature</u>	<u>Laura Elliott</u>	<u>Printed Name</u>	<u>Company/ Agency</u>	<u>Date/ Time</u>
<u>Relinquished</u>				
<u>Signature</u>		<u>Printed Name</u>	<u>Company/ Agency</u>	<u>Date/ Time</u>
<u>Received</u>				
<u>Signature</u>		<u>Printed Name</u>	<u>Company/ Agency</u>	<u>Date/ Time</u>
<u>Relinquished</u>				
<u>Signature</u>		<u>Printed Name</u>	<u>Company/ Agency</u>	<u>Date/ Time</u>
<u>Received</u>				
<u>Signature</u>		<u>Printed Name</u>	<u>Company/ Agency</u>	<u>Date/ Time</u>
<u>Relinquished</u>				
<u>Signature</u>		<u>Printed Name</u>	<u>Company/ Agency</u>	<u>Date/ Time</u>

SAMPLE CONDITIONS  
RECEIVED COOL  WARM  \_\_\_\_\_ °F

CUSTODY SEALED YES  NO

**SPECIAL REQUIREMENTS:**



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**CHAIN OF CUSTODY RECORD**  
**[2005-GMP-087-Q4]**

SIGNAT

**COC Number**

TURNAROUND TIME  
DATE 12/14/00

**10 Days**

PAGE 1 OF 1

**CHAIN OF CUSTODY SIGNATURE RECORD**

Signature (Relinquished)	Printed Name	Laura Elliott	Company/ Agency	Date/ Time
Signature (Received)	Printed Name		Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name		Company/ Agency	Date/ Time
Signature (Received)	Printed Name		Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name		Company/ Agency	Date/ Time
Signature (Received)	Printed Name		Company/ Agency	Date/ Time

## SAMPLE CONDITIONS

RECEIVED COOL  WARM  °F

CUSTODY SEALED YES  NO

**SPECIAL REQUIREMENTS:**



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### CHAIN OF CUSTODY RECORD

[2005-GMP-087-Q4]

COC Number

TURNAROUND TIME

DATE 12/14/05

10 Days

PAGE 1 OF 1

COMPANY	CH2M HILL	COMMENTS	
PROJECT NAME	PG&E Topock	NUMBER OF CONTAINERS  ALERT!!  Level III QC	
PHONE	(510) 251-2888 FAX (510) 622-7086		
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612		
P.O. NUMBER	328225.GM.02.00		
SAMPLERS (SIGNATURE)	<u>ZM Elliott</u>		
SAMPLE I.D.	DATE	TIME	DESCRIPTION
-1 EB-121405-087	12/14/05	0925	X
-2 MW-97-087	12/14/05	1025	groundwater
-3 MW-92-087	12/14/05	1330	groundwater
-4 MW-94-087	12/14/05	1450	groundwater

Rec'd 12/14/05  
cc 949884

CHAIN OF CUSTODY SIGNATURE RECORD				SAMPLE CONDITIONS
Signature (Relinquished) <u>ZM Elliott</u>	Printed Name <u>Laura Elliott</u>	Company/ Agency <u>CH2M HILL</u>	Date/ Time <u>12/14/05 15:30</u>	RECEIVED <input type="checkbox"/> COOL <input type="checkbox"/> WARM <input type="checkbox"/> °F
Signature (Received) <u>J Brown</u>	Printed Name <u>J Brown</u>	Company/ Agency <u>TLL</u>	Date/ Time <u>12/14/05 20:00</u>	CUSTODY SEALED
Signature (Relinquished) <u>J Brown</u>	Printed Name <u>J Brown</u>	Company/ Agency <u>TLL</u>	Date/ Time <u>12/14/05 20:00</u>	SPECIAL REQUIREMENTS See Form Attached
Signature (Received) <u>J Brown</u>	Printed Name <u>J Brown</u>	Company/ Agency <u>TLL</u>	Date/ Time <u>12/14/05 20:00</u>	



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14201 Franklin Avenue, Tustin, CA 92780-7008  
(714) 730-6239 FAX: (714) 730-6462  
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CHAIN OF CUSTODY RECORD  
[2005-GMP-087-Q4]

949883 MILA

COC Number

10 Days

TURNAROUND TIME

DATE 12-14-05

PAGE 1 OF 1

COMPANY	CH2M HILL	PROJECT NAME	PG&E Topock	PHONE	(510) 251-2888 FAX (510) 622-7086	ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612	P.O. NUMBER	328225.GM.02.00	COMMENTS									
										CR6 (218.6) Lab Filtered	CR6 (71984) Lab Filtered	CR6 (7198) Lab Filtered	Diss Metals (50108) Field Filtered Chromium	Diss Metals (50108) Field Filtered Cr, Ca, Mg, K, Na, B	Diss Metals (50108) Field Filtered Fe, Ca, Mg, K, Na, B	Diss Metals (50108) Field Filtered Al, Fe, Mn	Total Metals (4704) Lab Filtered Chromium	Specific Conductance (120.7)	pH (150.1)
1	MW-34-080-087	12-14-05	1007	GW		X	X		X			X	X	X	X	X	3	ALERT!!  Level III QC	
2	MW-34-055-087	12/14/05	1242	GW		X			X			X		X	X	X	3		
3	MW-34-100-087*	12/14/05	1355	GW		X	X							X	X		3		
4	MW-93-087	12/14/05	1300	GW		X	X							X	X		3		
5	MW-27-020-087	12-14-05	1432	GW		X	X							X	X		3		

Rec'd

12/14/05

949883

TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SIGNATURE RECORD					
Signature (Relinquished)	Kate Ebel	Printed Name	Kate Ebel	Company/ Agency	CH2M HILL
Signature (Received)	J. Bryan	Printed Name	J. Bryan	Company/ Agency	TLI
Signature (Relinquished)	J. Bryan	Printed Name	J. Bryan	Company/ Agency	EXECUTIVE COALITION
Signature (Received)		Printed Name		Company/ Agency	
Signature (Relinquished)		Printed Name		Company/ Agency	
Signature (Received)		Printed Name		Company/ Agency	

SAMPLE CONDITIONS		*F
RECEIVED	COOL <input type="checkbox"/> WARM <input type="checkbox"/>	
CUSTODY SEALED		YES <input type="checkbox"/> NO <input type="checkbox"/>

## SPECIAL REQUIREMENTS:

For Sample Conditions  
See Form Attached

\* MW-34-100-087 needs to be put on its own SDG with a 5 Day TAT

ALERT!!

Level III QC



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949904

## CHAIN OF CUSTODY RECORD

[2005-GMP-087-Q4]

Case Number

5 days

TURNAROUND TIME

DATE 12-14-05

PAGE 1

RUSH

COMPANY CH2M HILL

PROJECT NAME PG&amp;E Topock

PHONE (510) 251-2888 FAX (510) 622-7086

ADDRESS 155 Grand Ave Ste 1000

Oakland, CA 94612

P.O. NUMBER 328225.GM.02.00

SAMPLERS (SIGNATURE) *Kate Ebel*

SAMPLE I.D.	DATE	TIME	DESCRIPTION	CR6 (218.6) Lab Filtered	CR6 (77964) Lab Filtered	Diss Metals (60108) Field Filtered	Diss Metals (60108) Field Filtered Chromium	Diss Metals (60108) Field Filtered Q Ca Mg K Na B	Diss Metals (60108) Field Filtered Title 22	Diss Metals (60108) Lab Filtered Fe Zn Cu Mg K	Diss Metals (60108) Lab Filtered Chromium	Total Metals (202.7) Field Filtered	Specific Conductance (120.1)	pH (150.1)	TDS (160.1)	NUMBER OF CONTAINERS	COMMENTS
1 MW-34-080-087	12/14/05	1000	GW	X	X	X	X	X	X	X	X	XX	X	X	X	3	Level III QC pH=7
2 MW-34-083-087	12/14/05	1212	GW	X	X	X	X	X	X	X	X	XX	X	X	X	3	pH=7
3 MW-34-080-087	12/14/05	1300	GW	X	X	X	X	X	X	X	X	XX	X	X	X	3	pH=7
4 MW-93-087	12/14/05	1300	GW	X	X	X	X	X	X	X	X	XX	X	X	X	3	pH=7
5 MW-27-020-087	12/14/05	1432	GW	X	X	X	X	X	X	X	X	XX	X	X	X	3	pH=7

