Topock Project Executive Abstract

Document Title: Third Quarter 2011 Interim Measures Performance Monitoring and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California Submitting Agency: DTSC Final Document? ☒ Yes ☐ No	Date of Document: 11/30/2011 Who Created this Document?: (i.e. PG&E, DTSC, DOI, Other) PG&E
Priority Status: ☐ **HIGH** ☐ **MED** ☒ **LOW** Is this time critical? ☐ Yes ☒ No Type of Document: ☐ Draft ☒ Report ☐ Letter ☐ Memo ☐ Other/Explain:	Action Required: ☒ Information Only ☐ Review & Comment Return to: _____ By Date: _____ ☐ Other/Explain:
What does this information pertain to? ☐ Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA)/Preliminary Assessment (PA) ☐ RCRA Facility Investigation (RFI)/Remedial Investigation (RI) (including Risk Assessment) ☐ Corrective Measures Study (CMS)/Feasibility Study (FS) ☐ Corrective Measures Implementation (CMI)/Remedial Action ☐ California Environmental Quality Act (CEQA)/Environmental Impact Report (EIR) ☒ Interim Measures ☐ Other / Explain:	Is this a Regulatory Requirement? ☒ Yes ☐ No If no, why is the document needed?
What is the consequence of NOT doing this item? What is the consequence of DOING this item? Report is required to be in compliance with DTSC requirements.	Other Justification/s: ☐ Permit ☐ Other / Explain:

Brief Summary of attached document:

This quarterly report documents the monitoring activities and performance evaluation of the Interim Measure (IM) hydraulic containment system under the IM Performance Monitoring Program and the Groundwater Monitoring Program and Surface Water Monitoring Program for the Topock Project. Hydraulic and chemical monitoring data were collected and used to evaluate IM hydraulic containment system performance based on a set of standards approved by DTSC. Key items included in this report are: (1) measured groundwater elevations and hydraulic gradient data at compliance well pairs that indicate the direction of groundwater flow is away from the Colorado River and towards the pumping centers onsite; (2) hexavalent chromium data for monitoring wells; (3) pumping rates and volumes from the IM extraction system; and (4) Groundwater Monitoring Program and Surface Water Monitoring Program activities and results.

Based on the data and evaluation presented in this report, the IM performance standard has been met for the Third Quarter 2011 reporting period, which includes the months of July, August, September, and October 2011. The average pumping rate for the IM extraction system over the third quarter 2011 was 127.4 gallons per minute, and an estimated 52.9 kilograms of chromium were removed.

Written by: Pacific Gas and Electric Company

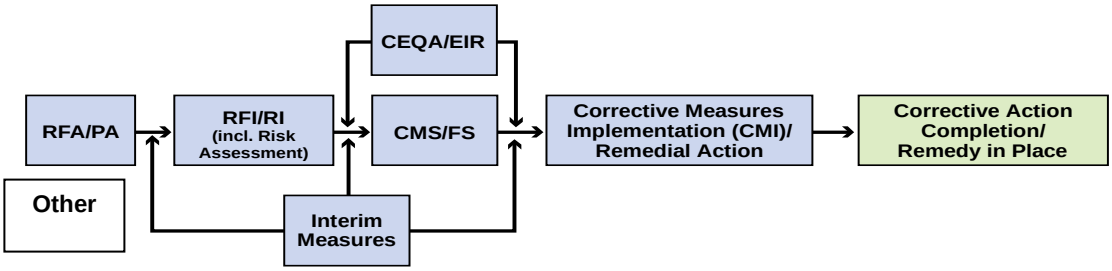
Recommendations:
This report is for information only.

How is this information related to the Final Remedy or Regulatory Requirements:
This report is required by DTSC as part of the Interim Measures Performance Monitoring Program.

Other requirements of this information?
None.

Related Reports and Documents:

Click any boxes in the Regulatory Road Map (below) to be linked to the Documents Library on the DTSC Topock Web Site (www.dtsc-topock.com).



Legend

RFA/PA – RCRA Facility Assessment/Preliminary Assessment
RFI/RI – RCRA Facility Investigation/CERCLA Remedial Investigation (including Risk Assessment)
CMS/FS – RCRA Corrective Measure Study/CERCLA Feasibility Study
CEQA/EIR – California Environmental Quality Act/Environmental Impact Report

Version 9

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November 30, 2011

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Project Manager
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Subject: *Third Quarter 2011 Interim Measures Performance and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California* (Document ID: PGE20111130A)

Dear Mr. Yue:

Enclosed is the *Third Quarter 2011 Interim Measures Performance Monitoring and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California* for PG&E's Interim Measures (IM) Performance Monitoring Program and the Groundwater Monitoring Program and Surface Water Monitoring Program for the Topock project. This report presents the third quarter (July through October 2011) performance monitoring results for the IM hydraulic containment system and summarizes the operations and performance evaluation for the reporting period. This report also presents groundwater and surface water monitoring activities, results, and analyses related to the Groundwater and Surface Water Monitoring Programs during the reporting period.

The IM quarterly performance monitoring report is submitted in conformance with the reporting requirements in the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) IM directive dated February 14, 2005 and updates and modifications approved by DTSC in letters or emails dated October 12, 2007, July 14, 2008, July 17, 2008, March 3, 2010, April 28, 2010, and July 23, 2010.

Please contact me at (805) 234-2257 if you have any questions on the combined monitoring report. Comments regarding the new report format and contents are welcomed.

Sincerely,

Yvonne Meeks
Topock Project Manager

Enclosure
Third Quarter 2011 Interim Measures Performance and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

cc: Chris Guerre/DTSC
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Final Report

Third Quarter 2011 Interim Measures Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report,

PG&E Topock Compressor Station, Needles, California

Document ID: PGE20111130A

Prepared for

California Environmental Protection Agency, Department of Toxic Substances Control

on behalf of

Pacific Gas and Electric Company

November 30, 2011

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Third Quarter 2011 Interim Measures Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report,

Interim Measures Performance Monitoring Program and Groundwater Monitoring Program, PG&E Topock Compressor Station, Needles, California

Prepared for

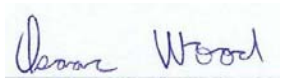
California Environmental Protection Agency, Department of Toxic Substances Control

On behalf of

Pacific Gas and Electric Company

November 30, 2011

This report was prepared under the supervision of a
California Professional Geologist



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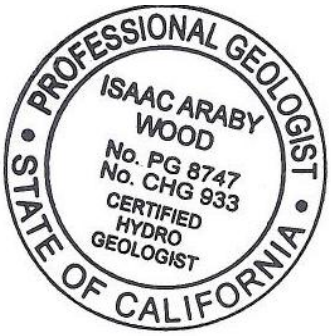

Jay Piper
CH2M HILL Project Manager

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Acronyms and Abbreviations

µg/L	micrograms per liter
bgs	below ground surface
BOR	United States Bureau of Reclamation
COPC	contaminant of potential concern
Cr(T)	total chromium
Cr(VI)	hexavalent chromium
DOI	United Department of the Interior
DTSC	California Environmental Protection Agency, Department of Toxic Substances Control
FLUTe	Flexible Liner Underground Technologies
ft/ft	feet per foot
GMP	Groundwater Monitoring Program
gpm	gallons per minute
IM	Interim Measure
IMCP	Interim Measures Contingency Plan
IM-3	Interim Measure Number 3
mg/L	milligrams per liter
PG&E	Pacific Gas and Electric Company
PMP	Performance Monitoring Program
RCRA	Resource Conservation and Recovery Act
RMP	Surface Water Monitoring Program
TDS	total dissolved solids
USEPA	United States Environmental Protection Agency

1.0 Introduction

Pacific Gas and Electric Company (PG&E) is implementing Interim Measures (IM) to address chromium concentrations in groundwater at the Topock Compressor Station near Needles, California. 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. (All figures are located at the end of the report.) This report presents the monitoring data from three key PG&E monitoring programs, which include:

- Site-wide Groundwater Monitoring Program (GMP).
- Site-wide Surface Water Monitoring Program (RMP).
- Interim Measure Number 3 (IM-3) Performance Monitoring Program (PMP) (data and evaluations).

The data presented for the GMP were collected from throughout the months of July through October 2011 (hereafter referred to as the reporting period). The data for the RMP were collected from August 23 and 24, 2011. The data collected as part of the GMP and RMP are presented in Section 3.0. The data collected as part of the PMP are presented in Section 4.0. This combined PMP and GMP (including RMP) reporting format was approved by the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) in May 2009 (DTSC, 2009a). On July 23, 2010, DTSC approved a new sampling event timing and reporting schedule for the PMP, GMP, and RMP programs (DTSC, 2010a). In compliance with this approval, the Third Quarter 2011 monitoring report contains data from July through October 2011.

1.1 Site-wide Groundwater and Surface Water Monitoring Program

The Topock GMP and RMP were initiated as part of a Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation and Liability Act facility investigation/remedial investigation groundwater investigation. These programs are being regulated under a Corrective Action Consent Agreement issued by the DTSC in 1996 for the Topock site (United States Environmental Protection Agency [USEPA] ID No. CAT080011729).

Groundwater monitoring data collected between July 1997 and October 2007 are presented in the *Revised Final RCRA Facility Investigation and Remedial Investigation Report, Volume 2 – Hydrogeological Characterization and Results of Groundwater and Surface Water Investigation, Pacific Gas and Electric Company, Topock Compressor Station, Needles, California*, dated February 11, 2009 (CH2M HILL, 2009a). Select groundwater and surface water monitoring data from November 2007 through September 2008 are presented in the *Final RCRA Facility Investigation/Remedial Investigation Report, Volume 2 Addendum – Hydrogeologic Characterization and Results of Groundwater and Surface Water Investigation, Pacific Gas and*

Electric Company, Topock Compressor Station, Needles, California, dated June 29, 2009 (CH2M HILL, 2009b).

For background (including well construction details) and descriptions of the current groundwater and surface water sampling, analyses, and monitoring programs, refer to PG&E's *Fourth Quarter 2010 and Annual Interim Measures Performance Monitoring and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California*, dated March 15, 2011 (CH2M HILL, 2011a).

In compliance with the requirements for Groundwater and Surface Water Monitoring Program directive of April 2005 (DTSC, 2005a), this document presents the Third Quarter 2011 GMP and RMP report for the IM monitoring activities from July 1, 2011 through October 31, 2011.

1.1.1 GMP and RMP Monitoring Networks

Figure 1-2 shows the current locations and sampling frequencies of the monitoring wells in the GMP. The complete GMP includes approximately 133 wells, which monitor the Alluvial Aquifer and the bedrock and consist of:

- One hundred eleven monitoring wells in California (including bedrock wells equipped with packers and newly installed East Ravine/Topock Compressor Station Wells; excluding two dry wells and five wells currently sampled by ARCADIS under the Pilot Test Program).
- Eight monitoring wells in Arizona.
- Two water supply wells.
- Two active extraction wells.
- Five test wells.

Sampling frequencies for the GMP wells were updated beginning in First Quarter 2010 following the DTSC directive dated March 3, 2010 (DTSC, 2010b). Figure 1-2 shows these updated frequencies. Sampling frequencies for the Arizona monitoring wells were updated following the April 23, 2010 approval from the Arizona Department of Environmental Quality (2010) and the April 28, 2010 directive from DTSC (DTSC, 2010c).

Figure 1-3 shows the locations and sampling frequencies of the RMP. The RMP consists of:

- Ten river channel surface water monitoring locations.
- Four shoreline surface water monitoring locations.
- Two other surface water monitoring locations.

During the week of January 18, 2010, a series of storm events occurred that caused flooding of low-lying areas and damaged several wells in the GMP monitoring network, including the bedrock wells of the MW-58 cluster: MW-58-115 and MW-58-205. As a result of this cluster being inundated and filled with floodwater, the Flexible Liner Underground Technologies (FLUTe) well liner that allowed discrete sampling at the 115-foot-below-ground-surface (bgs) and 205-foot-bgs depth intervals was damaged and subsequently removed from the borehole. The MW-58 bedrock well cluster was configured as an open

rock borehole and temporarily re-designated as MW-58BR. In September 2010, at the direction of DTSC, a packer system was installed into the open borehole MW-58BR at approximately 115 feet bgs, dividing the open borehole into upper and lower intervals designated as MW-58BR-UPR and MW-58BR-LWR, respectively (CH2M HILL, 2010a). In January of 2011, the packer was moved to approximately 160 feet bgs, and the upper and lower intervals were designated as MW-58BR-UPR-160 and MW-58BR-LWR-160, respectively. In February 2011, DTSC and the United Department of the Interior (DOI) approved an Addendum to the East Ravine Groundwater Investigation (CH2MHILL, 2010b; DTSC, 2011; DOI, 2011a). Monitoring continues at this well as part of the East Ravine Investigation as of June 2011. Results are anticipated to be reported under separate cover at the completion of the East Ravine/Topock Compressor Station groundwater investigation.

On an August 5, 2010 conference call, DTSC directed PG&E to initiate monthly sampling at the MW-64 well cluster. Following the results from MW-58 packer samples, DTSC directed PG&E to remove the FLUTe liner creating depth-discrete sampling zones in the MW-64 cluster (MW-64-150, MW-64-205, and MW-64-260). The FLUTe liner was removed during the week of December 6, 2010, and the open borehole was temporarily re-designated as MW-64BR. Following removal of the FLUTe system, the open borehole was developed, and a sample of the open borehole was collected on December 20, 2010. A packer system dividing the MW-64 borehole into two depth intervals similar to MW-58BR was installed in January 2011, as directed by DTSC (CH2M HILL, 2010c). This packer was set at approximately 150 feet bgs, and the upper and lower intervals were designated as MW-64BR-UPR-150 and MW-64BR-LWR-150, respectively. In February 2011, DTSC and DOI approved an Addendum to the East Ravine Groundwater Investigation (CH2MHILL, 2010b; DTSC, 2011; DOI, 2011a). Monitoring continues at this well as part of the East Ravine Investigation as of June 2011. Results are anticipated to be reported under separate cover at the completion of the East Ravine/Topock Compressor Station groundwater investigation.

The two wells comprising the MW-38 cluster, located in Bat Cave Wash adjacent to the Topock Compressor Station, were also damaged in the storm events during the week of January 18, 2010. Plans to repair monitoring well MW-38D and repair or replace monitoring well MW-38S provided in the technical memorandum entitled *Final Revised Implementation Plan for Repair of Monitoring Wells MW-38S and MW-38D and Old Well/Pipe Reconnaissance* (CH2M HILL, 2011b) were approved by DTSC and DOI on February 24 and 25, 2011, respectively (DTSC, 2011; DOI, 2011b). Repair/replacement of MW-38S and MW-38D is pending as of the time of submittal of this report.

1.2 Interim Measure Performance Monitoring Program

In compliance with the requirements for IM monitoring and reporting outlined in the DTSC IM performance directive of February 2005 and in subsequent directives from the DTSC in 2007 (DTSC, 2005b, 2007a-c), this document presents the Third Quarter 2011 PMP evaluation report for the IM monitoring activities from July 1, 2011 through October 31, 2011.

The Topock project IM consists of groundwater extraction for hydraulic control of the plume boundaries in the Colorado River floodplain and management of extracted groundwater. The groundwater extraction, treatment, and injection systems are collectively referred to as IM-3. The IM only monitors the Alluvial Aquifer. Currently, the IM-3 facilities include a

groundwater extraction system (four extraction wells: TW-2D, TW-3D, TW-2S, and PE-1), conveyance piping, a groundwater treatment plant, and an injection well field for the discharge of the treated groundwater. At this time, extraction wells PE-1 and TW-3D operate full time. Figure 1-1 shows the location of the IM-3 extraction, conveyance, treatment, and injection facilities.

In a letter dated February 14, 2005, DTSC established the criteria for evaluating the performance of the IM (DTSC, 2005c). As defined by DTSC, the performance standard for this IM is to "establish and maintain a net landward hydraulic gradient, both horizontally and vertically, that ensures that hexavalent chromium [Cr(VI)] concentrations at or greater than 20 micrograms per liter [µg/L] in the floodplain are contained for removal and treatment" (DTSC, 2005b). A draft *Performance Monitoring Plan for Interim Measures in the Floodplain Area, Pacific Gas and Electric Company, Topock Compressor Station, Needles, California* (CH2M HILL, 2005) was submitted to DTSC on April 15, 2005 (herein referred to as the Performance Monitoring Plan).

The February 2005 DTSC directive also defined the monitoring and reporting requirements for the IM (DTSC, 2005b-c). In October 2007, DTSC modified the reporting requirements for the PMP (DTSC, 2007a) to discontinue monthly performance monitoring reports (the quarterly and annual reporting requirements were unchanged). Additional updates and modifications to the PMP were approved by DTSC in letters dated October 12, 2007; July 14, 2008; July 17, 2008; and July 23, 2010 (DTSC, 2007a, 2008a-b, 2010a).

1.2.1 PMP Monitoring Networks

Figure 1-4 shows the locations of wells used for IM extraction, performance monitoring, and hydraulic gradient measurements. With approval from DTSC, the list of wells included in the PMP was modified beginning August 1, 2008. The performance monitoring wells in service/active during the reporting period are defined as:

- **Floodplain Wells** (monitoring wells on the Colorado River floodplain).
- **Intermediate Wells** (monitoring wells located immediately north, west, and southwest of the floodplain).
- **Interior Wells** (monitoring wells located upgradient of IM pumping).
- **Extraction Wells** (TW-2D, TW-3D, TW-2S, and PE-01).

Three extraction wells (TW-2D, TW-3D, and TW-2S) are located on the MW-20 bench. In addition, extraction well PE-1 is located on the floodplain approximately 450 feet east of extraction well TW-3D, as shown in Figure 1-4. As stated earlier, extraction wells TW-3D and PE-1 operate full time.

Groundwater monitoring wells installed on the Arizona side of the Colorado River are not formally part of the PMP, but some of these wells have been used to collect groundwater elevation data for evaluating the hydraulic gradient on the Arizona side of the river.

The PMP monitors hydrogeologic conditions in the Alluvial Aquifer. 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 in the floodplain area—designated upper (shallow wells), middle (mid-depth wells), and lower (deep wells)—are based on grouping the monitoring wells screened at common elevations. These divisions do not correspond to any lithostratigraphic layers within the aquifer. The Alluvial Aquifer is considered to be hydraulically undivided. The subdivision of the aquifer into three depth intervals is an appropriate construct for presenting and evaluating spatial and temporal distribution of 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.

2.0 Third Quarter 2011 Monitoring Activities

This section provides a summary of the monitoring and sampling activities completed during the reporting period.

2.1 Groundwater Monitoring Program

2.1.1 Monthly

The active IM extraction wells (PE-1 and TW-3D) were sampled for Cr(VI) and chromium during July, August, September, and October 2011.

DTSC directed that monthly sampling of open bedrock boreholes with packers installed (MW-58BR and MW-64BR) wells be continued. Monitoring continues at these wells as part of an ongoing East Ravine Groundwater Investigation as of October 2011. Results are anticipated to be reported under separate cover at the completion of the East Ravine/Topock Compressor Station groundwater investigation.

2.1.2 Quarterly

Following the July 23, 2010 sampling schedule approval (DTSC, 2010a), the third quarter 2011 GMP quarterly groundwater monitoring event was conducted between September 26 through October 6, 2011 and consisted of collecting samples from 31 groundwater monitoring wells.

These wells were sampled for Cr(VI), chromium, field oxidation-reduction potential, laboratory specific conductance, and field pH.

In addition, the following monitoring activities were conducted at selected GMP wells during the Third Quarter 2011 sampling event:

- One well (MW-12) screened in alluvial sediments was sampled for California Code of Regulations Title 22 metals analyses, which includes arsenic.
- Twelve GMP wells screened in fluvial sediments were sampled for arsenic, as directed by DTSC in its Corrective Measures Study review comment No. 186 (DTSC, 2009b).
- Arsenic was analyzed in groundwater samples from nine bedrock monitoring wells.
- Samples were also collected from a subset of wells for contaminants of potential concern (COPCs), including molybdenum, nitrate, and selenium and potential in situ byproducts (manganese, iron, and arsenic). In an email dated March 3, 2010, DTSC directed monitoring of these COPCs and potential in situ byproducts (DTSC, 2010d).

2.2 East Ravine/Topock Compressor Station Groundwater Investigation

Data from newly installed wells are being collected as part of the East Ravine/Topock Compressor Station groundwater investigation. Results are anticipated to be reported under separate cover at the completion of the East Ravine/Topock Compressor Station groundwater investigation.

2.3 Surface Water Monitoring Program

Quarterly surface water sampling was conducted August 23 through 24, 2011 from the complete RMP monitoring network. Samples were analyzed for Cr(VI), chromium, specific conductance, and pH. Samples were also analyzed for COPCs (molybdenum, nitrate, and selenium), in situ byproducts (manganese, iron, and arsenic), and geochemical indicator parameters to develop baseline concentrations for future remedy performance evaluation.

2.4 Performance Monitoring Program

PMP pressure transducers, which monitor the Alluvial Aquifer, are downloaded in the first week of every month (July, August, September, and October). The transducers in the key monitoring wells (MW-27-085, MW-31-135, MW-34-100, and MW-45-095a; see Figure 1-4) are downloaded weekly. The transducers at the MW-33 cluster, including key well MW-33-150, are downloaded daily via a cellular telemetry system.

3.0 Results for Site-wide Groundwater Monitoring and Surface Water Sampling

3.1 Groundwater Results for Cr(VI) and Chromium

Table 3-1 presents the results for Cr(VI), chromium, field oxidation-reduction potential, laboratory specific conductance, and field pH in groundwater samples collected from July 2011 through October 2011. During Third Quarter 2011, the maximum detected Cr(VI) concentration was 7,860 µg/L at well MW-50-200. The laboratory reports for results from July through October 2011 are presented in Appendix A.

Figures 3-1a through 3-1c present the Cr(VI) results for wells monitoring the shallow (upper depth interval), mid-depth (middle depth interval), and deep (lower depth interval) wells of the Alluvial Aquifer and bedrock, respectively, from Third Quarter 2011. Figures 3-1a through 3-1c also show the approximate outlines of Cr(VI) concentration contours greater than 32 µg/L for the Alluvial Aquifer and bedrock based on results from groundwater sampling events conducted in Fourth Quarter 2010 and Second Quarter 2011, where a larger number of wells were sampled, and the Third Quarter 2011 sampling event. The value of 32 µg/L is based on the calculated natural background upper tolerance limit for Cr(VI) in groundwater from the background study (CH2M HILL, 2009a).

The areas where Cr(VI) concentrations are greater than 32 µg/L in the shallow, mid-depth, and deep intervals of the Alluvial Aquifer and East Ravine bedrock wells are generally similar to the previous quarterly monitoring events (CH2M HILL, 2009c-e, 2010d-e, 2011a,c-d).

3.2 Other Groundwater Monitoring Results

3.2.1 COPCs and In situ Byproducts

Table 3-2 presents the COPC and in situ byproduct results for groundwater monitoring wells sampled in Third Quarter 2011. These results include:

- The maximum detected molybdenum concentration was 170 µg/L at well MW-46-175.
- The maximum nitrate result was collected from well TW-01 at 24.0 milligrams per liter (mg/L).
- The maximum selenium result was collected from well TW-1 at 25.0 µg/L.
- The maximum detected manganese result was collected from well MW-53D at 1,800 µg/L.
- An iron sample was only collected from one well (MW-53D), with a result of 220 µg/L.
- Arsenic results are discussed in Section 3.2.3.

3.2.2 Title 22 Metals

Table 3-3 presents the Title 22 metals results for the GMP monitoring well MW-12 sampled during Third Quarter 2011. In addition to chromium, the trace metals detected in MW-12 were arsenic, barium, molybdenum, selenium, and vanadium. The dissolved concentrations of the trace metals—other than chromium and arsenic—are below the respective federal and California maximum contaminant level drinking water standards.

3.2.3 Arsenic Sampling in Monitoring Wells

Twelve Alluvial Aquifer wells were sampled for arsenic in the Third Quarter 2011 event. These results are presented in Table B-1 in Appendix B. Three of the monitoring well samples had arsenic concentrations greater than the California maximum contaminant level of 10 µg/L (MW-12, MW-33-40, and MW-42-55). The maximum concentration was detected in MW-12 at 47.0 µg/L. The arsenic concentrations are within the previously observed ranges for each well.

Nine bedrock wells were sampled for arsenic in the Third Quarter 2011 event. These results are presented in Table B-1 in Appendix B. Two of the bedrock monitoring well samples had arsenic concentrations greater that the California maximum contaminant level of 10 µg/L (MW-57-185 at 13.0 µg/L and MW-62-110 at 11.0 µg/L).

3.2.4 Sample Results for East Ravine/Topock Compressor Station Wells

Additional wells have been installed as part of the ongoing East Ravine/Topock Compressor Station groundwater investigation. These wells will be incorporated into the GMP monitoring program at the completion of the East Ravine/Topock Compressor Station groundwater investigation.

Results from these wells, are presented in Table B-2 in Appendix B. Complete results are anticipated to be reported under separate cover in early 2012 as a summary report as discussed in the Work Plan Addendum (CH2M HILL, 2010b).

3.3 Surface Water Results for Cr(VI) and Chromium

Table 3-4 presents results of Cr(VI), chromium, specific conductance, and lab pH from the surface water sampling event conducted in August 2011. Cr(VI) was not detected above the reporting limit at any in-channel, shoreline, or other surface water monitoring locations during Third Quarter 2011. Chromium was not detected above the reporting limit at any in-channel, shoreline, or other surface water monitoring locations during Third Quarter 2011. Table 3-5 presents results for the COPCs (molybdenum, nitrate, and selenium), in situ byproducts (manganese, iron, and arsenic), and other geochemical indicator parameters.

3.4 Data Validation and Completeness

Laboratory analytical data from the Third Quarter 2011 GMP sampling events were reviewed by project chemists to assess data quality and to identify deviations from analytical requirements. In addition to the typical metals and anions that are typically analyzed for in the Topock monitoring wells, organic compounds were requested by Methods SW8015B, SW8081A, SW8082, SW8151, SW8260B, SW8270C, SW8270CSIM, and

SW8290, for monitoring wells installed as part of the East Ravine and Topock Compressor Station area Groundwater Investigation.

Two sets of results led to quality control follow-up with the analytical laboratory which to resolve anomalous detections:

- During the second quarter event, MW-53D had Cr(VI) detection of 6.6 µg/L, and total chromium [Cr(T)] was non-detect at 1 µg/L. The fact that Cr(T) was non-detect suggested an issue with the Cr(VI) analysis since it is theoretically impossible to have Cr(VI) greater than Cr(T). For the third quarter event, both Cr(VI) and Cr(T) results were non-detect, as reported in Table 3-1. However, the Cr(VI) analysis did have an elevated reporting limit of 2.1 µg/L, indicating a matrix interference.
- Initial preliminary results from the August surface water sampling event indicated low-level Cr(T) detections (1 to 3 µg/L) from several sample locations both upgradient and downgradient of the site. The initial results were from one of three sample containers collected for Cr(T) analysis at each sample location. Because the sample results did not correlate with historic results or with the Cr(VI) results for these locations, the lab was directed to re-analyze each of the samples that had an initial detection. The re-analysis results were all non-detect and are reported in Table 3-4. The lab concluded that the initial detect sample results were probably a result of a low-level contamination that occurred in the lab.

The following bullets summarize the notable analytical qualifications in the data reported this quarter:

- Two samples exhibited Cr(VI) / Cr(T) comparison issues:
  - PE-01 had a Cr(VI) detection of 10.2 µg/L and a detection of dissolved Cr(T) of 7.6 µg/L. Since it is theoretically impossible to have Cr(VI) greater than dissolved Cr(T), there is an unresolved issue with this sample's results. The detect results were qualified and flagged "J."
  - MW-24BR had a dissolved Cr(T) detection of 8.2 µg/L and a non-detect for Cr(VI). Historically, MW-24BR has been non-detect for dissolved Cr(T). Since it is theoretically impossible to have dissolved Cr(T) at that level that is not Cr(VI), there is an unresolved issue with this sample's results (possibly colloidal chromium).
- Three volatile organic compounds from Method SW8260B (2-butanone, acetone, and acrolein), one orthophosphate (USEPA 300.0), and one TPH-Diesel (SW8015B) had matrix spike recoveries that were outside the control limits. The associated non-detect results were qualified and flagged "UJ." One potassium sample (SW6010B) had a matrix spike recovery outside the control limits, and the associated detect results were qualified and flagged "J."
- One Continuing Calibration Verification sample was outside the control limits for bromomethane (SW8260B) and one Continuing Calibration Verification sample was outside the control limits for bis(2-chloroisopropyl)ether (SW8270C). The associated non-detect sample results were qualified and flagged "UJ."

- One sample results for octachlorodibenzo-p-dioxin (SW8290) had an internal standard outside the control limits, and the non-detect result was qualified and flagged "UJ."One field duplicate pair had relative percent differences greater than the upper control limit for nitrate (USEPA 300.0) and iron (SW6010B), and the detect results were qualified and flagged "J."
- One herbicide sample (SW8151) had surrogate recoveries that were outside the control limits, and the associated non-detect results were qualified and flagged "UJ."
- Nine Cr(VI) results (USEPA 218.6) exhibited a matrix interference issue that required a dilution to achieve satisfactory matrix spike recovery, resulting in an elevated reporting limit. The sample results were qualified, but no flags were added.
- One laboratory control sample's recovery for carbonate alkalinity (SM2320B) was greater than the upper control limit, and the associated non-detect sample results were qualified and flagged "UJ." It should be noted that carbonate alkalinity is associated with pHs greater than 8.3 and because none of the samples has a pH above 8.3, the carbonate alkalinity analysis is of limited value (and subject to validity).
- Based on the March 2007 USEPA ruling, pH has a 15-minute holding time. As a result, pH (SM4500-HB) samples analyzed in a certified lab require qualification. Therefore, all of the pH results for the River Monitoring Program samples were qualified as estimated and flagged "J."

No other significant analytical deficiencies were identified in the Third Quarter 2011 GMP data. Additional details are provided in the data validation reports, which are kept in the project file and are available upon request.

4.0 IM Performance Monitoring Program Evaluation

4.1 Water Quality Results for PMP Floodplain Wells

Table C-1 in Appendix C presents the results of the general chemistry and stable isotope analyses for 15 PMP monitoring wells and two river stations during sampling events from March 2005 through October 2011. In July 2008, DTSC approved modifications to the PMP IM chemical performance monitoring program (DTSC, 2008b). With those modifications, there are now 10 monitoring wells and one river station sampled for IM chemical performance monitoring. Figure 1-4 shows the locations of the monitoring wells sampled for the performance monitoring parameters. Water samples from the selected performance monitoring locations are analyzed for general chemistry parameters, including total dissolved solids (TDS), chloride, sulfate, nitrate, bromide, calcium, potassium, magnesium, sodium, boron, alkalinity, deuterium, and oxygen-18 to monitor the effects of IM pumping on groundwater chemistry.

4.2 Cr(VI) Distribution and Trends in PMP Wells

The July through October 2011 distribution of Cr(VI) in the upper (shallow wells), middle (mid-depth wells), and lower (deep wells) intervals of the Alluvial Aquifer is shown in plan view and cross-section on Figure 4-1[1]. Figure 4-2 presents the July through October 2011 Cr(VI) results for cross-section B, oriented parallel to the Colorado River. The location of cross-section B is shown on Figure 1-4. The Cr(VI) concentration contours shown for the Alluvial Aquifer on these figures are based on results for groundwater samples collected in Fourth Quarter 2010 and Second Quarter 2011, where a larger number of wells were sampled, and Third Quarter 2011.

Figure 4-3 presents Cr(VI) concentration trend graphs for selected deep monitoring wells in the floodplain area through October 2011. Sampling results are plotted for wells MW-34-100, MW-36-90, MW-36-100, MW-44-115, MW-44-125, and MW-46-175. The locations of the deep wells selected for performance evaluation are shown on Figure 1-4. Appendix C includes Cr(VI) concentration trend graphs for selected monitoring well clusters through October 2011.

Wells showing marked decreases in concentration are generally in the floodplain area where IM pumping is removing chromium in groundwater. Wells with historic detections near or at reporting limits remained at these levels during the third quarter 2011 period. A review of Figure 4-3 and Appendix C indicates that Cr(VI) concentrations have remained steady or

[1] In Figures 4-1 and 4-2, the Cr(VI) concentrations are color-coded based on the groundwater background Cr(VI) concentration, which is 32 µg/L (CH2M HILL, 2009a). The 20 µg/L and 50 µg/L Cr(VI) concentration contours presented in Figures 4-1 and 4-2 are shown in accordance with DTSC's 2005 IM directive and are not based on the background Cr(VI) concentration for groundwater.

have decreased in many wells since IM and PE-1 pumping began in 2004 and 2005, respectively.

Key Cr(VI) and chromium trends for PMP groundwater monitoring wells (see Figure 1-4) sampled during the Third Quarter 2011 include:

- Cr(VI) concentrations at MW-28-90 have remained below or near the reporting limit since 2004, as presented in Figure C-4 in Appendix C.
- Mid-depth and deep MW-33 cluster Cr(VI) concentrations have shown stable trends since 2008, while shallow well MW-33-40 has remained below or near the reporting limit since 2004, as presented in Figure C-5 in Appendix C.
- Cr(VI) concentrations at MW-34-100 have been variable, but generally declining, since June 2006, as shown on Figure 4-3. In addition to this primary overall downward trend in Cr(VI) concentration, MW-34-100 also shows a secondary seasonal effect in concentration related to high (spring/summer) and low (winter) Colorado River levels. The transitions between high and low river stages are believed to result in relatively small changes in the direction of the flow paths around MW-34-100 (both horizontally and/or vertically). Such changes in flowpaths could result in seasonal variations in the concentrations observed in MW-34-100 as groundwater is pulled from areas of higher concentrations and/or lower oxidation-reduction potential. The secondary trend of seasonal fluctuation in Cr(VI) is also seen in other monitoring wells near MW-34-100, superimposed on the overall deceasing trends at MW-44-125 and MW-44-115, and on a stable Cr(VI) trend at MW-46-175. River levels are discussed in Section 4.6.
- Cr(VI) concentrations at MW-44-115 have shown a steady declining trend since the well was constructed in 2006. The lowest concentrations reported to date were in the second and third quarters of 2011, with concentrations of 184 µg/L and 144 µg/L, respectively.
- Cr(VI) concentrations at MW-44-125 above 600 µg/L in 2006, shortly after the well was constructed, have steadily declined since late 2008. During the second and third quarter Cr(VI) concentrations were at or below laboratory reporting limits.

4.3 PMP Contingency Plan Cr(VI) Monitoring

The Topock Interim Measures Contingency Plan (IMCP) was developed to detect and control any possible migration of the Cr(VI) plume toward the Colorado River. Currently, the IMCP consists of 24 wells (CH2M HILL, 2005, 2006; PG&E, 2007, 2008). Appendix C includes Cr(VI) concentration trend graphs for the IMCP wells. The IMCP well Cr(VI) results in Third Quarter 2011 were all below their assigned trigger levels.

4.4 Extraction Systems Operations

Pumping data for the IM-3 groundwater extraction system for the reporting period of July 1, 2011 through October 31, 2011 are presented in Table 4-1. From July 1, 2011 through October 31, 2011, the volume of groundwater extracted and treated by the IM-3 system was 22,562,451 gallons. This resulted in removal of an estimated 116.6 pounds (52.9 kilograms) of

chromium from the aquifer during the period from July 1, 2011 through September 30, 2011[2].

During Third Quarter 2011, extraction wells TW-3D and PE-1 operated at a combined pumping rate of 127.4 gallons per minute (gpm), including periods of planned and unplanned downtime. The average monthly pumping rates during the reporting period were 127.9 gpm (July 2011), 117.9 gpm (August 2011), 132.5 gpm (September 2011), and 131.4 gpm (October 2011). Extraction wells TW-2S and TW-2D were not operated during Third Quarter 2011. The operational run-time percentage for the IM extraction system was 94.9 percent during this reporting period. The operations log for the extraction system during Third Quarter 2011, including planned and unplanned downtime, is included in Appendix D.

The concentrate (i.e., saline water) from the reverse osmosis system was shipped offsite as a RCRA non-hazardous waste and was transported to Liquid Environmental Solutions in Phoenix, Arizona for treatment and disposal. Seven containers of solids from the IM-3 facility were disposed of at the Kettleman Hills Chemical Waste Management facility during Third Quarter 2011. Daily IM-3 inspections included general facility inspections, flow measurements, and site security monitoring. Daily logs with documentation of inspections are maintained onsite.

During the reporting period, Cr(VI) concentrations in TW-3D have remained stable, ranging from a maximum value of 1,130 µg/L in July 2011 to a minimum value of 991 µg/L in August and October 2011, as shown in Table 4-2. TDS concentrations in TW-3D for this period have remained relatively stable as shown in Table 4-2.

The Cr(VI) concentrations in the extracted groundwater at well PE-1, located on the floodplain, have ranged from to 9.0 to 11.1 µg/L during the reporting period, as shown in Table 4-2. TDS concentrations in PE-1 for this period have also remained stable.

4.5 Hydraulic Gradient and River Levels during Quarterly Period

During the reporting period, water levels were recorded at intervals of 30 minutes with pressure transducers in 53 wells in the Alluvial Aquifer and two river monitoring stations (I-3 and RRB). The data are typically continuous, with only short interruptions for sampling or maintenance. The locations of the wells monitored are shown in Figure 1-4.

Daily average groundwater and river elevations calculated from the pressure transducer data for the reporting period are summarized in Table E-1 in Appendix E. Groundwater elevations (or hydraulic heads) are adjusted for temperature and salinity differences between wells (i.e., adjusted to a common freshwater equivalent), as described in the Performance Monitoring Plan. Groundwater elevation hydrographs for the PMP wells during the reporting period are included in Appendix E. The elevation of the Colorado

[2] On July 23, 2010 DTSC approved a revised reporting schedule for this report that included a revised IM-3 sample collection period from July 1, 2010 through September 30, 2010. This IM-3 sample collection period is in line with previous reports prior to combining the GMP with the PMP reports.

River measured at the I-3 gauge station (location shown in Figure 1-4) is also shown on the hydrographs in Appendix E.

Average Third Quarter 2011 groundwater elevations for the shallow, mid-depth, and deep wells are presented and contoured in plan view in Figures 4-4a through 4-4c. Average groundwater elevations for wells on floodplain cross-section A are presented and contoured in Figure 4-5. Several monitoring wells are significantly deeper than other wells in the lower-depth interval. Due to vertical gradients present at the Topock site, water levels in deeper wells tend to be higher than water levels in shallower wells. Consequently, some of the wells with screen intervals significantly deeper than most of the lower-interval wells exhibit higher water levels that are not contoured in the plan view in Figure 4-4c.

For the reporting period, a full set of transducer data was recorded in wells located on the Arizona side of the Colorado River. The quarterly average groundwater elevations for wells MW-55-120, MW-54-85, MW-54-140, and MW-54-195 are presented on Figure 4-4c and are used for contouring, where appropriate. With the exception of well MW-55-45, all of the wells in the MW-54 and MW-55 clusters are screened in the deep interval of the Alluvial Aquifer. Well MW-55-45 is screened over the boundary between the shallow and middle intervals.

Deep zone water levels shown in Figure 4-4c indicate that potentiometric levels in monitoring wells in Arizona are higher than those in wells across the river on the California floodplain. This means that the hydraulic gradient on the Arizona side of the river is directed to the west and, as a result, groundwater flow would also be towards the west in that area. This is consistent with the site conceptual model and with the current numerical groundwater flow model (CH2M HILL, 2009a, 2009f).

Hydraulic gradients were measured during the reporting period for well pairs selected for performance monitoring of the two pumping centers (TW-3D and PE-1). The following well pairs were approved by DTSC on October 12, 2007 (DTSC, 2007a) to define the gradients induced while pumping from two locations:

- MW-31-135 and MW-33-150 (northern gradient pair)
- MW-45-95 and MW-34-100 (central gradient pair)
- MW-45-95 and MW-27-85 (southern gradient pair)

Table 4-3 presents the average monthly hydraulic gradients that were measured between the gradient well pairs in Third Quarter 2011. Figure 4-6 presents graphs of the hydraulic gradients, monthly average pumping rates, and river levels for the quarterly period. Strong landward gradients were measured each month. The overall average gradients for all well pairs ranged from 0.0032 to 0.0046 feet per foot (ft/ft). This is 3.2 to 4.6 times greater than the required gradient of 0.001 ft/ft. The gradient for the northern well pair ranged from 1.7 to 2.1 times the target gradient of 0.001 ft/ft. For the central well pair, the average landward gradient ranged from 5.8 to 8.8 times the target gradient. The southern well pair gradients averaged 2.2 to 3.2 times the target gradient for the reporting period.

4.6 Projected River Levels during Next Quarter

Colorado River stage near the Topock Compressor Station is measured at the I-3 location and is directly influenced by releases from Davis Dam and, to a lesser degree, from Lake

Havasu elevations, both of which are controlled by the United States Bureau of Reclamation (BOR). Total releases from Davis Dam follow a predictable annual cycle, with largest monthly releases typically in spring and early summer and smallest monthly releases in late fall/winter (November and December). Superimposed on this annual cycle is a diurnal cycle determined primarily by daily fluctuations in electric power demand. Releases within a given 24-hour period often fluctuate over a wider range of flows than that of monthly average flows over an entire year.

Figure 4-7 shows river stage measured at I-3 superimposed on the projected I-3 river levels. Projected river levels for future months are based on the BOR projections of Davis Dam discharge and Lake Havasu levels from the month preceding. For example, the projected river level for November 2011 is based on the October 2011 BOR data of Davis Dam release and Lake Havasu level not the actual release and level values. The variability between measured and projected river levels is due to the difference between measured and actual Davis Dam release and Lake Havasu levels. The more recent data plotted in Figure 4-7 are summarized in Table 4-4. The future projections shown in Figure 4-7 are based on BOR long-range projections of Davis Dam releases and Lake Havasu levels from June 2011. There is more uncertainty in these projections at longer times in the future since water demand is based on various elements including climatic factors.

Current BOR projections, presented in Table 4-4, show that the average projected Davis Dam release for November 2011 (8,600 cubic feet per second) will be less than the actual release in October 2011 (9,934 cubic feet per second). Based on November 2011 BOR predictions, it is anticipated that the Colorado River level at the I-3 gage location in November 2011 will be approximately 0.60 foot lower compared to the actual levels in October 2011. Current projections show that the water levels will decrease during the next quarterly reporting period (November through December 2011), as shown in Figure 4-7.

4.7 Quarterly PMP Evaluation Summary

The groundwater elevation and hydraulic gradient data from July 2011 through October 2011 performance monitoring indicate that the minimum landward gradient target of 0.001 ft/ft was exceeded each month during the quarterly reporting period. The overall average landward gradients during Third Quarter 2011 were 3.2 to 4.6 times the required minimum magnitude. The current gradient well pairs are adequate to define the capture of the Cr(VI) plume while pumping from extraction wells TW-3D and PE-1. Based on the hydraulic and monitoring data and evaluation presented in this report, the IM performance standard has been met for the Third Quarter 2011 reporting period.

A total of 22,562,451 gallons of groundwater were extracted between July and October 2011 by the IM-3 treatment facility. The average pumping rate for the IM extraction system during Third Quarter 2011, including system downtime, was 127.4 gpm. An estimated 116.6 pounds (52.9 kilograms) of chromium were removed and treated during the period of July 1 through September 30, 2011.

A review of the groundwater gradient maps for Third Quarter 2011 (Figures 4-4a to 4-4c) shows that floodplain PMP monitoring wells where Cr(VI) was detected at greater than 20 mg/L are within the IM capture zone of the pumping well(s) during the reporting

period. That is, the inferred groundwater flow lines from floodplain PMP wells with Cr(VI) greater than 20 mg/L are generally oriented towards the TW-3D and PE-1 extraction wells.

Presentation and evaluation of the Cr(VI) trends observed in the performance monitoring area during the Third Quarter 2011 reporting period are discussed in Section 4.2. Wells showing marked decreases in concentration are generally in the floodplain area where IM pumping is removing chromium in groundwater. Wells with historic detections near or at reporting limits remained at these levels during the Third Quarter 2011 period.

5.0 Upcoming Operation and Monitoring Events

Reporting of the IM extraction and monitoring activities will continue as described in the PMP and under direction from DTSC. All monitoring results, operations, and performance monitoring data will be reported in the fourth quarter and annual 2011 monitoring report, which will be submitted by March 15, 2012.

5.1 Groundwater Monitoring Program

5.1.1 Quarterly Monitoring

As described in the July 23, 2010 DTSC sampling schedule approval (DTSC, 2010a), the fourth quarter/biennial monitoring event will occur December 5 through December 16, 2011. This sampling event will include approximately 130 GMP wells. Monthly sampling at MW-34-100 and MW-46-175 will be completed during the fourth quarter.

5.1.2 Monthly Monitoring

Monthly sampling of the two active extraction wells (TW-3D and PE-1) will continue to be performed during the first two weeks of each month.

5.2 Surface Water Monitoring Program

The Fourth Quarter 2011 surface water monitoring event will be conducted at locations in the RMP monitoring network and is scheduled to occur on November 29-30, 2011. Results will be reported in the fourth quarter and annual 2011 monitoring report.

5.3 Performance Monitoring Program

5.3.1 Extraction

Per DTSC direction, PG&E will continue to operate wells TW-3D and PE-1 at a target combined pumping rate of 135 gpm during Fourth Quarter 2011, except for periods when planned and unplanned downtime occurs. Extracted groundwater treated at the IM-3 facility will be discharged into the IM-3 injection wells in accordance with Waste Discharge Requirements Order No. R7-2006-0060. Saline water and solids generated as byproducts of the treatment process will continue to be transported for offsite disposal.

PG&E will balance the pumping rates between wells TW-3D and PE-1 to maintain the target pumping rate and to maintain the DTSC-specified hydraulic gradients across the Alluvial Aquifer. Well TW-2D will serve as a backup to extraction wells TW-3D and PE-1.

5.3.2 Transducer Download

Downloads of the transducers in the key gradient control wells (MW-27-085, MW-31-135, MW-33-150, MW-34-100, and MW-45-095) will continue to be conducted weekly during the

Fourth Quarter 2011 reporting period and daily for the MW-33 cluster including key well MW-33-150. Downloads of the remainder of the transducers will occur during the first week of each month during the Fourth Quarter 2011 reporting period.

6.0 References

ARCADIS. 2011. *Third Quarter 2011 Monitoring Report for the Upland Reductive Zone In-Situ Pilot Test*. October 4.

Arizona Department of Environmental Quality. 2010. Email. "Re: Reminder – sampling frequency modification for Arizona wells proposed with 4Q2009 data submittal." April 23.

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC). 2005a. Letter to PG&E. "Requirements for Groundwater and Surface Water Monitoring Program, Pacific Gas & Electric Company, Topock Compressor Station, Needles, California (EPA ID No. CAT080011729)." April 26.

_____. 2005b. Letter. "Criteria for Evaluating Interim Measures Performance Requirements to Hydraulically Contain Chromium Plume in Floodplain Area, Pacific Gas & Electric Company, Topock Compressor Station." February 14.

_____. 2005c. Letter. "Contingency Plan for Sentry Well Groundwater Monitoring." February 14.

_____. 2007a. Letter. "Approval of Updates and Modifications to the Interim Measures Performance Monitoring Program. Pacific Gas & Electric Company, Topock Compressor Station." October 12.

_____. 2007b. Letter. "Updates and Modifications to the PG&E's Topock Interim Measures Performance Monitoring Program. PG&E Topock Compressor Station, Needles, California." July 27.

_____. 2007c. Letter. "Conditional Approval of Updates and Modifications to the Groundwater and Surface Water Monitoring Program, Pacific Gas & Electric Company, Topock Compressor Station." September 28.

_____. 2008a. Letter. "Modifications to Hydraulic Data Collection for the Interim Measures Performance Monitoring Program at Pacific Gas and Electric Company (PG&E), Topock Compressor Station, Needles, California." July 14.

_____. 2008b. Letter. "Modifications to Chemical Performance Monitoring and Contingency Plan for the Floodplain Interim Measures Performance Monitoring Program at Pacific Gas and Electric Company (PG&E), Topock Compressor Station, Needles, California." July 17.

_____. 2009a. Email. "Re: Request for Combined Reporting of Topock GMP and PMP." May 26.

_____. 2009b. Letter. "Comments on January 27, 2009 Draft Corrective Measures Study/Feasibility Study (CMS/FS) Report for SWMU1/AOC1, (EPA ID NO. CAT080011729)." March 26.

_____. 2010a. Email. "RE: Topock GMP sampling event timing and reporting schedule." July 23.

_____. 2010b. Email. "Re: Topock GMP Monitoring Frequency Modification." March 3.

_____. 2010c. Letter. "Arizona Monitoring Well Sampling Frequency Modification. Pacific Gas and Electric Company (PG&E), Topock Compressor Station, Needles, California." April 28.

_____. 2010d. Email. "Topock GMP Monitoring Frequency Modification, Topock Compressor Station, Needles, California." March 3.

_____. 2011. Email. "Approval of the *Revised Addendum to the Revised Work Plan for East Ravine Groundwater Investigation*, and *Final Revised Implementation Plan for Repair of Monitoring Wells MW-38S and MW-38D and Old Well/Pipe Reconnaissance at Pacifica Gas and Electric Company (PG&E), Topock Compressor Station, Needles, California* (EPA ID No. CAT080011729)." February 24.

CH2M HILL. 2005. *Draft Performance Monitoring Plan for Interim Measures in the Floodplain Area, Pacific Gas and Electric Company, Topock Compressor Station, Needles, California*. April 15.

_____. 2006. *Topock Interim Measures Performance Contingency Plan, Revision 1, Topock Compressor Station, Needles, California*. August.

_____. 2008. *Groundwater Background Study, Steps 3 and 4: Final Report of Results, PG&E Topock Compressor Station, Needles, California*. July 23.

_____. 2009a. *Revised Final RCRA Facility Investigation/Remedial Investigation Report, Volume 2 – Hydrogeologic Characterization and Results of Groundwater and Surface Water Investigation, Pacific Gas and Electric Company, Topock Compressor Station, Needles, California*. February 11.

_____. 2009b. *Final RCRA Facility Investigation/Remedial Investigation Report, Volume 2 Addendum – Hydrogeologic Characterization and Results of Groundwater and Surface Water Investigation, Pacific Gas and Electric Company, Topock Compressor Station, Needles, California*. June 29.

_____. 2009c. *Quarterly Performance Monitoring Report and Evaluation, February through April 2009, PG&E Topock Compressor Station, Needles, California*. May 29.

_____. 2009d. *Second Quarter 2009 Interim Measures Performance Monitoring and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California*. August 28.

_____. 2009e. *Third Quarter 2009 Interim Measures Performance Monitoring and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California*. November 30.

_____. 2009f. *Final Groundwater Corrective Measures Study/Feasibility Study Report for SWMU 1/AOC 1 and AOC 10, PG&E Topock Compressor Station, Needles, California*. December 16.

_____. 2010a. *Implementation Plan for Packer Evaluation of the MW-58BR Borehole, PG&E Topock Compressor Station, Needles, California.* August 11.

_____. 2010b. *Revised Addendum to the Revised Work Plan for East Ravine Groundwater Investigation, PG&E Topock Compressor Station, Needles, California*. December 31.

_____. 2010c. *Revised Implementation Plan for Packer Evaluation of the MW-64BR Borehole, PG&E Topock Compressor Station, Needles, California*. December 14.

_____. 2010d. *Second Quarter 2010 Interim Measures Performance Monitoring and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California*. November 30.

_____. 2010e. *Third Quarter 2010 Interim Measures Performance Monitoring and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California*. August 30.

_____. 2011a. *Fourth Quarter and Annual 2010 Interim Measures Performance Monitoring and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California*. March 15.

_____. 2011b. *Final Revised Implementation Plan for Repair of Monitoring Wells MW-38S and MW-38D and Old Well/Pipe Reconnaissance, Topock Compressor Station, Needles, California*. February 11.

_____. 2011c. *First Quarter 2011 Interim Measures Performance Monitoring and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California*. April 29.

_____. 2011d. *Second Quarter 2011 Interim Measures Performance Monitoring and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California*. August 15.

_____. 2011e. *Draft Basis of Design Report/ Preliminary (30%) Design Submittal for the Final Groundwater Remedy, PG&E Topock Compressor Station, Needles, California*. November 18.

Pacific Gas and Electric Company (PG&E). 2007. Letter. *Updates and Modifications to the PG&E's Topock Interim Measures Performance Monitoring Program PG&E Topock Compressor Station, Needles, California*. July 27.

_____. 2008. *Approved Modifications to the Topock IM Performance Monitoring Program PG&E Topock Compressor Station, Needles, California*. August 4.

United States Department of the Interior (DOI). 2011a. Email. "PG&E Topock Compressor Station Remediation Site – *Revised Addendum to the Revised Work Plan for East Ravine Groundwater Investigation, PG&E Topock Compressor Station, Needles, California."* February 4.

_____. 2011b. Email. "PG&E Topock Compressor Station Remediation Site – Technical Memorandum entitled *Final Revised Implementation Plan for Repair of Monitoring Wells MW-38S and MW-38D and Old Well/Pipe Reconnaissance, PG&E Topock Compressor Station, Needles, California."* February 25.

Tables

Table 3-1
Groundwater Sampling Results, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Water Quality Parameters: Field ORP (mV)	Specific Conductance (µS/cm) [1]	Field pH
MW-9	SA	15-Dec-10	312	334	93	3,310	7.4
MW-10	SA	07-Dec-10	912	949	82	2,710	7.9
		07-Dec-10 FD	900	909	FD	FD	FD
		05-May-11	411	384	-15	3,000	7.7
		05-May-11 FD	391	401	FD	3,000	FD
MW-12	SA	30-Sep-10	2,930	2,810	210	6,390	8.2
		30-Sep-10 FD	3,110	2,810	FD	FD	FD
		16-Dec-10	2,770	2,800	59	6,430	8.3
		10-Feb-11	2,950	3,160	180	6,250	8.4
		06-May-11	2,910	2,870	150	6,400	8.2
		06-Oct-11	2,840	3,200	73	6,700	8.3
MW-13	SA	07-Dec-10	21.9	22.6	3.8	2,030	7.9
MW-14	SA	07-Dec-10	22.1	22.1	14	1,560	8.0
MW-15	SA	14-Dec-10	13.8	13.4	150	1,810	7.7
MW-16	SA	10-Dec-10	10.1	10.2	22	1,130	8.0
		02-May-11	10.0	10.6	R	1,100	8.5
MW-17	SA	14-Dec-10	16.7	17.0	150	1,590	7.9
		03-May-11	15.0	15.9	R	1,500	8.0
MW-18	SA	14-Dec-10	21.1	19.4	120	1,360	7.6
MW-19	SA	15-Dec-10	387	418	120	2,360	7.5
		04-May-11	497	494	-2.1	2,200	7.8
MW-20-70	SA	16-Dec-10	3,130	3,430	75	3,030	7.6
		06-May-11	3,570	3,510	150	2,700	7.4
MW-20-100 [2]	MA	10-Feb-11	4,500	4,520	210	3,090	7.5
		06-May-11	5,640	5,600	140	3,100	7.1
MW-20-130 [2]	DA	10-Feb-11	10,100	10,600	220	12,200	7.6
		06-May-11	12,100	11,500	120	12,000	7.3
MW-21	SA	28-Sep-10	ND (1.0)	1.1	-84	13,100	7.1
		07-Dec-10	ND (1.0)	ND (1.0)	13	12,400	7.2
		08-Feb-11	3.3	3.6	190	8,450	7.4
		03-May-11	2.0	2.3	R	9,000	7.6
		29-Sep-11	ND (1.0)	ND (1.0)	23	13,000	7.1

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Table 3-1
Groundwater Sampling Results, July 2010 through October 2011
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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Water Quality Parameters: Field ORP (mV)	Specific Conductance [1] (µS/cm)	Field pH
MW-22	SA	07-Dec-10	ND (1.0)	ND (1.0)	-66	28,500	6.7
		03-May-11	ND (1.0)	ND (1.0)	-64	14,000	8.5
MW-23-060	BR	29-Sep-10	29.6	31.1	51	16,500	R
		14-Dec-10	30.4	33.3	53	16,100	R
		09-Feb-11	31.5	30.8	93	16,900	R
		04-May-11	30.2	31.3	-77	15,000	R
		29-Sep-11	26.8	29.8	-29	16,000	9.0
MW-23-080	BR	29-Sep-10	6.0	8.0	-53	17,300	R
		14-Dec-10	12.2	12.8	3.5	17,400	R
		09-Feb-11	19.8	20.7	63	17,400	R
		04-May-11	14.1	13.3	-170	15,000	R
		04-May-11 FD	14.4	12.5	FD	16,000	FD
		29-Sep-11	5.6	5.6	-66	16,000	10.5
MW-24BR	BR	30-Sep-10	ND (1.0)	1.1	-170	15,000	8.0
		08-Dec-10	ND (1.0)	ND (1.0)	-160	15,000	8.3
		08-Feb-11	ND (1.0)	ND (1.0)	-170	14,900	8.1
		05-May-11	ND (1.0)	ND (1.0)	-130	14,000	8.5
		30-Sep-11	ND (1.0)	8.2 J	-130	14,000	8.3
MW-25	SA	07-Dec-10	280	344	35	1,360	7.6
MW-26	SA	15-Dec-10	1,890	2,030	110	4,120	7.4
		05-May-11	2,010	1,890	63	4,000	7.3
MW-27-20	SA	07-Dec-10	ND (0.2)	ND (1.0)	-170	1,000	7.7
MW-27-60	MA	07-Dec-10	ND (0.2)	ND (1.0)	-160	1,180	8.2
MW-27-85	DA	01-Oct-10	ND (1.0)	1.2	-37	15,100	7.2
		07-Dec-10	ND (1.0)	ND (1.0)	-80	14,400	7.2
		08-Feb-11	ND (1.0)	ND (1.0)	-53	14,400	7.2
		08-Feb-11 FD	ND (1.0)	ND (1.0)	FD	FD	FD
		28-Apr-11	ND (1.0)	ND (1.0)	20	13,000	7.4
		28-Apr-11 FD	ND (1.0)	ND (1.0)	FD	13,000	FD
		03-Oct-11	ND (1.0)	ND (1.0)	-83	12,000	7.2
		03-Oct-11 FD	ND (1.0)	ND (1.0)	FD	12,000	FD
MW-28-25	SA	08-Dec-10	ND (1.0)	ND (1.0)	-34	1,140	7.3
		02-May-11	ND (0.2)	1.2	-8.8	1,000	7.6

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Table 3-1
Groundwater Sampling Results, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Water Quality Parameters: Field ORP (mV)	Specific Conductance [1] (µS/cm)	Field pH
MW-28-90	DA	28-Sep-10	ND (0.2)	ND (1.0)	-110	7,480	7.3
		08-Dec-10	ND (1.0)	ND (1.0)	-140	7,670	7.3
		08-Feb-11	ND (0.2)	ND (1.0)	-79	7,730	7.2
		02-May-11	ND (0.2)	ND (1.0)	-70	7,100	8.1
		26-Sep-11	ND (0.2)	ND (1.0)	-140	7,200	7.3
MW-29	SA	14-Dec-10	ND (0.2)	ND (1.0)	-140	2,330	7.3
		29-Apr-11	0.24	ND (1.0)	-120	2,200	7.3
MW-30-30	SA	07-Dec-10	ND (1.0)	ND (1.0)	-170	22,800	7.3
		03-May-11	ND (1.0)	ND (1.0)	-160	12,000	7.4
MW-30-50	MA	07-Dec-10	ND (0.2)	ND (1.0)	-210	1,330	8.0
MW-31-60	SA	15-Dec-10	353	386	150	3,300	7.5
		04-May-11	331	324	-6.2	3,800	7.8
MW-31-135	DA	15-Dec-10	17.8	15.9	89	11,700	7.8
MW-32-20	SA	08-Dec-10	ND (1.0)	ND (1.0)	-140	51,700	6.8
MW-32-35	SA	09-Dec-10	ND (1.0)	3.0	-180	19,700	7.2
		02-May-11	ND (1.0)	ND (1.0)	-230	17,000	7.7
MW-33-40	SA	28-Sep-10	ND (0.2)	3.5	-26	5,490	8.2
		10-Dec-10	ND (1.0)	ND (1.0)	45	14,000	7.7
		09-Feb-11	ND (1.0)	1.7	22	10,500	7.7
		02-May-11	ND (0.2)	ND (1.0)	-150	5,900	8.5
		27-Sep-11	ND (1.0)	1.0	-66	12,000	7.8
MW-33-90	MA	29-Sep-10	24.4	20.9	-24	10,700	7.4
		10-Dec-10	24.5	25.0	-91	10,600	7.5
		09-Feb-11	24.2	25.3	7.7	10,600	7.4
		04-May-11	20.7	21.3	100	9,600	7.5
		04-Oct-11	16.8	20.2	63	10,000	7.3
MW-33-150	DA	29-Sep-10	10.8	10.8	62	17,500	7.4
		29-Sep-10 FD	11.2	11.0	FD	FD	FD
		10-Dec-10	11.5	11.9	-44	17,600	7.6
		09-Feb-11	12.2	12.3	R	17,700	7.5
		04-May-11	11.2	11.4	-93	15,000	7.4
		04-Oct-11	10.4	10.1	110	16,000	7.4
MW-33-210	DA	29-Sep-10	13.0	13.5	88	19,600	7.3

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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Water Quality Parameters: Field ORP (mV)	Specific Conductance [1] (µS/cm)	Field pH
MW-33-210	DA	10-Dec-10	14.1	15.5	-69	19,900	7.4
		09-Feb-11	14.8	15.2	61	20,000	7.3
		04-May-11	10.7	11.0	-170	1,700	7.2
		27-Sep-11	12.7	12.9	-84	18,000	7.3
MW-34-55	MA	07-Dec-10	ND (0.2)	ND (1.0)	-150	1,020	7.7
MW-34-80	DA	01-Oct-10	ND (0.2)	ND (1.0)	-60	8,400	7.4
		07-Dec-10	ND (0.2)	ND (1.0)	-100	7,830	7.4
		07-Feb-11	ND (0.2)	1.3	3.9	7,660	7.4
		07-Feb-11 FD	ND (0.2)	ND (1.0)	FD	FD	FD
		28-Apr-11	ND (1.0)	ND (1.0)	-19	7,600	7.6
		03-Oct-11	ND (1.0)	ND (1.0)	-92	7,800	7.3
MW-34-100	DA	01-Oct-10	75.1	66.6	33	18,500	7.4
		01-Oct-10 FD	75.6	67.1	FD	FD	FD
		09-Nov-10	110	104	83	18,400	8.9
		08-Dec-10	145	132	-76	18,600	7.5
		08-Dec-10 FD	141	127	FD	FD	FD
		11-Jan-11	290	259	150	18,400	7.5
		07-Feb-11	210	201	28	18,400	7.5
		28-Apr-11	15.9	15.8	12	16,000	7.6
		28-Apr-11 FD	16.1	16.8	FD	16,000	FD
		03-Oct-11	55.8	56.9	5.7	17,000	7.4
		03-Oct-11 FD	57.0	61.7	FD	17,000	FD
MW-35-60	SA	14-Dec-10	30.2	25.4	110	7,490	7.3
		04-May-11	26.1	26.4	-19	6,700	7.9
MW-35-135	DA	14-Dec-10	37.8	34.8	130	10,100	7.7
		04-May-11	29.4	31.0	-37	9,800	8.1
MW-36-20	SA	07-Dec-10	ND (0.2)	ND (1.0)	-170	7,260	7.6
MW-36-40	SA	07-Dec-10	ND (0.2)	ND (1.0)	-200	2,120	7.9
MW-36-50	MA	08-Dec-10	ND (0.2)	ND (1.0)	-110	1,810	7.5
MW-36-70	MA	07-Dec-10	ND (0.2)	ND (1.0)	-100	R	8.1
MW-36-90	DA	08-Dec-10	ND (0.2)	ND (1.0)	-69	1,430	8.2
		08-Dec-10 FD	ND (0.2)	ND (1.0)	FD	FD	FD
		02-May-11	ND (0.2)	ND (1.0)	-71	1,300	8.9

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Table 3-1
Groundwater Sampling Results, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Water Quality Parameters: Field ORP (mV)	Specific Conductance [1] (µS/cm)	Field pH
MW-36-100	DA	15-Dec-10	69.6	64.6	-160	11,000	7.1
		03-May-11	56.4	62.5	-140	9,700	7.0
MW-37S	MA	10-Dec-10	9.6	10.0	120	5,240	7.7
MW-37D	DA	15-Dec-10	128	146	92	16,000	7.7
		05-May-11	178	172	90	15,000	7.6
MW-39-50	MA	08-Dec-10	ND (0.2)	ND (1.0)	-7.5	1,720	8.0
MW-39-60	MA	09-Dec-10	ND (0.2)	ND (1.0)	-63	2,040	7.9
MW-39-70	MA	08-Dec-10	ND (0.2)	ND (1.0)	79	3,850	7.4
MW-39-80	DA	09-Dec-10	ND (0.2)	ND (1.0)	-38	9,460	7.0
MW-39-100	DA	14-Dec-10	206	240	6.4	20,300	6.7
MW-40D	DA	15-Dec-10	172	159	22	16,200	7.5
		05-May-11	140	124	-7.7	14,000	7.4
MW-41S	SA	08-Dec-10	19.5	16.4 J	-66	5,090	8.1
		08-Dec-10 FD	19.7	21.3 J	FD	FD	FD
MW-41M	DA	08-Dec-10	11.0	10.4	-83	15,700	7.8
MW-41D	DA	08-Dec-10	2.2	3.1	-110	22,100	7.9
		02-May-11	1.9	2.4	R	18,000	7.8
MW-42-30	SA	06-Dec-10	ND (0.2)	ND (1.0)	-220	4,850	7.8
MW-42-55	MA	27-Sep-10	ND (0.2)	ND (1.0)	R	9,130	7.2
		06-Dec-10	ND (1.0)	ND (1.0)	-170	8,830	7.3
		07-Feb-11	ND (0.2)	ND (1.0)	-110	8,650	7.4
		29-Apr-11	ND (0.2)	ND (1.0)	-100	7,500	7.3
		26-Sep-11	ND (0.2)	ND (1.0)	-120	6,300	7.4
MW-42-65	MA	27-Sep-10	ND (1.0)	ND (1.0)	R	10,800	7.1
		06-Dec-10	ND (1.0)	ND (1.0)	-110	11,200	7.1
		07-Feb-11	ND (1.0)	ND (1.0)	-59	11,500	7.1
		29-Apr-11	ND (1.0)	ND (1.0)	-62	9,500	7.1
		26-Sep-11	ND (1.0)	ND (1.0)	-41	9,100	7.2
MW-43-25	SA	09-Dec-10	ND (0.2)	ND (1.0)	-190	1,260	7.6
		29-Apr-11	ND (0.2)	ND (1.0)	-180	1,200	7.4
MW-43-75	DA	09-Dec-10	ND (1.0)	ND (1.0)	-170	11,700	7.6

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Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Water Quality Parameters: Field ORP (mV)	Specific Conductance (µS/cm) [1]	Field pH
MW-43-90	DA	09-Dec-10	ND (1.0)	ND (1.0)	-98	18,400	7.0
		29-Apr-11	ND (1.0)	ND (1.0)	-92	17,000	6.8
MW-44-70	MA	09-Dec-10	ND (0.2)	ND (1.0)	-230	2,850	7.6
		03-May-11	ND (0.2)	ND (1.0)	-160	2,500	7.4
MW-44-115	DA	28-Sep-10	228	218	-200	11,800	7.9
		28-Sep-10 FD	236	219	FD	FD	FD
		09-Dec-10	219	191	-230	12,100	8.0
		09-Dec-10 FD	187	191	FD	FD	FD
		08-Feb-11	203	206	-170	9,990	7.8
		03-May-11	184	201	-120	11,000	7.7
		27-Sep-11	144	150	-150	11,000	7.9
MW-44-125	DA	28-Sep-10	ND (0.2)	16.0	-220	12,000	7.7
		09-Dec-10	24.5	26.9	-280	12,900	7.9
		09-Dec-10 FD	25.0	27.4	FD	FD	FD
		08-Feb-11	65.6	71.1	-230	13,300	7.8
		08-Feb-11 FD	65.4	75.1	FD	FD	FD
		03-May-11	ND (0.2)	10.8 J	-320	11,000	7.5
		03-May-11 FD	1.0	14.7 J	FD	10,000	FD
		27-Sep-11	ND (1.0)	6.0	-170	11,000	7.8
		27-Sep-11 FD	ND (1.0)	7.1	FD	12,000	FD
MW-46-175	DA	28-Sep-10	74.5	72.3	-210	17,300	8.3
		09-Nov-10	102	115	-65	17,600	8.6
		08-Dec-10	130	123	-190	17,700	8.3
		08-Dec-10 FD	134	124	FD	FD	FD
		11-Jan-11	169	174	60	18,000	8.2
		08-Feb-11	149	151	-65	18,100	8.3
		03-May-11	53.4	55.9	-200	16,000	8.3
		03-May-11 FD	53.2	56.8	FD	16,000	FD
		26-Sep-11	69.4	70.6	-180	17,000	8.3
MW-46-205	DA	08-Dec-10	5.6	6.4	-100	21,800	8.3
		04-May-11	5.8	6.6	41	18,000	8.1
MW-47-55	SA	13-Dec-10	25.0	22.0	69	4,810	7.4
		13-Dec-10 FD	23.2	22.3	FD	FD	FD
		03-May-11	19.3	19.4	65	4,300	7.5

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Table 3-1
Groundwater Sampling Results, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Water Quality Parameters: Field ORP (mV)	Specific Conductance (µS/cm) [1]	Field pH
MW-47-115	DA	13-Dec-10	22.5	18.4	58	14,300	7.4
		03-May-11	22.5	24.4	-40	12,000	7.5
MW-48	BR	29-Sep-10	ND (1.0)	ND (1.0)	110	16,800	7.1
		08-Dec-10	ND (1.0)	ND (1.0)	-4.3	21,400	7.5
		09-Feb-11	ND (1.0)	ND (1.0)	160	18,300	7.0
		04-May-11	ND (1.0)	ND (1.0)	-120	16,000	7.3
		30-Sep-11	ND (0.2)	ND (1.0)	31	17,000	7.2
MW-49-135	DA	13-Dec-10	ND (1.0)	3.1	-1.2	14,400	7.8
MW-49-275	DA	13-Dec-10	ND (1.0)	1.8	-200	26,400	8.1
MW-49-365	DA	13-Dec-10	ND (2.1)	ND (1.0)	-220	40,200	7.9
MW-50-095	MA	10-Dec-10	18.9	19.7	36	5,240	7.8
		03-May-11	18.3	18.9	R	5,000	8.2
MW-50-200 [2]	DA	30-Sep-10	10,200	9,670	170	21,700	7.7
		10-Feb-11	9,160	9,350	230	21,800	7.9
		10-Feb-11 FD	9,100	9,240	FD	FD	FD
		06-May-11	9,720	9,080	51	18,000	7.7
		04-Oct-11	7,860	7,350	70	19,000	7.7
MW-51	MA	16-Dec-10	4,590	4,720	80	11,100	7.4
		06-May-11	4,730	4,690	130	10,000	7.4
MW-52S	MA	09-Dec-10	ND (1.0)	ND (1.0)	-180	11,200	7.2
		03-May-11	ND (2.1)	ND (1.0)	-130	10,000	8.8
MW-52M	DA	09-Dec-10	ND (1.0)	ND (1.0)	-210	16,800	7.6
		03-May-11	ND (2.1)	ND (1.0)	-140	15,000	9.0
MW-52D	DA	09-Dec-10	ND (1.0)	ND (1.0)	-220	21,700	8.0
		03-May-11	ND (1.0)	ND (1.0)	-150	18,000	9.3
MW-53M	DA	10-Dec-10	ND (1.0)	ND (1.0)	-210	21,000	8.1
		03-May-11	ND (1.0)	ND (1.0)	-150	18,000	R
MW-53D	DA	09-Dec-10	ND (1.0)	ND (1.0)	-220	26,200	8.4
		03-May-11	6.6 J	ND (1.0)	-150	32,000	R
		03-Oct-11	ND (2.1)	ND (1.0)	-220	33,000	8.3
		03-Oct-11 FD	ND (2.1)	ND (1.0)	FD	33,000	FD
MW-54-85	DA	14-Dec-10	ND (1.0)	ND (1.0)	-190	10,700	7.6

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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Water Quality Parameters: Field ORP (mV)	Specific Conductance [1] (µS/cm)	Field pH
MW-54-85	DA	05-May-11	ND (0.2)	ND (1.0)	-200	10,100	7.4
MW-54-140	DA	14-Dec-10	ND (1.0)	ND (1.0)	-110	13,100	7.8
		05-May-11	ND (0.2)	ND (1.0)	-40	13,000	8.1
MW-54-195	DA	14-Dec-10	ND (1.0)	ND (1.0)	-250	19,700	8.1
		05-May-11	ND (1.0)	ND (1.0) J	-180	20,000	8.9
		05-May-11 FD	ND (1.0)	ND (5.0)	FD	20,000	FD
MW-55-45	MA	09-Dec-10	ND (0.2)	ND (1.0)	-200	1,560	7.8
MW-55-120	DA	09-Dec-10	6.2	6.8	-120	9,320	8.0
		09-Dec-10 FD	6.2	6.8	FD	FD	FD
MW-56S	SA	14-Dec-10	ND (0.2)	ND (1.0)	-140	6,440	7.3
		04-May-11	ND (0.2)	ND (1.0)	-150	6,310	7.1
MW-56M	DA	14-Dec-10	ND (2.0)	ND (1.0)	-130	15,300	7.2
		04-May-11	ND (0.2)	ND (1.0) J	-150	14,900	7.1
MW-56D	DA	14-Dec-10	ND (2.0)	ND (1.0)	-110	22,400	7.8
		04-May-11	ND (1.0)	ND (5.0)	-100	21,700	7.6
MW-57-070	BR	30-Sep-10	856	733	36	1,940	7.2
		15-Dec-10	456 J	438	1.8	2,160	7.2
		15-Dec-10 FD	330 J	368	FD	FD	FD
		10-Feb-11	507	612	130	2,510	7.3
		05-May-11	486	475	58	2,400	7.0
		05-May-11 FD	500	421	FD	2,400	FD
		29-Sep-11	309	352	56	2,400	6.9
MW-57-185	BR	29-Sep-10	5.6	5.9	11	18,900	8.6
		09-Dec-10	3.7	2.4	-180	19,500	8.7
		08-Feb-11	5.9	6.6	-20	19,200	8.6
		03-May-11	6.3	7.2	R	17,000	8.4
		28-Sep-11	7.0	8.5	-130	17,000	8.5
MW-58BR-LWR	BR	16-Sep-10	200	200	-20	9,960	7.7
		07-Oct-10	199	173	-66	9,890	7.5
MW-58BR-LWR-160	BR	10-Feb-11	140	130	120	8,950	8.4
		04-Apr-11	100	110	-61	---	7.9
MW-58BR-UPR	BR	14-Sep-10	3.8	3.5	-27	11,800	8.0

Refer to table footnotes for data qualifier explanation.

Table 3-1
Groundwater Sampling Results, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Water Quality Parameters: Field ORP (mV)	Specific Conductance [1] (µS/cm)	Field pH
MW-58BR-UPR	BR	06-Oct-10	4.7	8.4	-78	11,800	8.0
MW-58BR-UPR-160	BR	01-Feb-11	ND (1.0)	ND (1.0)	-110	12,000	7.5
		18-Mar-11	ND (5.0)	ND (1.0)	-120	12,800	7.9
MW-59-100	SA	30-Sep-10	5,140	4,630	240	10,700	6.9
		16-Dec-10	5,660	4,830	110	9,940	7.0
		10-Feb-11	5,090	5,020	210	10,200	7.2
		10-Feb-11 FD	5,110	5,120	FD	FD	FD
		06-May-11	5,240	4,520	120	10,000	6.9
		04-Oct-11	4,330	4,850	120	10,000	6.8
MW-60-125	BR	30-Sep-10	806	795	-16	9,210	7.4
		16-Dec-10	1,090	992	49	9,250	7.3
		16-Dec-10 FD	1,070	1,000	FD	FD	FD
		10-Feb-11	1,160	1,170	170	9,330	7.5
		05-May-11	1,040	959	-14	8,700	7.3
		04-Oct-11	715	760	-27	8,200	7.3
MW-61-110	BR	30-Sep-10	512	507	38	16,400	7.4
		15-Dec-10	567	510	-100	16,600	7.6
		09-Feb-11	684	653	60	16,300	7.5
		05-May-11	522	531	-31	15,000	7.3
		30-Sep-11	611	698	-30	15,000	7.3
MW-62-065	BR	30-Sep-10	500	462	130	6,640	7.3
		15-Dec-10	598	494	19	6,270	7.4
		09-Feb-11	481	475	110	6,430	7.4
		05-May-11	488	472	51	6,000	7.3
		29-Sep-11	457	500	44	6,300	7.4
MW-62-110	BR	29-Sep-10	414	363	-60	9,130	7.8
		16-Dec-10	390	378	110	8,880	7.8
		09-Feb-11	565	540	190	8,850	7.6
		05-May-11	569	531	95	8,500	7.6
		29-Sep-11	598	739	-60	8,700	7.7
MW-62-190	BR	29-Sep-10	ND (1.0)	ND (1.0)	43	19,100	7.7
		16-Dec-10	ND (1.0)	1.3	-30	17,500	7.9
		09-Feb-11	ND (1.0)	ND (1.0)	130	18,100	7.8
		05-May-11	ND (1.0)	ND (1.0)	-110	17,000	7.7

Refer to table footnotes for data qualifier explanation.

Table 3-1
Groundwater Sampling Results, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Water Quality Parameters		
					Field ORP (mV)	Specific Conductance [1] (µS/cm)	Field pH
MW-62-190	BR	29-Sep-11	ND (1.0)	ND (1.0)	-88	17,000	7.7
MW-63-065	BR	27-Sep-10	1.7	2.2	73	7,440	7.1
		27-Sep-10 FD	1.7	2.2	FD	FD	FD
		06-Dec-10	1.2	ND (1.0)	-23	8,250	7.1
		08-Feb-11	1.3	1.7	61	7,530	7.2
		03-May-11	1.0	1.7	-120	7,200	7.0
		28-Sep-11	1.6	2.8	4.5	7,500	7.1
MW-64-150	BR	25-Aug-10	ND (1.0)	ND (1.0)	-51	10,900	7.2
		29-Sep-10	ND (1.0)	ND (1.0)	18	10,500	6.7
		20-Oct-10	ND (0.2)	ND (1.0)	-49	8,340	7.1
		11-Nov-10	ND (0.2)	ND (1.0)	-26	8,550	7.3
MW-64-205	BR	25-Aug-10	ND (1.0)	3.9	-72	15,800	7.6
		29-Sep-10	ND (1.0)	3.8	-110	15,900	6.8
		20-Oct-10	ND (1.0)	3.6	-46	14,900	7.0
		11-Nov-10	ND (1.0)	4.0	-56	14,700	7.3
MW-64-260	BR	25-Aug-10	ND (1.0)	ND (1.0)	-210	15,900	8.1
		29-Sep-10	ND (1.0)	ND (1.0)	-180	15,900	6.7
		20-Oct-10	ND (1.0)	ND (1.0)	-140	14,800	6.9
		11-Nov-10	ND (1.0)	ND (1.0)	-160	14,500	7.2
MW-64BR [3]	BR	20-Dec-10	140	140	32	14,700	7.3
MW-64BR-LWR-150	BR	24-Feb-11	100	97.0	46	17,200	7.6
		20-Apr-11	2.1	3.2	-100	---	7.8
MW-64BR-UPR-150	BR	26-Jan-11	220	220	88	14,000	7.5
		12-Apr-11	130	140	-50	---	7.5
OW-3S	SA	08-Dec-10	25.2	25.6	-49	1,650	7.9
OW-3M	MA	08-Dec-10	18.0	18.6	-100	5,730	8.2
OW-3D	DA	08-Dec-10	9.4	10.4	-110	8,920	8.2
PE-1	DA	07-Jul-10	13.7	11.4 LF	---	---	---
		04-Aug-10	12.4	11.9 LF	---	---	---
		01-Sep-10	14.9	12.4 LF	---	---	---
		05-Oct-10	13.2	12.3 LF	---	---	---
		03-Nov-10	12.9	12.0 LF	---	---	---
		07-Dec-10	15.2	14.4 LF	---	---	---

Refer to table footnotes for data qualifier explanation.

Table 3-1
Groundwater Sampling Results, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Water Quality Parameters		
					Field ORP (mV)	Specific Conductance (µS/cm) [1]	Field pH
PE-1	DA	04-Jan-11	17.5	16.6 LF	---	---	---
		01-Feb-11	15.4	13.4 LF	---	---	---
		01-Mar-11	12.9	15.2 LF	---	---	---
		05-Apr-11	10.5	10.0 LF	---	5,180	---
		02-May-11	9.9	10.5 LF	---	5,240	---
		07-Jun-11	9.5	11.0 LF	---	5,180	---
		05-Jul-11	10.2 J	7.6 JLF	---	5,140	---
		02-Aug-11	9.0	8.8 LF	---	5,090	---
		06-Sep-11	9.5	9.0 LF	---	5,040	---
		04-Oct-11	11.1	10.1 LF	---	4,930	---
PGE-7BR	BR	09-Dec-10	ND (1.0)	ND (1.0)	-250	20,400	7.3
PGE-8 [2]	BR	10-Feb-11	ND (1.0)	2.0	-330	20,800	8.0
Park Moabi-3	MA	10-Dec-10	11.9	10.5 UF	48	1,300	7.6
Park Moabi-4	MA	10-Dec-10	21.0	20.6 UF	40	1,960	7.4
TW-1	SA-MA-DA	28-Sep-10	3,690	3,490	2.1	7,130	7.3
		09-Dec-10	3,520	3,780	29	7,330	7.4
		09-Feb-11	3,710	3,620	32	7,440	7.2
		05-May-11	3,700	3,520	R	6,900	7.4
		28-Sep-11	3,200	3,040	170	7,000	7.3
TW-2S	SA-MA	15-Dec-10	700	815	200	2,550	7.6
TW-2D	DA	15-Dec-10	274	287	230	9,370	7.2
TW-3D	DA	07-Jul-10	1,100	1,130 LF	---	---	---
		04-Aug-10	1,280	1,100 LF	---	---	---
		01-Sep-10	1,130	1,160 LF	---	---	---
		05-Oct-10	1,280	1,150 LF	---	---	---
		03-Nov-10	1,160	1,130 LF	---	---	---
		07-Dec-10	1,080	1,170 LF	---	---	---
		04-Jan-11	1,100	1,200 LF	---	---	---
		01-Feb-11	1,000	1,100 LF	---	---	---
		01-Mar-11	1,090	1,320 LF	---	---	---
		05-Apr-11	1,130	1,220 LF	---	8,710	---
		02-May-11	1,100	1,070 LF	---	8,620	---
		07-Jun-11	1,030	1,090 LF	---	8,530	---
		05-Jul-11	1,130	953 LF	---	8,460	---

Refer to table footnotes for data qualifier explanation.

Table 3-1
Groundwater Sampling Results, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Water Quality Parameters		
					Field ORP (mV)	Specific Conductance [1] (µS/cm)	Field pH
TW-3D	DA	02-Aug-11	991	948 LF	---	8,440	---
		06-Sep-11	1,000	992 LF	---	8,510	---
		04-Oct-11	991	1,010 LF	---	8,420	---
TW-4	DA	13-Dec-10	11.4	11.9	83	21,700	7.4

Refer to table footnotes for data qualifier explanation.

NOTES:

ND = not detected at listed reporting limit (RL).
FD = field duplicate sample.
UF = unfiltered.
LF = lab filtered.
J = concentration or RL estimated by laboratory or data validation.
(---) = data not collected, available, rejected, or field instrument malfunction.
R = Data rejected (exceeded analytical criteria for precision and accuracy); should not be used for project decision-making.
µg/L= micrograms per liter.
mV = millivolts.
ORP = oxidation-reduction potential.
µS/cm = microSiemens per centimeter.

[1] Field Specific Conductance reported through First Quarter 2011; Lab Specific Conductance reported starting in Second Quarter 2011.

[2] Data collected February 2011 due to field logistical issues.

[3] One-time sample collected from an open borehole.

Beginning February 1, 2008, hexavalent chromium samples are field filtered per DTSC - approved change from analysis method SW7199 to E218.6.

The RLs for certain hexavalent chromium results from Method SW7199 analyses have been elevated above the standard RL of 0.2 µg/L due to required sample dilution to accommodate matrix interferences.

Monitoring wells MW-11, MW-24A, MW-24B, MW-38S, and MW-38D are currently sampled as part of the upland in-situ pilot test monitoring. Results from these wells are presented in the in-situ pilot test reports (ARCADIS, 2011) and are not included in this table.

As a results of a series of storm events in January 2010 the MW-58 cluster (MW-58-115 and MW-58-205) was inundated with flood water. This floodwater destroyed the Flexible Liner Underground Technologies™ well liner that allowed discrete sampling at the 115 feet below ground surface (bgs) and 205 feet bgs depth intervals and was consequently removed from the borehole. The MW-58 bedrock well cluster is now an open borehole with a packer system installed. In September 2010 a packer system was installed in the borehole at about 115 ft bgs that divided the open borehole into upper (UPR) and lower (LWR) intervals. In January 2011 the packer was moved to a new location at about 160 ft bgs. Monitoring continues at this well as part of the East Ravine Investigation as of June 2011. Results will be reported under separate cover in late 2011 (CH2M HILL, 2010).

In accordance with DTSC direction, the Flexible Liner Underground Technologies (FLUTe) multi-level monitoring system, which allowed discrete sampling at the 150, 205 and 260 ft bgs depth intervals, was removed from the MW-64BR borehole in December 2010. Following removal of the FLUTe system, the open borehole was developed and a sample of the open borehole was collected on December 20, 2010. At the direction of DTSC, a packer system was installed in January 2011 at about 150 ft bgs. Monitoring continues at this well as part of the East Ravine Investigation as of June 2011. Results will be reported under separate cover in late 2011 (CH2M HILL, 2010).

TW-1 not posted on contour maps (Figure 3-1a-c and Figure 4-1) because well is constructed across all three depth intervals.

ORP is reported to two significant figures. Specific Conductance is reported to three significant figures.

Wells are assigned to separate Aquifer zones for results reporting:
SA: shallow interval of Alluvial Aquifer.
MA: mid-depth interval of Alluvial Aquifer.
DA: deep interval of Alluvial Aquifer.
PA: perched aquifer (unsaturated zone).
BR: well completed in bedrock (Miocene Conglomerate or pre-Tertiary crystalline rock).
BR-S: well completed in shallowest portion of BR.
BR-M: well completed in middle portion of BR.
BR-D: well completed in deeper portion of BR.

Refer to table footnotes for data qualifier explanation.

Table 3-2
Groundwater COPCs and In Situ Byproducts Sampling Results, Third Quarter 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Well ID	Aquifer Zone	Sample Date	Arsenic Dissolved (µg/L)	Iron Dissolved (µg/L)	Molydenum Dissolved (µg/L)	Selenium Dissolved (µg/L)	Manganese Dissolved (µg/L)	Nitrate as N (mg/L)
MW-12	SA	06-Oct-11	47.0	---	11.0	9.7	---	9.80
MW-23-060	BR	29-Sep-11	2.1	---	---	---	ND (2.5)	---
MW-23-080	BR	29-Sep-11	3.5	---	---	---	ND (2.5)	---
MW-27-85	DA	03-Oct-11	1.4	---	---	---	---	---
		03-Oct-11 FD	1.4	---	---	---	---	---
MW-28-90	DA	26-Sep-11	2.0	---	---	---	---	---
MW-33-40	SA	27-Sep-11	11.0	---	---	---	---	---
MW-34-80	DA	03-Oct-11	1.5	---	---	---	---	---
MW-34-100	DA	03-Oct-11	1.3	---	---	---	---	---
		03-Oct-11 FD	1.4	---	---	---	---	---
MW-42-55	MA	26-Sep-11	13.0	---	---	---	---	---
MW-42-65	MA	26-Sep-11	2.3	---	---	---	1300	---
MW-44-115	DA	27-Sep-11	6.1	---	82.0	ND (2.5)	4.1	ND (1.0)
MW-44-125	DA	27-Sep-11	4.2	---	140	ND (2.5)	590	ND (1.0)
		27-Sep-11 FD	3.8	---	150	ND (2.5)	630	ND (1.0)
MW-46-175	DA	26-Sep-11	---	---	170	ND (2.5)	---	ND (2.5)
MW-53D	DA	03-Oct-11	3.0	220	---	---	1800	---
		03-Oct-11 FD	2.9	220	---	---	1800	---
MW-57-185	BR	28-Sep-11	13.0	---	88.0	ND (2.5)	520	ND (2.5)
MW-59-100	SA	04-Oct-11	2.0	---	ND (12)	5.6	1.9	4.00
MW-60-125	BR	04-Oct-11	1.7	---	20.0	ND (12)	14.0	2.60
MW-61-110	BR	30-Sep-11	3.3	---	24.0	ND (2.5)	270	ND (2.5)
MW-62-065	BR	29-Sep-11	1.3	---	14.0	3.0	13.0	3.50
MW-62-110	BR	29-Sep-11	11.0	---	54.0	3.2	210	3.00
MW-62-190	BR	29-Sep-11	6.6	---	85.0	ND (12)	1100	ND (2.5)
MW-63-065	BR	28-Sep-11	1.5	---	24.0	ND (2.5)	15.0	1.40
TW-1	SA-MA-DA	28-Sep-11	---	---	15.0	25.0	---	24.0

NOTES:

µg/L = micrograms per liter.
mg/L = milligrams per liter.
ND = not detected at listed reporting limit.
FD = field duplicate sample.
--- = data not collected, available, rejected, or field instrument malfunction.
J = concentration or RL estimated by laboratory or data validation mg/L.

The Background Study Upper Tolerance Limit (UTL) for Arsenic is 24.3 µg/L.
The U.S. EPA and California Maximum Contaminant Level for Arsenic is 10 µg/L.
The secondary U.S. EPA and California Maximum Contaminant Level for Iron is 300 ug/L.
The Background Study Upper Tolerance Limit (UTL) for Molybdenum is 36.3 µg/L.
There is no U.S. EPA and California Maximum Contaminant Level for Molybdenum.
The Background Study Upper Tolerance Limit (UTL) for Selenium is 10.3 µg/L.
The U.S. EPA and California Maximum Contaminant Level for Selenium is 50.0 µg/L.
The secondary U.S. EPA and California Maximum Contaminant Level for Manganese is 50 ug/L.
The Background Study Upper Tolerance Limit (UTL) for Nitrate as N is 5.03 mg/L.
The U.S. EPA and California Maximum Contaminant Level for Nitrate as N is 10 mg/L.
The Background Study Upper Tolerance Limit (UTL) for Fluoride is 7.1 mg/L.
The U.S. EPA and California Maximum Contaminant Level for Fluoride is 4 mg/L.
The secondary U.S. EPA and California Maximum Contaminant Level for Fluoride is 2 mg/L.

Wells are assigned to separate Aquifer zones for results reporting:
SA: shallow interval of Alluvial Aquifer.
MA: mid-depth interval of Alluvial Aquifer.
DA: deep interval of Alluvial Aquifer.
PA: perched aquifer (unsaturated zone).
BR: well completed in bedrock (Miocene Conglomerate or pre-Tertiary crystalline rock).
BR-S: well completed in shallow portion of BR.
BR-M: well completed in middle portion of BR.
BR-D: well completed in deep portion of BR.

Table 3-3
Title 22 Metals Results, Third Quarter 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report,
PG&E Topock Compressor Station, Needles, California

Well ID	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
	California MCL:	6	10	1,000	4	5	NE	50	1,000*	15	2	NE	100	50	100*	2	NE	5,000*
MW-12	10/06/2011	ND (10)	47.0	66.0	ND (1.0)	ND (3.0)	ND (3.0)	3,200	ND (5.0)	ND (10)	ND (0.2)	11.0	ND (5.0)	9.7	ND (3.0)	ND (2.5)	10.0	ND (10)

Notes:

ND not detected at listed reporting limit.
FD field duplicate sample.
NE not established.
* Secondary USEPA MCL.

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 (µg/L), are the California primary drinking water standards, except where noted.

All results are dissolved metals concentrations in µg/L from field-filtered samples.

Metals analyzed by Methods SW6010B or SW6020A or SW7470A.

Table 3-4
Surface Water Sampling Results, Third Quarter 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Location	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Specific Conductance (µS/cm)	Lab pH
In-channel Locations					
C-BNS-D	08/23/2011	ND (0.2)	ND (1.0)	944	8.03
C-CON-S	08/24/2011	ND (0.2)	ND (1.0)	935	7.82
C-CON-D	08/24/2011	ND (0.2)	ND (1.0)	941	7.81
C-I-3-S	08/23/2011	ND (0.2)	ND (1.0)	945	8.02 J
C-I-3-D	08/23/2011	ND (0.2)	ND (1.0)	936	8.04 J
C-MAR-S	08/23/2011	ND (0.2)	ND (1.0)	970	7.92
C-MAR-D	08/23/2011	ND (0.2)	ND (1.0)	970	7.89
C-NR1-S	08/24/2011	ND (0.2)	ND (1.0)	942	7.98
C-NR1-D	08/24/2011	ND (0.2)	ND (1.0)	931	7.94
C-NR3-S	08/24/2011	ND (0.2)	ND (1.0)	946	7.97
C-NR3-D	08/24/2011	ND (0.2)	ND (1.0)	948	7.97
C-NR4-S	08/24/2011	ND (0.2)	ND (1.0)	945	8.04
C-NR4-D	08/24/2011	ND (0.2)	ND (1.0)	950	8.04
C-R22a-S	08/23/2011	ND (0.2)	ND (1.0)	940	8.11 J
C-R22a-D	08/23/2011	ND (0.2)	ND (1.0)	946	8.10 J
C-R27-S	08/23/2011	ND (0.2)	ND (1.0)	946	7.92
C-R27-D	08/23/2011	ND (0.2)	ND (1.0)	945	8.08
C-TAZ-S	08/23/2011	ND (0.2)	ND (1.0)	947	8.07 J
C-TAZ-D	08/23/2011	ND (0.2)	ND (1.0)	915	8.02 J
Shoreline Samples					
R-19	08/24/2011	ND (0.2)	ND (1.0)	938	8.06 J
R-28	08/23/2011	ND (0.2)	ND (1.0)	935	8.15
R63	08/23/2011	ND (0.2)	ND (1.0)	930	8.22 J
R63	08/23/2011 FD	ND (0.2)	ND (1.0)	940	8.19 J
RRB	08/24/2011	ND (0.2)	ND (1.0)	926	8.17 J
Other Surface Water Monitoring Locations					
SW1	08/23/2011	ND (0.2)	ND (1.0)	957	7.70 J
SW2	08/23/2011	ND (0.2)	ND (1.0)	956	7.74 J

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.

Hexavalent chromium analytical method EPA 218.6 (reporting limit 0.2 µg/L for undiluted samples).

Other analytical methods: dissolved chromium - method SW6020A, specific conductance - EPA 120.1, pH -SM4500-HB.

Table 3-5
COPCs, In Situ Byproducts, and Geochemical Indicator Parameters in Surface Water Samples, Third Quarter 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide
Groundwater and Surface Water Monitoring Report,
PG&E Topock Compressor Station, Needles, California

Location	Sample Date	Alkalinity, bicarbonate as CaCO3 mg/L	Alkalinity, carbonate as CaCO3 mg/L	Alkalinity, total as CaCO3 mg/L	Arsenic, dissolved µg/L	Iron, Total µg/L	Iron, dissolved µg/L	Manganese, dissolved µg/L	Molybdenum, dissolved µg/L	Nitrate as Nitrogen mg/L	Selenium, dissolved µg/L	Total suspended solids mg/L
In-channel Locations												
C-BNS-D	08/23/2011	125	ND (5)	125	2.5	ND (20)	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-CON-S	08/24/2011	125	ND (5)	125	3.4	24.6	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-CON-D	08/24/2011	140	ND (5)	140	2.7	28	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-I-3-S	08/23/2011	116	ND (5)	116	2.4	22.6	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-I-3-D	08/23/2011	123	ND (5)	123	2.6	39.1	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-MAR-S	08/23/2011	125	ND (5)	125	2.7	730	ND (20)	15.4	ND (10)	ND (0.5)	ND (10)	13.6
C-MAR-D	08/23/2011	125	ND (5)	125	2.7	857	ND (20)	15.5	ND (10)	ND (0.5)	ND (10)	19.3
C-NR1-S	08/24/2011	120	ND (5)	120	2.8	ND (20)	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-NR1-D	08/24/2011	130	ND (5)	130	2.6	24.1	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-NR3-S	08/24/2011	136	ND (5)	136	2.9	ND (20)	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-NR3-D	08/24/2011	120	ND (5)	120	2.6	ND (20)	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-NR4-S	08/24/2011	115	ND (5)	115	2.5	ND (20)	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-NR4-D	08/24/2011	132	ND (5)	132	2.4	ND (20)	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-R22a-S	08/23/2011	120	ND (5)	120	2.6	23.5	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-R22a-D	08/23/2011	110	ND (5)	110	2.6	23.6	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-R27-S	08/23/2011	118	ND (5)	118	2.4	ND (20)	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-R27-D	08/23/2011	118	ND (5)	118	2.6	33	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-TAZ-S	08/23/2011	122	ND (5)	122	3.1	ND (20)	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
C-TAZ-D	08/23/2011	123	ND (5)	123	2.6	24.4	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
Shoreline Samples												
R-19	08/24/2011	135	ND (5)	135	2.4	20.9	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
R-28	08/23/2011	115	ND (5)	115	2.8	44	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
R63	08/23/2011	114	ND (5)	114	2.6	46.6	ND (20)	ND (10)	ND (10)	0.718	ND (10)	ND (10)
R63	08/23/2011 FD	120	ND (5)	120	2.8	49.5	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)
RRB	08/24/2011	125	ND (5)	125	2.8	27.4	ND (20)	ND (10)	ND (10)	ND (0.5)	ND (10)	ND (10)

Notes:

µg/L micrograms per liter.
mg/L milligrams per liter.
ND not detected at listed reporting limit.
J concentration or reporting limit estimated by laboratory or data validation.

Methods:
Alkalinity - SM2320B.
Metals - SW6010B/SW6020A.
Nitrate - EPA 300.0.
Total Suspended Solids - SM2540D.

TABLE 4-1

Pumping Rate and Extracted Volume for IM System, Third Quarter 2011

Third Quarter 2011 Interim Measures Performance Monitoring
and Site-wide Groundwater and Surface Water Monitoring Report,
PG&E Topock Compressor Station, Needles, California

Extraction Well ID	July 2011		August 2011		September 2011		October 2011		Third Quarter 2011	
	Average [a] Pumping Rate (gpm)	Volume Pumped (gal)	Average [a] Pumping Rate (gpm)	Volume Pumped (gal)	Average [a] Pumping Rate (gpm)	Volume Pumped (gal)	Average [a] Pumping Rate (gpm)	Volume Pumped (gal)	Average [a] Pumping Rate (gpm)	Volume Pumped (gal)
TW-02S	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
TW-02D	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
TW-03D	102.78	4,588,151	94.58	4,221,841	106.32	4,593,164	106.05	4,734,132	102.43	18,137,288
PE-01	25.15	1,122,571	23.33	1,041,457	26.19	1,131,346	25.31	1,129,789	24.99	4,425,163
TOTAL	**127.9**	**5,710,722**	**117.9**	**5,263,298**	**132.5**	**5,724,510**	**131.4**	**5,863,921**	**127.4**	**22,562,451**

Chromium Removed This Quarter (kg)	52.9
Chromium Removed Project to Date (kg)	3,109.3
Chromium Removed This Quarter (lb)	116.6
Chromium Removed Project to Date (lb)	6,854.7

NOTES:

gpm gallons per minute.
gal gallons.
ac-ft acre-feet.
kg kilograms.
lb pounds.

[a] The "Average Pumping Rate" is the overall average during the reporting period, including system downtime, based on flow meter readings.

Chromium removed includes the period of July 1, 2011 through September 30, 2011. On July 23, 2010 DTSC approved a revised reporting schedule for this report that included a revised IM-3 sample collection period from July 1, 2010 through September 30, 2010; this IM-3 sample collection period is in line with previous reports prior to combining the GMP with the PMP reports.

Table 4-2
Analytical Results for Extraction Wells, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Well ID	Sample Date	Dissolved Chromium (µg/L)	Hexavalent Chromium (µg/L)	Total Dissolved Solids (mg/L)
TW-3D	07-Jul-10	1,130	1,100	5,280
	04-Aug-10	1,100	1,280	5,330
	01-Sep-10	1,160	1,130	4,900
	05-Oct-10	1,150	1,280	5,160
	03-Nov-10	1,130	1,160	5,360
	07-Dec-10	1,170	1,080	5,530
	04-Jan-11	1,200	1,100	5,550
	01-Feb-11	1,100	1,000	4,700
	01-Mar-11	1,320	1,090	5,380
	05-Apr-11	1,220	1,130	5,120
	02-May-11	1,070	1,100	5,080
	07-Jun-11	1,090	1,030	5,120
	05-Jul-11	953	1,130	5,020
	02-Aug-11	948	991	5,120
	06-Sep-11	992	1,000	5,140
	04-Oct-11	1,010	991	5,040
PE-1	07-Jul-10	11.4	13.7	3,350
	04-Aug-10	11.9	12.4	3,180
	01-Sep-10	12.4	14.9	3,420
	05-Oct-10	12.3	13.2	3,290
	03-Nov-10	12.0	12.9	3,300
	07-Dec-10	14.4	15.2	3,160
	04-Jan-11	16.6	17.5	3,110
	01-Feb-11	13.4	15.4	3,120
	01-Mar-11	15.2	12.9	3,200
	05-Apr-11	10.0	10.5	2,920
	02-May-11	10.5	9.90	3,100
	07-Jun-11	11.0	9.50	3,190
	05-Jul-11	7.60 J	10.2 J	3,120
	02-Aug-11	8.80	9.00	3,060
	06-Sep-11	9.00	9.50	2,860
	04-Oct-11	10.1	11.1	2,900

NOTES:

µg/L = concentration in micrograms per liter.
mg/L = concentration in milligrams per liter.
LF = lab filtered.
UF = unfiltered.

Groundwater samples from active extraction wells are taken at sample taps in Valve Vault 1 on the MW-20 Bench.

Dissolved chromium was analyzed by Method SW6020A or EPA200.8 or EPA200.7, hexavalent chromium analyzed by Method SM3500-CrB or EPA218.6 and total dissolved solids were analyzed by Method SM2540C.

TABLE 4-3

Average Hydraulic Gradients Measured at Well Pairs, Third Quarter 2011

Third Quarter 2011 Interim Measure Performace Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Well Pair [a]	Reporting Period	Mean landward Hydraulic Gradient [b] (feet/foot)	Days in Monthly Average [c]
Overall Average	July	0.0043	NA
	August	0.0032	NA
	September	0.0046	NA
	October	0.0040	NA
Northern Gradient Pair MW-31-135 / MW-33-150	July	0.0021	31 / 31
	August	0.0017	31 / 31
	September	0.0020	30 / 30
	October	0.0017	31 / 31
Central Gradient Pair MW-45-95 / MW-34-100	July	0.0078	31 / 31
	August	0.0058	31 / 31
	September	0.0088	30 / 30
	October	0.0075	31 / 31
Southern Gradient Pair MW-45-95 / MW-27-85	July	0.0030	31 / 31
	August	0.0022	31 / 31
	September	0.0032	30 / 30
	October	0.0027	31 / 31

NOTES:

NA = All available data used in calculating overall average except where noted.

a Refer to Figure 1-3 for location of well pairs.
b For IM pumping, the target landward gradient for the selected well pairs is 0.001 feet/foot.
c Number of days transducers in both wells were operating correctly / Total number of days in month.

TABLE 4-4
Predicted and Actual Monthly Average Davis Dam Discharge and Colorado River Elevation at I-3
Third Quarter 2011 Interim Measures Performance Monitoring and
Site-wide Groundwater and Surface Water Monitoring Report,
PG&E Topock Compressor Station, Needles, California

	Davis Dam Release			Colorado River Elevation at I-3		
Month	Projected (cfs)	Actual (cfs)	Difference (cfs)	Predicted (ft amsl)	Actual (ft amsl)	Difference (feet)
January 2008	9,300	8,900	400	453.5	453.6	0.1
February 2008	10,100	12,463	-2,363	454.5	454.7	0.1
March 2008	15,200	15,837	-637	455.6	455.9	0.3
April 2008	17,600	18,554	-954	456.6	457.0	0.4
May 2008	17,200	16,155	1,045	456.6	456.4	-0.3
June 2008	15,400	15,655	-255	456.2	456.5	0.3
July 2008	14,500	14,574	-74	455.8	456.0	0.2
August 2008	13,100	12,976	124	455.2	455.2	0.0
September 2008	12,300	11,731	569	454.9	455.0	0.1
October 2008	10,500	10,272	228	454.1	454.2	0.1
November 2008	10,400	10,130	270	454.1	454.03	-0.1
December 2008	5,800	5,506	294	452.3	452.45	0.2
January 2009	9,300	10,644	-1,344	452.6	454.02	1.4
February 2009	10,800	11,319	-519	454.2	454.34	0.2
March 2009	16,200	16,826	-626	456.1	456.37	0.3
April 2009	18,800	18,432	368	457.2	457.13	-0.1
May 2009	15,800	14,889	911	456.4	456.26	-0.1
June 2009	14,100	13,246	854	455.8	455.73	0.0
July 2009	13,500	13,579	-79	455.5	455.65	0.1
August 2009	11,900	12,296	-396	454.8	455.08	0.3
September 2009	12,700	12,203	497	454.9	455.24	0.4
October 2009	9,500	10,128	-628	453.8	454.04	0.3
November 2009	10,200	9,909	291	454.1	454.27	0.2
December 2009	9,000	8,650	350	453.6	453.54	-0.1
January 2010	9,900	7,415	2,485	453.9	453.36	-0.5
February 2010	7,700	7,961	-261	453.0	453.41	0.4
March 2010	14,700	14,014	686	455.5	455.40	-0.1
April 2010	16,100	14,762	1,338	455.3	455.94	0.7
May 2010	15,500	15,246	254	456.2	456.41	0.3
June 2010	15,800	15,332	468	456.4	456.45	0.0
July 2010	14,500	14,841	-341	455.9	456.34	0.4
August 2010	13,500	13,627	-127	455.4	455.87	0.5
September 2010	13,400	13,555	-155	455.2	455.79	0.6
October 2010	12,300	12,463	-163	454.7	455.41	0.7
November 2010	10,900	10,597	303	454.3	454.92	0.6
December 2010	9,800	9,286	514	453.9	453.86	-0.1
January 2011	7,700	8,172	-472	453.1	453.34	0.2
February 2011	11,000	10,547	453	454.2	454.38	0.2
March 2011	15,900	15,875	25	455.9	456.22	0.3
April 2011	17,900	17,595	305	456.9	457.02	0.2
May 2011	16,400	15,437	963	456.6	456.40	-0.2
June 2011	16,100	16,024	76	456.5	456.75	0.2
July 2011	15,500	15,333	167	456.3	456.30	0.1
August 2011	13,300	13,368	-68	455.4	455.67	0.3
September 2011	12,700	12,052	648	455.2	455.25	0.1
October 2011	9,200	9,934	-734	453.9	454.30	0.4
November 2011	8,600			453.7		

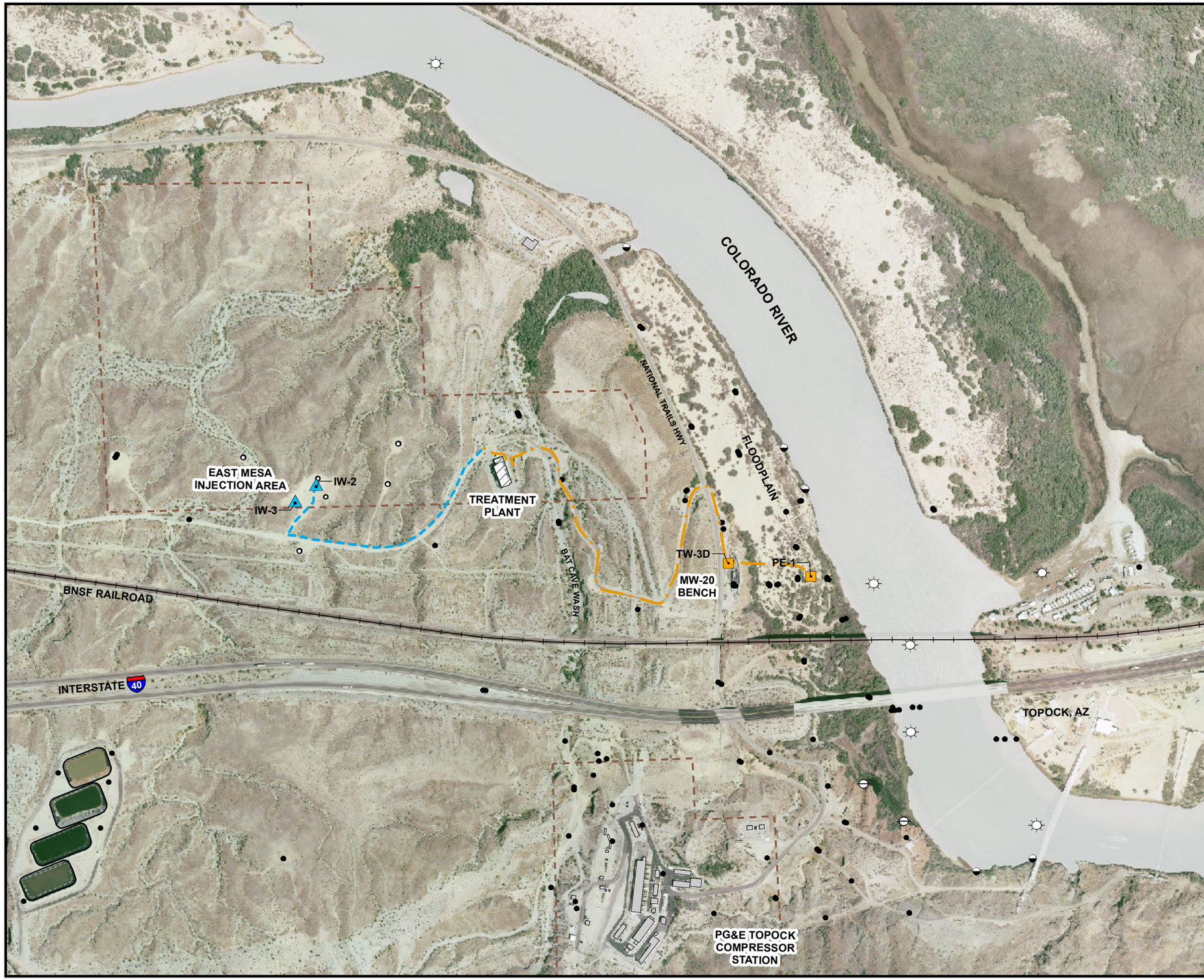
NOTES:
cfs = cubic feet per second.
ft amsl = feet above mean sea level.

Projected river level for each month in the past is calculated based on the preceding months USBR projections of Davis Dam release and stage in Lake Havasu. Future projections of river level at I-3 are based upon November 2011 USBR projections. These data are reported monthly by the US Department of Interior, at http://www.usbr.gov/lc/region/g4000/24mo.pdf

The difference in I-3 elevation is the difference between the I-3 elevation predicted and the actual elevation measured at I-3. The source of this difference is differences between BOR projections and actual dam releases/Havasu reservoir levels, rather than the multiple regression error.

For data prior to 2008 please see *Fourth Quarter 2009 and Annual Interim Measure Performance Monitoring Report, PG&E Topock Compressor Station, Needles, California (CH2M HILL, 2010a).*

Figures



VICINITY MAP

LEGEND

- IM-3 Extraction Well (Active)
- IM-3 Injection Well
- Monitoring Well in Site-Wide Groundwater Monitoring Program (GMP)
- Monitoring Well in IM-3 Compliance Monitoring Program
- Shoreline Surface Water Monitoring Location
- River Channel Surface Water Monitoring Location
- Other Surface Water Monitoring Location
- Groundwater Extraction/Influent Pipeline
- Treatment Plant Effluent Pipeline
- Property Line

Note: 1. Location map shows Interim Measure No. 3 (IM-3) active facilities as of current report

2. See Figures 1-2 and 1-3 for complete monitoring locations and identifications.

N

0 600 1,200 Feet

FIGURE 1-1
LOCATIONS OF IM-3 FACILITIES AND MONITORING LOCATIONS
THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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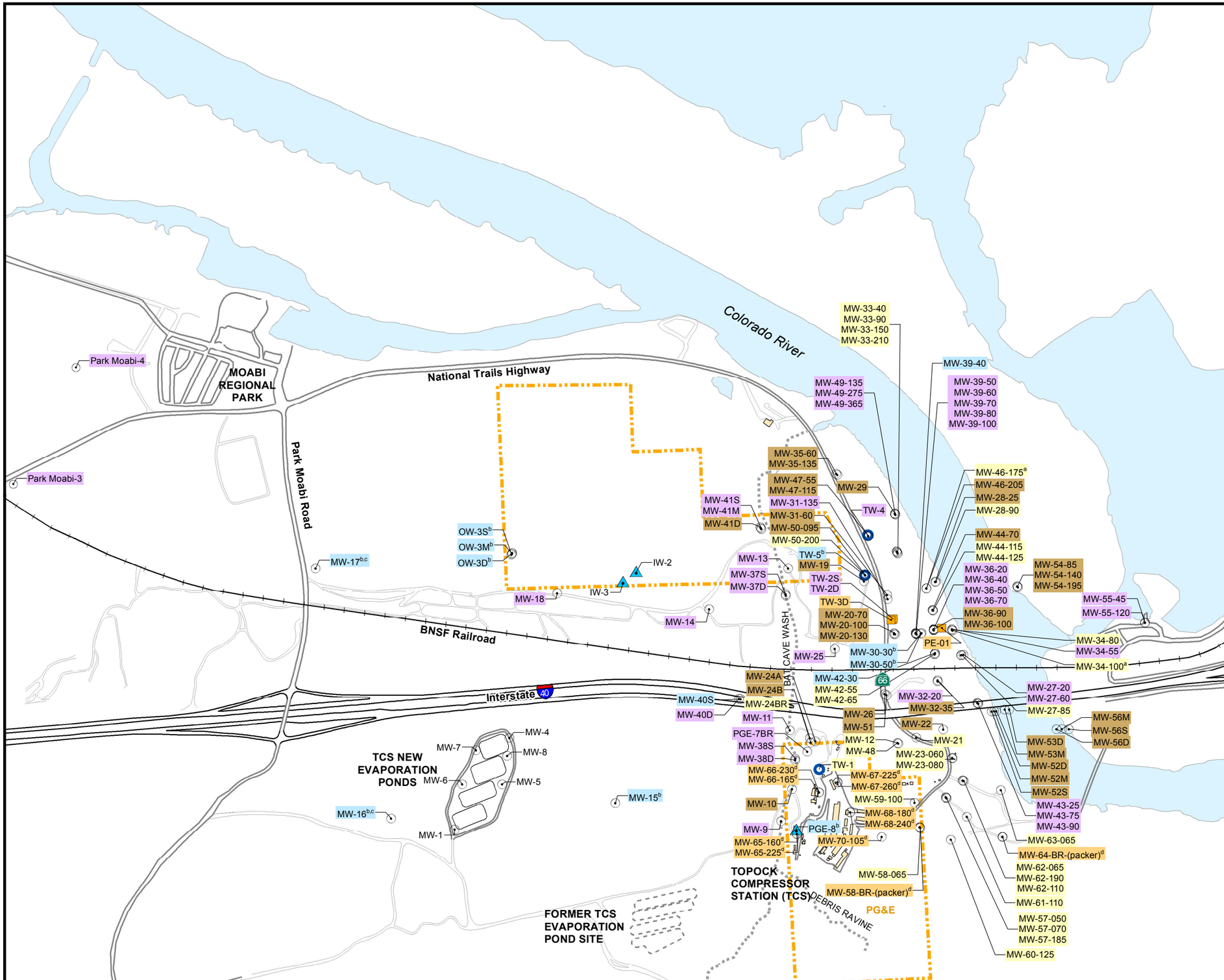

LEGEND

- Injection Well
- Groundwater Monitoring Well
- Test Well or Supply Well (inactive)
- Extraction Well
- Property Boundary

Sampling Frequency for Groundwater Monitoring Program (GMP)

MW-17	Biennial Sampling
MW-9	Annual Sampling
MW-22	Semiannual Sampling
MW-12	Quarterly Sampling
TW-3D	Monthly Sampling

Notes:

[a] Monthly sampling November through February, otherwise quarterly.

[b] These wells required to be sampled biennially, will be sampled annually for the water quality snapshot.

[c] Background metals collected semiannually.

[d] Planned to be reincorporated/incorporated into GMP Monitoring Program at the completion of the East Ravine/Topock Compressor Station groundwater investigation.

N

0 500 1,000 Feet

California State Plane NAD83 Zone 5 US Feet

FIGURE 1-2
MONITORING LOCATIONS AND SAMPLING FREQUENCY FOR GMP

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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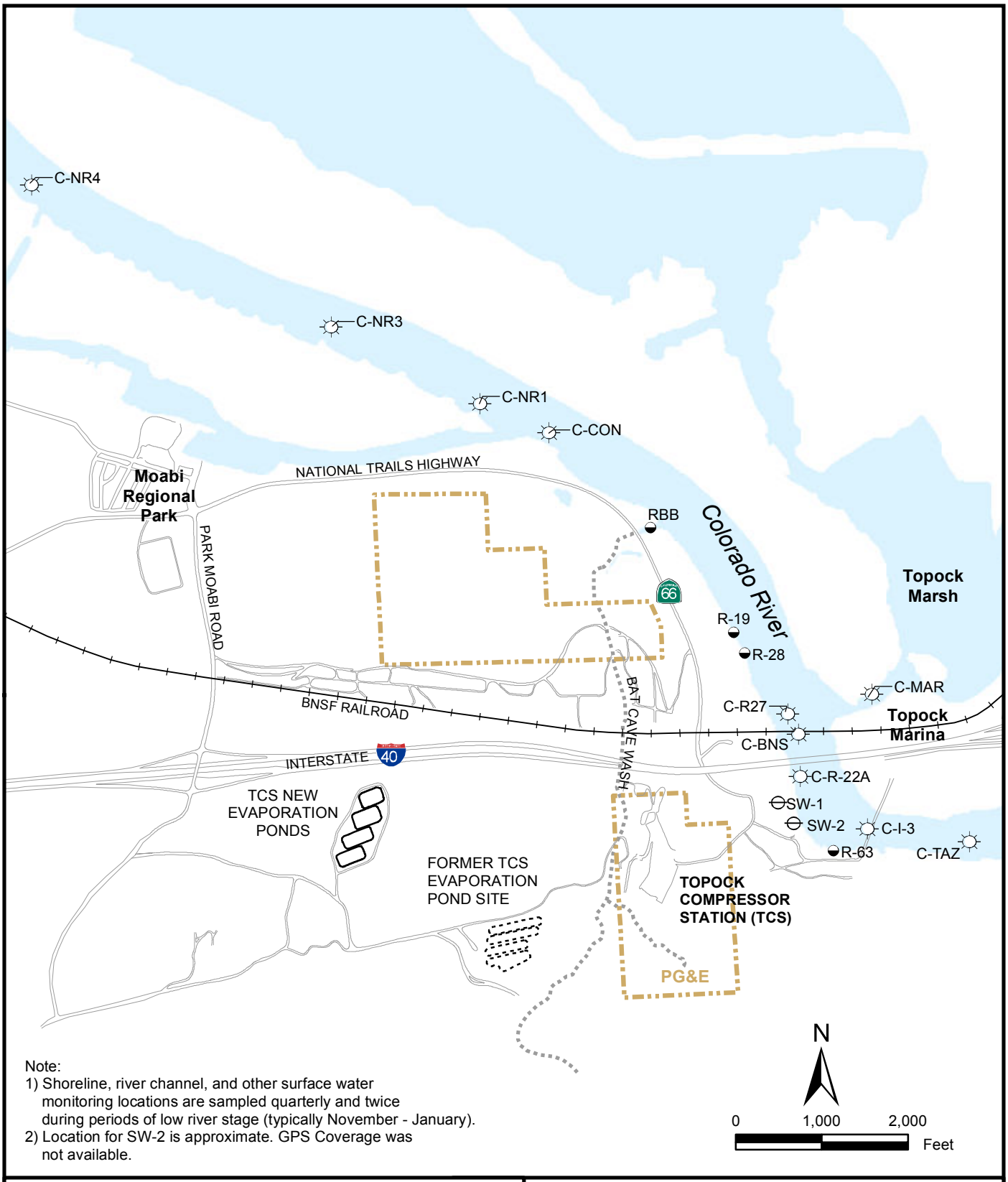

Note:
1) Shoreline, river channel, and other surface water monitoring locations are sampled quarterly and twice during periods of low river stage (typically November - January).
2) Location for SW-2 is approximate. GPS Coverage was not available.

LEGEND

- Shoreline Surface Water Monitoring Location
- River Channel Surface Water Monitoring Location
- Other Surface Water Monitoring Location

FIGURE 1-3
MONITORING LOCATIONS AND SAMPLING FREQUENCY FOR RMP

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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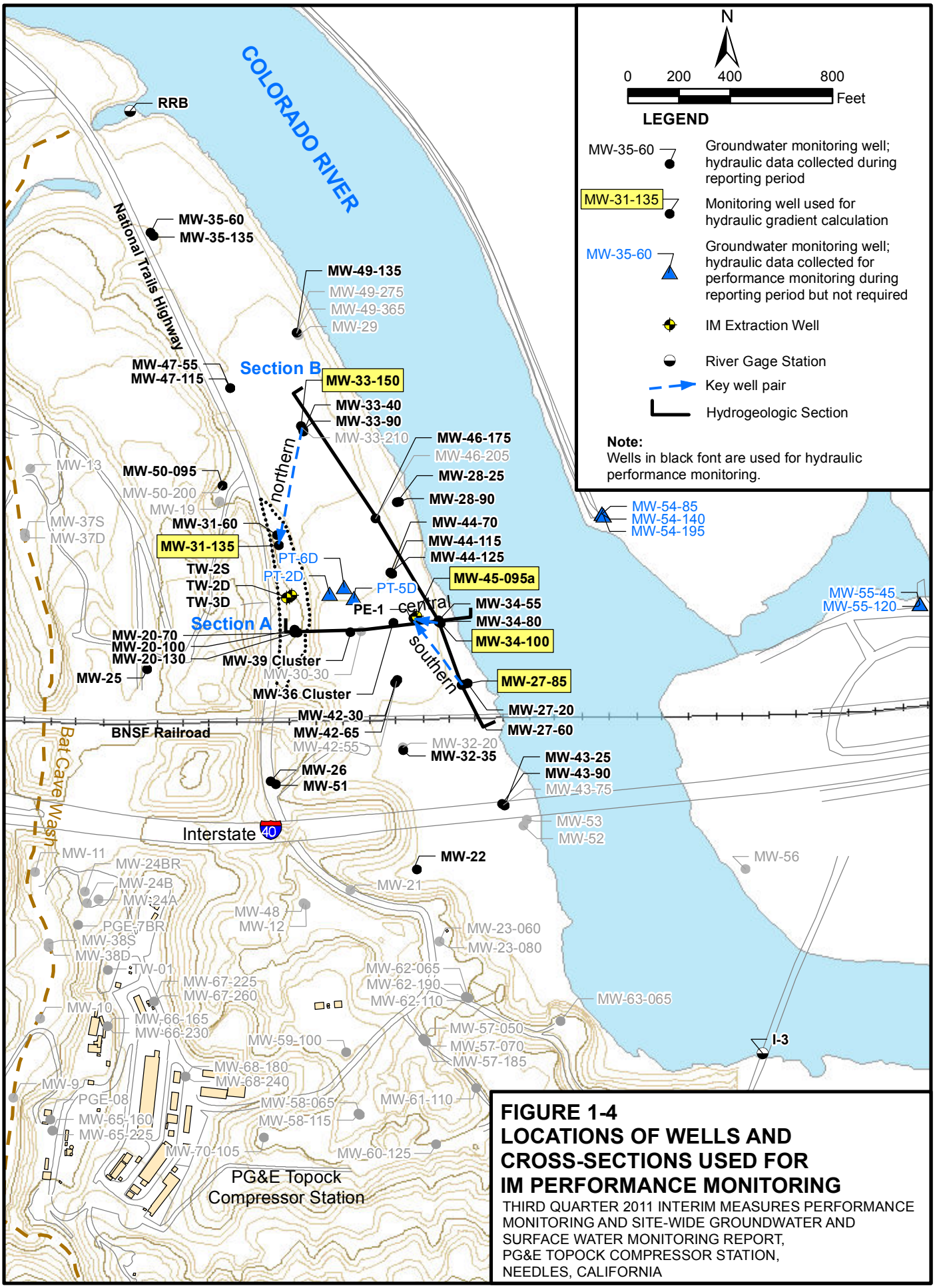

FIGURE 1-4
LOCATIONS OF WELLS AND CROSS-SECTIONS USED FOR IM PERFORMANCE MONITORING

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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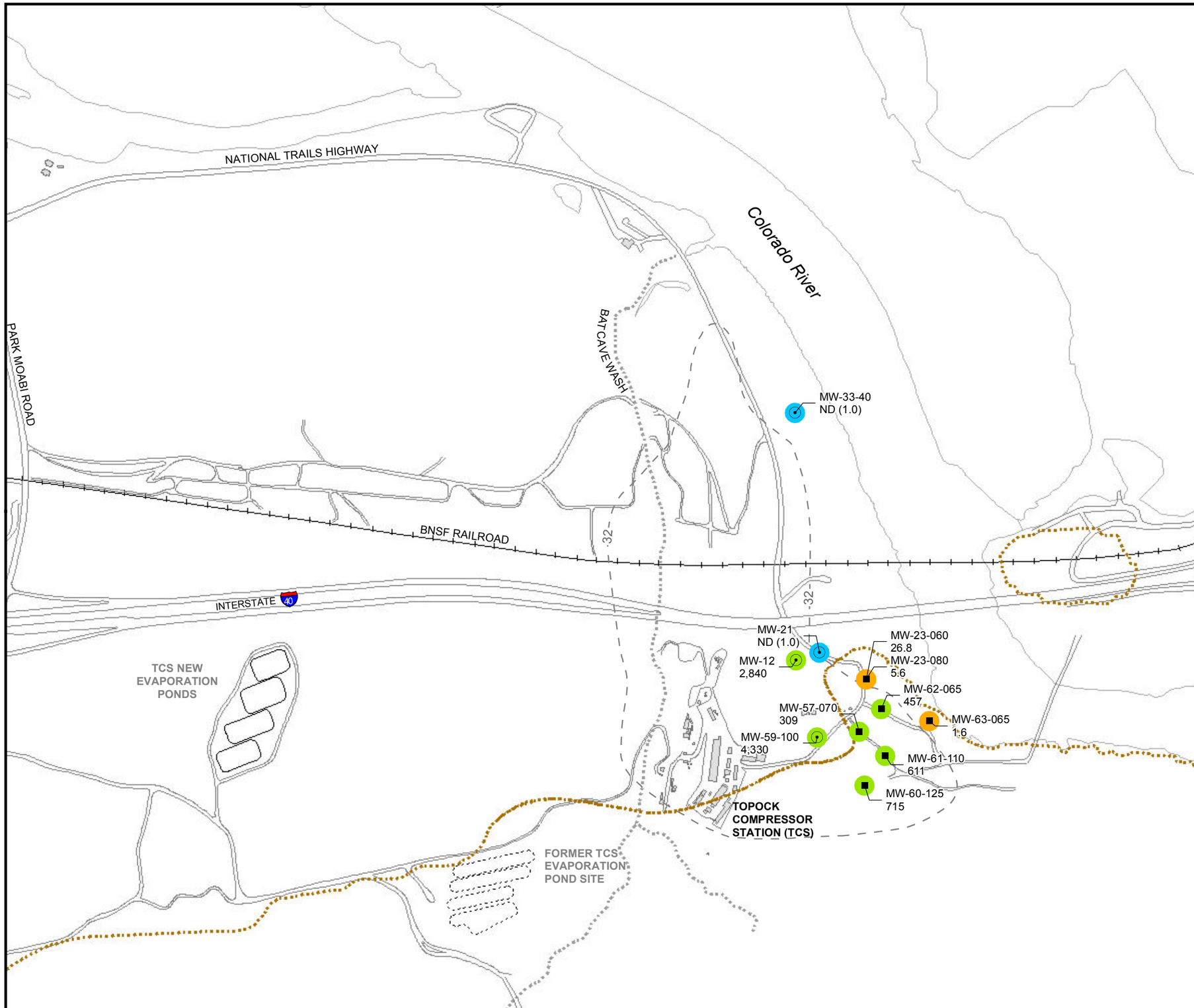

LEGEND

- ⊙ Alluvial Aquifer well sampled during sampling event
- ■ Bedrock well sampled during sampling event

6.48 Concentration of hexavalent chromium [Cr(VI)] in groundwater, micrograms per liter (µg/L)

Results shown are maximum concentrations in primary and duplicate samples from wells completed in **Shallow zone** of Alluvial Aquifer and Bedrock.

ND (0.2) Cr(VI) not detected at listed reporting limit

Cr(VI) Concentrations - Third Quarter 2011

- Not detected at analytical reporting limit
- Concentration between reporting limit and 32 µg/L
- Concentration ≥ 32 µg/L

-32- Approximate outline of monitoring wells in Alluvial Aquifer and Bedrock with Cr(VI) concentrations ≥ 32 µg/L based on Third Quarter 2011 groundwater sampling results. Because a limited number of wells were sampled in Third Quarter 2011, data from larger sampling events in Fourth Quarter 2010 and Second Quarter 2011 were also used to develop contours.

Approximate bedrock contact at 455 feet above mean sea level.

Notes:
Results plotted are maximum concentration from primary and duplicate samples, see table 3-1 for complete results.

N

0 500 1,000 Feet

FIGURE 3-1a
Cr(VI) SAMPLING RESULTS, SHALLOW WELLS IN ALLUVIAL AQUIFER AND BEDROCK, THIRD QUARTER 2011

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT, PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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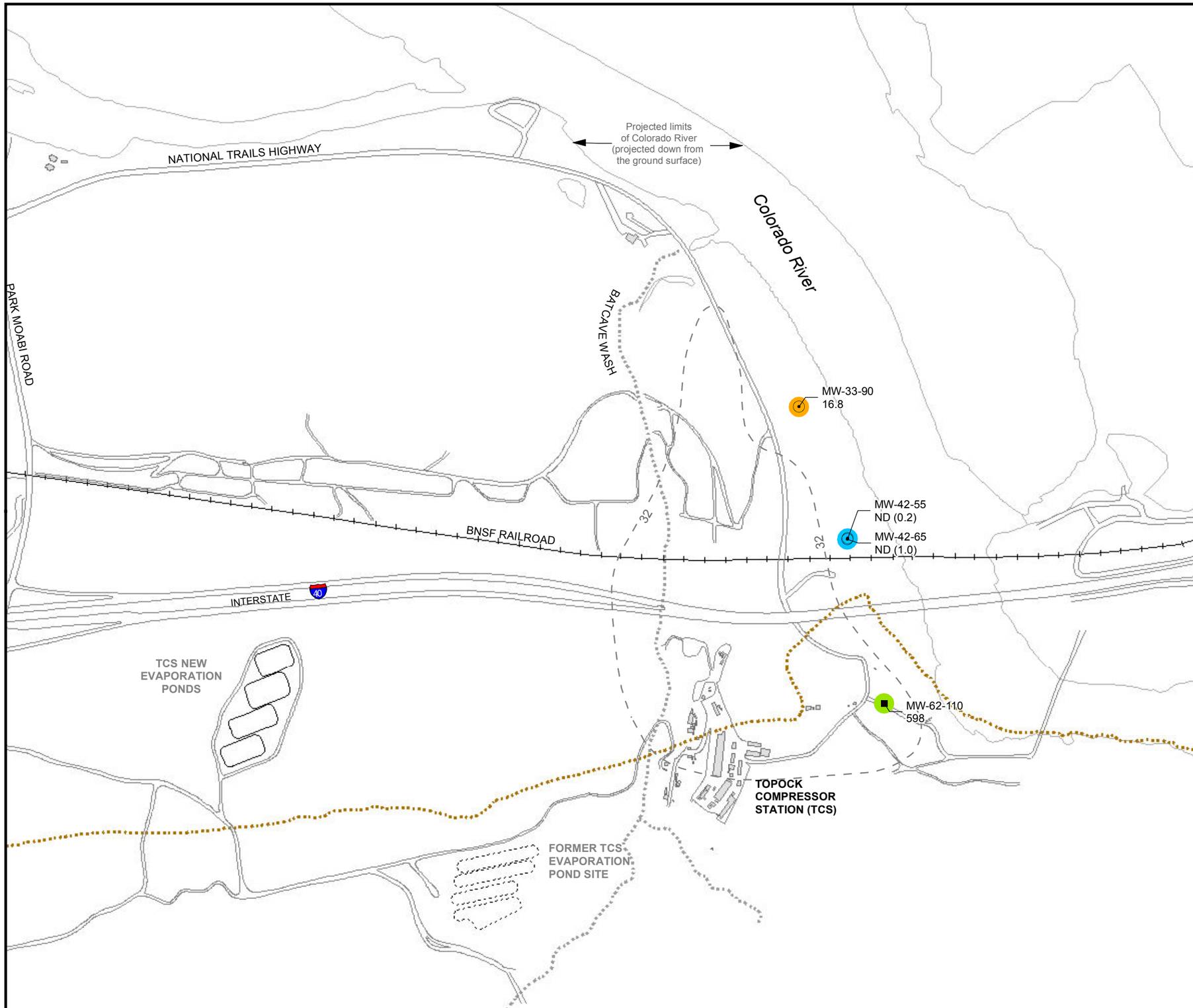

LEGEND

⊙ Alluvial Aquifer well sampled during sampling event

■ Bedrock well sampled during sampling event

6.48 Concentration of hexavalent chromium [Cr(VI)] in groundwater, micrograms per liter (µg/L)

Results shown are maximum concentrations in primary and duplicate samples from wells completed in **Mid-Depth zone** of Alluvial Aquifer and Bedrock.

ND (0.2) Cr(VI) not detected at listed reporting limit

Cr(VI) Concentrations - Third Quarter 2011

- Not detected at analytical reporting limit
- Concentration between reporting limit and 32 µg/L
- Concentration ≥ 32 µg/L

- -32- Approximate outline of monitoring wells in Alluvial Aquifer and Bedrock with Cr(VI) concentrations ≥ 32 µg/L based on Third Quarter 2011 groundwater sampling results. Because a limited number of wells were sampled in Third Quarter 2011, data from larger sampling events in Fourth Quarter 2010 and Second Quarter 2011 were also used to develop contours.

Approximate bedrock contact at 425 feet above mean sea level.

Note:
1. Results plotted are maximum concentration from primary and duplicate samples, see table 3-1 for complete results.

N

0 500 1,000 Feet

FIGURE 3-1b
Cr(VI) SAMPLING RESULTS
MID-DEPTH WELLS IN ALLUVIAL AQUIFER AND BEDROCK, THIRD QUARTER 2011

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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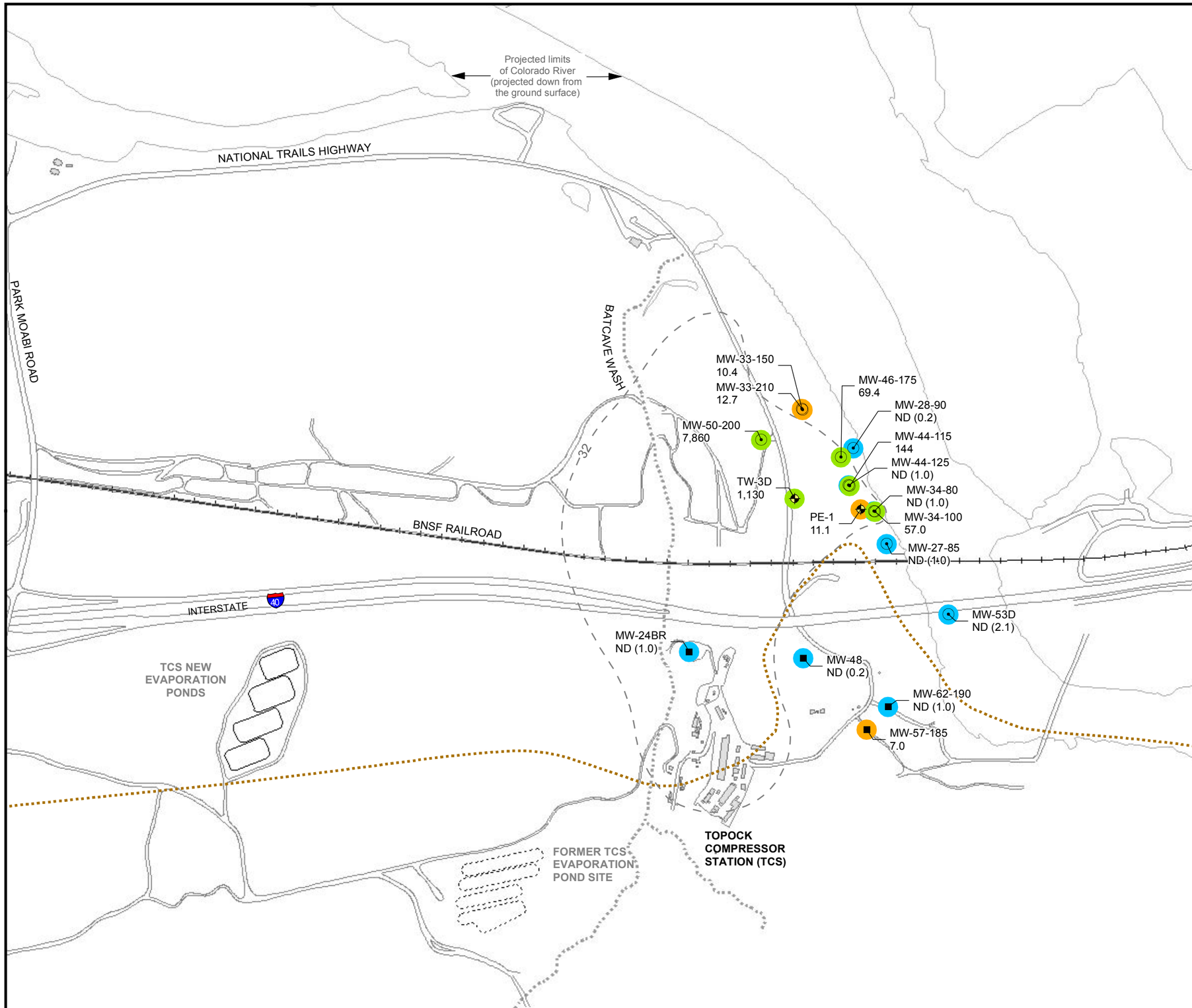


LEGEND

- Extraction well sampled during sampling event
- Alluvial Aquifer well sampled during sampling event
- Bedrock well sampled during sampling event

6.48 Concentration of hexavalent chromium [Cr(VI)] in groundwater, micrograms per liter (µg/L)

Results shown are maximum concentrations in primary and duplicate samples from wells completed in **Deep zone** of Alluvial Aquifer and Bedrock.

ND (0.2) Cr(VI) not detected at listed reporting limit

Cr(VI) Concentrations - Third Quarter 2011

- Not detected at analytical reporting limit
- Concentration between reporting limit and 32 µg/L
- Concentration ≥ 32 µg/L

32 Approximate outline of monitoring wells in Alluvial Aquifer and Bedrock with Cr(VI) concentrations ≥ 32 µg/L based on Third Quarter 2011 groundwater sampling results. Because a limited number of wells were sampled in Third Quarter 2011, data from larger sampling events in Fourth Quarter 2010 and Second Quarter 2011 were also used to develop contours.

Approximate bedrock contact at 395 feet above mean sea level.

Notes:

1. Results plotted are maximum concentration from primary and duplicate samples, see table 3-1 for complete results.
2. In the floodplain area, the 32 µg/L line for Cr(VI) in deep zone (80-90 feet below Colorado River) is estimated based on available groundwater sampling, hydrogeologic and geochemical data. There are no data confirming the existence of Cr(VI) under the Colorado River.

N

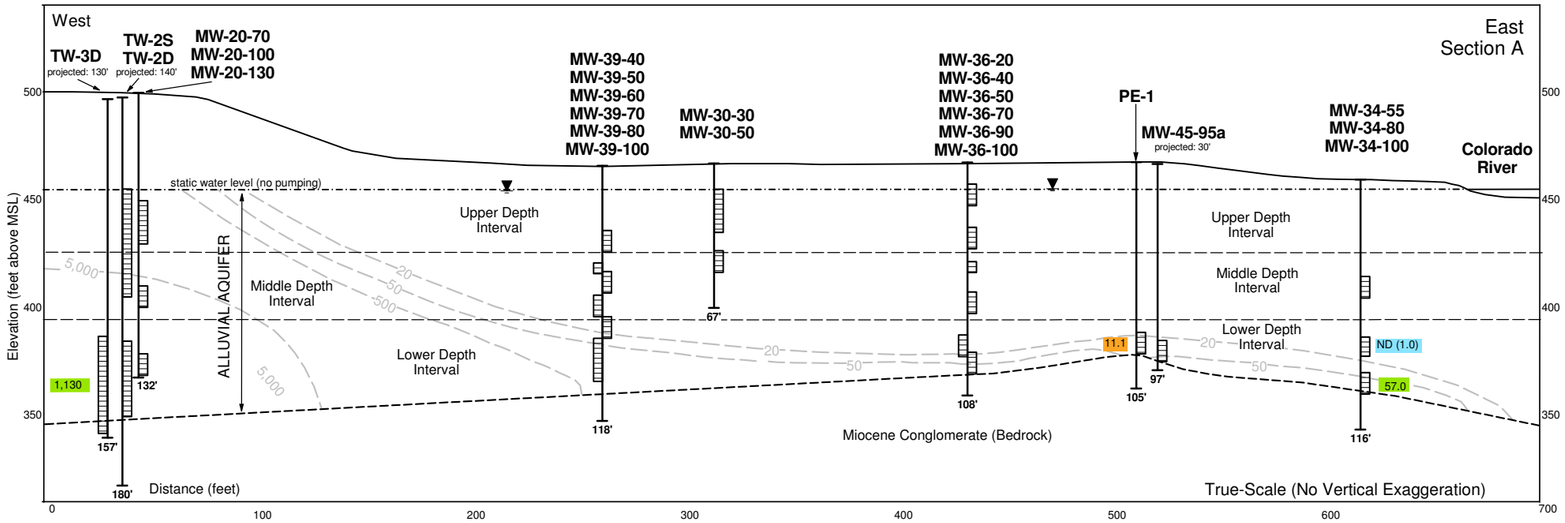
0 500 1,000 Feet

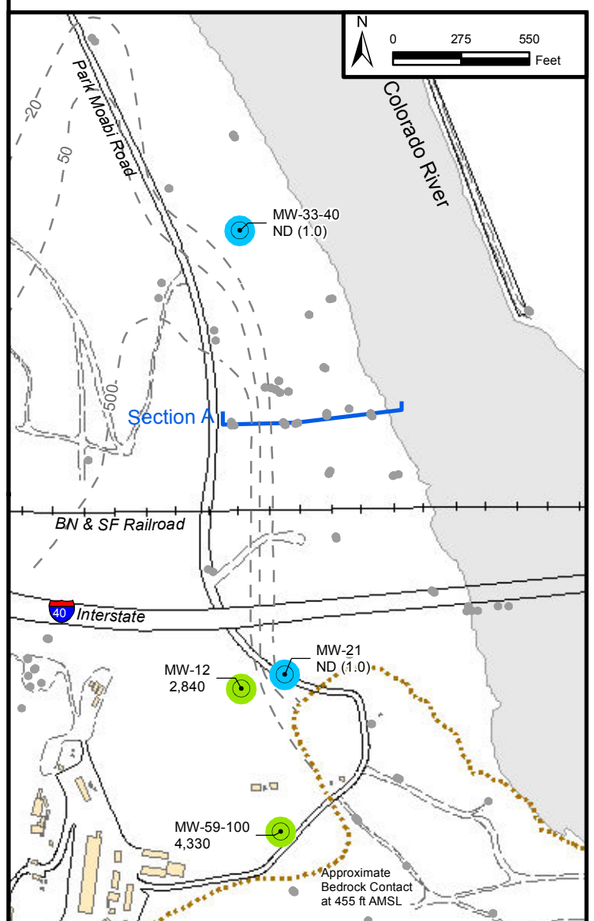
FIGURE 3-1c
Cr(VI) SAMPLING RESULTS, DEEP WELLS IN ALLUVIAL AQUIFER AND BEDROCK, THIRD QUARTER 2011

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

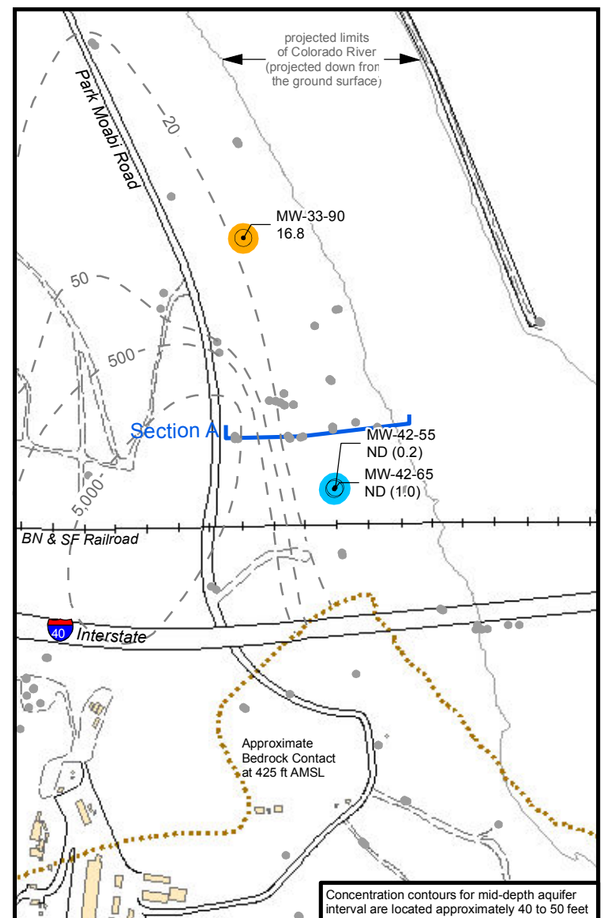
CH2MHILL

D:\Projects\Topock\MapFiles\2011\IMP\Q3\IMP_cr6_Q32011_deep

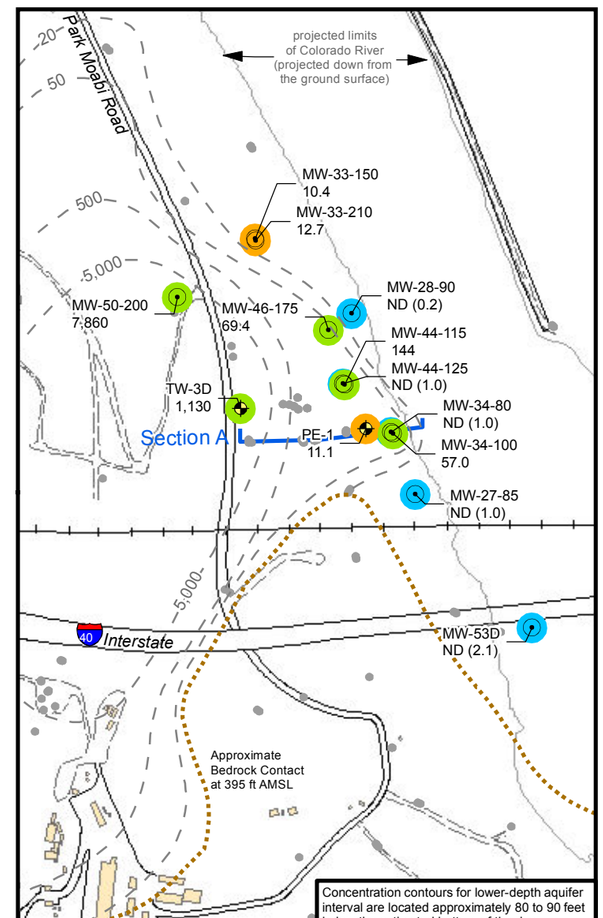




Shallow Wells (Upper Depth Interval)



Mid-Depth Wells (Middle-Depth Interval)



Deep Wells (Lower Depth Interval)

LEGEND

- Alluvial Aquifer well sampled during sampling event
- Extraction well sampled during sampling event
- Well not sampled during sampling event

6.48 Concentration of hexavalent chromium [Cr(VI)] in groundwater, micrograms per liter (µg/L). Results posted are maximum Cr(VI) concentrations.

ND (0.2) Cr(VI) not detected at listed reporting limit

Cr(VI) Concentrations - Third Quarter 2011

- Not detected at analytical reporting limit
- Concentration between reporting limit and 32 µg/L
- Concentration ≥ 32 µg/L

50 — Inferred Cr(VI) concentration contour within Alluvial aquifer depth interval based on Third Quarter 2011 groundwater sampling results. Because a limited number of wells were sampled in Third Quarter 2011, data from larger sampling events in Fourth Quarter 2010 and Second Quarter 2011 were also used to develop contours.

- Hydrogeologic Section A
- Approximate bedrock contact

NOTES ON CONTOUR MAPS

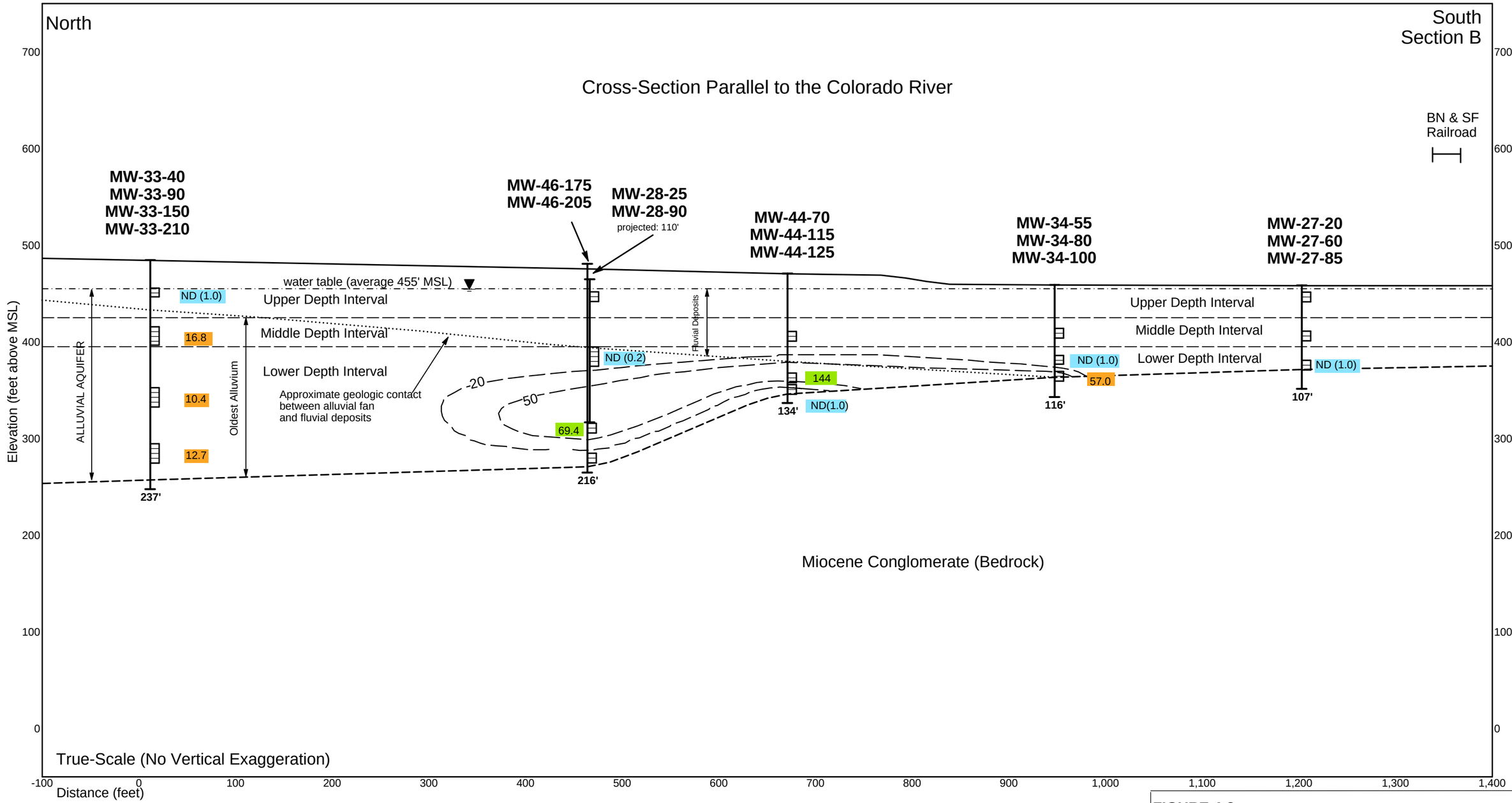
1. The Cr(VI) concentration contours of 20 and 50 µg/L are shown in accordance with DTSC's 2005 IM performance monitoring directive. The IM performance standard was established for containment of Cr(VI) concentrations greater than 20 ug/L in the floodplain portion of the Alluvial Aquifer.
2. In the floodplain area, the 20 µg/L line for Cr(VI) in deep zone (80-90 feet below Colorado River) is estimated based on available groundwater sampling, hydrogeologic and geochemical data. There are no data confirming the existence of Cr(VI) under the Colorado River.
3. Extraction wells PE-1 and TW-3D are not included in contouring. These wells draw water from a larger area and do not represent Cr(VI) concentrations at their specific locations.

FIGURE 4-1
MAXIMUM Cr(VI) CONCENTRATIONS IN ALLUVIAL AQUIFER, THIRD QUARTER 2011

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

CH2MHILL

D:\GIS\Projects\Topock\MapFiles\2011\IMP\Q3\IMP_Cr6_ppb_3Q11_Max



Notes:
ND = Not detected at listed reporting limit.

See Table 3-1 for additional sampling data and prior results for wells on this figure.

See Figure 1-4 for location of this cross-section.

water level

well screen 3,810

boring depth (feet) 103'

-— — 50 -— —

Inferred hexavalent chromium contours (ppb) in Alluvial Aquifer from Third Quarter 2011. Because a limited number of wells were sampled in Third Quarter 2011, data from larger sampling events in Fourth Quarter 2010 and Second Quarter 2011 were also used to develop contours.

Hexavalent Chromium [Cr(VI)] concentration in micrograms per liter (µg/L), equivalent to parts per billion (ppb).

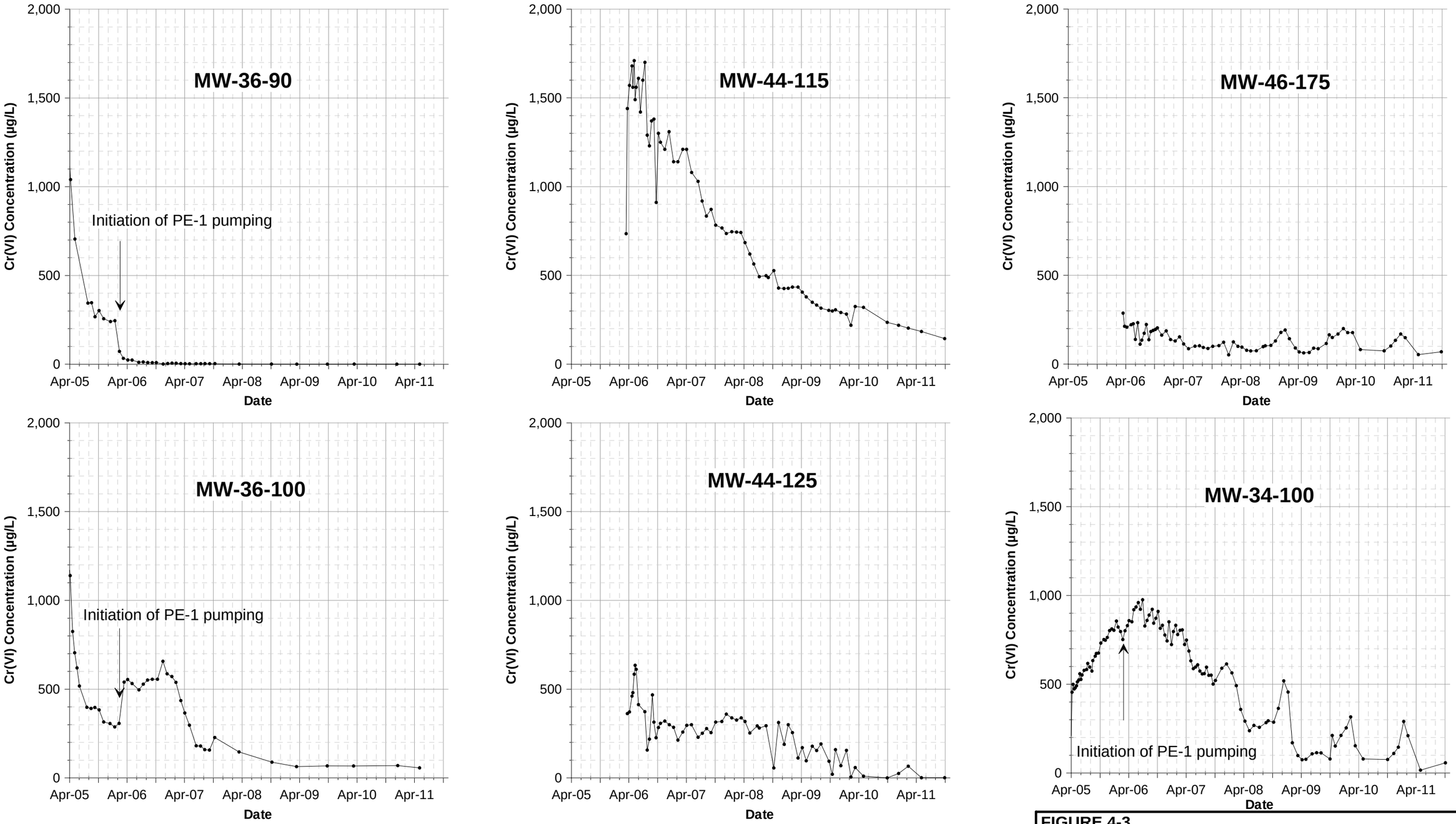
ND (0.2)	Not detected at listed reporting limit (ppb)
24.2	Less than 32 µg/L
203	Greater than 32 µg/L

FIGURE 4-2
Cr(VI) CONCENTRATIONS
FLOODPLAIN CROSS-SECTION B,
THIRD QUARTER 2011

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT, PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL

C:\USERS\E2USER\DOCUMENTS\TOPOCK\GINT\2011_3Q\FIGURE_4-2_XSECB_CR.GDW;



Notes
1. Hexavalent chromium [Cr(VI)] results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. Results plotted are maximum concentrations from primary and duplicate samples; see Table 3-1 for complete results.
3. MW-36 wells selected to monitor effects of PE-1 pumping on plume west of PE-1. MW-44 wells, MW-46-175, and MW-34-100 selected to monitor concentrations within the plume.

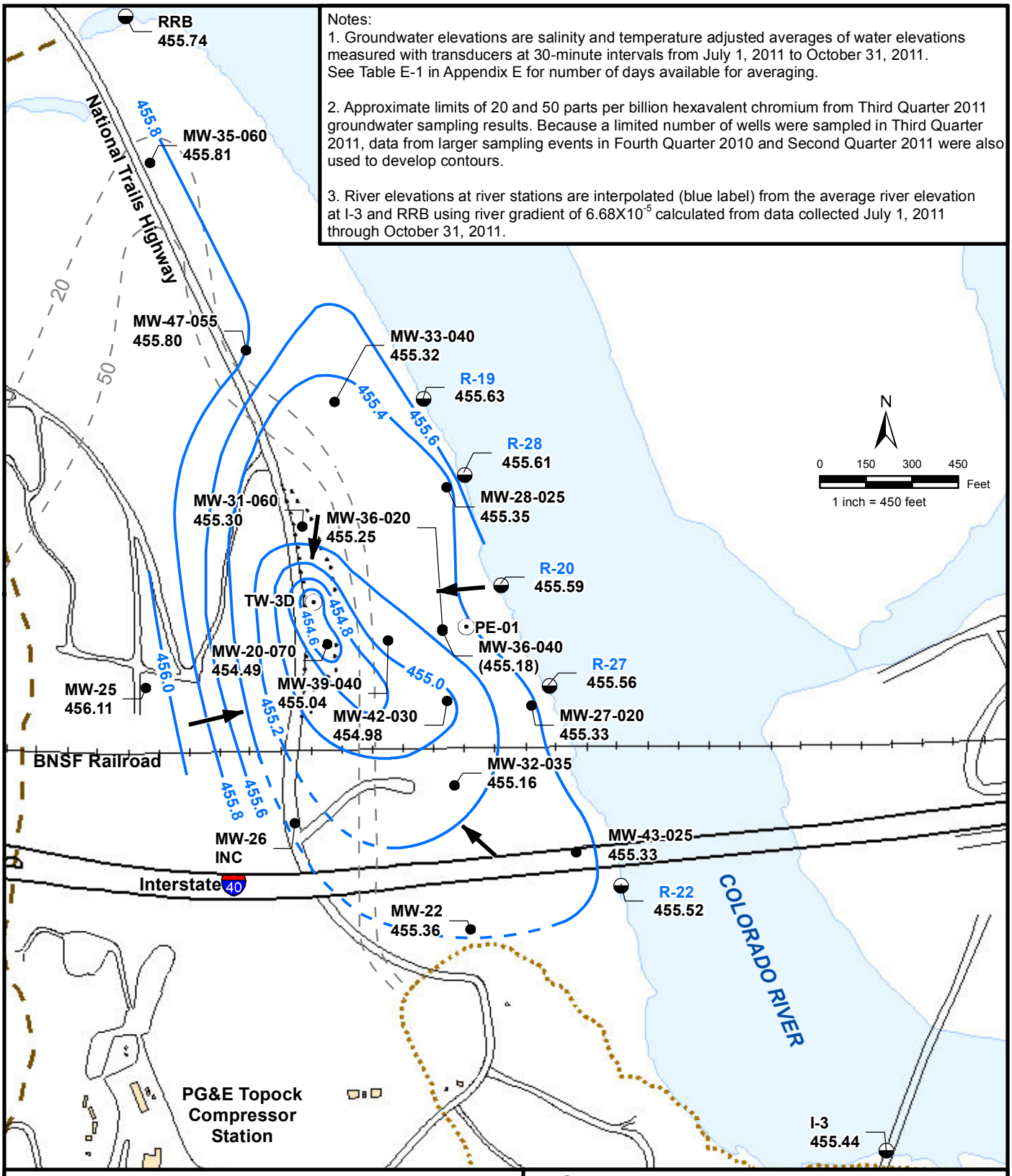
FIGURE 4-3
Cr(VI) CONCENTRATION TRENDS IN SELECTED PERFORMANCE MONITORING WELLS, APRIL 2005 THROUGH OCTOBER 2011
THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT, PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL

Notes:
1. Groundwater elevations are salinity and temperature adjusted averages of water elevations measured with transducers at 30-minute intervals from July 1, 2011 to October 31, 2011. See Table E-1 in Appendix E for number of days available for averaging.

2. Approximate limits of 20 and 50 parts per billion hexavalent chromium from Third Quarter 2011 groundwater sampling results. Because a limited number of wells were sampled in Third Quarter 2011, data from larger sampling events in Fourth Quarter 2010 and Second Quarter 2011 were also used to develop contours.

3. River elevations at river stations are interpolated (blue label) from the average river elevation at I-3 and RRB using river gradient of $6.68X10^{-5}$ calculated from data collected July 1, 2011 through October 31, 2011.



MW-29 455.85	Average Groundwater Elevation at Monitoring Station (ft AMSL)
MW-29 (455.85)	Average Groundwater Elevation at Monitoring Station (ft AMSL) Not Used for Contouring
R-22 455.85	River Elevation (ft MSL) Interpolated Average
→	Interpreted Groundwater Flow Direction
·····	Bedrock Contact at 455 ft elevation
●	Monitoring Well
◒	River Station
⊙	Extraction Well
——	Groundwater Elevation Contour 0.2 ft (dashed where inferred)
INC	Data incomplete for reporting period

FIGURE 4-4a
AVERAGE GROUNDWATER ELEVATIONS FOR SHALLOW WELLS AND RIVER ELEVATIONS, THIRD QUARTER 2011

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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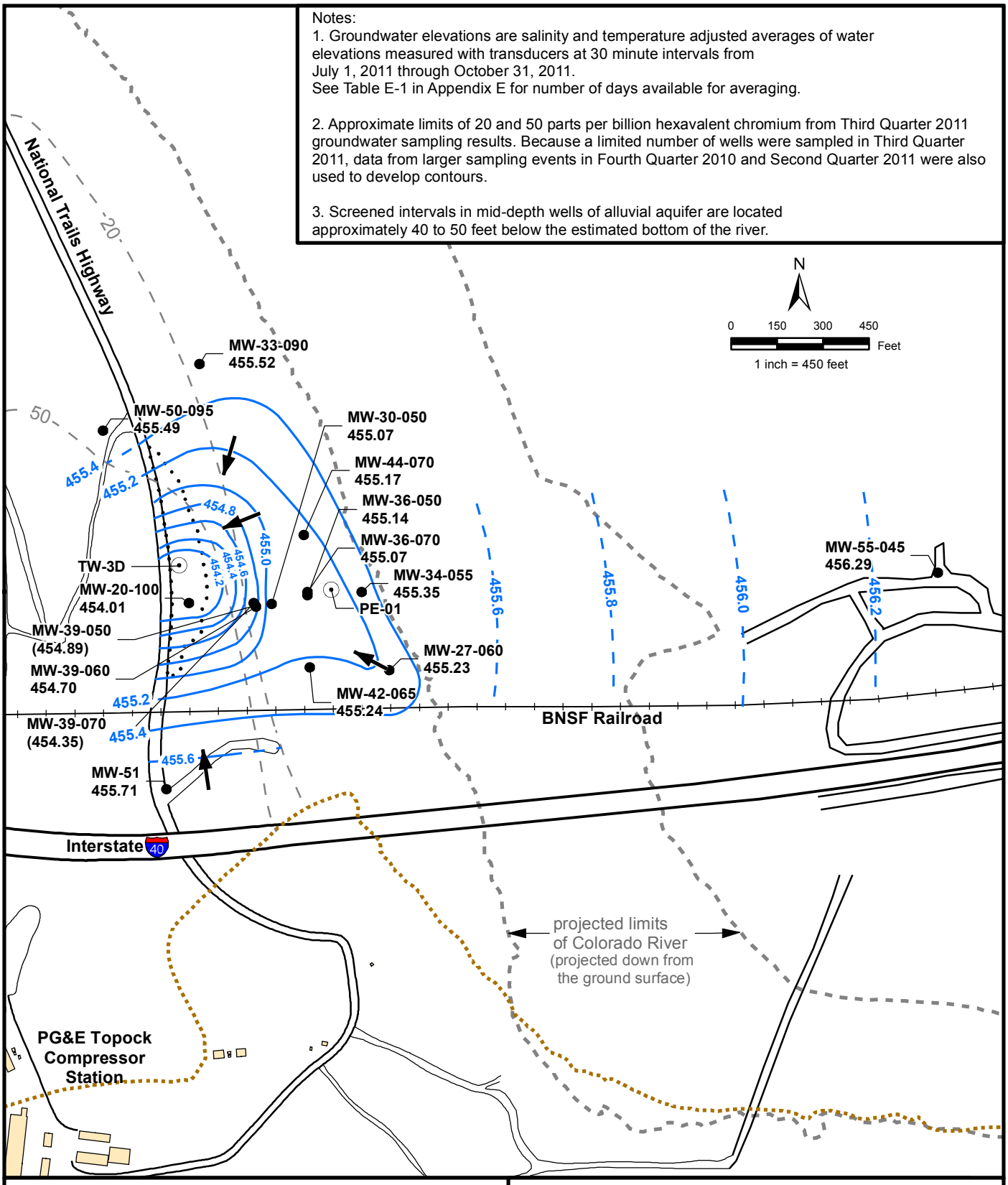
Notes:
1. Groundwater elevations are salinity and temperature adjusted averages of water elevations measured with transducers at 30 minute intervals from July 1, 2011 through October 31, 2011.
See Table E-1 in Appendix E for number of days available for averaging.

2. Approximate limits of 20 and 50 parts per billion hexavalent chromium from Third Quarter 2011 groundwater sampling results. Because a limited number of wells were sampled in Third Quarter 2011, data from larger sampling events in Fourth Quarter 2010 and Second Quarter 2011 were also used to develop contours.

3. Screened intervals in mid-depth wells of alluvial aquifer are located approximately 40 to 50 feet below the estimated bottom of the river.



MW-29 455.85 — Average Groundwater Elevation at Monitoring Station (ft AMSL)

MW-29 (455.85) — Average Groundwater Elevation at Monitoring Station (ft AMSL) Not Used for Contouring

Interpreted Groundwater Flow Direction

Bedrock Contact at 425 ft elevation

Monitoring Well

Extraction Well

Groundwater Elevation Contour 0.2 ft (dashed where inferred)

FIGURE 4-4b
AVERAGE GROUNDWATER ELEVATIONS FOR MID-DEPTH WELLS, THIRD QUARTER 2011

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

CH2MHILL

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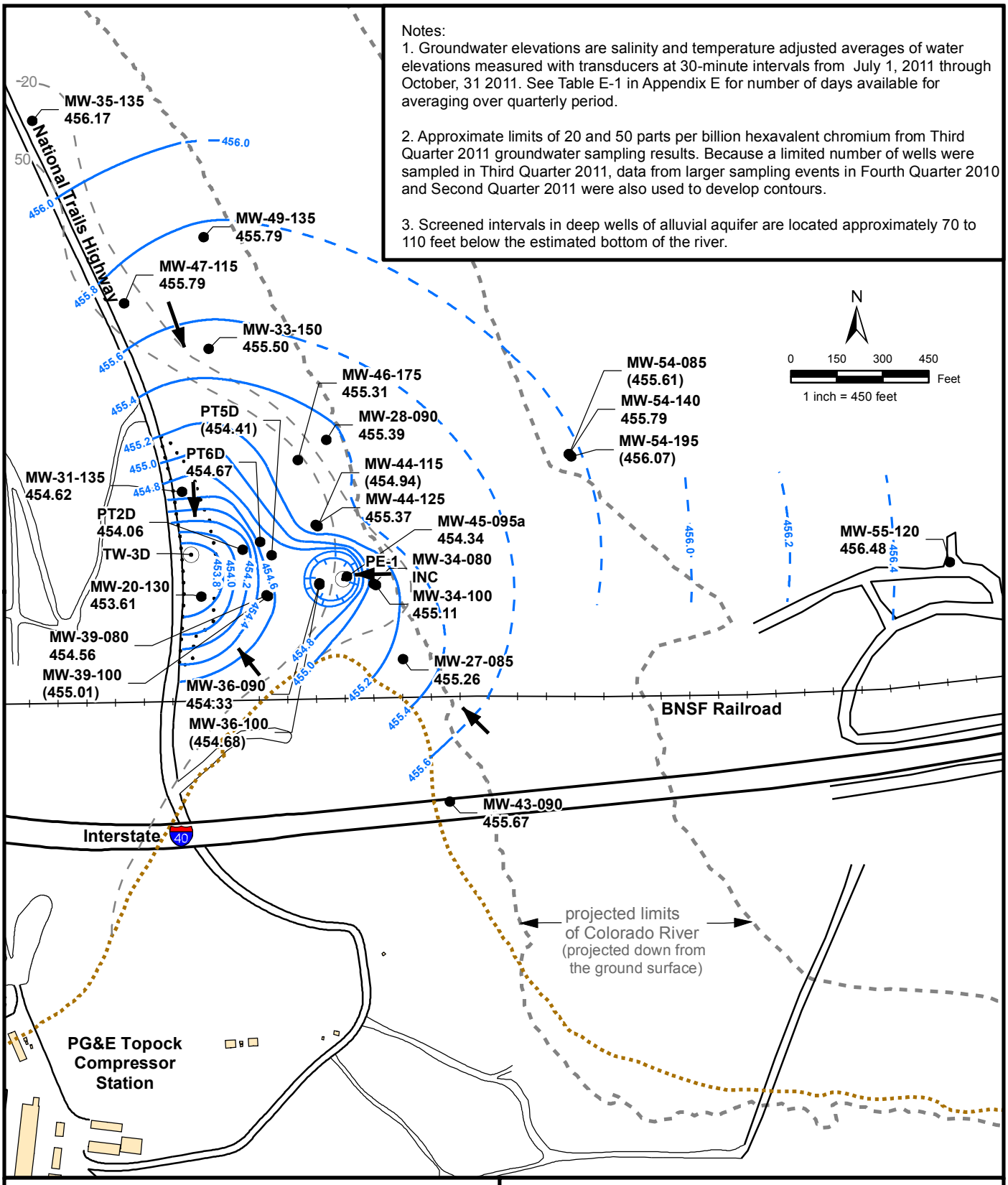
Notes:
1. Groundwater elevations are salinity and temperature adjusted averages of water elevations measured with transducers at 30-minute intervals from July 1, 2011 through October, 31 2011. See Table E-1 in Appendix E for number of days available for averaging over quarterly period.

2. Approximate limits of 20 and 50 parts per billion hexavalent chromium from Third Quarter 2011 groundwater sampling results. Because a limited number of wells were sampled in Third Quarter 2011, data from larger sampling events in Fourth Quarter 2010 and Second Quarter 2011 were also used to develop contours.

3. Screened intervals in deep wells of alluvial aquifer are located approximately 70 to 110 feet below the estimated bottom of the river.



MW-29 455.85	Average Groundwater Elevation at Monitoring Station (ft AMSL)	Monitoring Well	
MW-29 (455.85)	Average Groundwater Elevation at Monitoring Station (ft AMSL) Not Used for Contouring	Extraction Well	
	Interpreted Groundwater Flow Direction	Groundwater Elevation Contour 0.2 ft (dashed where inferred)	
	Bedrock Contact at 395 ft elevation	INC	Data incomplete for reporting period

FIGURE 4-4c
AVERAGE GROUNDWATER ELEVATIONS FOR DEEP WELLS, THIRD QUARTER 2011

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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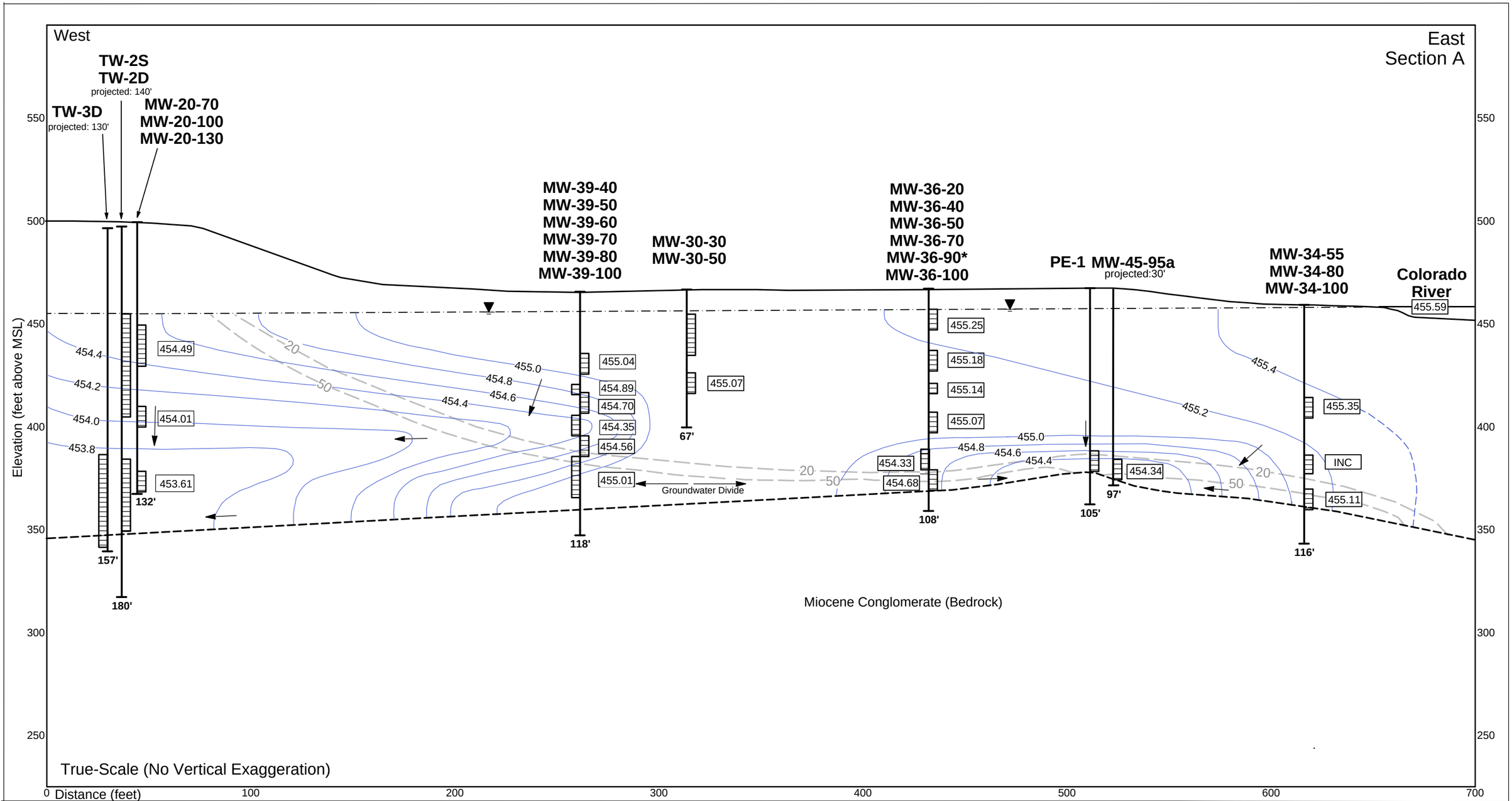

Notes:
Results show average groundwater elevations for July 1, 2011 through October 31, 2011 measured with transducers at 30 minute intervals.

Groundwater elevations adjusted for salinity and temperature.
Well MW-36-90* is excluded from contouring.
River elevation (R-20) is the calculated average river level based upon the river gradient between RRB and I-3.

INC = Data incomplete for reporting period.

Legend:

MW-30-50 — Inferred water table — well screen — 455.23 — 103 boring depth (feet)

20 — Inferred hexavalent chromium contours (ppb) in Alluvial Aquifer from Third Quarter 2011. Because a limited number of wells were sampled in Third Quarter 2011, data from larger sampling events in Fourth Quarter 2010 and Second Quarter 2011 were also used to develop contours.

455.23 — Average groundwater head (ft AMSL)

453.5 — Groundwater head contour

453.5 — Inferred groundwater head contour

Interpreted groundwater flow direction

FIGURE 4-5
AVERAGE GROUNDWATER ELEVATIONS FOR WELLS IN FLOODPLAIN CROSS-SECTION A THIRD QUARTER 2011

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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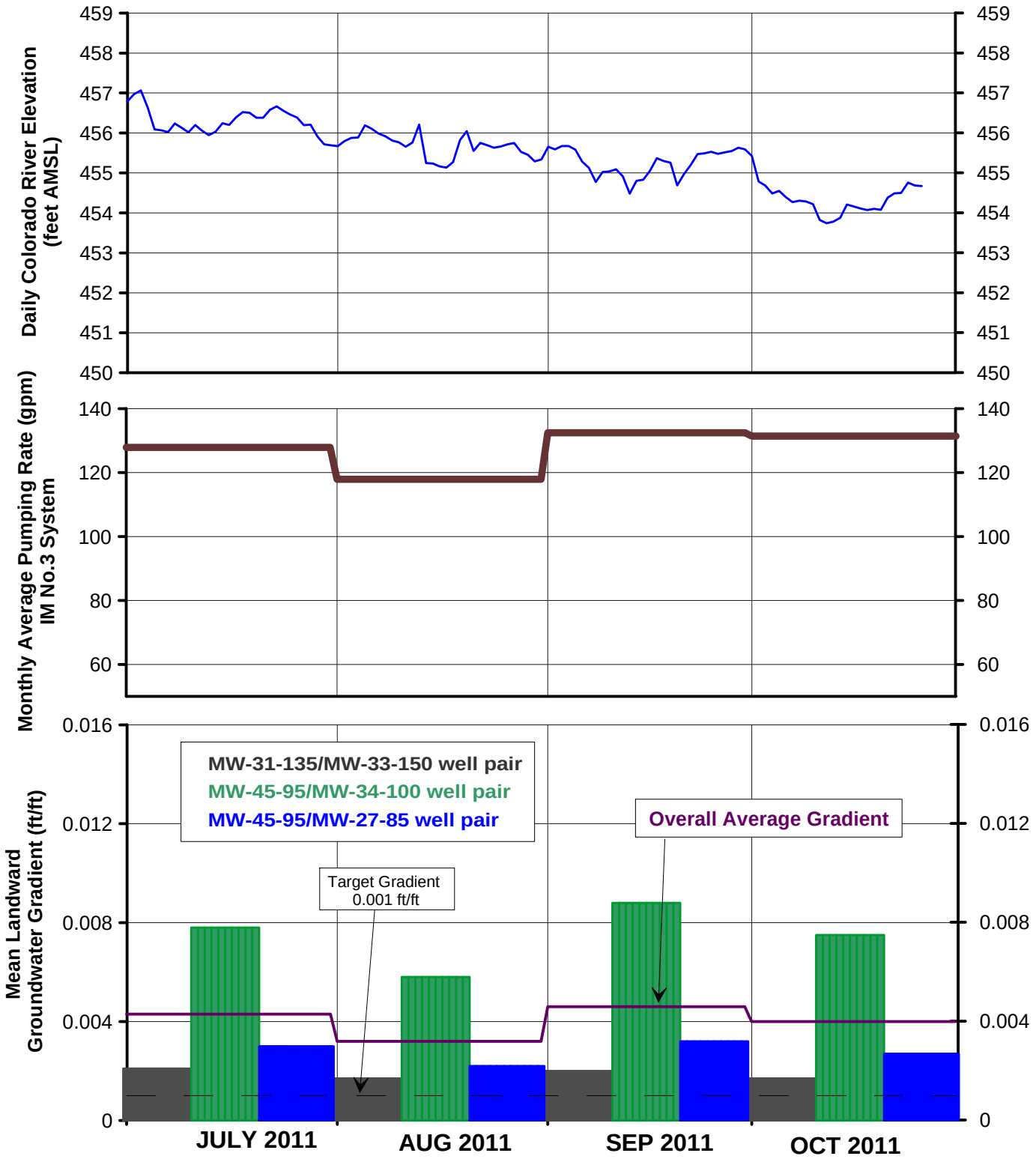
C:\USERS\E2USER\DOCUMENTS\TOPOCK\GINT\2011_3Q\FIGURE_4-5_XSECA_GW.GDW;



Notes:

1) For IM pumping, the target landward gradient for well pairs is 0.001 feet/foot.
2) Refer to Table 4-1 and Section 4.4 for discussion of pumping data.
3) Pumping rate plotted is the combined rate of extraction wells TW-3D and PE-1 in operation each month.
4) Refer to Table 4-3 and Section 4.5 for discussion of gradient data.

FIGURE 4-6
MEASURED HYDRAULIC GRADIENTS, RIVER ELEVATIONS, AND PUMPING RATE, THIRD QUARTER 2011

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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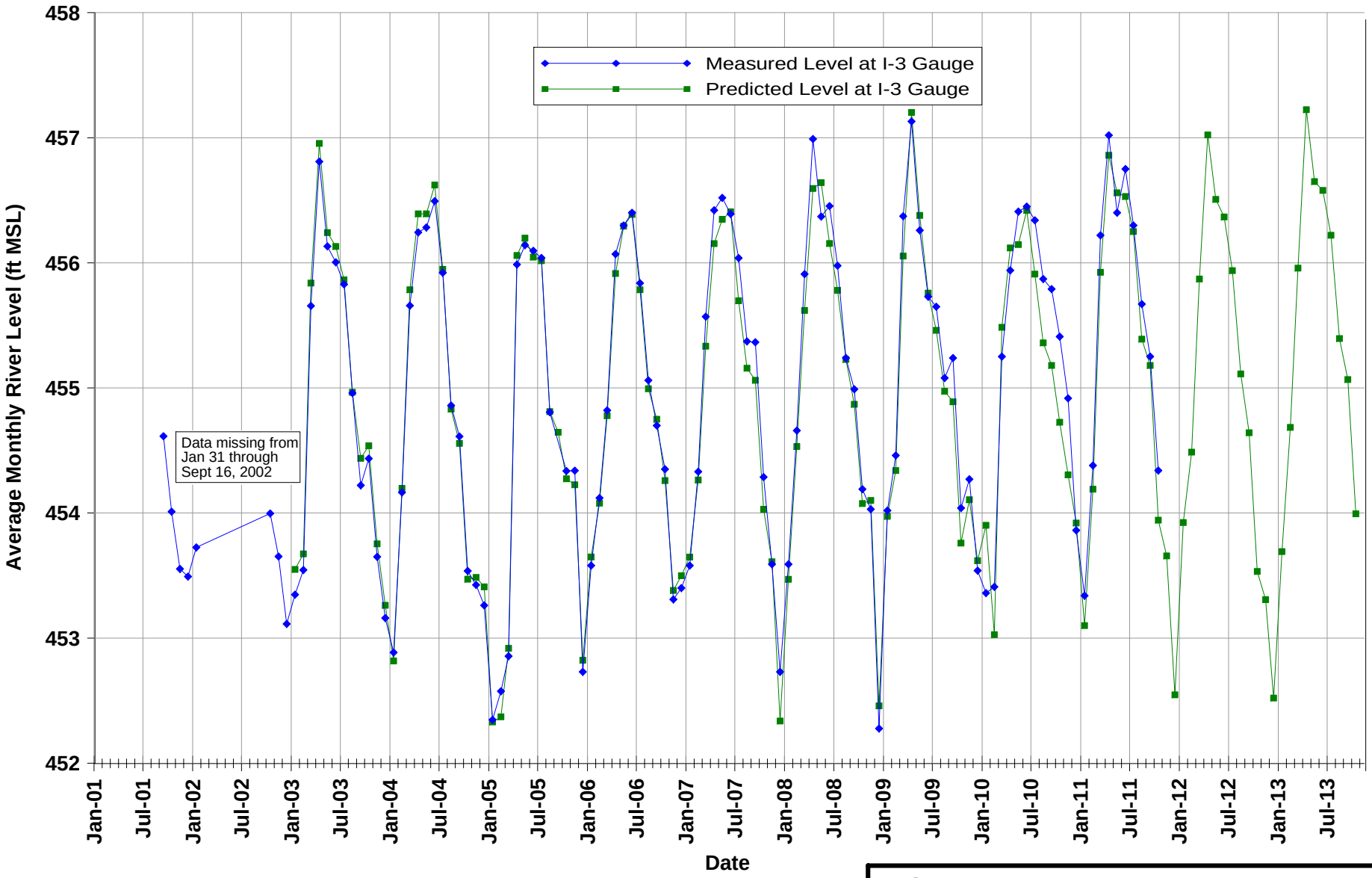

Note:
Projected river level for each month in the past is calculated based on the preceding months USBR projections of Davis Dam release and stage in Lake Havasu. Future projections of river level at I-3 are based upon November 2011 USBR projections. These data are reported monthly by the US Department of Interior, at http://www.usbr.gov/lc/region/g4000/24mo.pdf

FIGURE 4-7
PAST AND PREDICTED FUTURE RIVER LEVELS AT TOPOCK COMPRESSOR STATION

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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Appendix A
Lab Reports, Third Quarter 2011
(Provided on CD-ROM with hardcopy submittal)

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

EPA Method 8290
Dioxins/Furans by GC-HRMS
Case Narrative

ARF: 64901

Project: 417981.ER.02.DM 2011-East Ravine-GWINV

State Certification Number: CA1312 (DW & WW)

NELAP Certification number: 05233CA (HW)

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sample Receipt Information:

The water samples were received on June 16, 2011, at 4.0°C. The samples were assigned Analytical Request Form (ARF) number 64901. The sample numbers and requested analysis were compared to the chain of custody. A labeling discrepancy was noted; a sample ID was corrected, as instructed. Four samples were placed on hold as requested. No other exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
MW-65-160-001	AY39842	WATER	06/13/11	06/16/11
MW-65-225-001	AY39843	WATER	06/13/11	06/16/11
MW-66-165-001	AY39844	WATER	06/13/11	06/16/11
MW-66-230-001	AY39845	WATER	06/14/11	06/16/11
MW-67-225-001	AY39846	WATER	06/14/11	06/16/11
MW-67-260-001	AY39847	WATER	06/14/11	06/16/11
MW-68-180-001	AY39848	WATER	06/14/11	06/16/11
MW-68-240-001	AY39849	WATER	06/14/11	06/16/11
MW-70-105-001	AY39850	WATER	06/13/11	06/16/11
MW-99-001	AY39851	WATER	06/14/11	06/16/11

The samples were screened for responses down to the EMPC or EDL, in accordance with the EPA 8290 method.