Rec'd

12/14/05

949883

Rec'd 12/15/05

SLC 949904

TOTAL NUMBER OF CONTAINERS

## CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished) <i>Kate Ebel</i>	Printed Name Kate Ebel	Company/ Agency CH2M HILL	Date/ Time 12-14-05 1500
Signature (Received) <i>J Brown</i>	Printed Name J Brown	Company/ Agency TLI	Date/ Time 12-14-05 20400
Signature (Relinquished) <i>SPACER 8719</i>	Printed Name SPACER 8719	Company/ Agency EXCECTIVE COLLISION	Date/ Time 12/14/05 0855
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

SAMPLE CONDITIONS  
 RECEIVED  COOL  WARM  °F  
 CUSTODY SEALED YES  NO

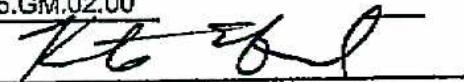
## SPECIAL REQUIREMENTS:

For Sample Conditions  
See Form Attached

EMAX Laboratories, Inc.  
 1835 W. 205th Street, Torrance, CA 90501  
 Tel: (310) 618 8889 Ext. 119 Fax: (310) 618 0818  
 Joe Kelbley jkelbley@emaxlabs.com

CHAIN OF CUSTODY RECORD  
 [2005-GMP-087-Q4]

COC Number \_\_\_\_\_  
 TURNAROUND TIME \_\_\_\_\_  
 DATE 12-14-05 12 Days  
 PAGE \_\_\_\_ OF \_\_\_\_

COMPANY	CH2M HILL	COMMENTS						
PROJECT NAME	PG&E Topock GWM							
PHONE	(510) 251-2888	FAX (510) 622-7086						
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612							
P.O. NUMBER	328225.GM.02.00							
SAMPLERS [SIGNATURE]								
SAMPLE I.D.	DATE	TIME	DESCRIPTION	Alkalinity (370)	Anions (300)	Bromide Chloride Sulfate Nitrate	NUMBER OF CONTAINERS	Comments
MW-34-080-087	12-14-05	1007	Groundwater	X	X		1	
MW-34-055-087	12/14/05	1242	Groundwater	X	X		1	
MW-27-020-087	12-14-05	1432	Groundwater	X	X		1	
			Groundwater					
			Groundwater					
			Groundwater					
			Groundwater					
			Surfacewater					
			Surfacewater					

CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished) 	Printed Name <i>Kate Ebel</i>	Company/ Agency	Date/ Time 12-14-05 1500	SAMPLE CONDITIONS
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	RECEIVED <input type="checkbox"/> COOL <input type="checkbox"/> WARM <input type="checkbox"/> °F _____
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time	CUSTODY SEALED <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/>
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	SPECIAL REQUIREMENTS:
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time	
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	

Zymax Forensics.  
71 Zaca Ln. San Luis Obispo, CA 93401  
phone: (805) 544-4696  
Alan Jeffrey

CHAIN OF CUSTODY RECORD  
[2005-GMP-087-Q4]

COC Number

TURNAROUND TIME  
DATE 12.14.05

10 Days

PAGE \_\_\_\_ OF \_\_\_\_

COMPANY	CH2M HILL			COMMENTS											
PROJECT NAME	PG&E Topock GWM														
PHONE	(510) 251-2888	FAX	(510) 622-7086												
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612														
P.O. NUMBER	328225.GM.02.00			TEAM	3										
SAMPLERS (SIGNATURE)															
SAMPLE I.D.	DATE	TIME	DESCRIPTION												
MW-34-080-087	12/14/05	1007	Groundwater	R											
MW-34-055-087	12/14/05	1242	Groundwater	X											
MW-327-020-087	12/14/05	1432	Groundwater	R											
			Groundwater												
			Groundwater												
			Groundwater												
			Groundwater												
			Groundwater												
			Groundwater												
			Groundwater												
			Groundwater												
			Groundwater												
			Groundwater												
			Groundwater												

## CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished) 	Printed Name	Kate Ebel	Company/ Agency	CH2M HILL	Date/Time
Signature (Received)	Printed Name		Company/ Agency		Date/ Time
Signature (Relinquished)	Printed Name		Company/ Agency		Date/ Time
Signature (Received)	Printed Name		Company/ Agency		Date/ Time
Signature (Relinquished)	Printed Name		Company/ Agency		Date/ Time
Signature (Received)	Printed Name		Company/ Agency		Date/ Time

## SAMPLE CONDITIONS

RECEIVED COOL  WARM  °FCUSTODY SEALED YES  NO 

## SPECIAL REQUIREMENTS:



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## **CHAIN OF CUSTODY RECORD**

{2005-GMP-087-Q4}

**COC Number**

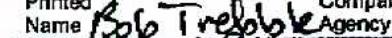
#### **TURNAROUND TIME**

DATE 1-11-2018

**10 Days**

PAGE } OF

## **CHAIN OF CUSTODY SIGNATURE RECORD**

Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
	Bob Trelobo	CH2M HILL	12/15/05 1530
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
	Shirley Blatt	TLI	12/15/05 20:30
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

#### SAMPLE CONDITIONS

RECEIVED COOL  WARM  °F

CUSTODY SEALED YES  NO

**SPECIAL REQUIREMENTS:**

ALERT!!  
Level III QC



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## CHAIN OF CUSTODY RECORD

[2005-GMP-087-Q4]

COC Number

TURNAROUND TIME

DATE 12/16/05 PAGE 1 OF 1

10 Days

949937

COMPANY	CH2M HILL	PROJECT NAME	PG&E Topock	PHONE	(510) 251-2888	FAX	(510) 622-7086 <th>COMMENTS</th>	COMMENTS								
ADDRESS	155 Grand Ave Ste 1000	P.O. NUMBER	328225.GM.02.00	SAMPLERS (SIGNATURE)	J. Bunting											
SAMPLE I.D.	DATE	TIME	DESCRIPTION	CR6 (718.6) Lab Filtered	CR6 (71964) Lab Filtered	CR6 (7198) Lab Filtered	Diss Metals (6010B) Field Filtered Chromium	Diss Metals (6010B) Field Filtered Cr Ca Mg K Na B	Diss Metals (6010B) Field Filtered Fe 22	Diss Metals (6010B) Field Filtered Na B Fe Mn	Diss Metals (6010B) Lab Filtered Ti 22 Cr Mg K	Total Metals (7470A) Field Filtered Chromium	Specific Conductance (120.1)	pH (150.1)	TDS (160.1)	NUMBER OF CONTA
MW-27-085-087	12/15/05	1047	GW	X	X							X X	3		PH=2	
EB- <sup>JB</sup> -15 EB-121505A-087	12/15/05	1054	GW		X				X				2			
MW-27-060-087	12/15/05	1120	GW		X X							X X	3			
MW-42-065-087	12/15/05	1237	GW	X	X							X	3			
MW-42-055-087	12/15/05	1256	GW	X	X							X	3			
MW-42-030-087	12/15/05	1331	GW	X	X							X X	3			
MW-30030-087	12/15/05	1438	GW	X	X							X X X	4			

## CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished) J. Bunting Printed Name James Bunting Company/ Agency CH2M HILL Date 12/15/05 Time 1520

Signature (Received) L. Shabecraft Printed Name L. Shabecraft Company/ Agency TI Date 12/15/05 Time

Signature (Relinquished)  Printed Name  Company/ Agency  Date 20/80 Time

Signature (Received)  Printed Name  Company/ Agency  Date  Time

Signature (Relinquished)  Printed Name  Company/ Agency  Date  Time

Signature (Received)  Printed Name  Company/ Agency  Date  Time

Signature (Relinquished)  Printed Name  Company/ Agency  Date  Time

Signature (Received)  Printed Name  Company/ Agency  Date  Time

## SAMPLE CONDITIONS

RECEIVED  COOL  WARM  °FCUSTODY SEALED  YES  NO 

SPECIAL REQUIREMENTS:  
**ALERT!!**  
**Level III QC**



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### CHAIN OF CUSTODY RECORD

[2005-GMP-087-Q4]

COC Number

TURNAROUND TIME

10 Days

DATE 12/15/05 PAGE 1 OF 1

**949936**

COMPANY	CH2M HILL	CR6 (218.6) Lab Filtered	CR6 (7186) Lab Filtered	CR6 (7189) Lab Filtered	Diss Metals (60108) Field Filtered	Diss Metals (60108) Field Filtered Chromium	Diss Metals (60108) Field Filtered Cr Ca Mg K Na B	Diss Metals (60108) Field Filtered Na B Fe Mn	Diss Metals (60108) Field Filtered Total 22	Diss Metals (60108) Field Filtered Total Ca Mg K	Total Metals (74704) Field Filtered Chromium	Specific Conductance (120.1)	pH (150.1)	TDS (180.1)	NUMBER OF CONTAINERS	COMMENTS
PROJECT NAME	PG&E Topock															
PHONE	(510) 251-2888															
ADDRESS	155 Grand Ave Ste 1000															
P.O. NUMBER	328225.GM.02.00															
SAMPLERS (SIGNATURE)	<i>J. Elliott</i>															
SAMPLE I.D.	DATE	TIME	DESCRIPTION													
1 MW-14-087	12/15/05	1212	groundwater	X	X						X	X			3	ALERT
2 CON-087	12/15/05	1015	surfacewater	X		X		X			X	X			3	Level II QC
3 I - 3 - 087	12/15/05	1045	surfacewater	X			X				X	X			3	
4 NR-1-087	12/15/05	0930	surfacewater	X			X				X	X			3	
5 NR-2-087	12/15/05	0940	surfacewater	X			X				X	X			3	
6 NR-3-087	12/15/05	0950	surfacewater	X			X				X	X			3	
7 MW-20-070-087	12/15/05	1342	groundwater	X			X	X	X	X	X	XX			3	
8 MW-20-100-087	12/15/05	1320	groundwater	X		X					X	X	X		3	
9 MW-24RR-087	12/15/05	1450	groundwater	X	X						X	X			3	

### CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
<i>J. Elliott</i>	Laura Elliott	CH2M Hill	12/15/05 15:30
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
<i>Chase Blefka</i>	Chase Blefka	TLL	12/15/05 20:30
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

SAMPLE CONDITIONS  
RECEIVED  COOL  WARM  °F

CUSTODY SEALED YES  NO

SPECIAL REQUIREMENTS:  
**For Sample Conditions  
See Form Attached**



**TRUESDAIL LABORATORIES, INC.**  
14201 Franklin Avenue, Tustin, CA 92780-7008  
(714)730-6239 FAX: (714) 730-5462  
[www.truesdail.com](http://www.truesdail.com)

## **CHAIN OF CUSTODY RECORD**

[2005-GMP-087-Q4]

**COC Number**

## TURNAROUND TIME

DATE 12/15/05 PAGE 2 OF 2

COMPANY	CH2M HILL	
PROJECT NAME	PG&E Topock	
PHONE	(510) 251-2888	FAX (510) 622-7086
ADDRESS	155 Grand Ave Ste 1000	
	Oakland, CA 94612	
P.O. NUMBER	328225.GM.02.00	

SAMPLERS (SIGNATURE)			
SAMPLE I.D.	DATE	TIME	DESCRIPTION

		NUMBER OF CONTAINERS
CR6 (278.6)	Lab Filtered	
CR6 (71954)	Lab Filtered	
X CR6 (7199)	Lab Filtered	
Diss Metals (60108)	Field Filtered	
Diss Metals (60108)	Field Filtered	Chromium
Diss Metals (60108)	Field Filtered	Cr Ca Mg K Na B
Diss Metals (60108)	Field Filtered	Ti Fe 22
Diss Metals (60108)	Field Filtered	Na B Fe Mn
Diss Metals (60108)	Lab filtered	Ti Fe 22 Ca Mg K
Total Metals (74704)	Field Filtered	Chromium
Specific Conductance (20.0)	Field Filtered	Chromium
pH (150.1)	(20.0)	
TDS (160.1)		
	2	pH - 2
	11	12.00
	10	11.98
	9	11.97
	8	11.96
	7	11.95
	6	11.94
	5	11.93
	4	11.92
	3	11.91
	2	11.90
	1	11.89
	0	11.88

**CHAIN OF CUSTODY SIGNATURE RECORD**

Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
<i>Z. M. Elliott</i>	<i>LeAnn Elliott</i>	<i>CH2M Hill</i>	<i>10/13/00 15:30</i>
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
<i>R. B.</i>	<i>Steve B.</i>	<i>TLI</i>	<i>12/16/00 20:30</i>
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

SAMPLE CONDITIONS		
RECEIVED	COOL <input type="checkbox"/>	WARM <input type="checkbox"/>
		°F
CUSTODY SEALED	YES <input type="checkbox"/>	NO <input type="checkbox"/>

#### SPECIFIC REQUIREMENTS:

**For Sample Conditions  
See Form Attached**

EMAX Laboratories, Inc.  
1835 W. 205th Street, Torrance, CA 90501  
Tel: (310) 618 8889 Ext. 119 Fax: (310) 618 0818  
Joe Kelbley jkelbley@emaxlabs.com

CHAIN OF CUSTODY RECORD  
[2005-GMP-087-Q4]

COC Number

TURNAROUND TIME

12 Days

DATE 12/15/05

PAGE +

OF 1

COMPANY	CH2M HILL	Alkalinity (310)	Atrons (30)	Bromide Chloride Sulfate Nitrate	NUMBER OF CONTAINERS	COMMENTS
PROJECT NAME	PG&E Topock GWM					
PHONE	(510) 251-2888	FAK (510) 622-7086				
ADDRESS	155 Grand Ave Ste 1000					
	Oakland, CA 94612					
P.O. NUMBER	328226.GM.02.00					
SAMPLERS (SIGNATURE)	XMElliott					
SAMPLE I.D.	DATE	TIME	DESCRIPTION			
MW-2D-100-087	12/15/05	1320	Groundwater	X X	1	
MW-2D-070-087	12/15/05	1342	Groundwater	X X	1	
			Groundwater			
			Groundwater			
			Groundwater			
			Groundwater			
			Groundwater			
			Surfacewater			
			Surfacewater		2	

CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished)	Printed Name	Laura Elliott	Company/ Agency	CH2M HILL	Date/ Time	12/15/05 1330
Signature (Received)	Printed Name		Company/ Agency		Date/ Time	
Signature (Relinquished)	Printed Name		Company/ Agency		Date/ Time	
Signature (Received)	Printed Name		Company/ Agency		Date/ Time	
Signature (Relinquished)	Printed Name		Company/ Agency		Date/ Time	
Signature (Received)	Printed Name		Company/ Agency		Date/ Time	