Sample Preparation:

The samples were extracted and cleaned up according to the EPA 8290 method. All holding times were met.

Analysis Information:

The samples were analyzed according to the EPA 8290, using a Waters Inc. Autospec Premier High Resolution Mass Spectrometer. The results were reported in accordance with EPA 8290 guidelines, as follows:

1. For analytes that had no chromatographic response in the sample, the EDL (Estimated Detection Limit) was reported in the EDL / EMPC column on the Form 1.
2. For analytes that exhibited chromatographic peaks in the sample (but did not meet the method requirements for positive identification), the EMPC (Estimated Maximum Potential Concentration) was reported in the EDL / EMPC column.
3. For the positively identified analytes the concentration was reported in the "Results" column, and EMPC was reported in the EDL / EMPC column. The EMPC is equal to the detected concentration.

The TEQ was calculated using the TEF values provided by the World Health Organization "Toxicity Equivalency Factor Table 2005". As per the method, the TEQ values were based on concentrations of pg/g for soil samples.

In accordance with the client's instructions, a sample exhibiting J-value responses below the PQL was re-injected for confirmation purposes. The higher of the two results was reported on the Form 1. For J-value responses in which the confirmation result was "not detected", the analyte was reported as not detected with an EMPC from the J-value detection, according to the client's instructions.

Quality Control/Assurance

Calibrations:

Calibrations and Resolution Checks were performed according to the method. All calibration acceptance criteria were met.

Blanks:

The method blank contained no target analyte at or above one-half the PQL.

Spikes:

A Laboratory Control Spike (LCS) was used for quality control. The LCS recoveries met acceptance criteria.

Sample MW-66-165-001 was designated by the client for MS/MSD analysis. 1,2,3,7,8,9-HxCDF recovered above the upper control limit of 130% at 219% in the MS and the RPD exceeded the control limit of 30% at 60.5%.

Surrogate Recoveries (C13 Internal Standards):

C13 Internal Standards were added to the extracts in accordance with the method and reported on the Form 1s as surrogate recoveries. For the sample MW-65-160-001, the surrogate 13C-OCDD recovered below the lower control limit of 40% at 39.0%. The sample was re-injected with similar recoveries. All other recoveries met acceptance criteria.

Summary:

All data were acceptable. No other analytical exception is noted.

CERTIFICATION

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

7/1/4

Leonard Fong, Ph.D. Laboratory Director / Date

64901 Duffy Redding.doc

Receiving

From: "Stephane Maupas" <smaupas@applinc.com>
To: <receiving@applinc.com>
Cc: <cmoua@applinc.com>; <rpatterson@applinc.com>
Sent: Thursday, June 16, 2011 10:50 AM
Subject: FW: Label discrepancy ARF64901 PG&E Topock

Hello Tom,

The correct ID is MW-65-225-001

Sincerely,
Stephane Maupas
Project Manager
smaupas@applinc.com

This is a PRIVATE and CONFIDENTIAL message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind APPL, Inc. to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

From: Shawn.Duffy@CH2M.com [mailto:Shawn.Duffy@CH2M.com]
Sent: Thursday, June 16, 2011 10:24 AM
To: smaupas@applinc.com
Subject: RE: Label discrepancy ARF64901 PG&E Topock

Hi Stephane,

The sample ID should be MW-65-225-001. Please make that correction, Thanks.

Shawn

From: Stephane Maupas [mailto:smaupas@applinc.com]
Sent: Thursday, June 16, 2011 10:07 AM
To: Duffy, Shawn/RDD
Subject: Label discrepancy ARF64901 PG&E Topock
Importance: High

Hello Mr. Duffy,

The COC listed Sample ID as MW-65-205-001 but Label has ID as MW-65-225-001 for the following project: Job# 2011-EASTRAVINE-GWINV-001 PG&E TOPOCK.
Could you tell me which ID you would like us to use?
Thank you

Sincerely,
Stephane Maupas
Project Manager
smaupas@applinc.com

This is a PRIVATE and CONFIDENTIAL message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless

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CHAIN OF CUSTODY RECORD

Project Name PG&E Topock
Location Topock
Project Number 417981.ER.02.DM
Project Manager Mike C.
Sample Manager Shawn Duffy

Task Order
Project 2011-EASTRAVINE-GWINV-001
Turnaround Time 10 Days
Shipping Date:
COC Number:

Container: 2 X 1L Amber
Preservatives: 4°C
Filtered: NA
Holding Time: 7

SAMPLE ID	DATE	TIME	Matrix	Dioxins/Furans (SW8290)	Number of Containers	COMMENTS
mw-65-160-001	6/13/11	1331	GW	X	2	
mw-65-285-001	6/13/11	1426	GW		2	
mw-66-165-001	6/13/11	1537	GW	X	6	
mw-66-230-001	6/14/11	1207	GW		2	
mw-67-225-001	6/14/11	0927	GW	X	2	
mw-67-260-001	6/14/11	1053	GW		2	
mw-68-180-001	6/14/11	1311	GW	X	2	
mw-68-240-001	6/14/11	0803	GW		2	
mw-70-105-001	6/13/11	1207	GW	X	2	
mw-99-001	6/14/11	1311	GW	X	2	
				TOTAL NUMBER OF CONTAINERS	~~22~~ 24 22	

12

	Signatures	Date/Time
Approved by		6/14/11 1540
Sampled by		6/14/11 1540
Relinquished by		6/14/11 1540
Received by		6/14/11 1540
Relinquished by		6/14/11 1847
Received by		6/14/11 @ 1847

RELINQUISHED BY: 6/15/11 @ 1200

Shipping Details

Method of Shipment: ATTN:
On Ice: ~~yes~~ no 2.6°C/3.7°C/2.8°C/2.6°C/22°C/2.6°C 2.8°C/2.6°C/4.8°C IR#C
Airbill No:
Lab Name: APPL
Lab Phone:

6/16/11 08:55

Special Instructions:
PLEASE HOLD EXTRA CONTAINERS FOR METHODS NOT LISTED ON THE COC.

Report Copy to
Shawn Duffy
(530) 229-3303

COOLER RECEIPT FORM

1) Project: 2011 - EASTRAVINE - GWINV-001 PG&E TOPOCK Date Received: 6/16/11

2) Coolers: Number of Coolers: 2

3) YES NO Were coolers and samples screened for radioactivity?

4) YES NO Were custody seals on outside of cooler? How many? 2 Date on seal? 6/15/11

5) Name on seal? See label

6) YES NO NA Were custody seals unbroken and intact at the time of arrival?

7) YES NO Did the cooler come with a shipping slip (air bill, etc.)? Carrier name: On Trac

8) Shipping slip numbers: 1) D100103862 46734 2) D100103862 46833 3)

9) YES NO NA Was the shipping slip scanned into the database?

10) YES NO NA If cooler belongs to APPL, has it been logged into the ice chest database?

11) Describe type of packing in cooler (bubble wrap, popcorn, type of ice, etc.): bubble bag in wet ice

12) YES NO NA For hand delivered samples was sufficient ice present to start the cooling process?

13) YES NO Was a temperature blank included in the cooler?

14) Serial number of certified NIST thermometer used: A39267 Correction factor: 0

15) Cooler temp(s): 1) 2.5°C 2) 2.5°C 3) 4) 5) 6) 7) 8)

Chain of custody:

16) YES NO Was a chain of custody received?

17) YES NO Were the custody papers signed in the appropriate places?

18) YES NO Was the project identifiable from custody papers?

19) YES NO Did the chain of custody include date and time of sampling?

20) YES NO Is location where sample was taken listed on the chain of custody?

Sample Labels:

21) YES NO Were container labels in good condition?

22) YES NO Was the client ID on the label?

23) YES NO Was the date of sampling on the label?

24) YES NO Was the time of sampling on the label?

25) YES NO Did all container labels agree with custody papers?

Sample Containers:

26) YES NO Were all containers sealed in separate bags?

27) YES NO Did all containers arrive unbroken?

28) YES NO Was there any leakage from samples?

29) YES NO Were any of the lids cracked or broken?

30) YES NO Were correct containers used for the tests indicated?

31) YES NO Was a sufficient amount of sample sent for teste indicated?

32) YES NO NA Were bubbles present in volatile samples? If yes, the following were received with air bubbles:

Larger than a pea:

Smaller than a pea:

Preservation & Hold time:

33) YES NO NA Was a sufficient amount of holding time remaining to analyze the samples?

34) YES NO NA Do the sample containers contain the same preservative as what is stated on the COC?

35) YES NO NA Was the pH taken of all non-VOA preserved samples and written on the sample container?

36) YES NO NA Was the pH of acid preserved non-VOA samples < 2 & sodium hydroxide preserved samples > 10?

37) YES NO NA Unpreserved VOA Vials received?

38) YES NO NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?

Lab notified if pH was not adequate:

Deficiencies: COC listed sample ID as MW-65-205-001 but label has ID as MW-65-225-001.

Signature of personnel receiving samples: Second reviewer:

Signature of project manager notified: Date and Time of notification:

Name of client notified: Date and Time of notification: 9:45 6/16/11

Information given to client:

by whom (initials):

Signature: Date: 6/15/11

Method Blank

EPA 8290 - Dioxins and Furans

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **110621W-39844 - 156454**
Batch ID: $8290W-110621A

Sample Type	Analyte	Result	PQL	EDL/EMPC	Units	Ext Date	Analysis Date
BLANK	1,2,3,4,6,7,8-HPCDD	3.6DL U	125.0	3.6DL	pg/L	06/21/11	06/24/11
BLANK	1,2,3,4,6,7,8-HPCDF	38PC U	125.0	38PC	pg/L	06/21/11	06/24/11
BLANK	1,2,3,4,7,8,9-HPCDF	2.9DL U	125.0	2.9DL	pg/L	06/21/11	06/24/11
BLANK	1,2,3,4,7,8-HXCDD	2.2PC U	125.0	2.2PC	pg/L	06/21/11	06/24/11
BLANK	1,2,3,4,7,8-HXCDF	2.0DL U	125.0	2.0DL	pg/L	06/21/11	06/24/11
BLANK	1,2,3,6,7,8-HXCDD	9.5PC U	125.0	9.5PC	pg/L	06/21/11	06/24/11
BLANK	1,2,3,6,7,8-HXCDF	1.8DL U	125.0	1.8DL	pg/L	06/21/11	06/24/11
BLANK	1,2,3,7,8,9-HXCDD	3.6DL U	125.0	3.6DL	pg/L	06/21/11	06/24/11
BLANK	1,2,3,7,8,9-HXCDF	2.4DL U	125.0	2.4DL	pg/L	06/21/11	06/24/11
BLANK	1,2,3,7,8-PECDD	3.5DL U	125.0	3.5DL	pg/L	06/21/11	06/24/11
BLANK	1,2,3,7,8-PECDF	3.1DL U	125.0	3.1DL	pg/L	06/21/11	06/24/11
BLANK	2,3,4,6,7,8-HXCDF	2.1DL U	125.0	2.1DL	pg/L	06/21/11	06/24/11
BLANK	2,3,4,7,8-PECDF	3.1DL U	125.0	3.1DL	pg/L	06/21/11	06/24/11
BLANK	2,3,7,8-TCDD	4.1DL U	50.0	4.1DL	pg/L	06/21/11	06/24/11
BLANK	2,3,7,8-TCDF	4.3DL U	50.0	4.3DL	pg/L	06/21/11	06/24/11
BLANK	OCDD	9.2DL U	250.0	9.2DL	pg/L	06/21/11	06/24/11
BLANK	OCDF	5.7DL U	250.0	5.7DL	pg/L	06/21/11	06/24/11
BLANK	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S)	61.9	40-135		%	06/21/11	06/24/11
BLANK	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S)	62.0	40-135		%	06/21/11	08/24/11
BLANK	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	65.0	40-135		%	06/21/11	06/24/11
BLANK	SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	56.4	40-135		%	06/21/11	06/24/11
BLANK	SURROGATE: 13C-1,2,3,7,8-PECDD (S)	65.2	40-135		%	06/21/11	06/24/11
BLANK	SURROGATE: 13C-1,2,3,7,8-PECDF (S)	65.0	40-135		%	06/21/11	06/24/11
BLANK	SURROGATE: 13C-2,3,7,8-TCDD (S)	58.2	40-135		%	06/21/11	06/24/11
BLANK	SURROGATE: 13C-2,3,7,8-TCDF (S)	67.5	40-135		%	06/21/11	08/24/11
BLANK	SURROGATE: 13C-OCDD (S)	50.1	40-135		%	06/21/11	06/24/11

Quant Method: 8290_110614
Run #: 110614_HR_199
Instrument: Magneto
Sequence: 110614
Initials: RP

Printed: 06/28/11 9:45:56 AM

Laboratory Control Spike Recovery
EPA 8290 - Dioxins and Furans

APPL ID: **110621W-39844 LCS - 156454**
Batch ID: #8290W-110621A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level pg/L	SPK Result pg/L	SPK % Recovery	Recovery Limits
1,2,3,4,6,7,8-HPCDD	1650	1570	95.1	70-130
1,2,3,4,6,7,8-HPCDF	1660	1650	99.6	70-130
1,2,3,4,7,8,9-HPCDF	1520	1400	92.0	70-130
1,2,3,4,7,8-HXCDD	1810	1660	91.7	70-130
1,2,3,4,7,8-HXCDF	1540	1490	96.8	70-130
1,2,3,6,7,8-HXCDD	1910	1920	101	70-130
1,2,3,6,7,8-HXCDF	1470	1590	108	70-130
1,2,3,7,8,9-HXCDD	1890	1780	94.2	70-130
1,2,3,7,8,9-HXCDF	1410	1420	100	70-130
1,2,3,7,8-PECDD	1560	1620	104	70-130
1,2,3,7,8-PECDF	1660	1720	103	70-130
2,3,4,6,7,8-HXCDF	1490	1540	103	70-130
2,3,4,7,8-PECDF	1530	1580	104	70-130
2,3,7,8-TCDD	650	666	102	70-130
2,3,7,8-TCDF	659	632	95.9	70-130
OCDD	3440	3300	95.9	70-130
OCDF	3300	3330	101	70-130
SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD	5000	3060	61.2	40-135
SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF	5000	3030	60.6	40-135
SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S	5000	3210	64.2	40-135
SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S	5000	2840	56.8	40-135
SURROGATE: 13C-1,2,3,7,8-PECDD (S)	2000	1180	59.0	40-135
SURROGATE: 13C-1,2,3,7,8-PECDF (S)	2000	1140	57.0	40-135
SURROGATE: 13C-2,3,7,8-TCDD (S)	2000	1170	58.5	40-135
SURROGATE: 13C-2,3,7,8-TCDF (S)	2000	1350	67.5	40-135
SURROGATE: 13C-OCDD (S)	10000	4820	48.2	40-135

Comments:

Primary	SPK
Quant Method :	8290_110614
Extraction Date :	06/21/11
Analysis Date :	06/25/11
Instrument :	Magneto
Run :	110614_HR_214
Initials :	RP

Printed: 06/28/11 9:45:53 AM

APPL Standard LCS

Matrix Spike Recoveries

EPA 8290 - Dioxins and Furans

APPL ID: **110621W-39844 MS - 156454**
Batch ID: #8290W-110621A
Sample ID: AY39844
Client ID: MW-66-165-001

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl pg/L	Matrix Result pg/L	SPK Result pg/L	DUP Result pg/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2,3,4,6,7,8-HPCDD	1650	ND	1520	1530	92.1	92.7	70-130	0.66	30
1,2,3,4,6,7,8-HPCDF	1660	ND	1600	1690	96.6	102	70-130	5.5	30
1,2,3,4,7,8,9-HPCDF	1520	ND	1910	1740	126	114	70-130	9.3	30
1,2,3,4,7,8-HXCDD	1810	ND	1680	1720	92.8	95.0	70-130	2.4	30
1,2,3,4,7,8-HXCDF	1540	ND	1500	1480	97.4	96.1	70-130	1.3	30
1,2,3,6,7,8-HXCDD	1910	ND	1810	1750	95.0	91.8	70-130	3.4	30
1,2,3,6,7,8-HXCDF	1470	ND	1410	1420	95.9	96.6	70-130	0.71	30
1,2,3,7,6,9-HXCDD	1690	ND	1980	1900	105	101	70-130	4.1	30
1,2,3,7,8,9-HXCDF	1410	ND	3100	1660	219 #	117	70-130	60.5 #	30
1,2,3,7,8-PECDD	1560	ND	1480	1430	94.7	91.5	70-130	3.4	30
1,2,3,7,8-PECDF	1660	ND	1590	1620	95.6	97.4	70-130	1.9	30
2,3,4,6,7,8-HXCDF	1490	ND	1620	1520	108	102	70-130	6.4	30
2,3,4,7,8-PECDF	1530	ND	1370	1490	89.8	97.7	70-130	8.4	30
2,3,7,8-TCDD	650	ND	607	578	93.4	88.9	70-130	4.9	30
2,3,7,8-TCDF	659	ND	607	589	92.1	89.4	70-130	3.0	30
OCDD	3440	ND	3260	3210	95.3	93.3	70-130	2.2	30
OCDF	3300	ND	3720	3060	113	92.7	70-130	19.5	30
SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD	5000	NA	3910	4010	78.2	80.2	40-135		
SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (	5000	NA	3240	3320	64.8	66.4	40-135		
SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S	5000	NA	2420	2870	48.4	57.4	40-135		
SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S	5000	NA	2220	2480	44.4	49.6	40-135		
SURROGATE: 13C-1,2,3,7,8-PECDD (S)	2000	NA	1030	1050	51.5	52.5	40-135		
SURROGATE: 13C-1,2,3,7,8-PECDF (S)	2000	NA	1090	979	54.5	49.0	40-135		
SURROGATE: 13C-2,3,7,8-TCDD (S)	2000	NA	1020	1110	51.0	55.5	40-135		
SURROGATE: 13C-2,3,7,8-TCDF (S)	2000	NA	1130	1250	56.5	62.5	40-135		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	8290_110625	8290_110625
Extraction Date :	06/21/11	06/21/11
Analysis Date :	06/26/11	06/26/11
Instrument :	Magneto	Magneto
Run :	110625_HR_26	110625_HR_27
Initials :	RP	

Printed: 06/28/11 9:45:43 AM
APPL Standard MSD

Matrix Spike Recoveries

EPA 8290 - Dioxins and Furans

APPL ID: **110621W-39844 MS - 156454**
Batch ID: #8290W-110621A
Sample ID: AY39844
Client ID: MW-66-165-001

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl pg/L	Matrix Result pg/L	SPK Result pg/L	DUP Result pg/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
SURROGATE: 13C-OCDD (S)	10000	NA	7420	7340	74.2	73.4	40-135		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	8290_110625	8290_110625
Extraction Date :	06/21/11	06/21/11
Analysis Date :	06/26/11	06/26/11
Instrument :	Magneto	Magneto
Run :	110625_HR_26	110625_HR_27
Initials :	RP	

Printed: 06/28/11 9:45:43 AM
APPL Standard MSD

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 64901

Case No: 64901 Date Analyzed: 06/24/11

Matrix: WATER Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S)	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S)
110621A-BLK	Blank	61.9	62.0
AY39842	MW-65-160-001	55.6	56.5
AY39844	MW-66-165-001	58.6	56.9
AY39848	MW-68-180-001	76.0	75.5
AY39850	MW-70-105-001	73.5	70.8
AY39851	MW-99-001	50.1	48.1
110621A-LCS	Lab Control Spike	61.2	60.6
AY39844-MS	Matrix Spike	78.2	64.8
AY39844-MSD	Matrix SpikeD	80.2	66.4
AY39846	MW-67-225-001	66.6	58.0

Comments: Batch: #8290W-110621A

Printed: 06/28/11 9:45:38 AM

Form 2 & 8, Surrogate Recovery Summary

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 64901

Case No: 64901 Date Analyzed: 06/24/11

Matrix: WATER Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)
110621A-BLK	Blank	65.0	56.4
AY39842	MW-65-160-001	69.5	58.1
AY39844	MW-66-165-001	63.1	51.7
AY39848	MW-68-180-001	81.5	70.9
AY39850	MW-70-105-001	75.5	63.0
AY39851	MW-99-001	52.3	44.5
110621A-LCS	Lab Control Spike	64.2	56.8
AY39844-MS	Matrix Spike	46.4	44.4
AY39844-MSD	Matrix SpikeD	57.4	49.6
AY39846	MW-67-225-001	50.7	42.4

Comments: Batch: #8290W-110621A

Printed: 06/28/11 9:45:38 AM
Form 2 & 8, Surrogate Recovery Summary

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 64901
Case No: 64901 Date Analyzed: 06/24/11
Matrix: WATER Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-1,2,3,7,8-PECDD (S)	SURROGATE: 13C-1,2,3,7,8-PECDF (S)
110621A-BLK	Blank	65.2	65.0
AY39842	MW-65-160-001	51.8	54.5
AY39844	MW-66-165-001	53.6	54.5
AY39846	MW-68-180-001	79.3	79.3
AY39850	MW-70-105-001	72.3	73.2
AY39851	MW-99-001	48.0	47.9
110621A-LCS	Lab Control Spike	59.0	57.0
AY39844-MS	Matrix Spike	51.5	54.5
AY39844-MSD	Matrix SpikeD	52.5	49.0
AY39846	MW-67-225-001	41.7	40.8

Comments: Batch: #8290W-110621A

Printed: 06/28/11 9:45:38 AM
Form 2 & 8, Surrogate Recovery Summary

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 64901

Case No: 64901 Date Analyzed: 06/24/11

Matrix: WATER Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-2,3,7,8-TCDD (S)	SURROGATE: 13C-2,3,7,8-TCDF (S)
110621A-BLK	Blank	58.2	67.5
AY39842	MW-65-160-001	54.5	63.6
AY39844	MW-66-165-001	52.8	57.8
AY39848	MW-68-180-001	72.9	83.4
AY39850	MW-70-105-001	63.2	73.3
AY39851	MW-99-001	50.2	52.8
110621A-LCS	Lab Control Spike	58.5	67.5
AY39844-MS	Matrix Spike	51.0	56.5
AY39844-MSD	Matrix SpikeD	55.5	62.5
AY39846	MW-67-225-001	45.0	48.1

Comments: Batch: #8290W-110621A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 64901
Case No: 64901 Date Analyzed: 06/24/11
Matrix: WATER Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-OCDD (S)	
110621A-BLK	Blank	50.1	
AY39842	MW-65-160-001	39.0	#
AY39844	MW-66-165-001	45.7	
AY39848	MW-68-180-001	61.5	
AY39850	MW-70-105-001	57.8	
AY39851	MW-99-001	40.2	
110621A-LCS	Lab Control Spike	48.2	
AY39844-MS	Matrix Spike	74.2	
AY39844-MSD	Matrix SpikeD	73.4	
AY39846	MW-67-225-001	60.3	

Comments: Batch: #8290W-110621A

Printed: 06/28/11 9:45:38 AM
Form 2 & 8, Surrogate Recovery Summary

EPA 8290

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 64901

Case No: 64901 Date Analyzed: 06/24/11

Matrix: WATER Instrument: Magneto

Blank ID: 110621A-BLK Time Analyzed: 1025

APPL ID.	Client Sample No.	File ID.	Date Analyzed
110621A-BLK	Blank	110614_HR_199	06/24/11 1025
AY39842	MW-65-160-001	110614_HR_200	06/24/11 1228
AY39844	MW-66-165-001	110614_HR_201	06/24/11 1332
AY39848	MW-68-180-001	110614_HR_203	06/24/11 1553
AY39850	MW-70-105-001	110614_HR_204	06/24/11 1701
AY39851	MW-99-001	110614_HR_210	06/24/11 2353
110621A-LCS	Lab Control Spike	110814_HR_214	06/25/11 0429
110621A-MS	Matrix Spike	110625_HR_26	06/26/11 1727
110621A-MSD	Matrix SpikeD	110625_HR_27	06/26/11 1834
AY39846	MW-67-225-001	110625_HR_29	06/26/11 2055

Comments: Batch: #6290W-110621A

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Form 4, Blank Summary

EPA 8290 - Dioxins and Furans

CH2M Hill
2525 Airpark Dr.
Redding, CA 96001

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Shawn Duffy

Project: 417981.ER.02.DM 2011-East Ravine-GWINV

ARF: 64901

Sample ID: MW-65-160-001

APPL ID: AY39842

Sample Collection Date: 06/13/11

QCG: $8290W-110621A-156454

Method	Analyte	Result	PQL	EDL/EMPC	Units	Ext Date	Analysis Date
EPA 8290	1,2,3,4,6,7,8-HPCDD	6.3DL U	125.0	6.3DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,6,7,8-HPCDF	3.5DL U	125.0	3.5DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8,9-HPCDF	4.5DL U	125.0	4.5DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8-HXCDD	4.9DL U	125.0	4.9DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8-HXCDF	2.6DL U	125.0	2.6DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,6,7,8-HXCDD	5.1DL U	125.0	5.1DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,8,7,8-HXCDF	2.3DL U	125.0	2.3DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8,9-HXCDD	4.7DL U	125.0	4.7DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8,9-HXCDF	3.1DL U	125.0	3.1DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8-PECDD	3.6DL U	125.0	3.6DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8-PECDF	2.4DL U	125.0	2.4DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,4,6,7,8-HXCDF	2.7DL U	125.0	2.7DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,4,7,8-PECDF	2.4DL U	125.0	2.4DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,7,8-TCDD	4.0DL U	50.0	4.0DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,7,8-TCDF	3.4DL U	50.0	3.4DL	pg/L	06/21/11	06/24/11
EPA 8290	OCDD	9.6DL U	250.0	9.6DL	pg/L	06/21/11	06/24/11
EPA 8290	OCDF	9.6DL U	250.0	9.6DL	pg/L	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S	55.6	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S)	56.5	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	69.5	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	58.1	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDD (S)	51.8	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDF (S)	54.5	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDD (S)	54.5	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDF (S)	63.6	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-OCDD (S)	39.0 #	40-135		%	06/21/11	06/24/11

= Recovery (or RPD) is outside QC limits.

Quant Method: 8290_110614
Run #: 110614_HR_200
Instrument: Magneto
Sequence: 110614
Dilution Factor: 1
Initials: RP

Printed: 07/01/11 2:46:26 PM
Form 1 - APPL Standard GC - No MC

EPA 8290 - Dioxins and Furans

CH2M Hill
2525 Airpark Dr.
Redding, CA 96001

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Shawn Duffy

Project: 417981.ER.02.DM 2011-East Ravine-GWINV

ARF: 64901

Sample ID: MW-66-165-001

APPL ID: AY39844

Sample Collection Date: 06/13/11

QCG: $8290W-110621A-156454

Method	Analyte	Result	PQL	EDL/EMPC	Units	Ext Date	Analysis Date
EPA 8290	1,2,3,4,6,7,8-HPCDD	4.8DL U	125.0	4.8DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,6,7,8-HPCDF	3.4DL U	125.0	3.4DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8,9-HPCDF	4.4DL U	125.0	4.4DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8-HXCDD	3.6DL U	125.0	3.6DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8-HXCDF	2.2DL U	125.0	2.2DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,6,7,8-HXCDD	3.8DL U	125.0	3.8DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,6,7,8-HXCDF	2.0DL U	125.0	2.0DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8,9-HXCDD	3.5DL U	125.0	3.5DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8,9-HXCDF	2.6DL U	125.0	2.6DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8-PECDD	4.5DL U	125.0	4.5DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8-PECDF	2.4DL U	125.0	2.4DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,4,6,7,8-HXCDF	2.3DL U	125.0	2.3DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,4,7,8-PECDF	2.4DL U	125.0	2.4DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,7,8-TCDD	4.1DL U	50.0	4.1DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,7,8-TCDF	4.7DL U	50.0	4.7DL	pg/L	06/21/11	06/24/11
EPA 8290	OCDD	11DL U	250.0	11DL	pg/L	06/21/11	06/24/11
EPA 8290	OCDF	8.2DL U	250.0	8.2DL	pg/L	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S	58.6	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S)	56.9	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	63.1	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	51.7	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDD (S)	53.6	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDF (S)	54.5	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDD (S)	52.8	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDF (S)	57.8	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-OCDD (S)	45.7	40-135		%	06/21/11	06/24/11

Quant Method: 8290_110614
Run #: 110614_HR_201
Instrument: Magneto
Sequence: 110614
Dilution Factor: 1
Initials: RP

Printed: 07/01/11 2:46:26 PM
Form 1 - APPL Standard GC - No MC

EPA 8290 - Dioxins and Furans

CH2M Hill
2525 Airpark Dr.
Redding, CA 96001

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Shawn Duffy

Project: 417981.ER.02.DM 2011-East Ravine-GWINV

ARF: 64901

Sample ID: MW-67-225-001

APPL ID: AY39846

Sample Collection Date: 06/14/11

QCG: $8290W-110621A-156454

Method	Analyte	Result	PQL	EDL/EMPC	Units	Ext Date	Analysis Date
EPA 8290	1,2,3,4,6,7,8-HPCDD	2.8PC U	125.0	2.8PC	pg/L	06/21/11	06/26/11
EPA 8290	1,2,3,4,6,7,8-HPCDF	4.6PC U	125.0	4.6PC	pg/L	06/21/11	06/26/11
EPA 8290	1,2,3,4,7,8,9-HPCDF	2.2DL U	125.0	2.2DL	pg/L	06/21/11	06/26/11
EPA 8290	1,2,3,4,7,8-HXCDD	3.3PC U	125.0	3.3PC	pg/L	06/21/11	06/26/11
EPA 8290	1,2,3,4,7,8-HXCDF	2.3PC U	125.0	2.3PC	pg/L	06/21/11	06/26/11
EPA 8290	1,2,3,6,7,8-HXCDD	2.1DL U	125.0	2.1DL	pg/L	06/21/11	06/26/11
EPA 8290	1,2,3,6,7,8-HXCDF	3.1 J	125.0	3.1PC	pg/L	06/21/11	06/26/11
EPA 8290	1,2,3,7,8,9-HXCDD	5.1PC U	125.0	5.1PC	pg/L	06/21/11	06/26/11
EPA 8290	1,2,3,7,6,9-HXCDF	3.0PC U	125.0	3.0PC	pg/L	06/21/11	06/26/11
EPA 8290	1,2,3,7,8-PECDD	2.2DL U	125.0	2.2DL	pg/L	06/21/11	06/26/11
EPA 8290	1,2,3,7,8-PECDF	1.4DL U	125.0	1.4DL	pg/L	06/21/11	06/26/11
EPA 8290	2,3,4,6,7,8-HXCDF	1.5PC U	125.0	1.5PC	pg/L	06/21/11	06/26/11
EPA 8290	2,3,4,7,8-PECDF	2.0PC U	125.0	2.0PC	pg/L	06/21/11	06/26/11
EPA 8290	2,3,7,8-TCDD	2.1DL U	50.0	2.1DL	pg/L	06/21/11	06/26/11
EPA 8290	2,3,7,8-TCDF	2.8DL U	50.0	2.8DL	pg/L	06/21/11	06/26/11
EPA 8290	OCDD	12PC U	250.0	12PC	pg/L	06/21/11	06/26/11
EPA 8290	OCDF	9.9PC U	250.0	9.9PC	pg/L	06/21/11	06/26/11
EPA 8290	TEQ	0.31	NA		pg/L	06/21/11	06/26/11
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S	66.6	40-135		%	06/21/11	06/26/11
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S	58.0	40-135		%	06/21/11	06/26/11
EPA 8290	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	50.7	40-135		%	06/21/11	06/26/11
EPA 8290	SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	42.4	40-135		%	06/21/11	06/26/11
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDD (S)	41.7	40-135		%	06/21/11	06/26/11
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDF (S)	40.8	40-135		%	06/21/11	06/26/11
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDD (S)	45.0	40-135		%	06/21/11	06/26/11
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDF (S)	48.1	40-135		%	06/21/11	06/26/11
EPA 8290	SURROGATE: 13C-OCDD (S)	60.3	40-135		%	06/21/11	06/26/11

J = Estimated value.

Quant Method: 8290_110625
Run #: 110625_HR_29
Instrument: Magneto
Sequence: 110625
Dilution Factor: 1
Initials: RP

Printed: 06/28/11 9:46:04 AM
Form 1 - APPL Standard GC - No MC

EPA 8290 - Dioxins and Furans

CH2M Hill
2525 Airpark Dr.
Redding, CA 96001

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Shawn Duffy

Project: 417981.ER.02.DM 2011-East Ravine-GWINV

ARF: 64901

Sample ID: MW-68-180-001

APPL ID: AY39848

Sample Collection Date: 06/14/11

QCG: $8290W-110621A-156454

Method	Analyte	Result	PQL	EDL/EMPC	Units	Ext Date	Analysis Date
EPA 8290	1,2,3,4,6,7,8-HPCDD	4.4DL U	125.0	4.4DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,8,7,8-HPCDF	2.6DL U	125.0	2.6DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8,9-HPCDF	3.4DL U	125.0	3.4DL	pg/L	08/21/11	08/24/11
EPA 8290	1,2,3,4,7,8-HXCDD	3.4DL U	125.0	3.4DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8-HXCDF	2.0DL U	125.0	2.0DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,6,7,8-HXCDD	3.5DL U	125.0	3.5DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,6,7,8-HXCDF	1.9DL U	125.0	1.9DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8,9-HXCDD	3.3DL U	125.0	3.3DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8,9-HXCDF	2.4DL U	125.0	2.4DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8-PECDD	3.2DL U	125.0	3.2DL	pg/L	08/21/11	06/24/11
EPA 8290	1,2,3,7,8-PECDF	2.7DL U	125.0	2.7DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,4,6,7,8-HXCDF	2.1DL U	125.0	2.1DL	pg/L	08/21/11	06/24/11
EPA 8290	2,3,4,7,8-PECDF	2.7DL U	125.0	2.7DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,7,8-TCDD	4.4DL U	50.0	4.4DL	pg/L	08/21/11	06/24/11
EPA 8290	2,3,7,8-TCDF	4.4DL U	50.0	4.4DL	pg/L	06/21/11	06/24/11
EPA 8290	OCDD	6.5DL U	250.0	6.5DL	pg/L	06/21/11	06/24/11
EPA 8290	OCDF	4.7DL U	250.0	4.7DL	pg/L	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S	76.0	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S)	75.5	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	81.5	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	70.9	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDD (S)	79.3	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDF (S)	79.3	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDD (S)	72.9	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDF (S)	83.4	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-OCDD (S)	61.5	40-135		%	06/21/11	06/24/11

Quant Method: 8290_110614
Run #: 110614_HR_203
Instrument: Magneto
Sequence: 110614
Dilution Factor: 1
Initials: RP

Printed: 07/01/11 2:46:26 PM
Form 1 - APPL Standard GC - No MC

EPA 8290 - Dioxins and Furans

CH2M Hill
2525 Airpark Dr.
Redding, CA 96001

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Shawn Duffy

Project: 417981.ER.02.DM 2011-East Ravine-GWINV

ARF: 64901

Sample ID: MW-70-105-001

APPL ID: AY39850

Sample Collection Date: 06/13/11

QCG: $8290W-110621A-156454

Method	Analyte	Result	PQL	EDL/EMPC	Units	Ext Date	Analysis Date
EPA 8290	1,2,3,4,6,7,8-HPCDD	4.1DL U	125.0	4.1DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,6,7,8-HPCDF	2.9DL U	125.0	2.9DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8,9-HPCDF	3.8DL U	125.0	3.8DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8-HXCDD	4.9DL U	125.0	4.9DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8-HXCDF	2.5DL U	125.0	2.5DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,6,7,8-HXCDD	5.2DL U	125.0	5.2DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,6,7,8-HXCDF	2.3DL U	125.0	2.3DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8,9-HXCDD	4.8DL U	125.0	4.8DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8,9-HXCDF	3.0DL U	125.0	3.0DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8-PECDD	4.0DL U	125.0	4.0DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8-PECDF	2.5DL U	125.0	2.5DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,4,6,7,8-HXCDF	2.6DL U	125.0	2.6DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,4,7,8-PECDF	2.5DL U	125.0	2.5DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,7,8-TCDD	4.2DL U	50.0	4.2DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,7,8-TCDF	4.4DL U	50.0	4.4DL	pg/L	06/21/11	06/24/11
EPA 8290	OCDD	19PC U	250.0	19PC	pg/L	06/21/11	06/24/11
EPA 8290	OCDF	5.2DL U	250.0	5.2DL	pg/L	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S	73.5	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S)	70.8	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	75.5	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	63.0	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDD (S)	72.3	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDF (S)	73.2	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDD (S)	63.2	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDF (S)	73.3	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-OCDD (S)	57.8	40-135		%	06/21/11	06/24/11

Quant Method: 8290_110614
Run #: 110614_HR_204
Instrument: Magneto
Sequence: 110614
Dilution Factor: 1
Initials: RP

Printed: 07/01/11 2:46:26 PM
Form 1 - APPL Standard GC - No MC

EPA 8290 - Dioxins and Furans

CH2M Hill
2525 Airpark Dr.
Redding, CA 96001

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Shawn Duffy

Project: 417981.ER.02.DM 2011-East Ravine-GWINV

ARF: 64901

Sample ID: MW-99-001

APPL ID: AY39851

Sample Collection Date: 06/14/11

QCG: $8290W-110621A-156454

Method	Analyte	Result	PQL	EDL/EMPC	Units	Ext Date	Analysis Date
EPA 8290	1,2,3,4,6,7,8-HPCDD	5.1DL U	125.0	5.1DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,6,7,8-HPCDF	3.3DL U	125.0	3.3DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8,9-HPCDF	4.3DL U	125.0	4.3DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8-HXCDD	16PC U	125.0	16PC	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,4,7,8-HXCDF	6.3PC U	125.0	6.3PC	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,6,7,8-HXCDD	5.8DL U	125.0	5.8DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,6,7,8-HXCDF	4.8PC U	125.0	4.8PC	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8,9-HXCDD	5.3DL U	125.0	5.3DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8,9-HXCDF	3.7DL U	125.0	3.7DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8-PECDD	5.7DL U	125.0	5.7DL	pg/L	06/21/11	06/24/11
EPA 8290	1,2,3,7,8-PECDF	5.4PC U	125.0	5.4PC	pg/L	06/21/11	06/24/11
EPA 8290	2,3,4,6,7,8-HXCDF	3.0PC U	125.0	3.0PC	pg/L	06/21/11	06/24/11
EPA 8290	2,3,4,7,8-PECDF	2.8DL U	125.0	2.8DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,7,8-TCDD	4.3DL U	50.0	4.3DL	pg/L	06/21/11	06/24/11
EPA 8290	2,3,7,8-TCDF	5.5DL U	50.0	5.5DL	pg/L	06/21/11	06/24/11
EPA 8290	OCDD	13DL U	250.0	13DL	pg/L	06/21/11	06/24/11
EPA 8290	OCDF	13DL U	250.0	13DL	pg/L	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S	50.1	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S)	48.1	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	52.3	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	44.5	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDD (S)	48.0	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDF (S)	47.9	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDD (S)	50.2	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDF (S)	52.8	40-135		%	06/21/11	06/24/11
EPA 8290	SURROGATE: 13C-OCOD (S)	40.2	40-135		%	06/21/11	06/24/11

Quant Method: 8290_110614
Run #: 110614_HR_210
Instrument: Magneto
Sequence: 110614
Dilution Factor: 1
Initials: RP

Printed: 07/01/11 2:46:27 PM
Form 1 - APPL Standard GC - No MC

TRUESDAIL LABORATORIES, INC.

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14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
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www.truesdail.com

July 07, 2011

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000
Oakland, California 94612

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK IM3PLANT-EW-183, GROUNDWATER MONITORING PROJECT, TLI NO.: 995497

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-EW-183 groundwater-monitoring project for Total Dissolved and Hexavalent Chromium, Total Dissolved Solids, and pH. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, wet chemistry raw data, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data are under Section 5.

The samples were received and delivered with the chain of custody on June 7, 2011, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Per Mr. Shawn Duffy's request, the pH analysis was cancelled.

Samples for Total Dissolved Chromium were analyzed by method EPA 200.8 with the approval of Mr. Shawn Duffy of CH2M Hill.

Total Dissolved Chromium, for sample PE-01-183, was re-analyzed by EPA 200.7 due to the discrepancy between the Total Dissolved Chromium and Hexavalent Chromium results. The result from the re-analysis is reported.

No other violations or non-conformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

K. R. P. Iyer

K.R.P. Iyer
Quality Assurance/Quality Control Officer

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 408401.01.DM

Laboratory No.: 995497
Date: July 7, 2011
Collected: June 7, 2011
Received: June 7, 2011

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Gautam Savani
SM 2540C	Total Dissolved Solids	Jenny Tankunakorn
EPA 200.8	Total Dissolved Chromium	Katia Kiarashpoor
EPA 200.7	Total Chromium	Ethel Suico
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky
SM 3500-CrB	Hexavalent Chromium	Jenny Tankunakorn

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 995497
Date Received: June 7, 2011
Revision 1; July 8, 2011

Project Name: PG&E Topock Project
Project No.: 408401.01.DM
P.O. No.: 408401.01.DM

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
995497-001	PE-01-183	E120.1	NONE	6/7/2011	10:30	EC	5180	umhos/cm	2.00
995497-001	PE-01-183	E200.7	LABFLT	6/7/2011	10:30	Chromium	11.0	ug/L	1.0
995497-001	PE-01-183	E218.6	LABFLT	6/7/2011	10:30	Chromium, hexavalent	9.5	ug/L	0.20
995497-001	PE-01-183	SM2540C	NONE	6/7/2011	10:30	Total Dissolved Solids	3190	mg/L	125
995497-002	TW-03D-183	E120.1	NONE	6/7/2011	10:30	EC	8530	umhos/cm	2.00
995497-002	TW-03D-183	E200.8	LABFLT	6/7/2011	10:30	Chromium	1090	ug/L	2.0
995497-002	TW-03D-183	SM2540C	NONE	6/7/2011	10:30	Total Dissolved Solids	5120	mg/L	125
995497-002	TW-03D-183	SM3500-CrB	LABFLT	6/7/2011	10:30	Chromium, hexavalent	1030	ug/L	100

ND: Non Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results:
Results below 0.01 will have two (2) significant figures.
Result above or equal to 0.01 will have three (3) significant figures.
Quality Control data will always have three (3) significant figures.

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REPORT

Client: **CH2MHill**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Shawn Duffy
Project Name: PG&E Topock Project
P.O. Number: 408401.01.DM
Project Number: 408401.01.DM

Laboratory No. 995497

Printed 7/7/2011

Samples Received on 6/7/2011 10:00:00 PM

Field ID	Lab ID	Collected	Matrix
PE-01-183	995497-001	06/07/2011 10:30	Water
TW-03D-183	995497-002	06/07/2011 10:30	Water

Specific Conductivity - EPA 120.1 Batch 06EC11D 6/10/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
995497-001 Specific Conductivity	umhos/cm	06/10/2011	1.00	0.0380	2.00	5180
995497-002 Specific Conductivity	umhos/cm	06/10/2011	1.00	0.0380	2.00	8530

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 995499-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	954	953	0.105	0 - 10

Duplicate — Lab ID = 995499-012

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	950.	952	0.210	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	703	706	99.6	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	704	706	99.7	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	706	706	100.	90 - 110

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Chrome VI by EPA 218.6 Batch 06CrH11D

Parameter	Unit	Analyzed	DF	MDL	RL	Result
995497-001 Chromium, Hexavalent	ug/L	06/08/2011 09:46	1.05	0.0210	0.20	9.5

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 995497-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	1.05	9.43	9.47	0.455	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.89	5.00	97.7	90 - 110

Matrix Spike — Lab ID = 995451-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	8.06	8.26(5.30)	96.3	90 - 110

Matrix Spike — Lab ID = 995451-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	16.4	16.4(10.6)	99.7	90 - 110

Matrix Spike — Lab ID = 995451-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	7.62	7.89(5.30)	94.8	90 - 110

Matrix Spike — Lab ID = 995451-006

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	9.23	9.76(5.30)	90.0	90 - 110

Matrix Spike — Lab ID = 995451-007

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	9.75	9.66(5.30)	102.	90 - 110

Matrix Spike — Lab ID = 995451-008

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	9.76	9.76(5.30)	99.9	90 - 110

Matrix Spike — Lab ID = 995451-009

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	9.87	9.94(5.30)	98.7	90 - 110

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Matrix Spike — Lab ID = 995452-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.11	1.13(1.06)	97.8	90 - 110

Matrix Spike — Lab ID = 995452-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.06	1.11(1.06)	95.8	90 - 110

Matrix Spike — Lab ID = 995494-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	6.71	7.00(5.30)	94.5	90 - 110

Matrix Spike — Lab ID = 995494-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	6.88	6.91(5.30)	99.3	90 - 110

Matrix Spike — Lab ID = 995494-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	6.49	6.85(5.30)	93.1	90 - 110

Matrix Spike — Lab ID = 995494-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	7.15	7.29(5.30)	97.4	90 - 110

Matrix Spike — Lab ID = 995497-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	19.4	20.1(10.6)	93.7	90 - 110

Matrix Spike — Lab ID = 995498-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.46	5.45(5.25)	100.	90 - 110

Matrix Spike — Lab ID = 995498-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.16	1.12(1.06)	104.	90 - 110

Matrix Spike — Lab ID = 995498-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	105	1900	1930(1050)	97.1	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.91	5.00	98.1	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.62	10.0	96.2	95 - 105

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MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.81	10.0	98.1	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.78	10.0	97.8	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.58	10.0	95.8	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.65	10.0	96.5	95 - 105

Chromium, Hexavalent by SM 3500-Cr B

Batch 06CrH11A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
995497-002 Chromium, Hexavalent	ug/L	06/16/2011 16:03	10.0	35.0	100.	1030

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 995497-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	10.0	1040	1030	0.860	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	104.	100.	104.	90 - 110

Matrix Spike — Lab ID = 995497-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	10.0	2120	2030(1000)	109.	85 - 115

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	65.4	60.0	109	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	64.1	60.0	107.	90 - 110

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Client: CH2MHill

Project Name: PG&E Topock Project
Project Number: 408401.01.DM

Printed 7/7/2011

Total Dissolved Solids by SM 2540 C Batch 06TDS11C 6/8/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
995497-001 Total Dissolved Solids	mg/L	06/08/2011	1.00	0.434	125	3190
995497-002 Total Dissolved Solids	mg/L	06/08/2011	1.00	0.434	125	5120

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	1.00	ND

Duplicate — Lab ID = 995498-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	4750	4680	1.48	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	469	500.	93.8	90 - 110

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Metals by EPA 200.8, Dissolved Batch 061611A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
995497-002 Chromium	ug/L	06/16/2011 11:56	10.0	0.220	2.0	1090

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate — Lab ID = 995497-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	10.0	1080	1090	0.829	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.7	50.0	101.	85 - 115

Matrix Spike — Lab ID = 995497-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	10.0	1610	1590(500.)	103.	75 - 125

Matrix Spike Duplicate — Lab ID = 995497-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	10.0	1590	1590(500.)	101.	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.9	50.0	102.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.8	50.0	99.6	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.2	50.0	98.4	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.9	50.0	99.8	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.7	50.0	103.	90 - 110

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Client: CH2MHill | Project Name: PG&E Topock Project | Page 8 of 10

Project Number: 408401.01.DM | Printed 7/8/2011

Revised

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.8	50.0	102.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.8	50.0	95.6	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	0.0310	0.00		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	0.0163	0.00		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.0	50.0	102.	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.9	50.0	97.9	80 - 120

Serial Dilution — Lab ID = 995497-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	50.0	1070	1090	1.57	0 - 10

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Metals by 200.7, Dissolved

Batch 070711A-Th

Parameter	Unit	Analyzed	DF	MDL	RL	Result
995497-001 Chromium	ug/L	07/07/2011 14:55	1.00	0.325	1.0	11.0

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate — Lab ID = 995497-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	1.00	10.9	11.0	1.10	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.8	50.0	99.7	85 - 115

Matrix Spike — Lab ID = 995497-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	1.00	57.7	61.0(50.0)	93.3	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.8	50.0	99.7	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.6	50.0	95.3	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.1	50.0	96.3	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.0	50.0	96.1	80 - 120

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Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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E2-Sean

Total Dissolved Solids by SM 2540 C

Calculations

Batch: 06TDS11C
Date Calculated: 6/13/11

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL , ppm	Reported Value, ppm	DF
BLANK	100	76.8834	76.8837	76.8834	0.0003	No	0.0000	0.0	25.0	ND	1
995496-1	100	75.1386	75.1692	75.1691	0.0001	No	0.0305	305.0	25.0	305.0	1
995496-2	100	65.6318	65.6832	65.683	0.0002	No	0.0512	512.0	25.0	512.0	1
995496-3	100	74.7149	74.7412	74.741	0.0002	No	0.0261	261.0	25.0	261.0	1
995496-4	100	74.7171	74.7432	74.7431	0.0001	No	0.0260	260.0	25.0	260.0	1
995496-5	100	73.8315	73.8686	73.8682	0.0004	No	0.0367	367.0	25.0	367.0	1
995497-1	20	48.1869	48.2508	48.2507	0.0001	No	0.0638	3190.0	125.0	3190.0	1
995497-2	20	73.0038	73.1063	73.1061	0.0002	No	0.1023	5115.0	125.0	5115.0	1
995498-1	20	49.7185	49.8047	49.8044	0.0003	No	0.0859	4295.0	125.0	4295.0	1
995498-2	20	49.8364	49.9304	49.93	0.0004	No	0.0936	4680.0	125.0	4680.0	1
995498-2D	20	47.0707	47.1661	47.1657	0.0004	No	0.0950	4750.0	125.0	4750.0	1
LCS	100	111.7311	111.7782	111.778	0.0002	No	0.0469	469.0	25.0	469.0	1
LCSD											1

Calculation as follows:

$$\text{Filterable residue (TDS), mg/L} = \left(\frac{A-B}{C}\right) x\ 1\ 0^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.
ND = not detected (below the reporting limit)

Analyst Printed Name | Analyst Signature | Reviewer Printed Name | Reviewer Signature

WetChem TDS_0810.xls

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 06TDS11C

Date Calculated: 6/13/11

Laboratory Number	EC	TDS/EC Ratio: 0.55-.9	Calculated TDS (EC*0.65)	Measured TDS / Calc TDS <1.3
995496-1	472	0.65	306.8	0.99
995496-2	862	0.59	560.3	0.91
995496-3	431	0.61	280.15	0.93
995496-4	431	0.60	280.15	0.93
995496-5	596	0.62	387.4	0.95
995497-1	5170	0.62	3360.5	0.95
995497-2	8530	0.60	5544.5	0.92
995498-1	7320	0.59	4758	0.90
995498-2	7840	0.60	5096	0.92
995498-2D	7840	0.61	5096	0.93
LCS				

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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

[IM3Plant-EW-183] 995497

COC Number

TURNAROUND TIME 10 Days

DATE 06/07/11 PAGE 1 OF 1

COMPANY: CH2M HILL /E2

PROJECT NAME: PG&E Topock IM3Plant-EW

PHONE: 530-229-3303 FAX: 530-339-3303

ADDRESS: 155 Grand Ave Ste 1000, Oakland, CA 94612

P.O. NUMBER: 408401.01.DM

SAMPLERS (SIGNATURE: C. Lentz

Rec'd 06/07/11
Lab#: 995497

	SAMPLE I.D.	DATE	TIME	DESCRIPTION	Dissolved Cr (200.7) Lab filtered	Cr(VI) (3500-Cr B)	pH (150.0) EC (120.1)	TDS (160.1)	Cr(VI) (218.6)	NUMBER OF CONTAINERS	COMMENTS
-1	PE-01-183	06/07/11	10:30	Ground water	X		X	X	X	4	pH = 2) 200.7
-2	TW-03D-183	06/07/11	10:30	Ground water	X	X	X	X		4	pH = 2)
										8	TOTAL NUMBER OF CONTAINERS

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	C. Lentz	C. Lentz	CH2M HILL	6-7-11 15:33
Signature (Received)	Rafael Davila	Rafael	T.L.I	6-7-11 15:33
Signature (Relinquished)	Rafael Davila	Rafael	T.L.I	6-7-11 22:00
Signature (Received)	Nicole	Nicole	TLI	6/7/11 22:00
Signature (Relinquished)				
Signature (Received)				

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ 4°C °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

054

Hexavalent Chromium

Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
06/08/11	995494-3	9.5	N/A	N/A	N/A	SB
↓	↓ -4	↓	↓	↓	↓	↓
06/08/11	995495-1	9.5	N/A	N/A	N/A	SB
↓	↓ -2	↓	↓	↓	↓	↓
↓	↓ -3	↓	↓	↓	↓	↓
06/08/11	995496-1	9.5	N/A	N/A	N/A	SB
↓	↓ -2	↓	↓	↓	↓	↓
↓	↓ -3	↓	↓	↓	↓	↓
↓	↓ -4	↓	↓	↓	↓	↓
↓	↓ -5	↓	↓	↓	↓	↓
06/08/11	995497-1	7.0	5.00	9.5	9:10	SB
06/08/11	995498-1	7.0	5.00	9.5	9:15	SB
↓	↓ -2	↓	↓	↓	9:20	↓

Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest	Adjusted to pH<2 (Y/N)
995481	<1	>2	06/03/11	M.M	Yes	3:10
995480	Solid					
497(1-2)	<1	>2			NO	—
498(1-2)						—
491						—
995499(1-4)	<1	<2			Yes	3:10
995526 (1)	<1	<2	6/03/11	KK	NO	No
995519(1-11)	<1	<2	6/09/11	M.M	Yes	No
995497(1-2)	<1	>2	6/10/11	ES	NO	yes @ 10:00 a.m
995498(1-2)	<1	>2				
DUP 995498-2	<1	>2				
995537	Solid		6/10/11	M.M	Yes	SILC
995586	<1	>2	6/13/11	M.M	Yes	yes @ 13:00 p.m
995671(1-2)	<1	<2	6/16/11	M.M	Yes	—
672(1)						—
673(1-5)						—
995667	<1	<2			Yes	yes @ 10:00
995632	<1	>2	6/16/11	ES	NO	yes @ 1:00 p.m
995691	<1	>2	6/20/11	M.M	Yes	—
995692		<2				—
995720						—
995694						—
995695						—
995696(1-4)						—
~~700592 (55-72)~~	~~<1~~	~~<2~~	~~6/20/11~~	~~M.M~~	~~No~~	~~—~~
~~700593 (55-72)~~	~~<1~~	~~<2~~	~~6/20/11~~	~~M.M~~	~~No~~	~~—~~
995754	<1	>2	6/21/11	M.M	Yes	Yes @ 10:00
995727(124)	<1	>2	6/22/11	ES	NO	@ 10:00 am
995749	<1	<2				—
750						—
751						—
752						—
753						—
995763	<1	>2	6/23/11	ES	NO	@ 10:00 am
995773(789)						
995761(1-3)						
995805(1-2)	<1	<2	6/23/11	M.M	Yes	—
995806(1-7)						—
995807(1-3)						—
995810	>1	<2				—
995820 (1-13)	<1	<2	6/24/11	KK	YES	—
995824 (1-6)						—
995822 (1-2)						—
995830 (1-3)	<1	>2	6/27/11	KK	NO	yes @ 3:10 pm
995838(1-4)	<1	>2	6/28/11	KK	—	yes @ 8:20 am
995840 (1-3)	<1	>2	6/28/11	KK	—	yes @ 8:20 am
995853 (1)	<1	<2	6/29/11	KK	—	—
995863(1-3)	<1	>2			—	yes @ 8:30 am
995864	<1	>2			—	yes @ 8:30 am

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 995497

Date Delivered: 06/07/11 **Time:** 22:00 **By:** ☐Mail ☒Field Service ☐Client

1. Was a Chain of Custody received and signed? ☒Yes ☐No ☐N/A
2. Does Customer require an acknowledgement of the COC? ☐Yes ☐No ☒N/A
3. Are there any special requirements or notes on the COC? ☐Yes ☐No ☒N/A
4. If a letter was sent with the COC, does it match the COC? ☐Yes ☐No ☒N/A
5. Were all requested analyses understood and acceptable? ☒Yes ☐No ☐N/A
6. Were samples received in a chilled condition? ☒Yes ☐No ☐N/A
   Temperature (if yes)? 4 °C
7. Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)? ☒Yes ☐No ☐N/A
8. Were sample custody seals intact? ☐Yes ☐No ☒N/A
9. Does the number of samples received agree with COC? ☒Yes ☐No ☐N/A
10. Did sample labels correspond with the client ID's? ☒Yes ☐No ☐N/A
11. Did sample labels indicate proper preservation? ☒Yes ☐No ☐N/A
    Preserved (if yes) by: ☒Truesdail ☐Client
12. Were samples pH checked? pH = See C.O.C ☒Yes ☐No ☐N/A
13. Were all analyses within holding time at time of receipt? ☒Yes ☐No ☐N/A
    If not, notify Project Manager.
14. Have Project due dates been checked and accepted? ☒Yes ☐No ☐N/A
    Turn Around Time (TAT): ☐ RUSH ☒ Std
15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☒Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☐Other_____
16. Comments: _____
17. Sample Check-In completed by Truesdail Log-In/Receiving: Linda

ALERT! Level III QC

M:\Docs\FormBlank.doc

TRUESDAIL LABORATORIES, INC.
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14201 FRANKLIN AVENUE
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July 27, 2011

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000
Oakland, California 94612

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK IM3PLANT-EW-184, GROUNDWATER MONITORING PROJECT, TLI NO.: 995930

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-EW-184 groundwater-monitoring project for Total Dissolved and Hexavalent Chromium, Total Dissolved Solids, and Specific Conductivity. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, wet chemistry raw data, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data are under Section 5.

The samples were received and delivered with the chain of custody on July 5, 2011, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Per Mr. Shawn Duffy's request, the pH analysis was cancelled.

Samples for Total Dissolved Chromium were analyzed by method EPA 200.8 with the approval of Mr. Shawn Duffy of CH2M Hill.

No other violations or non-conformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

FOR Michael Ngo
Quality Assurance/Quality Control Officer

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 408401.01.DM

Laboratory No.: 995930
Date: July 27, 2011
Collected: July 5, 2011
Received: July 5, 2011

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Gautam Savani
SM 2540C	Total Dissolved Solids	Jenny Tankunakorn
EPA 200.8	Total Dissolved Chromium	Katia Kiarashpoor
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky
SM 3500-CrB	Hexavalent Chromium	Jenny Tankunakorn

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 995930
Date Received: July 5, 2011

Project Name: PG&E Topock Project
Project No.: 408401.01.DM
P.O. No.: 408401.01.DM

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
995930-001	PE-01-184	E120.1	NONE	7/5/2011	14:30	EC	5140	umhos/cm	2.00
995930-001	PE-01-184	E200.8	LABFLT	7/5/2011	14:30	Chromium	7.6	ug/L	1.0
995930-001	PE-01-184	E218.6	LABFLT	7/5/2011	14:30	Chromium, hexavalent	10.2	ug/L	0.20
995930-001	PE-01-184	SM2540C	NONE	7/5/2011	14:30	Total Dissolved Solids	3120	mg/L	125
995930-002	TW-03D-184	E120.1	NONE	7/5/2011	14:30	EC	8460	umhos/cm	2.00
995930-002	TW-03D-184	E200.8	LABFLT	7/5/2011	14:30	Chromium	953	ug/L	10.0
995930-002	TW-03D-184	SM2540C	NONE	7/5/2011	14:30	Total Dissolved Solids	5020	mg/L	125
995930-002	TW-03D-184	SM3500-CrB	LABFLT	7/5/2011	14:30	Chromium, hexavalent	1130	ug/L	100

ND: Non Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results:
Results below 0.01 will have two (2) significant figures.
Result above or equal to 0.01 will have three (3) significant figures.
Quality Control data will always have three (3) significant figures.

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REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Shawn Duffy
Project Name: PG&E Topock Project
P.O. Number: 408401.01.DM
Project Number: 408401.01.DM

Laboratory No. 995930

Printed 7/27/2011

Samples Received on 7/5/2011 10:30:00 PM

Field ID	Lab ID	Collected	Matrix
PE-01-184	995930-001	07/05/2011 14:30	Water
TW-03D-184	995930-002	07/05/2011 14:30	Water

Specific Conductivity - EPA 120.1 Batch 07EC11B 7/7/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
995930-001 Specific Conductivity	umhos/cm	07/07/2011	1.00	0.0380	2.00	5140
995930-002 Specific Conductivity	umhos/cm	07/07/2011	1.00	0.0380	2.00	8460

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 995931-003

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	42300	42400	0.236	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	709	706	100.	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	708	706	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	980.	998	98.2	90 - 110

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 408401.01.DM Printed 7/27/2011

Chrome VI by EPA 218.6 Batch 07CrH11A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
995930-001 Chromium, Hexavalent	ug/L	07/06/2011 16:30	1.05	0.0210	0.20	10.2

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 995932-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	1.05	2.90	2.89	0.311	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.04	5.00	101.	90 - 110

Matrix Spike — Lab ID = 995930-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	26.8	26.6(16.4)	101.	90 - 110

Matrix Spike — Lab ID = 995932-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	8.36	8.19(5.30)	103.	90 - 110

Matrix Spike — Lab ID = 995932-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	8.91	8.67(5.30)	104.	90 - 110

Matrix Spike — Lab ID = 995932-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	8.59	8.64(5.30)	99.1	90 - 110

Matrix Spike — Lab ID = 995932-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	7.90	8.32(5.30)	92.0	90 - 110

Matrix Spike — Lab ID = 995932-005

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.57	1.58(1.06)	99.4	90 - 110

Matrix Spike — Lab ID = 995932-006

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	7.81	8.01(5.30)	96.2	90 - 110

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Chromium, Hexavalent by SM 3500-Cr B

Batch 07CrH11A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
995930-002 Chromium, Hexavalent	ug/L	07/12/2011 17:48	10.0	43.5	100.	1130

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 995930-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	10.0	1150	1130	1.82	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	98.9	100.	98.9	90 - 110

Matrix Spike — Lab ID = 995930-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	10.0	2160	2130(1000)	103.	85 - 115

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	61.6	60.0	103.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	60.4	60.0	101.	90 - 110

Total Dissolved Solids by SM 2540 C

Batch 07TDS11B 7/7/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
995930-001 Total Dissolved Solids	mg/L	07/07/2011	1.00	0.434	125	3120
995930-002 Total Dissolved Solids	mg/L	07/07/2011	1.00	0.434	125	5020

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	1.00	ND

Duplicate — Lab ID = 995933-004

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	411	401	2.46	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	516	500.	103.	90 - 110

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 408401.01.DM Printed 7/27/2011

Metals by EPA 200.8, Dissolved

Batch 071111A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
995930-001 Chromium	ug/L	07/11/2011 15:36	5.00	0.110	1.0	7.6
995930-002 Chromium	ug/L	07/11/2011 16:02	50.0	1.10	10.0	953.

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate — Lab ID = 995930-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	5.00	7.57	7.64	0.947	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.7	50.0	99.3	85 - 115

Matrix Spike — Lab ID = 995930-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	248.	258.(250.)	95.9	75 - 125

Matrix Spike Duplicate — Lab ID = 995930-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	247.	258.(250.)	95.9	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.2	50.0	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.9	50.0	95.7	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.8	50.0	95.6	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.2	50.0	96.5	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.1	50.0	96.3	90 - 110

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 408401.01.DM Printed 7/27/2011

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.7	50.0	93.4	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.9	50.0	95.7	80 - 120

Serial Dilution Lab ID = 995931-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	25.0	781.	810.	3.66	0 - 10

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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E2 Conlon

Total Dissolved Solids by SM 2540 C

Calculations

Batch: 07TDS11B

Date Calculated: 7/11/11

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL , ppm	Reported Value, ppm	DF
BLANK	100	67.2310	67.2312	67.231	0.0002	No	0.0000	0.0	25.0	ND	1
995930-1	20	49.7176	49.7799	49.7799	0.0000	No	0.0623	3115.0	125.0	3115.0	1
995930-2	20	48.1850	48.2859	48.2855	0.0004	No	0.1005	5025.0	125.0	5025.0	1
995931-1	20	50.3837	50.4676	50.4674	0.0002	No	0.0837	4185.0	125.0	4185.0	1
995931-2	20	49.4166	49.5113	49.5109	0.0004	No	0.0943	4715.0	125.0	4715.0	1
995931-3	3	47.6197	47.7105	47.7101	0.0004	No	0.0904	30133.3	833.3	30133.3	1
995933-1	100	73.1413	73.2054	73.2054	0.0000	No	0.0641	641.0	25.0	641.0	1
995933-2	100	65.9571	65.9885	65.9885	0.0000	No	0.0314	314.0	25.0	314.0	1
995933-3	100	68.1785	68.2209	68.2205	0.0004	No	0.0420	420.0	25.0	420.0	1
995933-4	100	73.8279	73.8681	73.8680	0.0001	No	0.0401	401.0	25.0	401.0	1
995933-5	100	72.4704	72.5196	72.5192	0.0004	No	0.0488	488.0	25.0	488.0	1
995933-4D	100	76.2040	76.2455	76.2451	0.0004	No	0.0411	411.0	25.0	411.0	1
LCS	100	109.0957	109.1474	109.1473	0.0001	No	0.0516	516.0	25.0	516.0	1
995967	50	51.2503	51.3125	51.3123	0.0002	No	0.0620	1240.0	50.0	1240.0	1
995936-1	50	68.9039	68.9565	68.9564	0.0001	No	0.0525	1050.0	50.0	1050.0	1
995936-2	100	75.7664	75.8199	75.8196	0.0003	No	0.0532	532.0	25.0	532.0	1
995936-3	100	65.6296	65.6863	65.6863	0.0000	No	0.0567	567.0	25.0	567.0	1
995936-4	100	74.7140	74.7701	74.7698	0.0003	No	0.0558	558.0	25.0	558.0	1
995970-1	100	110.4365	110.4765	110.4761	0.0004	No	0.0396	396.0	25.0	396.0	1
995970-2	100	51.5077	51.5525	51.5523	0.0002	No	0.0446	446.0	25.0	446.0	1
995970-3	100	111.3748	111.41	111.41	0.0000	No	0.0352	352.0	25.0	352.0	1
995970-4	50	51.1304	51.2042	51.204	0.0002	No	0.0736	1472.0	50.0	1472.0	1
995970-5	100	108.6921	108.7288	108.7287	0.0001	No	0.0366	366.0	25.0	366.0	1
LCSD	100				0.0000	No	0.0000	0.0	25.0	ND	1

Calculation as follows:

$$\text{Filterable residue (TDS), mg/L} = \left(\frac{A-B}{C}\right) x\ 1\ 0^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

Analyst Printed Name | Analyst Signature | Reviewer Printed Name | Reviewer Signature

WetChem TDS_0810.xls

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 07TDS11B

Date Calculated: 7/11/11

Laboratory Number	EC	TDS/EC Ratio: 0.55-.9	Calculated TDS (EC*0.65)	Measured TDS / Calc TDS <1.3
995930-1	5140	0.61	3341	0.93
995930-2	8460	0.59	5499	0.91
995931-1	7090	0.59	4608.5	0.91
995931-2	7840	0.60	5096	0.93
995931-3	42400	0.71	27560	1.09
995933-1	999	0.64	649.35	0.99
995933-2	566	0.55	367.9	0.85
995933-3	706	0.59	458.9	0.92
995933-4	665	0.60	432.25	0.93
995933-5	862	0.57	560.3	0.87
995933-4D	665	0.62	432.25	0.95
LCS				
995967	1810	0.69	1176.5	1.05
995936-1	1807	0.58	1174.55	0.89
995936-2	969	0.55	629.85	0.84
995936-3	937	0.61	609.05	0.93
995936-4	843	0.66	547.95	1.02
995970-1	681	0.58	442.65	0.89
995970-2	723	0.62	469.95	0.95
995970-3	587	0.60	381.55	0.92
995970-4	2110	0.70	1371.5	1.07
995970-5	594	0.62	386.1	0.95

TRUESDAIL LABORATORIES, INC.
14201 Franklin Avenue, Tustin, CA 92780-7008
(714)730-6239 FAX: (714) 730-6462
www.truesdail.com

CHAIN OF CUSTODY RECORD

[IM3Plant-EW-184]

995930

COC Number

TURNAROUND TIME 10 Days

DATE 07/05/11 PAGE 1 OF 1

COMPANY: CH2M HILL /E2

PROJECT NAME: PG&E Topock IM3Plant-EW

PHONE: 530-229-3303 FAX: 530-339-3303

ADDRESS: 155 Grand Ave Ste 1000, Oakland, CA 94612

P.O. NUMBER: 408401.01.DM

SAMPLERS (SIGNATURE):

	SAMPLE I.D.	DATE	TIME	DESCRIPTION	Dissolved Cr (200.7) Lab filtered	Cr(VI) (3500-Cr B)	pH (150.0) EC (120.1)	TDS (160.1)	Cr(VI) (218.6)									NUMBER OF CONTAINERS	COMMENTS
-1	PE-01-184	07/05/11	1430	Ground water	X		X	X	X									~~4~~ 3	pH=6 (200.7)
-2	TW-03D-184	07/05/11	1430	Ground water	X	X	X	X										~~4~~ 3	
																		6	TOTAL NUMBER OF CONTAINERS

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	[signature]	[illegible]	OMI	7-5-11 1600
Signature (Received)	Rafael Davila	Rafael	T-L-I	7-5-11 16:30
Signature (Relinquished)	Rafael Davila	Rafael	T.L.I	7-5-11 22:30
Signature (Received)	Ludo	Shabunina	TLI	7/5/11 22:30
Signature (Relinquished)				
Signature (Received)				

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ 3.6°C °F

CUSTODY SEALED YES ☐ NO ☑

SPECIAL REQUIREMENTS:

042

Hexavalent Chromium

Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
07/06/11	995930-1	7.0	5.00	9.5	10:15	SB
07/06/11	995931-1	7.0	5.00	9.5	10:20	SB
	-2				10:25	
	-3				10:30	
07/06/11	995932-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
	-5					
	-6					
07/06/11	995933-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
	-5					
	-6					
07/06/11	995934-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
	-5					
	-6					
	-7					
	-8					

ah

Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest	Adjusted to pH<2 (Y/N)
995876 (5)	<1	<2	6/30/11	[illegible]	Y	—
995890	<1	>2	6/30/11	KF	NO	yes @ 1:45 pm
995897 (1-3)	<1	>2	↓	↓	↓	↓
995929	Solid		6/06/11	M.M	Yes	TTLC
995932 (1-6)	<1	<2	↓	↓	↓	—
995933 (1-5)	↓	↓	↓	↓	↓	—
995934 (1-8)	↓	↓	↓	↓	↓	—
995930 (1-2)	<1	>2	7/6/11	ES	No	yes @ 11:00 a.m
995931 (1-3)	<1	>2	↓	↓	↓	↓
995967	<1	<2	7/7/11	M.M	Yes	—
995968 (1-10)	↓	↓	↓	↓	↓	—
995969 (1-8)	↓	↓	↓	↓	↓	—
995970 (1-5)	↓	↓	↓	↓	↓	—
995971 (1-3)	↓	↓	↓	↓	↓	—
995936 (1-4)	<1	>2	7/7/11	KF	No	yes @ 2:30 pm
995939	<1	>2	↓	↓	↓	↓
995960 (1-3)	<1	>2	↓	↓	↓	↓
995979	<1	>2	↓	↓	↓	yes @ 2:20 pm
995990 (1-12)	<1	<2	7/8/11	M.M	Yes	—
995991 (1-4)	↓	↓			↓	—
995992 (1-7)						—
995993 (1-10)	↓	↓			↓	—
996012	<1	<2	7/11/11	KF	NO	NO
996008 (1-6)	<1	<2	7/11/11	M.M	Yes	—
996009 (1-6)	↓	↓			↓	—
996010 (1-5)	↓	↓			↓	—
995980	Solid	–	7/11/11	MM	Yes	—
995962	<1	<2	7/11/11	ES	NO	No
963	↓	↓	↓	↓	↓	↓
964						
965						
982						
983						
987						
996003						
004						
005						
012	↓	↓	↓	↓	↓	↓
996053 (1-7)	<1	<2	7/13/11	MM	Yes	—
996026 (1-6)	<1	<2	7/13/11	ES	NO	—
996051	<1	>2	↓	↓	↓	yes @ 11:00 a.m
996052 (1-7)	<1	<2	↓	↓	↓	—
996021 (1-4)	<1	>2	↓	↓	↓	yes @ 11:00 a.m
996045 (1-3)	↓	↓	↓	↓	↓	↓
996059-4	↓	<2	↓	↓	↓	—
996061	↓	↓	↓	↓	↓	—
062	↓	↓	↓	↓	↓	—
673 (7,8,9)	↓	>2	↓	↓	↓	yes @ 11:00
~~996127~~	<1	<2	7/11			

M.M 7/15

Hinkley

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 995930

Date Delivered: 07/05/11 **Time:** 22:30 **By:** ☐Mail ☒Field Service ☐Client

1. Was a Chain of Custody received and signed? ☒Yes ☐No ☐N/A
2. Does Customer require an acknowledgement of the COC? ☐Yes ☐No ☒N/A
3. Are there any special requirements or notes on the COC? ☐Yes ☐No ☒N/A
4. If a letter was sent with the COC, does it match the COC? ☐Yes ☐No ☒N/A
5. Were all requested analyses understood and acceptable? ☒Yes ☐No ☐N/A
6. Were samples received in a chilled condition? ☒Yes ☐No ☐N/A
   Temperature (if yes)? 3.6°C
7. Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)? ☒Yes ☐No ☐N/A
8. Were sample custody seals intact? ☐Yes ☐No ☒N/A
9. Does the number of samples received agree with COC? ☒Yes ☐No ☐N/A
10. Did sample labels correspond with the client ID's? ☒Yes ☐No ☐N/A
11. Did sample labels indicate proper preservation? ☐Yes ☐No ☒N/A
    Preserved (if yes) by: ☐Truesdail ☐Client
12. Were samples pH checked? pH = See C.O.C. ☒Yes ☐No ☐N/A
13. Were all analyses within holding time at time of receipt? ☒Yes ☐No ☐N/A
    If not, notify Project Manager.
14. Have Project due dates been checked and accepted? ☒Yes ☐No ☐N/A
    Turn Around Time (TAT): ☐ RUSH ☒ Std
15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☒Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☐Other _____
16. Comments: _____
17. Sample Check-In completed by Truesdail Log-In/Receiving: Linda Shabnuine

ALERT II Level III QC

M:\Discrp\FormBlank.doc

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www.truesdail.com

August 18, 2011

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000
Oakland, California 94612

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK IM3PLANT-EW-185, GROUNDWATER MONITORING PROJECT, TLI NO.: 996486

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-EW-185 groundwater-monitoring project for Total Dissolved and Hexavalent Chromium, Total Dissolved Solids, and Specific Conductivity. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, wet chemistry raw data, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data are under Section 5.

The samples were received and delivered with the chain of custody on August 2, 2011, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Per Mr. Shawn Duffy's request, the pH analysis was cancelled.

Samples for Total Dissolved Chromium were analyzed by method EPA 200.8 with the approval of Mr. Shawn Duffy of CH2M Hill.

No other violations or non-conformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

Michael Ngo
Quality Assurance/Quality Control Officer

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www.truesdail.com

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 408401.01.DM

Laboratory No.: **996486**
Date: August 18, 2011
Collected: August 2, 2011
Received: August 2, 2011

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Gautam Savani
SM 2540C	Total Dissolved Solids	Jenny Tankunakorn
EPA 200.8	Total Dissolved Chromium	Katia Kiarashpoor
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky
SM 3500-CrB	Hexavalent Chromium	Jenny Tankunakorn

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 996486
Date Received: August 2, 2011

Project Name: PG&E Topock Project
Project No.: 408401.01.DM
P.O. No.: 408401.01.DM

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996486-001	PE-01-185	E120.1	NONE	8/2/2011	13:30	EC	5090	umhos/cm	2.00
996486-001	PE-01-185	E200.8	LABFLT	8/2/2011	13:30	Chromium	8.8	ug/L	1.0
996486-001	PE-01-185	E218.6	LABFLT	8/2/2011	13:30	Chromium, hexavalent	9.0	ug/L	0.20
996486-001	PE-01-185	SM2540C	NONE	8/2/2011	13:30	Total Dissolved Solids	3060	mg/L	125
996486-002	TW-03D-185	E120.1	NONE	8/2/2011	13:30	EC	8440	umhos/cm	2.00
996486-002	TW-03D-185	E200.8	LABFLT	8/2/2011	13:30	Chromium	948	ug/L	4.0
996486-002	TW-03D-185	SM2540C	NONE	8/2/2011	13:30	Total Dissolved Solids	5120	mg/L	125
996486-002	TW-03D-185	SM3500-CrB	LABFLT	8/2/2011	13:30	Chromium, hexavalent	991	ug/L	100

ND: Non Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results:
Results below 0.01 will have two (2) significant figures.
Result above or equal to 0.01 will have three (3) significant figures.
Quality Control data will always have three (3) significant figures.

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REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Shawn Duffy
Project Name: PG&E Topock Project
P.O. Number: 408401.01.DM
Project Number: 408401.01.DM

Laboratory No. 996486

Printed 8/18/2011

Samples Received on 8/2/2011 9:30:00 PM

Field ID	Lab ID	Collected	Matrix
PE-01-185	996486-001	08/02/2011 13:30	Water
TW-03D-185	996486-002	08/02/2011 13:30	Water

Specific Conductivity - EPA 120.1 Batch 08EC11B 8/5/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996486-001 Specific Conductivity	umhos/cm	08/05/2011	1.00	0.0380	2.00	5090
996486-002 Specific Conductivity	umhos/cm	08/05/2011	1.00	0.0380	2.00	8440

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 996487-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	7800	7800	0.00	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	703	706	99.6	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	705	706	99.8	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	705	706	99.8	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	983	998	98.5	90 - 110

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Chrome VI by EPA 218.6

Batch 08CrH11H

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996486-001 Chromium, Hexavalent	ug/L	08/08/2011 09:17	1.05	0.0260	0.20	9.0

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 996487-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	105	885.	887	0.171	0 - 20

Duplicate — Lab ID = 996573-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	24.9	24.9	0.190	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.02	5.00	100.	90 - 110

Matrix Spike — Lab ID = 996486-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	19.6	19.6(10.6)	100.	90 - 110

Matrix Spike — Lab ID = 996487-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	6.69	6.73(5.25)	99.3	90 - 110

Matrix Spike — Lab ID = 996487-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	105	1930	1940(1050)	99.0	90 - 110

Matrix Spike — Lab ID = 996517-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.14	1.14(1.06)	99.7	90 - 110

Matrix Spike — Lab ID = 996517-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.16	1.14(1.06)	102.	90 - 110

Matrix Spike — Lab ID = 996517-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.59	1.65(1.06)	94.4	90 - 110

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MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.3	10.0	103.	95 - 105

Chromium, Hexavalent by SM 3500-Cr B Batch 08CrH11A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996486-002 Chromium, Hexavalent	ug/L	08/08/2011 17:18	10.0	43.5	100.	991.

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 996486-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	10.0	991.	991	0.0303	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	95.5	100.	95.5	90 - 110

Matrix Spike — Lab ID = 996486-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	10.0	2000	1990(1000)	100.	85 - 115

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	55.5	60.0	92.5	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	57.9	60.0	96.5	90 - 110

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 408401.01.DM Printed 8/18/2011

Total Dissolved Solids by SM 2540 C Batch 08TDS11E 8/8/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996486-001 Total Dissolved Solids	mg/L	08/08/2011	1.00	0.434	125	3060
996486-002 Total Dissolved Solids	mg/L	08/08/2011	1.00	0.434	125	5120

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	1.00	ND

Duplicate Lab ID = 996460-006

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	575	586	1.89	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	499	500.	99.8	90 - 110

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 408401.01.DM Printed 8/18/2011

Metals by EPA 200.8, Dissolved

Batch 080511A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996486-001 Chromium	ug/L	08/05/2011 13:10	5.00	0.110	1.0	8.8
996486-002 Chromium	ug/L	08/05/2011 14:18	20.0	0.440	4.0	948.

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate — Lab ID = 996486-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	5.00	9.04	8.79	2.82	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.9	50.0	99.7	85 - 115

Matrix Spike — Lab ID = 996486-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	255	259.(250.)	98.5	75 - 125

Matrix Spike Duplicate — Lab ID = 996486-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	256.	259.(250.)	98.7	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.8	50.0	99.5	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.4	50.0	101.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.0	50.0	100.	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 408401.01.DM

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.9	50.0	97.8	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.8	50.0	97.5	80 - 120

Serial Dilution — Lab ID = 996486-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	100	959.	948	1.12	0 - 10

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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EZ Condon

Total Dissolved Solids by SM 2540 C

Calculations

Batch: 08TDS11E

Date Calculated: 8/10/11

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL, ppm	Reported Value, ppm	DF
BLANK	100	76.5234	76.5238	76.5235	0.0003	No	0.0001	1.0	25.0	ND	1
996418-2	200	110.9556	110.9805	110.9805	0.0000	No	0.0249	124.5	12.5	124.5	1
996418-4	100	102.7266	102.7535	102.7531	0.0004	No	0.0265	265.0	25.0	265.0	1
996421-1	100	112.8350	112.8773	112.8772	0.0001	No	0.0422	422.0	25.0	422.0	1
996421-2	100	111.1380	111.1778	111.1777	0.0001	No	0.0397	397.0	25.0	397.0	1
996421-3	50	92.0996	92.131	92.1307	0.0003	No	0.0311	622.0	50.0	622.0	1
996421-4	50	110.6523	110.737	110.7367	0.0003	No	0.0844	1688.0	50.0	1688.0	1
996422-3	50	68.2238	68.2646	68.2642	0.0004	No	0.0404	808.0	50.0	808.0	1
996422-4	50	67.7787	67.8327	67.8325	0.0002	No	0.0538	1076.0	50.0	1076.0	1
996438-16	50	112.8992	112.9401	112.94	0.0001	No	0.0408	816.0	50.0	816.0	1
996460-6	100	105.3845	105.4435	105.4431	0.0004	No	0.0586	586.0	25.0	586.0	1
996460-6D	100	121.7167	121.7745	121.7742	0.0003	No	0.0575	575.0	25.0	575.0	1
LCS	100	105.2884	105.3384	105.3383	0.0001	No	0.0499	499.0	25.0	499.0	1
996483-1	50	50.4137	50.4726	50.4724	0.0002	No	0.0587	1174.0	50.0	1174.0	1
996483-2	50	49.8350	49.913	49.9128	0.0002	No	0.0778	1556.0	50.0	1556.0	1
996483-3	50	51.2662	51.3624	51.3621	0.0003	No	0.0959	1918.0	50.0	1918.0	1
996483-4	50	47.9090	47.9436	47.9433	0.0003	No	0.0343	686.0	50.0	686.0	1
996483-5	50	49.4187	49.5362	49.536	0.0002	No	0.1173	2346.0	50.0	2346.0	1
996486-1	20	50.1286	50.1897	50.1897	0.0000	No	0.0611	3055.0	125.0	3055.0	1
996486-2	20	49.6154	49.7179	49.7179	0.0000	No	0.1025	5125.0	125.0	5125.0	1
996499-5	100	112.3089	112.3485	112.3482	0.0003	No	0.0393	393.0	25.0	393.0	1
996599-1	50	72.4708	72.5428	72.5428	0.0000	No	0.0720	1440.0	50.0	1440.0	1
996599-2	50	74.2327	74.3066	74.3066	0.0000	No	0.0739	1478.0	50.0	1478.0	1
LCSD											1

Calculation as follows:

$$\text{Filterable residue (TDS), mg/L} = \left(\frac{A-B}{C}\right) x\ 10^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

Analyst Printed Name | Analyst Signature | Reviewer Printed Name | Reviewer Signature

WetChem TDS_0810.xls

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 08TDS11E

Date Calculated: 8/10/11

Laboratory Number	EC	TDS/EC Ratio: 0.55-.9	Calculated TDS (EC*0.65)	Measured TDS / Calc TDS <1.3
996418-2	179	0.70	116.35	1.07
996418-4	501	0.53	325.65	0.81
996421-1	633	0.67	411.45	1.03
996421-2	630	0.63	409.5	0.97
996421-3	1017	0.61	661.05	0.94
996421-4	2470	0.68	1605.5	1.05
996422-3	1290	0.63	838.5	0.96
996422-4	1695	0.63	1101.75	0.98
996438-16	1417	0.58	921.05	0.89
996460-6	943	0.62	612.95	0.96
996460-6D	943	0.61	612.95	0.94
LCS				
996483-1	1740	0.67	1131	1.04
996483-2	2440	0.64	1586	0.98
996483-3	2710	0.71	1761.5	1.09
996483-4	1100	0.62	715	0.96
996483-5	3360	0.70	2184	1.07
996486-1	5080	0.60	3302	0.93
996486-2	8450	0.61	5492.5	0.93
996499-5	600	0.66	390	1.01
996599-1	2230	0.65	1449.5	0.99
996599-2	2220	0.67	1443	1.02

TRUESDAIL LABORATORIES, INC.
14201 Franklin Avenue, Tustin, CA 92780-7008
(714)730-6239 FAX: (714) 730-6462
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CHAIN OF CUSTODY RECORD

[IM3Plant-EW-185]

996486

COC Number

TURNAROUND TIME 10 Days

DATE 08/02/11 PAGE 1 OF 1

COMPANY: CH2M HILL /E2

PROJECT NAME: PG&E Topock IM3Plant-EW

PHONE: 530-229-3303 FAX: 530-339-3303

ADDRESS: 155 Grand Ave Ste 1000, Oakland, CA 94612

P.O. NUMBER: 408401.01.DM

SAMPLERS (SIGNATURE

	SAMPLE I.D.	DATE	TIME	DESCRIPTION	Dissolved Cr (200.7) Lab filtered	Cr(VI) (3500-Cr B)	pH (150.0) EC (120.1)	TDS (160.1)	Cr(VI) (218.6)										NUMBER OF CONTAINERS	COMMENTS
-1	PE-01-185	08/02/11	13:30	Ground water	X		X	X	X										4	pH-6 (200.7)
-2	TW-03D-185	08/02/11	13:30	Ground water	X	X	X	X											4	
																			8	TOTAL NUMBER OF CONTAINERS

ALERT !!
Level III QC

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Relinquished		Ron Phelps	OMI	8-2-11 15:30
Received	Rafael Davila	Rafael	T-L-I	8-2-11 15:30
Relinquished	Rafael Davila	Rafael	T-L-I	8-2-11 21:30
Received	Luda	Shabunina	TLI	8/2/11 21:30
Relinquished				
Received				

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ 3.8°C °F

CUSTODY SEALED YES ☐ NO ☑

SPECIAL REQUIREMENTS:

For Sample Conditions See Form Attached

042

Hexavalent Chromium

Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
08/02/11	996424-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
08/03/11	996482-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
	-5					
	-6					
	-7					
	-8					
	-9					
08/03/11	996483-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
	-5					
08/03/11	996484-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
	-5					
	-6					
08/03/11	996485-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
08/03/11	996486-1	7.0	5.00	9.5	10:00	SB
08/03/11	996487-1	7.0	5.00	9.5	9:55	SB
	-2				10:05	

ab

Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest	Adjusted to pH<2 (Y/N)
996418(1,2,4	<1	>2	8/2/11	ES	No	yes @ 11:30 a.m
996419(1-8)	↓	↓	↓	↓	↓	↓
996457	<1	>2	08/03/11	M.M	Yes	—
996458		↓	↓	↓	↓	—
996481		↓	↓	↓	↓	—
996482(1-8)	<1	<2	↓	↓	↓	—
996483 (1-5)	↓	↓	↓	↓	↓	—
996484(1-6)	↓	↓	↓	↓	↓	—
996485(1-3)	↓	↓	↓	↓	↓	—
996486(1-2)	<1	>2	8/3/11	ES	NO	yes @ 1:30 p.m
996487(1-2)	↓	↓	↓	↓	↓	↓
996517(1,6,8,10)	<1	<2	08/04/11	M.M	Yes	—
996518(1-9)	↓	↓	↓	↓	↓	—
996539(9)	<1	<2	08/05/11	MM	Yes	—
996540(1-9)	↓	↓	↓	↓	↓	—
996541(1-8,10)	↓	↓	↓	↓	↓	—
996573	↓	↓	↓	↓	↓	—
996574(1,3,4,5)	<1	<2	08/08/11	M.M	Yes	—
996575(1-5)	↓	↓	↓	↓	↓	—
996599(1-2	<1	<2	08/09/11	M.M	Yes	—
996600(1,3-6)	↓	↓	↓	↓	↓	—
996601(1-3)	↓	↓	↓	↓	↓	—
996602(1-5)	↓	↓	↓	↓	↓	—
996603(1-7)	↓	↓	↓	↓	↓	—
910538-1	<1	<2	8/5/11	KK	yes	—
996620(1-7)	<1	>2	8/9/11	ES	No	yes @ 3:30
621(1-8)	↓	↓	↓	↓	↓	↓
622(1-7)	↓	↓	↓	↓	↓	↓
996594(1-24)	<1	>2	↓	↓	↓	↓
996643(1-3)	<1	>2	8/10/11	ES	NO	yes @ 11:00 a.m
996644(1-4)	↓	↓	↓	↓	↓	↓
996646(1-2)	↓	↓	↓	↓	↓	↓
996649(1-9)	<1	<2	8/10/11	MM	Yes	—
996650(1-9)	↓	↓	↓	↓	↓	—
996651(1-9,11)	↓	↓	↓	↓	↓	—
996652	<1	>2	8/10/11	ES	NO	yes @ 3:00 pm
996671(1-5)	<1	<2	8/11/11	M.M	Yes	—
996672(1-8,9,10)	↓	↓	↓	↓	↓	—
996694(1-8,9,11)	<1	<2	8/12/11	M.M	Yes	—
996695(1-7)	↓	↓	↓	↓	↓	—
996696(1-3)	↓	↓	↓	↓	↓	—
996720(1-6)	↓	↓	↓	↓	↓	—
996679(1-5)	SCUM	-	8/12/11	M.M	yes	TTLC
996680	↓	-	↓	↓	↓	↓
996717(1-4)	↓	-	↓	↓	↓	↓
996741(1-4)	<1	<2	8/16/11	M.M	Yes	—
996777(1-8)	<1	↓	8/17/11	M.M	Yes	—
996778(1-11)	↓	↓	↓	↓	↓	—
996795	↓	↓	↓	↓	↓	—

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 996496

Date Delivered: 08/02/11 **Time:** 21:30 **By:** ☐Mail ☒Field Service ☐Client

1. Was a Chain of Custody received and signed? ☒Yes ☐No ☐N/A
2. Does Customer require an acknowledgement of the COC? ☐Yes ☐No ☒N/A
3. Are there any special requirements or notes on the COC? ☐Yes ☐No ☒N/A
4. If a letter was sent with the COC, does it match the COC? ☐Yes ☐No ☒N/A
5. Were all requested analyses understood and acceptable? ☒Yes ☐No ☐N/A
6. Were samples received in a chilled condition? ☒Yes ☐No ☐N/A
   Temperature (if yes)? 3.8°C
7. Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)? ☒Yes ☐No ☐N/A
8. Were sample custody seals intact? ☐Yes ☐No ☒N/A
9. Does the number of samples received agree with COC? ☒Yes ☐No ☐N/A
10. Did sample labels correspond with the client ID's? ☒Yes ☐No ☐N/A
11. Did sample labels indicate proper preservation? ☐Yes ☐No ☒N/A
    Preserved (if yes) by: ☐Truesdail ☐Client
12. Were samples pH checked? pH = See c.o.c. ☒Yes ☐No ☐N/A
13. Were all analyses within holding time at time of receipt? ☒Yes ☐No ☐N/A
    If not, notify Project Manager.
14. Have Project due dates been checked and accepted? ☒Yes ☐No ☐N/A
    Turn Around Time (TAT): ☐ RUSH ☒ Std
15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☒Ground Water ☐Waste Water
    ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☐Other_____
16. Comments: _____
17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Linda Shabenine

ALERT !! Level III QC

M:\Discrp.FormBlank.doc

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www.truesdail.com

September 27, 2011

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000
Oakland, California 94612

Dear Mr. Duffy:

SUBJECT: REVISED CASE NARRATIVE PG&E TOPOCK 2011-RMP-178, SURFACEWATER MONITORING PROJECT, TLI NO.: 996913

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2011-RMP-178 surfacewater-monitoring project. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data, and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data are under Section 5.