SAMPLE CONDITIONS

RECEIVED COOL  WARM  °F

CUSTODY SEALED YES  NO

SPECIAL REQUIREMENTS:

EMAX Laboratories, Inc.  
 1835 W. 205th Street, Torrance, CA 90501  
 Tel: (310) 618 8889 Ext. 119 Fax: (310) 618 0818  
 Joe Keibley jkeibley@emaxlabs.com

**CHAIN OF CUSTODY RECORD**  
 [2005-GMP-087-Q4]

COC Number

TURNAROUND TIME

12 Days

DATE 12/15/05

PAGE 1 OF 1

COMPANY	CH2M HILL	COMMENTS					
PROJECT NAME	PG&E Topock GWM						
PHONE	(510) 251-2888	FAX (510) 622-7086					
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612						
P.O. NUMBER	328225.GM.02.00						
SAMPLERS (SIGNATURE)	<u>J. Bentler</u>						
SAMPLE I.D.	DATE	TIME	DESCRIPTION	Alkalinity (310) Anions (300) Bromide Chloride Sulfate Nitrate	NUMBER OF CONTAINERS		
MW-30-030-087	12/15/05	1438	Groundwater			X	X
			Groundwater				
			Groundwater				
			Groundwater				
			Groundwater				
			Groundwater				
			Groundwater				
			Groundwater				
			Groundwater				

**CHAIN OF CUSTODY SIGNATURE RECORD**

Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
<u>J. Bentler</u>	<u>Jenny Bentler</u>	<u>CH2M Hill</u>	<u>12/15/05 1520</u>
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

**SAMPLE CONDITIONS**

RECEIVED COOL  WARM  °F \_\_\_\_\_  
 CUSTODY SEALED YES  NO

**SPECIAL REQUIREMENTS:**

Zymax Forensics,  
71 Zaca Ln. San Luis Obispo, CA 93401  
phone: (805) 544-4696  
Alan Jeffrey

CHAIN OF CUSTODY RECORD  
[2005-GMP-087-Q4]

COC Number

TURNAROUND TIME  
DATE 12/15/05

10 Days

PAGE 1 OF 1

COMPANY	CH2M HILL			Oxygen 18 & Deuterium (CF-IRMS)	NUMBER OF CONTAINERS	COMMENTS		
PROJECT NAME	PG&E Topock GWM							
PHONE	(510) 251-2888	FAX	(510) 622-7086					
ADDRESS	155 Grand Ave Ste 1000							
	Oakland, CA 94612							
P.O. NUMBER	328225.GM.02.00					TEAM	1	
SAMPLERS (SIGNATURE)	<i>J. Bunting</i>							
SAMPLE I.D.	DATE	TIME	DESCRIPTION					
MW-30-030-087	12/15/05	1438	Groundwater			X	1	
			Groundwater					
			Groundwater					
			Groundwater					
			Groundwater					
			Groundwater					
			Groundwater					
			Groundwater					
			Surfacewater					
			Surfacewater					

CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished)	<i>J. Bunting</i>	Printed Name	Jenny Bradshaw	Company/ Agency	CH2M Hill	Date/ Time	12/15/05 1520
Signature (Received)		Printed Name		Company/ Agency		Date/ Time	
Signature (Relinquished)		Printed Name		Company/ Agency		Date/ Time	
Signature (Received)		Printed Name		Company/ Agency		Date/ Time	
Signature (Relinquished)		Printed Name		Company/ Agency		Date/ Time	
Signature (Received)		Printed Name		Company/ Agency		Date/ Time	

SAMPLE CONDITIONS

RECEIVED COOL  WARM  \_\_\_\_\_ °F

CUSTODY SEALED YES  NO

SPECIAL REQUIREMENTS:

Zymax Forensics.  
71 Zaca Ln. San Luis Obispo, CA 93401  
phone: (805) 544-4696  
Alan Jeffrey

### CHAIN OF CUSTODY RECORD

[2005-GMP-087-Q4]

COC Number

10 Days

TURNAROUND TIME

DATE 12/15/05 PAGE 1 OF 1

COMPANY	CH2M HILL	COMMENTS					
PROJECT NAME	PG&E Topock GWM						
PHONE	(510) 251-2888	FAX (510) 622-7086					
ADDRESS	155 Grand Ave Ste 1000						
OAKLAND, CA 94612							
P.O. NUMBER	328225.GM.02.00	TEAM <u>1</u>					
SAMPLERS (SIGNATURE)	<u>Laura Elliott</u>						
SAMPLE I.D.	DATE	TIME	DESCRIPTION	Oxygen 18 & Deuterium (CF-RMS)	NUMBER OF CONTAINERS		
MW-20-100-087	12/15/05	1320	Groundwater			X	1
MW-20-090-087	12/15/05	1330	Groundwater			X	1
		1342	Groundwater				
			Groundwater				
			Groundwater				
			Groundwater				
			Groundwater				
			Surfacewater				
			Surfacewater				2

### CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished)	Printed Name	Laura Elliott	Company/ Agency	CH2M Hill	Date/ Time	12/15/05 1330
Signature (Received)	Printed Name		Company/ Agency		Date/ Time	
Signature (Relinquished)	Printed Name		Company/ Agency		Date/ Time	
Signature (Received)	Printed Name		Company/ Agency		Date/ Time	
Signature (Relinquished)	Printed Name		Company/ Agency		Date/ Time	
Signature (Received)	Printed Name		Company/ Agency		Date/ Time	

### SAMPLE CONDITIONS

RECEIVED COOL  WARM  \_\_\_\_\_ °F

CUSTODY SEALED YES  NO

### SPECIAL REQUIREMENTS:



TRUESDAIL LABORATORIES, INC.  
14201 Franklin Avenue, Tustin, CA 92780-7008  
(714)730-6239 FAX: (714) 730-6462  
www.truesdall.com

### CHAIN OF CUSTODY RECORD

[2005-GMP-087-Q4]

COC Number

TURNAROUND TIME

10 Days

DATE 12/16/05

PAGE 1 OF 1

COMPANY	CH2M HILL	CR6 (27&6) Lab Filtered	CR6 (7/95a) Lab Filtered	CR6 (7/99) Lab Filtered	Diss Metals (6010B) Field Filtered	Total Metals (7470A) Field Filtered	Specific Conductance (20.7)	pH (150.1)	TDS (160.1)	NUMBER OF CONTAINERS	COMMENTS						
PROJECT NAME	PG&E Topock																
PHONE	(510) 251-2888	FAX (510) 622-7086															
ADDRESS	155 Grand Ave Ste 1000																
P.O. NUMBER	328225.GM.02.00																
SAMPLERS (SIGNATURE)	<u>Bob Trebble</u>																
SAMPLE I.D.	DATE	TIME	DESCRIPTION														
MW-39-60-087	12/16/05	0915	GW	X	X							X	X			3	
MW-39-50-087	12/16/05	1015	GW	X	X							X	X			3	
MW-39-40-087	12/16/05	1050	GW		X	X						X	X			3	
MW-39-70-087	12/16/05	1140	GW	X	X							X	X			3	
MW-22-087	12/16/05	1250	GW		X	X						X	X			3	
Filter 121005	12/16/05	1330	GW	X												1	
MW-32-035-087	12/16/05	1450	GW	X	X	X						X	X			3	
MW-32-20-087	12/16/05	1510	GW	X	X	X						X	X			3	
NEW 121605	12/16/05	1530	GW	X												1	

### CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished) <u>Bob Trebble</u>	Printed Name <u>Bob Trebble</u>	Company/ Agency <u>CH2M HILL</u>	Date/ Time <u>12/16/05 1530</u>	SAMPLE CONDITIONS	
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	RECEIVED	COOL <input type="checkbox"/> WARM <input type="checkbox"/> °F
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time	CUSTODY SEALED	YES <input type="checkbox"/> NO <input type="checkbox"/>
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	SPECIAL REQUIREMENTS:	
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time		
Signature (Received)	Printed Name	Company/ Agency	Date/ Time		

Zymax Forensics.  
71 Zaca Ln, San Luis Obispo, CA 93401  
phone: (805) 544-4696  
Alan Jeffrey

CHAIN OF CUSTODY RECORD  
[2005-GMP-087-Q4]

COG Number \_\_\_\_\_  
TURNAROUND TIME \_\_\_\_\_ 10 Days  
DATE 12/16/05 PAGE \_\_\_\_\_ OF \_\_\_\_\_

COMPANY	CH2M HILL			Oxygen 18 & Deuterium (CFS/RMS)	NUMBER OF CONTAINERS	COMMENTS		
PROJECT NAME	PG&E Topock GWM							
PHONE	(510) 251-2888	FAX	(510) 622-7086					
ADDRESS	155 Grand Ave Ste 1000							
	Oakland, CA 94612							
P.O. NUMBER	328225.GM.02.00	TEAM	3					
SAMPLERS (SIGNATURE)	<u>Reetie Bob</u>							
SAMPLE I.D.	DATE	TIME	DESCRIPTION					
MW-32-035-087	12/16/05	1450	Groundwater	X	1			
MW-32-20-087	12/16/05	1510	Groundwater	X	1			
			Groundwater					
			Groundwater					
			Groundwater					
			Groundwater					
			Groundwater					
			Groundwater					
			Groundwater					
			Groundwater					
			Groundwater					
			Groundwater					

CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time	SAMPLE CONDITIONS		
<u>Reetie Bob</u>	<u>Bob Treble</u>	<u>CH2M HILL</u>	<u>12/16/05 1450</u>	RECEIVED	COOL <input type="checkbox"/>	WARM <input type="checkbox"/> °F _____
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	CUSTODY SEALED		
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time	YES <input type="checkbox"/> NO <input type="checkbox"/>		
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	SPECIAL REQUIREMENTS:		
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time			
Signature (Received)	Printed Name	Company/ Agency	Date/ Time			
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time			
Signature (Received)	Printed Name	Company/ Agency	Date/ Time			

**Appendix B**  
**Additional Water Quality Characterization**  
**June through October 2005**

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**Appendix B**  
**Additional Water Quality Characterization, June through October 2005**  
**PG&E Topock Groundwater and Surfacewater Monitoring Program**

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity	Ammonia	Total Organic Carbon	Dissolved Silica	Iron	Manganese
<b>Monitoring Wells</b>																			
MW-20-70	15-Jun-05	1980	-7	-60.0	749	388	9.79	ND (1)	189	55.4	10.5	433	0.414	73.8	ND (0.5)	2.76	18.8	ND (0.1)	ND (0.001) J
	15-Jun-05 FD	2050	-8.3	-57.0	760	392	9.81	ND (1)	204	60.7	11.4	468	0.445	71.3	ND (0.5)	2.77	18.4	ND (0.1)	0.0077 J
MW-20-100	15-Jun-05	2500	-4.7	-46.0	921	506	9.02	ND (1)	137	21.3	9.06	592	0.713	84	ND (0.5)	3.72	18.7	ND (0.5)	ND (0.5)
MW-20-130	15-Jun-05	7790	-5	-48.0	3410	1230	11.1	ND (1)	352	23.2	31.3	2980	2.75	68.7	ND (0.5)	3	17.8	ND (0.1)	ND (0.001)
MW-22	17-Jun-05	20800	-9.9	-76.0	9940	2190	ND (0.5)	ND (2.5)	791	197	28.4	6100	2.54	651	4.86	12.4	21.5	9.47	3.66
MW-25	14-Jun-05	942	-8.6	-61.0	289	183	3.89	ND (0.5)	93.5	20	8.91	253	0.464	137	ND (0.5)	1.39	24.3	ND (0.1)	ND (0.001)
	14-Jun-05 FD	980	-7.2	-59.0	294	185	3.94	ND (0.5)	100	20.9	9.06	268	0.475	137	ND (0.5)	1.27	22.9	ND (0.1)	ND (0.001)
MW-26	13-Jun-05	2130	-8.2	-65.0	847	371	4.9	ND (0.5)	178	44.6	14	511	0.663	103	ND (0.5)	ND (1)	21.8	ND (0.5)	ND (0.5)
MW-27-20	18-Jul-05	---	-11.9	-98.0	81.9	228	ND (0.5)	ND (0.5)	96.1	30.1	4.27	94.8	ND (0.2)	160	0.995	3.07	22.1	0.922	ND (0.5)
	05-Oct-05	742	-11.8	-102.0	91.1	252	ND (0.5)	ND (0.5)	88.6	31.4	5.48	81	ND (0.2)	175	---	---	---	---	---
MW-27-60	18-Jul-05	---	-10.4	-80.0	3810	996	ND (0.5)	ND (0.5)	354	114	2020	19.9	1.19	325	0.861	5.86	23.1	2.93	ND (0.5)
	05-Oct-05	8530	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
MW-27-85	19-Jul-05	---	-9.5	-75.0	5690	1480	ND (0.5)	ND (0.5)	564	153	36.2	3520	1.74	328	ND (0.5)	8.02	24.4	ND (0.5)	1.13
	05-Oct-05	12300	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
MW-28-25	15-Jun-05	974	-11.6	-91.0	108	359	ND (0.5)	ND (0.5)	133	38.9	6.54	117	ND (0.2)	221	ND (0.5)	3.49	22.2	ND (0.5)	ND (0.5)
MW-28-90	15-Jun-05	5750	-9.8	-80.0	2620	720	ND (0.5)	ND (0.5)	172	24.5	13.5	2060	1.08	153	ND (0.5)	2.57	19.7	0.524	0.664
MW-30-50	07-Oct-05	6860	-9.4	-79.0	3060	857	ND (0.5)	0.899 J	438	101	37	1780	1.27	252	0.645	4.2	18	---	---
MW-31-60	13-Jun-05	1660	-8.2	-65.0	745	207	4.12	ND (0.5)	121	18.9	6.57	403	0.388	70	ND (0.5)	ND (1)	21	ND (0.5)	ND (0.5)
MW-31-135	13-Jun-05	5800 J	-9.6	-72.0	3300	482	0.953	ND (0.5)	231	14.3	16.2	2170	1.36	32.5	ND (0.5)	ND (1)	20.2	ND (0.5)	ND (0.5)
MW-32-20	17-Jun-05	10200	-9	-67.0	4810	690	ND (0.5)	ND (2.5)	566	231	23.3	2620	1.75	676	9.87	15.3	36.3	10.3	0.674
MW-32-35	17-Jun-05	7550	-9.5	-72.0	3520	787	ND (0.5)	ND (2.5)	506	120	14.8	2110	1.18	223	2.52	4.85	24.1	6.67	1.73
MW-33-40	17-Jun-05	9680	-9.4	-67.0	1410	369	ND (0.5)	ND (2.5)	13.6	10.1	2.03	977	0.961	200	ND (0.5)	4.05	36.5	ND (0.5)	ND (0.5)
MW-33-90	16-Jun-05	5880	-10	-72.0	2690	394	0.975	ND (0.5)	243	27.5	13.7	1830	1.08	50.1	ND (0.5)	2.91 J	19.6	ND (0.5)	ND (0.5)
	16-Jun-05 FD	6210	-9.8	-72.0	2650	396	0.972	ND (0.5)	245	27.2	12.8	1810	1.06	52.6	ND (0.5)	ND (1) J	19.9	ND (0.5)	ND (0.5)
MW-33-150	17-Jun-05	10700	-10.2	-75.0	5380	709	0.992	ND (2.5)	416	45.8	25	3470	1.06	45	ND (0.5)	3.02	17.8	ND (0.5)	ND (0.5)
MW-33-210	16-Jun-05	13600	-9.3	-79.0	6450	1060	1.26	ND (0.5)	571	99.1	28.8	4290	1.02	65.1	ND (0.5)	1.27	21.4	ND (0.5)	ND (0.5)
MW-34-55	15-Jul-05	---	-10.3	-84.0	2250	607	ND (0.5)	ND (0.5)	247	52	16.5	1420	1.02	242	0.695	2.23	---	ND (0.5)	ND (0.5)
	05-Oct-05	5150	-10.6	-88.0	2170	619	ND (0.5)	ND (0.5)	272	59.1	25.8	1230	1.2	232	---	1.83	18.6	0.47	ND (0.5)
MW-34-80	30-Jun-05	7840	-8.4	-82.0	3910	979	ND (0.5)	ND (0.5)	497	76.5	27.7	2670	1.66	302	ND (0.5)	4.83	37.7	0.172	0.233
MW-34-100	21-Jun-05	11300	-9.7	-75.0	5350	1270	1.05	ND (0.5)	229	17.4	27.1	3510	2.22	179	ND (0.5)	3.63	22.2	ND (0.5)	ND (0.5)
	21-Jun-05 FD	10900 J	-9.5	-77.0	4920	1180	1.03	ND (0.5)	243	18.2	32.1	3740	2.36	179	ND (0.5)	3.37	23	ND (0.5)	ND (0.5)
MW-35-60	13-Jun-05	4140	-9.5	-72.0	1880	367	2	ND (0.5)	290	37.8	13.5	1220	0.666	70	ND (0.5)	ND (1)	21.1	ND (0.5)	ND (0.5)
MW-35-135	13-Jun-05	7400	-10.5	-79.0	3360	953	2.19	ND (0.5)	373	45.7	15.2	2140	0.776	42.5	ND (0.5)	ND (1)	18.7	ND (0.5)	ND (0.5)
MW-36-20	03-Oct-05	9320	-9.8	-75.0	4580	1180	ND (0.5)	5.78	433	116	26.1	2040	1.93	330	ND (0.5)	6.35	33.3	---	---
MW-36-70	03-Oct-05	5450	-10.2	-80.0	2510	748	ND (0.5)	0.665	341	72.6	32.8	1450	1.56	218	0.558	2.28	25.5	---	---
MW-36-100	05-Oct-05	10700	-9.6	-82.0	4800	1230	ND (0.5)	ND (0.5)	390	23.3	46.7	2460	2.4	215	ND (0.5)	4.27	19.8	---	---
MW-39-40	16-Jun-05	3660	-6.8	-50.0	1500	536	ND (0.5)	ND (0.5)	214	41.3	13.4	874	0.793	175	0.721	4.13	23.4	1.43	0.57
MW-39-70	16-Jun-05	9160 J	-8.7	-64.0	3800	919	ND (0.5)	ND (0.5)	495	65.8	22	2550	1.41	223	ND (0.5)	4.89	27.2	ND (0.5)	ND (0.5)
MW-39-100	17-Jun-05	12200 J	-7.9	-63.0	5820	1510	4.23</td												