The samples were received and delivered with the chain of custody on August 23, 2011, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Due to the early sampling time and late arrival of the samples, samples C-I-3-D-178, C-I-3-S-178, C-R22A-D-178, C-R22A-S-178, C-TAZ-D-178, C-TAZ-S-178, MW-101-178, R63-178, SW1-178, and SW2-178 for pH analysis by SM 4500-H B were analyzed past the method specified holding time. Mr. Shawn Duffy approved the analysis.

Total Dissolved Chromium, for samples C-MAR-D-178 and C-TAZ-S-178, was re-digested (9/6/11) and re-analyzed (9/9/11 - 9/10/11) for each of the three sample containers (bottles A, B, C) provided per site due to the discrepancy between the Total Dissolved Chromium and Hexavalent Chromium results. The results for all re-digested samples were ND<1.0 ug/L. The original digested samples were also re-analyzed for comparison. The results from the original run and the re-analysis of the original digestate were 1.3 and 1.1 ug/L for C-MAR-D-178 and 1.0 and 1.1 ug/L for C-TAZ-S-178. After discussing the results with Mr. Shawn Duffy, the results from the re-digested samples are reported. The detected results in the original run were most likely due to contamination during sample preparation/digestion. See the attached table for more information.

No other violations or non-conformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Sean Card

Mona Nassimi
Manager, Analytical Services

Michael Ngo
Quality Assurance/Quality Control Officer

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		Total Dissolved Chromium									
	Digestion Date	08/25/11		09/06/11		09/06/11		09/06/11		08/25/11	
	Bottle #	Bottle A		Bottle A		Bottle B		Bottle C		Bottle A	
	LR Type	---		RE (second digestion)		RE1 (third digestion)		RE2 (fourth digestion)		RE3	
		Results	Analysis Date / Time	Results	Analysis Date / Time	Results	Analysis Date / Time	Results	Analysis Date / Time	Results	Analysis Date / Time
	Units	ug/L		ug/L		ug/L		ug/L		ug/L	
996913-1	C-BNS-D-178	ND<1.0	8/31/11 12:24	---	---	---	---	---	---	---	---
996913-2	C-I-3-D-178	ND<1.0	8/31/11 13:17	---	---	---	---	---	---	---	---
996913-3	C-I-3-S-178	ND<1.0	8/31/11 13:25	---	---	---	---	---	---	---	---
996913-4	C-MAR-D-178	1.3	8/31/11 13:33	ND<1.0	9/9/11 19:01	ND<1.0	9/10/11 0:49	ND<1.0	9/10/11 0:57	1.1	9/12/11 12:31
996913-5	C-MAR-S-178	ND<1.0	8/31/11 13:40	---	---	---	---	---	---	---	---
996913-6	C-R22A-D-178	ND<1.0	8/31/11 13:48	---	---	---	---	---	---	---	---
996913-7	C-R22A-S-178	ND<1.0	8/31/11 13:55	---	---	---	---	---	---	---	---
996913-8	C-R27-D-178	ND<1.0	8/31/11 14:18	---	---	---	---	---	---	---	---
996913-9	C-R27-S-178	ND<1.0	8/31/11 14:30	---	---	---	---	---	---	---	---
996913-10	C-TAZ-D-178	ND<1.0	8/31/11 14:37	---	---	---	---	---	---	---	---
996913-11	C-TAZ-S-178	1.0	8/31/11 15:15	ND<1.0	9/9/11 19:31	ND<1.0	9/10/11 1:05	ND<1.0	9/10/11 1:12	1.1	9/12/11 12:39
996913-12	MW-101-178	ND<1.0	8/31/11 15:24	---	---	---	---	---	---	---	---
996913-13	R-28-178	ND<1.0	8/31/11 15:32	---	---	---	---	---	---	---	---
996913-14	R63-178	ND<1.0	8/31/11 15:39	---	---	---	---	---	---	---	---
996913-15	SW1-178	ND<1.0	8/31/11 15:47	---	---	---	---	---	---	---	---
996913-16	SW2-178	ND<1.0	8/31/11 15:55	---	---	---	---	---	---	---	---

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Event 2010-RMP-178 Cr by SW 6020, Surfacewater Samples

Samples field filtered unless otherwise noted

Sample ID	Initial pH	pH adjustment needed?	Amount of additional acid needed	Final pH	Comments
C-BNS-D-178	2.00	No			
C-I-3-D-178	2.00	No			
C-I-3-S-178	2.00	No			
C-MAR-D-178	2.00	No			
C-MAR-S-178	2.00	No			
C-R22A-D-178	2.00	No			
C-R22A-S-178	2.00	No			
C-R27-D-178	2.00	No			
C-R27-S-178	2.00	No			
C-TAZ-D-178	2.00	No			
C-TAZ-S-178	2.00	No			
MW-101-178	2.00	No			
R-28-178	2.00	No			
R63-178	2.00	No			
SW1-178	2.00	No			
SW2-178	2.00	No			

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Event 2010-RMP-178 Cr (VI) by EPA 218.6, Surfacewater Samples

Samples field filtered unless otherwise noted

Sample ID	Initial pH	pH adjustment needed?	Amount of additional buffer needed	Final pH	Comments
C-BNS-D-178	9.50	No			
C-I-3-D-178	9.50	No			
C-I-3-S-178	9.50	No			
C-MAR-D-178	9.50	No			
C-MAR-S-178	9.50	No			
C-R22A-D-178	9.50	No			
C-R22A-S-178	9.50	No			
C-R27-D-178	9.50	No			
C-R27-S-178	9.50	No			
C-TAZ-D-178	9.50	No			
C-TAZ-S-178	9.50	No			
MW-101-178	9.50	No			
R-28-178	9.50	No			
R63-178	9.50	No			
SW1-178	9.50	No			
SW2-178	9.50	No			

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 996913
Date Received: August 23, 2011

Project Name: PG&E Topock Project
Project No.: 405681.MP.02.RM
P.O. No.: 405681.MP.02.RM

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996913-001	C-BNS-D-178	E120.1	NONE	8/23/2011	12:46	EC	944	umhos/cm	2.00
996913-001	C-BNS-D-178	E218.6	FLDFLT	8/23/2011	12:46	Chromium, hexavalent	ND	ug/L	0.20
996913-001	C-BNS-D-178	E300	NONE	8/23/2011	12:46	Nitrate as N	ND	mg/L	0.500
996913-001	C-BNS-D-178	SM2320B	NONE	8/23/2011	12:46	Alkalinity	125	mg/L	5.00
996913-001	C-BNS-D-178	SM2320B	NONE	8/23/2011	12:46	Bicarbonate	125	mg/L	5.00
996913-001	C-BNS-D-178	SM2320B	NONE	8/23/2011	12:46	Carbonate	ND	mg/L	5.00
996913-001	C-BNS-D-178	SM2540D	NONE	8/23/2011	12:46	Total Suspended Solids	ND	mg/L	10.0
996913-001	C-BNS-D-178	SM4500HB	NONE	8/23/2011	12:46	PH	8.03	pH	4.00
996913-001	C-BNS-D-178	SW6010B	NONE-digested	8/23/2011	12:46	Iron	ND	ug/L	20.0
996913-001	C-BNS-D-178	SW6010B	FLDFLT-digested	8/23/2011	12:46	Iron	ND	ug/L	20.0
996913-001	C-BNS-D-178	SW6020	FLDFLT-digested	8/23/2011	12:46	Arsenic	2.5	ug/L	1.0
996913-001	C-BNS-D-178	SW6020	FLDFLT-digested	8/23/2011	12:46	Chromium	ND	ug/L	1.0
996913-001	C-BNS-D-178	SW6020	FLDFLT-digested	8/23/2011	12:46	Manganese	ND	ug/L	10.0
996913-001	C-BNS-D-178	SW6020	FLDFLT-digested	8/23/2011	12:46	Molybdenum	ND	ug/L	10.0
996913-001	C-BNS-D-178	SW6020	FLDFLT-digested	8/23/2011	12:46	Selenium	ND	ug/L	10.0
996913-002	C-I-3-D-178	E120.1	NONE	8/23/2011	10:42	EC	936	umhos/cm	2.00
996913-002	C-I-3-D-178	E218.6	FLDFLT	8/23/2011	10:42	Chromium, hexavalent	ND	ug/L	0.20
996913-002	C-I-3-D-178	E300	NONE	8/23/2011	10:42	Nitrate as N	ND	mg/L	0.500
996913-002	C-I-3-D-178	SM2320B	NONE	8/23/2011	10:42	Alkalinity	123	mg/L	5.00
996913-002	C-I-3-D-178	SM2320B	NONE	8/23/2011	10:42	Bicarbonate	123	mg/L	5.00
996913-002	C-I-3-D-178	SM2320B	NONE	8/23/2011	10:42	Carbonate	ND	mg/L	5.00
996913-002	C-I-3-D-178	SM2540D	NONE	8/23/2011	10:42	Total Suspended Solids	ND	mg/L	10.0
996913-002	C-I-3-D-178	SM4500HB	NONE	8/23/2011	10:42	PH	8.04 J	pH	4.00

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Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996913-002	C-I-3-D-178	SW6010B	NONE-digested	8/23/2011	10:42	Iron	39.1	ug/L	20.0
996913-002	C-I-3-D-178	SW6010B	FLDFLT-digested	8/23/2011	10:42	Iron	ND	ug/L	20.0
996913-002	C-I-3-D-178	SW6020	FLDFLT-digested	8/23/2011	10:42	Arsenic	2.6	ug/L	1.0
996913-002	C-I-3-D-178	SW6020	FLDFLT-digested	8/23/2011	10:42	Chromium	ND	ug/L	1.0
996913-002	C-I-3-D-178	SW6020	FLDFLT-digested	8/23/2011	10:42	Manganese	ND	ug/L	10.0
996913-002	C-I-3-D-178	SW6020	FLDFLT-digested	8/23/2011	10:42	Molybdenum	ND	ug/L	10.0
996913-002	C-I-3-D-178	SW6020	FLDFLT-digested	8/23/2011	10:42	Selenium	ND	ug/L	10.0
996913-003	C-I-3-S-178	E120.1	NONE	8/23/2011	10:59	EC	945	umhos/cm	2.00
996913-003	C-I-3-S-178	E218.6	FLDFLT	8/23/2011	10:59	Chromium, hexavalent	ND	ug/L	0.20
996913-003	C-I-3-S-178	E300	NONE	8/23/2011	10:59	Nitrate as N	ND	mg/L	0.500
996913-003	C-I-3-S-178	SM2320B	NONE	8/23/2011	10:59	Alkalinity	116	mg/L	5.00
996913-003	C-I-3-S-178	SM2320B	NONE	8/23/2011	10:59	Bicarbonate	116	mg/L	5.00
996913-003	C-I-3-S-178	SM2320B	NONE	8/23/2011	10:59	Carbonate	ND	mg/L	5.00
996913-003	C-I-3-S-178	SM2540D	NONE	8/23/2011	10:59	Total Suspended Solids	ND	mg/L	10.0
996913-003	C-I-3-S-178	SM4500HB	NONE	8/23/2011	10:59	PH	8.02 J	pH	4.00
996913-003	C-I-3-S-178	SW6010B	NONE-digested	8/23/2011	10:59	Iron	22.6	ug/L	20.0
996913-003	C-I-3-S-178	SW6010B	FLDFLT-digested	8/23/2011	10:59	Iron	ND	ug/L	20.0
996913-003	C-I-3-S-178	SW6020	FLDFLT-digested	8/23/2011	10:59	Arsenic	2.4	ug/L	1.0
996913-003	C-I-3-S-178	SW6020	FLDFLT-digested	8/23/2011	10:59	Chromium	ND	ug/L	1.0
996913-003	C-I-3-S-178	SW6020	FLDFLT-digested	8/23/2011	10:59	Manganese	ND	ug/L	10.0
996913-003	C-I-3-S-178	SW6020	FLDFLT-digested	8/23/2011	10:59	Molybdenum	ND	ug/L	10.0
996913-003	C-I-3-S-178	SW6020	FLDFLT-digested	8/23/2011	10:59	Selenium	ND	ug/L	10.0
996913-004	C-MAR-D-178	E120.1	NONE	8/23/2011	14:34	EC	970	umhos/cm	2.00
996913-004	C-MAR-D-178	E218.6	FLDFLT	8/23/2011	14:34	Chromium, hexavalent	ND	ug/L	0.20
996913-004	C-MAR-D-178	E300	NONE	8/23/2011	14:34	Nitrate as N	ND	mg/L	0.500
996913-004	C-MAR-D-178	SM2320B	NONE	8/23/2011	14:34	Alkalinity	125	mg/L	5.00
996913-004	C-MAR-D-178	SM2320B	NONE	8/23/2011	14:34	Bicarbonate	125	mg/L	5.00
996913-004	C-MAR-D-178	SM2320B	NONE	8/23/2011	14:34	Carbonate	ND	mg/L	5.00
996913-004	C-MAR-D-178	SM2540D	NONE	8/23/2011	14:34	Total Suspended Solids	19.3	mg/L	10.0
996913-004	C-MAR-D-178	SM4500HB	NONE	8/23/2011	14:34	PH	7.89	pH	4.00
996913-004	C-MAR-D-178	SW6010B	NONE-digested	8/23/2011	14:34	Iron	857	ug/L	20.0
996913-004	C-MAR-D-178	SW6010B	FLDFLT-digested	8/23/2011	14:34	Iron	ND	ug/L	20.0
996913-004	C-MAR-D-178	SW6020	FLDFLT-digested	8/23/2011	14:34	Arsenic	2.7	ug/L	1.0
996913-004	C-MAR-D-178	SW6020	FLDFLT-digested	8/23/2011	14:34	Chromium	ND	ug/L	1.0
996913-004	C-MAR-D-178	SW6020	FLDFLT-digested	8/23/2011	14:34	Manganese	15.5	ug/L	10.0
996913-004	C-MAR-D-178	SW6020	FLDFLT-digested	8/23/2011	14:34	Molybdenum	ND	ug/L	10.0
996913-004	C-MAR-D-178	SW6020	FLDFLT-digested	8/23/2011	14:34	Selenium	ND	ug/L	10.0

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Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996913-005	C-MAR-S-178	E120.1	NONE	8/23/2011	14:47	EC	970	umhos/cm	2.00
996913-005	C-MAR-S-178	E218.6	FLDFLT	8/23/2011	14:47	Chromium, hexavalent	ND	ug/L	0.20
996913-005	C-MAR-S-178	E300	NONE	8/23/2011	14:47	Nitrate as N	ND	mg/L	0.500
996913-005	C-MAR-S-178	SM2320B	NONE	8/23/2011	14:47	Alkalinity	125	mg/L	5.00
996913-005	C-MAR-S-178	SM2320B	NONE	8/23/2011	14:47	Bicarbonate	125	mg/L	5.00
996913-005	C-MAR-S-178	SM2320B	NONE	8/23/2011	14:47	Carbonate	ND	mg/L	5.00
996913-005	C-MAR-S-178	SM2540D	NONE	8/23/2011	14:47	Total Suspended Solids	13.6	mg/L	10.0
996913-005	C-MAR-S-178	SM4500HB	NONE	8/23/2011	14:47	PH	7.92	pH	4.00
996913-005	C-MAR-S-178	SW6010B	NONE-digested	8/23/2011	14:47	Iron	730	ug/L	20.0
996913-005	C-MAR-S-178	SW6010B	FLDFLT-digested	8/23/2011	14:47	Iron	ND	ug/L	20.0
996913-005	C-MAR-S-178	SW6020	FLDFLT-digested	8/23/2011	14:47	Arsenic	2.7	ug/L	1.0
996913-005	C-MAR-S-178	SW6020	FLDFLT-digested	8/23/2011	14:47	Chromium	ND	ug/L	1.0
996913-005	C-MAR-S-178	SW6020	FLDFLT-digested	8/23/2011	14:47	Manganese	15.4	ug/L	10.0
996913-005	C-MAR-S-178	SW6020	FLDFLT-digested	8/23/2011	14:47	Molybdenum	ND	ug/L	10.0
996913-005	C-MAR-S-178	SW6020	FLDFLT-digested	8/23/2011	14:47	Selenium	ND	ug/L	10.0
996913-006	C-R22A-D-178	E120.1	NONE	8/23/2011	12:01	EC	946	umhos/cm	2.00
996913-006	C-R22A-D-178	E218.6	FLDFLT	8/23/2011	12:01	Chromium, hexavalent	ND	ug/L	0.20
996913-006	C-R22A-D-178	E300	NONE	8/23/2011	12:01	Nitrate as N	ND	mg/L	0.500
996913-006	C-R22A-D-178	SM2320B	NONE	8/23/2011	12:01	Alkalinity	110	mg/L	5.00
996913-006	C-R22A-D-178	SM2320B	NONE	8/23/2011	12:01	Bicarbonate	110	mg/L	5.00
996913-006	C-R22A-D-178	SM2320B	NONE	8/23/2011	12:01	Carbonate	ND	mg/L	5.00
996913-006	C-R22A-D-178	SM2540D	NONE	8/23/2011	12:01	Total Suspended Solids	ND	mg/L	10.0
996913-006	C-R22A-D-178	SM4500HB	NONE	8/23/2011	12:01	PH	8.10 J	pH	4.00
996913-006	C-R22A-D-178	SW6010B	NONE-digested	8/23/2011	12:01	Iron	23.6	ug/L	20.0
996913-006	C-R22A-D-178	SW6010B	FLDFLT-digested	8/23/2011	12:01	Iron	ND	ug/L	20.0
996913-006	C-R22A-D-178	SW6020	FLDFLT-digested	8/23/2011	12:01	Arsenic	2.6	ug/L	1.0
996913-006	C-R22A-D-178	SW6020	FLDFLT-digested	8/23/2011	12:01	Chromium	ND	ug/L	1.0
996913-006	C-R22A-D-178	SW6020	FLDFLT-digested	8/23/2011	12:01	Manganese	ND	ug/L	10.0
996913-006	C-R22A-D-178	SW6020	FLDFLT-digested	8/23/2011	12:01	Molybdenum	ND	ug/L	10.0
996913-006	C-R22A-D-178	SW6020	FLDFLT-digested	8/23/2011	12:01	Selenium	ND	ug/L	10.0

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Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996913-007	C-R22A-S-178	E120.1	NONE	8/23/2011	12:18	EC	940	umhos/cm	2.00
996913-007	C-R22A-S-178	E218.6	FLDFLT	8/23/2011	12:18	Chromium, hexavalent	ND	ug/L	0.20
996913-007	C-R22A-S-178	E300	NONE	8/23/2011	12:18	Nitrate as N	ND	mg/L	0.500
996913-007	C-R22A-S-178	SM2320B	NONE	8/23/2011	12:18	Alkalinity	120	mg/L	5.00
996913-007	C-R22A-S-178	SM2320B	NONE	8/23/2011	12:18	Bicarbonate	120	mg/L	5.00
996913-007	C-R22A-S-178	SM2320B	NONE	8/23/2011	12:18	Carbonate	ND	mg/L	5.00
996913-007	C-R22A-S-178	SM2540D	NONE	8/23/2011	12:18	Total Suspended Solids	ND	mg/L	10.0
996913-007	C-R22A-S-178	SM4500HB	NONE	8/23/2011	12:18	PH	8.11 J	pH	4.00
996913-007	C-R22A-S-178	SW6010B	NONE-digested	8/23/2011	12:18	Iron	23.5	ug/L	20.0
996913-007	C-R22A-S-178	SW6010B	FLDFLT-digested	8/23/2011	12:18	Iron	ND	ug/L	20.0
996913-007	C-R22A-S-178	SW6020	FLDFLT-digested	8/23/2011	12:18	Arsenic	2.6	ug/L	1.0
996913-007	C-R22A-S-178	SW6020	FLDFLT-digested	8/23/2011	12:18	Chromium	ND	ug/L	1.0
996913-007	C-R22A-S-178	SW6020	FLDFLT-digested	8/23/2011	12:18	Manganese	ND	ug/L	10.0
996913-007	C-R22A-S-178	SW6020	FLDFLT-digested	8/23/2011	12:18	Molybdenum	ND	ug/L	10.0
996913-007	C-R22A-S-178	SW6020	FLDFLT-digested	8/23/2011	12:18	Selenium	ND	ug/L	10.0
996913-008	C-R27-D-178	E120.1	NONE	8/23/2011	13:25	EC	945	umhos/cm	2.00
996913-008	C-R27-D-178	E218.6	FLDFLT	8/23/2011	13:25	Chromium, hexavalent	ND	ug/L	0.20
996913-008	C-R27-D-178	E300	NONE	8/23/2011	13:25	Nitrate as N	ND	mg/L	0.500
996913-008	C-R27-D-178	SM2320B	NONE	8/23/2011	13:25	Alkalinity	118	mg/L	5.00
996913-008	C-R27-D-178	SM2320B	NONE	8/23/2011	13:25	Bicarbonate	118	mg/L	5.00
996913-008	C-R27-D-178	SM2320B	NONE	8/23/2011	13:25	Carbonate	ND	mg/L	5.00
996913-008	C-R27-D-178	SM2540D	NONE	8/23/2011	13:25	Total Suspended Solids	ND	mg/L	10.0
996913-008	C-R27-D-178	SM4500HB	NONE	8/23/2011	13:25	PH	8.08	pH	4.0
996913-008	C-R27-D-178	SW6010B	NONE-digested	8/23/2011	13:25	Iron	33.0	ug/L	20.0
996913-008	C-R27-D-178	SW6010B	FLDFLT-digested	8/23/2011	13:25	Iron	ND	ug/L	20.0
996913-008	C-R27-D-178	SW6020	FLDFLT-digested	8/23/2011	13:25	Arsenic	2.6	ug/L	1.0
996913-008	C-R27-D-178	SW6020	FLDFLT-digested	8/23/2011	13:25	Chromium	ND	ug/L	1.0
996913-008	C-R27-D-178	SW6020	FLDFLT-digested	8/23/2011	13:25	Manganese	ND	ug/L	10.0
996913-008	C-R27-D-178	SW6020	FLDFLT-digested	8/23/2011	13:25	Molybdenum	ND	ug/L	10.0
996913-008	C-R27-D-178	SW6020	FLDFLT-digested	8/23/2011	13:25	Selenium	ND	ug/L	10.0

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Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996913-009	C-R27-S-178	E120.1	NONE	8/23/2011	13:42	EC	946	umhos/cm	2.00
996913-009	C-R27-S-178	E218.6	FLDFLT	8/23/2011	13:42	Chromium, hexavalent	ND	ug/L	0.20
996913-009	C-R27-S-178	E300	NONE	8/23/2011	13:42	Nitrate as N	ND	mg/L	0.500
996913-009	C-R27-S-178	SM2320B	NONE	8/23/2011	13:42	Alkalinity	118	mg/L	5.00
996913-009	C-R27-S-178	SM2320B	NONE	8/23/2011	13:42	Bicarbonate	118	mg/L	5.00
996913-009	C-R27-S-178	SM2320B	NONE	8/23/2011	13:42	Carbonate	ND	mg/L	5.00
996913-009	C-R27-S-178	SM2540D	NONE	8/23/2011	13:42	Total Suspended Solids	ND	mg/L	10.0
996913-009	C-R27-S-178	SM4500HB	NONE	8/23/2011	13:42	PH	7.92	pH	4.00
996913-009	C-R27-S-178	SW6010B	NONE-digested	8/23/2011	13:42	Iron	ND	ug/L	20.0
996913-009	C-R27-S-178	SW6010B	FLDFLT-digested	8/23/2011	13:42	Iron	ND	ug/L	20.0
996913-009	C-R27-S-178	SW6020	FLDFLT-digested	8/23/2011	13:42	Arsenic	2.4	ug/L	1.0
996913-009	C-R27-S-178	SW6020	FLDFLT-digested	8/23/2011	13:42	Chromium	ND	ug/L	1.0
996913-009	C-R27-S-178	SW6020	FLDFLT-digested	8/23/2011	13:42	Manganese	ND	ug/L	10.0
996913-009	C-R27-S-178	SW6020	FLDFLT-digested	8/23/2011	13:42	Molybdenum	ND	ug/L	10.0
996913-009	C-R27-S-178	SW6020	FLDFLT-digested	8/23/2011	13:42	Selenium	ND	ug/L	10.0
996913-010	C-TAZ-D-178	E120.1	NONE	8/23/2011	9:57	EC	915	umhos/cm	2.00
996913-010	C-TAZ-D-178	E218.6	FLDFLT	8/23/2011	9:57	Chromium, hexavalent	ND	ug/L	0.20
996913-010	C-TAZ-D-178	E300	NONE	8/23/2011	9:57	Nitrate as N	ND	mg/L	0.500
996913-010	C-TAZ-D-178	SM2320B	NONE	8/23/2011	9:57	Alkalinity	123	mg/L	5.00
996913-010	C-TAZ-D-178	SM2320B	NONE	8/23/2011	9:57	Bicarbonate	123	mg/L	5.00
996913-010	C-TAZ-D-178	SM2320B	NONE	8/23/2011	9:57	Carbonate	ND	mg/L	5.00
996913-010	C-TAZ-D-178	SM2540D	NONE	8/23/2011	9:57	Total Suspended Solids	ND	mg/L	10.0
996913-010	C-TAZ-D-178	SM4500HB	NONE	8/23/2011	9:57	PH	8.02 J	pH	4.00
996913-010	C-TAZ-D-178	SW6010B	NONE-digested	8/23/2011	9:57	Iron	24.4	ug/L	20.0
996913-010	C-TAZ-D-178	SW6010B	FLDFLT-digested	8/23/2011	9:57	Iron	ND	ug/L	20.0
996913-010	C-TAZ-D-178	SW6020	FLDFLT-digested	8/23/2011	9:57	Arsenic	2.6	ug/L	1.0
996913-010	C-TAZ-D-178	SW6020	FLDFLT-digested	8/23/2011	9:57	Chromium	ND	ug/L	1.0
996913-010	C-TAZ-D-178	SW6020	FLDFLT-digested	8/23/2011	9:57	Manganese	ND	ug/L	10.0
996913-010	C-TAZ-D-178	SW6020	FLDFLT-digested	8/23/2011	9:57	Molybdenum	ND	ug/L	10.0
996913-010	C-TAZ-D-178	SW6020	FLDFLT-digested	8/23/2011	9:57	Selenium	ND	ug/L	10.0

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Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996913-011	C-TAZ-S-178	E120.1	NONE	8/23/2011	10:11	EC	947	umhos/cm	2.00
996913-011	C-TAZ-S-178	E218.6	FLDFLT	8/23/2011	10:11	Chromium, hexavalent	ND	ug/L	0.20
996913-011	C-TAZ-S-178	E300	NONE	8/23/2011	10:11	Nitrate as N	ND	mg/L	0.500
996913-011	C-TAZ-S-178	SM2320B	NONE	8/23/2011	10:11	Alkalinity	122	mg/L	5.00
996913-011	C-TAZ-S-178	SM2320B	NONE	8/23/2011	10:11	Bicarbonate	122	mg/L	5.00
996913-011	C-TAZ-S-178	SM2320B	NONE	8/23/2011	10:11	Carbonate	ND	mg/L	5.00
996913-011	C-TAZ-S-178	SM2540D	NONE	8/23/2011	10:11	Total Suspended Solids	ND	mg/L	10.0
996913-011	C-TAZ-S-178	SM4500HB	NONE	8/23/2011	10:11	PH	8.07 J	pH	4.00
996913-011	C-TAZ-S-178	SW6010B	NONE-digested	8/23/2011	10:11	Iron	ND	ug/L	20.0
996913-011	C-TAZ-S-178	SW6010B	FLDFLT-digested	8/23/2011	10:11	Iron	ND	ug/L	20.0
996913-011	C-TAZ-S-178	SW6020	FLDFLT-digested	8/23/2011	10:11	Arsenic	3.1	ug/L	1.0
996913-011	C-TAZ-S-178	SW6020	FLDFLT-digested	8/23/2011	10:11	Chromium	ND	ug/L	1.0
996913-011	C-TAZ-S-178	SW6020	FLDFLT-digested	8/23/2011	10:11	Manganese	ND	ug/L	10.0
996913-011	C-TAZ-S-178	SW6020	FLDFLT-digested	8/23/2011	10:11	Molybdenum	ND	ug/L	10.0
996913-011	C-TAZ-S-178	SW6020	FLDFLT-digested	8/23/2011	10:11	Selenium	ND	ug/L	10.0
996913-012	MW-101-178	E120.1	NONE	8/23/2011	7:10	EC	940	umhos/cm	2.00
996913-012	MW-101-178	E218.6	FLDFLT	8/23/2011	7:10	Chromium, hexavalent	ND	ug/L	0.20
996913-012	MW-101-178	E300	NONE	8/23/2011	7:10	Nitrate as N	ND	mg/L	0.500
996913-012	MW-101-178	SM2320B	NONE	8/23/2011	7:10	Alkalinity	120	mg/L	5.00
996913-012	MW-101-178	SM2320B	NONE	8/23/2011	7:10	Bicarbonate	120	mg/L	5.00
996913-012	MW-101-178	SM2320B	NONE	8/23/2011	7:10	Carbonate	ND	mg/L	5.00
996913-012	MW-101-178	SM2540D	NONE	8/23/2011	7:10	Total Suspended Solids	ND	mg/L	10.0
996913-012	MW-101-178	SM4500HB	NONE	8/23/2011	7:10	PH	8.19 J	pH	4.00
996913-012	MW-101-178	SW6010B	NONE-digested	8/23/2011	7:10	Iron	49.5	ug/L	20.0
996913-012	MW-101-178	SW6010B	FLDFLT-digested	8/23/2011	7:10	Iron	ND	ug/L	20.0
996913-012	MW-101-178	SW6020	FLDFLT-digested	8/23/2011	7:10	Arsenic	2.8	ug/L	1.0
996913-012	MW-101-178	SW6020	FLDFLT-digested	8/23/2011	7:10	Chromium	ND	ug/L	1.0
996913-012	MW-101-178	SW6020	FLDFLT-digested	8/23/2011	7:10	Manganese	ND	ug/L	10.0
996913-012	MW-101-178	SW6020	FLDFLT-digested	8/23/2011	7:10	Molybdenum	ND	ug/L	10.0
996913-012	MW-101-178	SW6020	FLDFLT-digested	8/23/2011	7:10	Selenium	ND	ug/L	10.0

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Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996913-013	R-28-178	E120.1	NONE	8/23/2011	14:11	EC	935	umhos/cm	2.00
996913-013	R-28-178	E218.6	FLDFLT	8/23/2011	14:11	Chromium, hexavalent	ND	ug/L	0.20
996913-013	R-28-178	E300	NONE	8/23/2011	14:11	Nitrate as N	ND	mg/L	0.500
996913-013	R-28-178	SM2320B	NONE	8/23/2011	14:11	Alkalinity	115	mg/L	5.00
996913-013	R-28-178	SM2320B	NONE	8/23/2011	14:11	Bicarbonate	115	mg/L	5.00
996913-013	R-28-178	SM2320B	NONE	8/23/2011	14:11	Carbonate	ND	mg/L	5.00
996913-013	R-28-178	SM2540D	NONE	8/23/2011	14:11	Total Suspended Solids	ND	mg/L	10.0
996913-013	R-28-178	SM4500HB	NONE	8/23/2011	14:11	PH	8.15	pH	4.00
996913-013	R-28-178	SW6010B	NONE-digested	8/23/2011	14:11	Iron	44.0	ug/L	20.0
996913-013	R-28-178	SW6010B	FLDFLT-digested	8/23/2011	14:11	Iron	ND	ug/L	20.0
996913-013	R-28-178	SW6020	FLDFLT-digested	8/23/2011	14:11	Arsenic	2.8	ug/L	1.0
996913-013	R-28-178	SW6020	FLDFLT-digested	8/23/2011	14:11	Chromium	ND	ug/L	1.0
996913-013	R-28-178	SW6020	FLDFLT-digested	8/23/2011	14:11	Manganese	ND	ug/L	10.0
996913-013	R-28-178	SW6020	FLDFLT-digested	8/23/2011	14:11	Molybdenum	ND	ug/L	10.0
996913-013	R-28-178	SW6020	FLDFLT-digested	8/23/2011	14:11	Selenium	ND	ug/L	10.0
996913-014	R63-178	E120.1	NONE	8/23/2011	11:27	EC	930	umhos/cm	2.00
996913-014	R63-178	E218.6	FLDFLT	8/23/2011	11:27	Chromium, hexavalent	ND	ug/L	0.20
996913-014	R63-178	E300	NONE	8/23/2011	11:27	Nitrate as N	0.718	mg/L	0.500
996913-014	R63-178	SM2320B	NONE	8/23/2011	11:27	Alkalinity	114	mg/L	5.00
996913-014	R63-178	SM2320B	NONE	8/23/2011	11:27	Bicarbonate	114	mg/L	5.00
996913-014	R63-178	SM2320B	NONE	8/23/2011	11:27	Carbonate	ND	mg/L	5.00
996913-014	R63-178	SM2540D	NONE	8/23/2011	11:27	Total Suspended Solids	ND	mg/L	10.0
996913-014	R63-178	SM4500HB	NONE	8/23/2011	11:27	PH	8.22 J	pH	4.00
996913-014	R63-178	SW6010B	NONE-digested	8/23/2011	11:27	Iron	46.6	ug/L	20.0
996913-014	R63-178	SW6010B	FLDFLT-digested	8/23/2011	11:27	Iron	ND	ug/L	20.0
996913-014	R63-178	SW6020	FLDFLT-digested	8/23/2011	11:27	Arsenic	2.6	ug/L	1.0
996913-014	R63-178	SW6020	FLDFLT-digested	8/23/2011	11:27	Chromium	ND	ug/L	1.0
996913-014	R63-178	SW6020	FLDFLT-digested	8/23/2011	11:27	Manganese	ND	ug/L	10.0
996913-014	R63-178	SW6020	FLDFLT-digested	8/23/2011	11:27	Molybdenum	ND	ug/L	10.0
996913-014	R63-178	SW6020	FLDFLT-digested	8/23/2011	11:27	Selenium	ND	ug/L	10.0

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TRUESDAIL LABORATORIES, INC.

Report Continued

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996913-015	SW1-178	E120.1	NONE	8/23/2011	7:52	EC	957	umhos/cm	2.00
996913-015	SW1-178	E218.6	FLDFLT	8/23/2011	7:52	Chromium, hexavalent	ND	ug/L	0.20
996913-015	SW1-178	SM4500HB	NONE	8/23/2011	7:52	PH	7.70 J	pH	4.00
996913-015	SW1-178	SW6020	FLDFLT-digested	8/23/2011	7:52	Chromium	ND	ug/L	1.0
996913-016	SW2-178	E120.1	NONE	8/23/2011	8:12	EC	956	umhos/cm	2.00
996913-016	SW2-178	E218.6	FLDFLT	8/23/2011	8:12	Chromium, hexavalent	ND	ug/L	0.20
996913-016	SW2-178	SM4500HB	NONE	8/23/2011	8:12	PH	7.74 J	pH	4.00
996913-016	SW2-178	SW6020	FLDFLT-digested	8/23/2011	8:12	Chromium	ND	ug/L	1.0

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

Note: The following "Significant Figures" rule has been applied to all results:

Results below 0.01ppm will have two (2) significant figures.

Result above or equal to 0.01ppm will have three (3) significant figures.

Quality Control data will always have three (3) significant figures.

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TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
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REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Shawn Duffy
Project Name: PG&E Topock Project
P.O. Number: 405681.MP.02.RM
Project Number: 405681.MP.02.RM

Laboratory No. 996913

Printed 9/13/2011

Samples Received on 8/23/2011 10:30:00 PM

Field ID	Lab ID	Collected	Matrix
C-BNS-D-178	996913-001	08/23/2011 12:46	Water
C-I-3-D-178	996913-002	08/23/2011 10:42	Water
C-I-3-S-178	996913-003	08/23/2011 10:59	Water
C-MAR-D-178	996913-004	08/23/2011 14:34	Water
C-MAR-S-178	996913-005	08/23/2011 14:47	Water
C-R22A-D-178	996913-006	08/23/2011 12:01	Water
C-R22A-S-178	996913-007	08/23/2011 12:18	Water
C-R27-D-178	996913-008	08/23/2011 13:25	Water
C-R27-S-178	996913-009	08/23/2011 13:42	Water
C-TAZ-D-178	996913-010	08/23/2011 09:57	Water
C-TAZ-S-178	996913-011	08/23/2011 10:11	Water
MW-101-178	996913-012	08/23/2011 07:10	Water
R-28-178	996913-013	08/23/2011 14:11	Water
R63-178	996913-014	08/23/2011 11:27	Water
SW1-178	996913-015	08/23/2011 07:52	Water
SW2-178	996913-016	08/23/2011 08:12	Water

Anions By I.C. - EPA 300.0 Batch 08AN11U

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996913-001 Nitrate as Nitrogen	mg/L	08/24/2011 11:23	1.00	0.0110	0.500	ND
996913-002 Nitrate as Nitrogen	mg/L	08/24/2011 12:46	1.00	0.0110	0.500	ND
996913-003 Nitrate as Nitrogen	mg/L	08/24/2011 11:54	1.00	0.0110	0.500	ND
996913-004 Nitrate as Nitrogen	mg/L	08/24/2011 12:04	1.00	0.0110	0.500	ND
996913-005 Nitrate as Nitrogen	mg/L	08/24/2011 12:15	1.00	0.0110	0.500	ND
996913-006 Nitrate as Nitrogen	mg/L	08/24/2011 12:56	1.00	0.0110	0.500	ND
996913-007 Nitrate as Nitrogen	mg/L	08/24/2011 13:07	1.00	0.0110	0.500	ND
996913-008 Nitrate as Nitrogen	mg/L	08/24/2011 13:17	1.00	0.0110	0.500	ND
996913-009 Nitrate as Nitrogen	mg/L	08/24/2011 13:28	1.00	0.0110	0.500	ND
996913-010 Nitrate as Nitrogen	mg/L	08/24/2011 13:38	1.00	0.0110	0.500	ND

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996913-011 Nitrate as Nitrogen	mg/L	08/24/2011 13:48	1.00	0.0110	0.500	ND
996913-012 Nitrate as Nitrogen	mg/L	08/24/2011 13:59	1.00	0.0110	0.500	ND
996913-013 Nitrate as Nitrogen	mg/L	08/24/2011 14:09	1.00	0.0110	0.500	ND
996913-014 Nitrate as Nitrogen	mg/L	08/24/2011 14:20	1.00	0.0110	0.500	0.718

Method Blank

Parameter	Unit	DF	Result
Nitrate as Nitrogen	mg/L	1.00	ND

Duplicate — Lab ID = 996913-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	ND	0.376	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	3.98	4.00	99.4	90 - 110

Matrix Spike — Lab ID = 996913-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	2.54	2.38(2.00)	108.	85 - 115

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	4.00	4.00	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	3.00	3.00	99.9	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	2.98	3.00	99.3	90 - 110

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Alkalinity by SM 2320B Batch 08ALK11E 8/30/2011

Parameter		Unit	Analyzed	DF	MDL	RL	Result
996913-001	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	125
	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	125
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND
996913-002	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	123
	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	123
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND
996913-003	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	116
	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	116
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND
996913-004	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	125
	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	125
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND
996913-005	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	125
	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	125
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND
996913-006	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	110.
	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	110.
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND
996913-007	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	120.
	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	120.
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND
996913-008	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	118
	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	118
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND
996913-009	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	118
	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	118
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND
996913-010	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	123
	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	123
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND
996913-011	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	122
	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	122
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND
996913-012	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	120.

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996913-012	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	120.
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND
996913-013	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	115
	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	115
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND
996913-014	Alkalinity as CaCO3	mg/L	08/30/2011	1.00	1.68	5.00	114
	Bicarbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	114
	Carbonate (Calculated)	mg/L	08/30/2011	1.00	1.68	5.00	ND

Method Blank

Parameter	Unit	DF	Result
Alkalinity as CaCO3	mg/L	1.00	ND

Duplicate — Lab ID = 996913-005

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Alkalinity as CaCO3	mg/L	1.00	124	125	0.803	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Alkalinity as CaCO3	mg/L	1.00	100.	100.	100.	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Alkalinity as CaCO3	mg/L	1.00	100.	100.	100.	90 - 110

Matrix Spike — Lab ID = 996913-006

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Alkalinity as CaCO3	mg/L	1.00	228	210.(100.)	118	75 - 125

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 405681.MP.02.RM Printed 9/13/2011

Specific Conductivity - EPA 120.1 Batch 08EC11H 8/26/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996913-001 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	944
996913-002 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	936
996913-003 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	945
996913-004 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	970.
996913-005 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	970.
996913-006 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	946
996913-007 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	940.
996913-008 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	945
996913-009 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	946
996913-010 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	915
996913-011 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	947
996913-012 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	940.
996913-013 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	935
996913-014 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	930.
996913-015 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	957
996913-016 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	956

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 996913-006

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	947	946	0.106	0 - 10

Duplicate — Lab ID = 996913-016

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	957	956	0.104	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	706	706	100.	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	708	706	100.	90 - 110

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Metals by EPA 6010B, Total Batch 082511B

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996913-001 Iron	ug/L	08/25/2011 16:16	1.11	1.49	20.0	ND
996913-002 Iron	ug/L	08/25/2011 16:33	1.11	1.49	20.0	39.1
996913-003 Iron	ug/L	08/25/2011 16:55	1.11	1.49	20.0	22.6
996913-004 Iron	ug/L	08/25/2011 17:01	1.11	1.49	20.0	857.
996913-005 Iron	ug/L	08/25/2011 17:07	1.11	1.49	20.0	730.
996913-006 Iron	ug/L	08/25/2011 17:14	1.11	1.49	20.0	23.6
996913-007 Iron	ug/L	08/25/2011 17:20	1.11	1.49	20.0	23.5
996913-008 Iron	ug/L	08/25/2011 17:26	1.11	1.49	20.0	33.0
996913-009 Iron	ug/L	08/25/2011 17:32	1.11	1.49	20.0	ND
996913-010 Iron	ug/L	08/25/2011 17:38	1.11	1.49	20.0	24.4
996913-011 Iron	ug/L	08/25/2011 17:44	1.11	1.49	20.0	ND
996913-012 Iron	ug/L	08/25/2011 17:50	1.11	1.49	20.0	49.5
996913-013 Iron	ug/L	08/25/2011 18:18	1.11	1.49	20.0	44.0
996913-014 Iron	ug/L	08/25/2011 18:24	1.11	1.49	20.0	46.6

Method Blank

Parameter	Unit	DF	Result
Iron	ug/L	1.00	ND

Duplicate — Lab ID = 996913-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Iron	ug/L	1.11	ND	0.00	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	2060	2000	103.	85 - 115

Matrix Spike — Lab ID = 996913-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Iron	ug/L	1.11	2170	2220(2220)	97.9	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	4760	5000	95.3	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	4660	5000	93.1	90 - 110

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Chrome VI by EPA 218.6

Batch 08CrH11Z

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996913-001 Chromium, Hexavalent	ug/L	08/24/2011 09:28	1.05	0.0260	0.20	ND
996913-002 Chromium, Hexavalent	ug/L	08/24/2011 09:39	1.05	0.0260	0.20	ND
996913-003 Chromium, Hexavalent	ug/L	08/24/2011 09:59	1.05	0.0260	0.20	ND
996913-004 Chromium, Hexavalent	ug/L	08/24/2011 10:10	1.05	0.0260	0.20	ND
996913-005 Chromium, Hexavalent	ug/L	08/24/2011 11:23	1.05	0.0260	0.20	ND
996913-006 Chromium, Hexavalent	ug/L	08/24/2011 11:33	1.05	0.0260	0.20	ND
996913-007 Chromium, Hexavalent	ug/L	08/24/2011 11:43	1.05	0.0260	0.20	ND
996913-008 Chromium, Hexavalent	ug/L	08/24/2011 11:54	1.05	0.0260	0.20	ND
996913-009 Chromium, Hexavalent	ug/L	08/24/2011 12:46	1.05	0.0260	0.20	ND
996913-010 Chromium, Hexavalent	ug/L	08/24/2011 13:48	1.05	0.0260	0.20	ND
996913-011 Chromium, Hexavalent	ug/L	08/24/2011 13:59	1.05	0.0260	0.20	ND
996913-012 Chromium, Hexavalent	ug/L	08/24/2011 14:09	1.05	0.0260	0.20	ND
996913-013 Chromium, Hexavalent	ug/L	08/24/2011 15:01	1.05	0.0260	0.20	ND
996913-014 Chromium, Hexavalent	ug/L	08/24/2011 15:11	1.05	0.0260	0.20	ND
996913-015 Chromium, Hexavalent	ug/L	08/24/2011 15:22	1.05	0.0260	0.20	ND
996913-016 Chromium, Hexavalent	ug/L	08/24/2011 16:19	1.05	0.0260	0.20	ND

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 996913-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	1.05	ND	0.0530	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.98	5.00	99.7	90 - 110

Matrix Spike — Lab ID = 996913-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.13	1.10(1.06)	103.	90 - 110

Matrix Spike — Lab ID = 996913-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.12	1.11(1.06)	101.	90 - 110

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Matrix Spike — Lab ID = 996913-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.12	1.11(1.06)	101.	90 - 110

Matrix Spike — Lab ID = 996913-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.14	1.12(1.06)	102.	90 - 110

Matrix Spike — Lab ID = 996913-005

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.16	1.14(1.06)	102.	90 - 110

Matrix Spike — Lab ID = 996913-006

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.16	1.14(1.06)	101.	90 - 110

Matrix Spike — Lab ID = 996913-007

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.16	1.13(1.06)	103.	90 - 110

Matrix Spike — Lab ID = 996913-008

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.16	1.14(1.06)	102.	90 - 110

Matrix Spike — Lab ID = 996913-009

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.18	1.14(1.06)	103.	90 - 110

Matrix Spike — Lab ID = 996913-010

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.16	1.14(1.06)	102.	90 - 110

Matrix Spike — Lab ID = 996913-011

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.18	1.15(1.06)	103.	90 - 110

Matrix Spike — Lab ID = 996913-012

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.21	1.14(1.06)	106.	90 - 110

Matrix Spike — Lab ID = 996913-013

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.19	1.16(1.06)	103.	90 - 110

Matrix Spike — Lab ID = 996913-014

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.20	1.15(1.06)	104.	90 - 110

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Matrix Spike — Lab ID = 996913-015

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.19	1.17(1.06)	102.	90 - 110

Matrix Spike — Lab ID = 996913-016

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.19	1.15(1.06)	103.	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.01	5.00	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.2	10.0	102.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.4	10.0	104.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.3	10.0	103.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.1	10.0	101.	95 - 105

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Metals by EPA 6020A, Dissolved Batch 083111A

Parameter		Unit	Analyzed	DF	MDL	RL	Result
996913-001	Arsenic	ug/L	08/31/2011 12:24	4.44	0.253	1.0	2.5
	Chromium	ug/L	08/31/2011 12:24	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/31/2011 12:24	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/31/2011 12:24	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 12:24	4.44	0.302	10.0	ND
996913-002	Arsenic	ug/L	08/31/2011 13:17	4.44	0.253	1.0	2.6
	Chromium	ug/L	08/31/2011 13:17	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/31/2011 13:17	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/31/2011 13:17	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 13:17	4.44	0.302	10.0	ND
996913-003	Arsenic	ug/L	08/31/2011 13:25	4.44	0.253	1.0	2.4
	Chromium	ug/L	08/31/2011 13:25	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/31/2011 13:25	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/31/2011 13:25	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 13:25	4.44	0.302	10.0	ND
996913-004	Arsenic	ug/L	08/31/2011 13:33	4.44	0.253	1.0	2.7
	Manganese	ug/L	08/31/2011 13:33	4.44	0.253	10.0	15.5
	Molybdenum	ug/L	08/31/2011 13:33	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 13:33	4.44	0.302	10.0	ND
996913-005	Arsenic	ug/L	08/31/2011 13:40	4.44	0.253	1.0	2.7
	Chromium	ug/L	08/31/2011 13:40	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/31/2011 13:40	4.44	0.253	10.0	15.4
	Molybdenum	ug/L	08/31/2011 13:40	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 13:40	4.44	0.302	10.0	ND
996913-006	Arsenic	ug/L	08/31/2011 13:48	4.44	0.253	1.0	2.6
	Chromium	ug/L	08/31/2011 13:48	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/31/2011 13:48	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/31/2011 13:48	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 13:48	4.44	0.302	10.0	ND
996913-007	Arsenic	ug/L	08/31/2011 13:55	4.44	0.253	1.0	2.6
	Chromium	ug/L	08/31/2011 13:55	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/31/2011 13:55	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/31/2011 13:55	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 13:55	4.44	0.302	10.0	ND

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996913-008	Arsenic	ug/L	08/31/2011 14:18	4.44	0.253	1.0	2.6
	Chromium	ug/L	08/31/2011 14:18	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/31/2011 14:18	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/31/2011 14:18	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 14:18	4.44	0.302	10.0	ND
996913-009	Arsenic	ug/L	08/31/2011 14:30	4.44	0.253	1.0	2.4
	Chromium	ug/L	08/31/2011 14:30	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/31/2011 14:30	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/31/2011 14:30	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 14:30	4.44	0.302	10.0	ND
996913-010	Arsenic	ug/L	08/31/2011 14:37	4.44	0.253	1.0	2.6
	Chromium	ug/L	08/31/2011 14:37	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/31/2011 14:37	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/31/2011 14:37	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 14:37	4.44	0.302	10.0	ND
996913-011	Arsenic	ug/L	08/31/2011 15:15	4.44	0.253	1.0	3.1
	Manganese	ug/L	08/31/2011 15:15	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/31/2011 15:15	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 15:15	4.44	0.302	10.0	ND
996913-012	Arsenic	ug/L	08/31/2011 15:24	4.44	0.253	1.0	2.8
	Chromium	ug/L	08/31/2011 15:24	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/31/2011 15:24	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/31/2011 15:24	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 15:24	4.44	0.302	10.0	ND
996913-013	Arsenic	ug/L	08/31/2011 15:32	4.44	0.253	1.0	2.8
	Chromium	ug/L	08/31/2011 15:32	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/31/2011 15:32	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/31/2011 15:32	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 15:32	4.44	0.302	10.0	ND
996913-014	Arsenic	ug/L	08/31/2011 15:39	4.44	0.253	1.0	2.6
	Chromium	ug/L	08/31/2011 15:39	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/31/2011 15:39	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/31/2011 15:39	4.44	0.240	10.0	ND
	Selenium	ug/L	08/31/2011 15:39	4.44	0.302	10.0	ND
996913-015	Chromium	ug/L	08/31/2011 15:47	4.44	0.0977	1.0	ND
996913-016	Chromium	ug/L	08/31/2011 15:55	4.44	0.0977	1.0	ND

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Method Blank

Parameter	Unit	DF	Result
Arsenic	ug/L	1.00	ND
Chromium	ug/L	1.00	ND
Selenium	ug/L	1.00	ND
Manganese	ug/L	1.00	ND
Molybdenum	ug/L	1.00	ND

Duplicate — Lab ID = 996913-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Arsenic	ug/L	4.44	2.70	2.48	8.46	0 - 20
Chromium	ug/L	4.44	ND	0.00	0	0 - 20
Selenium	ug/L	4.44	ND	0.00	0	0 - 20
Manganese	ug/L	4.44	ND	0.00	0	0 - 20
Molybdenum	ug/L	4.44	ND	0.00	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	5.00	108.	100.	108.	85 - 115
Chromium	ug/L	5.00	106.	100.	106.	85 - 115
Selenium	ug/L	5.00	112	100.	112	85 - 115
Manganese	ug/L	5.00	104.	100.	104.	85 - 115
Molybdenum	ug/L	5.00	101.	100.	101.	85 - 115

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	5.00	109.	100.	109.	85 - 115
Chromium	ug/L	5.00	107.	100.	107.	85 - 115
Selenium	ug/L	5.00	114.	100.	114.	85 - 115
Manganese	ug/L	5.00	106.	100.	106.	85 - 115
Molybdenum	ug/L	5.00	103.	100.	103.	85 - 115

Matrix Spike — Lab ID = 996913-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Arsenic	ug/L	4.44	118.	113.(111)	104.	75 - 125
Chromium	ug/L	4.44	111.	111(111)	99.9	75 - 125
Selenium	ug/L	4.44	118.	111(111)	106.	75 - 125
Manganese	ug/L	4.44	110.	111(111)	98.8	75 - 125
Molybdenum	ug/L	4.44	111.	111(111)	100.	75 - 125

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Matrix Spike Duplicate Lab ID = 996913-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Arsenic	ug/L	4.44	117.	113.(111)	103.	75 - 125
Chromium	ug/L	4.44	110.	111(111)	99.4	75 - 125
Selenium	ug/L	4.44	118.	111(111)	107.	75 - 125
Manganese	ug/L	4.44	110.	111(111)	98.7	75 - 125
Molybdenum	ug/L	4.44	113.	111(111)	102.	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	49.7	50.0	99.4	90 - 110
Chromium	ug/L	1.00	51.1	50.0	102.	90 - 110
Selenium	ug/L	1.00	48.4	50.0	96.7	90 - 110
Manganese	ug/L	1.00	49.7	50.0	99.5	90 - 110
Molybdenum	ug/L	1.00	49.1	50.0	98.1	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	48.7	50.0	97.4	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	49.8	50.0	99.6	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	50.0	50.0	100.0	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.5	50.0	98.9	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.9	50.0	99.8	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.9	50.0	97.8	90 - 110
Selenium	ug/L	1.00	49.0	50.0	98.1	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Selenium	ug/L	1.00	48.6	50.0	97.2	90 - 110

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Metals by EPA 6020A, Dissolved

Batch 090911A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996913-004 Chromium	ug/L	09/09/2011 19:01	4.44	0.0977	1.0	ND
996913-011 Chromium	ug/L	09/09/2011 19:31	4.44	0.0977	1.0	ND

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	5.00	98.8	100.	98.8	85 - 115

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	5.00	98.7	100.	98.7	85 - 115

Matrix Spike — Lab ID = 996913-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	4.44	112.	111(111)	100.	75 - 125

Matrix Spike Duplicate — Lab ID = 996913-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	4.44	110.	111(111)	98.9	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	45.3	50.0	90.7	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.5	50.0	97.0	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.8	50.0	97.6	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	52.1	50.0	104.	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

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Metals by EPA 6010B, Dissolved Batch 082911A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996913-001 Iron	ug/L	08/29/2011 11:58	1.11	1.49	20.0	ND
996913-002 Iron	ug/L	08/29/2011 12:16	1.11	1.49	20.0	ND
996913-003 Iron	ug/L	08/29/2011 12:44	1.11	1.49	20.0	ND
996913-004 Iron	ug/L	08/29/2011 12:50	1.11	1.49	20.0	ND
996913-005 Iron	ug/L	08/29/2011 12:56	1.11	1.49	20.0	ND
996913-006 Iron	ug/L	08/29/2011 13:01	1.11	1.49	20.0	ND
996913-007 Iron	ug/L	08/29/2011 13:07	1.11	1.49	20.0	ND
996913-008 Iron	ug/L	08/29/2011 13:13	1.11	1.49	20.0	ND
996913-009 Iron	ug/L	08/29/2011 13:19	1.11	1.49	20.0	ND
996913-010 Iron	ug/L	08/29/2011 13:25	1.11	1.49	20.0	ND
996913-011 Iron	ug/L	08/29/2011 13:31	1.11	1.49	20.0	ND
996913-012 Iron	ug/L	08/29/2011 13:37	1.11	1.49	20.0	ND
996913-013 Iron	ug/L	08/29/2011 14:00	1.11	1.49	20.0	ND
996913-014 Iron	ug/L	08/29/2011 14:06	1.11	1.49	20.0	ND

Method Blank

Parameter	Unit	DF	Result
Iron	ug/L	1.00	ND

Duplicate — Lab ID = 996913-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Iron	ug/L	1.11	ND	0.00	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	104.	100.	104.	85 - 115

Matrix Spike — Lab ID = 996913-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Iron	ug/L	1.11	92.1	111(111)	83.0	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	5180	5000	104.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	4910	5000	98.1	90 - 110

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pH by SM 4500-H B Batch 08PH11N

Parameter	Unit	Analyzed	DF	MDL	RL	Result	
996913-001 pH	pH	08/24/2011 12:00	1.00	0.0593	4.00	8.03	
996913-002 pH	pH	08/24/2011 12:05	1.00	0.0593	4.00	8.04	J
996913-003 pH	pH	08/24/2011 12:10	1.00	0.0593	4.00	8.02	J
996913-004 pH	pH	08/24/2011 12:15	1.00	0.0593	4.00	7.89	
996913-005 pH	pH	08/24/2011 12:20	1.00	0.0593	4.00	7.92	
996913-006 pH	pH	08/24/2011 12:25	1.00	0.0593	4.00	8.10	J
996913-007 pH	pH	08/24/2011 12:30	1.00	0.0593	4.00	8.11	J
996913-008 pH	pH	08/24/2011 12:35	1.00	0.0593	4.00	8.08	
996913-009 pH	pH	08/24/2011 12:40	1.00	0.0593	4.00	7.92	
996913-010 pH	pH	08/24/2011 12:45	1.00	0.0593	4.00	8.02	J
996913-011 pH	pH	08/24/2011 12:48	1.00	0.0593	4.00	8.07	J
996913-012 pH	pH	08/24/2011 12:50	1.00	0.0593	4.00	8.19	J
996913-013 pH	pH	08/24/2011 12:52	1.00	0.0593	4.00	8.15	
996913-014 pH	pH	08/24/2011 12:55	1.00	0.0593	4.00	8.22	J
996913-015 pH	pH	08/24/2011 12:57	1.00	0.0593	4.00	7.70	J
996913-016 pH	pH	08/24/2011 12:59	1.00	0.0593	4.00	7.74	J

Duplicate — Lab ID = 996913-016

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
pH	pH	1.00	7.76	7.74	0.258	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
pH	pH	1.00	7.01	7.00	100.	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
pH	pH	1.00	7.02	7.00	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
pH	pH	1.00	7.06	7.00	101.	90 - 110

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Total Suspended Solids by SM 2540 D Batch 08TSS11H 8/25/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996913-001 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996913-002 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996913-003 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996913-004 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	19.3
996913-005 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	13.6
996913-006 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996913-007 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996913-008 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996913-009 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996913-010 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996913-011 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996913-012 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996913-013 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996913-014 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND

Method Blank

Parameter	Unit	DF	Result
Total Suspended Solids	mg/L	1.00	ND

Duplicate — Lab ID = 996913-010

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Suspended Solids	mg/L	1.00	ND	0.00	0	0 - 5

Duplicate — Lab ID = 996913-014

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Suspended Solids	mg/L	1.00	ND	0.00	0	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Suspended Solids	mg/L	1.00	98.0	100.	98.0	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Suspended Solids	mg/L	1.00	101	100.	101	90 - 110

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Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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TRUESDAIL LABORATORIES INC.

Total Suspended Solids by SM 2540 D

Calculations

Batch: 08TSS11H

Date Calculated: 8/25/11

Dish Number	Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL, ppm	Reported Value, ppm	DF
D1	BLK	1000	1.4175	1.4175	1.4175	0.0000	No	0.0000	0.0	2.5	ND	1
D4	996913-1	1000	1.4224	1.4227	1.4227	0.0000	No	0.0003	0.3	2.5	ND	1
D5	996913-2	1000	1.4249	1.4253	1.4253	0.0000	No	0.0004	0.4	2.5	ND	1
D6	996913-3	1000	1.4164	1.4170	1.417	0.0000	No	0.0006	0.6	2.5	ND	1
D7	996913-4	1000	1.4209	1.4402	1.4402	0.0000	No	0.0193	19.3	2.5	19.3	1
D8	996913-5	1000	1.4109	1.4245	1.4245	0.0000	No	0.0136	13.6	2.5	13.6	1
D9	996913-6	1000	1.4267	1.4269	1.4269	0.0000	No	0.0002	0.2	2.5	ND	1
D10	996913-7	1000	1.4346	1.4356	1.4356	0.0000	No	0.0010	1.0	2.5	ND	1
D11	996913-8	1000	1.4151	1.4154	1.4154	0.0000	No	0.0003	0.3	2.5	ND	1
D12	996913-9	1000	1.4161	1.4164	1.4164	0.0000	No	0.0003	0.3	2.5	ND	1
D13	996913-10	900	1.4214	1.4217	1.4217	0.0000	No	0.0003	0.3	2.8	ND	1
D14	996913-10D	900	1.416	1.4163	1.4163	0.0000	No	0.0003	0.3	2.8	ND	1
D15	996913-11	1000	1.4259	1.4263	1.4263	0.0000	No	0.0004	0.4	2.5	ND	1
D16	996913-12	1000	1.4201	1.4238	1.4238	0.0000	No	0.0037	3.7	2.5	3.7	1
D17	996913-13	1000	1.4223	1.4227	1.4227	0.0000	No	0.0004	0.4	2.5	ND	1
D18	996913-14	900	1.4271	1.4300	1.43	0.0000	No	0.0029	3.2	2.8	3.2	1
D19	996913-14D	900	1.4220	1.4247	1.4247	0.0000	No	0.0027	3.0	2.8	3.0	1
D2	LCS-1	100	1.4212	1.4310	1.431	0.0000	No	0.0098	98.0	25.0	98.0	1
D3	LCS-2	100	1.4297	1.4398	1.4398	0.0000	No	0.0101	101.0	25.0	101.0	1

Calculation as follows:

$$\text{Non- Filterable residue (TSS), mg/L} = \left(\frac{A-B}{C}\right) x\ 10^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

GAUTAM
Analyst Printed Name

Analyst Signature

Reviewer Printed Name

Reviewer Signature

TSS_0310A8/29/11, by HT

TRUESDAIL LABORATORIES, INC.

Alkalinity by SM 2320B
Calculations

Date of Analysis: 8/30/11
Start of Analysis:
Date Sampled:

Analytical Batch: 08ALK11E
Matrix: Water
Date Calculated: 8/30/11

Lab ID	Sample pH	Sample Volume (ml)	N of HCL	Titrant Volume to reach pH 8.3	P Alkalinity as CaCO3	Titrant Volume to reach pH 4.5	Total mL titrant to reach pH 0.3 unit lower	Total Alkalinity as CaCO3	RL, ppm	Total Alkalinity Reported Value	HCO3 Alkalinity as $CaCO_3$ (ppm)	CO3 Alkalinity as $CaCO_3$ (ppm)	OH Alkalinity as $CaCO_3$ (ppm)	Low Alkalinity as $CaCO_3$ (<20ppm)
BLANK	6.99	50	0.02		0.0	0.05		1.0	5	ND	ND	ND	ND	
996438-16	7.04	50	0.02		0.0	3.75		75.0	5	75.0	75.0	ND	ND	
996891-20	8.06	50	0.02		0.0	1.75		35.0	5	35.0	35.0	ND	ND	
996913-1	8.11	50	0.02		0.0	6.25		125.0	5	125.0	125.0	ND	ND	
996913-2	8.11	50	0.02		0.0	6.15		123.0	5	123.0	123.0	ND	ND	
996913-3	8.14	50	0.02		0.0	5.80		116.0	5	116.0	116.0	ND	ND	
996913-4	7.92	50	0.02		0.0	6.25		125.0	5	125.0	125.0	ND	ND	
996913-5	7.90	50	0.02		0.0	6.25		125.0	5	125.0	125.0	ND	ND	
996913-6	8.17	50	0.02		0.0	5.50		110.0	5	110.0	110.0	ND	ND	
996913-7	8.18	50	0.02		0.0	6.00		120.0	5	120.0	120.0	ND	ND	
996913-8	8.13	50	0.02		0.0	5.90		118.0	5	118.0	118.0	ND	ND	
996913-9	8.14	50	0.02		0.0	5.90		118.0	5	118.0	118.0	ND	ND	
996913-10	8.25	50	0.02		0.0	6.15		123.0	5	123.0	123.0	ND	ND	
996913-11	8.16	50	0.02		0.0	6.10		122.0	5	122.0	122.0	ND	ND	
996913-12	8.10	50	0.02		0.0	6.00		120.0	5	120.0	120.0	ND	ND	
996913-13	8.18	50	0.02		0.0	5.75		115.0	5	115.0	115.0	ND	ND	
996913-14	8.27	50	0.02		0.0	5.70		114.0	5	114.0	114.0	ND	ND	
996913-5DUP	7.90	50	0.02		0.0	6.20		124.0	5	124.0	124.0	ND	ND	
	-	-	-	-										
	-	-	-	-		-								
996913-6MS	9.48	50	0.02	2.3	45.0	11.40		228.0	5	228.0	138.0	90	ND	
LCS1	10.30	50	0.02	2.2	44.0	5.00		100.0	5	100.0	12.0	88	ND	
LCS2	10.35	50	0.02	2.2	44.0	5.00		100.0	5	100.0	12.0	88	ND	

Calculations as follows:

$$T \text{ or } P = \left(\frac{A \times N \times 50000}{mL \ sample} \right)$$

Low Alkalinity: as mg/L CaCO3 $= \dfrac{(2 \times B - C) \times N \times 50000}{mL \text{ sample}}$

ND: Not Detected (below the reporting limit)
LCS: Laboratory Control Standard
LCSD: Laboratory Control Standard Duplicate
MS: Matrix Spike
MSD: Matrix Spike Duplicate

Where:
T = Total Alkalinity, mg CaCO3/L
P = Phenolphthalein Alkalinity, mg CaCO3/L
A = mL standard acid used
N = normality of standard acid

Where:
B = mL titrant to first recorded pH
C = total mL titrant to reach pH 0.3 unit lower
N = normality of standard acid

LUCK

Analyst Printed Name | Analyst Signature | Reviewer Printed Name | Reviewer Signature

Alk_10c9/7/11, by HT

For Sample Conditions
See Form Attached

996913

Rec'd 08/23/11
s 996913

CH2MHILL

CHAIN OF CUSTODY RECORD

Project Name PG&E Topock
Location Topock
Project Number 405681.MP.02.RM
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2011-RMP-178
Turnaround Time 10 Days
Shipping Date: 8/23/2011
COC Number: 1

				Container:	3X250 ml Poly	250 Poly	500 ml Poly	3x500 ml Poly	3x500 ml Poly	2x1 Liter Poly	2x1 Liter Poly	2x1 Liter Poly	2x1 Liter Poly	2x1 Liter Poly		
				Preservatives:	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	4°C	4°C		
				Filtered:	Field	NA	NA	Field	Field	NA	NA	NA	NA	NA		
				Holding Time:	28	28	180	180	180	2	2	2	2	2		
		DATE	TIME	Matrix	Cr6 (E218.6 - river) Field Filtered	Field QC Cr6 (E218.6-river)	Metals (6010B) Total Fe	Metals (6020A) Field Filtered Chromium	Metals (SW6010B/SW6020Adis) Field Filtered As,Mn,Fe,Se,Mo	Specific Conductance (E120.1)	Anions (E300.0) Nitrate	PH (SM4500HB)	Alkalinity (SM2320B)	TSS (SM2540)	Number of Containers	COMMENTS
-1	C-BNS-D-178	8/23/2011	12:46	Water	x		x	x	x	x	x	x	x	x	9	
-2	C-I-3-D-178	8/23/2011	10:42	Water	x		x	x	x	x	x	x	x	x	9	
-3	C-I-3-S-178	8/23/2011	10:59	Water	x		x	x	x	x	x	x	x	x	9	
-4	C-MAR-D-178	8/23/2011	14:34	Water	x		x	x	x	x	x	x	x	x	9	
-5	C-MAR-S-178	8/23/2011	14:47	Water	x		x	x	x	x	x	x	x	x	9	
	C-MW-80-178	8/23/2011	11:18	Water		x									1	Hold
	C-MW-81-178	8/23/2011	14:05	Water		x									1	Hold
-6	C-R22A-D-178	8/23/2011	12:01	Water	x		x	x	x	x	x	x	x	x	9	
-7	C-R22A-S-178	8/23/2011	12:18	Water	x		x	x	x	x	x	x	x	x	9	
-8	C-R27-D-178	8/23/2011	13:25	Water	x		x	x	x	x	x	x	x	x	9	
-9	C-R27-S-178	8/23/2011	13:42	Water	x		x	x	x	x	x	x	x	x	9	
-10	C-TAZ-D-178	8/23/2011	9:57	Water	x		x	x	x	x	x	x	x	x	9	
-11	C-TAZ-S-178	8/23/2011	10:11	Water	x		x	x	x	x	x	x	x	x	9	
-12	MW-101-178	8/23/2011	7:10	Water	x		x	x	x	x	x	x	x	x	9	
-13	R-28-178	8/23/2011	14:11	Water	x		x	x	x	x	x	x	x	x	9	

* Where provided w/3 Cr6 bottles please analyze 1 + hold 2

ALERT !!
Level III QC

pH for 6010B/6020A

m=2

m=2

Signatures

Approved by
Sampled by
Relinquished by
Received by Rafael Davila 8/23/11
Relinquished by Rafael 8-23-11 22:30
Received by Luda 8/23/11 22:30

Date/Time 8-23-11 16:00

16:00

Shipping Details
Method of Shipment: courier
On Ice: yes / no
Airbill No:
Lab Name: Truesdail Laboratories, Inc.
Lab Phone: (714) 730-6239

ATTN: Sample Custody

Special Instructions: Aug 23-25, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

996913

CH2MHILL

CHAIN OF CUSTODY RECORD

8/23/2011 3:33:20 PM

Project Name: PG&E Topock
Location: Topock
Project Number: 405681.MP.02.RM
Project Manager: Jay Piper
Sample Manager: Shawn Duffy

Task Order
Project: 2011-RMP-178
Turnaround Time: 10 Days
Shipping Date: 8/23/2011
COC Number: 1

			Container:	3X250 ml Poly	250 Poly	500 ml Poly	3x500 ml Poly	3x500 ml Poly	2x1 Liter Poly	2x1 Liter Poly	2x1 Liter Poly	2x1 Liter Poly	2x1 Liter Poly			
			Preservatives:	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	4°C	4°C			
			Filtered:	Field	NA	NA	Field	Field	NA	NA	NA	NA	NA			
			Holding Time:	28	28	180	180	180	2	2	2	2	2			
	DATE	TIME	Matrix	Cr6 (E218.6 - river) Field Filtered	Field QC Cr6 (E218.6-river)	Metals (6010B) Total Fe	Metals (6020A) Field Filtered Chromium	Metals (SW6010B/SW6020Adis) Field Filtered As,Mn,Fe,Se,Mo	Specific Conductance (E120.1)	Anions (E300.0) Nitrate	PH (SM4500HB)	Alkalinity (SM2320B)	TSS (SM2540)		Number of Containers	COMMENTS
-14 R63-178	8/23/2011	11:27	Water	X		X	X	X	X	X	X	X	X		9	pH = 2
RMP-AB1-178	8/23/2011	9:35	Water		X										1	Hold
-15 SW1-178	8/23/2011	7:52	Water	X			X		X		X				7	pH = 2
-16 SW2-178	8/23/2011	8:12	Water	X			X		X		X				7	pH = 2
														TOTAL NUMBER OF CONTAINERS	143	

*Where provided w/3 Cr6 bottles, please analyze 1 + hold 2

pH for 6010B/6020A

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

	Signatures	Date/Time
Approved by		8-23-11 16:00
Sampled by		
Relinquished by		
Received by	Rafael Davila	8-23-11 16:00
Relinquished by	Rafael	8-23-11 22:30
Received by	Luda	8/23/11 22:30

Shipping Details
Method of Shipment: courier
On Ice: yes / no
Airbill No:
Lab Name: Truesdall Laboratories, Inc.
Lab Phone: (714) 730-6239

ATTN: Sample Custody

Special Instructions:
Aug 23-25, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

Hexavalent Chromium

Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
8/19/11	996839-3	9.5	N/A	N/A	N/A	AL
	-4					
	-5					
08/19/11	996853-1	9.5	N/A	N/A	N/A	SB
	-2					
08/22/11	996859	9.5	N/A	N/A	N/A	SB
08/24/11	996912	7.0	5.00	9.5	9:15	SB
08/24/11	996913-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
	-5					
	-6					
	-7					
	-8					
	-9					
	-10					
	-11					
	-12					
	-13					
	-14					
	-15					
	-16					

AL

Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest	Adjusted to pH<2 (Y/N)
996810(1-2)	<1	<2	8/18/11	M.M	Yes	–
996811 (1-7)	↓	↓	↓	↓	↓	–
996812(1-4)						–
996813(1-13)						–
996740	<1	>2	8/18/11	ES	No	yes @ 2:00 p.m
996835(1-2)	<1	<2	8/19/11	M.M	Yes	–
996836(1-4)	↓	↓	↓	↓	↓	–
996837						–
996838(1-2)						–
996839(1-5)						–
996799(1-3)	Solid	–	8/19/11	M.M	Yes	TTLC/SPLP
996824(1-5)	Solid	–	↓	↓	↓	TTLC
996853(1-1)	<1	<2	8/22/11	M.M	Yes	–
996859	<1	>2	8/22/11	MM	No	yes @ 1 pm
996893(1-9)	Solid	–	8/23/11	M.M	Yes	TTLC
996892(1-3)	Liquid	–	8/23/11	↓	↓	–
996950	Solid	8	8/25/11		Yes	TTLC
996951-2	<2	<2	8/25/11	M.M	Yes	–
996948-	↓	↓	↓	↓	↓	–
996913-(1-6)	↓	<2	↓	↓	↓	–
996934(1-10)	<2	<2	8/26/11	MM	Yes	–
996941						
996993(1-12)	Solid	–	08/29/11	MM	Yes	TTLC
996912	<1	>2	8/29/11	ES	No	yes @ 3:00 p.m
996539(1-8)	soil	–	8/25/11	ES	Yes	TTLC
997023	<1	<2	08/31/11	M.M	Yes	–
997024(1-5)	↓	↓	↓	↓	↓	–
997022	<1	>2	9/2/11	ES	No	yes @ 11:30 am
997095(1-2)	<1	>2	9/7/11	ES	No	yes @ 11:00 am
997096(1-2)	<1	>2	↓	↓	↓	↓
997097(1-2)	<1	<2	9/7/11	M.M	Yes	–
997099(1-4)	↓	↓	↓	↓	↓	–
997098(1-2)	<1	<2	9/7/11	M.M	Yes	–
997132(1-7)	↓	↓	↓	↓	↓	–
996083(16,23)	<1	>2	9/7/11	ES	No	yes @ 10:00 am
997199(1-11)	<1	>2	9/13/11	ES	Yes	3010A

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 996913

Date Delivered: 08/23/11 **Time:** 22:30 **By:** ☐Mail ☒Field Service ☐Client

1. Was a Chain of Custody received and signed? ☒Yes ☐No ☐N/A
2. Does Customer require an acknowledgement of the COC? ☐Yes ☐No ☒N/A
3. Are there any special requirements or notes on the COC? ☐Yes ☐No ☒N/A
4. If a letter was sent with the COC, does it match the COC? ☐Yes ☐No ☒N/A
5. Were all requested analyses understood and acceptable? ☒Yes ☐No ☐N/A
6. Were samples received in a chilled condition? ☒Yes ☐No ☐N/A
   Temperature (if yes)? 3.9°C
7. Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)? ☒Yes ☐No ☐N/A
8. Were sample custody seals intact? ☐Yes ☐No ☒N/A
9. Does the number of samples received agree with COC? ☒Yes ☐No ☐N/A
10. Did sample labels correspond with the client ID's? ☒Yes ☐No ☐N/A
11. Did sample labels indicate proper preservation? ☒Yes ☐No ☐N/A
    Preserved (if yes) by: ☒**Truesdail** ☐Client
12. Were samples pH checked? pH = see c.o.c. ☒Yes ☐No ☐N/A
13. Were all analyses within holding time at time of receipt? ☒Yes ☐No ☐N/A
    If not, notify Project Manager.
14. Have Project due dates been checked and accepted? ☒Yes ☐No ☐N/A
    Turn Around Time (TAT): ☐ **RUSH** ☒ Std
15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water
    ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☒Other Water
16. Comments: _____
17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Luda

ALERT!! Level II QC

C:\Users\Test\Desktop\Forms A - D\Discrp.FormBlank.doc

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

September 27, 2011

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000
Oakland, California 94612

Dear Mr. Duffy:

SUBJECT: REVISED CASE NARRATIVE PG&E TOPOCK 2011-RMP-178, SURFACEWATER MONITORING PROJECT, TLI NO.: 996934

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2011-RMP-178 surfacewater-monitoring project. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data, and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data are under Section 5.

The samples were received and delivered with the chain of custody on August 24, 2011, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Due to the early sampling time and late arrival of the samples, samples R-19-178 and RRB-178 for pH analysis by SM 4500-H B were analyzed past the method specified holding time. Mr. Shawn Duffy approved the analysis.

Total Dissolved Chromium, for samples C-CON-D-178, C-CON-S-178, C-NR1-S-178, C-NR3-D-178, C-NR4-D-178, and C-NR4-S-178, was re-digested and re-analyzed for each of the three sample containers (bottles A, B, C) provided per site due to the discrepancy between the Total Dissolved Chromium and Hexavalent Chromium results. The results for all re-digested samples were ND<1.0 ug/L. The original digested samples were also re-analyzed for comparison and in most cases matched the original run. After discussing the results with Mr. Shawn Duffy, the results from the re-digested samples are reported. The detected results in the original run were most likely due to contamination during sample digestion. See the attached table for more information.

No other violations or non-conformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Sean Carl

Mona Nassimi
Manager, Analytical Services

Michael Ngo
Quality Assurance/Quality Control Officer

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		Total Dissolved Chromium									
	Digestion Date	08/26/11		09/06/11		09/06/11		09/06/11		08/26/11	
	Bottle #	Bottle A		Bottle A		Bottle B		Bottle C		Bottle A	
	LR Type	---		RE (second digestion)		RE1 (third digestion)		RE2 (fourth digestion)		RE3	
		Results	Analysis Date / Time	Results	Analysis Date / Time	Results	Analysis Date / Time	Results	Analysis Date / Time	Results	Analysis Date / Time
	Units	ug/L		ug/L		ug/L		ug/L		ug/L	
996934-1	C-CON-D-178	1.6	8/30/11 13:58	ND<1.0	9/9/11 19:38	ND<1.0	9/9/11 23:18	ND<1.0	9/12/11 16:37	1.5	9/12/11 13:40
996934-2	C-CON-S-178	3.2	8/30/11 15:09	ND<1.0	9/9/11 19:46	ND<1.0	9/9/11 23:33	ND<1.0	9/9/11 23:41	2.6	9/12/11 14:10
996934-3	C-NR1-D-178	ND<1.0	8/30/11 15:19	---	---	---	---	---	---	---	---
996934-4	C-NR1-S-178	2.0	8/30/11 15:26	ND<1.0	9/9/11 19:54	ND<1.0	9/9/11 23:49	ND<1.0	9/9/11 23:56	1.6	9/12/11 14:17
996934-5	C-NR3-D-178	1.1	8/30/11 15:34	ND<1.0	9/9/11 20:01	ND<1.0	9/10/11 0:04	ND<1.0	9/10/11 0:11	ND<1.0	9/12/11 14:25
996934-6	C-NR3-S-178	ND<1.0	8/30/11 15:42	---	---	---	---	---	---	---	---
996934-7	C-NR4-D-178	1.1	8/30/11 15:50	ND<1.0	9/9/11 20:24	ND<1.0	9/10/11 0:34	ND<1.0	9/12/11 16:45	ND<1.0	9/12/11 14:48
996934-8	C-NR4-S-178	1.0	8/30/11 15:57	ND<1.0	9/9/11 20:32	ND<1.0	9/9/11 22:25	ND<1.0	9/9/11 23:11	ND<1.0	9/12/11 14:55
996934-9	R-19-178	ND<1.0	8/30/11 16:05	---	---	---	---	---	---	---	---
996934-10	RRB-178	ND<1.0	8/30/11 16:12	---	---	---	---	---	---	---	---

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

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Event 2010-RMP-178 Cr by SW 6020, Surfacewater Samples

Samples field filtered unless otherwise noted

Sample ID	Initial pH	pH adjustment needed?	Amount of additional acid needed	Final pH	Comments
C-CON-D-178	2.00	No			
C-CON-S-178	2.00	No			
C-NR1-D-178	2.00	No			
C-NR1-S-178	2.00	No			
C-NR3-D-178	2.00	No			
C-NR3-S-178	2.00	No			
C-NR4-D-178	2.00	No			
C-NR4-S-178	2.00	No			
R-19-178	2.00	No			
RRB-178	2.00	No			

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Event 2010-RMP-178 Cr (VI) by EPA 218.6, Surfacewater Samples

Samples field filtered unless otherwise noted

Sample ID	Initial pH	pH adjustment needed?	Amount of additional buffer needed	Final pH	Comments
C-CON-D-178	9.50	No			
C-CON-S-178	9.50	No			
C-NR1-D-178	9.50	No			
C-NR1-S-178	9.50	No			
C-NR3-D-178	9.50	No			
C-NR3-S-178	9.50	No			
C-NR4-D-178	9.50	No			
C-NR4-S-178	9.50	No			
R-19-178	9.50	No			
RRB-178	9.50	No			

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 996934
Date Received: August 24, 2011

Project Name: PG&E Topock Project
Project No.: 405681.MP.02.RM
P.O. No.: 405681.MP.02.RM

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996934-001	C-CON-D-178	E120.1	NONE	8/24/2011	9:14	EC	941	umhos/cm	2.00
996934-001	C-CON-D-178	E218.6	FLDFLT	8/24/2011	9:14	Chromium, hexavalent	ND	ug/L	0.20
996934-001	C-CON-D-178	E300	NONE	8/24/2011	9:14	Nitrate as N	ND	mg/L	0.500
996934-001	C-CON-D-178	SM2320B	NONE	8/24/2011	9:14	Alkalinity	140	mg/L	5.00
996934-001	C-CON-D-178	SM2320B	NONE	8/24/2011	9:14	Bicarbonate	140	mg/L	5.00
996934-001	C-CON-D-178	SM2320B	NONE	8/24/2011	9:14	Carbonate	ND	mg/L	5.00
996934-001	C-CON-D-178	SM2540D	NONE	8/24/2011	9:14	Total Suspended Solids	ND	mg/L	10.0
996934-001	C-CON-D-178	SM4500HB	NONE	8/24/2011	9:14	PH	7.81	pH	4.00
996934-001	C-CON-D-178	SW6010B	NONE-Digested	8/24/2011	9:14	Iron	28.0	ug/L	20.0
996934-001	C-CON-D-178	SW6010B	FLDFLT-Digested	8/24/2011	9:14	Iron	ND	ug/L	20.0
996934-001	C-CON-D-178	SW6020	FLDFLT-Digested	8/24/2011	9:14	Arsenic	2.7	ug/L	1.0
996934-001	C-CON-D-178	SW6020	FLDFLT-Digested	8/24/2011	9:14	Chromium	ND	ug/L	1.0
996934-001	C-CON-D-178	SW6020	FLDFLT-Digested	8/24/2011	9:14	Manganese	ND	ug/L	10.0
996934-001	C-CON-D-178	SW6020	FLDFLT-Digested	8/24/2011	9:14	Molybdenum	ND	ug/L	10.0
996934-001	C-CON-D-178	SW6020	FLDFLT-Digested	8/24/2011	9:14	Selenium	ND	ug/L	10.0
996934-002	C-CON-S-178	E120.1	NONE	8/24/2011	9:29	EC	935	umhos/cm	2.00
996934-002	C-CON-S-178	E218.6	FLDFLT	8/24/2011	9:29	Chromium, hexavalent	ND	ug/L	0.20
996934-002	C-CON-S-178	E300	NONE	8/24/2011	9:29	Nitrate as N	ND	mg/L	0.500
996934-002	C-CON-S-178	SM2320B	NONE	8/24/2011	9:29	Alkalinity	125	mg/L	5.00
996934-002	C-CON-S-178	SM2320B	NONE	8/24/2011	9:29	Bicarbonate	125	mg/L	5.00
996934-002	C-CON-S-178	SM2320B	NONE	8/24/2011	9:29	Carbonate	ND	mg/L	5.00
996934-002	C-CON-S-178	SM2540D	NONE	8/24/2011	9:29	Total Suspended Solids	ND	mg/L	10.0
996934-002	C-CON-S-178	SM4500HB	NONE	8/24/2011	9:29	PH	7.82	pH	4.00

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Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996934-002	C-CON-S-178	SW6010B	NONE-Digested	8/24/2011	9:29	Iron	24.6	ug/L	20.0
996934-002	C-CON-S-178	SW6010B	FLDFLT-Digested	8/24/2011	9:29	Iron	ND	ug/L	20.0
996934-002	C-CON-S-178	SW6020	FLDFLT-Digested	8/24/2011	9:29	Arsenic	3.4	ug/L	1.0
996934-002	C-CON-S-178	SW6020	FLDFLT-Digested	8/24/2011	9:29	Chromium	ND	ug/L	1.0
996934-002	C-CON-S-178	SW6020	FLDFLT-Digested	8/24/2011	9:29	Manganese	ND	ug/L	10.0
996934-002	C-CON-S-178	SW6020	FLDFLT-Digested	8/24/2011	9:29	Molybdenum	ND	ug/L	10.0
996934-002	C-CON-S-178	SW6020	FLDFLT-Digested	8/24/2011	9:29	Selenium	ND	ug/L	10.0
996934-003	C-NR1-D-178	E120.1	NONE	8/24/2011	9:56	EC	931	umhos/cm	2.00
996934-003	C-NR1-D-178	E218.6	FLDFLT	8/24/2011	9:56	Chromium, hexavalent	ND	ug/L	0.20
996934-003	C-NR1-D-178	E300	NONE	8/24/2011	9:56	Nitrate as N	ND	mg/L	0.500
996934-003	C-NR1-D-178	SM2320B	NONE	8/24/2011	9:56	Alkalinity	130	mg/L	5.00
996934-003	C-NR1-D-178	SM2320B	NONE	8/24/2011	9:56	Bicarbonate	130	mg/L	5.00
996934-003	C-NR1-D-178	SM2320B	NONE	8/24/2011	9:56	Carbonate	ND	mg/L	5.00
996934-003	C-NR1-D-178	SM2540D	NONE	8/24/2011	9:56	Total Suspended Solids	ND	mg/L	10.0
996934-003	C-NR1-D-178	SM4500HB	NONE	8/24/2011	9:56	PH	7.94	pH	4.00
996934-003	C-NR1-D-178	SW6010B	NONE-Digested	8/24/2011	9:56	Iron	24.1	ug/L	20.0
996934-003	C-NR1-D-178	SW6010B	FLDFLT-Digested	8/24/2011	9:56	Iron	ND	ug/L	20.0
996934-003	C-NR1-D-178	SW6020	FLDFLT-Digested	8/24/2011	9:56	Arsenic	2.6	ug/L	1.0
996934-003	C-NR1-D-178	SW6020	FLDFLT-Digested	8/24/2011	9:56	Chromium	ND	ug/L	1.0
996934-003	C-NR1-D-178	SW6020	FLDFLT-Digested	8/24/2011	9:56	Manganese	ND	ug/L	10.0
996934-003	C-NR1-D-178	SW6020	FLDFLT-Digested	8/24/2011	9:56	Molybdenum	ND	ug/L	10.0
996934-003	C-NR1-D-178	SW6020	FLDFLT-Digested	8/24/2011	9:56	Selenium	ND	ug/L	10.0
996934-004	C-NR1-S-178	E120.1	NONE	8/24/2011	10:13	EC	942	umhos/cm	2.00
996934-004	C-NR1-S-178	E218.6	FLDFLT	8/24/2011	10:13	Chromium, hexavalent	ND	ug/L	0.20
996934-004	C-NR1-S-178	E300	NONE	8/24/2011	10:13	Nitrate as N	ND	mg/L	0.500
996934-004	C-NR1-S-178	SM2320B	NONE	8/24/2011	10:13	Alkalinity	120	mg/L	5.00
996934-004	C-NR1-S-178	SM2320B	NONE	8/24/2011	10:13	Bicarbonate	120	mg/L	5.00
996934-004	C-NR1-S-178	SM2320B	NONE	8/24/2011	10:13	Carbonate	ND	mg/L	5.00
996934-004	C-NR1-S-178	SM2540D	NONE	8/24/2011	10:13	Total Suspended Solids	ND	mg/L	10.0
996934-004	C-NR1-S-178	SM4500HB	NONE	8/24/2011	10:13	PH	7.98	pH	4.00
996934-004	C-NR1-S-178	SW6010B	NONE-Digested	8/24/2011	10:13	Iron	ND	ug/L	20.0
996934-004	C-NR1-S-178	SW6010B	FLDFLT-Digested	8/24/2011	10:13	Iron	ND	ug/L	20.0
996934-004	C-NR1-S-178	SW6020	FLDFLT-Digested	8/24/2011	10:13	Arsenic	2.8	ug/L	1.0
996934-004	C-NR1-S-178	SW6020	FLDFLT-Digested	8/24/2011	10:13	Chromium	ND	ug/L	1.0
996934-004	C-NR1-S-178	SW6020	FLDFLT-Digested	8/24/2011	10:13	Manganese	ND	ug/L	10.0
996934-004	C-NR1-S-178	SW6020	FLDFLT-Digested	8/24/2011	10:13	Molybdenum	ND	ug/L	10.0
996934-004	C-NR1-S-178	SW6020	FLDFLT-Digested	8/24/2011	10:13	Selenium	ND	ug/L	10.0

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Report Continued

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996934-005	C-NR3-D-178	E120.1	NONE	8/24/2011	10:48	EC	948	umhos/cm	2.00
996934-005	C-NR3-D-178	E218.6	FLDFLT	8/24/2011	10:48	Chromium, hexavalent	ND	ug/L	0.20
996934-005	C-NR3-D-178	E300	NONE	8/24/2011	10:48	Nitrate as N	ND	mg/L	0.500
996934-005	C-NR3-D-178	SM2320B	NONE	8/24/2011	10:48	Alkalinity	120	mg/L	5.00
996934-005	C-NR3-D-178	SM2320B	NONE	8/24/2011	10:48	Bicarbonate	120	mg/L	5.00
996934-005	C-NR3-D-178	SM2320B	NONE	8/24/2011	10:48	Carbonate	ND	mg/L	5.00
996934-005	C-NR3-D-178	SM2540D	NONE	8/24/2011	10:48	Total Suspended Solids	ND	mg/L	10.0
996934-005	C-NR3-D-178	SM4500HB	NONE	8/24/2011	10:48	PH	7.97	pH	4.00
996934-005	C-NR3-D-178	SW6010B	NONE-Digested	8/24/2011	10:48	Iron	ND	ug/L	20.0
996934-005	C-NR3-D-178	SW6010B	FLDFLT-Digested	8/24/2011	10:48	Iron	ND	ug/L	20.0
996934-005	C-NR3-D-178	SW6020	FLDFLT-Digested	8/24/2011	10:48	Arsenic	2.6	ug/L	1.0
996934-005	C-NR3-D-178	SW6020	FLDFLT-Digested	8/24/2011	10:48	Chromium	ND	ug/L	1.0
996934-005	C-NR3-D-178	SW6020	FLDFLT-Digested	8/24/2011	10:48	Manganese	ND	ug/L	10.0
996934-005	C-NR3-D-178	SW6020	FLDFLT-Digested	8/24/2011	10:48	Molybdenum	ND	ug/L	10.0
996934-005	C-NR3-D-178	SW6020	FLDFLT-Digested	8/24/2011	10:48	Selenium	ND	ug/L	10.0
996934-006	C-NR3-S-178	E120.1	NONE	8/24/2011	11:03	EC	946	umhos/cm	2.00
996934-006	C-NR3-S-178	E218.6	FLDFLT	8/24/2011	11:03	Chromium, hexavalent	ND	ug/L	0.20
996934-006	C-NR3-S-178	E300	NONE	8/24/2011	11:03	Nitrate as N	ND	mg/L	0.500
996934-006	C-NR3-S-178	SM2320B	NONE	8/24/2011	11:03	Alkalinity	136	mg/L	5.00
996934-006	C-NR3-S-178	SM2320B	NONE	8/24/2011	11:03	Bicarbonate	136	mg/L	5.00
996934-006	C-NR3-S-178	SM2320B	NONE	8/24/2011	11:03	Carbonate	ND	mg/L	5.00
996934-006	C-NR3-S-178	SM2540D	NONE	8/24/2011	11:03	Total Suspended Solids	ND	mg/L	10.0
996934-006	C-NR3-S-178	SM4500HB	NONE	8/24/2011	11:03	PH	7.97	pH	4.00
996934-006	C-NR3-S-178	SW6010B	NONE-Digested	8/24/2011	11:03	Iron	ND	ug/L	20.0
996934-006	C-NR3-S-178	SW6010B	FLDFLT-Digested	8/24/2011	11:03	Iron	ND	ug/L	20.0
996934-006	C-NR3-S-178	SW6020	FLDFLT-Digested	8/24/2011	11:03	Arsenic	2.9	ug/L	1.0
996934-006	C-NR3-S-178	SW6020	FLDFLT-Digested	8/24/2011	11:03	Chromium	ND	ug/L	1.0
996934-006	C-NR3-S-178	SW6020	FLDFLT-Digested	8/24/2011	11:03	Manganese	ND	ug/L	10.0
996934-006	C-NR3-S-178	SW6020	FLDFLT-Digested	8/24/2011	11:03	Molybdenum	ND	ug/L	10.0
996934-006	C-NR3-S-178	SW6020	FLDFLT-Digested	8/24/2011	11:03	Selenium	ND	ug/L	10.0

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Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996934-007	C-NR4-D-178	E120.1	NONE	8/24/2011	11:42	EC	950	umhos/cm	2.00
996934-007	C-NR4-D-178	E218.6	FLDFLT	8/24/2011	11:42	Chromium, hexavalent	ND	ug/L	0.20
996934-007	C-NR4-D-178	E300	NONE	8/24/2011	11:42	Nitrate as N	ND	mg/L	0.500
996934-007	C-NR4-D-178	SM2320B	NONE	8/24/2011	11:42	Alkalinity	132	mg/L	5.00
996934-007	C-NR4-D-178	SM2320B	NONE	8/24/2011	11:42	Bicarbonate	132	mg/L	5.00
996934-007	C-NR4-D-178	SM2320B	NONE	8/24/2011	11:42	Carbonate	ND	mg/L	5.00
996934-007	C-NR4-D-178	SM2540D	NONE	8/24/2011	11:42	Total Suspended Solids	ND	mg/L	10.0
996934-007	C-NR4-D-178	SM4500HB	NONE	8/24/2011	11:42	PH	8.04	pH	4.00
996934-007	C-NR4-D-178	SW6010B	NONE-Digested	8/24/2011	11:42	Iron	ND	ug/L	20.0
996934-007	C-NR4-D-178	SW6010B	FLDFLT-Digested	8/24/2011	11:42	Iron	ND	ug/L	20.0
996934-007	C-NR4-D-178	SW6020	FLDFLT-Digested	8/24/2011	11:42	Arsenic	2.4	ug/L	1.0
996934-007	C-NR4-D-178	SW6020	FLDFLT-Digested	8/24/2011	11:42	Chromium	ND	ug/L	1.0
996934-007	C-NR4-D-178	SW6020	FLDFLT-Digested	8/24/2011	11:42	Manganese	ND	ug/L	10.0
996934-007	C-NR4-D-178	SW6020	FLDFLT-Digested	8/24/2011	11:42	Molybdenum	ND	ug/L	10.0
996934-007	C-NR4-D-178	SW6020	FLDFLT-Digested	8/24/2011	11:42	Selenium	ND	ug/L	10.0
996934-008	C-NR4-S-178	E120.1	NONE	8/24/2011	11:55	EC	945	umhos/cm	2.00
996934-008	C-NR4-S-178	E218.6	FLDFLT	8/24/2011	11:55	Chromium, hexavalent	ND	ug/L	0.20
996934-008	C-NR4-S-178	E300	NONE	8/24/2011	11:55	Nitrate as N	ND	mg/L	0.500
996934-008	C-NR4-S-178	SM2320B	NONE	8/24/2011	11:55	Alkalinity	115	mg/L	5.00
996934-008	C-NR4-S-178	SM2320B	NONE	8/24/2011	11:55	Bicarbonate	115	mg/L	5.00
996934-008	C-NR4-S-178	SM2320B	NONE	8/24/2011	11:55	Carbonate	ND	mg/L	5.00
996934-008	C-NR4-S-178	SM2540D	NONE	8/24/2011	11:55	Total Suspended Solids	ND	mg/L	10.0
996934-008	C-NR4-S-178	SM4500HB	NONE	8/24/2011	11:55	PH	8.04	pH	4.00
996934-008	C-NR4-S-178	SW6010B	NONE-Digested	8/24/2011	11:55	Iron	ND	ug/L	20.0
996934-008	C-NR4-S-178	SW6010B	FLDFLT-Digested	8/24/2011	11:55	Iron	ND	ug/L	20.0
996934-008	C-NR4-S-178	SW6020	FLDFLT-Digested	8/24/2011	11:55	Arsenic	2.5	ug/L	1.0
996934-008	C-NR4-S-178	SW6020	FLDFLT-Digested	8/24/2011	11:55	Chromium	ND	ug/L	1.0
996934-008	C-NR4-S-178	SW6020	FLDFLT-Digested	8/24/2011	11:55	Manganese	ND	ug/L	10.0
996934-008	C-NR4-S-178	SW6020	FLDFLT-Digested	8/24/2011	11:55	Molybdenum	ND	ug/L	10.0
996934-008	C-NR4-S-178	SW6020	FLDFLT-Digested	8/24/2011	11:55	Selenium	ND	ug/L	10.0

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Report Continued

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
996934-009	R-19-178	E120.1	NONE	8/24/2011	7:51	EC	938	umhos/cm	2.00
996934-009	R-19-178	E218.6	FLDFLT	8/24/2011	7:51	Chromium, hexavalent	ND	ug/L	0.20
996934-009	R-19-178	E300	NONE	8/24/2011	7:51	Nitrate as N	ND	mg/L	0.500
996934-009	R-19-178	SM2320B	NONE	8/24/2011	7:51	Alkalinity	135	mg/L	5.00
996934-009	R-19-178	SM2320B	NONE	8/24/2011	7:51	Bicarbonate	135	mg/L	5.00
996934-009	R-19-178	SM2320B	NONE	8/24/2011	7:51	Carbonate	ND	mg/L	5.00
996934-009	R-19-178	SM2540D	NONE	8/24/2011	7:51	Total Suspended Solids	ND	mg/L	10.0
996934-009	R-19-178	SM4500HB	NONE	8/24/2011	7:51	PH	8.06 J	pH	4.00
996934-009	R-19-178	SW6010B	NONE-Digested	8/24/2011	7:51	Iron	20.9	ug/L	20.0
996934-009	R-19-178	SW6010B	FLDFLT-Digested	8/24/2011	7:51	Iron	ND	ug/L	20.0
996934-009	R-19-178	SW6020	FLDFLT-Digested	8/24/2011	7:51	Arsenic	2.4	ug/L	1.0
996934-009	R-19-178	SW6020	FLDFLT-Digested	8/24/2011	7:51	Chromium	ND	ug/L	1.0
996934-009	R-19-178	SW6020	FLDFLT-Digested	8/24/2011	7:51	Manganese	ND	ug/L	10.0
996934-009	R-19-178	SW6020	FLDFLT-Digested	8/24/2011	7:51	Molybdenum	ND	ug/L	10.0
996934-009	R-19-178	SW6020	FLDFLT-Digested	8/24/2011	7:51	Selenium	ND	ug/L	10.0
996934-010	RRB-178	E120.1	NONE	8/24/2011	8:29	EC	926	umhos/cm	2.00
996934-010	RRB-178	E218.6	FLDFLT	8/24/2011	8:29	Chromium, hexavalent	ND	ug/L	0.20
996934-010	RRB-178	E300	NONE	8/24/2011	8:29	Nitrate as N	ND	mg/L	0.500
996934-010	RRB-178	SM2320B	NONE	8/24/2011	8:29	Alkalinity	125	mg/L	5.00
996934-010	RRB-178	SM2320B	NONE	8/24/2011	8:29	Bicarbonate	125	mg/L	5.00
996934-010	RRB-178	SM2320B	NONE	8/24/2011	8:29	Carbonate	ND	mg/L	5.00
996934-010	RRB-178	SM2540D	NONE	8/24/2011	8:29	Total Suspended Solids	ND	mg/L	10.0
996934-010	RRB-178	SM4500HB	NONE	8/24/2011	8:29	PH	8.17 J	pH	4.00
996934-010	RRB-178	SW6010B	NONE-Digested	8/24/2011	8:29	Iron	27.4	ug/L	20.0
996934-010	RRB-178	SW6010B	FLDFLT-Digested	8/24/2011	8:29	Iron	ND	ug/L	20.0
996934-010	RRB-178	SW6020	FLDFLT-Digested	8/24/2011	8:29	Arsenic	2.8	ug/L	1.0
996934-010	RRB-178	SW6020	FLDFLT-Digested	8/24/2011	8:29	Chromium	ND	ug/L	1.0
996934-010	RRB-178	SW6020	FLDFLT-Digested	8/24/2011	8:29	Manganese	ND	ug/L	10.0
996934-010	RRB-178	SW6020	FLDFLT-Digested	8/24/2011	8:29	Molybdenum	ND	ug/L	10.0
996934-010	RRB-178	SW6020	FLDFLT-Digested	8/24/2011	8:29	Selenium	ND	ug/L	10.0

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

Note: The following "Significant Figures" rule has been applied to all results:

Results below 0.01ppm will have two (2) significant figures.