**Appendix B**  
**Additional Water Quality Characterization, June through October 2005**  
**PG&E Topock Groundwater and Surfacewater Monitoring Program**

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity	Ammonia	Total Organic Carbon	Dissolved Silica	Iron	Manganese
<b>Monitoring Wells</b>																			
MW-41D	14-Jun-05	14200	-9.5	-78.0	7220	758	ND (0.5)	ND (0.5)	366	30.8	31.7	4450	1.64	38.2	ND (0.5)	1.38	16	ND (0.5)	ND (0.5)
MW-41S	14-Jun-05	2760	-9.3	-69.0	732	250	1.3	ND (0.5)	103	15.3	8.79	787	0.755	56	ND (0.5)	ND (1)	19.6	ND (0.5)	ND (0.5)
MW-42-30	07-Oct-05	10400	-4.5	-51.0	4930	1170	ND (0.5)	1.71 J	698	178	41.2	2080	1.59	250	3.94	6.83	19.8	---	---
MW-42-55	07-Oct-05	11800	-6.1	-59.0	5510	1290	ND (0.5)	1.87 J	1040	169	55.7	2320	1.51	250	ND (0.5)	6.22	15	---	---
MW-42-65	07-Oct-05	11600	-7.9	-70.0	5100	1260	ND (0.5)	1.26 J	909	175	61.1	2620	1.54	262	ND (0.5)	4.7	21	---	---
MW-43-25	20-Jun-05	1080	-11.8	-96.0	114	380	ND (0.5)	ND (0.5)	118	49.6	6.75	131	ND (0.2)	258	1.57	5.07	25.1	4.73	0.504
MW-43-75	20-Jun-05	9630	-10.7	-85.0	3980	1580	ND (0.5)	0.514	410	75	26.2	3100	1.62	440	ND (0.5)	13.2	24.8	3.5	ND (0.5)
MW-43-90	20-Jun-05	15700	-9.9	-79.0	6920	1900	ND (0.5)	ND (0.5)	846	371	45.9	4210	1.44	412	ND (0.5)	14.4	26	15.6	1.32
	20-Jun-05 FD	15300	-10	-81.0	6430	1750	ND (0.5)	ND (0.5)	830	363	44.4	4120	1.4	409	ND (0.5)	14.6	26.7	15.5	1.3
<b>Surface Water Stations</b>																			
R-27	14-Jun-05	686	-11.4	-92.0	90.9	266	ND (0.5)	ND (0.5)	81.9	29.8	6.04	98.9	ND (0.2)	127	ND (0.5)	4.35	8.62	ND (0.5)	ND (0.5)
R-28	14-Jun-05	680	-11.6	-95.0	91.2	268	ND (0.5)	ND (0.5)	78.5	28.5	5.08	94.5	ND (0.2)	127	ND (0.5)	14.2	8.93	ND (0.5)	ND (0.5)

NOTES:

FD field duplicate sample

ND parameter not detected at the listed reporting limit.

J concentration or reporting estimated by laboratory or data validation

--- parameter not analyzed

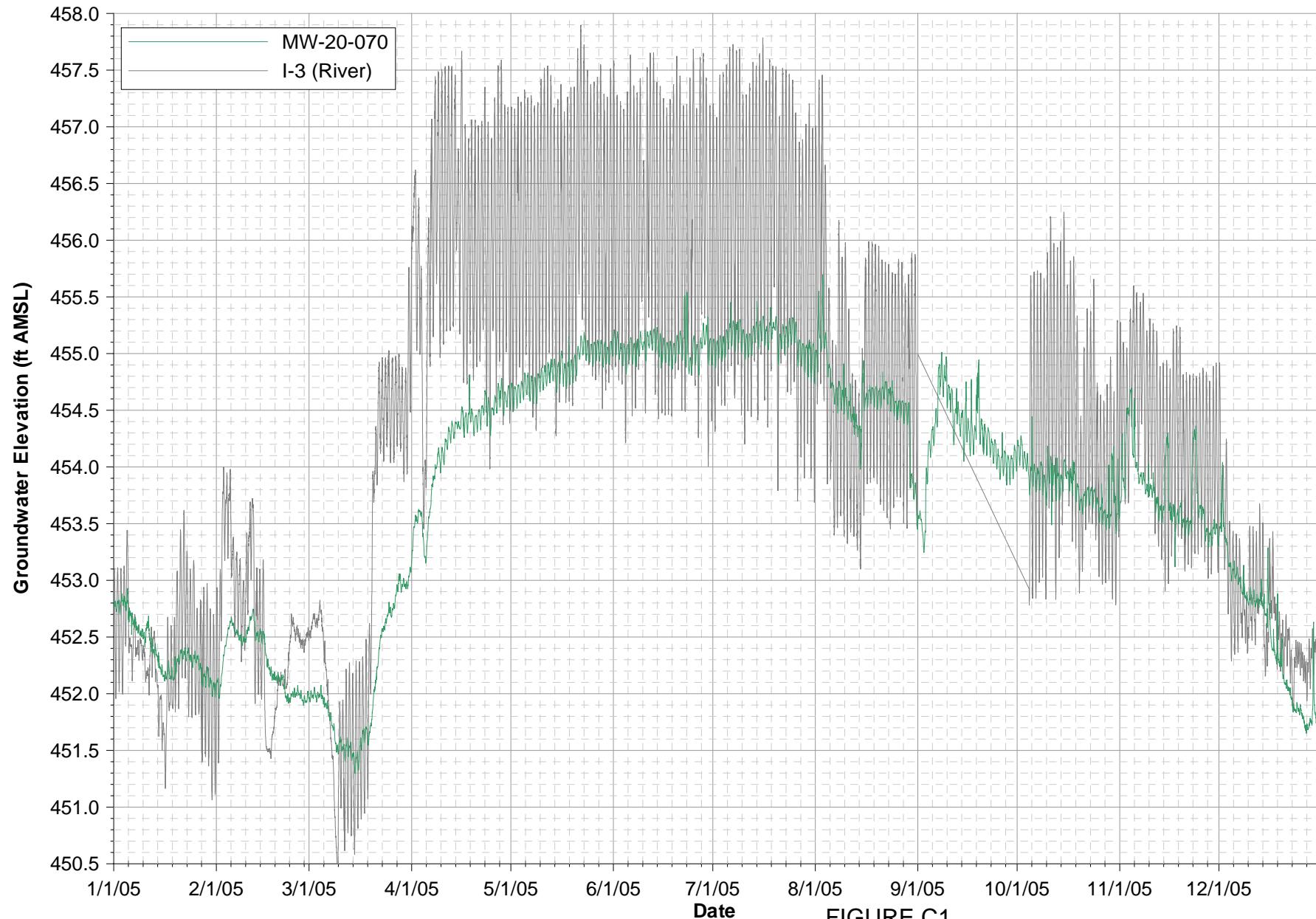
Results in milligrams per liter (mg/L), except Oxygen-18 and Deuterium, which are expressed as differences from global standards in parts per thousand.

Alkalinity reported as carbonate (CaCO<sub>3</sub>). Nitrate reported as Nitrogen (N).

All metal results are dissolved concentrations except for selected unfiltered parameters noted with ^ (total metals concentration).

December 2005 quarterly event isotope results not available at the time of report preparation.

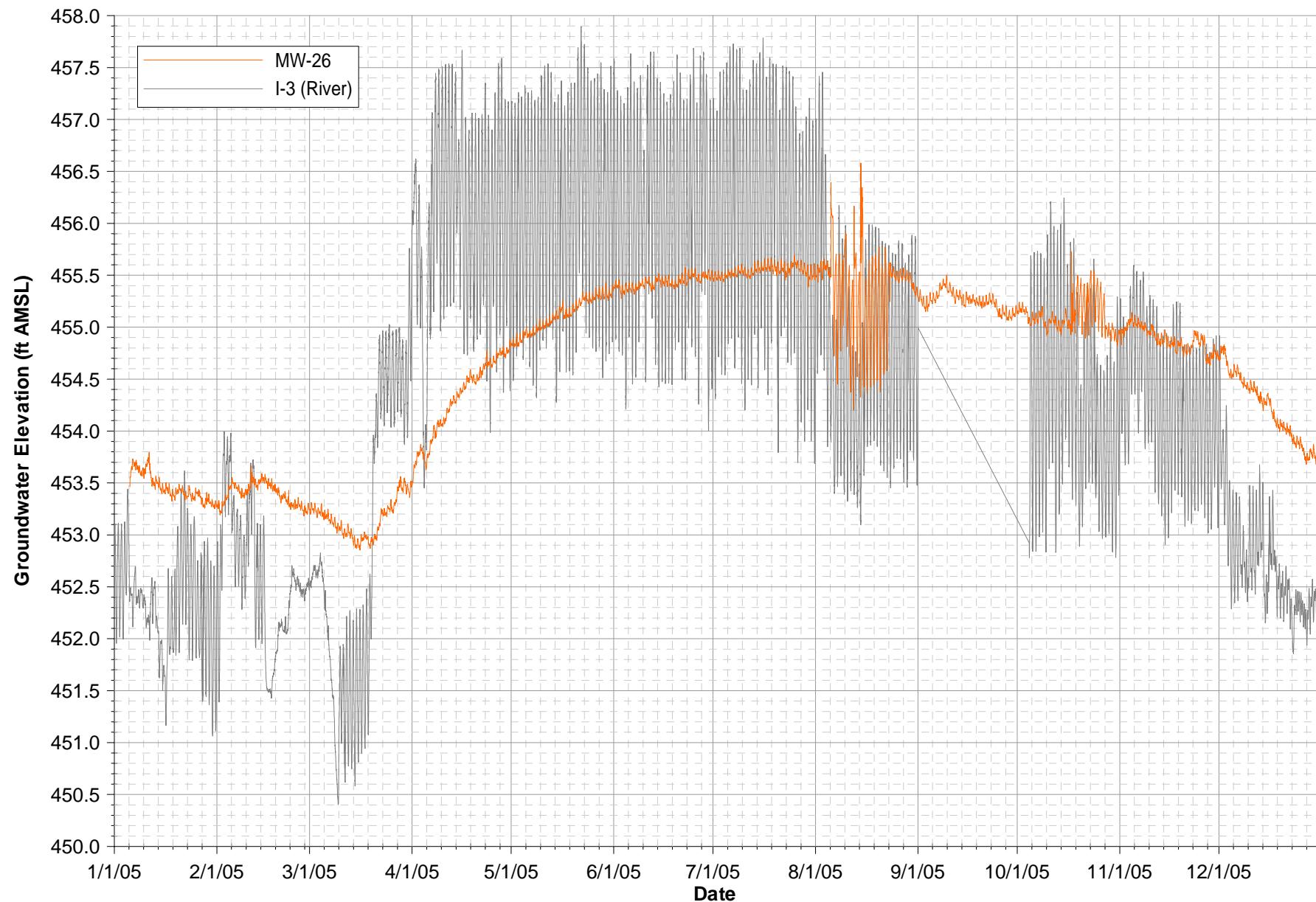
**Appendix C**  
**Hydrographs**  
**January through December 2005**