Result above or equal to 0.01ppm will have three (3) significant figures.

Quality Control data will always have three (3) significant figures.

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TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Shawn Duffy
Project Name: PG&E Topock Project
P.O. Number: 405681.MP.02.RM
Project Number: 405681.MP.02.RM

Laboratory No. 996934

Printed 9/13/2011

Samples Received on 8/24/2011 10:00:00 PM

Field ID	Lab ID	Collected	Matrix
C-CON-D-178	996934-001	08/24/2011 09:14	Water
C-CON-S-178	996934-002	08/24/2011 09:29	Water
C-NR1-D-178	996934-003	08/24/2011 09:56	Water
C-NR1-S-178	996934-004	08/24/2011 10:13	Water
C-NR3-D-178	996934-005	08/24/2011 10:48	Water
C-NR3-S-178	996934-006	08/24/2011 11:03	Water
C-NR4-D-178	996934-007	08/24/2011 11:42	Water
C-NR4-S-178	996934-008	08/24/2011 11:55	Water
R-19-178	996934-009	08/24/2011 07:51	Water
RRB-178	996934-010	08/24/2011 08:29	Water

Anions By I.C. - EPA 300.0 Batch 08AN11W

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996934-001 Nitrate as Nitrogen	mg/L	08/25/2011 11:42	1.00	0.0110	0.500	ND
996934-002 Nitrate as Nitrogen	mg/L	08/25/2011 12:13	1.00	0.0110	0.500	ND
996934-003 Nitrate as Nitrogen	mg/L	08/25/2011 12:24	1.00	0.0110	0.500	ND
996934-004 Nitrate as Nitrogen	mg/L	08/25/2011 12:34	1.00	0.0110	0.500	ND
996934-005 Nitrate as Nitrogen	mg/L	08/25/2011 12:45	1.00	0.0110	0.500	ND
996934-006 Nitrate as Nitrogen	mg/L	08/25/2011 12:55	1.00	0.0110	0.500	ND
996934-007 Nitrate as Nitrogen	mg/L	08/25/2011 13:26	1.00	0.0110	0.500	ND
996934-008 Nitrate as Nitrogen	mg/L	08/25/2011 13:37	1.00	0.0110	0.500	ND
996934-009 Nitrate as Nitrogen	mg/L	08/25/2011 13:47	1.00	0.0110	0.500	ND
996934-010 Nitrate as Nitrogen	mg/L	08/25/2011 13:57	1.00	0.0110	0.500	ND

Method Blank

Parameter	Unit	DF	Result
Nitrate as Nitrogen	mg/L	1.00	ND

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Duplicate — Lab ID = 996934-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	ND	0.379	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	3.99	4.00	99.7	90 - 110

Matrix Spike — Lab ID = 996934-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	2.59	2.38(2.00)	111.	85 - 115

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	3.99	4.00	99.8	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	3.00	3.00	99.9	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	2.98	3.00	99.4	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	2.97	3.00	98.9	90 - 110

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Alkalinity by SM 2320B Batch 08ALK11F 8/31/2011

Parameter		Unit	Analyzed	DF	MDL	RL	Result
996934-001	Alkalinity as CaCO3	mg/L	08/31/2011	1.00	1.68	5.00	140.
	Bicarbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	140.
	Carbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	ND
996934-002	Alkalinity as CaCO3	mg/L	08/31/2011	1.00	1.68	5.00	125
	Bicarbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	125
	Carbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	ND
996934-003	Alkalinity as CaCO3	mg/L	08/31/2011	1.00	1.68	5.00	130.
	Bicarbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	130.
	Carbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	ND
996934-004	Alkalinity as CaCO3	mg/L	08/31/2011	1.00	1.68	5.00	120.
	Bicarbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	120.
	Carbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	ND
996934-005	Alkalinity as CaCO3	mg/L	08/31/2011	1.00	1.68	5.00	120.
	Bicarbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	120.
	Carbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	ND
996934-006	Alkalinity as CaCO3	mg/L	08/31/2011	1.00	1.68	5.00	136
	Bicarbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	136
	Carbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	ND
996934-007	Alkalinity as CaCO3	mg/L	08/31/2011	1.00	1.68	5.00	132
	Bicarbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	132
	Carbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	ND
996934-008	Alkalinity as CaCO3	mg/L	08/31/2011	1.00	1.68	5.00	115
	Bicarbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	115
	Carbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	ND
996934-009	Alkalinity as CaCO3	mg/L	08/31/2011	1.00	1.68	5.00	135
	Bicarbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	135
	Carbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	ND
996934-010	Alkalinity as CaCO3	mg/L	08/31/2011	1.00	1.68	5.00	125
	Bicarbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	125
	Carbonate (Calculated)	mg/L	08/31/2011	1.00	1.68	5.00	ND

Method Blank

Parameter	Unit	DF	Result
Alkalinity as CaCO3	mg/L	1.00	ND

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Duplicate — Lab ID = 996934-009

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Alkalinity as CaCO3	mg/L	1.00	135	135	0.00	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Alkalinity as CaCO3	mg/L	1.00	100.	100.	100.	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Alkalinity as CaCO3	mg/L	1.00	102	100.	102	90 - 110

Matrix Spike — Lab ID = 996934-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Alkalinity as CaCO3	mg/L	1.00	205	230.(100.)	75.0	75 - 125

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project Page 5 of 20
Project Number: 405681.MP.02.RM Printed 9/13/2011

Specific Conductivity - EPA 120.1 Batch 08EC11I 8/26/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996934-001 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	941
996934-002 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	935
996934-003 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	931
996934-004 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	942
996934-005 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	948
996934-006 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	946
996934-007 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	950.
996934-008 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	945
996934-009 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	938
996934-010 Specific Conductivity	umhos/cm	08/26/2011	1.00	0.0380	2.00	926

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 996934-010

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	927	926	0.108	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	706	706	100.	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	707	706	100.	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	707	706	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	976	998	97.8	90 - 110

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Metals by EPA 6010B, Total Batch 083111A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996934-001 Iron	ug/L	08/31/2011 12:02	1.11	1.49	20.0	28.0
996934-002 Iron	ug/L	08/31/2011 12:37	1.11	1.49	20.0	24.6
996934-003 Iron	ug/L	08/31/2011 12:43	1.11	1.49	20.0	24.1
996934-004 Iron	ug/L	08/31/2011 12:49	1.11	1.49	20.0	ND
996934-005 Iron	ug/L	08/31/2011 12:54	1.11	1.49	20.0	ND
996934-006 Iron	ug/L	08/31/2011 13:00	1.11	1.49	20.0	ND
996934-007 Iron	ug/L	08/31/2011 13:06	1.11	1.49	20.0	ND
996934-008 Iron	ug/L	08/31/2011 13:12	1.11	1.49	20.0	ND
996934-009 Iron	ug/L	08/31/2011 13:18	1.11	1.49	20.0	20.9
996934-010 Iron	ug/L	08/31/2011 13:24	1.11	1.49	20.0	27.4

Method Blank

Parameter	Unit	DF	Result
Iron	ug/L	1.00	ND

Duplicate — Lab ID = 996934-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Iron	ug/L	1.11	29.8	28.0	6.23	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	2220	2000	111.	85 - 115

Matrix Spike — Lab ID = 996934-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Iron	ug/L	1.11	2140	2250(2220)	95.1	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	5130	5000	103.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	5170	5000	103.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	5160	5000	103.	90 - 110

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Chrome VI by EPA 218.6

Batch 08CrH11AA

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996934-001 Chromium, Hexavalent	ug/L	08/25/2011 09:40	1.05	0.0260	0.20	ND
996934-002 Chromium, Hexavalent	ug/L	08/25/2011 10:00	1.05	0.0260	0.20	ND
996934-003 Chromium, Hexavalent	ug/L	08/25/2011 10:11	1.05	0.0260	0.20	ND
996934-004 Chromium, Hexavalent	ug/L	08/25/2011 10:53	1.05	0.0260	0.20	ND
996934-005 Chromium, Hexavalent	ug/L	08/25/2011 11:59	1.05	0.0260	0.20	ND
996934-006 Chromium, Hexavalent	ug/L	08/25/2011 12:09	1.05	0.0260	0.20	ND
996934-007 Chromium, Hexavalent	ug/L	08/25/2011 12:51	1.05	0.0260	0.20	ND
996934-008 Chromium, Hexavalent	ug/L	08/25/2011 13:01	1.05	0.0260	0.20	ND
996934-009 Chromium, Hexavalent	ug/L	08/25/2011 13:11	1.05	0.0260	0.20	ND
996934-010 Chromium, Hexavalent	ug/L	08/25/2011 13:22	1.05	0.0260	0.20	ND

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 996934-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	1.05	ND	0.0670	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.09	5.00	102.	90 - 110

Matrix Spike — Lab ID = 996912-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.28	1.22(1.06)	105.	90 - 110

Matrix Spike — Lab ID = 996912-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.90	5.55(5.25)	106.	90 - 110

Matrix Spike — Lab ID = 996934-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.15	1.13(1.06)	102.	90 - 110

Matrix Spike — Lab ID = 996934-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.17	1.14(1.06)	103.	90 - 110

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Matrix Spike — Lab ID = 996934-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.16	1.14(1.06)	103.	90 - 110

Matrix Spike — Lab ID = 996934-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.22	1.13(1.06)	108.	90 - 110

Matrix Spike — Lab ID = 996934-005

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.22	1.18(1.06)	104.	90 - 110

Matrix Spike — Lab ID = 996934-006

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.22	1.16(1.06)	106.	90 - 110

Matrix Spike — Lab ID = 996934-007

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.22	1.16(1.06)	106.	90 - 110

Matrix Spike — Lab ID = 996934-008

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.22	1.16(1.06)	106.	90 - 110

Matrix Spike — Lab ID = 996934-009

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.22	1.15(1.06)	106.	90 - 110

Matrix Spike — Lab ID = 996934-010

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.21	1.17(1.06)	104.	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.02	5.00	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.86	10.0	98.6	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.93	10.0	99.3	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.0	10.0	100.	95 - 105

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Metals by EPA 6020A, Dissolved Batch 083011A

Parameter		Unit	Analyzed	DF	MDL	RL	Result
996934-001	Arsenic	ug/L	08/30/2011 13:58	4.44	0.253	1.0	2.7
	Manganese	ug/L	08/30/2011 13:58	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/30/2011 13:58	4.44	0.240	10.0	ND
	Selenium	ug/L	08/30/2011 13:58	4.44	0.302	10.0	ND
996934-002	Arsenic	ug/L	08/30/2011 15:09	4.44	0.253	1.0	3.4
	Manganese	ug/L	08/30/2011 15:09	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/30/2011 15:09	4.44	0.240	10.0	ND
	Selenium	ug/L	08/30/2011 15:09	4.44	0.302	10.0	ND
996934-003	Arsenic	ug/L	08/30/2011 15:19	4.44	0.253	1.0	2.6
	Chromium	ug/L	08/30/2011 15:19	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/30/2011 15:19	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/30/2011 15:19	4.44	0.240	10.0	ND
	Selenium	ug/L	08/30/2011 15:19	4.44	0.302	10.0	ND
996934-004	Arsenic	ug/L	08/30/2011 15:26	4.44	0.253	1.0	2.8
	Manganese	ug/L	08/30/2011 15:26	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/30/2011 15:26	4.44	0.240	10.0	ND
	Selenium	ug/L	08/30/2011 15:26	4.44	0.302	10.0	ND
996934-005	Arsenic	ug/L	08/30/2011 15:34	4.44	0.253	1.0	2.6
	Manganese	ug/L	08/30/2011 15:34	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/30/2011 15:34	4.44	0.240	10.0	ND
	Selenium	ug/L	08/30/2011 15:34	4.44	0.302	10.0	ND
996934-006	Arsenic	ug/L	08/30/2011 15:42	4.44	0.253	1.0	2.9
	Chromium	ug/L	08/30/2011 15:42	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/30/2011 15:42	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/30/2011 15:42	4.44	0.240	10.0	ND
	Selenium	ug/L	08/30/2011 15:42	4.44	0.302	10.0	ND
996934-007	Arsenic	ug/L	08/30/2011 15:50	4.44	0.253	1.0	2.4
	Manganese	ug/L	08/30/2011 15:50	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/30/2011 15:50	4.44	0.240	10.0	ND
	Selenium	ug/L	08/30/2011 15:50	4.44	0.302	10.0	ND
996934-008	Arsenic	ug/L	08/30/2011 15:57	4.44	0.253	1.0	2.5
	Manganese	ug/L	08/30/2011 15:57	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/30/2011 15:57	4.44	0.240	10.0	ND
	Selenium	ug/L	08/30/2011 15:57	4.44	0.302	10.0	ND

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996934-009	Arsenic	ug/L	08/30/2011 16:05	4.44	0.253	1.0	2.4
	Chromium	ug/L	08/30/2011 16:05	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/30/2011 16:05	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/30/2011 16:05	4.44	0.240	10.0	ND
	Selenium	ug/L	08/30/2011 16:05	4.44	0.302	10.0	ND
996934-010	Arsenic	ug/L	08/30/2011 16:12	4.44	0.253	1.0	2.8
	Chromium	ug/L	08/30/2011 16:12	4.44	0.0977	1.0	ND
	Manganese	ug/L	08/30/2011 16:12	4.44	0.253	10.0	ND
	Molybdenum	ug/L	08/30/2011 16:12	4.44	0.240	10.0	ND
	Selenium	ug/L	08/30/2011 16:12	4.44	0.302	10.0	ND

Method Blank

Parameter	Unit	DF	Result
Arsenic	ug/L	1.00	ND
Chromium	ug/L	1.00	ND
Selenium	ug/L	1.00	ND
Manganese	ug/L	1.00	ND
Molybdenum	ug/L	1.00	ND

Duplicate — Lab ID = 996934-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Arsenic	ug/L	4.44	2.54	2.69	5.58	0 - 20
Chromium	ug/L	4.44	1.60	1.62	0.930	0 - 20
Selenium	ug/L	4.44	ND	0.00	0	0 - 20
Manganese	ug/L	4.44	ND	0.00	0	0 - 20
Molybdenum	ug/L	4.44	ND	0.00	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	5.00	108	100.	108	85 - 115
Chromium	ug/L	5.00	103.	100.	103.	85 - 115
Selenium	ug/L	5.00	112.	100.	112.	85 - 115
Manganese	ug/L	5.00	102.	100.	102.	85 - 115
Molybdenum	ug/L	5.00	99.6	100.	99.6	85 - 115

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Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	5.00	110.	100.	110.	85 - 115
Chromium	ug/L	5.00	102.	100.	102.	85 - 115
Selenium	ug/L	5.00	111.	100.	111.	85 - 115
Manganese	ug/L	5.00	97.5	100.	97.5	85 - 115
Molybdenum	ug/L	5.00	96.3	100.	96.3	85 - 115

Matrix Spike — Lab ID = 996934-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Arsenic	ug/L	4.44	123.	114.(111)	109.	75 - 125
Chromium	ug/L	4.44	114.	113.(111)	102.	75 - 125
Selenium	ug/L	4.44	120.	111(111)	108.	75 - 125
Manganese	ug/L	4.44	111.	111(111)	99.8	75 - 125
Molybdenum	ug/L	4.44	117.	111(111)	106.	75 - 125

Matrix Spike Duplicate — Lab ID = 996934-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Arsenic	ug/L	4.44	121.	114.(111)	106.	75 - 125
Chromium	ug/L	4.44	112.	113.(111)	99.8	75 - 125
Selenium	ug/L	4.44	117.	111(111)	105.	75 - 125
Manganese	ug/L	4.44	109.	111(111)	98.0	75 - 125
Molybdenum	ug/L	4.44	116.	111(111)	104.	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	47.8	50.0	95.5	90 - 110
Chromium	ug/L	1.00	48.3	50.0	96.6	90 - 110
Selenium	ug/L	1.00	48.2	50.0	96.3	90 - 110
Manganese	ug/L	1.00	49.3	50.0	98.6	90 - 110
Molybdenum	ug/L	1.00	48.1	50.0	96.1	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	47.8	50.0	95.7	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	47.2	50.0	94.3	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.4	50.0	94.9	90 - 110

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Metals by EPA 6020A, Dissolved Batch 090911A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996934-001 Chromium	ug/L	09/09/2011 19:38	4.44	0.0977	1.0	ND
996934-002 Chromium	ug/L	09/09/2011 19:46	4.44	0.0977	1.0	ND
996934-004 Chromium	ug/L	09/09/2011 19:54	4.44	0.0977	1.0	ND
996934-005 Chromium	ug/L	09/09/2011 20:01	4.44	0.0977	1.0	ND
996934-007 Chromium	ug/L	09/09/2011 20:24	4.44	0.0977	1.0	ND
996934-008 Chromium	ug/L	09/09/2011 20:32	4.44	0.0977	1.0	ND

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	5.00	98.8	100.	98.8	85 - 115

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	5.00	98.7	100.	98.7	85 - 115

Matrix Spike — Lab ID = 996913-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	4.44	112.	111(111)	100.	75 - 125

Matrix Spike Duplicate — Lab ID = 996913-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	4.44	110.	111(111)	98.9	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	45.3	50.0	90.7	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.5	50.0	97.0	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.8	50.0	97.6	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	52.1	50.0	104.	90 - 110

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Metals by EPA 6010B, Dissolved Batch 090211A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996934-001 Iron	ug/L	09/02/2011 11:05	1.11	1.49	20.0	ND
996934-002 Iron	ug/L	09/02/2011 11:22	1.11	1.49	20.0	ND
996934-003 Iron	ug/L	09/02/2011 11:51	1.11	1.49	20.0	ND
996934-004 Iron	ug/L	09/02/2011 12:38	1.11	1.49	20.0	ND
996934-005 Iron	ug/L	09/02/2011 12:03	1.11	1.49	20.0	ND
996934-006 Iron	ug/L	09/02/2011 12:09	1.11	1.49	20.0	ND
996934-007 Iron	ug/L	09/02/2011 12:15	1.11	1.49	20.0	ND
996934-008 Iron	ug/L	09/02/2011 12:21	1.11	1.49	20.0	ND
996934-009 Iron	ug/L	09/02/2011 12:27	1.11	1.49	20.0	ND
996934-010 Iron	ug/L	09/02/2011 12:33	1.11	1.49	20.0	ND

Method Blank

Parameter	Unit	DF	Result
Iron	ug/L	1.00	ND

Duplicate — Lab ID = 996934-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Iron	ug/L	1.11	ND	16.3	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	105.	100.	105.	85 - 115

Matrix Spike — Lab ID = 996934-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Iron	ug/L	1.11	128.	127.(111)	101.	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	5360	5000	107.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	5340	5000	107.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	5400	5000	108.	90 - 110

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Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	2210	2000	110.	80 - 120

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	2350	2000	118.	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	2260	2000	113.	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Iron	ug/L	1.00	2320	2000	116	80 - 120

pH by SM 4500-H B

Batch 08PH11O

Parameter	Unit	Analyzed	DF	MDL	RL	Result	
996934-001 pH	pH	08/25/2011 08:53	1.00	0.0590	4.00	7.81	
996934-002 pH	pH	08/25/2011 08:55	1.00	0.0590	4.00	7.82	
996934-003 pH	pH	08/25/2011 09:00	1.00	0.0590	4.00	7.94	
996934-004 pH	pH	08/25/2011 09:03	1.00	0.0590	4.00	7.98	
996934-005 pH	pH	08/25/2011 09:05	1.00	0.0590	4.00	7.97	
996934-006 pH	pH	08/25/2011 09:07	1.00	0.0590	4.00	7.97	
996934-007 pH	pH	08/25/2011 09:10	1.00	0.0590	4.00	8.04	
996934-008 pH	pH	08/25/2011 09:12	1.00	0.0590	4.00	8.04	
996934-009 pH	pH	08/25/2011 09:15	1.00	0.0590	4.00	8.06	J
996934-010 pH	pH	08/25/2011 09:17	1.00	0.0590	4.00	8.17	J

Duplicate Lab ID = 996934-010

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
pH	pH	1.00	8.18	8.17	0.122	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
pH	pH	1.00	7.02	7.00	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
pH	pH	1.00	7.05	7.00	101.	90 - 110

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 405681.MP.02.RM Printed 9/13/2011

Total Suspended Solids by SM 2540 D Batch 08TSS11I 8/25/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
996934-001 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996934-002 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996934-003 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996934-004 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996934-005 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996934-006 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996934-007 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996934-008 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996934-009 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND
996934-010 Total Suspended Solids	mg/L	08/25/2011	1.00	0.217	10.0	ND

Method Blank

Parameter	Unit	DF	Result
Total Suspended Solids	mg/L	1.00	ND

Duplicate Lab ID = 996934-010

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Suspended Solids	mg/L	1.00	ND	0.00	0	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Suspended Solids	mg/L	1.00	98.0	100.	98.0	90 - 110

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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EZ Condon

TRUESDAIL LABORATORIES INC.

Total Suspended Solids by SM 2540 D

Calculations

Batch: 08TSS11I

Date Calculated: 8/25/11

Dish Number	Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL, ppm	Reported Value, ppm	DF
D1	BLK	1000	1.4175	1.4175	1.4175	0.0000	No	0.0000	0.0	2.5	ND	1
D20	996934-1	1000	1.4268	1.4278	1.4278	0.0000	No	0.0010	1.0	2.5	ND	1
D21	996934-2	1000	1.4307	1.4312	1.4312	0.0000	No	0.0005	0.5	2.5	ND	1
D22	996934-3	1000	1.4181	1.4190	1.419	0.0000	No	0.0009	0.9	2.5	ND	1
D23	996934-4	1000	1.4184	1.4188	1.4188	0.0000	No	0.0004	0.4	2.5	ND	1
D24	996934-5	1000	1.4395	1.4402	1.4402	0.0000	No	0.0007	0.7	2.5	ND	1
D25	996934-6	1000	1.4305	1.4307	1.4307	0.0000	No	0.0002	0.2	2.5	ND	1
D26	996934-7	1000	1.4278	1.4285	1.4285	0.0000	No	0.0007	0.7	2.5	ND	1
D27	996934-8	1000	1.4311	1.4315	1.4315	0.0000	No	0.0004	0.4	2.5	ND	1
D28	996934-9	1000	1.4262	1.4263	1.4263	0.0000	No	0.0001	0.1	2.5	ND	1
D29	996934-10	900	1.4253	1.4255	1.4255	0.0000	No	0.0002	0.2	2.8	ND	1
D30	996934-10D	900	1.4248	1.425	1.425	0.0000	No	0.0002	0.2	2.8	ND	1
D2	LCS-1	100	1.4212	1.4310	1.431	0.0000	No	0.0098	98.0	25.0	98.0	1

Calculation as follows:

$$\text{Non-Filterable residue (TSS), mg/L} = \left(\frac{A-B}{C}\right) x\, 10^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

GAUTAM
Analyst Printed Name

Analyst Signature

Reviewer Printed Name

Reviewer Signature

TSS_0310A8/31/11, by HT

TRUESDAIL LABORATORIES, INC.

Alkalinity by SM 2320B
Calculations

Date of Analysis: 8/31/11
Start of Analysis:
Date Sampled:

Ez Seen

Analytical Batch: 08ALK11F
Matrix: Water
Date Calculated: 9/1/11

Lab ID	Sample pH	Sample Volume (ml)	N of HCL	Titrant Volume to reach pH 8.3	P Alkalinity as CaCO3	Titrant Volume to reach pH 4.5	Total mL titrant to reach pH 0.3 unit lower	Total Alkalinity as CaCO3	RL, ppm	Total Alkalinity Reported Value	HCO3 Alkalinity as $CaCO_3$ (ppm)	CO3 Alkalinity as $CaCO_3$ (ppm)	OH Alkalinity as $CaCO_3$ (ppm)	Low Alkalinity as $CaCO_3$ (<20ppm)
BLANK	6.99	50	0.02		0.0	0.05		1.0	5	ND	ND	ND	ND	
997010	7.44	50	0.02		0.0	4.25		85.0	5	85.0	85.0	ND	ND	
996934-1	8.06	50	0.02		0.0	7.00		140.0	5	140.0	140.0	ND	ND	
996934-2	8.08	50	0.02		0.0	6.25		125.0	5	125.0	125.0	ND	ND	
996934-3	8.08	50	0.02		0.0	6.50		130.0	5	130.0	130.0	ND	ND	
996934-4	8.07	50	0.02		0.0	6.00		120.0	5	120.0	120.0	ND	ND	
996934-5	7.96	50	0.02		0.0	6.00		120.0	5	120.0	120.0	ND	ND	
996934-6	8.07	50	0.02		0.0	6.80		136.0	5	136.0	136.0	ND	ND	
996934-7	8.06	50	0.02		0.0	6.60		132.0	5	132.0	132.0	ND	ND	
996934-8	8.01	50	0.02		0.0	5.75		115.0	5	115.0	115.0	ND	ND	
996934-9	8.13	50	0.02		0.0	6.75		135.0	5	135.0	135.0	ND	ND	
996934-10	7.94	50	0.02		0.0	6.25		125.0	5	125.0	125.0	ND	ND	
996934-9DUP	8.11	50	0.02		0.0	6.75		135.0	5	135.0	135.0	ND	ND	
996934-3MS	9.09	50	0.02	1.5	30.0	10.25		205.0	5	205.0	145.0	60	ND	
LCS1	10.25	50	0.02	2.2	44.0	5.00		100.0	5	100.0	12.0	88	ND	
LCS2	10.35	50	0.02	2.2	44.0	5.10		102.0	5	102.0	14.0	88	ND	

Calculations as follows:

$$T \text{ or } P = \left(\frac{A \times N \times 50000}{mL \ sample} \right)$$

Where:
T = Total Alkalinity, mg CaCO3/L
P = Phenolphthalein Alkalinity, mg CaCO3/L
A = mL standard acid used
N = normality of standard acid

Low Alkalinity: as mg/L CaCO3 $= \frac{(2 \times B - C) \times N \times 50000}{\text{mL sample}}$

Where:
B = mL titrant to first recorded pH
C = total mL titrant to reach pH 0.3 unit lower
N = normality of standard acid

ND: Not Detected (below the reporting limit)
LCS: Laboratory Control Standard
LCSD: Laboratory Control Standard Duplicate
MS: Matrix Spike
MSD: Matrix Spike Duplicate

Lucie
Analyst Printed Name

Analyst Signature

Reviewer Printed Name

Reviewer Signature

042

Alk_10c9/1/11, by HT

For Sample Conditions
See Form Attached

Rec'd 08/24/11
s 996934

996934

CH2MHILL

CHAIN OF CUSTODY RECORD

8/24/2011 2:26:11 PM

Project Name PG&E Topock
Location Topock
Project Number 405681.MP.02.RM
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2011-RMP-178
Turnaround Time 10 Days
Shipping Date: 8/19/2011
COC Number: TLI_RMP178

				Container:	3X250 ml Poly	250 Poly	500 ml Poly	3x500 ml Poly	3x500 ml Poly	2x1 Liter Poly	2x1 Liter Poly	2x1 Liter Poly	2x1 Liter Poly	2x1 Liter Poly		
				Preservatives:	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	4°C	4°C		
				Filtered:	Field	NA	NA	Field	Field	NA	NA	NA	NA	NA		
				Holding Time:	28	28	180	180	180	2	2	2	2	2		
		DATE	TIME	Matrix	Cr6 (E218.6 - river) Field Filtered	Field QC Cr6 (E218.6-river)	Metals (6010B) Total Fe	Metals (6020A) Field Filtered Chromium	Metals (SW6010B/SW6020Adis) Field Filtered As,Mn,Fe,Se,Mo	Specific Conductance (E120.1)	Anions (E300.0) Nitrate	PH (SM4500HB)	Alkalinity (SM2320B)	TSS (SM2540)	Number of Containers	COMMENTS
-1	C-CON-D-178	8/24/2011	9:14	Water	X		X	X	X	X	X	X	X	X	9	pH for 6010B/6020A
-2	C-CON-S-178	8/24/2011	9:29	Water	X		X	X	X	X	X	X	X	X	9	pH=2
	C-MW-82-178	8/24/2011	7:47	Water		X									1	Hold
	C-MW-83-178	8/24/2011	10:40	Water		X									1	Hold
-3	C-NR1-D-178	8/24/2011	9:56	Water	X		X	X	X	X	X	X	X	X	9	
-4	C-NR1-S-178	8/24/2011	10:13	Water	X		X	X	X	X	X	X	X	X	9	
-5	C-NR3-D-178	8/24/2011	10:48	Water	X		X	X	X	X	X	X	X	X	9	
-6	C-NR3-S-178	8/24/2011	11:03	Water	X		X	X	X	X	X	X	X	X	9	
-7	C-NR4-D-178	8/24/2011	11:42	Water	X		X	X	X	X	X	X	X	X	9	pH=2
-8	C-NR4-S-178	8/24/2011	11:55	Water	X		X	X	X	X	X	X	X	X	9	
-9	R-19-178	8/24/2011	7:51	Water	X		X	X	X	X	X	X	X	X	9	
	RMP-AB2-178	8/24/2011	7:40	Water		X									1	Hold
-10	RRB-178	8/24/2011	8:29	Water	X		X	X	X	X	X	X	X	X	9	pH=2
														TOTAL NUMBER OF CONTAINERS	93	

*Where provided w/3 Cr6 bottles please analyze 1 + hold 2

ALERT II Level III QC

Signatures

Approved by
Sampled by
Relinquished by
Received by Rafael Davila 8/24/11 15:30
Relinquished by Rafael Davila 8/24/11 22:00
Received by [illegible] 8/24/11 22:00

Date/Time 8-24-11 15:30

Shipping Details
Method of Shipment: FedEx
On Ice: yes / no
Airbill No:
Lab Name: Truesdail Laboratories, Inc.
Lab Phone: (714) 730-6239

ATTN:
Sample Custody

Special Instructions:
Aug 23-25, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

Hexavalent Chromium

Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
8/19/11	996839-3	9.5	N/A	N/A	N/A	AL
	-4					
	-5					
08/19/11	996853-1	9.5	N/A	N/A	N/A	SB
	-2					
08/22/11	996859	9.5	N/A	N/A	N/A	SB
08/24/11	996912	7.0	5.00	9.5	9:15	SB
08/24/11	996913-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
	-5					
	-6					
	-7					
	-8					
	-9					
	-10					
	-11					
	-12					
	-13					
	-14					
	-15					
	-16					
08/25/11	996934-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
	-5					
	-6					
	-7					
	-8					
	-9					
	-10					

Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest	Adjusted to pH<2 (Y/N)
996810(1-2)	<1	<2	8/18/11	M.M	Yes	–
996811(1-7)	↓	↓	↓	↓	↓	–
996812(1-4)						–
996813(1-13)						–
996740	<1	>2	8/18/11	ES	No	yes @ 2:00 pm
996835(1-2)	<1	<2	8/19/11	M.M	Yes	–
996836(1-4)	↓	↓	↓	↓	↓	–
996837						–
996838(1-2)						–
996839(1-5)						–
996799(1-3)	Solid	–	8/19/11	M.M	Yes	TTLC/SPLP
996824(1-5)	Solid	–	↓	↓	↓	TTLC
996853(1-1)	<1	<2	8/22/11	M.M	Yes	–
996859	<1	>2	8/22/11	MM	No	yes @ 1 pm
996893(1-9)	Solid	–	8/23/11	M.M	Yes	TTLC
996892(1-3)	Liquid	–	8/23/11	↓	↓	–
996950	Solid	8	8/25/11		Yes	TTLC
996951-2	<2	>2	8/25/11	M.M	Yes	–
996948-	↓	↓	↓	↓	↓	–
996913-1(1-6)	↓	<2	↓	↓	↓	–
996934(1-10)	<2	<2	8/26/11	MM	Yes	–
996941						
996993(1-2)	Solid	–	08/29/11	MM	Yes	TTLC
996912	<1	>2	8/29/11	ES	No	yes @ 3:00 p.m
996539(1-8)	soil	–	8/25/11	ES	yes	TTLC
997023	<1	<2	08/31/11	M.M	Yes	–
997024(1-5)	↓	↓	↓	↓	↓	–
997022	<1	>2	9/2/11	ES	No	yes @ 11:30 am
997095(1-2)	<1	>2	9/7/11	ES	No	yes @ 11:00 a.m
997096(1-2)	<1	>2	↓	↓	↓	↓
997097(1-2)	<1	<2	9/7/11	M.M	Yes	–
997099(1-4	↓	↓	↓	↓	↓	–
997098(1-2)	<1	<2	9/8/11	M.M	Yes	–
997132(1-7)	↓	↓	↓	↓	↓	–
996083(16,23)	<1	>2	9/7/11	ES	No	yes @ 10:00 am
997199(1-11)	<1	>2	9/12/11	ES	Yes	30A

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E 2 **Lab #** 996934

Date Delivered: 08/24/11 **Time:** 22:00 **By:** ☐Mail ☒Field Service ☐Client

1. Was a Chain of Custody received and signed? ☒Yes ☐No ☐N/A
2. Does Customer require an acknowledgement of the COC? ☐Yes ☐No ☒N/A
3. Are there any special requirements or notes on the COC? ☐Yes ☐No ☒N/A
4. If a letter was sent with the COC, does it match the COC? ☐Yes ☐No ☒N/A
5. Were all requested analyses understood and acceptable? ☒Yes ☐No ☐N/A
6. Were samples received in a chilled condition? ☒Yes ☐No ☐N/A
   Temperature (if yes)? 4.3° C
7. Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)? ☒Yes ☐No ☐N/A
8. Were sample custody seals intact? ☐Yes ☐No ☒N/A
9. Does the number of samples received agree with COC? ☒Yes ☐No ☐N/A
10. Did sample labels correspond with the client ID's? ☒Yes ☐No ☐N/A
11. Did sample labels indicate proper preservation? ☒Yes ☐No ☐N/A
    Preserved (if yes) by: ☒**Truesdail** ☐Client
12. Were samples pH checked? pH = See C.O.C. ☒Yes ☐No ☐N/A
13. Were all analyses within holding time at time of receipt? ☒Yes ☐No ☐N/A
    If not, notify Project Manager.
14. Have Project due dates been checked and accepted? ☒Yes ☐No ☐N/A
    Turn Around Time (TAT): ☐ **RUSH** ☒ Std
15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☒Other Water
16. Comments: _____
17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Leader

ALERT!! Level III QC

C:\Users\Test\Desktop\Forms A - D\Discrp.FormBlank.doc

TRUESDAIL LABORATORIES, INC.
EXCELLENCE IN INDEPENDENT TESTING

Established 1931

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

September 20, 2011

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000
Oakland, California 94612

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK IM3PLANT-EW-186, GROUNDWATER MONITORING PROJECT, TLI NO.: 997095

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-EW-186 groundwater-monitoring project for Total Dissolved and Hexavalent Chromium, Total Dissolved Solids, and Specific Conductivity. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, wet chemistry raw data, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data are under Section 5.

The samples were received and delivered with the chain of custody on September 6, 2011, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Per Mr. Shawn Duffy's request, the pH analysis was cancelled.

Samples for Total Dissolved Chromium were analyzed by method EPA 200.8 with the approval of Mr. Shawn Duffy of CH2M Hill.

No other violations or non-conformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Sean Cook

Mona Nassimi
Manager, Analytical Services

Michael Ngo

Michael Ngo
Quality Assurance/Quality Control Officer

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 424973.01.DM

Laboratory No.: 997095
Date: September 20, 2011
Collected: September 6, 2011
Received: September 6, 2011

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Gautam Savani
SM 2540C	Total Dissolved Solids	Jenny Tankunakorn
EPA 200.8	Total Dissolved Chromium	Katia Kiarashpoor
EPA 218.6	Hexavalent Chromium	Maksim Gorbunov
SM 3500-CrB	Hexavalent Chromium	Jenny Tankunakorn

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 997095
Date Received: September 6, 2011

Project Name: PG&E Topock Project
Project No.: 424973.01.DM
P.O. No.: 424973.01.DM

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
997095-001	PE-01-186	E120.1	NONE	9/6/2011	10:00	EC	5040	umhos/cm	2.00
997095-001	PE-01-186	E200.8	LABFLT	9/6/2011	10:00	Chromium	9.0	ug/L	1.0
997095-001	PE-01-186	E218.6	LABFLT	9/6/2011	10:00	Chromium, hexavalent	9.5	ug/L	0.20
997095-001	PE-01-186	SM2540C	NONE	9/6/2011	10:00	Total Dissolved Solids	2860	mg/L	125
997095-002	TW-03D-186	E120.1	NONE	9/6/2011	10:00	EC	8510	umhos/cm	2.00
997095-002	TW-03D-186	E200.8	LABFLT	9/6/2011	10:00	Chromium	992	ug/L	2.0
997095-002	TW-03D-186	SM2540C	NONE	9/6/2011	10:00	Total Dissolved Solids	5140	mg/L	125
997095-002	TW-03D-186	SM3500-CrB	LABFLT	9/6/2011	10:00	Chromium, hexavalent	1000	ug/L	100

ND: Non Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results:
Results below 0.01 will have two (2) significant figures.
Result above or equal to 0.01 will have three (3) significant figures.
Quality Control data will always have three (3) significant figures.

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REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Shawn Duffy
Project Name: PG&E Topock Project
P.O. Number: 424973.01.DM
Project Number: 424973.01.DM

Laboratory No. 997095

Printed 9/20/2011

Samples Received on 9/6/2011 9:30:00 PM

Field ID	Lab ID	Collected	Matrix
PE-01-186	997095-001	09/06/2011 10:00	Water
TW-03D-186	997095-002	09/06/2011 10:00	Water

Specific Conductivity - EPA 120.1 Batch 09EC11B 9/9/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997095-001 Specific Conductivity	umhos/cm	09/09/2011	1.00	0.0380	2.00	5040
997095-002 Specific Conductivity	umhos/cm	09/09/2011	1.00	0.0380	2.00	8510

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 997096-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	7820	7810	0.128	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	707	706	100.	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	706	706	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	990.	998	99.2	90 - 110

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Chrome VI by EPA 218.6 Batch 09CrH11A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997095-001 Chromium, Hexavalent	ug/L	09/08/2011 16:24	1.05	0.0260	0.20	9.5

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 997132-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	1.05	2.17	2.16	0.314	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.94	5.00	98.9	90 - 110

Matrix Spike — Lab ID = 997095-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	20.1	20.1(10.6)	100.	90 - 110

Matrix Spike — Lab ID = 997096-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.18	1.18(1.06)	100.	90 - 110

Matrix Spike — Lab ID = 997096-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.51	5.42(5.25)	102.	90 - 110

Matrix Spike — Lab ID = 997096-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	105	1890	1910(1050)	98.0	90 - 110

Matrix Spike — Lab ID = 997097-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.58	1.55(1.06)	103.	90 - 110

Matrix Spike — Lab ID = 997097-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	7.20	7.10(5.30)	102.	90 - 110

Matrix Spike — Lab ID = 997098-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	8.84	8.79(5.30)	101.	90 - 110

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Chromium, Hexavalent by SM 3500-Cr B

Batch 09CrH11A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997095-002 Chromium, Hexavalent	ug/L	09/12/2011 17:23	10.0	43.5	100.	1000

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 997095-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	10.0	1000	1000	0.339	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	94.3	100.	94.3	90 - 110

Matrix Spike — Lab ID = 997095-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	10.0	2010	2000(1000)	101.	85 - 115

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	55.5	60.0	92.5	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	55.5	60.0	92.5	90 - 110

Total Dissolved Solids by SM 2540 C

Batch 09TDS11A 9/7/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997095-001 Total Dissolved Solids	mg/L	09/07/2011	1.00	0.434	125	2860
997095-002 Total Dissolved Solids	mg/L	09/07/2011	1.00	0.434	125	5140

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	1.00	ND

Duplicate — Lab ID = 997099-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	1200	1230	2.80	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	492	500.	98.4	90 - 110

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 424973.01.DM Printed 9/20/2011

Metals by EPA 200.8, Dissolved

Batch 091511A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997095-001 Chromium	ug/L	09/15/2011 15:00	5.00	0.110	1.0	9.0
997095-002 Chromium	ug/L	09/15/2011 15:46	10.0	0.220	2.0	992.

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate — Lab ID = 997095-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	5.00	9.02	8.97	0.534	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.8	50.0	97.5	90 - 110

Matrix Spike — Lab ID = 997095-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	245.	259.(250.)	94.3	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.9	50.0	93.8	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.3	50.0	96.6	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.2	50.0	96.3	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.9	50.0	99.7	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.8	50.0	99.7	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 424973.01.DM Printed 9/20/2011

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.8	50.0	93.7	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	45.3	50.0	90.5	80 - 120

Serial Dilution — Lab ID = 997095-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	50.0	908.	992	8.88	0 - 10

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Sean Carl
Mona Nassimi
Manager, Analytical Services

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E2-Seam

Total Dissolved Solids by SM 2540 C

Calculations

Batch: 09TDS11A
Date Calculated: 9/12/11

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL , ppm	Reported Value, ppm	DF
BLANK	100	112.3586	112.3589	112.3588	0.0001	No	0.0002	2.0	25.0	ND	1
997071-2	200	109.3949	109.4104	109.4104	0.0000	No	0.0155	77.5	12.5	77.5	1
997071-4	100	108.6939	108.7217	108.7216	0.0001	No	0.0277	277.0	25.0	277.0	1
997083-16	50	68.1527	68.1900	68.1900	0.0000	No	0.0373	746.0	50.0	746.0	1
997095-1	20	68.2092	68.2667	68.2663	0.0004	No	0.0571	2855.0	125.0	2855.0	1
997095-2	20	50.1288	50.2318	50.2317	0.0001	No	0.1029	5145.0	125.0	5145.0	1
997096-1	20	68.1070	68.2006	68.2002	0.0004	No	0.0932	4660.0	125.0	4660.0	1
997096-2	20	74.7543	74.8461	74.8461	0.0000	No	0.0918	4590.0	125.0	4590.0	1
997098-1	100	103.4180	103.4621	103.4617	0.0004	No	0.0437	437.0	25.0	437.0	1
997098-2	100	100.6890	100.7412	100.7412	0.0000	No	0.0522	522.0	25.0	522.0	1
997099-1	50	111.1909	111.2526	111.2522	0.0004	No	0.0613	1226.0	50.0	1226.0	1
997099-1D	50	111.6555	111.7157	111.7153	0.0004	No	0.0598	1196.0	50.0	1196.0	1
LCS	100	104.8947	104.944	104.9439	0.0001	No	0.0492	492.0	25.0	492.0	1
997099-2	50	112.3125	112.3541	112.3537	0.0004	No	0.0412	824.0	50.0	824.0	1
997099-3	50	69.3493	69.4204	69.4204	0.0000	No	0.0711	1422.0	50.0	1422.0	1
997099-4	50	74.6989	74.7759	74.7759	0.0000	No	0.0770	1540.0	50.0	1540.0	1
997130-1	50	68.2216	68.2719	68.2719	0.0000	No	0.0503	1006.0	50.0	1006.0	1
997130-2	100	73.1389	73.1964	73.1961	0.0003	No	0.0572	572.0	25.0	572.0	1
997130-3	100	65.7133	65.7695	65.7692	0.0003	No	0.0559	559.0	25.0	559.0	1
997130-4	50	73.5047	73.5349	73.5349	0.0000	No	0.0302	604.0	50.0	604.0	1
LCSD											1

Calculation as follows:

$$\text{Filterable residue (TDS), mg/L} = \left(\frac{A-B}{C}\right) x\ 10^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.
ND = not detected (below the reporting limit)

Analyst Printed Name | Analyst Signature | Reviewer Printed Name | Reviewer Signature

* COC - Signed

WetChem TDS_0810.xls

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 09TDS11A

Date Calculated: 9/12/11

Laboratory Number	EC	TDS/EC Ratio: 0.55-.9	Calculated TDS (EC*0.65)	Measured TDS / Calc TDS <1.3
997071-2	142	0.55	92.3	0.84
997071-4	503	0.55	326.95	0.85
997083-16	1346	0.55	874.9	0.85
997095-1	5040	0.57	3276	0.87
997095-2	8490	0.61	5518.5	0.93
997096-1	7270	0.64	4725.5	0.99
997096-2	7810	0.59	5076.5	0.90
997098-1	726	0.60	471.9	0.93
997098-2	835	0.63	542.75	0.96
997099-1	1903	0.64	1236.95	0.99
997099-1D	1903	0.63	1236.95	0.97
LCS				
997099-2	1294	0.64	841.1	0.98
997099-3	2060	0.69	1339	1.06
997099-4	2240	0.69	1456	1.06
997130-1	1817	0.55	1181.05	0.85
997130-2	994	0.58	646.1	0.89
997130-3	933	0.60	606.45	0.92
997130-4	1017	0.59	661.05	0.91

997 095

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CHAIN OF CUSTODY RECORD

[IM3Plant-EW-186]

COC Number 997095

TURNAROUND TIME 10 Days

DATE 09/06/11 PAGE 1 OF 1

COMPANY: CH2M HILL /E2

PROJECT NAME: PG&E Topock IM3Plant-EW

PHONE: 530-229-3303 FAX: 530-339-3303

ADDRESS: 155 Grand Ave Ste 1000, Oakland, CA 94612

P.O. NUMBER: 424973.01.DM

SAMPLERS (SIGNATURE

Rec'd 09/06/11 997095

	SAMPLE I.D.	DATE	TIME	DESCRIPTION	Dissolved Cr (200.7) Lab filtered	Cr(VI) (3500-Cr B)	pH (150.0) EC (120.1)	TDS (160.1)	Cr(VI) (218.6)	NUMBER OF CONTAINERS	COMMENTS
-1	PE-01-186	09/06/11	10:00	Ground water	X		X	X	X	4	pH = 7 (200.7)
-2	TW-03D-186	09/06/11	10:00	Ground water	X	X	X	X		4	
											TOTAL NUMBER OF CONTAINERS

For Sample Conditions See Form Attached

ALERT !! Level III QC

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Relinquished		Ron Fields	OMI	9-6-11 1530
Received	Rafael Davila	Rafael	T.H.I	9-6-11 15:30
Relinquished	Rafael Davila	Rafael	T.H.I	9-6-11 21:30
Received		Amir P Hariri	TU	9-6-11 2130
Relinquished				
Received				

SAMPLE CONDITIONS

RECEIVED COOL ☒ WARM ☐ 3.4 °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

041

Hexavalent Chromium

Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
08/31/11	997022	7.0	5.00	9.5	8:40	SB
08/31/11	997023	9.5	N/A	N/A	N/A	SB
08/31/11	997024-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
	-5					
09/07/11	997095-1	7.0	5.00	9.5	8:20	SB
09/07/11	997096-1	7.0	5.00	9.5	8:15	SB
	-2				8:25	
09/07/11	997097-1	9.5	N/A	N/A	N/A	SB
	-2					
09/07/11	997099-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
9/8/11	997098-1	9.5	N/A	N/A	N/A	MVG
	-2					
	-3					
9/9/11	997132-1	9.5	N/A	N/A	N/A	
	-2					
	-3					
	-4					
	-5					
	-6					
	-7					

Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest	Adjusted to pH<2 (Y/N)
996810(1-2)	<1	<2	8/18/11	M.M	Yes	–
996811(1-4)	↓	↓	↓	↓	↓	–
996812(1-4)	↓	↓	↓	↓	↓	–
996813(1-13)	↓	↓	↓	↓	↓	–
996740	<1	>2	8/18/11	ES	No	yes @ 2:00 pm
996835(1-2)	<1	<2	8/19/11	M.M	Yes	–
996836(1-4)	↓	↓	↓	↓	↓	–
996837	↓	↓	↓	↓	↓	–
996838(1-2)	↓	↓	↓	↓	↓	–
996839(1-5)	↓	↓	↓	↓	↓	–
996799(1-3)	Solid	–	8/19/11	M.M	Yes	TTLC/STLS
996824(1-5)	Solid	–	↓	↓	↓	TTLC
996853(1-1)	<1	<2	8/22/11	M.M	Yes	–
996859	<1	>2	8/22/11	KK	No	yes @ 1 pm
996893(1-9)	Solid	–	8/23/11	M.M	Yes	TTLC
996892(1-3)	liquid	–	8/23/11	↓	↓	–
996950	solid	81	8/25/11		Yes	TTLC
996951-2	<2	<2	8/25/11	M.M	Yes	–
996948-	↓	↓	↓	↓	↓	–
996913-(1-6)	↓	<2	↓	↓	↓	–
996934(1-10)	<2	<2	8/26/11	M.M	Yes	–
996941						
996993(1-2)	Solid	–	08/29/11	MM	Yes	TTLC
996912	<1	>2	8/29/11	ES	No	yes @ 3:00 p.m
996539(1-8)	soil	–	8/25/11	ES	Yes	TTLC
997023	<1	<2	08/31/11	M.M	Yes	–
997024(1-5)	↓	↓	↓	↓	↓	–
997022	<1	>2	9/2/11	ES	No	yes @ 11:30 am
997095(1-2)	<1	>2	9/7/11	ES	No	yes @ 11:00 a.m
997096(1-2)	<1	>2	↓	↓	↓	↓
997097(1-2)	<1	<2	9/7/11	M.M	Yes	–
997099(1-4	↓	↓	↓	↓	↓	–
997098(1-2)	<1	<2	9/8/11	M.M	Yes	–
997132(1-7)	↓	↓	↓	↓	↓	–
996083(16,29)	<1	>2	9/7/11	ES	No	yes @ 10:00 am
997199(1-11)	<1	>2	9/13/11	ES	Yes	310A
997223(1)	<1	<2	9/15/11	M.M	Yes	310A
997224(1-1)	↓	↓	↓	↓	↓	↓
997225(1-8)	↓	↓	↓	↓	↓	↓
997226(1-3)	↓	↓	↓	↓	↓	↓
997242(1-10)	↓	↓	↓	↓	↓	↓
997243(1-10)	↓	↓	↓	↓	↓	↓
997227	<1	>2	9/15/11	ES	No	yes @ 2:00 p.m
997260	<1	<2	↓	M.M	Yes	–
997267(1-5)	↓	↓	9/16/11	MM	Yes	–
997268(1-9)	↓	↓	↓	↓	↓	–
997269(1-4)	↓	↓	↓	↓	↓	–
997270(1-4	↓	↓	↓	↓	↓	–
997271	↓	↓	↓	↓	↓	–

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: CH2M HILL **Lab #** 997U95

Date Delivered: 9/6/11 **Time:** 21:30 **By:** ☐Mail ☒Field Service ☐Client

1. Was a Chain of Custody received and signed? ☒Yes ☐No ☐N/A
2. Does Customer require an acknowledgement of the COC? ☐Yes ☐No ☒N/A
3. Are there any special requirements or notes on the COC? ☐Yes ☐No ☒N/A
4. If a letter was sent with the COC, does it match the COC? ☐Yes ☐No ☒N/A
5. Were all requested analyses understood and acceptable? ☒Yes ☐No ☐N/A
6. Were samples received in a chilled condition? ☒Yes ☐No ☐N/A
   Temperature (if yes)? 3 °C
7. Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)? ☒Yes ☐No ☐N/A
8. Were sample custody seals intact? ☐Yes ☐No ☒N/A
9. Does the number of samples received agree with COC? ☒Yes ☐No ☐N/A
10. Did sample labels correspond with the client ID's? ☒Yes ☐No ☐N/A
11. Did sample labels indicate proper preservation? ☒Yes ☐No ☐N/A
    Preserved (if yes) by: ☒**Truesdail** ☐Client
12. Were samples pH checked? pH = See COC ☐Yes ☐No ☐N/A
13. Were all analyses within holding time at time of receipt? ☒Yes ☐No ☐N/A
    If not, notify Project Manager.
14. Have Project due dates been checked and accepted? ☒Yes ☐No ☐N/A
    Turn Around Time (TAT): ☐ **RUSH** ☒ Std
15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☒Ground Water ☐Waste Water
    ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☐Other_____
16. Comments: _____
17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Alex

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October 14, 2011

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000
Oakland, California 94612

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2011-GMP-181-Q3, GROUNDWATER MONITORING PROJECT, TLI NO.: 997489

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2011-GMP-181-Q3 groundwater-monitoring project for Hexavalent and Total Dissolved Chromium. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data, and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data are under Section 5.

The samples were received and delivered with the chain of custody September 27, 2011, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Due to the discrepancy between the Total Dissolved Chromium (7.1 ug/L) and Hexavalent Chromium (ND<1.0 ug/L) results for sample MW-102-181, Mr. Shawn Duffy of CH2M Hill was notified. Sample from both the Total Dissolved Chromium and Hexavalent Chromium sample containers were analyzed for Total Dissolved Chromium. The results were 7.2 ug/L and 7.0 ug/L, respectively. After discussing the results with Mr. Duffy, the original results were reported.

Due to the discrepancy between the Total Dissolved Chromium (6.0 ug/L) and Hexavalent Chromium (ND<1.0 ug/L) results for sample MW-44-125-181, Mr. Shawn Duffy of CH2M Hill was notified. Sample from both the Total Dissolved Chromium and Hexavalent Chromium sample containers were analyzed for Total Dissolved Chromium. The results were 6.6 ug/L and 6.1 ug/L, respectively. After discussing the results with Mr. Duffy, the original results were reported.

No other violations or non-conformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for - Mona Nassimi
Manager, Analytical Services

Michael Ngo
Quality Assurance/Quality Control Officer

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 997489
Date Received: September 27, 2011

Project Name: PG&E Topock Project
Project No.: 405681.MP.02.GM.04
P.O. No.: 405681.MP.02.GM.04

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
997489-001	MW-28-090-181	E218.6	FLDFLT	9/26/2011	15:47	Chromium, hexavalent	ND	ug/L	0.20
997489-001	MW-28-090-181	SW6020	FLDFLT	9/26/2011	15:47	Chromium	ND	ug/L	1.0
997489-003	MW-42-055-181	E218.6	FLDFLT	9/26/2011	12:17	Chromium, hexavalent	ND	ug/L	0.20
997489-003	MW-42-055-181	SW6020	FLDFLT	9/26/2011	12:17	Chromium	ND	ug/L	1.0
997489-005	MW-42-065-181	E218.6	FLDFLT	9/26/2011	13:07	Chromium, hexavalent	ND	ug/L	1.0
997489-005	MW-42-065-181	SW6020	FLDFLT	9/26/2011	13:07	Chromium	ND	ug/L	1.0
997489-007	MW-46-175-181	E218.6	FLDFLT	9/26/2011	15:02	Chromium, hexavalent	69.4	ug/L	1.0
997489-007	MW-46-175-181	SW6020	FLDFLT	9/26/2011	15:02	Chromium	70.6	ug/L	1.0
997489-008	MW-102-181	E218.6	FLDFLT	9/27/2011	7:10	Chromium, hexavalent	ND	ug/L	1.0
997489-008	MW-102-181	SW6020	FLDFLT	9/27/2011	7:10	Chromium	7.1	ug/L	1.0
997489-009	MW-44-115-181	E218.6	FLDFLT	9/27/2011	12:19	Chromium, hexavalent	144	ug/L	2.1
997489-009	MW-44-115-181	SW6020	FLDFLT	9/27/2011	12:19	Chromium	150	ug/L	1.0
997489-010	MW-44-125-181	E218.6	FLDFLT	9/27/2011	11:46	Chromium, hexavalent	ND	ug/L	1.0
997489-010	MW-44-125-181	SW6020	FLDFLT	9/27/2011	11:46	Chromium	6.0	ug/L	1.0

ND: Non Detected (below reporting limit)
mg/L: Milligrams per liter.
Note: The following "Significant Figures" rule has been applied to all results:
Results below 0.01ppm will have two (2) significant figures.
Result above or equal to 0.01ppm will have three (3) significant figures.
Quality Control data will always have three (3) significant figures.

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REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Shawn Duffy
Project Name: PG&E Topock Project
P.O. Number: 405681.MP.02.GM.0
Project Number: 405681.MP.02.GM.0

Laboratory No. 997489

Printed 10/14/2011

Samples Received on 9/27/2011 9:30:00 PM

Field ID	Lab ID	Collected	Matrix
MW-28-090-181	997489-001	09/26/2011 15:47	Water
MW-28-090-181-EB	997489-002	09/26/2011 13:40	Water
MW-42-055-181	997489-003	09/26/2011 12:17	Water
MW-42-055-181-EB	997489-004	09/26/2011 11:45	Water
MW-42-065-181	997489-005	09/26/2011 13:07	Water
MW-42-065-181-EB	997489-006	09/26/2011 12:45	Water
MW-46-175-181	997489-007	09/26/2011 15:02	Water
MW-102-181	997489-008	09/27/2011 07:10	Water
MW-44-115-181	997489-009	09/27/2011 12:19	Water
MW-44-125-181	997489-010	09/27/2011 11:46	Water

Chrome VI by EPA 218.6 Batch 10CrH11B

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997489-001 Chromium, Hexavalent	ug/L	10/04/2011 08:11	1.05	0.0260	0.20	ND
997489-003 Chromium, Hexavalent	ug/L	10/04/2011 09:35	1.05	0.0260	0.20	ND
997489-005 Chromium, Hexavalent	ug/L	10/04/2011 11:50	5.25	0.136	1.0	ND
997489-007 Chromium, Hexavalent	ug/L	10/04/2011 12:11	5.25	0.136	1.0	69.4
997489-008 Chromium, Hexavalent	ug/L	10/04/2011 12:32	5.25	0.136	1.0	ND
997489-009 Chromium, Hexavalent	ug/L	10/04/2011 11:30	10.5	0.273	2.1	144.
997489-010 Chromium, Hexavalent	ug/L	10/04/2011 13:34	5.25	0.136	1.0	ND

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 997460-005

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	1.05	0.633	0.650	2.70	0 - 20

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Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.93	5.00	98.6	90 - 110

Matrix Spike — Lab ID = 997460-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	6.15	6.30(5.30)	97.2	90 - 110

Matrix Spike — Lab ID = 997460-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	6.20	6.36(5.30)	97.0	90 - 110

Matrix Spike — Lab ID = 997460-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.42	1.48(1.06)	94.3	90 - 110

Matrix Spike — Lab ID = 997460-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.41	1.51(1.06)	90.4	90 - 110

Matrix Spike — Lab ID = 997460-005

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.64	1.71(1.06)	93.0	90 - 110

Matrix Spike — Lab ID = 997489-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.01	1.06(1.06)	95.4	90 - 110

Matrix Spike — Lab ID = 997489-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	0.991	1.06(1.06)	93.5	90 - 110

Matrix Spike — Lab ID = 997489-005

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.18	5.25(5.25)	98.6	90 - 110

Matrix Spike — Lab ID = 997489-005

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	0.845	1.06(1.06)	79.8	90 - 110

Matrix Spike — Lab ID = 997489-007

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	146.	148.(78.8)	97.3	90 - 110

Matrix Spike — Lab ID = 997489-008

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.50	5.53(5.25)	99.4	90 - 110

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Matrix Spike — Lab ID = 997489-009

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	10.5	297.	302(158.)	96.6	90 - 110

Matrix Spike — Lab ID = 997489-010

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.51	5.56(5.25)	98.9	90 - 110

Matrix Spike — Lab ID = 997558-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.09	1.10(1.06)	98.7	90 - 110

Matrix Spike — Lab ID = 997558-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.08	1.06(1.06)	102.	90 - 110

Matrix Spike — Lab ID = 997558-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.55	1.55(1.06)	100.	90 - 110

Matrix Spike — Lab ID = 997558-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.18	1.20(1.06)	97.8	90 - 110

Matrix Spike — Lab ID = 997558-005

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	6.76	6.80(5.30)	99.2	90 - 110

Matrix Spike — Lab ID = 997558-006

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	7.47	7.53(5.30)	98.9	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.00	5.00	100.0	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.0	10.0	100.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.0	10.0	100.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.0	10.0	100.	95 - 105

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Metals by EPA 6020A, Dissolved

Batch 100311A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997489-001 Chromium	ug/L	10/03/2011 14:07	5.00	0.110	1.0	ND
997489-003 Chromium	ug/L	10/03/2011 14:37	5.00	0.110	1.0	ND
997489-005 Chromium	ug/L	10/03/2011 14:44	5.00	0.110	1.0	ND
997489-008 Chromium	ug/L	10/03/2011 14:59	5.00	0.110	1.0	7.1
997489-010 Chromium	ug/L	10/03/2011 15:15	5.00	0.110	1.0	6.0

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate — Lab ID = 997489-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	5.00	ND	0.00	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.5	50.0	99.1	85 - 115

Matrix Spike — Lab ID = 997489-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	233.	250.(250.)	93.4	75 - 125

Matrix Spike Duplicate — Lab ID = 997489-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	250.	250.(250.)	100.	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.6	50.0	103.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.8	50.0	95.7	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.0	50.0	100.	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

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Metals by EPA 6020A, Dissolved Batch 100511A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997489-007 Chromium	ug/L	10/05/2011 14:42	5.00	0.110	1.0	70.6
997489-009 Chromium	ug/L	10/05/2011 15:27	5.00	0.110	1.0	150.

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate — Lab ID = 997489-007

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	5.00	71.8	70.6	1.63	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.2	50.0	102.	85 - 115

Matrix Spike — Lab ID = 997489-007

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	315.	321.(250.)	97.9	75 - 125

Matrix Spike Duplicate — Lab ID = 997489-007

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	330.	321.(250.)	104.	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.3	50.0	103.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.4	50.0	101.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.2	50.0	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.8	50.0	102.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	53.4	50.0	107.	90 - 110

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 405681.MP.02.GM.0

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.8	50.0	104.	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.7	50.0	101.	80 - 120

Serial Dilution — Lab ID = 997489-007

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	25.0	67.8	70.6	4.06	0 - 10

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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997489

CH2MHILL

CHAIN OF CUSTODY RECORD

9/27/2011 3:08:17 PM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 9/30/2011
COC Number: 2

Container:	250 ml Poly	2x250 ml Poly	2x500 ml Poly	500 ml Poly
Preservatives:	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C
Filtered:	Field	Field	Field	Field
Holding Time:	28	28	180	180

* Where provided w/ 2 bottles for Cr6 + CrT please analyze 1 each + hold 1 each

Rec'd 09/27/11
s 997489

ALERT !!
Level III QC

		DATE	TIME	Matrix	Cr6 (E218.6) Field Filtered	Cr6 (E218.6R) Field Filtered	Metals (6020AFF) Field Filtered Chromium	Metals (6020AFF) Field Filtered Chromium		Number of Containers	COMMENTS
1	MW-28-090-181	9/26/2011	15:47	Water		X	X			4	pH for 6020A
2	MW-28-090-181-EB	9/26/2011	13:40	Water	X			X	hold	2	
3	MW-42-055-181	9/26/2011	12:17	Water		X	X			4	pH=2
4	MW-42-055-181-EB	9/26/2011	11:45	Water	X			X	Hold	2	
5	MW-42-065-181	9/26/2011	13:07	Water		X	X			4	
6	MW-42-065-181-EB	9/26/2011	12:45	Water	X			X	Hold	2	
7	MW-46-175-181	9/26/2011	15:02	Water	X			X		2	
	MW-72-181	9/26/2011	16:18	Water	X					1	Hold
8	MW-102-181	9/27/2011	7:10	Water	X			X		2	
9	MW-44-115-181	9/27/2011	12:19	Water	X			X		2	pH=2
10	MW-44-125-181	9/27/2011	11:46	Water	X			X		2	
									TOTAL NUMBER OF CONTAINERS	27	

For Sample Conditions
See Form Attached

f °C = 3.6°C

	Signatures	Date/Time
Approved by		
Sampled by		9-27-11 1520
Relinquished by		
Received by	Rafael Davila	T.L.I 9-27-11 15:20
Relinquished by	Rafael Davila	9/27/11 21:30
Received by	Luda	9/27/11 21:30

Shipping Details
Method of Shipment: courier
On Ice: yes / no
Airbill No:
Lab Name: Truesdail Laboratories, Inc.
Lab Phone: (714) 730-6239

ATTN:
Sample Custody

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

Hexavalent Chromium

Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
09/16/11	997272	9.5	N/A	N/A	N/A	SB
09/16/11	997313 -1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
09/16/11	997314-1	9.5	N/A	N/A	N/A	SB
	-2					
	-3					
	-4					
	-5					
9/21/11	997370	7.0	5 mL	9.5	8:40 am	al
9/27/11	997460-1	7.0	NA			
	-2					
	-3					
	-4					
	-5					
	-6					
9-28-11	997489-1	9.5	N/A	9.5	[illegible]	GG
	-2					
	-3					
	-4					
	-5					
	-6					
	-7					
	-8					
	-9					
	-10					
9/28/11	997490	7.0	5mL	9.5	8:45 AM	GG
9/27/11	997461	9.5	N/A	9.5	N/A	MG
9/28/11	997500	9.5	NA	NA	NA	GG

ak

Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest	Adjusted to pH<2 (Y/N)
997272	<1	<2	9/16/11	M.M	Yes	—
997313(1,2,4	↓	↓	↓	↓	↓	—
997314(1-4)	↓	↓	↓	↓	↓	—
997460(1-5)	<1	<2	9/27/11	M.M	Yes	—
997461(1)	↓	↓	↓		↓	—
997496	solid	—	09/28/11	M.M	Yes	STLC/TTLC
997506(1-2)	<1	<1	09/29/11	M.M	Yes	—
997507(1-5)	↓	↓	↓	↓	↓	—
997370	<1	>2	9/29/11	ES	No	yes @ 10:00 a.m
997490	<1	>2	↓	↓	↓	↓
997504	Solid	—	9/29/11	M.M	Yes	—
997505(1-2)	↓	—	↓	↓	↓	—
997459	<1	<2	9/29/11	MM	No	—
997543(1,2,4-10,13)	<1	<2	10/3/11	KK	NO	NO —
997390(1-6) 14,15	plant	>2	9/30/11	↓	↓	↓
997548(1-3)	<1	<2	10/3/11	↓	↓	↓
997558(1-6)	<1	<2	10/4/11	M.M	Yes	—
997594(1-11)	<1	<2	10/05/11	M.M	Yes	—
997595(1-11)	<1	↓	↓	↓	↓	—
997569	<1	>2	↓	↓	Yes	Yes
997631(1-4)	>1	<2	10/05/11	M.M	Yes	No
997628(1-3)	↓	↓	↓	↓	↓	↓
997629(1-2)	↓	↓	↓	↓	↓	↓
997630	↓	↓	↓	↓	↓	↓
997602(-1,2)	<1	>2	10/6	KK	No	yes @ 10:30 am
997650(1-12,16-21)	<1	<2	10/6/	M.M	Yes	No
997651(1,2,4,6,8,10,12-16)	↓	↓	↓	↓	↓	↓
997642(1-8)	>1	↓	↓	↓	↓	↓
997633(1-10	>1	<2	10/06	M.M	Yes	No
997634	↓	↓	↓	↓	↓	↓
997635	↓	↓	↓	↓	↓	↓
997657(1-2)	↓	↓	↓	↓	↓	↓
997658(1-3)	↓	↓	↓	↓	↓	↓
997659	↓	↓	↓	↓	↓	↓
997669(1-5)	>1	<2	10/06	M.M	Yes	No
997670	<1	<2	↓	↓	No	—
997671	>1	<2	↓	↓	Yes	—
997672(1-4	↓	↓	↓	↓	↓	No
997673(1-3	↓	↓	↓	↓	↓	—
997189(1-10)	<1	<2	10/03	KK	No	NO
997517(1-4)	plant	>2	10/05	KK	No	yes ~~[illegible]~~ KK
997695	>1	<2	10/06/	M.M	Yes	No KK
997699(1-3)	↓	↓		↓	↓	—
997701(1-4)	↓	↓		↓	↓	—
997704(1-4	↓	↓		↓	↓	—
997711	↓	↓		↓	↓	—
997715	↓	↓		↓	↓	—
997718(1-3)	↓	↓		↓	(1,3)	—
997518(1-6)	plant	>2	10/06/11	KK	No	yes @ 10 am

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 997489

Date Delivered: 09/27/11 **Time:** 21:30 **By:** ☐ **Mail** ☒ **Field Service** ☐ **Client**

1. *Was a Chain of Custody received and signed?* ☒ Yes ☐ No ☐ N/A
2. *Does Customer require an acknowledgement of the COC?* ☐ Yes ☐ No ☒ N/A
3. *Are there any special requirements or notes on the COC?* ☐ Yes ☐ No ☒ N/A
4. *If a letter was sent with the COC, does it match the COC?* ☐ Yes ☐ No ☒ N/A
5. *Were all requested analyses understood and acceptable?* ☒ Yes ☐ No ☐ N/A
6. *Were samples received in a chilled condition?* ☒ Yes ☐ No ☐ N/A
   Temperature (if yes)? 3.6 °C
7. *Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?* ☒ Yes ☐ No ☐ N/A
8. *Were sample custody seals intact?* ☐ Yes ☐ No ☒ N/A
9. *Does the number of samples received agree with COC?* ☒ Yes ☐ No ☐ N/A
10. *Did sample labels correspond with the client ID's?* ☒ Yes ☐ No ☐ N/A
11. *Did sample labels indicate proper preservation?* ☒ Yes ☐ No ☐ N/A
    Preserved (if yes) by: ☒ **Truesdail** ☐ *Client*
12. *Were samples pH checked? pH =* See C.O.C. ☒ Yes ☐ No ☐ N/A
13. *Were all analyses within holding time at time of receipt?* ☒ Yes ☐ No ☐ N/A
    If not, notify Project Manager.
14. *Have Project due dates been checked and accepted?* ☒ Yes ☐ No ☐ N/A
    Turn Around Time (TAT): ☐ **RUSH** ☒ *Std*
15. ***Sample Matrix:*** ☐ *Liquid* ☐ *Drinking Water* ☐ *Ground Water* ☐ *Waste Water* ☐ *Sludge* ☐ *Soil* ☐ *Wipe* ☐ *Paint* ☐ *Solid* ☒ *Other* Water
16. *Comments:* _____
17. *Sample Check-In completed by* **Truesdail** *Log-In/Receiving:* [signature]

ALERT !! Level III QC

C:\Users\Test\Desktop\Forms A - D\Discrp.FormBlank.doc

TRUESDAIL LABORATORIES, INC.

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Established 1931

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

October 21, 2011

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000
Oakland, California 94612

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2011-GMP-181-Q3, GROUNDWATER MONITORING PROJECT, TLI NO.: 997543

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2011-GMP-181-Q3 groundwater-monitoring project for Hexavalent and Total Dissolved Chromium. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data, and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data are under Section 5.

The samples were received and delivered with the chain of custody September 30, 2011, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Due to the discrepancy between the Total Dissolved Chromium (2.8 ug/L) and Hexavalent Chromium (1.6 ug/L) results for sample MW-63-065-181, Mr. Shawn Duffy of CH2M Hill was notified. Sample from both the Total Dissolved Chromium and Hexavalent Chromium sample containers were analyzed for Total Dissolved Chromium. The results were 2.4 ug/L and 1.5 ug/L, respectively. After discussing the results with Mr. Duffy, the original results were reported.

Due to the discrepancy between the Total Dissolved Chromium (739 ug/L) and Hexavalent Chromium (598 ug/L) results for sample MW-62-110-181, Mr. Shawn Duffy of CH2M Hill was notified. Sample from both the Total Dissolved Chromium and Hexavalent Chromium sample containers were analyzed for Total Dissolved Chromium. The results were 626 ug/L and 557 ug/L, respectively. After discussing the results with Mr. Duffy, the original results were reported.

Due to the discrepancy between the Total Dissolved Chromium (8.2 ug/L) and Hexavalent Chromium (ND<1.0 ug/L) results for sample MW-24BR-181, Mr. Shawn Duffy of CH2M Hill was notified. Sample from both the Total Dissolved Chromium and Hexavalent Chromium sample containers were analyzed for Total Dissolved Chromium. The results were 7.0 ug/L and 1.0 ug/L, respectively. After discussing the results with Mr. Duffy, the original results were reported.

No other violations or non-conformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

Michael Ngo
Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.
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(714) 730-6239 · FAX (714) 730-6462 · www.truesdail.com

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 997543
Date Received: September 30, 2011

Project Name: PG&E Topock Project
Project No.: 405681.MP.02.GM.04
P.O. No.: 405681.MP.02.GM.04

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
997543-001	MW-57-185-181	E218.6	FLDFLT	9/28/2011	16:40	Chromium, hexavalent	7.0	ug/L	1.0
997543-001	MW-57-185-181	SW6020	FLDFLT	9/28/2011	16:40	Chromium	8.5	ug/L	1.0
997543-002	MW-63-065-181	E218.6	FLDFLT	9/28/2011	13:47	Chromium, hexavalent	1.6	ug/L	0.45
997543-002	MW-63-065-181	SW6020	FLDFLT	9/28/2011	13:47	Chromium	2.8	ug/L	1.0
997543-003	MW-74-181	E218.6	FLDFLT	9/28/2011	17:05	Chromium, hexavalent	ND	ug/L	0.20
997543-004	MW-21-181	E218.6	FLDFLT	9/29/2011	10:48	Chromium, hexavalent	ND	ug/L	1.0
997543-004	MW-21-181	SW6020	FLDFLT	9/29/2011	10:48	Chromium	ND	ug/L	1.0
997543-005	MW-23-060-181	E218.6	FLDFLT	9/29/2011	12:51	Chromium, hexavalent	26.8	ug/L	1.0
997543-005	MW-23-060-181	SW6020	FLDFLT	9/29/2011	12:51	Chromium	29.8	ug/L	1.0
997543-006	MW-23-080-181	E218.6	FLDFLT	9/29/2011	14:06	Chromium, hexavalent	5.6	ug/L	2.1
997543-006	MW-23-080-181	SW6020	FLDFLT	9/29/2011	14:06	Chromium	5.6	ug/L	1.0
997543-007	MW-57-070-181	E218.6	FLDFLT	9/29/2011	17:05	Chromium, hexavalent	309	ug/L	10.5
997543-007	MW-57-070-181	SW6020	FLDFLT	9/29/2011	17:05	Chromium	352	ug/L	1.0
997543-008	MW-62-065-181	E218.6	FLDFLT	9/29/2011	15:18	Chromium, hexavalent	457	ug/L	10.5
997543-008	MW-62-065-181	SW6020	FLDFLT	9/29/2011	15:18	Chromium	500	ug/L	1.0
997543-009	MW-62-110-181	E218.6	FLDFLT	9/29/2011	15:51	Chromium, hexavalent	598	ug/L	10.5
997543-009	MW-62-110-181	SW6020	FLDFLT	9/29/2011	15:51	Chromium	739	ug/L	1.0
997543-010	MW-62-190-181	E218.6	FLDFLT	9/29/2011	15:57	Chromium, hexavalent	ND	ug/L	1.0
997543-010	MW-62-190-181	SW6020	FLDFLT	9/29/2011	15:57	Chromium	ND	ug/L	1.0
997543-011	MW-73-181	E218.6	FLDFLT	9/29/2011	15:45	Chromium, hexavalent	ND	ug/L	0.20
997543-012	MW-75-181	E218.6	FLDFLT	9/29/2011	17:28	Chromium, hexavalent	ND	ug/L	0.20
997543-013	MW-24BR-181	E218.6	FLDFLT	9/30/2011	9:32	Chromium, hexavalent	ND	ug/L	1.0
997543-013	MW-24BR-181	SW6020	FLDFLT	9/30/2011	9:32	Chromium	8.2	ug/L	1.0

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Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
997543-014	MW-48-181	E218.6	FLDFLT	9/30/2011	10:08	Chromium, hexavalent	ND	ug/L	0.20
997543-014	MW-48-181	SW6020	FLDFLT	9/30/2011	10:08	Chromium	ND	ug/L	1.0
997543-015	MW-61-110-181	E218.6	FLDFLT	9/30/2011	11:18	Chromium, hexavalent	611	ug/L	10.5
997543-015	MW-61-110-181	SW6020	FLDFLT	9/30/2011	11:18	Chromium	698	ug/L	1.0
997543-016	MW-76-181	E218.6	FLDFLT	9/30/2011	11:40	Chromium, hexavalent	ND	ug/L	0.20

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

Note: The following "Significant Figures" rule has been applied to all results:
Results below 0.01ppm will have two (2) significant figures.
Result above or equal to 0.01ppm will have three (3) significant figures.
Quality Control data will always have three (3) significant figures.

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REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Shawn Duffy
Project Name: PG&E Topock Project
P.O. Number: 405681.MP.02.GM.04
Project Number: 405681.MP.02.GM.04

Laboratory No. 997543

Printed 10/21/2011

Samples Received on 9/30/2011 8:30:00 PM

Field ID	Lab ID	Collected	Matrix
MW-57-185-181	997543-001	09/28/2011 16:40	Water
MW-63-065-181	997543-002	09/28/2011 13:47	Water
MW-74-181	997543-003	09/28/2011 17:05	Water
MW-21-181	997543-004	09/29/2011 10:48	Water
MW-23-060-181	997543-005	09/29/2011 12:51	Water
MW-23-080-181	997543-006	09/29/2011 14:06	Water
MW-57-070-181	997543-007	09/29/2011 17:05	Water
MW-62-065-181	997543-008	09/29/2011 15:18	Water
MW-62-110-181	997543-009	09/29/2011 15:51	Water
MW-62-190-181	997543-010	09/29/2011 15:57	Water
MW-73-181	997543-011	09/29/2011 15:45	Water
MW-75-181	997543-012	09/29/2011 17:28	Water
MW-24BR-181	997543-013	09/30/2011 09:32	Water
MW-48-181	997543-014	09/30/2011 10:08	Water
MW-61-110-181	997543-015	09/30/2011 11:18	Water
MW-76-181	997543-016	09/30/2011 11:40	Water

Chrome VI by EPA 218.6 Batch 10CrH11D

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997543-001 Chromium, Hexavalent	ug/L	10/05/2011 09:50	5.25	0.136	1.0	7.0
997543-002 Chromium, Hexavalent	ug/L	10/05/2011 10:01	2.25	0.0585	0.45	1.6
997543-003 Chromium, Hexavalent	ug/L	10/05/2011 05:47	1.05	0.0260	0.20	ND
997543-004 Chromium, Hexavalent	ug/L	10/05/2011 10:11	5.25	0.136	1.0	ND
997543-005 Chromium, Hexavalent	ug/L	10/05/2011 06:08	5.25	0.136	1.0	26.8
997543-006 Chromium, Hexavalent	ug/L	10/05/2011 16:39	10.5	0.273	2.1	5.6
997543-007 Chromium, Hexavalent	ug/L	10/05/2011 06:29	52.5	1.36	10.5	309.
997543-008 Chromium, Hexavalent	ug/L	10/05/2011 07:00	52.5	1.36	10.5	457.
997543-009 Chromium, Hexavalent	ug/L	10/05/2011 07:10	52.5	1.36	10.5	598.
997543-010 Chromium, Hexavalent	ug/L	10/05/2011 10:32	5.25	0.136	1.0	ND

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997543-011 Chromium, Hexavalent	ug/L	10/05/2011 07:31	1.05	0.0260	0.20	ND
997543-012 Chromium, Hexavalent	ug/L	10/05/2011 07:42	1.05	0.0260	0.20	ND
997543-013 Chromium, Hexavalent	ug/L	10/05/2011 10:42	5.25	0.136	1.0	ND
997543-014 Chromium, Hexavalent	ug/L	10/05/2011 08:02	1.05	0.0260	0.20	ND
997543-015 Chromium, Hexavalent	ug/L	10/05/2011 08:13	52.5	1.36	10.5	611.
997543-016 Chromium, Hexavalent	ug/L	10/05/2011 08:34	1.05	0.0260	0.20	ND

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 997543-015

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	52.5	612.	611	0.187	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.96	5.00	99.3	90 - 110

Matrix Spike — Lab ID = 997543-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	32.4	33.2(26.2)	97.2	90 - 110

Matrix Spike — Lab ID = 997543-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	6.72	6.86(5.25)	97.3	90 - 110

Matrix Spike — Lab ID = 997543-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.11	1.11(1.06)	99.4	90 - 110

Matrix Spike — Lab ID = 997543-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.59	5.80(5.25)	95.9	90 - 110

Matrix Spike — Lab ID = 997543-005

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	78.2	79.3(52.5)	97.9	90 - 110

Matrix Spike — Lab ID = 997543-006

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	28.3	31.5(26.2)	87.8	90 - 110

Matrix Spike — Lab ID = 997543-006

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	10.5	15.7	16.1(10.5)	95.8	90 - 110

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Matrix Spike — Lab ID = 997543-007

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	52.5	822.	834(525)	97.7	90 - 110

Matrix Spike — Lab ID = 997543-008

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	52.5	968.	982(525)	97.3	90 - 110

Matrix Spike — Lab ID = 997543-009

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	52.5	1370	1390(788.)	98.2	90 - 110

Matrix Spike — Lab ID = 997543-010

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.16	5.25(5.25)	98.4	90 - 110

Matrix Spike — Lab ID = 997543-011

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.09	1.14(1.06)	95.0	90 - 110

Matrix Spike — Lab ID = 997543-012

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.10	1.14(1.06)	95.8	90 - 110

Matrix Spike — Lab ID = 997543-013

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.49	5.50(5.25)	99.8	90 - 110

Matrix Spike — Lab ID = 997543-014

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.16	1.06(1.06)	110.	90 - 110

Matrix Spike — Lab ID = 997543-015

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	52.5	1360	1400(788.)	95.6	90 - 110

Matrix Spike — Lab ID = 997543-016

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.06	1.14(1.06)	92.5	90 - 110

Matrix Spike — Lab ID = 997548-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.13	5.25(5.25)	97.8	90 - 110

Matrix Spike — Lab ID = 997548-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.03	1.06(1.06)	97.2	90 - 110

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 405681.MP.02.GM.04 Printed 10/21/2011

Metals by EPA 6020A, Dissolved Batch 100611A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997543-001 Chromium	ug/L	10/06/2011 17:53	5.00	0.110	1.0	8.5
997543-002 Chromium	ug/L	10/06/2011 18:23	5.00	0.110	1.0	2.8
997543-004 Chromium	ug/L	10/06/2011 18:30	5.00	0.110	1.0	ND
997543-005 Chromium	ug/L	10/06/2011 19:00	5.00	0.110	1.0	29.8
997543-006 Chromium	ug/L	10/06/2011 19:15	5.00	0.110	1.0	5.6
997543-007 Chromium	ug/L	10/06/2011 19:23	5.00	0.110	1.0	352.
997543-008 Chromium	ug/L	10/06/2011 19:30	5.00	0.110	1.0	500.
997543-009 Chromium	ug/L	10/06/2011 19:38	5.00	0.110	1.0	739.
997543-010 Chromium	ug/L	10/06/2011 19:45	5.00	0.110	1.0	ND
997543-013 Chromium	ug/L	10/06/2011 19:53	5.00	0.110	1.0	8.2
997543-014 Chromium	ug/L	10/06/2011 20:23	5.00	0.110	1.0	ND
997543-015 Chromium	ug/L	10/06/2011 20:31	5.00	0.110	1.0	698.

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate — Lab ID = 997543-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	5.00	9.20	8.55	7.36	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	56.3	50.0	112.	85 - 115

Matrix Spike — Lab ID = 997543-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	271.	258.(250.)	105.	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	55.0	50.0	110.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	54.6	50.0	109.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	53.9	50.0	108.	90 - 110

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Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.2	50.0	102.	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	52.1	50.0	104.	80 - 120

Serial Dilution — Lab ID = 997543-005

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	25.0	28.2	29.8	5.62	0 - 10

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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997543

CH2MHILL

CHAIN OF CUSTODY RECORD

9/30/2011 12:43:57 PM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 9/30/2011
COC Number: 5

ALERT !! Level III QC

RUSH

For Sample Conditions See Form Attached

	Container:	250 ml Poly	2x250 ml Poly	2x500 ml Poly	500 ml Poly			
	Preservatives:	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C			
	Filtered:	Field	Field	Field	Field			
	Holding Time:	28	28	180	180			
		Cr6 (E218.6) Field Filtered	Cr6 (E218.6R) Field Filtered	Metals (6020AFF) Field Filtered Chromium	Metals (6020AFF) Field Filtered Chromium		Number of Containers	COMMENTS
	DATE TIME Matrix							
	MW-21-181-EB 9/28/2011 10:58 Water	X			X		2	
-1	MW-57-185-181 9/28/2011 16:40 Water	X			X		2	pH-2
-2	MW-63-065-181 9/28/2011 13:47 Water	X			X		2	pH-2
-3	MW-74-181 9/28/2011 15:45 Water	X					1	
-4	MW-21-181 9/29/2011 10:48 Water		X	X			4	
-5	MW-23-060-181 9/29/2011 12:51 Water	X			X		2	
-6	MW-23-080-181 9/29/2011 14:06 Water	X			X		2	
-7	MW-57-070-181 9/29/2011 17:05 Water	X			X		2	pH-2
-8	MW-62-065-181 9/29/2011 15:18 Water	X			X		2	
-9	MW-62-110-181 9/29/2011 15:51 Water	X			X		2	
-10	MW-62-190-181 9/29/2011 15:57 Water	X			X		2	
-11	MW-73-181 9/29/2011 17:05 Water	X					1	
-12	MW-75-181 9/29/2011 17:28 Water	X					1	
-13	MW-24BR-181 9/30/2011 9:32 Water	X			X		2	pH-2

pH for 6020A

	Signatures	Date/Time
Approved by	[signature]	9/30/11 1245
Sampled by		
Relinquished by	[signature]	9/30/11 1245
Received by	Rafael Davila	9/30/11 12:45
Relinquished by	Rafael Davila	9/30/11 8:30 pm
Received by	Linda	9/30/11 8:30 pm

Shipping Details
Method of Shipment: courier
On Ice: yes / no
Airbill No:
Lab Name: Truesdail Laboratories, Inc.
Lab Phone: (714) 730-6239

ATTN: Sample Custody

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

997543

CH2MHILL

CHAIN OF CUSTODY RECORD

9/30/2011 12:43:57 PM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 9/30/2011
COC Number: 5

RUSH

For Sample Conditions
See Form Attached

	DATE	TIME	Matrix	Cr6 (E218.6) Field Filtered	Cr6 (E218.6R) Field Filtered	Metals (6020AFF) Field Filtered Chromium	Metals (6020AFF) Field Filtered Chromium	Number of Containers	COMMENTS
Container:				250 ml Poly	2x250 ml Poly	2x500 ml Poly	500 ml Poly		
Preservatives:				(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C		
Filtered:				Field	Field	Field	Field		
Holding Time:				28	28	180	180		
-17 MW-48-181	9/30/2011	10:08	Water	X			X	2	
-18 MW-61-110-181	9/30/2011	11:18	Water	X			X	2	pH-7
-16 MW-75-181	9/30/2011	11:40	Water	X				1	6020A
							TOTAL NUMBER OF CONTAINERS	32	

ALERT !!
Level III QC

	Signatures	Date/Time
Approved by	[signature]	9/30/11 1245
Sampled by		
Relinquished by	[signature]	9/30/11 1245
Received by	Rafael Davila	9/30/11 12:45
Relinquished by	Rafael Davila	9/30/11 8:30 pm
Received by	[signature]	9/30/11 8:30 pm

Shipping Details
Method of Shipment: courier
On Ice: yes / no
Airbill No:
Lab Name: Truesdail Laboratories, Inc.
Lab Phone: (714) 730-6239

ATTN:
Sample Custody

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

Subject: RE: Topock COC Questions SDG 997543 - 10-3-11
From: "Shawn.Duffy@CH2M.com" <Shawn.Duffy@CH2M.com>
Date: Mon, 3 Oct 2011 15:54:05 -0400
To: Sean Condon <seanc@truesdail.com>
CC: "Erlene.Contreras@CH2M.com" <Erlene.Contreras@CH2M.com>

Hi Sean,

Attached is the missing COC, as for the time discrepancy between the COC and bottles - the bottles are correct.

Shawn

-----Original Message-----
From: Sean Condon [mailto:seanc@truesdail.com]
Sent: Monday, October 03, 2011 10:43 AM
To: Duffy, Shawn/RDD
Cc: Contreras, Erlene/RDD
Subject: Re: Topock COC Questions SDG 997543 - 10-3-11

COCs attached.

Sean Condon
Project Manager
Truesdail Laboratories, Inc.
Phone: (714) 730-6239
Fax: (714) 730-6462

On 10/3/2011 10:42 AM, Sean Condon wrote:
> Hi Shawn,
>
> Attached is the COC for SDG 997543 we received on Friday. There are a
> few issues:
>
> 1. The sample times (or IDs) on the sample containers are reversed
> from what is on the COC. The bottles have 17:05 for sample MW-74-181
> and 15:45 for MW-73-181. Which is correct, the COC or the bottles?
>
> 2. There are four sites that we received bottles for but are not on
> the COC (or are we missing a COC). The sample IDs are listed on a
> note on the attached COC.
>
> Let me know what you think.
>
> Thank you,
>
> Sean Condon
> Project Manager
> Truesdail Laboratories, Inc.
> Phone: (714) 730-6239
> Fax: (714) 730-6462

>

GMP-181 TLI COC 9-30-11 (2).pdf	**Content-Description:**	GMP-181 TLI COC 9-30-11 (2).pdf
	Content-Type:	application/pdf
	Content-Encoding:	base64

Hexavalent Chromium

Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
10/3/11	997543-1	9.5	N.A.	N.A.	N.A.	AL
	-2					
	-3					
	-4					
	-5					
	-6					
	-7					
	-8					
	-9					
	-10					
	-11					
	-12					
	-13					
	-14					
	-15					
	-16					
10/3/11	997548-1	9.5	N.A.	N.A.	N.A.	AL
	-2					
	-3					
10-04-11	997558-1	9.5	N/A	N/A	N/A	[illegible]
	-2					
	-3					
	-4					
	-5					
	-6					
10-5-11	997594-1	9.5	N/A	N/A	N/A	[illegible]
	-2					
	-3					
	-4					
	-5					
	-6					

Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest	Adjusted to pH<2 (Y/N)
997272	<1	<2	9/16/11	M.M	Yes	—
997313(1-4)	↓	↓	↓	↓	↓	—
997314(1-4)	↓	↓	↓	↓	↓	—
997460(1-5)	<1	<2	9/27/11	M.M	Yes	—
997461(1)	↓	↓	↓	↓	↓	—
997496	solid	—	09/28/11	M.M	Yes	STLC/TTLC
997506(1-2)	<1	<1	09/28/11	MM	Yes	—
997507(1-5)	↓	↓	↓	↓	↓	—
997370	<1	>2	9/29/11	ES	No	gas @ 10:00 a.m
997490	<1	>2	↓	↓	↓	↓
997504	Solid	—	9/29/11	M.M	Yes	—
997505(1-2)	↓	—	↓	↓	↓	—
997459	<1	<2	9/29/11	MM	No	—
997513(12,13,14,15)	<1	<2	10/3/11	KK	NO	NO —
997518	<1	<2	↓	↓	↓	↓
997558(1-6)	<1	<2	10/4/11	M.M	Yes	—
997594(1-11)	<1	<2	10/05/11	MM	Yes	—
997595(1-17)	<1	↓	↓	↓	↓	—
997569	<1	>2	↓	↓	Yes	Yes
997631(1-4)	>1	<2	10/05/11	MM	Yes	NO
997628(1-3)	↓	↓	↓	↓	↓	↓
997629(1-2)	↓	↓	↓	↓	↓	↓
997630	↓	↓	↓	↓	↓	↓
997602(-12)	<1	>2	10/6	KK	NO	YES @ 10:30 am
997650(1-12,6-21)	<1	<2	10/6/1	M.M	Yes	NO
997651(12,7,6,8,10,12-16)	↓	↓	↓	↓	↓	↓
997672(1-8)	>1	↓	↓	↓	↓	↓
997633(1-10	>1	<2	10/06	M.M	Yes	NO
997634	↓	↓	↓	↓	↓	↓
997635	↓	↓	↓	↓	↓	↓
997657(1-2)	↓	↓	↓	↓	↓	↓
997658(1-3)	↓	↓	↓	↓	↓	↓
997659	↓	↓	↓	↓	↓	↓
997667(1-5)	>1	<2	10/06	M.M	Yes	NO
997670	<1	<2	↓	↓	NO	—
997671	>1	<2	↓	↓	Yes	—
997672(1-4)	↓	↓	↓	↓	↓	NO
997673(1-3)	↓	↓	↓	↓	↓	—
997689(1-10)	<1	<2	10/05	KK	NO	NO
997517(1-4)	plant	>2	10/05	KK	NO	YES
997695	>1	<2	10/06/1	M.M	Yes	NO
997699(1-3)	↓	↓	↓	↓	↓	—
997701(1-4)	↓	↓	↓	↓	↓	—
997704(1-4	↓	↓	↓	↓	↓	—
997711	↓	↓	↓	↓	↓	—
997715	↓	↓	↓	↓	↓	—
997718(1-3)	↓	↓	↓	↓	(1,2)	—
997518(1-6)	plant	>2	10/06/11	KK	NO	YES @ 10 am

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 ***Lab #*** 997543

Date Delivered: 09/30/11 ***Time:*** 20:30 ***By:*** ☐***Mail*** ☒***Field Service*** ☐***Client***

1. *Was a Chain of Custody received and signed?* ☒*Yes* ☐*No* ☐*N/A*
2. *Does Customer require an acknowledgement of the COC?* ☐*Yes* ☐*No* ☒*N/A*
3. *Are there any special requirements or notes on the COC?* ☐*Yes* ☐*No* ☒*N/A*
4. *If a letter was sent with the COC, does it match the COC?* ☐*Yes* ☐*No* ☒*N/A*
5. *Were all requested analyses understood and acceptable?* ☒*Yes* ☐*No* ☐*N/A*
6. *Were samples received in a chilled condition?* ☒*Yes* ☐*No* ☐*N/A*
   Temperature (if yes)? 1.5°C
7. *Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?* ☒*Yes* ☐*No* ☐*N/A*
8. *Were sample custody seals intact?* ☐*Yes* ☐*No* ☒*N/A*
9. *Does the number of samples received agree with COC?* ☒*Yes* ☐*No* ☐*N/A*
10. *Did sample labels correspond with the client ID's?* ☒*Yes* ☐*No* ☐*N/A*
11. *Did sample labels indicate proper preservation?* ☒*Yes* ☐*No* ☐*N/A*
    Preserved (if yes) by: ☒***Truesdail*** ☐*Client*
12. *Were samples pH checked? pH =* See c.o.c. ☒*Yes* ☐*No* ☐*N/A*
13. *Were all analyses within holding time at time of receipt?* ☒*Yes* ☐*No* ☐*N/A*
    If not, notify Project Manager.
14. *Have Project due dates been checked and accepted?* ☒*Yes* ☐*No* ☐*N/A*
    Turn Around Time (TAT): ☒***RUSH*** ☐ *Std*
15. ***Sample Matrix:*** ☐*Liquid* ☐*Drinking Water* ☐*Ground Water* ☐*Waste Water* ☐*Sludge* ☐*Soil* ☐*Wipe* ☐*Paint* ☐*Solid* ☒*Other* Water
16. *Comments:* _____
17. *Sample Check-In completed by* ***Truesdail*** *Log-In/Receiving:* Linda

ALERT!! Level III QC

C:\Users\Test\Desktop\Forms A - D\Discrp.FormBlank.doc

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

October 17, 2011

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000
Oakland, California 94612

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2011-GMP-181-Q3, GROUNDWATER MONITORING PROJECT, TLI NO.: 997548

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2011-GMP-181-Q3 groundwater-monitoring project for Hexavalent and Total Dissolved Chromium. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data, and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data are under Section 5.

The samples were received and delivered with the chain of custody September 30, 2011, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

No violations or non-conformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

Michael Ngo
Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.
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(714) 730-6239 · FAX (714) 730-6462 · www.truesdail.com

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 997548
Date Received: September 30, 2011

Project Name: PG&E Topock Project
Project No.: 405681.MP.02.GM.04
P.O. No.: 405681.MP.02.GM.04

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
997548-001	MW-33-040-181	E218.6	FLDFLT	9/27/2011	14:02	Chromium, hexavalent	ND	ug/L	1.0
997548-001	MW-33-040-181	SW6020	FLDFLT	9/27/2011	14:02	Chromium	1.0	ug/L	1.0
997548-002	MW-33-210-181	E218.6	FLDFLT	9/27/2011	15:18	Chromium, hexavalent	12.7	ug/L	1.0
997548-002	MW-33-210-181	SW6020	FLDFLT	9/27/2011	15:18	Chromium	12.9	ug/L	1.0
997548-003	TW-01-181	SM3500-CrB	FLDFLT	9/28/2011	9:11	Chromium, hexavalent	3200	ug/L	250
997548-003	TW-01-181	SW6020	FLDFLT	9/28/2011	9:11	Chromium	3040	ug/L	5.0

ND: Non Detected (below reporting limit)
mg/L: Milligrams per liter.
Note: The following "Significant Figures" rule has been applied to all results:
Results below 0.01ppm will have two (2) significant figures.
Result above or equal to 0.01ppm will have three (3) significant figures.
Quality Control data will always have three (3) significant figures.

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

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REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Shawn Duffy
Project Name: PG&E Topock Project
P.O. Number: 405681.MP.02.GM.04
Project Number: 405681.MP.02.GM.04

Laboratory No. 997548

Printed 10/18/2011

Samples Received on 9/30/2011 8:30:00 PM

Field ID	Lab ID	Collected	Matrix
MW-33-040-181	997548-001	09/27/2011 14:02	Water
MW-33-210-181	997548-002	09/27/2011 15:18	Water
TW-01-181	997548-003	09/28/2011 09:11	Water

Chrome VI by EPA 218.6 Batch 10CrH11D

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997548-001 Chromium, Hexavalent	ug/L	10/05/2011 17:10	5.25	0.136	1.0	ND
997548-002 Chromium, Hexavalent	ug/L	10/05/2011 16:18	5.25	0.136	1.0	12.7

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 997543-015

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	52.5	612.	611	0.187	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.96	5.00	99.3	90 - 110

Matrix Spike — Lab ID = 997543-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	32.4	33.2(26.2)	97.2	90 - 110

Matrix Spike — Lab ID = 997543-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	6.72	6.86(5.25)	97.3	90 - 110

Matrix Spike — Lab ID = 997543-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.11	1.11(1.06)	99.4	90 - 110

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Matrix Spike — Lab ID = 997543-015

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	52.5	1360	1400(788.)	95.6	90 - 110

Matrix Spike — Lab ID = 997543-016

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.06	1.14(1.06)	92.5	90 - 110

Matrix Spike — Lab ID = 997548-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.13	5.25(5.25)	97.8	90 - 110

Matrix Spike — Lab ID = 997548-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.03	1.06(1.06)	97.2	90 - 110

Matrix Spike — Lab ID = 997548-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	38.2	38.9(26.2)	97.5	90 - 110

Matrix Spike — Lab ID = 997602-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.22	1.23(1.06)	99.4	90 - 110

Matrix Spike — Lab ID = 997602-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.55	5.59(5.25)	99.2	90 - 110

Matrix Spike — Lab ID = 997602-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	52.5	1830	1900(1050)	94.1	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.00	5.00	99.9	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.81	10.0	98.1	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.1	10.0	101.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.80	10.0	98.0	95 - 105

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Metals by EPA 6020A, Dissolved

Batch 101211A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997548-001 Chromium	ug/L	10/12/2011 16:54	5.00	0.110	1.0	1.0
997548-002 Chromium	ug/L	10/12/2011 17:47	5.00	0.110	1.0	12.9
997548-003 Chromium	ug/L	10/12/2011 18:03	25.0	0.550	5.0	3040

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.2	50.0	96.4	85 - 115

Matrix Spike — Lab ID = 997548-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	252.	251.(250.)	100.	75 - 125

Matrix Spike Duplicate — Lab ID = 997548-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	253.	251.(250.)	101.	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.7	50.0	99.5	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.4	50.0	92.8	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.8	50.0	95.6	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.2	50.0	94.5	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.2	50.0	92.4	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

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Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.5	50.0	96.9	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.8	50.0	102.	80 - 120

Serial Dilution — Lab ID = 997548-003

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	125	3180	3040	4.38	0 - 10

Chromium, Hexavalent by SM 3500-Cr B

Batch 10CrH11A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997548-003 Chromium, Hexavalent	ug/L	10/07/2011 19:03	25.0	109.	250.	3200

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 997746-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	25.0	2870	2840	1.12	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	91.9	100.	91.9	90 - 110

Matrix Spike — Lab ID = 997746-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	25.0	5260	5340(2500)	97.0	85 - 115

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	54.3	60.0	90.5	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	56.7	60.0	94.5	90 - 110

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Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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997548

CH2MHILL CHAIN OF CUSTODY RECORD 10/3/2011 12:24:34 PM Page 1 OF 1

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy

Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 9/30/2011
COC Number: 6

Rec'd 09/30/11
2c 997548

RUSH

	DATE	TIME	Matrix	Cr6 (E218.6) Field Filtered	Cr6 (SM3500B) Field Filtered	Cr6 (E218.6R) Field Filtered	Metals (6020AFF) Field Filtered Chromium	Metals (6020AFF) Field Filtered Chromium	Number of Containers	COMMENTS
Container:				250 ml Poly	250 ml Poly	2x250 ml Poly	2x500 ml Poly	500 ml Poly		
Preservatives:				(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C		
Filtered:				Field	Field	Field	Field	Field		
Holding Time:				28	28	28	180	180		
MW-33-040-181	9/27/2011	14:02	Water			X	X		4	pH for 6020A pH=2
MW-33-040-181-EB	9/27/2011	13:05	Water	X				X	2	
MW-33-210-181	9/27/2011	15:18	Water	X				X	2	
TW-01-181	9/28/2011	9:11	Water		X			X	2	pH=2
								TOTAL NUMBER OF CONTAINERS	10	

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

	Signatures	Date/Time
Approved by		9-30-11
Sampled by		1245
Relinquished by		9/30/11
Received by	Linda Strabelmine	20:30
Relinquished by		
Received by		

Shipping Details
Method of Shipment: courier
On Ice: yes / no
Airbill No:
Lab Name: Truesdail Laboratories, Inc.
Lab Phone: (714) 730-6239

ATTN:
Sample Custody

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

Hexavalent Chromium

Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
10/3/11	997543-1	9.5	N.A.	N.A.	N.A.	AL
	-2					
	-3					
	-4					
	-5					
	-6					
	-7					
	-8					
	-9					
	-10					
	-11					
	-12					
	-13					
	-14					
	-15					
	-16					
10/3/11	997548-1	9.5	N.A.	N.A.	N.A.	AL
	-2					
	-3					
10-04-11	997558-1	9.5	N/A	N/A	N/A	[illegible]
	-2					
	-3					
	-4					
	-5					
	-6					
10-5-11	997594-1	9.5	N/A	N/A	N/A	[illegible]
	-2					
	-3					
	-4					
	-5					
	-6					

Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest	Adjusted to pH<2 (Y/N)
997272	<1	<2	9/16/11	M.M	Yes	—
997313(1,2,4	↓	↓	↓	↓	↓	—
997314(1-4)	↓	↓	↓	↓	↓	—
997460(1-5)	<1	<2	9/27/11	M.M	Yes	—
997461(1)	↓	↓	↓		↓	—
997496	solid	—	09/28/11	M.M	Yes	STLC/TTLC
997506(1-2)	<1	<1	09/29/11	M.M	Yes	—
997507(1-5)	↓	↓	↓	↓	↓	—
997370	<1	>2	9/29/11	ES	No	yes @ 10:00 a.m
997490	<1	>2	↓	↓	↓	↓
997504	Solid	—	9/29/11	M.M	Yes	—
997505(1-2)	↓	—	↓	↓	↓	—
997459	<1	<2	9/29/11	MM	No	—
997543(1,2,4-10,13)	<1	<2	10/3/11	KK	NO	NO —
997390(1-6) 14,15	plant	>2	9/30/11	↓	↓	↓
997548(1-3)	<1	<2	10/3/11	↓	↓	↓
997558(1-6)	<1	<2	10/4/11	M.M	Yes	—
997594(1-11)	<1	<2	10/05/11	M.M	Yes	—
997595(1-13)	<1	↓	↓	↓	↓	—
997569	<1	>2	↓	↓	Yes	Yes
997631(1-4)	>1	<2	10/05/11	M.M	Yes	No
997628(1-3)	↓	↓	↓	↓	↓	↓
997629(1-2)	↓	↓	↓	↓	↓	↓
997630	↓	↓	↓	↓	↓	↓
997602(-1,2)	<1	>2	10/6	KK	No	yes @ 10:30 am
997650(1-12,16-21)	<1	<2	10/6/	M.M	Yes	No
997651(1-2,4,6,8,10,12-16)	↓	↓	↓	↓	↓	↓
997642(1-8)	>1	↓	↓	↓	↓	↓
997633(1-10	>1	<2	10/06	M.M	Yes	No
997634	↓	↓	↓	↓	↓	↓
997635	↓	↓	↓	↓	↓	↓
997657(1-2)	↓	↓	↓	↓	↓	↓
997658(1-3)	↓	↓	↓	↓	↓	↓
997659	↓	↓	↓	↓	↓	↓
997669(1-5)	>1	<2	10/06	M.M	Yes	No
997670	<1	<2	↓	↓	No	—
997671	>1	<2	↓	↓	Yes	—
997672(1-4	↓	↓	↓	↓	↓	No
997673(1-3	↓	↓	↓	↓	↓	—
997189(1-10)	<1	<2	10/03	KK	No	NO
997517(1-4)	plant	>2	10/05	KK	No	yes ~~[illegible]~~ KK
997695	>1	<2	10/06/	M.M	Yes	No KK
997699(1-3)	↓	↓		↓	↓	—
997701(1-4)	↓	↓		↓	↓	—
997704(1-4	↓	↓		↓	↓	—
997711	↓	↓		↓	↓	—
997715	↓	↓		↓	↓	—
997718(1-3)	↓	↓		↓	(1,3)	—
997518(1-6)	plant	>2	10/06/11	KK	No	yes @ 10 am

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 997548

Date Delivered: 09/30/11 **Time:** 20:30 **By:** ☐Mail ☒Field Service ☐Client

1. Was a Chain of Custody received and signed? ☒Yes ☐No ☐N/A
2. Does Customer require an acknowledgement of the COC? ☐Yes ☐No ☒N/A
3. Are there any special requirements or notes on the COC? ☐Yes ☐No ☒N/A
4. If a letter was sent with the COC, does it match the COC? ☐Yes ☐No ☒N/A
5. Were all requested analyses understood and acceptable? ☒Yes ☐No ☐N/A
6. Were samples received in a chilled condition? ☒Yes ☐No ☐N/A
   Temperature (if yes)? 4.5°C
7. Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)? ☒Yes ☐No ☐N/A
8. Were sample custody seals intact? ☐Yes ☐No ☒N/A
9. Does the number of samples received agree with COC? ☒Yes ☐No ☐N/A
10. Did sample labels correspond with the client ID's? ☒Yes ☐No ☐N/A
11. Did sample labels indicate proper preservation? ☒Yes ☐No ☐N/A
    Preserved (if yes) by: ☒**Truesdail** ☐Client
12. Were samples pH checked? pH = See C.o.e. ☒Yes ☐No ☐N/A
13. Were all analyses within holding time at time of receipt? ☒Yes ☐No ☐N/A
    If not, notify Project Manager.
14. Have Project due dates been checked and accepted? ☒Yes ☐No ☐N/A
    Turn Around Time (TAT): ☒**RUSH** ☐ Std
15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☒Other Water
16. Comments: _____
17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Linda

RUSH

ALERT !! Level III QC

C:\Users\Test\Desktop\Forms A - D\Discrp.FormBlank.doc

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

November 3, 2011

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000
Oakland, California 94612

Dear Mr. Duffy:

SUBJECT: REVISED CASE NARRATIVE PG&E TOPOCK IM3PLANT-EW-187, GROUNDWATER MONITORING PROJECT, TLI NO.: 997603

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-EW-187 groundwater-monitoring project for Total Dissolved and Hexavalent Chromium, Total Dissolved Solids, and Specific Conductivity. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, wet chemistry raw data, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data are under Section 5.

The samples were received and delivered with the chain of custody on October 4, 2011, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Per Mr. Shawn Duffy's request, the pH analysis was cancelled.

Samples for Total Dissolved Chromium were analyzed by method EPA 200.8 with the approval of Mr. Shawn Duffy of CH2M Hill.

Due to analyst error, the results for Total Dissolved Solids by SM 2540C were reported incorrectly. It was determined that the analyst inadvertently switched the sample I.D.s during the analysis. The sample I.D.s and results have been corrected and the revised report pages and raw data are attached.

No other violations or non-conformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

Michael Ngo
Quality Assurance/Quality Control Officer

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 997603
Date Received: October 4, 2011
Revision 1; November 3, 2011

Project Name: PG&E Topock Project
Project No.: 424973.01.DM
P.O. No.: 424973.01.DM

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
997603-001	PE-01-187	E120.1	NONE	10/4/2011	12:30	EC	4930	umhos/cm	2.00
997603-001	PE-01-187	E200.8	LABFLT	10/4/2011	12:30	Chromium	10.1	ug/L	1.0
997603-001	PE-01-187	E218.6	LABFLT	10/4/2011	12:30	Chromium, hexavalent	11.1	ug/L	0.20
997603-001	PE-01-187	SM2540C	NONE	10/4/2011	12:30	Total Dissolved Solids	2900	mg/L	125
997603-002	TW-03D-187	E120.1	NONE	10/4/2011	12:22	EC	8420	umhos/cm	2.00
997603-002	TW-03D-187	E200.8	LABFLT	10/4/2011	12:22	Chromium	1010	ug/L	4.0
997603-002	TW-03D-187	SM2540C	NONE	10/4/2011	12:22	Total Dissolved Solids	5040	mg/L	125
997603-002	TW-03D-187	SM3500-CrB	LABFLT	10/4/2011	12:22	Chromium, hexavalent	991	ug/L	100

ND: Non Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results:
Results below 0.01 will have two (2) significant figures.
Result above or equal to 0.01 will have three (3) significant figures.
Quality Control data will always have three (3) significant figures.

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REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Shawn Duffy
Project Name: PG&E Topock Project
P.O. Number: 424973.01.DM
Project Number: 424973.01.DM

Laboratory No. 997603

Printed 11/2/2011

Samples Received on 10/4/2011 9:30:00 PM

Field ID	Lab ID	Collected	Matrix
PE-01-187	997603-001	10/04/2011 12:30	Water
TW-03D-187	997603-002	10/04/2011 12:22	Water

Specific Conductivity - EPA 120.1 Batch 10EC11B 10/7/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997603-001 Specific Conductivity	umhos/cm	10/07/2011	1.00	0.0380	2.00	4930
997603-002 Specific Conductivity	umhos/cm	10/07/2011	1.00	0.0380	2.00	8420

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 997603-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	4940	4930	0.203	0 - 10

Duplicate — Lab ID = 997653-009

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	7330	7340	0.136	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	702	706	99.4	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	704	706	99.7	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	707	706	100.	90 - 110

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Chrome VI by EPA 218.6

Batch 10CrH11H

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997603-001 Chromium, Hexavalent	ug/L	10/10/2011 09:05	1.05	0.0400	0.20	11.1

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 997603-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	1.05	11.2	11.1	0.835	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.93	5.00	98.6	90 - 110

Matrix Spike — Lab ID = 997603-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	27.8	27.0(15.9)	105.	90 - 110

Matrix Spike — Lab ID = 997604-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	4.69	5.25(5.25)	89.3	90 - 110

Matrix Spike — Lab ID = 997604-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	0.00	1.06(1.06)	0.00	90 - 110

Matrix Spike — Lab ID = 997604-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	137.	136.(78.8)	102.	90 - 110

Matrix Spike — Lab ID = 997604-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	0.00	1.06(1.06)	0.00	90 - 110

Matrix Spike — Lab ID = 997604-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	0.00	1.06(1.06)	0.00	90 - 110

Matrix Spike — Lab ID = 997604-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	4.68	5.25(5.25)	89.2	90 - 110

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Chromium, Hexavalent by SM 3500-Cr B

Batch 10CrH11A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997603-002 Chromium, Hexavalent	ug/L	10/07/2011 19:04	10.0	43.5	100.	991.

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 997746-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	25.0	2870	2840	1.12	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	91.9	100.	91.9	90 - 110

Matrix Spike — Lab ID = 997746-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	25.0	5260	5340(2500)	97.0	85 - 115

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	54.3	60.0	90.5	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	56.7	60.0	94.5	90 - 110

Total Dissolved Solids by SM 2540 C

Batch 10TDS11A 10/6/2011

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997603-001 Total Dissolved Solids	mg/L	10/06/2011	1.00	0.400	125	2900
997603-002 Total Dissolved Solids	mg/L	10/06/2011	1.00	0.400	125	5040

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	1.00	ND

Duplicate — Lab ID = 997645-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	124	127	2.39	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	484	500.	96.8	90 - 110

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Metals by EPA 200.8, Dissolved

Batch 101011A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997603-001 Chromium	ug/L	10/10/2011 16:27	5.00	0.110	1.0	10.1
997603-002 Chromium	ug/L	10/10/2011 16:34	20.0	0.440	4.0	1010

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate — Lab ID = 997604-004

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	5.00	ND	0.00	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.3	50.0	102.	85 - 115

Matrix Spike — Lab ID = 997604-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	235.	250.(250.)	94.2	75 - 125

Matrix Spike Duplicate — Lab ID = 997604-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	242.	250.(250.)	97.0	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.9	50.0	104.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.1	50.0	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	52.4	50.0	105.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	52.6	50.0	105.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.1	50.0	100.	90 - 110

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 424973.01.DM Printed 11/2/2011

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	53.5	50.0	107.	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.0	50.0	98.0	80 - 120

Serial Dilution Lab ID = 997603-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	100	955.	1010	5.62	0 - 10

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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Total Dissolved Solids by SM 2540 C

Reviewed 11/3/11

Calculations

Batch: 10TDS11A

Date Calculated: 10/7/11

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL , ppm	Reported Value, ppm	DF
BLANK	100	74.2342	74.2344	74.2344	0.0000	No	0.0002	2.0	25.0	ND	1
997551	20	50.6110	50.6726	50.6726	0.0000	No	0.0616	3080.0	125.0	3080.0	1
997556-1	480	105.3572	105.3594	105.3592	0.0002	No	0.0020	4.2	5.2	ND	1
997556-2	480	105.2916	105.2926	105.2926	0.0000	No	0.0010	2.1	5.2	ND	1
997577-16	50	51.0895	51.1261	51.1261	0.0000	No	0.0366	732.0	50.0	732.0	1
997577-23	100	76.5274	76.5586	76.5586	0.0000	No	0.0312	312.0	25.0	312.0	1
997602-1	20	75.3063	75.3915	75.3915	0.0000	No	0.0852	4260.0	125.0	4260.0	1
997602-2	20	49.4177	49.5093	49.5093	0.0000	No	0.0916	4580.0	125.0	4580.0	1
997603-2	20	47.0085	47.1092	47.1092	0.0000	No	0.1007	5035.0	125.0	5035.0	1
997603-1	20	51.1310	51.1891	51.1891	0.0000	No	0.0581	2905.0	125.0	2905.0	1
997645-1	100	72.4709	72.4836	72.4836	0.0000	No	0.0127	127.0	25.0	127.0	1
997645-1D	100	67.7381	67.7505	67.7505	0.0000	No	0.0124	124.0	25.0	124.0	1
LCS	100	67.2182	67.2666	67.2666	0.0000	No	0.0484	484.0	25.0	484.0	1
LCSD											1

Calculation as follows:

$$\text{Filterable residue (TDS), mg/L} = \left(\frac{A-B}{C}\right) x\ 10^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

Analyst Printed Name

Analyst Signature

Reviewer Printed Name

Reviewer Signature

WetChem TDS_0810.xls

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Revised 11/2/11

Batch: 10TDS11A

Date Calculated: 10/7/11

Laboratory Number	EC	TDS/EC Ratio: 0.55-.9	Calculated TDS (EC*0.65)	Measured TDS / Calc TDS <1.3
997551	5460	0.56	3549	0.87
997556-1	15.1	ND	9.815	ND
997556-2	0.65	ND	0.4225	ND
997577-16	1327	0.55	862.55	0.85
997577-23	571	0.55	371.15	0.84
997602-1	7490	0.57	4868.5	0.88
997602-2	7820	0.59	5083	0.90
997603-2	8520	0.59	5538	0.91
997603-1	5010	0.58	3256.5	0.89
997645-1	254	0.50	165.1	0.77
997645-1D	254	0.49	165.1	0.75
LCS				

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CHAIN OF CUSTODY RECORD

[IM3Plant-EW-187]

997603

COC Number

TURNAROUND TIME 10 Days

DATE 10/04/11 PAGE 1 OF 1

COMPANY: CH2M HILL /E2

PROJECT NAME: PG&E Topock IM3Plant-EW

PHONE: 530-229-3303 FAX: 530-339-3303

ADDRESS: 155 Grand Ave Ste 1000, Oakland, CA 94612

P.O. NUMBER: 424973.01.DM

SAMPLERS (SIGNATURE: C. Knight

Rec'd 10/04/11
s 997603

	SAMPLE I.D.	DATE	TIME	DESCRIPTION	Dissolved Cr (200.7) Lab filtered	Cr(VI) (3500-Cr B)	pH (150.0) EC (120.1)	TDS (160.1)	Cr(VI) (218.6)	NUMBER OF CONTAINERS	COMMENTS
-1	PE-01-187	10/04/11	12:30	Ground water	X		X	X	X	4	
-2	TW-03D-187	10/04/11	12:22	Ground water	X	X	X	X		4	pH=7 (200.7)
											TOTAL NUMBER OF CONTAINERS

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Relinquished	[illegible]	Paul Phelps	OMI	10-4-11 1530
Received	Rafael Davila	Rafael	T.L.I	10-4-11 15:30
Relinquished	Rafael Davila	Rafael	T.L.I	10-4-11 21:30
Received	Linda	Shabunine	TLI	10/4/11 21:30
Relinquished				
Received				

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ 4.7°C °F

CUSTODY SEALED YES ☐ NO ☑

SPECIAL REQUIREMENTS:

045

Hexavalent Chromium

Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
10-5-2011	997594-7	9.5	N/A	N/A	N/A	[illegible]
	-8					
	-9					
	-10					
	-11					
10-5-2011	997595-1	9.5	N/A	N/A	N/A	[illegible]
	-2					
	-3					
	-4					
	-5					
	-6					
	-7					
	-8					
	-9					
	-10					
	-11					
	-12					
	-13					
10/05/11	997602	7.0	5.0 mL	9.5	10:10 am	ALi
10/5/11	997603-1	7.0	5.0 mL	9.5	10:10 Am	[illegible]
	-2	7.0	5.0 mL	9.5	10:10 Am	[illegible]
10/5/11	997604-1	9.5	N/A	N/A	N/A	[illegible]
	-2					
	-3					
	-4					
	-5					
	-6					
	-7					
	-8					
	-9					
	-10					
	-11					

Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest	Adjusted to pH<2 (Y/N)
997708 (1-4,5,11-20)	<1	<2	10/07/11	M.M	Yes	No
997709 (1,3,5,6,8,10,12-16)	↓	↓	↓	↓	↓	↓
997459 (1-6)	plant >2	>2	10/05/11	KK	No	yes
997446 (1-6)	plant >2	>2	10/05/11	KK	No	yes
997763 (1-10)	<1	<2	10/10/11	M.M	Yes	No
997603 (1-2)	<1	<2	10/9/11	KK	No	No
997604 (1-11)	<1	<2	10/10/11	KK	No	No
997870	<1	>2	10/12/11	ES	No	yes @ 4:00pm
997871	↓	↓	↓	↓	↓	↓
997745 total + dissolved (1-7)	<1	<2	10/13/11	KK	No	No
997746	<1	<2	10/13/11	KK	No	No
997652	<1	<2	10/13/11	KK	No	No
997653 (1-12)	<1	<2	10/3/11	KK	No	No
997852 (1-4)	>1	<2	10/13/11	M.M	Yes	No
997829 (1)	Sludge	—	10/13/11	M.M	Yes	TTLC
997816 (1-2)	Soil	—	10/13/11	M.M	Yes	↓
997867	↓	—	↓	↓	↓	↓
997649 (1-2)	plant	>2	10/12/11	KK	No	yes
997917	solid	—	10/14/11	MM	Yes	STLC
997871	>1	<2	10/14/11	M.M	Yes	No
997872	↓	↓	↓	↓	↓	↓
997875	↓	↓	↓	↓	↓	↓
997876	↓	↓	↓	↓	↓	↓
997880	↓	↓	↓	↓	↓	↓
997881	↓	↓	↓	↓	↓	↓
997874	↓	↓	↓	↓	↓	↓
997893	↓	↓	↓	↓	↓	↓
997920	Solid	—	10/14/11	MM	Yes	TTLC
997987	<1	<2	10/19/11	M.M	Yes	— No
998019 (1-2)	<1	<2	10/20/11	M.M	Yes	No
997956	>1	<2	↓	↓	↓	↓
997958	↓	↓	↓	↓	↓	↓
998008	↓	↓	↓	↓	↓	↓
998016 (1-2)	>1	↓	↓	↓	↓	↓
998039 (1-5)	<1	<2	10/21/11	M.M	Yes	No
997968	<1	>2	10/21/11	ES	No	yes @ 3:00 p.m
998095	>1	<2	10/25/11	M.M	Yes	—
998060	↓	↓	↓	↓	↓	—
998076	↓	↓	↓	↓	↓	—
998077	↓	↓	↓	↓	↓	—
998036	Solid	—	↓	↓	Yes	TTLC
998093	↓	—	↓	↓	↓	↓
998110 (1-8,9)	<1	<2	10/26/11	M.M	Yes	—
998111	↓	↓	↓	↓	↓	—
998112 (1-7)	↓	↓	↓	↓	↓	—
998113 (1-8)	↓	↓	↓	↓	↓	—
998114 (1-8)	↓	↓	↓	↓	↓	—
998115 (1-11)	↓	↓	↓	↓	↓	—
997884 (1-6)	plant	>2	10/17/11	KK	No	yes on 10/17/11

TRUESDAIL LABORATORIES, INC.

ALERT !! Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 997603

Date Delivered: 10/04/11 **Time:** 2130 **By:** ☐ **Mail** ☒ **Field Service** ☐ **Client**

1. *Was a Chain of Custody received and signed?* ☒ Yes ☐ No ☐ N/A
2. *Does Customer require an acknowledgement of the COC?* ☐ Yes ☐ No ☒ N/A
3. *Are there any special requirements or notes on the COC?* ☐ Yes ☐ No ☒ N/A
4. *If a letter was sent with the COC, does it match the COC?* ☐ Yes ☐ No ☒ N/A
5. *Were all requested analyses understood and acceptable?* ☒ Yes ☐ No ☐ N/A
6. *Were samples received in a chilled condition?* ☒ Yes ☐ No ☐ N/A
   Temperature (if yes)? 4.2°C
7. *Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?* ☒ Yes ☐ No ☐ N/A
8. *Were sample custody seals intact?* ☐ Yes ☒ No ☐ N/A
9. *Does the number of samples received agree with COC?* ☒ Yes ☐ No ☐ N/A
10. *Did sample labels correspond with the client ID's?* ☒ Yes ☐ No ☐ N/A
11. *Did sample labels indicate proper preservation?* ☐ Yes ☐ No ☒ N/A
    Preserved (if yes) by: ☐ **Truesdail** ☐ *Client*
12. *Were samples pH checked? pH =* See C-O-C ☒ Yes ☐ No ☐ N/A
13. *Were all analyses within holding time at time of receipt?* ☒ Yes ☐ No ☐ N/A
    If not, notify Project Manager.
14. *Have Project due dates been checked and accepted?* ☒ Yes ☐ No ☐ N/A
    Turn Around Time (TAT): ☐ **RUSH** ☒ *Std*
15. ***Sample Matrix:*** ☐ *Liquid* ☐ *Drinking Water* ☒ *Ground Water* ☐ *Waste Water* ☐ *Sludge* ☐ *Soil* ☐ *Wipe* ☐ *Paint* ☐ *Solid* ☐ *Other* _____
16. *Comments:* _____
17. *Sample Check-In completed by* **Truesdail** *Log-In/Receiving:* A

C:\Users\Tes\Desktop\Forms A - D\Discrp.FormBlank.doc

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TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

November 1, 2011

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000
Oakland, California 94612

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2011-GMP-181-Q3, GROUNDWATER MONITORING PROJECT, TLI NO.: 997604

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2011-GMP-181-Q3 groundwater-monitoring project for Hexavalent and Total Dissolved Chromium. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data, and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data are under Section 5.

The samples were received and delivered with the chain of custody October 4, 2011, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The matrix spike result at a 5x dilution for sample MW-101-181-Q3 for Hexavalent Chromium analysis by EPA 218.6 was just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the sample result for the 5x dilution was within the retention time window, the result from the 5x dilution was reported.

No other violations or non-conformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

Michael Ngo
Quality Assurance/Quality Control Officer

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 997604
Date Received: October 4, 2011

Project Name: PG&E Topock Project
Project No.: 405681.MP.02.GM
P.O. No.: 405681.MP.02.GM

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
997604-001	MW-100-181	E218.6	FLDFLT	10/3/2011	7:05	Chromium, hexavalent	ND	ug/L	1.0
997604-001	MW-100-181	SW6020	FLDFLT	10/3/2011	7:05	Chromium	ND	ug/L	1.0
997604-002	MW-101-181	E218.6	FLDFLT	10/3/2011	17:10	Chromium, hexavalent	57.0	ug/L	1.0
997604-002	MW-101-181	SW6020	FLDFLT	10/3/2011	17:10	Chromium	61.7	ug/L	1.0
997604-003	MW-103-181	E218.6	FLDFLT	10/3/2011	17:50	Chromium, hexavalent	ND	ug/L	2.1
997604-003	MW-103-181	SW6020	FLDFLT	10/3/2011	17:50	Chromium	ND	ug/L	1.0
997604-004	MW-27-085-181	E218.6	FLDFLT	10/3/2011	11:59	Chromium, hexavalent	ND	ug/L	1.0
997604-004	MW-27-085-181	SW6020	FLDFLT	10/3/2011	11:59	Chromium	ND	ug/L	1.0
997604-005	MW-34-080-181	E218.6	FLDFLT	10/3/2011	13:40	Chromium, hexavalent	ND	ug/L	1.0
997604-005	MW-34-080-181	SW6020	FLDFLT	10/3/2011	13:40	Chromium	ND	ug/L	1.0
997604-006	MW-34-100-181	E218.6	FLDFLT	10/3/2011	14:53	Chromium, hexavalent	55.8	ug/L	1.0
997604-006	MW-34-100-181	SW6020	FLDFLT	10/3/2011	14:53	Chromium	56.9	ug/L	1.0
997604-007	MW-53D-181	E218.6	FLDFLT	10/3/2011	16:41	Chromium, hexavalent	ND	ug/L	2.1
997604-007	MW-53D-181	SW6020	FLDFLT	10/3/2011	16:41	Chromium	ND	ug/L	1.0
997604-008	MW-33-090-181	E218.6	FLDFLT	10/4/2011	10:00	Chromium, hexavalent	16.8	ug/L	1.0
997604-008	MW-33-090-181	SW6020	FLDFLT	10/4/2011	10:00	Chromium	20.2	ug/L	1.0
997604-009	MW-33-150-181	E218.6	FLDFLT	10/4/2011	8:34	Chromium, hexavalent	10.4	ug/L	1.0
997604-009	MW-33-150-181	SW6020	FLDFLT	10/4/2011	8:34	Chromium	10.1	ug/L	1.0

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TRUESDAIL LABORATORIES, INC.

Report Continued

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
997604-010	MW-59-100-181	E218.6	FLDFLT	10/4/2011	14:24	Chromium, hexavalent	4330	ug/L	84.0
997604-010	MW-59-100-181	SW6020	FLDFLT	10/4/2011	14:24	Chromium	4850	ug/L	8.0
997604-011	MW-60-125-181	E218.6	FLDFLT	10/4/2011	13:25	Chromium, hexavalent	715	ug/L	42.0
997604-011	MW-60-125-181	SW6020	FLDFLT	10/4/2011	13:25	Chromium	760	ug/L	2.0

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

Note: The following "Significant Figures" rule has been applied to all results:
Results below 0.01ppm will have two (2) significant figures.
Result above or equal to 0.01ppm will have three (3) significant figures.
Quality Control data will always have three (3) significant figures.

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REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Shawn Duffy
Project Name: PG&E Topock Project
P.O. Number: 405681.MP.02.GM.04
Project Number: 405681.MP.02.GM.04

Laboratory No. 997604

Printed 11/1/2011

Samples Received on 10/4/2011 9:30:00 PM

Field ID	Lab ID	Collected	Matrix
MW-100-181	997604-001	10/03/2011 07:05	Water
MW-101-181	997604-002	10/03/2011 17:10	Water
MW-103-181	997604-003	10/03/2011 17:50	Water
MW-27-085-181	997604-004	10/03/2011 11:59	Water
MW-34-080-181	997604-005	10/03/2011 13:40	Water
MW-34-100-181	997604-006	10/03/2011 14:53	Water
MW-53D-181	997604-007	10/03/2011 16:41	Water
MW-33-090-181	997604-008	10/04/2011 10:00	Water
MW-33-150-181	997604-009	10/04/2011 08:34	Water
MW-59-100-181	997604-010	10/04/2011 14:24	Water
MW-60-125-181	997604-011	10/04/2011 13:25	Water

Chrome VI by EPA 218.6 Batch 10CrH11J

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997604-008 Chromium, Hexavalent	ug/L	10/11/2011 09:17	5.25	0.210	1.0	16.8
997604-011 Chromium, Hexavalent	ug/L	10/11/2011 10:53	210	8.40	42.0	715.

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 997604-008

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	105	16.6	16.8	0.848	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.95	5.00	99.1	90 - 110

Matrix Spike — Lab ID = 997604-008

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	45.6	43.0(26.2)	110.	90 - 110

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Matrix Spike — Lab ID = 997604-011

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	210	1860	1760(1050)	109.	90 - 110

Matrix Spike — Lab ID = 997604-011

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	105	1280	1770(1050)	53.3	90 - 110

Matrix Spike — Lab ID = 997653-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	6.48	6.05(5.25)	108.	90 - 110

Matrix Spike — Lab ID = 997653-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	8.00	8.16(5.25)	96.9	90 - 110

Matrix Spike — Lab ID = 997653-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	6.54	6.27(5.25)	105.	90 - 110

Matrix Spike — Lab ID = 997653-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	6.41	6.79(5.25)	92.7	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.97	5.00	99.5	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.86	10.0	98.6	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.81	10.0	98.1	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.93	10.0	99.3	95 - 105

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Chrome VI by EPA 218.6

Batch 10CrH11H

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997604-002 Chromium, Hexavalent	ug/L	10/10/2011 11:36	5.25	0.210	1.0	57.0
997604-004 Chromium, Hexavalent	ug/L	10/10/2011 14:10	5.25	0.210	1.0	ND
997604-005 Chromium, Hexavalent	ug/L	10/10/2011 14:47	5.25	0.210	1.0	ND
997604-006 Chromium, Hexavalent	ug/L	10/10/2011 17:36	5.25	0.210	1.0	55.8
997604-010 Chromium, Hexavalent	ug/L	10/10/2011 16:33	420	16.8	84.0	4330

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 997603-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	1.05	11.2	11.1	0.835	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.93	5.00	98.6	90 - 110

Matrix Spike — Lab ID = 997603-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	27.8	27.0(15.9)	105.	90 - 110

Matrix Spike — Lab ID = 997604-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	4.69	5.25(5.25)	89.3	90 - 110

Matrix Spike — Lab ID = 997604-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	0.00	1.06(1.06)	0.00	90 - 110

Matrix Spike — Lab ID = 997604-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	137.	136.(78.8)	102.	90 - 110

Matrix Spike — Lab ID = 997604-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	0.00	1.06(1.06)	0.00	90 - 110

Matrix Spike — Lab ID = 997604-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	0.00	1.06(1.06)	0.00	90 - 110

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Matrix Spike — Lab ID = 997604-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	4.68	5.25(5.25)	89.2	90 - 110

Matrix Spike — Lab ID = 997604-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.21	5.25(5.25)	99.2	90 - 110

Matrix Spike — Lab ID = 997604-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	0.00	1.06(1.06)	0.00	90 - 110

Matrix Spike — Lab ID = 997604-005

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	0.942	1.06(1.06)	88.8	90 - 110

Matrix Spike — Lab ID = 997604-005

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	4.88	5.25(5.25)	92.9	90 - 110

Matrix Spike — Lab ID = 997604-006

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	0.00	1.06(1.06)	0.00	90 - 110

Matrix Spike — Lab ID = 997604-006

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	141.	135.(78.8)	108.	90 - 110

Matrix Spike — Lab ID = 997604-007

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	0.00	1.06(1.06)	0.00	90 - 110

Matrix Spike — Lab ID = 997604-007

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	4.50	5.25(5.25)	85.8	90 - 110

Matrix Spike — Lab ID = 997604-008

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	48.4	38.6(26.2)	137.	90 - 110

Matrix Spike — Lab ID = 997604-008

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	48.6	38.6(26.2)	138.	90 - 110

Matrix Spike — Lab ID = 997604-009

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	0.00	1.06(1.06)	0.00	90 - 110

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Matrix Spike — Lab ID = 997604-009

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	21.3	15.8(5.25)	206.	90 - 110

Matrix Spike — Lab ID = 997604-010

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	420	10900	10600(6300)	104.	90 - 110

Matrix Spike — Lab ID = 997604-011

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	105	1490	1730(1050)	77.4	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.90	5.00	98.0	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.0	10.0	100.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.4	10.0	104.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.1	10.0	101.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.76	10.0	97.6	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.69	10.0	96.9	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.3	10.0	103.	95 - 105

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Chrome VI by EPA 218.6 Batch 10CrH11V

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997604-001 Chromium, Hexavalent	ug/L	10/27/2011 10:51	5.25	0.210	1.0	ND
997604-003 Chromium, Hexavalent	ug/L	10/27/2011 14:52	10.5	0.420	2.1	ND
997604-007 Chromium, Hexavalent	ug/L	10/27/2011 15:13	10.5	0.420	2.1	ND
997604-009 Chromium, Hexavalent	ug/L	10/27/2011 12:32	5.25	0.210	1.0	10.4

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 997604-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	10.5	43.3	48.0	10.3	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.84	5.00	96.7	90 - 110

Matrix Spike — Lab ID = 997604-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.20	5.25(5.25)	99.0	90 - 110

Matrix Spike — Lab ID = 997604-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	105.	100.(52.5)	108.	90 - 110

Matrix Spike — Lab ID = 997604-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	10.5	10.3	10.5(10.5)	98.2	90 - 110

Matrix Spike — Lab ID = 997604-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	3.97	5.25(5.25)	75.7	90 - 110

Matrix Spike — Lab ID = 997604-007

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	10.5	9.87	10.5(10.5)	94.0	90 - 110

Matrix Spike — Lab ID = 997604-007

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	4.59	5.25(5.25)	87.5	90 - 110

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Matrix Spike — Lab ID = 997604-009

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	36.1	36.6(26.2)	98.1	90 - 110

Matrix Spike — Lab ID = 998107-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.68	5.65(5.25)	101.	90 - 110

Matrix Spike — Lab ID = 998107-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.26	1.21(1.06)	105.	90 - 110

Matrix Spike — Lab ID = 998152-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.30	1.27(1.06)	103.	90 - 110

Matrix Spike — Lab ID = 998152-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.20	1.21(1.06)	99.3	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.76	5.00	95.2	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.52	10.0	95.2	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.3	10.0	103.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.0	10.0	100.	95 - 105

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Metals by EPA 6020A, Dissolved

Batch 101011A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997604-001 Chromium	ug/L	10/10/2011 16:50	5.00	0.110	1.0	ND
997604-002 Chromium	ug/L	10/10/2011 17:20	5.00	0.110	1.0	61.7
997604-004 Chromium	ug/L	10/10/2011 17:35	5.00	0.110	1.0	ND
997604-005 Chromium	ug/L	10/10/2011 18:05	5.00	0.110	1.0	ND
997604-006 Chromium	ug/L	10/10/2011 18:13	5.00	0.110	1.0	56.9
997604-007 Chromium	ug/L	10/10/2011 18:20	5.00	0.110	1.0	ND
997604-008 Chromium	ug/L	10/10/2011 18:28	5.00	0.110	1.0	20.2
997604-009 Chromium	ug/L	10/10/2011 18:36	5.00	0.110	1.0	10.1
997604-010 Chromium	ug/L	10/10/2011 18:43	40.0	0.880	8.0	4850
997604-011 Chromium	ug/L	10/10/2011 18:51	10.0	0.220	2.0	760.

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate — Lab ID = 997604-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	5.00	ND	0.00	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.3	50.0	102.	85 - 115

Matrix Spike — Lab ID = 997604-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	235.	250.(250.)	94.2	75 - 125

Matrix Spike Duplicate — Lab ID = 997604-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	242.	250.(250.)	97.0	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.9	50.0	104.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.1	50.0	100.	90 - 110

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Metals by EPA 6020A, Dissolved

Batch 101111A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997604-003 Chromium	ug/L	10/11/2011 21:09	5.00	0.110	1.0	ND

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate — Lab ID = 997604-003

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	5.00	ND	0.00	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	52.7	50.0	105.	85 - 115

Matrix Spike — Lab ID = 997604-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	269.	250.(250.)	108.	75 - 125

Matrix Spike Duplicate — Lab ID = 997604-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	263.	250.(250.)	105.	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.7	50.0	103.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.5	50.0	103.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.8	50.0	99.6	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.4	50.0	96.7	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.7	50.0	101.	90 - 110

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Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	53.3	50.0	106.	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	55.4	50.0	111.	80 - 120

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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997604

CH2MHILL

CHAIN OF CUSTODY RECORD

10/4/2011 2:54:32 PM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 10/4/2011
COC Number: 8

RUSH

Container:	250 ml Poly	2x250 ml Poly	2x500 ml Poly	500 ml Poly
Preservatives:	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C
Filtered:	Field	Field	Field	Field
Holding Time:	28	28	180	180

* Where provided w/ 2 Cr6 + 2 CrT bottles, please analyze 1 and save 1 of each.

Rec'd 10/04/11
s 997604

ALERT !!
Level III QC

		DATE	TIME	Matrix	Cr6 (E218.6) Field Filtered	Cr6 (E218.6R) Field Filtered	Metals (6020AFF) Field Filtered Chromium	Metals (6020AFF) Field Filtered Chromium		Number of Containers	COMMENTS
-1	MW-100-181	10/3/2011	7:05	Water		X	X			4	
-2	MW-101-181	10/3/2011	17:10	Water		X		X		3	
-3	MW-103-181	10/3/2011	17:50	Water		X	X			4	pH=2
-4	MW-27-085-181	10/3/2011	11:59	Water		X	X			4	
	MW-27-085-181-EB	10/3/2011	11:00	Water	X			X		2	
-5	MW-34-080-181	10/3/2011	13:40	Water		X	X			4	pH=2
	MW-34-080-181-EB	10/3/2011	12:30	Water	X			X		2	
-6	MW-34-100-181	10/3/2011	14:53	Water		X		X		3	pH=2
-7	MW-530-181	10/3/2011	16:41	Water		X	X			4	
	MW-77-181	10/3/2011	17:30	Water	X					1	Hold
-8	MW-33-090-181	10/4/2011	10:00	Water	X			X		2	?
-9	MW-33-150-181	10/4/2011	8:34	Water	X			X		2	
-10	MW-59-100-181	10/4/2011	14:24	Water	X			X		2	pH=2
-11	MW-60-125-181	10/4/2011	13:25	Water	X			X		2	

pH 6 - 6020A

39

For Sample Conditions
See Form Attached

	Signatures	Date/Time
Approved by		10-4-11 1500
Sampled by		
Relinquished by		
Received by	Rafael Davila	10/4/11 15:00
Relinquished by	Rafael Davila	10/4/11 21:30
Received by	Linda	10/4/11 21:30

Shipping Details
Method of Shipment: courier
On Ice: yes / no
Airbill No:
Lab Name: Truesdail Laboratories, Inc.
Lab Phone: (714) 730-6239

ATTN:
Sample Custody

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

Hexavalent Chromium

Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
10-5-2011	997594-7	9.5	N/A	N/A	N/A	[illegible]
	-8					
	-9					
	-10					
	-11					
10-5-2011	997595-1	9.5	N/A	N/A	N/A	[illegible]
	-2					
	-3					
	-4					
	-5					
	-6					
	-7					
	-8					
	-9					
	-10					
	-11					
	-12					
	-13					
10/05/11	997602	7.0	5.0 mL	9.5	10:10 am	ALi
10/5/11	997603-1	7.0	5.0 mL	9.5	10:10 Am	[illegible]
	-2	7.0	5.0 mL	9.5	10:10 Am	[illegible]
10/5/11	997604-1	9.5	N/A	N/A	N/A	[illegible]
	-2					
	-3					
	-4					
	-5					
	-6					
	-7					
	-8					
	-9					
	-10					
	-11					

Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest	Adjusted to pH<2 (Y/N)
997708 (1-4,5,11-20)	<1	<2	10/07/11	M.M	Yes	No
997709 (1,3,5,6,8,10,12-16)	↓	↓	↓	↓	↓	↓
997459 (1-6)	plant	>2	10/05/11	KK	No	yes
997446 (1-6)	plant	>2	10/05/11	KK	No	yes
997763 (1-10)	<1	<2	10/10/11	M.M	Yes	—
997603 (1-2)	<1	<2	10/9/11	KK	No	No
997604 (1-11)	<1	<2	10/10/11	KK	No	No
997870	<1	>2	10/12/11	ES	No	yes @ 4:00 pm
997871	↓	↓	↓	↓	↓	↓
997745 total + dissolved (1-7)	<1	<2	10/13/11	KK	No	No
997746	<1	<2	10/13/11	KK	No	No
997652	<1	<2	10/13/11	KK	No	No
997653 (1-12)	<1	<2	10/13/11	KK	No	No
997852 (1-4)	>1	<2	10/13/11	M.M	Yes	No
997829 (1)	Sludge	—	10/13/11	M.M	Yes	TTLC
997816 (1-2)	Soil	—	10/13/11	M.M	Yes	↓
997867	↓	—	↓	↓	↓	↓
997649 (1-2)	plant	>2	10/12/11	KK	No	yes
997917	Solid	—	10/14/11	MM	Yes	STLC
997871	>1	<2	10/14/11	M.M	Yes	No
997872	↓	↓	↓	↓	↓	↓
997875						
997876						
997880						
997881						
997874						
997893						
997920	Solid	—	10/14/11	MM	Yes	TTLC
997987	<1	<2	10/19/11	M.M	Yes	— No
998019 (1-7)	<1	<2	10/20/11	M.M	Yes	No
997956	>1	<2	↓	↓	↓	↓
997958	↓	↓				
998008						
998016 (1-2)	>1	↓	↓	↓	↓	↓
998039 (1-5)	<1	<2	10/21/11	M.M	Yes	No
997968	<1	>2	10/21/11	ES	No	yes @ 3:00 p.m
998095	>1	<2	10/25/11	M.M	Yes	—
998060	↓	↓	↓	↓	↓	—
998076						—
998077						—
998036	Solid	—			Yes	TTLC
998093	↓	—	↓	↓	↓	↓
998110 (1-5,9)	<1	<2	10/26/11	M.M	Yes	—
998111	↓	↓				—
998112 (1-7)						—
998113 (1-8)						—
998114 (1-8)						—
998115 (1-11)	↓	↓		↓	↓	—
997884 (1-6)	plant	>2	10/17/11	KK	No	yes on 10/17/11

TRUESDAIL LABORATORIES, INC.

ALERT !! Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 997604

Date Delivered: 10/04/11 **Time:** 2130 **By:** ❑ Mail ☒ Field Service ❑ Client

1. Was a Chain of Custody received and signed? ☒ Yes ❑ No ❑ N/A
2. Does Customer require an acknowledgement of the COC? ❑ Yes ❑ No ☒ N/A
3. Are there any special requirements or notes on the COC? ❑ Yes ❑ No ☒ N/A
4. If a letter was sent with the COC, does it match the COC? ❑ Yes ❑ No ☒ N/A
5. Were all requested analyses understood and acceptable? ☒ Yes ❑ No ❑ N/A
6. Were samples received in a chilled condition? ☒ Yes ❑ No ❑ N/A
   Temperature (if yes)? 4.2°C
7. Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)? ☒ Yes ❑ No ❑ N/A
8. Were sample custody seals intact? ❑ Yes ☒ No ❑ N/A
9. Does the number of samples received agree with COC? ☒ Yes ❑ No ❑ N/A
10. Did sample labels correspond with the client ID's? ☒ Yes ❑ No ❑ N/A
11. Did sample labels indicate proper preservation? ☒ Yes ❑ No ❑ N/A
    Preserved (if yes) by: ☒ **Truesdail** ❑ Client
12. Were samples pH checked? pH = See C.O.C ☒ Yes ❑ No ❑ N/A
13. Were all analyses within holding time at time of receipt? ☒ Yes ❑ No ❑ N/A
    If not, notify Project Manager.
14. Have Project due dates been checked and accepted? ☒ Yes ❑ No ❑ N/A
    Turn Around Time (TAT): ❑ **RUSH** ☒ Std
15. **Sample Matrix:** ❑ Liquid ❑ Drinking Water ❑ Ground Water ❑ Waste Water ❑ Sludge ❑ Soil ❑ Wipe ❑ Paint ❑ Solid ☒ Other water
16. Comments: _____
17. Sample Check-In completed by **Truesdail** Log-In/Receiving: _____

C:\Users\Test\Desktop\Forms A - D\Discrp.FormBlank.doc

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

October 21, 2011

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000
Oakland, California 94612

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2011-GMP-181-Q3, GROUNDWATER MONITORING PROJECT, TLI NO.: 997652

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2011-GMP-181-Q3 groundwater-monitoring project for Hexavalent and Total Dissolved Chromium. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data, and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data are under Section 5.

The samples were received and delivered with the chain of custody October 5, 2011, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

No violations or non-conformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

Michael Ngo
Quality Assurance/Quality Control Officer

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(714) 730-6239 · FAX (714) 730-6462 · www.truesdail.com

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 997652
Date Received: October 5, 2011

Project Name: PG&E Topock Project
Project No.: 405681.MP.02.GM.04
P.O. No.: 405681.MP.02.GM.04

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
997652-001	MW-50-200-181	SM3500-CrB	FLDFLT	10/4/2011	15:26	Chromium, hexavalent	7860	ug/L	500
997652-001	MW-50-200-181	SW6020	FLDFLT	10/4/2011	15:26	Chromium	7350	ug/L	20.0

ND: Non Detected (below reporting limit)
mg/L: Milligrams per liter.
Note: The following "Significant Figures" rule has been applied to all results:
Results below 0.01ppm will have two (2) significant figures.
Result above or equal to 0.01ppm will have three (3) significant figures.
Quality Control data will always have three (3) significant figures.

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TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Jennifer Low
Project Name: PG&E Topock Project
P.O. Number: 405681.MP.02.GM.04
Project Number: 405681.MP.02.GM.04

Laboratory No. 997652

Printed 10/21/2011

Samples Received on 10/5/2011 10:00:00 PM

Field ID	Lab ID	Collected	Matrix
MW-50-200-181	997652-001	10/04/2011 15:26	Water

Metals by EPA 6020A, Dissolved Batch 101311A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997652-001 Chromium	ug/L	10/13/2011 23:20	100	2.20	20.0	7350

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate — Lab ID = 997543-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	5.00	2.41	2.42	0.331	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.4	50.0	94.8	85 - 115

Matrix Spike — Lab ID = 997543-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	229.	252.(250.)	90.8	75 - 125

Matrix Spike Duplicate — Lab ID = 997543-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	233.	252.(250.)	92.1	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.8	50.0	97.6	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.4	50.0	92.9	90 - 110

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MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.0	50.0	93.9	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.1	50.0	92.2	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.2	50.0	98.4	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.0	50.0	92.0	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	44.9	50.0	89.7	80 - 120

Serial Dilution — Lab ID = 997543-009

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	25.0	569.	626	9.47	0 - 10

Serial Dilution — Lab ID = 997652-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	500	7060	7350	4.07	0 - 10

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 405681.MP.02.GM.04

Printed 10/21/2011

Chromium, Hexavalent by SM 3500-Cr B Batch 10CrH11A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997652-001 Chromium, Hexavalent	ug/L	10/07/2011 19:05	50.0	218.	500.	7860

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 997746-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	25.0	2870	2840	1.12	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	91.9	100.	91.9	90 - 110

Matrix Spike — Lab ID = 997746-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	25.0	5260	5340(2500)	97.0	85 - 115

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	54.3	60.0	90.5	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	56.7	60.0	94.5	90 - 110

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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GMP-181 TLI #4 997652

CH2MHILL

CHAIN OF CUSTODY RECORD

10/5/2011 10:56:24 AM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 10/5/2011
COC Number: 9

				Cr6 (E218.6) Field Filtered	Cr6 (SM3500B) Field Filtered	Metals (6020AFF) Field Filtered Chromium		Number of Containers	COMMENTS
			Container:	250 ml Poly	250 ml Poly	500 ml Poly			
			Preservatives:	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C			
			Filtered:	Field	Field	Field			
			Holding Time:	28	28	180			
MW-50-200-181	10/4/2011	15:26	Water		X	X		2	pH=2
MW-76-181	10/4/2011	15:42	Water	X				1	Hold
							TOTAL NUMBER OF CONTAINERS	3	

ALERT !!
Level III QC

pH for 6020A

For Sample Conditions
See Form Attached

	Signatures	Date/Time
Approved by		
Sampled by		10-5-11 1545
Relinquished by		
Received by	Rafael Davila	10/5/11 1548
Relinquished by	Rafael Davila	10/5/11 22:00
Received by	Linda	10/5/11 22:00

Shipping Details
Method of Shipment: courier
On Ice: yes / no
Airbill No:
Lab Name: Truesdail Laboratories, Inc.
Lab Phone: (714) 730-6239

ATTN:
Sample Custody

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest	Adjusted to pH<2 (Y/N)
997708 (1-4,5,11-20)	<1	<2	10/07/11	M.M	Yes	No
997709 (1,3,5,6,8,10,12-16)	↓	↓	↓	↓	↓	↓
997459 (1-6)	plant >2	>2	10/05/11	KK	No	yes
997440 (1-6)	plant >2	>2	10/05/11	KK	No	yes
997763 (1-10)	<1	<2	10/10/11	M.M	Yes	No
997603 (1-2)	<1	<2	10/9/11	KK	No	No
997604 (1-11)	<1	<2	10/10/11	KK	No	No
997870	<1	>2	10/12/11	ES	No	yes @ 4:00pm
997871	↓	↓	↓	↓	↓	↓
997745 total + dissolved (1-7)	<1	<2	10/13/11	KK	No	No
997746	<1	<2	10/13/11	KK	No	No
997652	<1	<2	10/13/11	KK	No	No
997653 (1-12)	<1	<2	10/13/11	KK	No	No
997852 (1-4)	<1	<2	10/13/11	M.M	Yes	No
997829 (1)	Sludge	—	10/13/11	M.M	Yes	TTLC
997816 (1-2)	Soil	—	10/13/11	M.M	Yes	↓
997867	↓	—	↓	↓	↓	↓
997649 (1-2)	plant	>2	10/12/11	KK	No	yes
997917	Solid	—	10/14/11	MM	Yes	STLC
997871	>1	<2	10/14/11	M.M	Yes	No
997872	↓	↓	↓	↓	↓	↓
997875						
997876						
997880						
997881						
997874						
997893						
997920	Solid	—	10/14/11	M.M	Yes	TTLC
997987	<1	<2	10/19/11	M.M	Yes	— No
998019 (1-2)	<1	<2	10/20/11	M.M	Yes	No
997956	>1	<2	↓	↓	↓	↓
997958	↓	↓				
998008						
998016 (1-2)	>1	↓	↓	↓	↓	↓
998039 (1-5)	<1	<2	10/21/11	M.M	Yes	No
997988	<1	>2	10/21/11	ES	No	yes @ 3:00p.m

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E 2 **Lab #** 997652

Date Delivered: 10/5/11 **Time:** 22:00 **By:** ☐ **Mail** ☒ **Field Service** ☐ **Client**

1. *Was a Chain of Custody received and signed?* ☒ Yes ☐ No ☐ N/A
2. *Does Customer require an acknowledgement of the COC?* ☐ Yes ☐ No ☒ N/A
3. *Are there any special requirements or notes on the COC?* ☐ Yes ☐ No ☒ N/A
4. *If a letter was sent with the COC, does it match the COC?* ☐ Yes ☐ No ☒ N/A
5. *Were all requested analyses understood and acceptable?* ☒ Yes ☐ No ☐ N/A
6. *Were samples received in a chilled condition?* ☒ Yes ☐ No ☐ N/A
   Temperature (if yes)? 3.8°C
7. *Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?* ☒ Yes ☐ No ☐ N/A
8. *Were sample custody seals intact?* ☐ Yes ☐ No ☒ N/A
9. *Does the number of samples received agree with COC?* ☒ Yes ☐ No ☐ N/A
10. *Did sample labels correspond with the client ID's?* ☒ Yes ☐ No ☐ N/A
11. *Did sample labels indicate proper preservation?* ☒ Yes ☐ No ☐ N/A
    Preserved (if yes) by: ☒ **Truesdail** ☐ *Client*
12. *Were samples pH checked? pH =* see C.O.C. ☒ Yes ☐ No ☐ N/A
13. *Were all analyses within holding time at time of receipt?* ☒ Yes ☐ No ☐ N/A
    If not, notify Project Manager.
14. *Have Project due dates been checked and accepted?* ☒ Yes ☐ No ☐ N/A
    Turn Around Time (TAT): ☐ **RUSH** ☒ *Std*
15. ***Sample Matrix:*** ☐ *Liquid* ☐ *Drinking Water* ☐ *Ground Water* ☐ *Waste Water* ☐ *Sludge* ☐ *Soil* ☐ *Wipe* ☐ *Paint* ☐ *Solid* ☒ *Other* Water
16. *Comments:* _____
17. *Sample Check-In completed by* **Truesdail** *Log-In/Receiving:* Linda

ALERT! Level II QC

C:\Users\Test\Desktop\Forms A - D\Discrp.FormBlank.doc

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

October 21, 2011

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000
Oakland, California 94612

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2011-GMP-181-Q3, GROUNDWATER MONITORING PROJECT, TLI NO.: 997746

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2011-GMP-181-Q3 groundwater-monitoring project for Hexavalent and Total Dissolved Chromium. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data, and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data are under Section 5.

The samples were received and delivered with the chain of custody October 7, 2011, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

No violations or non-conformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

Michael Ngo
Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.
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14201 FRANKLIN AVENUE · TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462 · www.truesdail.com

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 997746
Date Received: October 7, 2011

Project Name: PG&E Topock Project
Project No.: 405681.MP.02.GM.04
P.O. No.: 405681.MP.02.GM.04

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
997746-001	MW-12-181	SM3500-CrB	FLDFLT	10/6/2011	15:42	Chromium, hexavalent	2840	ug/L	250
997746-001	MW-12-181	SW6020	FLDFLT	10/6/2011	15:42	Chromium	2880	ug/L	20.0

ND: Non Detected (below reporting limit)
mg/L: Milligrams per liter.
Note: The following "Significant Figures" rule has been applied to all results:
Results below 0.01ppm will have two (2) significant figures.
Result above or equal to 0.01ppm will have three (3) significant figures.
Quality Control data will always have three (3) significant figures.

004

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TRUESDAIL LABORATORIES, INC.

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Established 1931

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Jennifer Low
Project Name: PG&E Topock Project
P.O. Number: 405681.MP.02.GM.04
Project Number: 405681.MP.02.GM.04

Laboratory No. 997746

Printed 10/21/2011

Samples Received on 10/7/2011 12:10:00 PM

Field ID	Lab ID	Collected	Matrix
MW-12-181	997746-001	10/06/2011 15:42	Water

Metals by EPA 6020A, Dissolved Batch 102011A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997746-001 Chromium	ug/L	10/20/2011 21:22	100	2.20	20.0	2880

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate — Lab ID = 997745-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	5.00	1.14	1.32	14.2	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.2	50.0	100.	85 - 115

Matrix Spike — Lab ID = 997745-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	240.	251.(250.)	95.5	75 - 125

Matrix Spike Duplicate — Lab ID = 997745-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	230.	251.(250.)	91.5	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.6	50.0	101.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.0	50.0	96.0	90 - 110

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MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.7	50.0	101.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.1	50.0	94.2	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.2	50.0	100.	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0.00		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	45.8	50.0	91.5	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	44.4	50.0	88.9	80 - 120

Serial Dilution Lab ID = 997746-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	500	2840	2880	1.22	0 - 10

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Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project
Project Number: 405681.MP.02.GM.04

Chromium, Hexavalent by SM 3500-Cr B

Batch 10CrH11A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
997746-001 Chromium, Hexavalent	ug/L	10/07/2011 19:06	25.0	109.	250.	2840

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 997746-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	25.0	2870	2840	1.12	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	91.9	100.	91.9	90 - 110

Matrix Spike — Lab ID = 997746-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	25.0	5260	5340(2500)	97.0	85 - 115

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	54.3	60.0	90.5	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	56.7	60.0	94.5	90 - 110

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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GMP-181 TLI #5 997746

CH2MHILL

CHAIN OF CUSTODY RECORD

10/6/2011 4:16:00 PM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 10/6/2011
COC Number: 11

Rec'd 10/07/11
Lab# 997746

ALERT !!
Level III QC

			Container:	250 ml Poly	500 ml Poly			
			Preservatives:	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C			
			Filtered:	Field	Field			
			Holding Time:	28	180			
	DATE	TIME	Matrix	Cr6 (SM3500B) Field Filtered	Metals (6020AFF) Field Filtered Chromium		Number of Containers	COMMENTS
MW-12-181	10/6/2011	15:42	Water	X	X		2	pH 2
						TOTAL NUMBER OF CONTAINERS	2	

For Sample Conditions
See Form Attached

	Signatures	Date/Time
Approved by		10-7-11
Sampled by		
Relinquished by		
Received by	Hipolito	10-7-11 8:00
Relinquished by	Hipolito	10-7-11 12:10
Received by		10-7-11 12:10

Shipping Details

Method of Shipment: courier
On Ice: yes / no
Airbill No:
Lab Name: Truesdail Laboratories, Inc.
Lab Phone: (714) 730-6239

ATTN:
Sample Custody

Special Instructions:
Sept 26-Oct-6, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest	Adjusted to pH<2 (Y/N)
997708 (1-49, 11-20)	<1	<2	10/07/11	M.M	Yes	No
997709 (1,3,5,6,8,10,12-16)	↓	↓	↓	↓	↓	↓
997459 (1-6)	plant >2	>2	10/05/11	KK	NO	YES
997446 (1-6)	plant >2	>2	10/05/11	KK	NO	YES
997763 (1-10)	<1	<2	10/10/11	M.M	Yes	No
997603 (1-2)	<1	<2	10/9/11	KK	NO	No
997604 (1-11)	<1	<2	10/10/11	KK	NO	No
997870	<1	>2	10/12/11	ES	No	yes @ 4:00 pm
997871	↓	↓	↓	↓	↓	↓
997745 total + dissolved (1-7)	<1	<2	10/13/11	KK	No	No
997746	<1	<2	10/13/11	KK	NO	NO
997652	<1	<2	10/13/11	KK	No	No
997653 (1-12)	<1	<2	10/13/11	KK	NO	No
997852 (1-4)	>1	<2	10/13/11	M.M	Yes	No
997829 11	Sludge	—	10/13/11	M.M	Yes	TTLC
997816 (1-21)	Soil	—	10/13/11	M.M	Yes	↓
997867	↓	—	↓	↓	↓	↓
997649 (1-2)	plant	>2	10/12/11	KK	NO	Yes
997917	Solid	—	10/14/11	MM	Yes	STLC
997871	>1	<2	10/14/11	M.M	Yes	No
997872	↓	↓	↓	↓	↓	↓
997875	↓	↓	↓	↓	↓	↓
997876	↓	↓	↓	↓	↓	↓
997880	↓	↓	↓	↓	↓	↓
997881	↓	↓	↓	↓	↓	↓
997874	↓	↓	↓	↓	↓	↓
997893	↓	↓	↓	↓	↓	↓
997920	Solid	—	10/14/11	MM	Yes	TTLC
997987	<1	<2	10/19/11	M.M	Yes	— No
998019 (1-21)	<1	<2	10/20/11	M.M	Yes	No
997956	>1	<2	↓	↓	↓	↓
997958	↓	↓	↓	↓	↓	↓
998008	↓	↓	↓	↓	↓	↓
998016 (1-21)	>1	↓	↓	↓	↓	↓
998039 (1-5)	<1	<2	10/21/11	M.M	Yes	No
997968	<1	>2	10/21/11	ES	No	yes @ 3:00 p.m

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 ***Lab #*** 997746

Date Delivered: 10 / 7 / 11 ***Time:*** 12:10 ***By:*** ☐ ***Mail*** ☒ ***Field Service*** ☐ ***Client***

1. *Was a Chain of Custody received and signed?* ☒ *Yes* ☐ *No* ☐ *N/A*
2. *Does Customer require an acknowledgement of the COC?* ☐ *Yes* ☐ *No* ☒ *N/A*
3. *Are there any special requirements or notes on the COC?* ☐ *Yes* ☐ *No* ☒ *N/A*
4. *If a letter was sent with the COC, does it match the COC?* ☐ *Yes* ☐ *No* ☒ *N/A*
5. *Were all requested analyses understood and acceptable?* ☒ *Yes* ☐ *No* ☐ *N/A*
6. *Were samples received in a chilled condition?* ☒ *Yes* ☐ *No* ☐ *N/A*
   Temperature (if yes)? 4 °C
7. *Were samples received intact* ☒ *Yes* ☐ *No* ☐ *N/A*
   (i.e. broken bottles, leaks, air bubbles, etc.)?
8. *Were sample custody seals intact?* ☐ *Yes* ☐ *No* ☒ *N/A*
9. *Does the number of samples received agree with COC?* ☒ *Yes* ☐ *No* ☐ *N/A*
10. *Did sample labels correspond with the client ID's?* ☒ *Yes* ☐ *No* ☐ *N/A*
11. *Did sample labels indicate proper preservation?* ☒ *Yes* ☐ *No* ☐ *N/A*
    Preserved (if yes) by: ☒ ***Truesdail*** ☐ *Client*
12. *Were samples pH checked? pH =* See C.o.C. ☒ *Yes* ☐ *No* ☐ *N/A*
13. *Were all analyses within holding time at time of receipt?* ☒ *Yes* ☐ *No* ☐ *N/A*
    If not, notify Project Manager.
14. *Have Project due dates been checked and accepted?* ☒ *Yes* ☐ *No* ☐ *N/A*
    Turn Around Time (TAT): ☐ ***RUSH*** ☒ *Std*
15. ***Sample Matrix:*** ☐ *Liquid* ☐ *Drinking Water* ☐ *Ground Water* ☐ *Waste Water*
    ☐ *Sludge* ☐ *Soil* ☐ *Wipe* ☐ *Paint* ☐ *Solid* ☒ *Other* Water
16. *Comments:* _____
17. *Sample Check-In completed by* ***Truesdail*** *Log-In/Receiving:* Linda

ALERT !!
Level III QC

June 27, 2011

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N005957

RE: PG&E Topock.417981.ER.02.DM

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on June 14, 2011 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.

Advanced Technology Laboratories, Inc.

Date: *27-Jun-11*

CLIENT: CH2M HILL
Project: PG&E Topock.417981.ER.02.DM
Lab Order: N005957

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium, Potassium and Sodium possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Advanced Technology Laboratories, Inc. *3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691*

Advanced Technology Laboratories, Inc.

Date: *27-Jun-11*

CLIENT: CH2M HILL
Project: PG&E Topock.417981.ER.02.DM
Lab Order: N005957
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N005957-001A	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-001B	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-001C	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-001D	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-001E	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-001F	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-001G	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-001H	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-001I	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-001J	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-001K	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-001L	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-001M	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-001N	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	
N005957-002A	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002B	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002C	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002D	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002E	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002F	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002G	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002H	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002I	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002J	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002K	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002L	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002M	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002N	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	
N005957-002O	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	

Advanced Technology Laboratories, Inc. *3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691*

CLIENT: CH2M HILL
Project: PG&E Topock.417981.ER.02.DM
Lab Order: N005957
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N005957-003A	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003B	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003C	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003D	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003E	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003F	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003G	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003H	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003I	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003J	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003K	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003L	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003M	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003N	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003O	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003P	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003Q	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003R	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003S	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003T	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003U	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003V	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-003W	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	
N005957-004A	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004B	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004C	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004D	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004E	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004F	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004G	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	

Advanced Technology Laboratories, Inc. 3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Project: PG&E Topock.417981.ER.02.DM
Lab Order: N005957
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N005957-004H	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004I	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004J	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004K	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004L	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004M	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004N	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004O	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004P	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-004Q	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	
N005957-005A	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005B	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005C	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005D	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005E	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005F	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005G	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005H	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005I	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005J	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005K	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005L	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005M	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005N	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005O	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005P	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-005Q	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	
N005957-006A	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006B	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006C	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	

Advanced Technology Laboratories, Inc. 3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Project: PG&E Topock.417981.ER.02.DM
Lab Order: N005957
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N005957-006D	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006E	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006F	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006G	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006H	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006I	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006J	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006K	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006L	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006M	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006N	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006O	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006P	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-006Q	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	
N005957-007A	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007B	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007C	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007D	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007E	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007F	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007G	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007H	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007I	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007J	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007K	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007L	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007M	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007N	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007O	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-007P	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	

Advanced Technology Laboratories, Inc. 3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Project: PG&E Topock.41798LER.02.DM
Lab Order: N005957
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N005957-007Q	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-008A	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008B	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008C	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008D	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008E	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008F	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008G	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008H	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008I	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008J	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008K	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008L	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008M	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008N	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008O	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008P	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-008Q	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	
N005957-009A	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	
N005957-009B	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	
N005957-009C	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	
N005957-009D	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	
N005957-009E	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	
N005957-009F	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	
N005957-009G	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	
N005957-009H	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	
N005957-009I	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	
N005957-009J	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	
N005957-009K	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	
N005957-009L	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	

Advanced Technology Laboratories, Inc. 3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Project: PG&E Topock.417981.ER.02.DM
Lab Order: N005957
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N005957-009M	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	
N005957-009N	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	
N005957-010A	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010B	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010C	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010D	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010E	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010F	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010G	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010H	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010I	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010J	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010K	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010L	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010M	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010N	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010O	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010P	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-010Q	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	
N005957-011A	EB-70331-001	Ground Water	6/14/2011 3:00:00 PM	6/14/2011	
N005957-011B	EB-70331-001	Ground Water	6/14/2011 3:00:00 PM	6/14/2011	
N005957-011C	EB-70331-001	Ground Water	6/14/2011 3:00:00 PM	6/14/2011	
N005957-011D	EB-70331-001	Ground Water	6/14/2011 3:00:00 PM	6/14/2011	
N005957-012A	TEMP BLANK	Ground Water		6/14/2011	
N005957-013A	TB-061111	Ground Water	6/11/2011 4:10:00 PM	6/14/2011	
N005957-014A	MW-68-180-001Dup	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	

Advanced Technology Laboratories, Inc. 3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-001

Client Sample ID: MW-65-160-001
Collection Date: 6/13/2011 1:31:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: **IC1_110615A**	QC Batch: **R80406**				PrepDate:		Analyst: **QBM**
Hexavalent Chromium	13	0.14	1.0		µg/L	5	6/15/2011 07:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-002

Client Sample ID: MW-65-225-001
Collection Date: 6/13/2011 2:26:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: **IC1_110615A**	QC Batch: **R80406**				PrepDate:		Analyst: **QBM**
Hexavalent Chromium	120	0.56	4.0		µg/L	20	6/15/2011 12:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock.417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: **IC1_110615A**	QC Batch: **R80406**				PrepDate:		Analyst: **QBM**
Hexavalent Chromium	560	2.8	20		µg/L	100	6/15/2011 03:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-230-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 12:07:00 PM
Project:	PG&E Topock.417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: **IC1_110615A**	QC Batch: **R80406**				PrepDate:		Analyst: **QBM**
Hexavalent Chromium	5100	14	100		µg/L	500	6/15/2011 12:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-005

Client Sample ID: MW-67-225-001
Collection Date: 6/14/2011 9:27:00 AM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: **IC1_110615A**	QC Batch: **R80406**				PrepDate:		Analyst: **QBM**
Hexavalent Chromium	1900	14	100		µg/L	500	6/15/2011 01:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-006

Client Sample ID: MW-67-260-001
Collection Date: 6/14/2011 10:53:00 AM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: **IC1_110615A**	QC Batch: **R80406**				PrepDate:		Analyst: **QBM**
Hexavalent Chromium	1800	14	100		µg/L	500	6/15/2011 01:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-007

Client Sample ID: MW-68-180-001
Collection Date: 6/14/2011 1:11:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: **IC1_110615A**	QC Batch: **R80406**				PrepDate:		Analyst: **QBM**
Hexavalent Chromium	2600	5.6	40		µg/L	200	6/15/2011 11:55 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-240-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 8:03:00 AM
Project:	PG&E Topock.417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: **IC1_110615A**	QC Batch: **R80406**				PrepDate:		Analyst: **QBM**
Hexavalent Chromium	420	1.4	10		µg/L	50	6/15/2011 04:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-009

Client Sample ID: MW-70-105-001
Collection Date: 6/13/2011 12:07:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: **IC1_110615A**	QC Batch: **R80406**				PrepDate:		Analyst: **QBM**
Hexavalent Chromium	0.38	0.028	0.20		µg/L	1	6/15/2011 11:32 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-010

Client Sample ID: MW-99-001
Collection Date: 6/14/2011 1:11:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: **IC1_110615A**	QC Batch: **R80406**				PrepDate:		Analyst: **QBM**
Hexavalent Chromium	2700	14	100		µg/L	500	6/15/2011 01:39 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	EB-70331-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 3:00:00 PM
Project:	PG&E Topock.417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: **IC1_110615A**	QC Batch: **R80406**				PrepDate:		Analyst: **QBM**
Hexavalent Chromium	ND	0.028	0.20		µg/L	1	6/15/2011 11:20 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: 27-Jun-11

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock.417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R80406** SampType: **MBLK** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **PBW** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277383**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R80406** SampType: **LCS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **LCSW** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277384**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.011	0.20	5.000	0	100	90	110				

Sample ID: **N005957-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277399**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	37.051	1.0	25.00	12.65	97.6	90	110				

Sample ID: **N005957-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277400**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	217.623	4.0	100.0	119.9	97.7	90	110				

Sample ID: **N005957-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277402**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1055.732	20	500.0	557.9	99.6	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock.417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N005957-003AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277403**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1049.715	20	500.0	557.9	98.4	90	110	1056	0.572	20	

Sample ID: **N005957-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277404**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7447.772	100	2500	5117	93.2	90	110				

Sample ID: **N005957-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277405**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4382.666	100	2500	1916	98.7	90	110				

Sample ID: **N005957-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277407**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	661.142	10	250.0	416.0	98.1	90	110				

Sample ID: **N005957-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277410**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4220.072	100	2500	1774	97.8	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock.417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N005957-007ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277411**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2573.887	40						2588	0.557	20	

Sample ID: **N005957-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277412**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3539.527	40	1000	2588	95.1	90	110				

Sample ID: **N005957-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277413**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.323	0.20	1.000	0.3756	94.8	90	110				

Sample ID: **N005957-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277414**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5128.289	100	2500	2678	98.0	90	110				

Sample ID: **N005957-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277415**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.995	0.20	1.000	0	99.5	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock.417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N005959-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277417**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	25.908	0.40	10.00	16.04	98.7	90	110				

Sample ID: **N005959-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277419**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	886.131	10	250.0	635.7	100	90	110				

Sample ID: **N005959-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **80406**
Client ID: **ZZZZZZ** Batch ID: **R80406** TestNo: **EPA 218.6** Analysis Date: **6/15/2011** SeqNo: **1277422**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	16331.223	200	5000	11220	102	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

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ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-001

Client Sample ID: MW-65-160-001
Collection Date: 6/13/2011 1:31:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_110620B**	QC Batch: **37108**				PrepDate:	**6/15/2011**	Analyst: **KAB**
Antimony	ND	5.4	10		ug/L	1	6/20/2011 05:21 PM
Barium	140	0.20	3.0		ug/L	1	6/20/2011 05:21 PM
Beryllium	ND	0.090	1.0		ug/L	1	6/20/2011 05:21 PM
Cadmium	ND	0.23	3.0		ug/L	1	6/20/2011 05:21 PM
Calcium	210000	120	500		ug/L	1	6/20/2011 05:21 PM
Chromium	17	0.22	1.0		ug/L	1	6/20/2011 05:21 PM
Cobalt	ND	0.31	3.0		ug/L	1	6/20/2011 05:21 PM
Copper	ND	0.53	5.0		ug/L	1	6/20/2011 05:21 PM
Iron	46	14	20		ug/L	1	6/20/2011 05:21 PM
Lead	ND	1.5	10		ug/L	1	6/20/2011 05:21 PM
Magnesium	37000	6.3	100		ug/L	1	6/20/2011 05:21 PM
Manganese	590	1.7	10		ug/L	1	6/20/2011 05:21 PM
Molybdenum	42	0.49	5.0		ug/L	1	6/20/2011 05:21 PM
Nickel	ND	1.1	5.0		ug/L	1	6/20/2011 05:21 PM
Potassium	23000	1200	10000		ug/L	20	6/17/2011 10:34 AM
Silver	ND	0.72	3.0		ug/L	1	6/20/2011 05:21 PM
Sodium	510000	24000	100000		ug/L	200	6/17/2011 12:40 PM
Vanadium	ND	0.19	3.0		ug/L	1	6/20/2011 05:21 PM
Zinc	ND	4.6	10		ug/L	1	6/20/2011 05:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-002

Client Sample ID: MW-65-225-001
Collection Date: 6/13/2011 2:26:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_110620B**	QC Batch: **37108**				PrepDate:	**6/15/2011**	Analyst: **KAB**
Antimony	ND	5.4	10		ug/L	1	6/20/2011 07:16 PM
Barium	77	0.20	3.0		ug/L	1	6/20/2011 07:16 PM
Beryllium	ND	0.090	1.0		ug/L	1	6/20/2011 07:16 PM
Cadmium	ND	0.23	3.0		ug/L	1	6/20/2011 07:16 PM
Calcium	430000	120	500		ug/L	1	6/20/2011 07:16 PM
Chromium	120	0.22	1.0		ug/L	1	6/20/2011 07:16 PM
Cobalt	ND	0.31	3.0		ug/L	1	6/20/2011 07:16 PM
Copper	ND	0.53	5.0		ug/L	1	6/20/2011 07:16 PM
Iron	ND	14	20		ug/L	1	6/20/2011 07:16 PM
Lead	ND	1.5	10		ug/L	1	6/20/2011 07:16 PM
Magnesium	24000	6.3	100		ug/L	1	6/20/2011 07:16 PM
Manganese	1100	1.7	10		ug/L	1	6/20/2011 07:16 PM
Molybdenum	37	0.49	5.0		ug/L	1	6/20/2011 07:16 PM
Nickel	ND	1.1	5.0		ug/L	1	6/20/2011 07:16 PM
Potassium	59000	1200	10000		ug/L	20	6/17/2011 10:41 AM
Silver	ND	0.72	3.0		ug/L	1	6/20/2011 07:16 PM
Sodium	2800000	120000	500000		ug/L	1000	6/17/2011 12:47 PM
Vanadium	ND	0.19	3.0		ug/L	1	6/20/2011 07:16 PM
Zinc	ND	4.6	10		ug/L	1	6/21/2011 11:15 AM

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-003

Client Sample ID: MW-66-165-001
Collection Date: 6/13/2011 3:37:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **ICP1_110620B**	QC Batch: **37108**				PrepDate:	**6/15/2011**	Analyst: **KAB**
Antimony	ND	5.4	10		ug/L	1	6/20/2011 05:32 PM
Barium	64	0.20	3.0		ug/L	1	6/20/2011 05:32 PM
Beryllium	ND	0.090	1.0		ug/L	1	6/20/2011 05:32 PM
Cadmium	ND	0.23	3.0		ug/L	1	6/20/2011 05:32 PM
Calcium	230000	120	500		ug/L	1	6/20/2011 05:32 PM
Chromium	570	0.22	1.0		ug/L	1	6/20/2011 05:32 PM
Cobalt	ND	0.31	3.0		ug/L	1	6/20/2011 05:32 PM
Copper	ND	0.53	5.0		ug/L	1	6/20/2011 05:32 PM
Iron	ND	14	20		ug/L	1	6/20/2011 05:32 PM
Lead	ND	1.5	10		ug/L	1	6/20/2011 05:32 PM
Magnesium	46000	6.3	100		ug/L	1	6/20/2011 05:32 PM
Manganese	130	1.7	10		ug/L	1	6/20/2011 05:32 PM
Molybdenum	8.7	0.49	5.0		ug/L	1	6/20/2011 05:32 PM
Nickel	ND	1.1	5.0		ug/L	1	6/20/2011 05:32 PM
Potassium	21000	620	5000		ug/L	10	6/17/2011 11:32 AM
Silver	ND	0.72	3.0		ug/L	1	6/20/2011 05:32 PM
Sodium	570000	60000	250000		ug/L	500	6/17/2011 12:50 PM
Vanadium	5.3	0.19	3.0		ug/L	1	6/20/2011 05:32 PM
Zinc	ND	4.6	10		ug/L	1	6/20/2011 05:32 PM

Qualifiers:
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-004

Client Sample ID: MW-66-230-001
Collection Date: 6/14/2011 12:07:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_110620B**	QC Batch: **37108**				PrepDate:	**6/15/2011**	Analyst: **KAB**
Antimony	ND	5.4	10		ug/L	1	6/20/2011 07:27 PM
Barium	67	0.20	3.0		ug/L	1	6/20/2011 07:27 PM
Beryllium	ND	0.090	1.0		ug/L	1	6/20/2011 07:27 PM
Cadmium	ND	0.23	3.0		ug/L	1	6/20/2011 07:27 PM
Calcium	360000	120	500		ug/L	1	6/20/2011 07:27 PM
Chromium	4700	0.22	1.0		ug/L	1	6/20/2011 07:27 PM
Cobalt	ND	0.31	3.0		ug/L	1	6/20/2011 07:27 PM
Copper	ND	0.53	5.0		ug/L	1	6/20/2011 07:27 PM
Iron	ND	14	20		ug/L	1	6/20/2011 07:27 PM
Lead	ND	1.5	10		ug/L	1	6/20/2011 07:27 PM
Magnesium	7200	6.3	100		ug/L	1	6/20/2011 07:27 PM
Manganese	45	1.7	10		ug/L	1	6/20/2011 07:27 PM
Molybdenum	43	0.49	5.0		ug/L	1	6/20/2011 07:27 PM
Nickel	ND	1.1	5.0		ug/L	1	6/20/2011 07:27 PM
Potassium	69000	1200	10000		ug/L	20	6/17/2011 10:46 AM
Silver	ND	0.72	3.0		ug/L	1	6/20/2011 07:27 PM
Sodium	3700000	120000	500000		ug/L	1000	6/17/2011 12:25 PM
Vanadium	ND	0.19	3.0		ug/L	1	6/20/2011 07:27 PM
Zinc	ND	4.6	10		ug/L	1	6/21/2011 11:19 AM

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-005

Client Sample ID: MW-67-225-001
Collection Date: 6/14/2011 9:27:00 AM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_110620B**	QC Batch: **37108**				PrepDate:	**6/15/2011**	Analyst: **KAB**
Antimony	ND	5.4	10		ug/L	1	6/20/2011 07:38 PM
Barium	88	0.20	3.0		ug/L	1	6/20/2011 07:38 PM
Beryllium	ND	0.090	1.0		ug/L	1	6/20/2011 07:38 PM
Cadmium	ND	0.23	3.0		ug/L	1	6/20/2011 07:38 PM
Calcium	150000	120	500		ug/L	1	6/20/2011 07:38 PM
Chromium	1900	0.22	1.0		ug/L	1	6/20/2011 07:38 PM
Cobalt	ND	0.31	3.0		ug/L	1	6/20/2011 07:38 PM
Copper	ND	0.53	5.0		ug/L	1	6/20/2011 07:38 PM
Iron	ND	14	20		ug/L	1	6/20/2011 07:38 PM
Lead	ND	1.5	10		ug/L	1	6/20/2011 07:38 PM
Magnesium	10000	6.3	100		ug/L	1	6/20/2011 07:38 PM
Manganese	240	1.7	10		ug/L	1	6/20/2011 07:38 PM
Molybdenum	37	0.49	5.0		ug/L	1	6/20/2011 07:38 PM
Nickel	ND	1.1	5.0		ug/L	1	6/20/2011 07:38 PM
Potassium	32000	1200	10000		ug/L	20	6/17/2011 10:48 AM
Silver	ND	0.72	3.0		ug/L	1	6/20/2011 07:38 PM
Sodium	1400000	120000	500000		ug/L	1000	6/17/2011 12:30 PM
Vanadium	ND	0.19	3.0		ug/L	1	6/20/2011 07:38 PM
Zinc	ND	4.6	10		ug/L	1	6/21/2011 11:23 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-006

Client Sample ID: MW-67-260-001
Collection Date: 6/14/2011 10:53:00 AM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_110620B**	QC Batch: **37108**				PrepDate:	**6/15/2011**	Analyst: **KAB**
Antimony	ND	5.4	10		ug/L	1	6/20/2011 07:49 PM
Barium	130	0.20	3.0		ug/L	1	6/20/2011 07:49 PM
Beryllium	ND	0.090	1.0		ug/L	1	6/20/2011 07:49 PM
Cadmium	ND	0.23	3.0		ug/L	1	6/20/2011 07:49 PM
Calcium	250000	120	500		ug/L	1	6/20/2011 07:49 PM
Chromium	1600	0.22	1.0		ug/L	1	6/20/2011 07:49 PM
Cobalt	ND	0.31	3.0		ug/L	1	6/20/2011 07:49 PM
Copper	ND	0.53	5.0		ug/L	1	6/20/2011 07:49 PM
Iron	ND	14	20		ug/L	1	6/20/2011 07:49 PM
Lead	ND	1.5	10		ug/L	1	6/20/2011 07:49 PM
Magnesium	5100	6.3	100		ug/L	1	6/20/2011 07:49 PM
Manganese	600	1.7	10		ug/L	1	6/20/2011 07:49 PM
Molybdenum	72	0.49	5.0		ug/L	1	6/20/2011 07:49 PM
Nickel	ND	1.1	5.0		ug/L	1	6/20/2011 07:49 PM
Potassium	62000	1200	10000		ug/L	20	6/17/2011 10:51 AM
Silver	ND	0.72	3.0		ug/L	1	6/20/2011 07:49 PM
Sodium	3500000	120000	500000		ug/L	1000	6/17/2011 12:33 PM
Vanadium	ND	0.19	3.0		ug/L	1	6/20/2011 07:49 PM
Zinc	ND	4.6	10		ug/L	1	6/21/2011 11:28 AM

Qualifiers:

- B — Analyte detected in the associated Method Blank
- H — Holding times for preparation or analysis exceeded
- S — Spike/Surrogate outside of limits due to matrix interference
- DO — Surrogate Diluted Out
- E — Value above quantitation range
- ND — Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-007

Client Sample ID: MW-68-180-001
Collection Date: 6/14/2011 1:11:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **ICP1_110620B**	QC Batch: **37108**				PrepDate:	**6/15/2011**	Analyst: **KAB**
Antimony	ND	5.4	10		ug/L	1	6/20/2011 08:00 PM
Barium	58	0.20	3.0		ug/L	1	6/20/2011 08:00 PM
Beryllium	ND	0.090	1.0		ug/L	1	6/20/2011 08:00 PM
Cadmium	ND	0.23	3.0		ug/L	1	6/20/2011 08:00 PM
Calcium	100000	120	500		ug/L	1	6/20/2011 08:00 PM
Chromium	2300	0.22	1.0		ug/L	1	6/20/2011 08:00 PM
Cobalt	ND	0.31	3.0		ug/L	1	6/20/2011 08:00 PM
Copper	ND	0.53	5.0		ug/L	1	6/20/2011 08:00 PM
Iron	310	14	20		ug/L	1	6/20/2011 08:00 PM
Lead	ND	1.5	10		ug/L	1	6/20/2011 08:00 PM
Magnesium	14000	6.3	100		ug/L	1	6/20/2011 08:00 PM
Manganese	130	1.7	10		ug/L	1	6/20/2011 08:00 PM
Molybdenum	54	0.49	5.0		ug/L	1	6/20/2011 08:00 PM
Nickel	ND	1.1	5.0		ug/L	1	6/20/2011 08:00 PM
Potassium	17000	620	5000		ug/L	10	6/17/2011 11:54 AM
Silver	ND	0.72	3.0		ug/L	1	6/20/2011 08:00 PM
Sodium	460000	12000	50000		ug/L	100	6/17/2011 11:57 AM
Vanadium	3.6	0.19	3.0		ug/L	1	6/20/2011 08:00 PM
Zinc	ND	4.6	10		ug/L	1	6/21/2011 11:32 AM

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-008

Client Sample ID: MW-68-240-001
Collection Date: 6/14/2011 8:03:00 AM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_110620B**	QC Batch: **37108**				PrepDate:	**6/15/2011**	Analyst: **KAB**
Antimony	ND	5.4	10		ug/L	1	6/20/2011 09:03 PM
Barium	86	0.20	3.0		ug/L	1	6/20/2011 09:03 PM
Beryllium	ND	0.090	1.0		ug/L	1	6/20/2011 09:03 PM
Cadmium	ND	0.23	3.0		ug/L	1	6/20/2011 09:03 PM
Calcium	330000	120	500		ug/L	1	6/20/2011 09:03 PM
Chromium	400	0.22	1.0		ug/L	1	6/20/2011 09:03 PM
Cobalt	ND	0.31	3.0		ug/L	1	6/20/2011 09:03 PM
Copper	ND	0.53	5.0		ug/L	1	6/20/2011 09:03 PM
Iron	260	14	20		ug/L	1	6/20/2011 09:03 PM
Lead	ND	1.5	10		ug/L	1	6/20/2011 09:03 PM
Magnesium	14000	6.3	100		ug/L	1	6/20/2011 09:03 PM
Manganese	360	1.7	10		ug/L	1	6/20/2011 09:03 PM
Molybdenum	21	0.49	5.0		ug/L	1	6/20/2011 09:03 PM
Nickel	ND	1.1	5.0		ug/L	1	6/20/2011 09:03 PM
Potassium	55000	1200	10000		ug/L	20	6/17/2011 10:56 AM
Silver	ND	0.72	3.0		ug/L	1	6/20/2011 09:03 PM
Sodium	2400000	60000	250000		ug/L	500	6/17/2011 11:59 AM
Vanadium	ND	0.19	3.0		ug/L	1	6/20/2011 09:03 PM
Zinc	13	4.6	10		ug/L	1	6/21/2011 11:36 AM

Qualifiers:
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-009

Client Sample ID: MW-70-105-001
Collection Date: 6/13/2011 12:07:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_110620B**	QC Batch: **37108**				PrepDate:	**6/15/2011**	Analyst: **KAB**
Antimony	ND	5.4	10		ug/L	1	6/20/2011 09:14 PM
Barium	51	0.20	3.0		ug/L	1	6/20/2011 09:14 PM
Beryllium	ND	0.090	1.0		ug/L	1	6/20/2011 09:14 PM
Cadmium	ND	0.23	3.0		ug/L	1	6/20/2011 09:14 PM
Calcium	29000	120	500		ug/L	1	6/20/2011 09:14 PM
Chromium	1.2	0.22	1.0		ug/L	1	6/20/2011 09:14 PM
Cobalt	ND	0.31	3.0		ug/L	1	6/20/2011 09:14 PM
Copper	ND	0.53	5.0		ug/L	1	6/20/2011 09:14 PM
Iron	36	14	20		ug/L	1	6/20/2011 09:14 PM
Lead	ND	1.5	10		ug/L	1	6/20/2011 09:14 PM
Magnesium	5200	6.3	100		ug/L	1	6/20/2011 09:14 PM
Manganese	190	1.7	10		ug/L	1	6/20/2011 09:14 PM
Molybdenum	170	0.49	5.0		ug/L	1	6/20/2011 09:14 PM
Nickel	ND	1.1	5.0		ug/L	1	6/20/2011 09:14 PM
Potassium	14000	620	5000		ug/L	10	6/17/2011 12:01 PM
Silver	ND	0.72	3.0		ug/L	1	6/20/2011 09:14 PM
Sodium	370000	12000	50000		ug/L	100	6/17/2011 12:04 PM
Vanadium	ND	0.19	3.0		ug/L	1	6/20/2011 09:14 PM
Zinc	ND	4.6	10		ug/L	1	6/21/2011 11:41 AM

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-010

Client Sample ID: MW-99-001
Collection Date: 6/14/2011 1:11:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_110620B**	QC Batch: **37108**				PrepDate:	**6/15/2011**	Analyst: **KAB**
Antimony	ND	5.4	10		ug/L	1	6/20/2011 09:24 PM
Barium	65	0.20	3.0		ug/L	1	6/20/2011 09:24 PM
Beryllium	ND	0.090	1.0		ug/L	1	6/20/2011 09:24 PM
Cadmium	ND	0.23	3.0		ug/L	1	6/20/2011 09:24 PM
Calcium	100000	120	500		ug/L	1	6/20/2011 09:24 PM
Chromium	2400	0.22	1.0		ug/L	1	6/20/2011 09:24 PM
Cobalt	ND	0.31	3.0		ug/L	1	6/20/2011 09:24 PM
Copper	ND	0.53	5.0		ug/L	1	6/20/2011 09:24 PM
Iron	1800	14	20		ug/L	1	6/20/2011 09:24 PM
Lead	ND	1.5	10		ug/L	1	6/20/2011 09:24 PM
Magnesium	14000	6.3	100		ug/L	1	6/20/2011 09:24 PM
Manganese	150	1.7	10		ug/L	1	6/20/2011 09:24 PM
Molybdenum	53	0.49	5.0		ug/L	1	6/20/2011 09:24 PM
Nickel	ND	1.1	5.0		ug/L	1	6/20/2011 09:24 PM
Potassium	17000	620	5000		ug/L	10	6/17/2011 12:06 PM
Silver	ND	0.72	3.0		ug/L	1	6/20/2011 09:24 PM
Sodium	450000	12000	50000		ug/L	100	6/17/2011 12:14 PM
Vanadium	5.5	0.19	3.0		ug/L	1	6/20/2011 09:24 PM
Zinc	11	4.6	10		ug/L	1	6/21/2011 11:49 AM

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-011

Client Sample ID: EB-70331-001
Collection Date: 6/14/2011 3:00:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_110620B**	QC Batch: **37108**				PrepDate:	**6/15/2011**	Analyst: **KAB**
Antimony	ND	5.4	10		ug/L	1	6/20/2011 09:35 PM
Barium	ND	0.20	3.0		ug/L	1	6/20/2011 09:35 PM
Beryllium	ND	0.090	1.0		ug/L	1	6/20/2011 09:35 PM
Cadmium	ND	0.23	3.0		ug/L	1	6/20/2011 09:35 PM
Chromium	ND	0.22	1.0		ug/L	1	6/20/2011 09:35 PM
Cobalt	ND	0.31	3.0		ug/L	1	6/20/2011 09:35 PM
Copper	ND	0.53	5.0		ug/L	1	6/20/2011 09:35 PM
Lead	ND	1.5	10		ug/L	1	6/20/2011 09:35 PM
Molybdenum	ND	0.49	5.0		ug/L	1	6/20/2011 09:35 PM
Nickel	ND	1.1	5.0		ug/L	1	6/20/2011 09:35 PM
Silver	ND	0.72	3.0		ug/L	1	6/20/2011 09:35 PM
Vanadium	ND	0.19	3.0		ug/L	1	6/20/2011 09:35 PM
Zinc	ND	4.6	10		ug/L	1	6/21/2011 12:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: 27-Jun-11

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock.417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: MB-37108 | SampType: MBLK | TestCode: 6010_WDPG | Units: ug/L | Prep Date: 6/15/2011 | RunNo: 80460
Client ID: PBW | Batch ID: 37108 | TestNo: EPA 6010B EPA 3010A | Analysis Date: 6/20/2011 | SeqNo: 1278433

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	10									
Barium	ND	3.0									
Beryllium	ND	1.0									
Cadmium	ND	3.0									
Calcium	ND	500									
Chromium	0.513	1.0									
Cobalt	1.028	3.0									
Copper	ND	5.0									
Iron	ND	20									
Lead	ND	10									
Magnesium	ND	100									
Manganese	ND	10									
Molybdenum	0.642	5.0									
Nickel	ND	5.0									
Silver	0.731	3.0									
Vanadium	ND	3.0									
Zinc	ND	10									

Sample ID: LCS-37108 | SampType: LCS | TestCode: 6010_WDPG | Units: ug/L | Prep Date: 6/15/2011 | RunNo: 80460
Client ID: LCSW | Batch ID: 37108 | TestNo: EPA 6010B EPA 3010A | Analysis Date: 6/20/2011 | SeqNo: 1278434

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	498.980	10	500.0	0	99.8	85	115				
Barium	506.104	3.0	500.0	0	101	85	115				
Beryllium	504.884	1.0	500.0	0	101	85	115				
Cadmium	497.112	3.0	500.0	0	99.4	85	115				
Calcium	10115.935	500	10000	0	101	85	115				
Chromium	502.872	1.0	500.0	0	101	85	115				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock.417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **LCS-37108** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80460**
Client ID: **LCSW** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/20/2011** SeqNo: **1278434**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cobalt	496.919	3.0	500.0	0	99.4	85	115				
Copper	501.446	5.0	500.0	0	100	85	115				
Iron	9986.120	20	10000	0	99.9	85	115				
Lead	503.784	10	500.0	0	101	85	115				
Magnesium	9850.209	100	10000	0	98.5	85	115				
Manganese	1002.293	10	1000	0	100	85	115				
Molybdenum	508.398	5.0	500.0	0	102	85	115				
Nickel	503.833	5.0	500.0	0	101	85	115				
Silver	486.250	3.0	500.0	0	97.3	85	115				
Vanadium	503.434	3.0	500.0	0	101	85	115				
Zinc	497.032	10	500.0	0	99.4	85	115				

Sample ID: **N005957-003B-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80460**
Client ID: **ZZZZZZ** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/20/2011** SeqNo: **1278441**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	490.220	10	500.0	0	98.0	75	125				
Barium	547.202	3.0	500.0	63.56	96.7	75	125				
Beryllium	509.868	1.0	500.0	0	102	75	125				
Cadmium	484.065	3.0	500.0	0	96.8	75	125				
Calcium	236714.750	500	10000	229800	69.6	75	125				S
Chromium	1054.502	1.0	500.0	566.9	97.5	75	125				
Cobalt	472.640	3.0	500.0	0	94.5	75	125				
Copper	491.848	5.0	500.0	0	98.4	75	125				
Iron	9528.572	20	10000	0	95.3	75	125				
Lead	475.734	10	500.0	0	95.1	75	125				
Magnesium	54525.987	100	10000	45990	85.4	75	125				
Manganese	1086.304	10	1000	127.7	95.9	75	125				
Molybdenum	509.189	5.0	500.0	8.726	100	75	125				
Nickel	481.472	5.0	500.0	0	96.3	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock.417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: N005957-003B-MS SampType: MS TestCode: 6010_WDPG Units: ug/L Prep Date: 6/15/2011 RunNo: 80460
Client ID: ZZZZZZ Batch ID: 37108 TestNo: EPA 6010B EPA 3010A Analysis Date: 6/20/2011 SeqNo: 1278441

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	507.969	3.0	500.0	0	102	75	125				
Vanadium	507.818	3.0	500.0	5.304	101	75	125				

Sample ID: N005957-003B-MSD SampType: MSD TestCode: 6010_WDPG Units: ug/L Prep Date: 6/15/2011 RunNo: 80460
Client ID: ZZZZZZ Batch ID: 37108 TestNo: EPA 6010B EPA 3010A Analysis Date: 6/20/2011 SeqNo: 1278442

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	491.717	10	500.0	0	98.3	75	125	490.2	0.305	20	
Barium	547.517	3.0	500.0	63.56	96.8	75	125	547.2	0.0577	20	
Beryllium	509.087	1.0	500.0	0	102	75	125	509.9	0.153	20	
Cadmium	483.026	3.0	500.0	0	96.6	75	125	484.1	0.215	20	
Calcium	242972.038	500	10000	229800	132	75	125	236700	2.61	20	S
Chromium	1070.739	1.0	500.0	566.9	101	75	125	1055	1.53	20	
Cobalt	468.362	3.0	500.0	0	93.7	75	125	472.6	0.909	20	
Copper	490.733	5.0	500.0	0	98.1	75	125	491.8	0.227	20	
Iron	9533.602	20	10000	0	95.3	75	125	9529	0.0528	20	
Lead	476.102	10	500.0	0	95.2	75	125	475.7	0.0775	20	
Magnesium	55731.225	100	10000	45990	97.4	75	125	54530	2.19	20	
Manganese	1090.668	10	1000	127.7	96.3	75	125	1086	0.401	20	
Molybdenum	511.217	5.0	500.0	8.726	100	75	125	509.2	0.397	20	
Nickel	482.508	5.0	500.0	0	96.5	75	125	481.5	0.215	20	
Silver	509.246	3.0	500.0	0	102	75	125	508.0	0.251	20	
Vanadium	507.687	3.0	500.0	5.304	100	75	125	507.8	0.0259	20	

Sample ID: N005957-003B-MS SampType: MS TestCode: 6010_WDPG Units: ug/L Prep Date: 6/15/2011 RunNo: 80460
Client ID: ZZZZZZ Batch ID: 37108 TestNo: EPA 6010B EPA 3010A Analysis Date: 6/21/2011 SeqNo: 1278529

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	495.337	10	500.0	0	99.1	75	125				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock.417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N005957-003B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80460**
Client ID: **ZZZZZZ** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/21/2011** SeqNo: **1278530**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	493.887	10	500.0	0	98.8	75	125	495.3	0.293	20	

Sample ID: **MB-37108** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80460**
Client ID: **PBW** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/17/2011** SeqNo: **1278568**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	500									
Sodium	ND	500									

Sample ID: **LCS2-37108** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80460**
Client ID: **LCSW** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/17/2011** SeqNo: **1278569**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	2397.255	500	2500	0	95.9	85	115				
Sodium	2440.502	500	2500	0	97.6	85	115				

Sample ID: **N005957-003B-MS2** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80460**
Client ID: **ZZZZZZ** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/17/2011** SeqNo: **1278585**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	42699.886	5000	15000	21410	142	75	125				S

Sample ID: **N005957-003B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80460**
Client ID: **ZZZZZZ** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/17/2011** SeqNo: **1278586**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	43655.488	5000	15000	21410	148	75	125	42700	2.21	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock.417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N005957-003B-MS2** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80460**
Client ID: **ZZZZZZ** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/17/2011** SeqNo: **1278612**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	561474.369	250000	15000	574500	-87.0	75	125				S

Sample ID: **N005957-003B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80460**
Client ID: **ZZZZZZ** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/17/2011** SeqNo: **1278613**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	573750.309	250000	15000	574500	-5.12	75	125	561500	2.16	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-001

Client Sample ID: MW-65-160-001
Collection Date: 6/13/2011 1:31:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **ICP7_110616B**	QC Batch: **37101**				PrepDate:	**6/15/2011**	Analyst: **JT**
Arsenic	1.2	0.0025	0.10		µg/L	1	6/16/2011 01:31 PM
Selenium	2.5	0.29	0.50		µg/L	1	6/16/2011 01:31 PM
Thallium	ND	0.015	0.50		µg/L	1	6/16/2011 01:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-002

Client Sample ID: MW-65-225-001
Collection Date: 6/13/2011 2:26:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **ICP7_110616B**	QC Batch: **37101**				PrepDate:	**6/15/2011**	Analyst: **JT**
Arsenic	1.8	0.0025	0.10		µg/L	1	6/16/2011 01:35 PM
Selenium	1.9	0.29	0.50		µg/L	1	6/16/2011 01:35 PM
Thallium	5.3	0.076	2.5		µg/L	5	6/16/2011 03:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-003

Client Sample ID: MW-66-165-001
Collection Date: 6/13/2011 3:37:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **ICP7_110616B**	QC Batch: **37101**				PrepDate:	**6/15/2011**	Analyst: **JT**
Arsenic	1.4	0.0025	0.10		µg/L	1	6/16/2011 01:16 PM
Selenium	40	0.29	0.50		µg/L	1	6/16/2011 01:16 PM
Thallium	ND	0.015	0.50		µg/L	1	6/16/2011 01:16 PM

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-004

Client Sample ID: MW-66-230-001
Collection Date: 6/14/2011 12:07:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **ICP7_110616B**	QC Batch: **37101**				PrepDate:	**6/15/2011**	Analyst: **JT**
Arsenic	4.6	0.012	0.50		µg/L	5	6/16/2011 03:09 PM
Selenium	4.8	1.4	2.5		µg/L	5	6/16/2011 03:09 PM
Thallium	ND	0.076	2.5		µg/L	5	6/16/2011 03:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-005

Client Sample ID: MW-67-225-001
Collection Date: 6/14/2011 9:27:00 AM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **ICP7_110616B**	QC Batch: **37101**				PrepDate:	**6/15/2011**	Analyst: **JT**
Arsenic	2.7	0.0025	0.10		µg/L	1	6/16/2011 01:45 PM
Selenium	68	0.29	0.50		µg/L	1	6/16/2011 01:45 PM
Thallium	ND	0.076	2.5		µg/L	5	6/16/2011 03:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-006

Client Sample ID: MW-67-260-001
Collection Date: 6/14/2011 10:53:00 AM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **ICP7_110616B**	QC Batch: **37101**				PrepDate:	**6/15/2011**	Analyst: **JT**
Arsenic	11	0.012	0.50		µg/L	5	6/16/2011 03:18 PM
Selenium	ND	1.4	2.5		µg/L	5	6/16/2011 03:18 PM
Thallium	ND	0.076	2.5		µg/L	5	6/16/2011 03:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-007

Client Sample ID: MW-68-180-001
Collection Date: 6/14/2011 1:11:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_110616B**	QC Batch: **37101**				PrepDate:	**6/15/2011**	Analyst: **JT**
Arsenic	2.8	0.0025	0.10		µg/L	1	6/16/2011 02:05 PM
Selenium	5.5	0.29	0.50		µg/L	1	6/16/2011 02:05 PM
Thallium	ND	0.015	0.50		µg/L	1	6/16/2011 02:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-008

Client Sample ID: MW-68-240-001
Collection Date: 6/14/2011 8:03:00 AM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **ICP7_110616B**	QC Batch: **37101**				PrepDate:	**6/15/2011**	Analyst: **JT**
Arsenic	1.7	0.0025	0.10		µg/L	1	6/16/2011 02:10 PM
Selenium	4.0	0.29	0.50		µg/L	1	6/16/2011 02:10 PM
Thallium	ND	0.076	2.5		µg/L	5	6/16/2011 03:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-009

Client Sample ID: MW-70-105-001
Collection Date: 6/13/2011 12:07:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_110616B**	QC Batch: **37101**				PrepDate:	**6/15/2011**	Analyst: **JT**
Arsenic	4.9	0.0025	0.10		µg/L	1	6/16/2011 02:15 PM
Selenium	0.97	0.29	0.50		µg/L	1	6/16/2011 02:15 PM
Thallium	ND	0.015	0.50		µg/L	1	6/16/2011 02:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-010

Client Sample ID: MW-99-001
Collection Date: 6/14/2011 1:11:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			EPA 6020				
RunID: ICP7_110616B	QC Batch: 37101				PrepDate:	6/15/2011	Analyst: JT
Arsenic	3.1	0.0025	0.10		µg/L	1	6/16/2011 02:20 PM
Selenium	5.1	0.29	0.50		µg/L	1	6/16/2011 02:20 PM
Thallium	ND	0.015	0.50		µg/L	1	6/16/2011 02:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	EB-70331-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 3:00:00 PM
Project:	PG&E Topock.417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **ICP7_110616B**	QC Batch: **37101**				PrepDate:	**6/15/2011**	Analyst: **JT**
Arsenic	ND	0.0025	0.10		µg/L	1	6/16/2011 02:24 PM
Selenium	ND	0.29	0.50		µg/L	1	6/16/2011 02:24 PM
Thallium	ND	0.015	0.50		µg/L	1	6/16/2011 02:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: 27-Jun-11

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock.417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: MB-37101 | SampType: MBLK | TestCode: 6020_DIS | Units: µg/L | Prep Date: 6/15/2011 | RunNo: 80437
Client ID: PBW | Batch ID: 37101 | TestNo: EPA 6020 | EPA 3010A | Analysis Date: 6/16/2011 | SeqNo: 1277947

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.030	0.10									
Selenium	ND	0.50									
Thallium	ND	0.50									

Sample ID: LCS-37101 | SampType: LCS | TestCode: 6020_DIS | Units: µg/L | Prep Date: 6/15/2011 | RunNo: 80437
Client ID: LCSW | Batch ID: 37101 | TestNo: EPA 6020 | EPA 3010A | Analysis Date: 6/16/2011 | SeqNo: 1277948

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.439	0.10	10.00	0	94.4	85	115				
Selenium	9.554	0.50	10.00	0	95.5	85	115				
Thallium	9.587	0.50	10.00	0	95.9	85	115				

Sample ID: N005957-003B-MS | SampType: MS | TestCode: 6020_DIS | Units: µg/L | Prep Date: | RunNo: 80437
Client ID: ZZZZZZ | Batch ID: 37101 | TestNo: EPA 6020 | EPA 3010A | Analysis Date: 6/16/2011 | SeqNo: 1277967

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.294	0.10	10.00	1.437	98.6	75	125				
Selenium	47.970	0.50	10.00	39.81	81.6	75	125				
Thallium	10.100	0.50	10.00	0.09441	100	75	125				

Sample ID: N005957-003B-MSD | SampType: MSD | TestCode: 6020_DIS | Units: µg/L | Prep Date: | RunNo: 80437
Client ID: ZZZZZZ | Batch ID: 37101 | TestNo: EPA 6020 | EPA 3010A | Analysis Date: 6/16/2011 | SeqNo: 1277968

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.319	0.10	10.00	1.437	98.8	75	125	11.29	0.222	20	
Selenium	48.659	0.50	10.00	39.81	88.4	75	125	47.97	1.43	20	
Thallium	10.095	0.50	10.00	0.09441	100	75	125	10.10	0.0495	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc.
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ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock,417981.ER.02.DM
Lab ID: N005957-001

Client Sample ID: MW-65-160-001
Collection Date: 6/13/2011 1:31:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
				EPA 7470A			
RunID: **AA1_110615A**	QC Batch: **37100**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-225-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 2:26:00 PM
Project:	PG&E Topock.417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
				EPA 7470A			
RunID: **AA1_110617B**	QC Batch: **37116**				PrepDate:	**6/16/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock.417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
				EPA 7470A			
RunID: **AA1_110615A**	QC Batch: **37100**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-004

Client Sample ID: MW-66-230-001
Collection Date: 6/14/2011 12:07:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
				EPA 7470A			
RunID: **AA1_110617B**	QC Batch: **37116**				PrepDate:	**6/16/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-005

Client Sample ID: MW-67-225-001
Collection Date: 6/14/2011 9:27:00 AM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
				EPA 7470A			
RunID: **AA1_110615A**	QC Batch: **37100**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-006

Client Sample ID: MW-67-260-001
Collection Date: 6/14/2011 10:53:00 AM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7470A				
RunID: **AA1_110617B**	QC Batch: **37116**				PrepDate:	**6/16/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-007

Client Sample ID: MW-68-180-001
Collection Date: 6/14/2011 1:11:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
				EPA 7470A			
RunID: **AA1_110615A**	QC Batch: **37100**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-240-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 8:03:00 AM
Project:	PG&E Topock.417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7470A				
RunID: **AA1_110617B**	QC Batch: **37116**				PrepDate:	**6/16/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock.417981.ER.02.DM
Lab ID: N005957-009

Client Sample ID: MW-70-105-001
Collection Date: 6/13/2011 12:07:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
				EPA 7470A			
RunID: **AA1_110615A**	QC Batch: **37100**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock.417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
				EPA 7470A			
RunID: **AA1_110615A**	QC Batch: **37100**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *27-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	EB-70331-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 3:00:00 PM
Project:	PG&E Topock.417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
				EPA 7470A			
RunID: **AA1_110617B**	QC Batch: **37116**				PrepDate:	**6/16/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: 27-Jun-11

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock.417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 7470_W_DISSPGE

Sample ID: LCS-37100 SampType: LCS TestCode: 7470_W_DIS Units: µg/L Prep Date: 6/15/2011 RunNo: 80438
Client ID: LCSW Batch ID: 37100 TestNo: EPA 7470A Analysis Date: 6/15/2011 SeqNo: 1277991

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.743	0.20	10.00	0	97.4	85	115				

Sample ID: MB-37100 SampType: MBLK TestCode: 7470_W_DIS Units: µg/L Prep Date: 6/15/2011 RunNo: 80438
Client ID: PBW Batch ID: 37100 TestNo: EPA 7470A Analysis Date: 6/15/2011 SeqNo: 1277992

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID: N005957-003BMS SampType: MS TestCode: 7470_W_DIS Units: µg/L Prep Date: 6/15/2011 RunNo: 80438
Client ID: ZZZZZZ Batch ID: 37100 TestNo: EPA 7470A Analysis Date: 6/15/2011 SeqNo: 1277995

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	19.052	0.20	20.00	0	95.3	75	125				

Sample ID: N005957-003BMSD SampType: MSD TestCode: 7470_W_DIS Units: µg/L Prep Date: 6/15/2011 RunNo: 80438
Client ID: ZZZZZZ Batch ID: 37100 TestNo: EPA 7470A Analysis Date: 6/15/2011 SeqNo: 1277996

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	19.681	0.20	20.00	0	98.4	75	125	19.05	3.25	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock.417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 7470_W_DISSPGE

Sample ID: LCS-37116 SampType: LCS TestCode: 7470_W_DIS Units: µg/L Prep Date: 6/16/2011 RunNo: 80439
Client ID: LCSW Batch ID: 37116 TestNo: EPA 7470A Analysis Date: 6/17/2011 SeqNo: 1278009

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.090	0.20	10.00	0	90.9	85	115				

Sample ID: MB-37116 SampType: MBLK TestCode: 7470_W_DIS Units: µg/L Prep Date: 6/16/2011 RunNo: 80439
Client ID: PBW Batch ID: 37116 TestNo: EPA 7470A Analysis Date: 6/17/2011 SeqNo: 1278010

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID: N005957-002B-MS SampType: MS TestCode: 7470_W_DIS Units: µg/L Prep Date: 6/16/2011 RunNo: 80439
Client ID: ZZZZZZ Batch ID: 37116 TestNo: EPA 7470A Analysis Date: 6/17/2011 SeqNo: 1278012

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	19.669	0.20	20.00	0	98.3	75	125				

Sample ID: N005957-002B-MSD SampType: MSD TestCode: 7470_W_DIS Units: µg/L Prep Date: 6/16/2011 RunNo: 80439
Client ID: ZZZZZZ Batch ID: 37116 TestNo: EPA 7470A Analysis Date: 6/17/2011 SeqNo: 1278013

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	18.551	0.20	20.00	0	92.8	75	125	19.67	5.85	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CH2MHILL

CHAIN OF CUSTODY RECORD

Page 1 OF 1

Project Name PG&E Topock
Location Topock
Project Number 417981.ER.02.DM
Project Manager Mike C.
Sample Manager Shawn Duffy

Task Order
Project 2011-EASTRAVINE-GWINV-001
Turnaround Time 10 Days
Shipping Date: Verbal in 5 days for the organic analysis.
COC Number:

Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	2x1 Liter	2x1 Liter	2x1 Liter	2x1 Liter	1 Liter Poly	3 x 40 ml VOA	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	3 x 40 ml VOA	3 x 40 ml VOA
Preservatives:	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	4°C	H2SO4, pH<2, 4°C	H3PO4, 4°C	4°C	4°C	4°C	4°C	4°C	4°C	HCL,4°C	HCL,4°C
Filtered:	Field	Field	Field	Field	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Holding Time:	28	180	180	180	2	2	2	2	28	28	7	7	7	7	7	7	14	14
	Cr6 (E218.6) Field Filtered	Metals (7470ADis) Field Filtered	Metals (SW6010B/SW6020Adis) Field Filtered Title 22 Metals	Metals (6010BFF) Field Filtered Ca,Mg,Mn,K,Na,Fe	Anions (E300.0) Cl,SO4,NO3,NO2,Fl,Br,PO4	TDS (SM2540C)	Alkalinity (SM2320B)	TSS (SM2540)	Ammonia (SM4500NH3)	TOC (SM5310C)	TPH-Extractable (8015B-E)	SVOC (8270C)	PAHs (SW8270Sim)	PCBs (8082)	Pesticides (SW8081A)	Herbicide (SW8151A)	VOCs (8260B)	TPH-Purgable (SW8015B)

NO0595	SAMPLE ID	DATE	TIME	Matrix	Number of Containers
-1	MW-65-160-001	6/13/11	1331	GW	18
2	MW-65-205-001	6/13/11	1426	GW	19
3	MW-66-165-001	6/13/11	1537	GW	75
4	MW-66-230-001	6/14/11	1207	GW	25
5	MW-67-225-001	6/14/11	0927	GW	25
6	MW-67-260-001	6/14/11	1053	GW	25
7	MW-68-180-001	6/14/11	1311	GW	25
8	MW-68-240-001	6/14/11	0803	GW	25
9	MW-70-105-001	6/13/11	1207	GW	18
10	MW-99-001	6/14/11	1311	GW	25
11	EB-70331-001	6/14/11	1500	GW	7
12	TEMP BLANK				1
13	TB-061111	6/11/11	1610	GW	1
				TOTAL	288

	Signatures	Date/Time
Approved by	[signature]	6/14/11 1540
Sampled by	[signature]	6/14/11 1540
Relinquished by	[signature]	6/14/11 1540
Received by	[signature] DMGalay	6/14/11 1540
Relinquished by	[signature] DMGalay	6/14/11 1847
Received by	[signature] GGEJMUNAN	6/14/11 1848

Shipping Details

Method of Shipment:
On Ice: ~~yes~~ / no 2.6°C/3.2°C/2.8°C/2.6°C/2.2°C/2.6°C 2.8°C/2.6°C/4.8°C 1 RT 2
Airbill No:
Lab Name: ADVANCED TECHNOLOGY LABORATORIES
Lab Phone: (702) 307-2659

ATTN: Marlon

Special Instructions:
PLEASE HOLD EXTRA CONTAINERS FOR METHODS NOT LISTED ON THE COC. SAMPLE MW-66-165-001 HAS EXTRA VOLUME FOR LAB QC.

Report Copy to
Shawn Duffy
(530) 229-3303

CH2MHILL

CHAIN OF CUSTODY RECORD

Project Name PG&E Topock
Location Topock
Project Number 417981.ER.02.DM
Project Manager Mike C.
Sample Manager Shawn Duffy

Task Order
Project 2011-EASTRAVINE-GWINV-001
Turnaround Time 10 Days
Shipping Date: Verbal in 5 days for the organic analysis.
COC Number:

Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	2x1 Liter	2x1 Liter	2x1 Liter	2x1 Liter	1 Liter Poly	3 x 40 ml VOA	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	3 x 40 ml VOA	3 x 40 ml VOA
Preservatives:	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	4°C	H2SO4, pH<2, 4°C	H3PO4, 4°C	4°C	4°C	4°C	4°C	4°C	4°C	HCL,4°C	HCL,4°C
Filtered:	Field	Field	Field	Field	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Holding Time:	28	180	180	180	2	2	2	2	28	28	7	7	7	7	7	7	14	14

SAMPLE ID	DATE	TIME	Matrix	Cr6 (E218.6) Field Filtered	Metals (7470Ad/s) Field Filtered	Metals (SW6010B/SW6020Ad/s) Field Filtered Title 22 Metals	Metals (6010BFF) Field Filtered Ca,Mg,Mn,K,Na,Fe	Anions (E300.0) Cl,SO4,NO3,NO2,Fl,Br,PO4	TDS (SM2540C)	Alkalinity (SM2320B)	TSS (SM2540)	Ammonia (SM4500NH3)	TOC (SM5310C)	TPH-Extractable (8015B-E)	SVOC (8270C)	PAHs (SW8270Sim)	PCBs (8082)	Pesticides (SW8081A)	Herbicide (SW8151A)	VOCs (8260B)	TPH-Purgable (SW8015B)	Number of Containers
MW-65-160-001	6/13/11	1331	GW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	19
MW-65-205-001	6/13/11	1426	GW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	75
MW-66-165-001	6/13/11	1537	GW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	25
MW-66-230-001	6/14/11	1207	GW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	25
MW-67-225-001	6/14/11	0927	GW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	25
MW-67-260-001	6/14/11	1053	GW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	25
MW-68-180-001	6/14/11	1311	GW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	25
MW-68-240-001	6/14/11	0803	GW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	25
MW-70-105-001	6/13/11	1207	GW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-99-001	6/14/11	1311	GW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	25
EB-70331-001	6/14/11	1500	GW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	7
TEMP BLANK																						1
TB-061111	6/11/11	1610	GW																	X		1
																					TOTAL	288

	Signatures	Date/Time
Approved by	Eli Ludwig	6/14/11 1540
Sampled by	Eli Ludwig	6/14/11 1540
Relinquished by	[illegible]	6/14/11 1540
Received by	DMcGalay	6/14/11 1540
Relinquished by	DMcGalay	6/14/11 1547
Received by	GGEESMAN	6/14/11 1848

Shipping Details
Method of Shipment:
On Ice: ~~yes~~ / no 2.6°C/2.2°C/2.8°C/2.6°C/2.2°C/2.6°C ~~Walton~~ 2.8°C/2.6°C/4.8°C IR#2
Airbill No:
Lab Name: ADVANCED TECHNOLOGY LABORATORIES
Lab Phone: (702) 307-2659

ATTN:

Special Instructions:
PLEASE HOLD EXTRA CONTAINERS FOR METHODS NOT LISTED ON THE COC. SAMPLE MW-66-165-001 HAS EXTRA VOLUME FOR LAB QC.

Report Copy to Shawn Duffy (530) 229-3303

Advanced Technology Laboratories, Inc.

Please review the checklist below. Any NO and/or NA signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Sample Receipt Checklist

Cooler Received/Opened On:	6/14/2011	Workorder:	N005957
Rep sample Temp (Deg C):	2.6,3.2,2.8,2.6,2.2,2.6,2.8,	IR Gun ID:	2
Temp Blank:	Yes ✔ No		
Carrier name:	ATL		
Last 4 digits of Tracking No.:		Packing Material Used:	Bubble Wrap
Cooling process:	✔ Ice Ice Pack Dry Ice Other None		

1. Shipping container/cooler in good condition?	Yes ✔	No	Not Present
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes	No	Not Present ✔
3. Custody seals intact on sample bottles?	Yes	No	Not Present ✔
4. Chain of custody present?	Yes ✔	No	
5. Sampler's name present in COC?	Yes ✔	No	
6. Chain of custody signed when relinquished and received?	Yes ✔	No	
7. Chain of custody agrees with sample labels?	Yes	No ✔	
8. Samples in proper container/bottle?	Yes ✔	No	
9. Sample containers intact?	Yes ✔	No	
10. Sufficient sample volume for indicated test?	Yes ✔	No	
11. All samples received within holding time?	Yes ✔	No	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ✔	No	NA
13. Water - VOA vials have zero headspace?	Yes ✔	No	NA
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ✔	No	NA
15. Did the bottle labels indicate correct preservatives used?	Yes ✔	No	NA
16. Were there Non-Conformance issues at login?	Yes ✔	No	NA
Was Client notified?	Yes ✔	No	NA

Comments: see correspondence

Checklist Completed B NS 6/15/11

Reviewed By: [illegible]

Advanced Technology Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atlglobal.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:
D-Tek
2722 Loker Ave W Ste B
Carlsbad, CA 92010

TEL: (760) 930-2555
FAX: (760) 930-2510
Acct #:

Field Sampler: Eli Ludwig

15-Jun-11

	Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests EPA 8151
N005957-001L	/ MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	32OZA	1
N005957-003L	/ MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	32OZA	1
N005957-005L	/ MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	32OZA	1
N005957-007L	/ MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	32OZA	1
N005957-009L	/ MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	32OZA	1
N005957-010L	/ MW-99-001	Ground Water	6/14/2011 1:11:00 PM	32OZA	1

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N005957 Please fax results by:6/21/2011

Please analyze for Herbicides by EPA 8151

Please use N005957-3L as sample and MS/MSD (3-32 oz amber bottles)

	Date/Time		Date/Time
Relinquished by:	6/15/11 3pm	**Received by:**	
Relinquished by:		**Received by:**	

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = ug/L, IC Cr^{+6} calculated concentration
DF = dilution factor

For N005957-001A, concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 2.530441 * 5$$

$$= 12.6522 \ \mu g/L$$

Reporting results in two significant figures,

$$Cr^{+6}, \mu g/L = 13$$

MS 6/17/11

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: METALS BY ICP
MATRIX: WATER

FORMULA:

Calculate the individual metal concentration, in mg/L, in the original sample as follows:

$$M, ug/L = \frac{A*C*DF*1000}{B}$$

where:
M= concentration of the metal in ug/L
A= mg/L, ICP calculated concentration
B= volume of sample, Liter
C= final volume of digestate, Liter
DF= dilution factor

For N005957-001B, concentration in ug/L are calculated as follows:

$$Ba, ug/L = 0.13547 \frac{mg/L * 0.025 L*1 *1000}{0.025 L}$$

Ba = 135.47 ug/L

Reporting result in two significant figures,

Ba = 140 ug/L 6/22/2011

DILUTION TEST

Analytical Method:	**EPA 6010B / 200.7**	**Matrix:**	**Water**
Digestion Method:	**EPA 3010A**	**Amount of Sample:**	**25 mL**
Date of Analysis:	**6/20/2011**	**Units:**	**ug/L**
Digestion Date:	**6/15/2011**		
Instrument Name:	**ICP1**		
Analysts:	**KB**		

Work Order # : **N005957-003B**
Batch # : **37108**

Analyte	A	B	Difference	% D
Barium	63.56	66.42	-2.86000	-4.5
Calcium	229800	243850.673	-14050.67300	-6.1
Chromium	566.9	586.925	-20.02500	-3.5
Magnesium	45990	48586.441	-2596.44100	-5.6
Manganese	127.7	131.835	-4.13500	-3.2

FORMULA:

$$\%D = \frac{(A-B)*100}{A}$$

where:

% D = % Difference
A= ug/L, ICP calculated concentration of the original sample
B= ug/L, ICP calculated concentration @5x dilution

[illegible] 6/20/2011

Advanced Technology Laboratories, Inc.

Date: *21-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N005957-003BDT** SampType: **DT** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **80460**
Client ID: **ZZZZZZ** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/20/2011** SeqNo: **1278435**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	66.420	15						63.56	4.41	10	
Calcium	243850.673	2500						229800	5.95	10	
Chromium	586.925	5.0						566.9	3.47	10	
Magnesium	48586.441	500						45990	5.49	10	
Manganese	131.835	50						127.7	3.18	10	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc.

Date: *21-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N005957-003BPS** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **80460**
Client ID: **ZZZZZZ** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/20/2011** SeqNo: **1278448**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	895.349	20	1000	0	89.5	75	125				
Barium	980.933	6.0	1000	63.56	91.7	75	125				
Beryllium	944.451	2.0	1000	0	94.4	75	125				
Cadmium	855.842	6.0	1000	0	85.6	75	125				
Calcium	254686.783	1000	20000	229800	125	75	125				
Chromium	1495.349	2.0	1000	566.9	92.8	75	125				
Cobalt	874.652	6.0	1000	0	87.5	75	125				
Copper	963.726	10	1000	0	96.4	75	125				
Lead	865.828	20	1000	0	86.6	75	125				
Magnesium	59001.462	200	20000	45990	65.1	75	125				S
Manganese	1949.034	20	2000	127.7	91.1	75	125				
Molybdenum	950.032	10	1000	8.726	94.1	75	125				
Nickel	877.947	10	1000	0	87.8	75	125				
Silver	941.564	6.0	1000	0	94.2	75	125				
Vanadium	978.922	6.0	1000	5.304	97.4	75	125				

Sample ID: **N005957-003BPS** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **80460**
Client ID: **ZZZZZZ** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/20/2011** SeqNo: **1278449**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2272.158	50	2500	0	90.9	75	125				
Barium	2407.143	15	2500	63.56	93.7	75	125				
Beryllium	2375.143	5.0	2500	0	95.0	75	125				
Cadmium	2170.949	15	2500	0	86.8	75	125				
Calcium	291530.545	2500	50000	229800	124	75	125				
Chromium	2932.324	5.0	2500	566.9	94.6	75	125				
Cobalt	2299.337	15	2500	0	92.0	75	125				
Copper	2436.010	25	2500	0	97.4	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N005957-003BPS** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **80460**
Client ID: **ZZZZZZ** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/20/2011** SeqNo: **1278449**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2209.254	50	2500	0	88.4	75	125				
Magnesium	85811.338	500	50000	45990	79.6	75	125				
Manganese	4772.851	50	5000	127.7	92.9	75	125				
Molybdenum	2390.349	25	2500	8.726	95.3	75	125				
Nickel	2246.343	25	2500	0	89.9	75	125				
Silver	2352.215	15	2500	0	94.1	75	125				
Vanadium	2451.446	15	2500	5.304	97.8	75	125				

Sample ID: **N005957-003BPS** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **80460**
Client ID: **ZZZZZZ** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/21/2011** SeqNo: **1278540**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	989.229	20	1000	0	98.9	75	125				

Sample ID: **N005957-003BPS** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **80460**
Client ID: **ZZZZZZ** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/21/2011** SeqNo: **1278541**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	2483.098	50	2500	0	99.3	75	125				

Sample ID: **N005957-003BPS** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **80460**
Client ID: **ZZZZZZ** Batch ID: **37108** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **6/17/2011** SeqNo: **1278614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	1228288.539	250000	1250000	0	98.3	75	125				
Sodium	1890664.687	250000	1250000	574500	105	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

Arsenic, mg/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = dilution factor
PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N005957-001B**, the concentration in ug/L is calculated as follows:

Arsenic, ug/L = 1.202* 1 * (25/25)

= 1.202 ug/L

Reporting results in two significant figures,

Arsenic, ug/L = 1.2

Advanced Technology Laboratories, Inc.

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N005957
Test Method: EPA 6020
Analysis Date: 06/16/11

Matrix: Aqueous
Batch No.: 37101

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Jojo Tenorio

Dilution Test is not applicable to Tl . The calc. Values are < 25X the RL. PS @ 2X passes the criteria.

Sample ID	Analyte	&Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N005866-001B-DT 5X	Arsenic	µg/L	1.487570774		1.437497941	3.48%	10
N005866-001B-DT 5X	Selenium	µg/L	39.52581954		39.81380208	-0.72%	10
N005866-001B-DT 5X	Thallium	µg/L	0.123972774	NA	0.094407325	31.32%	10

Advanced Technology Laboratories, Inc.

Date: *20-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N005957-003B-PS 2** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **80437**
Client ID: **ZZZZZZ** Batch ID: **37101** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **6/16/2011** SeqNo: **1277951**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.158	0.20	20.00	1.437	93.6	75	125				
Selenium	56.819	1.0	20.00	39.81	85.0	75	125				
Thallium	19.747	1.0	20.00	0.09441	98.3	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 7470
TEST NAME: Mercury in Water by Cold-Vapor Technique
MATRIX: Aqueous

FORMULA:

Calculate the Mercury concentration, in ug/L, in the original sample as follows:

Mercury, ug/L = A * DF * PF * 0.5

where:

A = ug/L, calculated concentration
DF = dilution factor
PF = Final Vol. of Digestate in mL / Wt. of Sample used in mL
0.5, is the coversion factor.

For Sample **N005957-001B**, the concentration in ug/L is calculated as follows:

Mercury, ug/L = 0* 1 * (50/25) * 0.5

= 0.0 ug/L

Reporting results in two significant figures,

Mercury, ug/L = 0.0

Mercury, ug/L = ND

June 28, 2011

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N005957

RE: PG&E Topock,417981.ER.02.DM

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on June 14, 2011 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.

CLIENT: CH2M HILL
Project: PG&E Topock,417981.ER.02.DM
Lab Order: N005957

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analysis:

Chlorinated Herbicides by EPA 8151 was subcontracted to D-Tek Laboratories with ELAP Certificate # 2344.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium, Potassium and Sodium possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Advanced Technology Laboratories, Inc. *3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691*

Advanced Technology Laboratories, Inc.

Date: *28-Jun-11*

CLIENT: CH2M HILL
Project: PG&E Topock,417981.ER.02.DM
Lab Order: N005957
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N005957-001A	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-001B	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-001C	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-001D	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-001E	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-001F	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-001G	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-001H	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-001I	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-001J	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-001K	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-001L	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-001M	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-001N	MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	6/14/2011	6/28/2011
N005957-002A	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002B	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002C	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002D	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002E	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002F	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002G	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002H	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002I	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002J	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002K	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002L	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002M	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002N	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011
N005957-002O	MW-65-225-001	Ground Water	6/13/2011 2:26:00 PM	6/14/2011	6/28/2011

Advanced Technology Laboratories, Inc. *3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691*

CLIENT: CH2M HILL
Project: PG&E Topock,417981.ER.02.DM
Lab Order: N005957
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N005957-003A	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003B	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003C	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003D	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003E	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003F	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003G	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003H	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003I	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003J	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003K	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003L	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003M	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003N	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003O	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003P	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003Q	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003R	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003S	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003T	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003U	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003V	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-003W	MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	6/14/2011	6/28/2011
N005957-004A	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004B	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004C	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004D	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004E	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004F	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004G	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011

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CLIENT: CH2M HILL
Project: PG&E Topock,417981.ER.02.DM
Lab Order: N005957
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N005957-004H	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004I	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004J	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004K	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004L	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004M	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004N	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004O	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004P	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-004Q	MW-66-230-001	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-005A	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005B	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005C	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005D	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005E	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005F	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005G	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005H	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005I	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005J	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005K	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005L	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005M	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005N	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005O	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005P	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-005Q	MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	6/14/2011	6/28/2011
N005957-006A	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006B	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006C	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011

Advanced Technology Laboratories, Inc. 3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Project: PG&E Topock,417981.ER.02.DM
Lab Order: N005957
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N005957-006D	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006E	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006F	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006G	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006H	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006I	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006J	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006K	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006L	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006M	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006N	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006O	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006P	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-006Q	MW-67-260-001	Ground Water	6/14/2011 10:53:00 AM	6/14/2011	6/28/2011
N005957-007A	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007B	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007C	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007D	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007E	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007F	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007G	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007H	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007I	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007J	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007K	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007L	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007M	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007N	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007O	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-007P	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011

Advanced Technology Laboratories, Inc. 3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Project: PG&E Topock,417981.ER.02.DM
Lab Order: N005957
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N005957-007Q	MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-008A	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008B	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008C	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008D	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008E	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008F	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008G	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008H	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008I	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008J	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008K	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008L	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008M	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008N	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008O	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008P	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-008Q	MW-68-240-001	Ground Water	6/14/2011 8:03:00 AM	6/14/2011	6/28/2011
N005957-009A	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-009B	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-009C	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-009D	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-009E	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-009F	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-009G	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-009H	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-009I	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-009J	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-009K	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-009L	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011

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CLIENT: CH2M HILL
Project: PG&E Topock,417981.ER.02.DM
Lab Order: N005957
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N005957-009M	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-009N	MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	6/14/2011	6/28/2011
N005957-010A	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010B	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010C	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010D	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010E	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010F	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010G	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010H	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010I	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010J	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010K	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010L	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010M	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010N	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010O	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010P	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-010Q	MW-99-001	Ground Water	6/14/2011 1:11:00 PM	6/14/2011	6/28/2011
N005957-011A	EB-70331-001	Ground Water	6/14/2011 3:00:00 PM	6/14/2011	6/28/2011
N005957-011B	EB-70331-001	Ground Water	6/14/2011 3:00:00 PM	6/14/2011	6/28/2011
N005957-011C	EB-70331-001	Ground Water	6/14/2011 3:00:00 PM	6/14/2011	6/28/2011
N005957-011D	EB-70331-001	Ground Water	6/14/2011 3:00:00 PM	6/14/2011	6/28/2011
N005957-012A	TEMP BLANK	Ground Water		6/14/2011	6/28/2011
N005957-013A	TB-061111	Ground Water	6/11/2011 4:10:00 PM	6/14/2011	6/28/2011
N005957-014A	MW-68-180-001Dup	Ground Water	6/14/2011 12:07:00 PM	6/14/2011	6/28/2011

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ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
				SM2540C			
RunID: **WETCHEM_110615A**	QC Batch: **37103**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Total Dissolved Solids (Residue, Filterable)	2500	10	10		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-225-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 2:26:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
				SM2540C			
RunID: **WETCHEM_110615A**	QC Batch: **37103**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Total Dissolved Solids (Residue, Filterable)	9600	100	100		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
				SM2540C			
RunID: **WETCHEM_110615A**	QC Batch: **37103**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Total Dissolved Solids (Residue, Filterable)	2900	20	20		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-230-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
				SM2540C			
RunID: **WETCHEM_110615A**	QC Batch: **37103**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Total Dissolved Solids (Residue, Filterable)	10000	100	100		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
				SM2540C			
RunID: **WETCHEM_110615A**	QC Batch: **37103**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-260-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 10:53:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
				SM2540C			
RunID: **WETCHEM_110615A**	QC Batch: **37103**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Total Dissolved Solids (Residue, Filterable)	8900	100	100		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
				SM2540C			
RunID: **WETCHEM_110615A**	QC Batch: **37103**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Total Dissolved Solids (Residue, Filterable)	1600	10	10		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-240-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 8:03:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
				SM2540C			
RunID: **WETCHEM_110615A**	QC Batch: **37103**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Total Dissolved Solids (Residue, Filterable)	7700	100	100		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-70-105-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
				SM2540C			
RunID: **WETCHEM_110615A**	QC Batch: **37103**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Total Dissolved Solids (Residue, Filterable)	1100	10	10		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
				SM2540C			
RunID: **WETCHEM_110615A**	QC Batch: **37103**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Total Dissolved Solids (Residue, Filterable)	1700	10	10		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: *28-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID: **MB-37103** SampType: **MBLK** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **6/15/2011** RunNo: **80434**
Client ID: **PBW** Batch ID: **37103** TestNo: **SM2540C** Analysis Date: **6/15/2011** SeqNo: **1277877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10									

Sample ID: **LCS-37103** SampType: **LCS** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **6/15/2011** RunNo: **80434**
Client ID: **LCSW** Batch ID: **37103** TestNo: **SM2540C** Analysis Date: **6/15/2011** SeqNo: **1277878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1045.000	10	1000	0	104	80	120				

Sample ID: **N005957-003D-DUP** SampType: **DUP** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **6/15/2011** RunNo: **80434**
Client ID: **ZZZZZZ** Batch ID: **37103** TestNo: **SM2540C** Analysis Date: **6/15/2011** SeqNo: **1277883**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	2758.000	20						2892	4.74	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILTERABLE RESIDUE							
				SM2540D			
RunID: **WETCHEM_110615B**	QC Batch: **37104**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Suspended Solids (Residue, Non-Filterable)	ND	10	10		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-225-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 2:26:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILTERABLE RESIDUE							
				SM2540D			
RunID: **WETCHEM_110615B** QC Batch: **37104**					PrepDate:	**6/15/2011**	Analyst: **CEI**
Suspended Solids (Residue, Non-Filterable)	35	10	10		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILTERABLE RESIDUE							
				SM2540D			
RunID: **WETCHEM_110615B** QC Batch: **37104**					PrepDate: **6/15/2011**		Analyst: **CEI**
Suspended Solids (Residue, Non-Filterable)	52	10	10		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-230-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILTERABLE RESIDUE							
				SM2540D			
RunID: **WETCHEM_110615B**	QC Batch: **37104**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Suspended Solids (Residue, Non-Filterable)	22	10	10		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILTERABLE RESIDUE							
				SM2540D			
RunID: **WETCHEM_110615B** QC Batch: **37104**					PrepDate: **6/15/2011**		Analyst: **CEI**
Suspended Solids (Residue, Non-Filterable)	13	10	10		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-260-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 10:53:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILTERABLE RESIDUE							
				SM2540D			
RunID: **WETCHEM_110615B** QC Batch: **37104**					PrepDate:	**6/15/2011**	Analyst: **CEI**
Suspended Solids (Residue, Non-Filterable)	20	10	10		mg/L	1	6/15/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILTERABLE RESIDUE							
				SM2540D			
RunID: **WETCHEM_110615B**	QC Batch: **37104**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Suspended Solids (Residue, Non-Filterable)	170	10	10		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-240-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 8:03:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILTERABLE RESIDUE							
				SM2540D			
RunID: **WETCHEM_110615B** QC Batch: **37104**					PrepDate:	**6/15/2011**	Analyst: **CEI**
Suspended Solids (Residue, Non-Filterable)	98	10	10		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-70-105-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILTERABLE RESIDUE							
				SM2540D			
RunID: **WETCHEM_110615B** QC Batch: **37104**					PrepDate:	**6/15/2011**	Analyst: **CEI**
Suspended Solids (Residue, Non-Filterable)	19	10	10		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL NON-FILTERABLE RESIDUE							
				SM2540D			
RunID: **WETCHEM_110615B** QC Batch: **37104**					PrepDate:	**6/15/2011**	Analyst: **CEI**
Suspended Solids (Residue, Non-Filterable)	140	10	10		mg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: *28-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.2_2540D_W

Sample ID: **MB-37104** SampType: **MBLK** TestCode: **160.2_2540D** Units: **mg/L** Prep Date: **6/15/2011** RunNo: **80435**
Client ID: **PBW** Batch ID: **37104** TestNo: **SM2540D** Analysis Date: **6/15/2011** SeqNo: **1277897**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter	ND	10									

Sample ID: **LCS-37104** SampType: **LCS** TestCode: **160.2_2540D** Units: **mg/L** Prep Date: **6/15/2011** RunNo: **80435**
Client ID: **LCSW** Batch ID: **37104** TestNo: **SM2540D** Analysis Date: **6/15/2011** SeqNo: **1277898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter	871.000	10	1000	0	87.1	80	120				

Sample ID: **N005957-003D-DUP** SampType: **DUP** TestCode: **160.2_2540D** Units: **mg/L** Prep Date: **6/15/2011** RunNo: **80435**
Client ID: **ZZZZZZ** Batch ID: **37104** TestNo: **SM2540D** Analysis Date: **6/15/2011** SeqNo: **1277902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter	54.000	10						52.00	3.77	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: *29-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001C		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **WETCHEM_110617D**	QC Batch: **R80436**				PrepDate:		Analyst: **CEI**
Alkalinity, Bicarbonate (As CaCO3)	71	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Total (As CaCO3)	71	1.2	5.0		mg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *29-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-225-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 2:26:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-002C		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **WETCHEM_110617D**	QC Batch: **R80436**				PrepDate:		Analyst: **CEI**
Alkalinity, Bicarbonate (As CaCO3)	56	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Total (As CaCO3)	56	1.2	5.0		mg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *29-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003D		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **WETCHEM_110617D**	QC Batch: **R80436**				PrepDate:		Analyst: **CEI**
Alkalinity, Bicarbonate (As CaCO3)	94	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Total (As CaCO3)	94	1.2	5.0		mg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *29-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-230-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-004D		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **WETCHEM_110617D**	QC Batch: **R80436**				PrepDate:		Analyst: **CEI**
Alkalinity, Bicarbonate (As CaCO3)	35	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Total (As CaCO3)	35	1.2	5.0		mg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *29-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005D		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **WETCHEM_110617D**	QC Batch: **R80436**				PrepDate:		Analyst: **CEI**
Alkalinity, Bicarbonate (As CaCO3)	120	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Total (As CaCO3)	120	1.2	5.0		mg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *29-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-260-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 10:53:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-006D		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **WETCHEM_110617D**	QC Batch: **R80436**				PrepDate:		Analyst: **CEI**
Alkalinity, Bicarbonate (As CaCO3)	32	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Total (As CaCO3)	32	1.2	5.0		mg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *29-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007D		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **WETCHEM_110617D**	QC Batch: **R80436**				PrepDate:		Analyst: **CEI**
Alkalinity, Bicarbonate (As CaCO3)	120	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Total (As CaCO3)	120	1.2	5.0		mg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *29-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-240-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 8:03:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-008D		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **WETCHEM_110617D**	QC Batch: **R80436**				PrepDate:		Analyst: **CEI**
Alkalinity, Bicarbonate (As CaCO3)	68	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Total (As CaCO3)	68	1.2	5.0		mg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *29-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-70-105-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-009C		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **WETCHEM_110617D**	QC Batch: **R80436**				PrepDate:		Analyst: **CEI**
Alkalinity, Bicarbonate (As CaCO3)	86	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Total (As CaCO3)	86	1.2	5.0		mg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *29-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010D		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **WETCHEM_110617D**	QC Batch: **R80436**				PrepDate:		Analyst: **CEI**
Alkalinity, Bicarbonate (As CaCO3)	110	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0		mg/L	1	6/17/2011
Alkalinity, Total (As CaCO3)	110	1.2	5.0		mg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: *29-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID: **LCS-R80436** SampType: **LCS** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **80436**
Client ID: **LCSW** Batch ID: **R80436** TestNo: **SM 2320 B** Analysis Date: **6/17/2011** SeqNo: **1280528**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Carbonate (As CaCO3)	80.000	5.0	100.0	0	80.0	80	120				
Alkalinity, Total (As CaCO3)	104.000	5.0	100.0	0	104	80	120				

Sample ID: **MB-R80436** SampType: **MBLK** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **80436**
Client ID: **PBW** Batch ID: **R80436** TestNo: **SM 2320 B** Analysis Date: **6/17/2011** SeqNo: **1280530**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0									
Alkalinity, Carbonate (As CaCO3)	ND	5.0									
Alkalinity, Hydroxide (As CaCO3)	ND	5.0									
Alkalinity, Total (As CaCO3)	ND	5.0									

Sample ID: **N005957-003D-DUP** SampType: **DUP** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **80436**
Client ID: **ZZZZZZ** Batch ID: **R80436** TestNo: **SM 2320 B** Analysis Date: **6/17/2011** SeqNo: **1280534**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	94.000	5.0						94.00	0	30	
Alkalinity, Carbonate (As CaCO3)	ND	5.0						0	0	30	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0						0	0	30	
Alkalinity, Total (As CaCO3)	94.000	5.0						94.00	0	30	

Sample ID: **N005957-003D-MS** SampType: **MS** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **80436**
Client ID: **ZZZZZZ** Batch ID: **R80436** TestNo: **SM 2320 B** Analysis Date: **6/17/2011** SeqNo: **1280535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Carbonate (As CaCO3)	ND	5.0	100.0	0	0	80	120				S
Alkalinity, Total (As CaCO3)	180.000	5.0	100.0	94.00	86.0	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID: **N005957-003D-MSD** SampType: **MSD** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **80436**
Client ID: **ZZZZZZ** Batch ID: **R80436** TestNo: **SM 2320 B** Analysis Date: **6/17/2011** SeqNo: **1280536**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Carbonate (As CaCO3)	ND	5.0	100.0	0	0	80	120	0	0	20	S
Alkalinity, Total (As CaCO3)	194.000	5.0	100.0	94.00	100	80	120	180.0	7.49	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Bromide	0.91	0.039	0.50		mg/L	1	6/15/2011 11:29 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Chloride	990	13	100		mg/L	200	6/15/2011 12:02 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Fluoride	2.6	0.23	2.5		mg/L	5	6/15/2011 11:17 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrogen, Nitrite	ND	0.28	10		mg/L	20	6/15/2011 11:06 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Orthophosphate as P	ND	0.042	0.10		mg/L	1	6/15/2011 11:29 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Sulfate	360	1.2	20		mg/L	20	6/15/2011 11:06 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrate as N	2.5	0.011	0.50		mg/L	1	6/15/2011 11:29 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-225-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 2:26:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Bromide	ND	0.078	1.0		mg/L	2	6/15/2011 12:47 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Chloride	5200	63	500		mg/L	1000	6/15/2011 12:13 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Fluoride	10	0.90	10		mg/L	20	6/15/2011 12:58 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrogen, Nitrite	ND	1.4	50		mg/L	100	6/15/2011 12:24 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Orthophosphate as P	ND	0.084	0.20		mg/L	2	6/15/2011 12:47 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Sulfate	910	5.8	100		mg/L	100	6/15/2011 12:24 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrate as N	ND	0.022	1.0		mg/L	2	6/15/2011 12:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Bromide	1.4	0.039	0.50		mg/L	1	6/15/2011 01:20 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Chloride	980	13	100		mg/L	200	6/15/2011 03:19 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Fluoride	ND	0.45	5.0		mg/L	10	6/15/2011 01:09 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrogen, Nitrite	ND	0.28	10		mg/L	20	6/15/2011 02:23 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Orthophosphate as P	ND	0.042	0.10		mg/L	1	6/15/2011 01:20 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Sulfate	510	2.9	50		mg/L	50	6/15/2011 03:52 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrate as N	26	0.22	10		mg/L	20	6/15/2011 02:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock,417981.ER.02.DM
Lab ID: N005957-004

Client Sample ID: MW-66-230-001
Collection Date: 6/14/2011 12:07:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Bromide	ND	0.078	1.0		mg/L	2	6/15/2011 05:24 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Chloride	5900	63	500		mg/L	1000	6/15/2011 11:44 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Fluoride	ND	2.3	25		mg/L	50	6/15/2011 04:50 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Nitrogen, Nitrite	ND	0.70	25		mg/L	50	6/15/2011 04:50 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Orthophosphate as P	ND	0.084	0.20		mg/L	2	6/15/2011 05:24 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Sulfate	910	2.9	50		mg/L	50	6/15/2011 04:50 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Nitrate as N	5.4	0.022	1.0		mg/L	2	6/15/2011 05:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Bromide	1.3	0.078	1.0		mg/L	2	6/15/2011 05:57 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Chloride	1800	32	250		mg/L	500	6/16/2011 12:06 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Fluoride	5.5	0.23	2.5		mg/L	5	6/15/2011 05:46 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrogen, Nitrite	ND	0.28	10		mg/L	20	6/15/2011 05:35 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Orthophosphate as P	ND	0.084	0.20		mg/L	2	6/15/2011 05:57 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Sulfate	910	5.8	100		mg/L	100	6/16/2011 12:17 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrate as N	13	0.055	2.5		mg/L	5	6/15/2011 05:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Nnt Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-260-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 10:53:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Bromide	ND	0.078	1.0		mg/L	2	6/15/2011 07:04 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Chloride	5400	63	500		mg/L	1000	6/16/2011 12:51 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Fluoride	10	0.45	5.0		mg/L	10	6/15/2011 06:20 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Nitrogen, Nitrite	ND	0.70	25		mg/L	50	6/15/2011 06:09 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Orthophosphate as P	ND	0.084	0.20		mg/L	2	6/15/2011 07:04 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Sulfate	760	2.9	50		mg/L	50	6/15/2011 06:09 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Nitrate as N	ND	0.022	1.0		mg/L	2	6/15/2011 07:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Bromide	ND	0.039	0.50		mg/L	1	6/15/2011 07:38 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Chloride	480	13	100		mg/L	200	6/16/2011 01:13 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Fluoride	2.2	0.090	1.0		mg/L	2	6/15/2011 07:27 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrogen, Nitrite	ND	0.070	2.5		mg/L	5	6/15/2011 11:55 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Orthophosphate as P	ND	0.042	0.10		mg/L	1	6/15/2011 07:38 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Sulfate	400	2.9	50		mg/L	50	6/16/2011 01:24 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrate as N	5.2	0.022	1.0		mg/L	2	6/15/2011 07:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock,417981.ER.02.DM
Lab ID: N005957-008

Client Sample ID: MW-68-240-001
Collection Date: 6/14/2011 8:03:00 AM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Bromide	ND	0.078	1.0		mg/L	2	6/15/2011 08:22 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Chloride	4100	63	500		mg/L	1000	6/16/2011 01:35 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Fluoride	5.5	0.45	5.0		mg/L	10	6/15/2011 08:00 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Nitrogen, Nitrite	ND	0.70	25		mg/L	50	6/15/2011 07:49 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Orthophosphate as P	ND	0.084	0.20		mg/L	2	6/15/2011 08:22 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Sulfate	730	2.9	50		mg/L	50	6/15/2011 07:49 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A**	QC Batch: **R80478**				PrepDate:		Analyst: **QBM**
Nitrate as N	1.5	0.022	1.0		mg/L	2	6/15/2011 08:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock,417981.ER.02.DM
Lab ID: N005957-009

Client Sample ID: MW-70-105-001
Collection Date: 6/13/2011 12:07:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Bromide	ND	0.039	0.50		mg/L	1	6/15/2011 10:20 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Chloride	480	6.3	50		mg/L	100	6/15/2011 10:32 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Fluoride	4.7	0.23	2.5		mg/L	5	6/15/2011 10:43 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrogen, Nitrite	ND	0.070	2.5		mg/L	5	6/15/2011 10:43 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Orthophosphate as P	ND	0.042	0.10		mg/L	1	6/15/2011 10:20 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Sulfate	130	1.2	20		mg/L	20	6/15/2011 10:09 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrate as N	ND	0.011	0.50		mg/L	1	6/15/2011 10:20 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock,417981.ER.02.DM
Lab ID: N005957-010

Client Sample ID: MW-99-001
Collection Date: 6/14/2011 1:11:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Bromide	ND	0.039	0.50		mg/L	1	6/15/2011 11:21 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Chloride	500	13	100		mg/L	200	6/16/2011 01:58 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Fluoride	2.2	0.090	1.0		mg/L	2	6/15/2011 10:59 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrogen, Nitrite	ND	0.070	2.5		mg/L	5	6/16/2011 01:02 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Orthophosphate as P	ND	0.042	0.10		mg/L	1	6/15/2011 11:21 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Sulfate	420	2.9	50		mg/L	50	6/16/2011 02:20 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_110615A** QC Batch: **R80478**					PrepDate:		Analyst: **QBM**
Nitrate as N	6.7	0.022	1.0		mg/L	2	6/15/2011 10:59 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: *28-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_BRPGE

Sample ID: **MB-R80478_BR** SampType: **MBLK** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **PBW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1278941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Sample ID: **LCS-R80478_BR** SampType: **LCS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **LCSW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1278942**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	2.497	0.50	2.500	0	99.9	90	110				

Sample ID: **N005957-003CMS** SampType: **MS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1278951**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	3.563	0.50	2.500	1.408	86.2	80	120				

Sample ID: **N005957-003CMSD** SampType: **MSD** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1278952**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	3.534	0.50	2.500	1.408	85.0	80	120	3.563	0.817	20	

Sample ID: **N005957-010CDUP** SampType: **DUP** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1278965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	0.494	0.50						0.4870	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **MB-R80478_CL** SampType: **MBLK** TestCode: **300_W_CLP** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **PBW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1278972**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **LCS-R80478_CL** SampType: **LCS** TestCode: **300_W_CLP** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **LCSW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1278973**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.356	0.50	2.500	0	94.2	90	110				

Sample ID: **N005957-003CMS** SampType: **MS** TestCode: **300_W_CLP** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1278982**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1471.200	100	500.0	981.6	97.9	80	120				

Sample ID: **N005957-003CMSD** SampType: **MSD** TestCode: **300_W_CLP** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1278983**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1479.800	100	500.0	981.6	99.6	80	120	1471	0.583	20	

Sample ID: **N005957-010CDUP** SampType: **DUP** TestCode: **300_W_CLP** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/16/2011** SeqNo: **1278999**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	507.400	100						503.0	0.871	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **MB-R80478_F** SampType: **MBLK** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **PBW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1278881**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.50									

Sample ID: **LCS-R80478_F** SampType: **LCS** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **LCSW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1278882**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	2.391	0.50	2.500	0	95.6	90	110				

Sample ID: **N005957-003CMS** SampType: **MS** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1278889**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	25.510	5.0	25.00	2.400	92.4	80	120				

Sample ID: **N005957-003CMSD** SampType: **MSD** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1278890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	25.080	5.0	25.00	2.400	90.7	80	120	25.51	1.70	20	

Sample ID: **N005957-010CDUP** SampType: **DUP** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279469**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	2.326	1.0						2.208	5.21	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_NO2PGE

Sample ID: **MB-R80478_NO2** SampType: **MBLK** TestCode: **300_W_NO2P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **PBW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50									

Sample ID: **LCS-R80478_NO2** SampType: **LCS** TestCode: **300_W_NO2P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **LCSW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	2.411	0.50	2.500	0	96.4	90	110				

Sample ID: **N005957-003CMS** SampType: **MS** TestCode: **300_W_NO2P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279029**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	52.800	10	50.00	0	106	80	120				

Sample ID: **N005957-003CMSD** SampType: **MSD** TestCode: **300_W_NO2P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279030**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	53.180	10	50.00	0	106	80	120	52.80	0.717	20	

Sample ID: **N005957-010CDUP** SampType: **DUP** TestCode: **300_W_NO2P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/16/2011** SeqNo: **1279044**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	2.5						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID: **MB-R80478_PO4** SampType: **MBLK** TestCode: **300_W_PO4P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **PBW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279122**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate as P	ND	0.10									

Sample ID: **LCS-R80478_PO4** SampType: **LCS** TestCode: **300_W_PO4P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **LCSW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279123**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate as P	2.470	0.10	2.500	0	98.8	90	110				

Sample ID: **N005957-003CMS** SampType: **MS** TestCode: **300_W_PO4P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279132**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate as P	1.821	0.10	2.500	0	72.8	80	120				S

Sample ID: **N005957-003CMSD** SampType: **MSD** TestCode: **300_W_PO4P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279133**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate as P	1.328	0.10	2.500	0	53.1	80	120	1.821	31.3	20	SR

Sample ID: **N005957-010CDUP** SampType: **DUP** TestCode: **300_W_PO4P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate as P	ND	0.10						0	0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R80478_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **PBW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279081**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	1.0									

Sample ID: **LCS-R80478_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **LCSW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279082**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.833	1.0	5.000	0	96.7	90	110				

Sample ID: **N005957-003CMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	769.500	50	250.0	506.8	105	80	120				

Sample ID: **N005957-003CMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	774.550	50	250.0	506.8	107	80	120	769.5	0.654	20	

Sample ID: **N005957-010CDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/16/2011** SeqNo: **1279107**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	423.350	50						424.0	0.142	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 300W_NO3PGE

Sample ID: **MB-R80478_NO3** SampType: **MBLK** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **PBW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279050**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50									

Sample ID: **LCS-R80478_NO3** SampType: **LCS** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **LCSW** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279051**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	2.408	0.50	2.500	0	96.3	90	110				

Sample ID: **N005957-003CMS** SampType: **MS** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279060**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	74.620	10	50.00	25.70	97.8	80	120				

Sample ID: **N005957-003CMSD** SampType: **MSD** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279061**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	74.340	10	50.00	25.70	97.3	80	120	74.62	0.376	20	

Sample ID: **N005957-010CDUP** SampType: **DUP** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **80478**
Client ID: **ZZZZZZ** Batch ID: **R80478** TestNo: **EPA 300.0** Analysis Date: **6/15/2011** SeqNo: **1279074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	6.796	1.0						6.696	1.48	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
AMMONIA-N							
				SM4500-NH3C			
RunID: **WETCHEM_110620A**	QC Batch: **37102**				PrepDate:	**6/20/2011**	Analyst: **CEI**
Nitrogen, Ammonia (As N)	0.54	0.030	0.10		mg/L	1	6/20/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-225-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 2:26:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
AMMONIA-N							
				SM4500-NH3C			
RunID: **WETCHEM_110620A**	QC Batch: **37102**				PrepDate:	**6/20/2011**	Analyst: **CEI**
Nitrogen, Ammonia (As N)	0.34	0.030	0.10		mg/L	1	6/20/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
AMMONIA-N							
				SM4500-NH3C			
RunID: **WETCHEM_110620A**	QC Batch: **37102**				PrepDate:	**6/20/2011**	Analyst: **CEI**
Nitrogen, Ammonia (As N)	0.16	0.030	0.10		mg/L	1	6/20/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-230-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
AMMONIA-N							
			SM4500-NH3C				
RunID: **WETCHEM_110620A**	QC Batch: **37102**				PrepDate:	**6/20/2011**	Analyst: **CEI**
Nitrogen, Ammonia (As N)	ND	0.030	0.10		mg/L	1	6/20/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
AMMONIA-N							
				SM4500-NH3C			
RunID: **WETCHEM_110620A**	QC Batch: **37102**				PrepDate:	**6/20/2011**	Analyst: **CEI**
Nitrogen, Ammonia (As N)	0.38	0.030	0.10		mg/L	1	6/20/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-260-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 10:53:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
AMMONIA-N							
			SM4500-NH3C				
RunID: **WETCHEM_110620A**	QC Batch: **37102**				PrepDate:	**6/20/2011**	Analyst: **CEI**
Nitrogen, Ammonia (As N)	0.17	0.030	0.10		mg/L	1	6/20/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
AMMONIA-N							
				SM4500-NH3C			
RunID: **WETCHEM_110620A**	QC Batch: **37102**				PrepDate:	**6/20/2011**	Analyst: **CEI**
Nitrogen, Ammonia (As N)	0.17	0.030	0.10		mg/L	1	6/20/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-240-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 8:03:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
AMMONIA-N							
				SM4500-NH3C			
RunID: **WETCHEM_110620A**	QC Batch: **37102**				PrepDate:	**6/20/2011**	Analyst: **CEI**
Nitrogen, Ammonia (As N)	0.15	0.030	0.10		mg/L	1	6/20/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-70-105-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
AMMONIA-N							
			SM4500-NH3C				
RunID: **WETCHEM_110620A**	QC Batch: **37102**				PrepDate:	**6/20/2011**	Analyst: **CEI**
Nitrogen, Ammonia (As N)	ND	0.030	0.10		mg/L	1	6/20/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
AMMONIA-N							
				SM4500-NH3C			
RunID: **WETCHEM_110620A**	QC Batch: **37102**				PrepDate:	**6/20/2011**	Analyst: **CEI**
Nitrogen, Ammonia (As N)	0.24	0.030	0.10		mg/L	1	6/20/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: *28-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 350.2_4500NH3C_WPGE

Sample ID: **LCS-37102** SampType: **LCS** TestCode: **350.2_4500N** Units: **mg/L** Prep Date: **6/20/2011** RunNo: **80447**
Client ID: **LCSW** Batch ID: **37102** TestNo: **SM4500-NH3** Analysis Date: **6/20/2011** SeqNo: **1278199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.945	0.10	1.000	0	94.5	85	115				

Sample ID: **MB-37102** SampType: **MBLK** TestCode: **350.2_4500N** Units: **mg/L** Prep Date: **6/20/2011** RunNo: **80447**
Client ID: **PBW** Batch ID: **37102** TestNo: **SM4500-NH3** Analysis Date: **6/20/2011** SeqNo: **1278200**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	ND	0.10									

Sample ID: **N005957-003EMS** SampType: **MS** TestCode: **350.2_4500N** Units: **mg/L** Prep Date: **6/20/2011** RunNo: **80447**
Client ID: **ZZZZZZ** Batch ID: **37102** TestNo: **SM4500-NH3** Analysis Date: **6/20/2011** SeqNo: **1278204**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	2.040	0.10	2.000	0.1560	94.2	75	125				

Sample ID: **N005957-003EMSD** SampType: **MSD** TestCode: **350.2_4500N** Units: **mg/L** Prep Date: **6/20/2011** RunNo: **80447**
Client ID: **ZZZZZZ** Batch ID: **37102** TestNo: **SM4500-NH3** Analysis Date: **6/20/2011** SeqNo: **1278205**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	2.064	0.10	2.000	0.1560	95.4	75	125	2.040	1.17	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7470A				
RunID: **AA1_110615A**	QC Batch: **37100**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-225-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 2:26:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7470A				
RunID: **AA1_110617B**	QC Batch: **37116**				PrepDate:	**6/16/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
				EPA 7470A			
RunID: **AA1_110615A**	QC Batch: **37100**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-230-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7470A				
RunID: **AA1_110617B**	QC Batch: **37116**				PrepDate:	**6/16/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
				EPA 7470A			
RunID: **AA1_110615A**	QC Batch: **37100**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-260-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 10:53:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7470A				
RunID: **AA1_110617B**	QC Batch: **37116**				PrepDate:	**6/16/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7470A				
RunID: **AA1_110615A**	QC Batch: **37100**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-240-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 8:03:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7470A				
RunID: **AA1_110617B**	QC Batch: **37116**				PrepDate:	**6/16/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-70-105-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
				EPA 7470A			
RunID: **AA1_110615A**	QC Batch: **37100**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/15/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7470A				
RunID: **AA1_110615A**	QC Batch: **37100**				PrepDate:	**6/15/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	EB-70331-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 3:00:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7470A				
RunID: **AA1_110617B**	QC Batch: **37116**				PrepDate:	**6/16/2011**	Analyst: **CEI**
Mercury	ND	0.091	0.20		µg/L	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: *28-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 7470_W_DISSPGE

Sample ID: **LCS-37100** SampType: **LCS** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80438**
Client ID: **LCSW** Batch ID: **37100** TestNo: **EPA 7470A** Analysis Date: **6/15/2011** SeqNo: **1277991**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.743	0.20	10.00	0	97.4	85	115				

Sample ID: **MB-37100** SampType: **MBLK** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80438**
Client ID: **PBW** Batch ID: **37100** TestNo: **EPA 7470A** Analysis Date: **6/15/2011** SeqNo: **1277992**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID: **N005957-003BMS** SampType: **MS** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80438**
Client ID: **ZZZZZZ** Batch ID: **37100** TestNo: **EPA 7470A** Analysis Date: **6/15/2011** SeqNo: **1277995**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	19.052	0.20	20.00	0	95.3	75	125				

Sample ID: **N005957-003BMSD** SampType: **MSD** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80438**
Client ID: **ZZZZZZ** Batch ID: **37100** TestNo: **EPA 7470A** Analysis Date: **6/15/2011** SeqNo: **1277996**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	19.681	0.20	20.00	0	98.4	75	125	19.05	3.25	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 7470_W_DISSPGE

Sample ID: LCS-37116	SampType: LCS	TestCode: 7470_W_DIS	Units: µg/L	Prep Date: 6/16/2011	RunNo: 80439
Client ID: LCSW	Batch ID: 37116	TestNo: EPA 7470A		Analysis Date: 6/17/2011	SeqNo: 1278009

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.090	0.20	10.00	0	90.9	85	115				

Sample ID: MB-37116	SampType: MBLK	TestCode: 7470_W_DIS	Units: µg/L	Prep Date: 6/16/2011	RunNo: 80439
Client ID: PBW	Batch ID: 37116	TestNo: EPA 7470A		Analysis Date: 6/17/2011	SeqNo: 1278010

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID: N005957-002B-MS	SampType: MS	TestCode: 7470_W_DIS	Units: µg/L	Prep Date: 6/16/2011	RunNo: 80439
Client ID: ZZZZZZ	Batch ID: 37116	TestNo: EPA 7470A		Analysis Date: 6/17/2011	SeqNo: 1278012

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	19.669	0.20	20.00	0	98.3	75	125				

Sample ID: N005957-002B-MSD	SampType: MSD	TestCode: 7470_W_DIS	Units: µg/L	Prep Date: 6/16/2011	RunNo: 80439
Client ID: ZZZZZZ	Batch ID: 37116	TestNo: EPA 7470A		Analysis Date: 6/17/2011	SeqNo: 1278013

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	18.551	0.20	20.00	0	92.8	75	125	19.67	5.85	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3510C			**EPA 8015B**				
RunID: **GC1_110620B**	QC Batch: **37112**				PrepDate:	**6/17/2011**	Analyst: **MDM**
TPH-Diesel	ND	13	51		ug/L	1	6/20/2011 07:37 PM
TPH-Motor Oil	ND	9.8	51		ug/L	1	6/20/2011 07:37 PM
Surr: Octacosane	121	0	26-152		%REC	1	6/20/2011 07:37 PM
Surr: p-Terphenyl	121	0	57-132		%REC	1	6/20/2011 07:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3510C			**EPA 8015B**				
RunID: **GC1_110620B**	QC Batch: **37112**				PrepDate:	**6/17/2011**	Analyst: **MDM**
TPH-Diesel	ND	13	51		ug/L	1	6/20/2011 08:03 PM
TPH-Motor Oil	ND	9.7	51		ug/L	1	6/20/2011 08:03 PM
Surr: Octacosane	92.0	0	26-152		%REC	1	6/20/2011 08:03 PM
Surr: p-Terphenyl	91.4	0	57-132		%REC	1	6/20/2011 08:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3510C			**EPA 8015B**				
RunID: **GC1_110620B**	QC Batch: **37112**				PrepDate:	**6/17/2011**	Analyst: **MDM**
TPH-Diesel	ND	13	51		ug/L	1	6/20/2011 08:29 PM
TPH-Motor Oil	ND	9.8	51		ug/L	1	6/20/2011 08:29 PM
Surr: Octacosane	81.5	0	26-152		%REC	1	6/20/2011 08:29 PM
Surr: p-Terphenyl	80.2	0	57-132		%REC	1	6/20/2011 08:29 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3510C			**EPA 8015B**				
RunID: **GC1_110620B**	QC Batch: **37112**				PrepDate:	**6/17/2011**	Analyst: **MDM**
TPH-Diesel	ND	13	51		ug/L	1	6/20/2011 08:55 PM
TPH-Motor Oil	ND	9.7	51		ug/L	1	6/20/2011 08:55 PM
Surr: Octacosane	97.5	0	26-152		%REC	1	6/20/2011 08:55 PM
Surr: p-Terphenyl	97.9	0	57-132		%REC	1	6/20/2011 08:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-70-105-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3510C			**EPA 8015B**				
RunID: **GC1_110620B**	QC Batch: **37112**				PrepDate:	**6/17/2011**	Analyst: **MDM**
TPH-Diesel	75	13	51		ug/L	1	6/20/2011 09:21 PM
TPH-Motor Oil	ND	9.8	51		ug/L	1	6/20/2011 09:21 PM
Surr: Octacosane	91.5	0	26-152		%REC	1	6/20/2011 09:21 PM
Surr: p-Terphenyl	89.2	0	57-132		%REC	1	6/20/2011 09:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID							
EPA 3510C			**EPA 8015B**				
RunID: **GC1_110620B**	QC Batch: **37112**				PrepDate:	**6/17/2011**	Analyst: **MDM**
TPH-Diesel	ND	13	51		ug/L	1	6/20/2011 09:47 PM
TPH-Motor Oil	ND	9.7	51		ug/L	1	6/20/2011 09:47 PM
Surr: Octacosane	93.9	0	26-152		%REC	1	6/20/2011 09:47 PM
Surr: p-Terphenyl	92.4	0	57-132		%REC	1	6/20/2011 09:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: *28-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DM_PGE

Sample ID: **LCS-37112_DRO** SampType: **LCS** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **6/17/2011** RunNo: **80465**
Client ID: **LCSW** Batch ID: **37112** TestNo: **EPA 8015B EPA 3510C** Analysis Date: **6/20/2011** SeqNo: **1278515**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	611.697	50	1000	0	61.2	61	143				
Surr: Octacosane	73.112		80.00		91.4	26	152				
Surr: p-Terphenyl	73.792		80.00		92.2	57	132				

Sample ID: **LCS-37112_ORO** SampType: **LCS** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **6/17/2011** RunNo: **80465**
Client ID: **LCSW** Batch ID: **37112** TestNo: **EPA 8015B EPA 3510C** Analysis Date: **6/20/2011** SeqNo: **1278516**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Motor Oil	860.887	50	1000	0	86.1	50	150				
Surr: Octacosane	75.874		80.00		94.8	26	152				
Surr: p-Terphenyl	76.420		80.00		95.5	57	132				

Sample ID: **LCSD-37112_ORO** SampType: **LCSD** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **6/17/2011** RunNo: **80465**
Client ID: **LCSS02** Batch ID: **37112** TestNo: **EPA 8015B EPA 3510C** Analysis Date: **6/20/2011** SeqNo: **1278517**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Motor Oil	851.277	50	1000	0	85.1	50	150	860.9	1.12	30	
Surr: Octacosane	71.378		80.00		89.2	26	152		0		
Surr: p-Terphenyl	71.873		80.00		89.8	57	132		0		

Sample ID: **MB-37112** SampType: **MBLK** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **6/17/2011** RunNo: **80465**
Client ID: **PBW** Batch ID: **37112** TestNo: **EPA 8015B EPA 3510C** Analysis Date: **6/20/2011** SeqNo: **1278518**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	18.214	50									
TPH-Motor Oil	12.993	50									
Surr: Octacosane	78.695		80.00		98.4	26	152				
Surr: p-Terphenyl	79.116		80.00		98.9	57	132				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DM_PGE

Sample ID: **N005957-003GMS** SampType: **MS** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **6/17/2011** RunNo: **80465**
Client ID: **ZZZZZZ** Batch ID: **37112** TestNo: **EPA 8015B EPA 3510C** Analysis Date: **6/20/2011** SeqNo: **1278526**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	685.679	51	1010	25.61	65.3	61	143				
Surr: Octacosane	68.901		80.81		85.3	26	152				
Surr: p-Terphenyl	71.587		80.81		88.6	57	132				

Sample ID: **N005957-003GMSD** SampType: **MSD** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **6/17/2011** RunNo: **80465**
Client ID: **ZZZZZZ** Batch ID: **37112** TestNo: **EPA 8015B EPA 3510C** Analysis Date: **6/20/2011** SeqNo: **1278527**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	550.824	51	1010	25.61	52.0	61	143	685.7	21.8	30	S
Surr: Octacosane	67.654		80.81		83.7	26	152		0		
Surr: p-Terphenyl	70.801		80.81		87.6	57	132		0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_110616A**	QC Batch: **E11VW027**				PrepDate:		Analyst: **QBM**
TPH-Gasoline	ND	6.0	100		ug/L	1	6/16/2011
Surr: Chlorobenzene - d5	105	0	74-138		%REC	1	6/16/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_110616A**	QC Batch: **E11VW027**				PrepDate:		Analyst: **QBM**
TPH-Gasoline	ND	6.0	100		ug/L	1	6/16/2011
Surr: Chlorobenzene - d5	98.7	0	74-138		%REC	1	6/16/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_110616A**	QC Batch: **E11VW027**				PrepDate:		Analyst: **QBM**
TPH-Gasoline	ND	6.0	100		ug/L	1	6/16/2011
Surr: Chlorobenzene - d5	106	0	74-138		%REC	1	6/16/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_110616A**	QC Batch: **E11VW027**				PrepDate:		Analyst: **QBM**
TPH-Gasoline	ND	6.0	100		ug/L	1	6/16/2011
Surr: Chlorobenzene - d5	111	0	74-138		%REC	1	6/16/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-70-105-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_110616A**	QC Batch: **E11VW027**				PrepDate:		Analyst: **QBM**
TPH-Gasoline	ND	6.0	100		ug/L	1	6/16/2011
Surr: Chlorobenzene - d5	99.1	0	74-138		%REC	1	6/16/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS BY GC/FID							
			EPA 8015B				
RunID: **GC4_110617B**	QC Batch: **E11VW028**				PrepDate:		Analyst: **QBM**
TPH-Gasoline	ND	6.0	100		ug/L	1	6/17/2011
Surr: Chlorobenzene - d5	108	0	74-138		%REC	1	6/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: *28-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_GPLLPGE

Sample ID: **E110616LCS** SampType: **LCS** TestCode: **8015_W_GPL** Units: **ug/L** Prep Date: RunNo: **80409**
Client ID: **LCSW** Batch ID: **E11VW027** TestNo: **EPA 8015B** Analysis Date: **6/16/2011** SeqNo: **1277503**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline	1017.000	100	1000	0	102	67	136				
Surr: Chlorobenzene - d5	52.059		50.00		104	74	138				

Sample ID: **E110616MB1** SampType: **MBLK** TestCode: **8015_W_GPL** Units: **ug/L** Prep Date: RunNo: **80409**
Client ID: **PBW** Batch ID: **E11VW027** TestNo: **EPA 8015B** Analysis Date: **6/16/2011** SeqNo: **1277504**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline	23.000	100									
Surr: Chlorobenzene - d5	57.643		50.00		115	74	138				

Sample ID: **N005957-003NMS** SampType: **MS** TestCode: **8015_W_GPL** Units: **ug/L** Prep Date: RunNo: **80409**
Client ID: **ZZZZZZ** Batch ID: **E11VW027** TestNo: **EPA 8015B** Analysis Date: **6/16/2011** SeqNo: **1277505**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline	1051.000	100	1000	28.00	102	67	136				
Surr: Chlorobenzene - d5	54.254		50.00		109	74	138				

Sample ID: **N005957-003NMSD** SampType: **MSD** TestCode: **8015_W_GPL** Units: **ug/L** Prep Date: RunNo: **80409**
Client ID: **ZZZZZZ** Batch ID: **E11VW027** TestNo: **EPA 8015B** Analysis Date: **6/16/2011** SeqNo: **1277506**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline	985.000	100	1000	28.00	95.7	67	136	1051	6.48	30	
Surr: Chlorobenzene - d5	52.778		50.00		106	74	138		0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_GPLLPGE

Sample ID: **E110617LCS** SampType: **LCS** TestCode: **8015_W_GPL** Units: **ug/L** Prep Date: RunNo: **80433**
Client ID: **LCSW** Batch ID: **E11VW028** TestNo: **EPA 8015B** Analysis Date: **6/17/2011** SeqNo: **1277874**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline	997.000	100	1000	0	99.7	67	136				
Surr: Chlorobenzene - d5	50.107		50.00		100	74	138				

Sample ID: **E110617MB1** SampType: **MBLK** TestCode: **8015_W_GPL** Units: **ug/L** Prep Date: RunNo: **80433**
Client ID: **PBW** Batch ID: **E11VW028** TestNo: **EPA 8015B** Analysis Date: **6/17/2011** SeqNo: **1277876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline	21.000	100									
Surr: Chlorobenzene - d5	52.952		50.00		106	74	138				

Sample ID: **N005959-002DMS** SampType: **MS** TestCode: **8015_W_GPL** Units: **ug/L** Prep Date: RunNo: **80433**
Client ID: **ZZZZZZ** Batch ID: **E11VW028** TestNo: **EPA 8015B** Analysis Date: **6/17/2011** SeqNo: **1277892**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline	1008.000	100	1000	25.00	98.3	67	136				
Surr: Chlorobenzene - d5	54.403		50.00		109	74	138				

Sample ID: **N005959-002DMSD** SampType: **MSD** TestCode: **8015_W_GPL** Units: **ug/L** Prep Date: RunNo: **80433**
Client ID: **ZZZZZZ** Batch ID: **E11VW028** TestNo: **EPA 8015B** Analysis Date: **6/17/2011** SeqNo: **1277894**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Gasoline	969.000	100	1000	25.00	94.4	67	136	1008	3.95	30	
Surr: Chlorobenzene - d5	49.035		50.00		98.1	74	138		0	0	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3510C			**EPA 8081A**				
RunID: **GC7_110617A**	QC Batch: **37098**				PrepDate:	**6/15/2011**	Analyst: **MDM**
4,4'-DDD	ND	0.0051	0.051		µg/L	1	6/17/2011 12:14 PM
4,4'-DDE	ND	0.0051	0.051		µg/L	1	6/17/2011 12:14 PM
4,4'-DDT	ND	0.0051	0.051		µg/L	1	6/17/2011 12:14 PM
Aldrin	ND	0.0043	0.026		µg/L	1	6/17/2011 12:14 PM
alpha-BHC	ND	0.0045	0.026		µg/L	1	6/17/2011 12:14 PM
alpha-Chlordane	ND	0.0050	0.026		µg/L	1	6/17/2011 12:14 PM
beta-BHC	0.31	0.0034	0.026		µg/L	1	6/17/2011 12:14 PM
delta-BHC	0.093	0.0042	0.026		µg/L	1	6/17/2011 12:14 PM
Dieldrin	ND	0.0048	0.051		µg/L	1	6/17/2011 12:14 PM
Endosulfan I	ND	0.0038	0.026		µg/L	1	6/17/2011 12:14 PM
Endosulfan II	ND	0.0046	0.051		µg/L	1	6/17/2011 12:14 PM
Endosulfan sulfate	ND	0.0067	0.051		µg/L	1	6/17/2011 12:14 PM
Endrin	ND	0.0035	0.051		µg/L	1	6/17/2011 12:14 PM
Endrin aldehyde	ND	0.0043	0.051		µg/L	1	6/17/2011 12:14 PM
gamma-BHC	ND	0.0043	0.026		µg/L	1	6/17/2011 12:14 PM
gamma-Chlordane	ND	0.0038	0.026		µg/L	1	6/17/2011 12:14 PM
Heptachlor	ND	0.0050	0.026		µg/L	1	6/17/2011 12:14 PM
Heptachlor epoxide	ND	0.0049	0.026		µg/L	1	6/17/2011 12:14 PM
Methoxychlor	ND	0.0036	0.26		µg/L	1	6/17/2011 12:14 PM
Toxaphene	ND	0.27	2.6		µg/L	1	6/17/2011 12:14 PM
Surr: Tetrachloro-m-xylene	82.3	0	33-138		%REC	1	6/17/2011 12:14 PM
Surr: Decachlorobiphenyl	113	0	29-135		%REC	1	6/17/2011 12:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Aualyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3510C			**EPA 8081A**				
RunID: **GC7_110617A**	QC Batch: **37098**				PrepDate:	**6/15/2011**	Analyst: **MDM**
4,4'-DDD	ND	0.0052	0.052		µg/L	1	6/17/2011 12:41 PM
4,4'-DDE	ND	0.0052	0.052		µg/L	1	6/17/2011 12:41 PM
4,4'-DDT	ND	0.0052	0.052		µg/L	1	6/17/2011 12:41 PM
Aldrin	ND	0.0044	0.026		µg/L	1	6/17/2011 12:41 PM
alpha-BHC	ND	0.0046	0.026		µg/L	1	6/17/2011 12:41 PM
alpha-Chlordane	ND	0.0051	0.026		µg/L	1	6/17/2011 12:41 PM
beta-BHC	ND	0.0035	0.026		µg/L	1	6/17/2011 12:41 PM
delta-BHC	ND	0.0043	0.026		µg/L	1	6/17/2011 12:41 PM
Dieldrin	ND	0.0049	0.052		µg/L	1	6/17/2011 12:41 PM
Endosulfan I	ND	0.0038	0.026		µg/L	1	6/17/2011 12:41 PM
Endosulfan II	ND	0.0047	0.052		µg/L	1	6/17/2011 12:41 PM
Endosulfan sulfate	ND	0.0068	0.052		µg/L	1	6/17/2011 12:41 PM
Endrin	ND	0.0036	0.052		µg/L	1	6/17/2011 12:41 PM
Endrin aldehyde	ND	0.0043	0.052		µg/L	1	6/17/2011 12:41 PM
gamma-BHC	ND	0.0044	0.026		µg/L	1	6/17/2011 12:41 PM
gamma-Chlordane	ND	0.0038	0.026		µg/L	1	6/17/2011 12:41 PM
Heptachlor	ND	0.0051	0.026		µg/L	1	6/17/2011 12:41 PM
Heptachlor epoxide	ND	0.0050	0.026		µg/L	1	6/17/2011 12:41 PM
Methoxychlor	ND	0.0037	0.26		µg/L	1	6/17/2011 12:41 PM
Toxaphene	ND	0.27	2.6		µg/L	1	6/17/2011 12:41 PM
Surr: Tetrachloro-m-xylene	61.1	0	33-138		%REC	1	6/17/2011 12:41 PM
Surr: Decachlorobiphenyl	79.9	0	29-135		%REC	1	6/17/2011 12:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3510C			**EPA 8081A**				
RunID: **GC7_110617A**	QC Batch: **37098**				PrepDate:	**6/15/2011**	Analyst: **MDM**
4,4'-DDD	ND	0.0051	0.051		µg/L	1	6/17/2011 01:08 AM
4,4'-DDE	ND	0.0051	0.051		µg/L	1	6/17/2011 01:08 AM
4,4'-DDT	ND	0.0051	0.051		µg/L	1	6/17/2011 01:08 AM
Aldrin	ND	0.0043	0.025		µg/L	1	6/17/2011 01:08 AM
alpha-BHC	ND	0.0045	0.025		µg/L	1	6/17/2011 01:08 AM
alpha-Chlordane	ND	0.0049	0.025		µg/L	1	6/17/2011 01:08 AM
beta-BHC	ND	0.0034	0.025		µg/L	1	6/17/2011 01:08 AM
delta-BHC	ND	0.0042	0.025		µg/L	1	6/17/2011 01:08 AM
Dieldrin	ND	0.0047	0.051		µg/L	1	6/17/2011 01:08 AM
Endosulfan I	ND	0.0037	0.025		µg/L	1	6/17/2011 01:08 AM
Endosulfan II	ND	0.0046	0.051		µg/L	1	6/17/2011 01:08 AM
Endosulfan sulfate	ND	0.0066	0.051		µg/L	1	6/17/2011 01:08 AM
Endrin	ND	0.0034	0.051		µg/L	1	6/17/2011 01:08 AM
Endrin aldehyde	ND	0.0042	0.051		µg/L	1	6/17/2011 01:08 AM
gamma-BHC	ND	0.0042	0.025		µg/L	1	6/17/2011 01:08 AM
gamma-Chlordane	ND	0.0037	0.025		µg/L	1	6/17/2011 01:08 AM
Heptachlor	ND	0.0050	0.025		µg/L	1	6/17/2011 01:08 AM
Heptachlor epoxide	ND	0.0049	0.025		µg/L	1	6/17/2011 01:08 AM
Methoxychlor	ND	0.0036	0.25		µg/L	1	6/17/2011 01:08 AM
Toxaphene	ND	0.27	2.5		µg/L	1	6/17/2011 01:08 AM
Surr: Tetrachloro-m-xylene	76.9	0	33-138		%REC	1	6/17/2011 01:08 AM
Surr: Decachlorobiphenyl	105	0	29-135		%REC	1	6/17/2011 01:08 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3510C			**EPA 8081A**				
RunID: **GC7_110617A**	QC Batch: **37098**				PrepDate: **6/15/2011**		Analyst: **MDM**
4,4'-DDD	ND	0.0051	0.051		µg/L	1	6/17/2011 01:35 AM
4,4'-DDE	ND	0.0051	0.051		µg/L	1	6/17/2011 01:35 AM
4,4'-DDT	ND	0.0051	0.051		µg/L	1	6/17/2011 01:35 AM
Aldrin	ND	0.0043	0.026		µg/L	1	6/17/2011 01:35 AM
alpha-BHC	ND	0.0045	0.026		µg/L	1	6/17/2011 01:35 AM
alpha-Chlordane	ND	0.0050	0.026		µg/L	1	6/17/2011 01:35 AM
beta-BHC	ND	0.0034	0.026		µg/L	1	6/17/2011 01:35 AM
delta-BHC	ND	0.0042	0.026		µg/L	1	6/17/2011 01:35 AM
Dieldrin	ND	0.0048	0.051		µg/L	1	6/17/2011 01:35 AM
Endosulfan I	ND	0.0038	0.026		µg/L	1	6/17/2011 01:35 AM
Endosulfan II	ND	0.0046	0.051		µg/L	1	6/17/2011 01:35 AM
Endosulfan sulfate	ND	0.0067	0.051		µg/L	1	6/17/2011 01:35 AM
Endrin	ND	0.0035	0.051		µg/L	1	6/17/2011 01:35 AM
Endrin aldehyde	ND	0.0043	0.051		µg/L	1	6/17/2011 01:35 AM
gamma-BHC	ND	0.0043	0.026		µg/L	1	6/17/2011 01:35 AM
gamma-Chlordane	ND	0.0038	0.026		µg/L	1	6/17/2011 01:35 AM
Heptachlor	ND	0.0050	0.026		µg/L	1	6/17/2011 01:35 AM
Heptachlor epoxide	ND	0.0049	0.026		µg/L	1	6/17/2011 01:35 AM
Methoxychlor	ND	0.0036	0.26		µg/L	1	6/17/2011 01:35 AM
Toxaphene	ND	0.27	2.6		µg/L	1	6/17/2011 01:35 AM
Surr: Tetrachloro-m-xylene	64.3	0	33-138		%REC	1	6/17/2011 01:35 AM
Surr: Decachlorobiphenyl	70.8	0	29-135		%REC	1	6/17/2011 01:35 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-70-105-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
	EPA 3510C				**EPA 8081A**		
RunID: **GC7_110617A**	QC Batch: **37098**				PrepDate:	**6/15/2011**	Analyst: **MDM**
4,4'-DDD	ND	0.0051	0.051		µg/L	1	6/17/2011 05:29 AM
4,4'-DDE	ND	0.0051	0.051		µg/L	1	6/17/2011 05:29 AM
4,4'-DDT	ND	0.0051	0.051		µg/L	1	6/17/2011 05:29 AM
Aldrin	ND	0.0043	0.026		µg/L	1	6/17/2011 05:29 AM
alpha-BHC	ND	0.0045	0.026		µg/L	1	6/17/2011 05:29 AM
alpha-Chlordane	ND	0.0050	0.026		µg/L	1	6/17/2011 05:29 AM
beta-BHC	ND	0.0034	0.026		µg/L	1	6/17/2011 05:29 AM
delta-BHC	ND	0.0042	0.026		µg/L	1	6/17/2011 05:29 AM
Dieldrin	ND	0.0048	0.051		µg/L	1	6/17/2011 05:29 AM
Endosulfan I	ND	0.0038	0.026		µg/L	1	6/17/2011 05:29 AM
Endosulfan II	ND	0.0046	0.051		µg/L	1	6/17/2011 05:29 AM
Endosulfan sulfate	ND	0.0067	0.051		µg/L	1	6/17/2011 05:29 AM
Endrin	ND	0.0035	0.051		µg/L	1	6/17/2011 05:29 AM
Endrin aldehyde	ND	0.0043	0.051		µg/L	1	6/17/2011 05:29 AM
gamma-BHC	ND	0.0043	0.026		µg/L	1	6/17/2011 05:29 AM
gamma-Chlordane	ND	0.0038	0.026		µg/L	1	6/17/2011 05:29 AM
Heptachlor	ND	0.0050	0.026		µg/L	1	6/17/2011 05:29 AM
Heptachlor epoxide	ND	0.0049	0.026		µg/L	1	6/17/2011 05:29 AM
Methoxychlor	ND	0.0036	0.26		µg/L	1	6/17/2011 05:29 AM
Toxaphene	ND	0.27	2.6		µg/L	1	6/17/2011 05:29 AM
Surr: Tetrachloro-m-xylene	42.6	0	33-138		%REC	1	6/17/2011 05:29 AM
Surr: Decachlorobiphenyl	55.1	0	29-135		%REC	1	6/17/2011 05:29 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PESTICIDES BY GC/ECD							
EPA 3510C			**EPA 8081A**				
RunID: **GC7_110617A**	QC Batch: **37098**				PrepDate:	**6/15/2011**	Analyst: **MDM**
4,4'-DDD	ND	0.0051	0.051		µg/L	1	6/17/2011 02:29 AM
4,4'-DDE	ND	0.0051	0.051		µg/L	1	6/17/2011 02:29 AM
4,4'-DDT	ND	0.0051	0.051		µg/L	1	6/17/2011 02:29 AM
Aldrin	ND	0.0043	0.025		µg/L	1	6/17/2011 02:29 AM
alpha-BHC	ND	0.0045	0.025		µg/L	1	6/17/2011 02:29 AM
alpha-Chlordane	ND	0.0049	0.025		µg/L	1	6/17/2011 02:29 AM
beta-BHC	ND	0.0034	0.025		µg/L	1	6/17/2011 02:29 AM
delta-BHC	ND	0.0042	0.025		µg/L	1	6/17/2011 02:29 AM
Dieldrin	ND	0.0047	0.051		µg/L	1	6/17/2011 02:29 AM
Endosulfan I	ND	0.0037	0.025		µg/L	1	6/17/2011 02:29 AM
Endosulfan II	ND	0.0046	0.051		µg/L	1	6/17/2011 02:29 AM
Endosulfan sulfate	ND	0.0066	0.051		µg/L	1	6/17/2011 02:29 AM
Endrin	ND	0.0034	0.051		µg/L	1	6/17/2011 02:29 AM
Endrin aldehyde	ND	0.0042	0.051		µg/L	1	6/17/2011 02:29 AM
gamma-BHC	ND	0.0042	0.025		µg/L	1	6/17/2011 02:29 AM
gamma-Chlordane	ND	0.0037	0.025		µg/L	1	6/17/2011 02:29 AM
Heptachlor	ND	0.0050	0.025		µg/L	1	6/17/2011 02:29 AM
Heptachlor epoxide	ND	0.0049	0.025		µg/L	1	6/17/2011 02:29 AM
Methoxychlor	ND	0.0036	0.25		µg/L	1	6/17/2011 02:29 AM
Toxaphene	ND	0.27	2.5		µg/L	1	6/17/2011 02:29 AM
Surr: Tetrachloro-m-xylene	68.3	0	33-138		%REC	1	6/17/2011 02:29 AM
Surr: Decachlorobiphenyl	67.9	0	29-135		%REC	1	6/17/2011 02:29 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: *28-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081_W_PGE

Sample ID: **N005957-003JMS_O** SampType: **MS** TestCode: **8081_W_PGE** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80440**
Client ID: **ZZZZZZ** Batch ID: **37098** TestNo: **EPA 8081A EPA 3510C** Analysis Date: **6/17/2011** SeqNo: **1278023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	0.517	0.051	0.5102	0	101	50	139				
4,4'-DDE	0.501	0.051	0.5102	0	98.2	48	137				
4,4'-DDT	0.486	0.051	0.5102	0	95.3	47	138				
Aldrin	0.433	0.026	0.5102	0	84.9	42	138				
alpha-BHC	0.469	0.026	0.5102	0	92.0	60	128				
alpha-Chlordane	0.519	0.026	0.5102	0	102	63	123				
beta-BHC	0.474	0.026	0.5102	0	92.8	66	126				
delta-BHC	0.513	0.026	0.5102	0	100	46	136				
Dieldrin	0.496	0.051	0.5102	0	97.1	62	129				
Endosulfan I	0.440	0.026	0.5102	0	86.3	49	120				
Endosulfan II	0.499	0.051	0.5102	0	97.8	42	130				
Endosulfan sulfate	0.623	0.051	0.5102	0	122	54	137				
Endrin	0.517	0.051	0.5102	0	101	56	134				
Endrin aldehyde	0.484	0.051	0.5102	0	94.8	56	137				
gamma-BHC	0.453	0.026	0.5102	0	88.8	30	146				
gamma-Chlordane	0.459	0.026	0.5102	0	90.0	67	120				
Heptachlor	0.464	0.026	0.5102	0	91.0	51	128				
Heptachlor epoxide	0.441	0.026	0.5102	0	86.4	62	131				
Methoxychlor	0.478	0.26	0.5102	0	93.7	56	150				
Surr: Tetrachloro-m-xylene	0.396		0.5102		77.5	33	138				
Surr: Decachlorobiphenyl	0.435		0.5102		85.2	29	135				

Sample ID: **N005957-003JMSD_** SampType: **MSD** TestCode: **8081_W_PGE** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80440**
Client ID: **ZZZZZZ** Batch ID: **37098** TestNo: **EPA 8081A EPA 3510C** Analysis Date: **6/17/2011** SeqNo: **1278024**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	0.549	0.050	0.5000	0	110	50	139	0.5166	6.02	30	
4,4'-DDE	0.531	0.050	0.5000	0	106	48	137	0.5010	5.73	30	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081_W_PGE

Sample ID: **N005957-003JMSD_** SampType: **MSD** TestCode: **8081_W_PGE** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80440**
Client ID: **ZZZZZZ** Batch ID: **37098** TestNo: **EPA 8081A EPA 3510C** Analysis Date: **6/17/2011** SeqNo: **1278024**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDT	0.515	0.050	0.5000	0	103	47	138	0.4862	5.82	30	
Aldrin	0.448	0.025	0.5000	0	89.6	42	138	0.4330	3.40	30	
alpha-BHC	0.487	0.025	0.5000	0	97.3	60	128	0.4694	3.57	30	
alpha-Chlordane	0.547	0.025	0.5000	0	109	63	123	0.5194	5.16	30	
beta-BHC	0.495	0.025	0.5000	0	99.0	66	126	0.4737	4.38	30	
delta-BHC	0.540	0.025	0.5000	0	108	46	136	0.5126	5.19	30	
Dieldrin	0.523	0.050	0.5000	0	105	62	129	0.4956	5.46	30	
Endosulfan I	0.463	0.025	0.5000	0	92.5	49	120	0.4402	4.95	30	
Endosulfan II	0.527	0.050	0.5000	0	105	42	130	0.4988	5.55	30	
Endosulfan sulfate	0.659	0.050	0.5000	0	132	54	137	0.6229	5.55	30	
Endrin	0.545	0.050	0.5000	0	109	56	134	0.5173	5.16	30	
Endrin aldehyde	0.508	0.050	0.5000	0	102	56	137	0.4838	4.85	30	
gamma-BHC	0.471	0.025	0.5000	0	94.3	30	146	0.4533	3.91	30	
gamma-Chlordane	0.483	0.025	0.5000	0	96.6	67	120	0.4590	5.15	30	
Heptachlor	0.480	0.025	0.5000	0	96.0	51	128	0.4644	3.37	30	
Heptachlor epoxide	0.463	0.025	0.5000	0	92.7	62	131	0.4409	4.97	30	
Methoxychlor	0.503	0.25	0.5000	0	101	56	150	0.4780	5.10	30	
Surr: Tetrachloro-m-xylene	0.414		0.5000		82.9	33	138		0	30	
Surr: Decachlorobiphenyl	0.453		0.5000		90.6	29	135		0	30	

Sample ID: **LCS-37098_OCP** SampType: **LCS** TestCode: **8081_W_PGE** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80440**
Client ID: **LCSW** Batch ID: **37098** TestNo: **EPA 8081A EPA 3510C** Analysis Date: **6/17/2011** SeqNo: **1278026**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	0.572	0.050	0.5000	0	114	50	139				
4,4'-DDE	0.595	0.050	0.5000	0	119	48	137				
4,4'-DDT	0.540	0.050	0.5000	0	108	47	138				
Aldrin	0.549	0.025	0.5000	0	110	42	138				
alpha-BHC	0.584	0.025	0.5000	0	117	60	128				
alpha-Chlordane	0.611	0.025	0.5000	0	122	63	123				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081_W_PGE

Sample ID: **LCS-37098_OCP** SampType: **LCS** TestCode: **8081_W_PGE** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80440**
Client ID: **LCSW** Batch ID: **37098** TestNo: **EPA 8081A EPA 3510C** Analysis Date: **6/17/2011** SeqNo: **1278026**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
beta-BHC	0.557	0.025	0.5000	0	111	66	126				
delta-BHC	0.574	0.025	0.5000	0	115	46	136				
Dieldrin	0.575	0.050	0.5000	0	115	62	129				
Endosulfan I	0.511	0.025	0.5000	0	102	49	120				
Endosulfan II	0.524	0.050	0.5000	0	105	42	130				
Endosulfan sulfate	0.661	0.050	0.5000	0	132	54	137				
Endrin	0.582	0.050	0.5000	0	116	56	134				
Endrin aldehyde	0.552	0.050	0.5000	0	110	56	137				
gamma-BHC	0.577	0.025	0.5000	0	115	30	146				
gamma-Chlordane	0.537	0.025	0.5000	0	107	67	120				
Heptachlor	0.565	0.025	0.5000	0	113	51	128				
Heptachlor epoxide	0.505	0.025	0.5000	0	101	62	131				
Methoxychlor	0.516	0.25	0.5000	0	103	56	150				
Surr: Tetrachloro-m-xylene	0.522		0.5000		104	33	138				
Surr: Decachlorobiphenyl	0.483		0.5000		96.5	29	135				

Sample ID: **MB-37098** SampType: **MBLK** TestCode: **8081_W_PGE** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80440**
Client ID: **PBW** Batch ID: **37098** TestNo: **EPA 8081A EPA 3510C** Analysis Date: **6/17/2011** SeqNo: **1278027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	ND	0.050									
4,4'-DDE	ND	0.050									
4,4'-DDT	ND	0.050									
Aldrin	ND	0.025									
alpha-BHC	ND	0.025									
alpha-Chlordane	ND	0.025									
beta-BHC	ND	0.025									
delta-BHC	ND	0.025									
Dieldrin	ND	0.050									
Endosulfan I	ND	0.025									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081_W_PGE

Sample ID: **MB-37098** SampType: **MBLK** TestCode: **8081_W_PGE** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80440**
Client ID: **PBW** Batch ID: **37098** TestNo: **EPA 8081A EPA 3510C** Analysis Date: **6/17/2011** SeqNo: **1278027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Endosulfan II	ND	0.050									
Endosulfan sulfate	ND	0.050									
Endrin	ND	0.050									
Endrin aldehyde	ND	0.050									
gamma-BHC	ND	0.025									
gamma-Chlordane	ND	0.025									
Heptachlor	ND	0.025									
Heptachlor epoxide	ND	0.025									
Methoxychlor	ND	0.25									
Toxaphene	ND	2.5									
Surr: Tetrachloro-m-xylene	0.437		0.5000		87.3	33	138				
Surr: Decachlorobiphenyl	0.456		0.5000		91.2	29	135				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PCBS BY GC/ECD							
	EPA 3510C				**EPA 8082**		
RunID: **GC7_110616B**	QC Batch: **37098**				PrepDate:	**6/15/2011**	Analyst: **MDM**
Aroclor 1016	ND	0.071	0.51		µg/L	1	6/16/2011 09:10 PM
Aroclor 1221	ND	0.23	1.0		µg/L	1	6/16/2011 09:10 PM
Aroclor 1232	ND	0.12	0.51		µg/L	1	6/16/2011 09:10 PM
Aroclor 1242	ND	0.13	0.51		µg/L	1	6/16/2011 09:10 PM
Aroclor 1248	ND	0.071	0.51		µg/L	1	6/16/2011 09:10 PM
Aroclor 1254	ND	0.071	0.51		µg/L	1	6/16/2011 09:10 PM
Aroclor 1260	ND	0.051	0.51		µg/L	1	6/16/2011 09:10 PM
Aroclor 1262	ND	0.061	0.51		µg/L	1	6/16/2011 09:10 PM
Aroclor 1268	ND	0.14	0.51		µg/L	1	6/16/2011 09:10 PM
Surr: Decachlorobiphenyl	124	0	29-133		%REC	1	6/16/2011 09:10 PM
Surr: Tetrachloro-m-xylene	82.8	0	50-120		%REC	1	6/16/2011 09:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock,417981.ER.02.DM
Lab ID: N005957-003

Client Sample ID: MW-66-165-001
Collection Date: 6/13/2011 3:37:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PCBS BY GC/ECD							
	EPA 3510C			**EPA 8082**			
RunID: **GC7_110616B**	QC Batch: **37098**				PrepDate:	**6/15/2011**	Analyst: **MDM**
Aroclor 1016	ND	0.073	0.52		µg/L	1	6/16/2011 09:40 PM
Aroclor 1221	ND	0.24	1.0		µg/L	1	6/16/2011 09:40 PM
Aroclor 1232	ND	0.13	0.52		µg/L	1	6/16/2011 09:40 PM
Aroclor 1242	ND	0.14	0.52		µg/L	1	6/16/2011 09:40 PM
Aroclor 1248	ND	0.073	0.52		µg/L	1	6/16/2011 09:40 PM
Aroclor 1254	ND	0.073	0.52		µg/L	1	6/16/2011 09:40 PM
Aroclor 1260	ND	0.052	0.52		µg/L	1	6/16/2011 09:40 PM
Aroclor 1262	ND	0.063	0.52		µg/L	1	6/16/2011 09:40 PM
Aroclor 1268	ND	0.15	0.52		µg/L	1	6/16/2011 09:40 PM
Surr: Decachlorobiphenyl	85.7	0	29-133		%REC	1	6/16/2011 09:40 PM
Surr: Tetrachloro-m-xylene	51.3	0	50-120		%REC	1	6/16/2011 09:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PCBS BY GC/ECD							
	EPA 3510C				**EPA 8082**		
RunID: **GC7_110616B**	QC Batch: **37098**				PrepDate:	**6/15/2011**	Analyst: **MDM**
Aroclor 1016	ND	0.071	0.51		µg/L	1	6/16/2011 10:10 PM
Aroclor 1221	ND	0.23	1.0		µg/L	1	6/16/2011 10:10 PM
Aroclor 1232	ND	0.12	0.51		µg/L	1	6/16/2011 10:10 PM
Aroclor 1242	ND	0.13	0.51		µg/L	1	6/16/2011 10:10 PM
Aroclor 1248	ND	0.071	0.51		µg/L	1	6/16/2011 10:10 PM
Aroclor 1254	ND	0.071	0.51		µg/L	1	6/16/2011 10:10 PM
Aroclor 1260	ND	0.051	0.51		µg/L	1	6/16/2011 10:10 PM
Aroclor 1262	ND	0.061	0.51		µg/L	1	6/16/2011 10:10 PM
Aroclor 1268	ND	0.14	0.51		µg/L	1	6/16/2011 10:10 PM
Surr: Decachlorobiphenyl	108	0	29-133		%REC	1	6/16/2011 10:10 PM
Surr: Tetrachloro-m-xylene	66.2	0	50-120		%REC	1	6/16/2011 10:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PCBS BY GC/ECD							
	EPA 3510C				**EPA 8082**		
RunID: **GC7_110616B**	QC Batch: **37098**				PrepDate:	**6/15/2011**	Analyst: **MDM**
Aroclor 1016	ND	0.071	0.51		µg/L	1	6/16/2011 10:40 PM
Aroclor 1221	ND	0.23	1.0		µg/L	1	6/16/2011 10:40 PM
Aroclor 1232	ND	0.12	0.51		µg/L	1	6/16/2011 10:40 PM
Aroclor 1242	ND	0.13	0.51		µg/L	1	6/16/2011 10:40 PM
Aroclor 1248	ND	0.071	0.51		µg/L	1	6/16/2011 10:40 PM
Aroclor 1254	ND	0.071	0.51		µg/L	1	6/16/2011 10:40 PM
Aroclor 1260	ND	0.051	0.51		µg/L	1	6/16/2011 10:40 PM
Aroclor 1262	ND	0.061	0.51		µg/L	1	6/16/2011 10:40 PM
Aroclor 1268	ND	0.14	0.51		µg/L	1	6/16/2011 10:40 PM
Surr: Decachlorobiphenyl	80.7	0	29-133		%REC	1	6/16/2011 10:40 PM
Surr: Tetrachloro-m-xylene	63.1	0	50-120		%REC	1	6/16/2011 10:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-70-105-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PCBS BY GC/ECD							
	EPA 3510C			**EPA 8082**			
RunID: **GC7_110620A**	QC Batch: **37130**				PrepDate:	**6/20/2011**	Analyst: **MDM**
Aroclor 1016	ND	0.071	0.51		µg/L	1	6/20/2011 05:02 PM
Aroclor 1221	ND	0.23	1.0		µg/L	1	6/20/2011 05:02 PM
Aroclor 1232	ND	0.12	0.51		µg/L	1	6/20/2011 05:02 PM
Aroclor 1242	ND	0.13	0.51		µg/L	1	6/20/2011 05:02 PM
Aroclor 1248	ND	0.071	0.51		µg/L	1	6/20/2011 05:02 PM
Aroclor 1254	ND	0.071	0.51		µg/L	1	6/20/2011 05:02 PM
Aroclor 1260	ND	0.051	0.51		µg/L	1	6/20/2011 05:02 PM
Aroclor 1262	ND	0.061	0.51		µg/L	1	6/20/2011 05:02 PM
Aroclor 1268	ND	0.14	0.51		µg/L	1	6/20/2011 05:02 PM
Surr: Decachlorobiphenyl	86.4	0	29-133		%REC	1	6/20/2011 05:02 PM
Surr: Tetrachloro-m-xylene	52.4	0	50-120		%REC	1	6/20/2011 05:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PCBS BY GC/ECD							
	EPA 3510C				**EPA 8082**		
RunID: **GC7_110616B**	QC Batch: **37098**				PrepDate:	**6/15/2011**	Analyst: **MDM**
Aroclor 1016	ND	0.071	0.51		µg/L	1	6/16/2011 11:41 PM
Aroclor 1221	ND	0.23	1.0		µg/L	1	6/16/2011 11:41 PM
Aroclor 1232	ND	0.12	0.51		µg/L	1	6/16/2011 11:41 PM
Aroclor 1242	ND	0.13	0.51		µg/L	1	6/16/2011 11:41 PM
Aroclor 1248	ND	0.071	0.51		µg/L	1	6/16/2011 11:41 PM
Aroclor 1254	ND	0.071	0.51		µg/L	1	6/16/2011 11:41 PM
Aroclor 1260	ND	0.051	0.51		µg/L	1	6/16/2011 11:41 PM
Aroclor 1262	ND	0.061	0.51		µg/L	1	6/16/2011 11:41 PM
Aroclor 1268	ND	0.14	0.51		µg/L	1	6/16/2011 11:41 PM
Surr: Decachlorobiphenyl	77.8	0	29-133		%REC	1	6/16/2011 11:41 PM
Surr: Tetrachloro-m-xylene	65.1	0	50-120		%REC	1	6/16/2011 11:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: *28-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8082_W_PGE

Sample ID: **LCS-37098_PCB** SampType: **LCS** TestCode: **8082_W_PGE** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80441**
Client ID: **LCSW** Batch ID: **37098** TestNo: **EPA 8082** **EPA 3510C** Analysis Date: **6/16/2011** SeqNo: **1278030**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	5.347	0.50	5.000	0	107	40	144				
Aroclor 1260	3.992	0.50	5.000	0	79.8	45	145				
Surr: Decachlorobiphenyl	0.419		0.5000		83.9	29	133				
Surr: Tetrachloro-m-xylene	0.333		0.5000		66.7	50	120				

Sample ID: **MB-37098** SampType: **MBLK** TestCode: **8082_W_PGE** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80441**
Client ID: **PBW** Batch ID: **37098** TestNo: **EPA 8082** **EPA 3510C** Analysis Date: **6/16/2011** SeqNo: **1278031**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.50									
Aroclor 1221	ND	1.0									
Aroclor 1232	ND	0.50									
Aroclor 1242	ND	0.50									
Aroclor 1248	ND	0.50									
Aroclor 1254	ND	0.50									
Aroclor 1260	ND	0.50									
Aroclor 1262	ND	0.50									
Aroclor 1268	ND	0.50									
Surr: Decachlorobiphenyl	0.510		0.5000		102	29	133				
Surr: Tetrachloro-m-xylene	0.422		0.5000		84.5	50	120				

Sample ID: **N005957-003JMS** SampType: **MS** TestCode: **8082_W_PGE** Units: **µg/L** Prep Date: **6/15/2011** RunNo: **80441**
Client ID: **ZZZZZZ** Batch ID: **37098** TestNo: **EPA 8082** **EPA 3510C** Analysis Date: **6/17/2011** SeqNo: **1278037**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	4.182	0.51	5.102	0	82.0	40	144				
Aroclor 1260	4.119	0.51	5.102	0	80.7	45	145				
Surr: Decachlorobiphenyl	0.417		0.5102		81.7	29	133				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8082_W_PGE

Sample ID: N005957-003JMS	SampType: MS	TestCode: 8082_W_PGE	Units: µg/L	Prep Date: 6/15/2011	RunNo: 80441
Client ID: ZZZZZZ	Batch ID: 37098	TestNo: EPA 8082	EPA 3510C	Analysis Date: 6/17/2011	SeqNo: 1278037

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Tetrachloro-m-xylene	0.316		0.5102		62.0	50	120				

Sample ID: N005957-003JMSD	SampType: MSD	TestCode: 8082_W_PGE	Units: µg/L	Prep Date: 6/15/2011	RunNo: 80441
Client ID: ZZZZZZ	Batch ID: 37098	TestNo: EPA 8082	EPA 3510C	Analysis Date: 6/17/2011	SeqNo: 1278038

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	4.270	0.52	5.208	0	82.0	40	144	4.182	2.10	30	
Aroclor 1260	4.160	0.52	5.208	0	79.9	45	145	4.119	0.986	30	
Surr: Decachlorobiphenyl	0.424		0.5208		81.4	29	133		0		
Surr: Tetrachloro-m-xylene	0.334		0.5208		64.1	50	120		0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8082_W_PGE

Sample ID: **LCS-37130** SampType: **LCS** TestCode: **8082_W_PGE** Units: **µg/L** Prep Date: **6/20/2011** RunNo: **80461**
Client ID: **LCSW** Batch ID: **37130** TestNo: **EPA 8082** **EPA 3510C** Analysis Date: **6/20/2011** SeqNo: **1278466**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	5.193	0.50	5.000	0	104	40	144				
Aroclor 1260	4.692	0.50	5.000	0	93.8	45	145				
Surr: Decachlorobiphenyl	0.513		0.5000		103	29	133				
Surr: Tetrachloro-m-xylene	0.389		0.5000		77.8	50	120				

Sample ID: **LCSD-37130** SampType: **LCSD** TestCode: **8082_W_PGE** Units: **µg/L** Prep Date: **6/20/2011** RunNo: **80461**
Client ID: **LCSS02** Batch ID: **37130** TestNo: **EPA 8082** **EPA 3510C** Analysis Date: **6/20/2011** SeqNo: **1278467**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	5.715	0.50	5.000	0	114	40	144	5.193	9.58	30	
Aroclor 1260	5.457	0.50	5.000	0	109	45	145	4.692	15.1	30	
Surr: Decachlorobiphenyl	0.568		0.5000		114	29	133		0		
Surr: Tetrachloro-m-xylene	0.366		0.5000		73.2	50	120		0		

Sample ID: **MB-37130** SampType: **MBLK** TestCode: **8082_W_PGE** Units: **µg/L** Prep Date: **6/20/2011** RunNo: **80461**
Client ID: **PBW** Batch ID: **37130** TestNo: **EPA 8082** **EPA 3510C** Analysis Date: **6/20/2011** SeqNo: **1278469**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.50									
Aroclor 1221	ND	1.0									
Aroclor 1232	ND	0.50									
Aroclor 1242	ND	0.50									
Aroclor 1248	ND	0.50									
Aroclor 1254	ND	0.50									
Aroclor 1260	ND	0.50									
Aroclor 1262	ND	0.50									
Aroclor 1268	ND	0.50									
Surr: Decachlorobiphenyl	0.550		0.5000		110	29	133				
Surr: Tetrachloro-m-xylene	0.290		0.5000		58.0	50	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
1,1,1,2-Tetrachloroethane	ND	0.061	1.0		ug/L	1	6/16/2011 09:02 PM
1,1,1-Trichloroethane	ND	0.068	1.0		ug/L	1	6/16/2011 09:02 PM
1,1,2,2-Tetrachloroethane	ND	0.054	1.0		ug/L	1	6/16/2011 09:02 PM
1,1,2-Trichloroethane	ND	0.083	1.0		ug/L	1	6/16/2011 09:02 PM
1,1-Dichloroethane	ND	0.099	1.0		ug/L	1	6/16/2011 09:02 PM
1,1-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 09:02 PM
1,1-Dichloropropene	ND	0.082	1.0		ug/L	1	6/16/2011 09:02 PM
1,2,3-Trichlorobenzene	ND	0.10	1.0		ug/L	1	6/16/2011 09:02 PM
1,2,3-Trichloropropane	ND	0.12	1.0		ug/L	1	6/16/2011 09:02 PM
1,2,4-Trichlorobenzene	ND	0.12	1.0		ug/L	1	6/16/2011 09:02 PM
1,2,4-Trimethylbenzene	ND	0.095	1.0		ug/L	1	6/16/2011 09:02 PM
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		ug/L	1	6/16/2011 09:02 PM
1,2-Dibromoethane	ND	0.14	1.0		ug/L	1	6/16/2011 09:02 PM
1,2-Dichlorobenzene	ND	0.070	1.0		ug/L	1	6/16/2011 09:02 PM
1,2-Dichloroethane	ND	0.17	1.0		ug/L	1	6/16/2011 09:02 PM
1,2-Dichloropropane	ND	0.085	1.0		ug/L	1	6/16/2011 09:02 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 09:02 PM
1,3-Dichlorobenzene	ND	0.090	1.0		ug/L	1	6/16/2011 09:02 PM
1,3-Dichloropropane	ND	0.074	1.0		ug/L	1	6/16/2011 09:02 PM
1,4-Dichlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 09:02 PM
2,2-Dichloropropane	ND	0.061	1.0		ug/L	1	6/16/2011 09:02 PM
2-Butanone	ND	1.0	10		ug/L	1	6/16/2011 09:02 PM
2-Chlorotoluene	ND	0.080	1.0		ug/L	1	6/16/2011 09:02 PM
4-Chlorotoluene	ND	0.10	1.0		ug/L	1	6/16/2011 09:02 PM
4-Isopropyltoluene	ND	0.080	1.0		ug/L	1	6/16/2011 09:02 PM
4-Methyl-2-pentanone	ND	0.76	10		ug/L	1	6/16/2011 09:02 PM
Acetone	ND	1.6	10		ug/L	1	6/16/2011 09:02 PM
Acrolein	ND	4.3	20		ug/L	1	6/16/2011 09:02 PM
Acrylonitrile	ND	0.61	20		ug/L	1	6/16/2011 09:02 PM
Benzene	ND	0.075	1.0		ug/L	1	6/16/2011 09:02 PM
Bromobenzene	ND	0.082	1.0		ug/L	1	6/16/2011 09:02 PM
Bromochloromethane	ND	0.15	1.0		ug/L	1	6/16/2011 09:02 PM
Bromodichloromethane	ND	0.063	1.0		ug/L	1	6/16/2011 09:02 PM
Bromoform	ND	0.086	1.0		ug/L	1	6/16/2011 09:02 PM
Bromomethane	ND	0.13	1.0		ug/L	1	6/16/2011 09:02 PM
Carbon disulfide	ND	0.054	1.0		ug/L	1	6/16/2011 09:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
Carbon tetrachloride	ND	0.10	1.0		ug/L	1	6/16/2011 09:02 PM
Chlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 09:02 PM
Chloroethane	ND	0.14	1.0		ug/L	1	6/16/2011 09:02 PM
Chloroform	ND	0.058	1.0		ug/L	1	6/16/2011 09:02 PM
Chloromethane	ND	0.054	1.0		ug/L	1	6/16/2011 09:02 PM
cis-1,2-Dichloroethene	ND	0.11	1.0		ug/L	1	6/16/2011 09:02 PM
cis-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 09:02 PM
Dibromochloromethane	ND	0.061	1.0		ug/L	1	6/16/2011 09:02 PM
Dibromomethane	ND	0.15	1.0		ug/L	1	6/16/2011 09:02 PM
Dichlorodifluoromethane	ND	0.12	1.0		ug/L	1	6/16/2011 09:02 PM
Ethylbenzene	ND	0.051	1.0		ug/L	1	6/16/2011 09:02 PM
Freon-113	ND	0.080	1.0		ug/L	1	6/16/2011 09:02 PM
Hexachlorobutadiene	ND	0.17	1.0		ug/L	1	6/16/2011 09:02 PM
Isopropylbenzene	ND	0.057	1.0		ug/L	1	6/16/2011 09:02 PM
m,p-Xylene	ND	0.17	1.0		ug/L	1	6/16/2011 09:02 PM
Methylene chloride	ND	0.10	5.0		ug/L	1	6/16/2011 09:02 PM
MTBE	ND	0.089	1.0		ug/L	1	6/16/2011 09:02 PM
n-Butylbenzene	ND	0.082	1.0		ug/L	1	6/16/2011 09:02 PM
n-Propylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 09:02 PM
Naphthalene	ND	0.056	1.0		ug/L	1	6/16/2011 09:02 PM
o-Xylene	ND	0.077	1.0		ug/L	1	6/16/2011 09:02 PM
sec-Butylbenzene	ND	0.098	1.0		ug/L	1	6/16/2011 09:02 PM
Styrene	ND	0.072	1.0		ug/L	1	6/16/2011 09:02 PM
tert-Butylbenzene	ND	0.062	1.0		ug/L	1	6/16/2011 09:02 PM
Tetrachloroethene	ND	0.13	1.0		ug/L	1	6/16/2011 09:02 PM
Toluene	ND	0.12	2.5		ug/L	1	6/16/2011 09:02 PM
trans-1,2-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 09:02 PM
trans-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 09:02 PM
Trichloroethene	ND	0.060	1.0		ug/L	1	6/16/2011 09:02 PM
Trichlorofluoromethane	ND	0.097	1.0		ug/L	1	6/16/2011 09:02 PM
Vinyl chloride	ND	0.12	1.0		ug/L	1	6/16/2011 09:02 PM
Xylenes, Total	ND	1.5	2.0		ug/L	1	6/16/2011 09:02 PM
Surr: 1,2-Dichloroethane-d4	98.9	0	72-119		%REC	1	6/16/2011 09:02 PM
Surr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	6/16/2011 09:02 PM
Surr: Dibromofluoromethane	100	0	85-115		%REC	1	6/16/2011 09:02 PM
Surr: Toluene-d8	107	0	81-120		%REC	1	6/16/2011 09:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock,417981.ER.02.DM
Lab ID: N005957-003

Client Sample ID: MW-66-165-001
Collection Date: 6/13/2011 3:37:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
1,1,1,2-Tetrachloroethane	ND	0.061	1.0		ug/L	1	6/16/2011 05:36 PM
1,1,1-Trichloroethane	ND	0.068	1.0		ug/L	1	6/16/2011 05:36 PM
1,1,2,2-Tetrachloroethane	ND	0.054	1.0		ug/L	1	6/16/2011 05:36 PM
1,1,2-Trichloroethane	ND	0.083	1.0		ug/L	1	6/16/2011 05:36 PM
1,1-Dichloroethane	ND	0.099	1.0		ug/L	1	6/16/2011 05:36 PM
1,1-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 05:36 PM
1,1-Dichloropropene	ND	0.082	1.0		ug/L	1	6/16/2011 05:36 PM
1,2,3-Trichlorobenzene	ND	0.10	1.0		ug/L	1	6/16/2011 05:36 PM
1,2,3-Trichloropropane	ND	0.12	1.0		ug/L	1	6/16/2011 05:36 PM
1,2,4-Trichlorobenzene	ND	0.12	1.0		ug/L	1	6/16/2011 05:36 PM
1,2,4-Trimethylbenzene	ND	0.095	1.0		ug/L	1	6/16/2011 05:36 PM
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		ug/L	1	6/16/2011 05:36 PM
1,2-Dibromoethane	ND	0.14	1.0		ug/L	1	6/16/2011 05:36 PM
1,2-Dichlorobenzene	ND	0.070	1.0		ug/L	1	6/16/2011 05:36 PM
1,2-Dichloroethane	ND	0.17	1.0		ug/L	1	6/16/2011 05:36 PM
1,2-Dichloropropane	ND	0.085	1.0		ug/L	1	6/16/2011 05:36 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 05:36 PM
1,3-Dichlorobenzene	ND	0.090	1.0		ug/L	1	6/16/2011 05:36 PM
1,3-Dichloropropane	ND	0.074	1.0		ug/L	1	6/16/2011 05:36 PM
1,4-Dichlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 05:36 PM
2,2-Dichloropropane	ND	0.061	1.0		ug/L	1	6/16/2011 05:36 PM
2-Butanone	ND	1.0	10		ug/L	1	6/16/2011 05:36 PM
2-Chlorotoluene	ND	0.080	1.0		ug/L	1	6/16/2011 05:36 PM
4-Chlorotoluene	ND	0.10	1.0		ug/L	1	6/16/2011 05:36 PM
4-Isopropyltoluene	ND	0.080	1.0		ug/L	1	6/16/2011 05:36 PM
4-Methyl-2-pentanone	ND	0.76	10		ug/L	1	6/16/2011 05:36 PM
Acetone	ND	1.6	10		ug/L	1	6/16/2011 05:36 PM
Acrolein	ND	4.3	20		ug/L	1	6/16/2011 05:36 PM
Acrylonitrile	ND	0.61	20		ug/L	1	6/16/2011 05:36 PM
Benzene	ND	0.075	1.0		ug/L	1	6/16/2011 05:36 PM
Bromobenzene	ND	0.082	1.0		ug/L	1	6/16/2011 05:36 PM
Bromochloromethane	ND	0.15	1.0		ug/L	1	6/16/2011 05:36 PM
Bromodichloromethane	ND	0.063	1.0		ug/L	1	6/16/2011 05:36 PM
Bromoform	ND	0.086	1.0		ug/L	1	6/16/2011 05:36 PM
Bromomethane	ND	0.13	1.0		ug/L	1	6/16/2011 05:36 PM
Carbon disulfide	ND	0.054	1.0		ug/L	1	6/16/2011 05:36 PM

Qualifiers:
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
Carbon tetrachloride	ND	0.10	1.0		ug/L	1	6/16/2011 05:36 PM
Chlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 05:36 PM
Chloroethane	ND	0.14	1.0		ug/L	1	6/16/2011 05:36 PM
Chloroform	1.8	0.058	1.0		ug/L	1	6/16/2011 05:36 PM
Chloromethane	ND	0.054	1.0		ug/L	1	6/16/2011 05:36 PM
cis-1,2-Dichloroethene	ND	0.11	1.0		ug/L	1	6/16/2011 05:36 PM
cis-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 05:36 PM
Dibromochloromethane	ND	0.061	1.0		ug/L	1	6/16/2011 05:36 PM
Dibromomethane	ND	0.15	1.0		ug/L	1	6/16/2011 05:36 PM
Dichlorodifluoromethane	ND	0.12	1.0		ug/L	1	6/16/2011 05:36 PM
Ethylbenzene	ND	0.051	1.0		ug/L	1	6/16/2011 05:36 PM
Freon-113	ND	0.080	1.0		ug/L	1	6/16/2011 05:36 PM
Hexachlorobutadiene	ND	0.17	1.0		ug/L	1	6/16/2011 05:36 PM
Isopropylbenzene	ND	0.057	1.0		ug/L	1	6/16/2011 05:36 PM
m,p-Xylene	ND	0.17	1.0		ug/L	1	6/16/2011 05:36 PM
Methylene chloride	ND	0.10	5.0		ug/L	1	6/16/2011 05:36 PM
MTBE	ND	0.089	1.0		ug/L	1	6/16/2011 05:36 PM
n-Butylbenzene	ND	0.082	1.0		ug/L	1	6/16/2011 05:36 PM
n-Propylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 05:36 PM
Naphthalene	ND	0.056	1.0		ug/L	1	6/16/2011 05:36 PM
o-Xylene	ND	0.077	1.0		ug/L	1	6/16/2011 05:36 PM
sec-Butylbenzene	ND	0.098	1.0		ug/L	1	6/16/2011 05:36 PM
Styrene	ND	0.072	1.0		ug/L	1	6/16/2011 05:36 PM
tert-Butylbenzene	ND	0.062	1.0		ug/L	1	6/16/2011 05:36 PM
Tetrachloroethene	ND	0.13	1.0		ug/L	1	6/16/2011 05:36 PM
Toluene	ND	0.12	2.5		ug/L	1	6/16/2011 05:36 PM
trans-1,2-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 05:36 PM
trans-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 05:36 PM
Trichloroethene	ND	0.060	1.0		ug/L	1	6/16/2011 05:36 PM
Trichlorofluoromethane	ND	0.097	1.0		ug/L	1	6/16/2011 05:36 PM
Vinyl chloride	ND	0.12	1.0		ug/L	1	6/16/2011 05:36 PM
Xylenes, Total	ND	1.5	2.0		ug/L	1	6/16/2011 05:36 PM
Surr: 1,2-Dichloroethane-d4	91.6	0	72-119		%REC	1	6/16/2011 05:36 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	6/16/2011 05:36 PM
Surr: Dibromofluoromethane	101	0	85-115		%REC	1	6/16/2011 05:36 PM
Surr: Toluene-d8	104	0	81-120		%REC	1	6/16/2011 05:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
1,1,1,2-Tetrachloroethane	ND	0.061	1.0		ug/L	1	6/16/2011 09:24 PM
1,1,1-Trichloroethane	ND	0.068	1.0		ug/L	1	6/16/2011 09:24 PM
1,1,2,2-Tetrachloroethane	ND	0.054	1.0		ug/L	1	6/16/2011 09:24 PM
1,1,2-Trichloroethane	ND	0.083	1.0		ug/L	1	6/16/2011 09:24 PM
1,1-Dichloroethane	ND	0.099	1.0		ug/L	1	6/16/2011 09:24 PM
1,1-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 09:24 PM
1,1-Dichloropropene	ND	0.082	1.0		ug/L	1	6/16/2011 09:24 PM
1,2,3-Trichlorobenzene	ND	0.10	1.0		ug/L	1	6/16/2011 09:24 PM
1,2,3-Trichloropropane	ND	0.12	1.0		ug/L	1	6/16/2011 09:24 PM
1,2,4-Trichlorobenzene	ND	0.12	1.0		ug/L	1	6/16/2011 09:24 PM
1,2,4-Trimethylbenzene	ND	0.095	1.0		ug/L	1	6/16/2011 09:24 PM
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		ug/L	1	6/16/2011 09:24 PM
1,2-Dibromoethane	ND	0.14	1.0		ug/L	1	6/16/2011 09:24 PM
1,2-Dichlorobenzene	ND	0.070	1.0		ug/L	1	6/16/2011 09:24 PM
1,2-Dichloroethane	ND	0.17	1.0		ug/L	1	6/16/2011 09:24 PM
1,2-Dichloropropane	ND	0.085	1.0		ug/L	1	6/16/2011 09:24 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 09:24 PM
1,3-Dichlorobenzene	ND	0.090	1.0		ug/L	1	6/16/2011 09:24 PM
1,3-Dichloropropane	ND	0.074	1.0		ug/L	1	6/16/2011 09:24 PM
1,4-Dichlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 09:24 PM
2,2-Dichloropropane	ND	0.061	1.0		ug/L	1	6/16/2011 09:24 PM
2-Butanone	ND	1.0	10		ug/L	1	6/16/2011 09:24 PM
2-Chlorotoluene	ND	0.080	1.0		ug/L	1	6/16/2011 09:24 PM
4-Chlorotoluene	ND	0.10	1.0		ug/L	1	6/16/2011 09:24 PM
4-Isopropyltoluene	ND	0.080	1.0		ug/L	1	6/16/2011 09:24 PM
4-Methyl-2-pentanone	ND	0.76	10		ug/L	1	6/16/2011 09:24 PM
Acetone	ND	1.6	10		ug/L	1	6/16/2011 09:24 PM
Acrolein	ND	4.3	20		ug/L	1	6/16/2011 09:24 PM
Acrylonitrile	ND	0.61	20		ug/L	1	6/16/2011 09:24 PM
Benzene	ND	0.075	1.0		ug/L	1	6/16/2011 09:24 PM
Bromobenzene	ND	0.082	1.0		ug/L	1	6/16/2011 09:24 PM
Bromochloromethane	ND	0.15	1.0		ug/L	1	6/16/2011 09:24 PM
Bromodichloromethane	ND	0.063	1.0		ug/L	1	6/16/2011 09:24 PM
Bromoform	ND	0.086	1.0		ug/L	1	6/16/2011 09:24 PM
Bromomethane	ND	0.13	1.0		ug/L	1	6/16/2011 09:24 PM
Carbon disulfide	ND	0.054	1.0		ug/L	1	6/16/2011 09:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
Carbon tetrachloride	ND	0.10	1.0		ug/L	1	6/16/2011 09:24 PM
Chlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 09:24 PM
Chloroethane	ND	0.14	1.0		ug/L	1	6/16/2011 09:24 PM
Chloroform	1.3	0.058	1.0		ug/L	1	6/16/2011 09:24 PM
Chloromethane	ND	0.054	1.0		ug/L	1	6/16/2011 09:24 PM
cis-1,2-Dichloroethene	ND	0.11	1.0		ug/L	1	6/16/2011 09:24 PM
cis-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 09:24 PM
Dibromochloromethane	ND	0.061	1.0		ug/L	1	6/16/2011 09:24 PM
Dibromomethane	ND	0.15	1.0		ug/L	1	6/16/2011 09:24 PM
Dichlorodifluoromethane	ND	0.12	1.0		ug/L	1	6/16/2011 09:24 PM
Ethylbenzene	ND	0.051	1.0		ug/L	1	6/16/2011 09:24 PM
Freon-113	ND	0.080	1.0		ug/L	1	6/16/2011 09:24 PM
Hexachlorobutadiene	ND	0.17	1.0		ug/L	1	6/16/2011 09:24 PM
Isopropylbenzene	ND	0.057	1.0		ug/L	1	6/16/2011 09:24 PM
m,p-Xylene	ND	0.17	1.0		ug/L	1	6/16/2011 09:24 PM
Methylene chloride	ND	0.10	5.0		ug/L	1	6/16/2011 09:24 PM
MTBE	ND	0.089	1.0		ug/L	1	6/16/2011 09:24 PM
n-Butylbenzene	ND	0.082	1.0		ug/L	1	6/16/2011 09:24 PM
n-Propylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 09:24 PM
Naphthalene	ND	0.056	1.0		ug/L	1	6/16/2011 09:24 PM
o-Xylene	ND	0.077	1.0		ug/L	1	6/16/2011 09:24 PM
sec-Butylbenzene	ND	0.098	1.0		ug/L	1	6/16/2011 09:24 PM
Styrene	ND	0.072	1.0		ug/L	1	6/16/2011 09:24 PM
tert-Butylbenzene	ND	0.062	1.0		ug/L	1	6/16/2011 09:24 PM
Tetrachloroethene	ND	0.13	1.0		ug/L	1	6/16/2011 09:24 PM
Toluene	ND	0.12	2.5		ug/L	1	6/16/2011 09:24 PM
trans-1,2-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 09:24 PM
trans-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 09:24 PM
Trichloroethene	ND	0.060	1.0		ug/L	1	6/16/2011 09:24 PM
Trichlorofluoromethane	ND	0.097	1.0		ug/L	1	6/16/2011 09:24 PM
Vinyl chloride	ND	0.12	1.0		ug/L	1	6/16/2011 09:24 PM
Xylenes, Total	ND	1.5	2.0		ug/L	1	6/16/2011 09:24 PM
Surr: 1,2-Dichloroethane-d4	93.3	0	72-119		%REC	1	6/16/2011 09:24 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	6/16/2011 09:24 PM
Surr: Dibromofluoromethane	97.0	0	85-115		%REC	1	6/16/2011 09:24 PM
Surr: Toluene-d8	106	0	81-120		%REC	1	6/16/2011 09:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
				EPA 8260B			
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
1,1,1,2-Tetrachloroethane	ND	0.061	1.0		ug/L	1	6/16/2011 09:47 PM
1,1,1-Trichloroethane	ND	0.068	1.0		ug/L	1	6/16/2011 09:47 PM
1,1,2,2-Tetrachloroethane	ND	0.054	1.0		ug/L	1	6/16/2011 09:47 PM
1,1,2-Trichloroethane	ND	0.083	1.0		ug/L	1	6/16/2011 09:47 PM
1,1-Dichloroethane	ND	0.099	1.0		ug/L	1	6/16/2011 09:47 PM
1,1-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 09:47 PM
1,1-Dichloropropene	ND	0.082	1.0		ug/L	1	6/16/2011 09:47 PM
1,2,3-Trichlorobenzene	ND	0.10	1.0		ug/L	1	6/16/2011 09:47 PM
1,2,3-Trichloropropane	ND	0.12	1.0		ug/L	1	6/16/2011 09:47 PM
1,2,4-Trichlorobenzene	ND	0.12	1.0		ug/L	1	6/16/2011 09:47 PM
1,2,4-Trimethylbenzene	ND	0.095	1.0		ug/L	1	6/16/2011 09:47 PM
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		ug/L	1	6/16/2011 09:47 PM
1,2-Dibromoethane	ND	0.14	1.0		ug/L	1	6/16/2011 09:47 PM
1,2-Dichlorobenzene	ND	0.070	1.0		ug/L	1	6/16/2011 09:47 PM
1,2-Dichloroethane	ND	0.17	1.0		ug/L	1	6/16/2011 09:47 PM
1,2-Dichloropropane	ND	0.085	1.0		ug/L	1	6/16/2011 09:47 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 09:47 PM
1,3-Dichlorobenzene	ND	0.090	1.0		ug/L	1	6/16/2011 09:47 PM
1,3-Dichloropropane	ND	0.074	1.0		ug/L	1	6/16/2011 09:47 PM
1,4-Dichlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 09:47 PM
2,2-Dichloropropane	ND	0.061	1.0		ug/L	1	6/16/2011 09:47 PM
2-Butanone	ND	1.0	10		ug/L	1	6/16/2011 09:47 PM
2-Chlorotoluene	ND	0.080	1.0		ug/L	1	6/16/2011 09:47 PM
4-Chlorotoluene	ND	0.10	1.0		ug/L	1	6/16/2011 09:47 PM
4-Isopropyltoluene	ND	0.080	1.0		ug/L	1	6/16/2011 09:47 PM
4-Methyl-2-pentanone	ND	0.76	10		ug/L	1	6/16/2011 09:47 PM
Acetone	ND	1.6	10		ug/L	1	6/16/2011 09:47 PM
Acrolein	ND	4.3	20		ug/L	1	6/16/2011 09:47 PM
Acrylonitrile	ND	0.61	20		ug/L	1	6/16/2011 09:47 PM
Benzene	ND	0.075	1.0		ug/L	1	6/16/2011 09:47 PM
Bromobenzene	ND	0.082	1.0		ug/L	1	6/16/2011 09:47 PM
Bromochloromethane	ND	0.15	1.0		ug/L	1	6/16/2011 09:47 PM
Bromodichloromethane	ND	0.063	1.0		ug/L	1	6/16/2011 09:47 PM
Bromoform	ND	0.086	1.0		ug/L	1	6/16/2011 09:47 PM
Bromomethane	ND	0.13	1.0		ug/L	1	6/16/2011 09:47 PM
Carbon disulfide	ND	0.054	1.0		ug/L	1	6/16/2011 09:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
Carbon tetrachloride	ND	0.10	1.0		ug/L	1	6/16/2011 09:47 PM
Chlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 09:47 PM
Chloroethane	ND	0.14	1.0		ug/L	1	6/16/2011 09:47 PM
Chloroform	ND	0.058	1.0		ug/L	1	6/16/2011 09:47 PM
Chloromethane	ND	0.054	1.0		ug/L	1	6/16/2011 09:47 PM
cis-1,2-Dichloroethene	ND	0.11	1.0		ug/L	1	6/16/2011 09:47 PM
cis-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 09:47 PM
Dibromochloromethane	ND	0.061	1.0		ug/L	1	6/16/2011 09:47 PM
Dibromomethane	ND	0.15	1.0		ug/L	1	6/16/2011 09:47 PM
Dichlorodifluoromethane	ND	0.12	1.0		ug/L	1	6/16/2011 09:47 PM
Ethylbenzene	ND	0.051	1.0		ug/L	1	6/16/2011 09:47 PM
Freon-113	ND	0.080	1.0		ug/L	1	6/16/2011 09:47 PM
Hexachlorobutadiene	ND	0.17	1.0		ug/L	1	6/16/2011 09:47 PM
Isopropylbenzene	ND	0.057	1.0		ug/L	1	6/16/2011 09:47 PM
m,p-Xylene	ND	0.17	1.0		ug/L	1	6/16/2011 09:47 PM
Methylene chloride	ND	0.10	5.0		ug/L	1	6/16/2011 09:47 PM
MTBE	ND	0.089	1.0		ug/L	1	6/16/2011 09:47 PM
n-Butylbenzene	ND	0.082	1.0		ug/L	1	6/16/2011 09:47 PM
n-Propylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 09:47 PM
Naphthalene	ND	0.056	1.0		ug/L	1	6/16/2011 09:47 PM
o-Xylene	ND	0.077	1.0		ug/L	1	6/16/2011 09:47 PM
sec-Butylbenzene	ND	0.098	1.0		ug/L	1	6/16/2011 09:47 PM
Styrene	ND	0.072	1.0		ug/L	1	6/16/2011 09:47 PM
tert-Butylbenzene	ND	0.062	1.0		ug/L	1	6/16/2011 09:47 PM
Tetrachloroethene	ND	0.13	1.0		ug/L	1	6/16/2011 09:47 PM
Toluene	ND	0.12	2.5		ug/L	1	6/16/2011 09:47 PM
trans-1,2-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 09:47 PM
trans-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 09:47 PM
Trichloroethene	ND	0.060	1.0		ug/L	1	6/16/2011 09:47 PM
Trichlorofluoromethane	ND	0.097	1.0		ug/L	1	6/16/2011 09:47 PM
Vinyl chloride	ND	0.12	1.0		ug/L	1	6/16/2011 09:47 PM
Xylenes, Total	ND	1.5	2.0		ug/L	1	6/16/2011 09:47 PM
Surr: 1,2-Dichloroethane-d4	95.4	0	72-119		%REC	1	6/16/2011 09:47 PM
Surr: 4-Bromofluorobenzene	102	0	76-119		%REC	1	6/16/2011 09:47 PM
Surr: Dibromofluoromethane	96.3	0	85-115		%REC	1	6/16/2011 09:47 PM
Surr: Toluene-d8	104	0	81-120		%REC	1	6/16/2011 09:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-70-105-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
				EPA 8260B			
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
1,1,1,2-Tetrachloroethane	ND	0.061	1.0		ug/L	1	6/16/2011 10:09 PM
1,1,1-Trichloroethane	ND	0.068	1.0		ug/L	1	6/16/2011 10:09 PM
1,1,2,2-Tetrachloroethane	ND	0.054	1.0		ug/L	1	6/16/2011 10:09 PM
1,1,2-Trichloroethane	ND	0.083	1.0		ug/L	1	6/16/2011 10:09 PM
1,1-Dichloroethane	ND	0.099	1.0		ug/L	1	6/16/2011 10:09 PM
1,1-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 10:09 PM
1,1-Dichloropropene	ND	0.082	1.0		ug/L	1	6/16/2011 10:09 PM
1,2,3-Trichlorobenzene	ND	0.10	1.0		ug/L	1	6/16/2011 10:09 PM
1,2,3-Trichloropropane	ND	0.12	1.0		ug/L	1	6/16/2011 10:09 PM
1,2,4-Trichlorobenzene	ND	0.12	1.0		ug/L	1	6/16/2011 10:09 PM
1,2,4-Trimethylbenzene	ND	0.095	1.0		ug/L	1	6/16/2011 10:09 PM
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		ug/L	1	6/16/2011 10:09 PM
1,2-Dibromoethane	ND	0.14	1.0		ug/L	1	6/16/2011 10:09 PM
1,2-Dichlorobenzene	ND	0.070	1.0		ug/L	1	6/16/2011 10:09 PM
1,2-Dichloroethane	ND	0.17	1.0		ug/L	1	6/16/2011 10:09 PM
1,2-Dichloropropane	ND	0.085	1.0		ug/L	1	6/16/2011 10:09 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 10:09 PM
1,3-Dichlorobenzene	ND	0.090	1.0		ug/L	1	6/16/2011 10:09 PM
1,3-Dichloropropane	ND	0.074	1.0		ug/L	1	6/16/2011 10:09 PM
1,4-Dichlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 10:09 PM
2,2-Dichloropropane	ND	0.061	1.0		ug/L	1	6/16/2011 10:09 PM
2-Butanone	ND	1.0	10		ug/L	1	6/16/2011 10:09 PM
2-Chlorotoluene	ND	0.080	1.0		ug/L	1	6/16/2011 10:09 PM
4-Chlorotoluene	ND	0.10	1.0		ug/L	1	6/16/2011 10:09 PM
4-Isopropyltoluene	ND	0.080	1.0		ug/L	1	6/16/2011 10:09 PM
4-Methyl-2-pentanone	ND	0.76	10		ug/L	1	6/16/2011 10:09 PM
Acetone	ND	1.6	10		ug/L	1	6/16/2011 10:09 PM
Acrolein	ND	4.3	20		ug/L	1	6/16/2011 10:09 PM
Acrylonitrile	ND	0.61	20		ug/L	1	6/16/2011 10:09 PM
Benzene	ND	0.075	1.0		ug/L	1	6/16/2011 10:09 PM
Bromobenzene	ND	0.082	1.0		ug/L	1	6/16/2011 10:09 PM
Bromochloromethane	ND	0.15	1.0		ug/L	1	6/16/2011 10:09 PM
Bromodichloromethane	ND	0.063	1.0		ug/L	1	6/16/2011 10:09 PM
Bromoform	ND	0.086	1.0		ug/L	1	6/16/2011 10:09 PM
Bromomethane	ND	0.13	1.0		ug/L	1	6/16/2011 10:09 PM
Carbon disulfide	ND	0.054	1.0		ug/L	1	6/16/2011 10:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-70-105-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
Carbon tetrachloride	ND	0.10	1.0		ug/L	1	6/16/2011 10:09 PM
Chlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 10:09 PM
Chloroethane	ND	0.14	1.0		ug/L	1	6/16/2011 10:09 PM
Chloroform	ND	0.058	1.0		ug/L	1	6/16/2011 10:09 PM
Chloromethane	ND	0.054	1.0		ug/L	1	6/16/2011 10:09 PM
cis-1,2-Dichloroethene	ND	0.11	1.0		ug/L	1	6/16/2011 10:09 PM
cis-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 10:09 PM
Dibromochloromethane	ND	0.061	1.0		ug/L	1	6/16/2011 10:09 PM
Dibromomethane	ND	0.15	1.0		ug/L	1	6/16/2011 10:09 PM
Dichlorodifluoromethane	ND	0.12	1.0		ug/L	1	6/16/2011 10:09 PM
Ethylbenzene	ND	0.051	1.0		ug/L	1	6/16/2011 10:09 PM
Freon-113	ND	0.080	1.0		ug/L	1	6/16/2011 10:09 PM
Hexachlorobutadiene	ND	0.17	1.0		ug/L	1	6/16/2011 10:09 PM
Isopropylbenzene	ND	0.057	1.0		ug/L	1	6/16/2011 10:09 PM
m,p-Xylene	ND	0.17	1.0		ug/L	1	6/16/2011 10:09 PM
Methylene chloride	ND	0.10	5.0		ug/L	1	6/16/2011 10:09 PM
MTBE	ND	0.089	1.0		ug/L	1	6/16/2011 10:09 PM
n-Butylbenzene	ND	0.082	1.0		ug/L	1	6/16/2011 10:09 PM
n-Propylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 10:09 PM
Naphthalene	ND	0.056	1.0		ug/L	1	6/16/2011 10:09 PM
o-Xylene	ND	0.077	1.0		ug/L	1	6/16/2011 10:09 PM
sec-Butylbenzene	ND	0.098	1.0		ug/L	1	6/16/2011 10:09 PM
Styrene	ND	0.072	1.0		ug/L	1	6/16/2011 10:09 PM
tert-Butylbenzene	ND	0.062	1.0		ug/L	1	6/16/2011 10:09 PM
Tetrachloroethene	ND	0.13	1.0		ug/L	1	6/16/2011 10:09 PM
Toluene	ND	0.12	2.5		ug/L	1	6/16/2011 10:09 PM
trans-1,2-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 10:09 PM
trans-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 10:09 PM
Trichloroethene	ND	0.060	1.0		ug/L	1	6/16/2011 10:09 PM
Trichlorofluoromethane	ND	0.097	1.0		ug/L	1	6/16/2011 10:09 PM
Vinyl chloride	ND	0.12	1.0		ug/L	1	6/16/2011 10:09 PM
Xylenes, Total	ND	1.5	2.0		ug/L	1	6/16/2011 10:09 PM
Surr: 1,2-Dichloroethane-d4	100	0	72-119		%REC	1	6/16/2011 10:09 PM
Surr: 4-Bromofluorobenzene	105	0	76-119		%REC	1	6/16/2011 10:09 PM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	6/16/2011 10:09 PM
Surr: Toluene-d8	107	0	81-120		%REC	1	6/16/2011 10:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
				EPA 8260B			
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
1,1,1,2-Tetrachloroethane	ND	0.061	1.0		ug/L	1	6/16/2011 10:32 PM
1,1,1-Trichloroethane	ND	0.068	1.0		ug/L	1	6/16/2011 10:32 PM
1,1,2,2-Tetrachloroethane	ND	0.054	1.0		ug/L	1	6/16/2011 10:32 PM
1,1,2-Trichloroethane	ND	0.083	1.0		ug/L	1	6/16/2011 10:32 PM
1,1-Dichloroethane	ND	0.099	1.0		ug/L	1	6/16/2011 10:32 PM
1,1-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 10:32 PM
1,1-Dichloropropene	ND	0.082	1.0		ug/L	1	6/16/2011 10:32 PM
1,2,3-Trichlorobenzene	ND	0.10	1.0		ug/L	1	6/16/2011 10:32 PM
1,2,3-Trichloropropane	ND	0.12	1.0		ug/L	1	6/16/2011 10:32 PM
1,2,4-Trichlorobenzene	ND	0.12	1.0		ug/L	1	6/16/2011 10:32 PM
1,2,4-Trimethylbenzene	ND	0.095	1.0		ug/L	1	6/16/2011 10:32 PM
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		ug/L	1	6/16/2011 10:32 PM
1,2-Dibromoethane	ND	0.14	1.0		ug/L	1	6/16/2011 10:32 PM
1,2-Dichlorobenzene	ND	0.070	1.0		ug/L	1	6/16/2011 10:32 PM
1,2-Dichloroethane	ND	0.17	1.0		ug/L	1	6/16/2011 10:32 PM
1,2-Dichloropropane	ND	0.085	1.0		ug/L	1	6/16/2011 10:32 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 10:32 PM
1,3-Dichlorobenzene	ND	0.090	1.0		ug/L	1	6/16/2011 10:32 PM
1,3-Dichloropropane	ND	0.074	1.0		ug/L	1	6/16/2011 10:32 PM
1,4-Dichlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 10:32 PM
2,2-Dichloropropane	ND	0.061	1.0		ug/L	1	6/16/2011 10:32 PM
2-Butanone	ND	1.0	10		ug/L	1	6/16/2011 10:32 PM
2-Chlorotoluene	ND	0.080	1.0		ug/L	1	6/16/2011 10:32 PM
4-Chlorotoluene	ND	0.10	1.0		ug/L	1	6/16/2011 10:32 PM
4-Isopropyltoluene	ND	0.080	1.0		ug/L	1	6/16/2011 10:32 PM
4-Methyl-2-pentanone	ND	0.76	10		ug/L	1	6/16/2011 10:32 PM
Acetone	ND	1.6	10		ug/L	1	6/16/2011 10:32 PM
Acrolein	ND	4.3	20		ug/L	1	6/16/2011 10:32 PM
Acrylonitrile	ND	0.61	20		ug/L	1	6/16/2011 10:32 PM
Benzene	ND	0.075	1.0		ug/L	1	6/16/2011 10:32 PM
Bromobenzene	ND	0.082	1.0		ug/L	1	6/16/2011 10:32 PM
Bromochloromethane	ND	0.15	1.0		ug/L	1	6/16/2011 10:32 PM
Bromodichloromethane	ND	0.063	1.0		ug/L	1	6/16/2011 10:32 PM
Bromoform	ND	0.086	1.0		ug/L	1	6/16/2011 10:32 PM
Bromomethane	ND	0.13	1.0		ug/L	1	6/16/2011 10:32 PM
Carbon disulfide	ND	0.054	1.0		ug/L	1	6/16/2011 10:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits doe to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
Carbon tetrachloride	ND	0.10	1.0		ug/L	1	6/16/2011 10:32 PM
Chlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 10:32 PM
Chloroethane	ND	0.14	1.0		ug/L	1	6/16/2011 10:32 PM
Chloroform	ND	0.058	1.0		ug/L	1	6/16/2011 10:32 PM
Chloromethane	ND	0.054	1.0		ug/L	1	6/16/2011 10:32 PM
cis-1,2-Dichloroethene	ND	0.11	1.0		ug/L	1	6/16/2011 10:32 PM
cis-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 10:32 PM
Dibromochloromethane	ND	0.061	1.0		ug/L	1	6/16/2011 10:32 PM
Dibromomethane	ND	0.15	1.0		ug/L	1	6/16/2011 10:32 PM
Dichlorodifluoromethane	ND	0.12	1.0		ug/L	1	6/16/2011 10:32 PM
Ethylbenzene	ND	0.051	1.0		ug/L	1	6/16/2011 10:32 PM
Freon-113	ND	0.080	1.0		ug/L	1	6/16/2011 10:32 PM
Hexachlorobutadiene	ND	0.17	1.0		ug/L	1	6/16/2011 10:32 PM
Isopropylbenzene	ND	0.057	1.0		ug/L	1	6/16/2011 10:32 PM
m,p-Xylene	ND	0.17	1.0		ug/L	1	6/16/2011 10:32 PM
Methylene chloride	ND	0.10	5.0		ug/L	1	6/16/2011 10:32 PM
MTBE	ND	0.089	1.0		ug/L	1	6/16/2011 10:32 PM
n-Butylbenzene	ND	0.082	1.0		ug/L	1	6/16/2011 10:32 PM
n-Propylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 10:32 PM
Naphthalene	ND	0.056	1.0		ug/L	1	6/16/2011 10:32 PM
o-Xylene	ND	0.077	1.0		ug/L	1	6/16/2011 10:32 PM
sec-Butylbenzene	ND	0.098	1.0		ug/L	1	6/16/2011 10:32 PM
Styrene	ND	0.072	1.0		ug/L	1	6/16/2011 10:32 PM
tert-Butylbenzene	ND	0.062	1.0		ug/L	1	6/16/2011 10:32 PM
Tetrachloroethene	ND	0.13	1.0		ug/L	1	6/16/2011 10:32 PM
Toluene	ND	0.12	2.5		ug/L	1	6/16/2011 10:32 PM
trans-1,2-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 10:32 PM
trans-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 10:32 PM
Trichloroethene	ND	0.060	1.0		ug/L	1	6/16/2011 10:32 PM
Trichlorofluoromethane	ND	0.097	1.0		ug/L	1	6/16/2011 10:32 PM
Vinyl chloride	ND	0.12	1.0		ug/L	1	6/16/2011 10:32 PM
Xylenes, Total	ND	1.5	2.0		ug/L	1	6/16/2011 10:32 PM
Surr: 1,2-Dichloroethane-d4	95.1	0	72-119		%REC	1	6/16/2011 10:32 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	6/16/2011 10:32 PM
Surr: Dibromofluoromethane	96.7	0	85-115		%REC	1	6/16/2011 10:32 PM
Surr: Toluene-d8	107	0	81-120		%REC	1	6/16/2011 10:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	EB-70331-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 3:00:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
1,1,1,2-Tetrachloroethane	ND	0.061	1.0		ug/L	1	6/16/2011 08:40 PM
1,1,1-Trichloroethane	ND	0.068	1.0		ug/L	1	6/16/2011 08:40 PM
1,1,2,2-Tetrachloroethane	ND	0.054	1.0		ug/L	1	6/16/2011 08:40 PM
1,1,2-Trichloroethane	ND	0.083	1.0		ug/L	1	6/16/2011 08:40 PM
1,1-Dichloroethane	ND	0.099	1.0		ug/L	1	6/16/2011 08:40 PM
1,1-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 08:40 PM
1,1-Dichloropropene	ND	0.082	1.0		ug/L	1	6/16/2011 08:40 PM
1,2,3-Trichlorobenzene	ND	0.10	1.0		ug/L	1	6/16/2011 08:40 PM
1,2,3-Trichloropropane	ND	0.12	1.0		ug/L	1	6/16/2011 08:40 PM
1,2,4-Trichlorobenzene	ND	0.12	1.0		ug/L	1	6/16/2011 08:40 PM
1,2,4-Trimethylbenzene	ND	0.095	1.0		ug/L	1	6/16/2011 08:40 PM
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		ug/L	1	6/16/2011 08:40 PM
1,2-Dibromoethane	ND	0.14	1.0		ug/L	1	6/16/2011 08:40 PM
1,2-Dichlorobenzene	ND	0.070	1.0		ug/L	1	6/16/2011 08:40 PM
1,2-Dichloroethane	ND	0.17	1.0		ug/L	1	6/16/2011 08:40 PM
1,2-Dichloropropane	ND	0.085	1.0		ug/L	1	6/16/2011 08:40 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 08:40 PM
1,3-Dichlorobenzene	ND	0.090	1.0		ug/L	1	6/16/2011 08:40 PM
1,3-Dichloropropane	ND	0.074	1.0		ug/L	1	6/16/2011 08:40 PM
1,4-Dichlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 08:40 PM
2,2-Dichloropropane	ND	0.061	1.0		ug/L	1	6/16/2011 08:40 PM
2-Butanone	ND	1.0	10		ug/L	1	6/16/2011 08:40 PM
2-Chlorotoluene	ND	0.080	1.0		ug/L	1	6/16/2011 08:40 PM
4-Chlorotoluene	ND	0.10	1.0		ug/L	1	6/16/2011 08:40 PM
4-Isopropyltoluene	ND	0.080	1.0		ug/L	1	6/16/2011 08:40 PM
4-Methyl-2-pentanone	ND	0.76	10		ug/L	1	6/16/2011 08:40 PM
Acetone	ND	1.6	10		ug/L	1	6/16/2011 08:40 PM
Acrolein	ND	4.3	20		ug/L	1	6/16/2011 08:40 PM
Acrylonitrile	ND	0.61	20		ug/L	1	6/16/2011 08:40 PM
Benzene	ND	0.075	1.0		ug/L	1	6/16/2011 08:40 PM
Bromobenzene	ND	0.082	1.0		ug/L	1	6/16/2011 08:40 PM
Bromochloromethane	ND	0.15	1.0		ug/L	1	6/16/2011 08:40 PM
Bromodichloromethane	ND	0.063	1.0		ug/L	1	6/16/2011 08:40 PM
Bromoform	ND	0.086	1.0		ug/L	1	6/16/2011 08:40 PM
Bromomethane	ND	0.13	1.0		ug/L	1	6/16/2011 08:40 PM
Carbon disulfide	ND	0.054	1.0		ug/L	1	6/16/2011 08:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	EB-70331-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 3:00:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
Carbon tetrachloride	ND	0.10	1.0		ug/L	1	6/16/2011 08:40 PM
Chlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 08:40 PM
Chloroethane	ND	0.14	1.0		ug/L	1	6/16/2011 08:40 PM
Chloroform	ND	0.058	1.0		ug/L	1	6/16/2011 08:40 PM
Chloromethane	ND	0.054	1.0		ug/L	1	6/16/2011 08:40 PM
cis-1,2-Dichloroethene	ND	0.11	1.0		ug/L	1	6/16/2011 08:40 PM
cis-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 08:40 PM
Dibromochloromethane	ND	0.061	1.0		ug/L	1	6/16/2011 08:40 PM
Dibromomethane	ND	0.15	1.0		ug/L	1	6/16/2011 08:40 PM
Dichlorodifluoromethane	ND	0.12	1.0		ug/L	1	6/16/2011 08:40 PM
Ethylbenzene	ND	0.051	1.0		ug/L	1	6/16/2011 08:40 PM
Freon-113	ND	0.080	1.0		ug/L	1	6/16/2011 08:40 PM
Hexachlorobutadiene	ND	0.17	1.0		ug/L	1	6/16/2011 08:40 PM
Isopropylbenzene	ND	0.057	1.0		ug/L	1	6/16/2011 08:40 PM
m,p-Xylene	ND	0.17	1.0		ug/L	1	6/16/2011 08:40 PM
Methylene chloride	ND	0.10	5.0		ug/L	1	6/16/2011 08:40 PM
MTBE	ND	0.089	1.0		ug/L	1	6/16/2011 08:40 PM
n-Butylbenzene	ND	0.082	1.0		ug/L	1	6/16/2011 08:40 PM
n-Propylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 08:40 PM
Naphthalene	ND	0.056	1.0		ug/L	1	6/16/2011 08:40 PM
o-Xylene	ND	0.077	1.0		ug/L	1	6/16/2011 08:40 PM
sec-Butylbenzene	ND	0.098	1.0		ug/L	1	6/16/2011 08:40 PM
Styrene	ND	0.072	1.0		ug/L	1	6/16/2011 08:40 PM
tert-Butylbenzene	ND	0.062	1.0		ug/L	1	6/16/2011 08:40 PM
Tetrachloroethene	ND	0.13	1.0		ug/L	1	6/16/2011 08:40 PM
Toluene	3.2	0.12	2.5		ug/L	1	6/16/2011 08:40 PM
trans-1,2-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 08:40 PM
trans-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 08:40 PM
Trichloroethene	ND	0.060	1.0		ug/L	1	6/16/2011 08:40 PM
Trichlorofluoromethane	ND	0.097	1.0		ug/L	1	6/16/2011 08:40 PM
Vinyl chloride	ND	0.12	1.0		ug/L	1	6/16/2011 08:40 PM
Xylenes, Total	ND	1.5	2.0		ug/L	1	6/16/2011 08:40 PM
Surr: 1,2-Dichloroethane-d4	93.2	0	72-119		%REC	1	6/16/2011 08:40 PM
Surr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	6/16/2011 08:40 PM
Surr: Dibromofluoromethane	96.5	0	85-115		%REC	1	6/16/2011 08:40 PM
Surr: Toluene-d8	104	0	81-120		%REC	1	6/16/2011 08:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	TB-061111
Lab Order:	N005957	**Collection Date:**	6/11/2011 4:10:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
1,1,1,2-Tetrachloroethane	ND	0.061	1.0		ug/L	1	6/16/2011 08:17 PM
1,1,1-Trichloroethane	ND	0.068	1.0		ug/L	1	6/16/2011 08:17 PM
1,1,2,2-Tetrachloroethane	ND	0.054	1.0		ug/L	1	6/16/2011 08:17 PM
1,1,2-Trichloroethane	ND	0.083	1.0		ug/L	1	6/16/2011 08:17 PM
1,1-Dichloroethane	ND	0.099	1.0		ug/L	1	6/16/2011 08:17 PM
1,1-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 08:17 PM
1,1-Dichloropropene	ND	0.082	1.0		ug/L	1	6/16/2011 08:17 PM
1,2,3-Trichlorobenzene	ND	0.10	1.0		ug/L	1	6/16/2011 08:17 PM
1,2,3-Trichloropropane	ND	0.12	1.0		ug/L	1	6/16/2011 08:17 PM
1,2,4-Trichlorobenzene	ND	0.12	1.0		ug/L	1	6/16/2011 08:17 PM
1,2,4-Trimethylbenzene	ND	0.095	1.0		ug/L	1	6/16/2011 08:17 PM
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		ug/L	1	6/16/2011 08:17 PM
1,2-Dibromoethane	ND	0.14	1.0		ug/L	1	6/16/2011 08:17 PM
1,2-Dichlorobenzene	ND	0.070	1.0		ug/L	1	6/16/2011 08:17 PM
1,2-Dichloroethane	ND	0.17	1.0		ug/L	1	6/16/2011 08:17 PM
1,2-Dichloropropane	ND	0.085	1.0		ug/L	1	6/16/2011 08:17 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 08:17 PM
1,3-Dichlorobenzene	ND	0.090	1.0		ug/L	1	6/16/2011 08:17 PM
1,3-Dichloropropane	ND	0.074	1.0		ug/L	1	6/16/2011 08:17 PM
1,4-Dichlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 08:17 PM
2,2-Dichloropropane	ND	0.061	1.0		ug/L	1	6/16/2011 08:17 PM
2-Butanone	ND	1.0	10		ug/L	1	6/16/2011 08:17 PM
2-Chlorotoluene	ND	0.080	1.0		ug/L	1	6/16/2011 08:17 PM
4-Chlorotoluene	ND	0.10	1.0		ug/L	1	6/16/2011 08:17 PM
4-Isopropyltoluene	ND	0.080	1.0		ug/L	1	6/16/2011 08:17 PM
4-Methyl-2-pentanone	ND	0.76	10		ug/L	1	6/16/2011 08:17 PM
Acetone	ND	1.6	10		ug/L	1	6/16/2011 08:17 PM
Acrolein	ND	4.3	20		ug/L	1	6/16/2011 08:17 PM
Acrylonitrile	ND	0.61	20		ug/L	1	6/16/2011 08:17 PM
Benzene	ND	0.075	1.0		ug/L	1	6/16/2011 08:17 PM
Bromobenzene	ND	0.082	1.0		ug/L	1	6/16/2011 08:17 PM
Bromochloromethane	ND	0.15	1.0		ug/L	1	6/16/2011 08:17 PM
Bromodichloromethane	ND	0.063	1.0		ug/L	1	6/16/2011 08:17 PM
Bromoform	ND	0.086	1.0		ug/L	1	6/16/2011 08:17 PM
Bromomethane	ND	0.13	1.0		ug/L	1	6/16/2011 08:17 PM
Carbon disulfide	ND	0.054	1.0		ug/L	1	6/16/2011 08:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock,417981.ER.02.DM
Lab ID: N005957-013

Client Sample ID: TB-061111
Collection Date: 6/11/2011 4:10:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_110616B**	QC Batch: **D11VW077**				PrepDate:		Analyst: **QBM**
Carbon tetrachloride	ND	0.10	1.0		ug/L	1	6/16/2011 08:17 PM
Chlorobenzene	ND	0.092	1.0		ug/L	1	6/16/2011 08:17 PM
Chloroethane	ND	0.14	1.0		ug/L	1	6/16/2011 08:17 PM
Chloroform	ND	0.058	1.0		ug/L	1	6/16/2011 08:17 PM
Chloromethane	ND	0.054	1.0		ug/L	1	6/16/2011 08:17 PM
cis-1,2-Dichloroethene	ND	0.11	1.0		ug/L	1	6/16/2011 08:17 PM
cis-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 08:17 PM
Dibromochloromethane	ND	0.061	1.0		ug/L	1	6/16/2011 08:17 PM
Dibromomethane	ND	0.15	1.0		ug/L	1	6/16/2011 08:17 PM
Dichlorodifluoromethane	ND	0.12	1.0		ug/L	1	6/16/2011 08:17 PM
Ethylbenzene	ND	0.051	1.0		ug/L	1	6/16/2011 08:17 PM
Freon-113	ND	0.080	1.0		ug/L	1	6/16/2011 08:17 PM
Hexachlorobutadiene	ND	0.17	1.0		ug/L	1	6/16/2011 08:17 PM
Isopropylbenzene	ND	0.057	1.0		ug/L	1	6/16/2011 08:17 PM
m,p-Xylene	ND	0.17	1.0		ug/L	1	6/16/2011 08:17 PM
Methylene chloride	ND	0.10	5.0		ug/L	1	6/16/2011 08:17 PM
MTBE	ND	0.089	1.0		ug/L	1	6/16/2011 08:17 PM
n-Butylbenzene	ND	0.082	1.0		ug/L	1	6/16/2011 08:17 PM
n-Propylbenzene	ND	0.087	1.0		ug/L	1	6/16/2011 08:17 PM
Naphthalene	ND	0.056	1.0		ug/L	1	6/16/2011 08:17 PM
o-Xylene	ND	0.077	1.0		ug/L	1	6/16/2011 08:17 PM
sec-Butylbenzene	ND	0.098	1.0		ug/L	1	6/16/2011 08:17 PM
Styrene	ND	0.072	1.0		ug/L	1	6/16/2011 08:17 PM
tert-Butylbenzene	ND	0.062	1.0		ug/L	1	6/16/2011 08:17 PM
Tetrachloroethene	ND	0.13	1.0		ug/L	1	6/16/2011 08:17 PM
Toluene	ND	0.12	2.5		ug/L	1	6/16/2011 08:17 PM
trans-1,2-Dichloroethene	ND	0.094	1.0		ug/L	1	6/16/2011 08:17 PM
trans-1,3-Dichloropropene	ND	0.10	1.0		ug/L	1	6/16/2011 08:17 PM
Trichloroethene	ND	0.060	1.0		ug/L	1	6/16/2011 08:17 PM
Trichlorofluoromethane	ND	0.097	1.0		ug/L	1	6/16/2011 08:17 PM
Vinyl chloride	ND	0.12	1.0		ug/L	1	6/16/2011 08:17 PM
Xylenes, Total	ND	1.5	2.0		ug/L	1	6/16/2011 08:17 PM
Surr: 1,2-Dichloroethane-d4	95.5	0	72-119		%REC	1	6/16/2011 08:17 PM
Surr: 4-Bromofluorobenzene	105	0	76-119		%REC	1	6/16/2011 08:17 PM
Surr: Dibromofluoromethane	99.4	0	85-115		%REC	1	6/16/2011 08:17 PM
Surr: Toluene-d8	105	0	81-120		%REC	1	6/16/2011 08:17 PM

Qualifiers:
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

Advanced Technology Laboratories, Inc.

Date: *28-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D110616LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **80420**
Client ID: **LCSW** Batch ID: **D11VW077** TestNo: **EPA 8260B** Analysis Date: **6/16/2011** SeqNo: **1277729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	24.500	1.0	25.00	0	98.0	81	129				
1,1,1-Trichloroethane	22.860	1.0	25.00	0	91.4	67	132				
1,1,2,2-Tetrachloroethane	25.090	1.0	25.00	0	100	63	128				
1,1,2-Trichloroethane	23.290	1.0	25.00	0	93.2	75	125				
1,1-Dichloroethane	24.220	1.0	25.00	0	96.9	69	133				
1,1-Dichloroethene	25.360	1.0	25.00	0	101	68	130				
1,1-Dichloropropene	23.180	1.0	25.00	0	92.7	73	132				
1,2,3-Trichlorobenzene	24.050	1.0	25.00	0	96.2	67	137				
1,2,3-Trichloropropane	24.500	1.0	25.00	0	98.0	73	124				
1,2,4-Trichlorobenzene	24.570	1.0	25.00	0	98.3	66	134				
1,2,4-Trimethylbenzene	24.730	1.0	25.00	0	98.9	74	132				
1,2-Dibromo-3-chloropropane	21.280	2.0	25.00	0	85.1	50	132				
1,2-Dibromoethane	24.300	1.0	25.00	0	97.2	80	121				
1,2-Dichlorobenzene	24.620	1.0	25.00	0	98.5	71	122				
1,2-Dichloroethane	25.610	1.0	25.00	0	102	69	132				
1,2-Dichloropropane	22.490	1.0	25.00	0	90.0	75	125				
1,3,5-Trimethylbenzene	24.910	1.0	25.00	0	99.6	74	131				
1,3-Dichlorobenzene	25.220	1.0	25.00	0	101	75	124				
1,3-Dichloropropane	23.880	1.0	25.00	0	95.5	73	126				
1,4-Dichlorobenzene	25.050	1.0	25.00	0	100	74	123				
2,2-Dichloropropane	19.240	1.0	25.00	0	77.0	69	137				
2-Butanone	249.060	10	250.0	0	99.6	49	136				
2-Chlorotoluene	25.390	1.0	25.00	0	102	73	