**FIGURE C1**  
**MW-20-70 HYDROGRAPH, 2005**

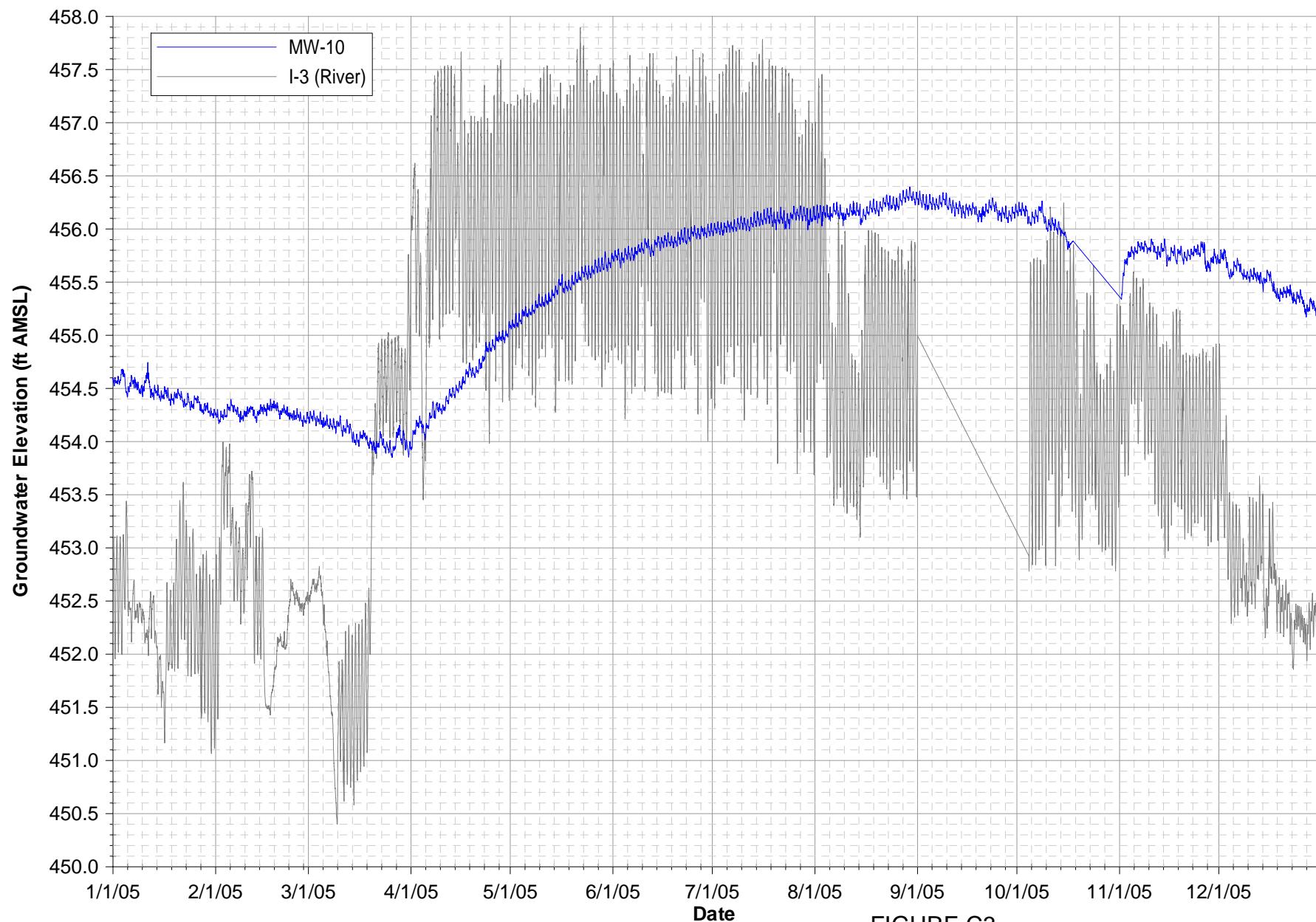
GROUNDWATER AND SURFACE WATER MONITORING PROGRAM  
PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA

Note: Data subject to review.  
I-3 data unavailable 9/1/05 through 10/4/2005.



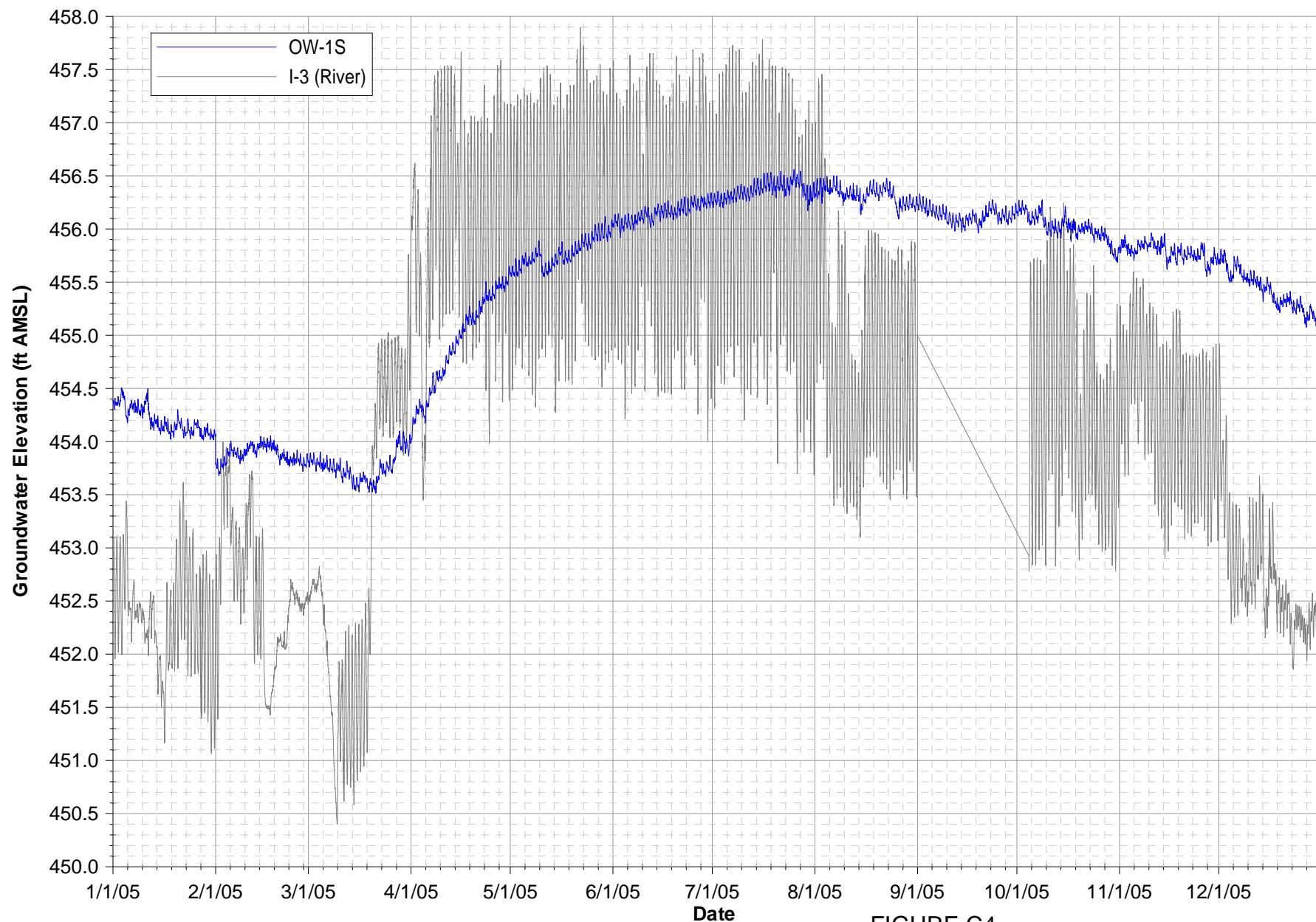
**FIGURE C2**  
**MW-26 HYDROGRAPH, 2005**  
**GROUNDWATER AND SURFACE WATER MONITORING PROGRAM**  
**PG&E TOPOCK COMPRESSOR STATION**  
**NEEDLES, CALIFORNIA**

Note: Data subject to review.  
I-3 data unavailable 9/1/05 through 10/4/2005.



**FIGURE C3**  
**MW-10 HYDROGRAPH, 2005**  
 GROUNDWATER AND SURFACE WATER MONITORING PROGRAM  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA

Note: Data subject to review.  
 I-3 data unavailable 9/1/05 through 10/4/2005.  
 MW-10 data unavailable 10/18/05 through 11/1/05.



**FIGURE C4**  
**OW-1S HYDROGRAPH, 2005**  
 GROUNDWATER AND SURFACE WATER MONITORING PROGRAM  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA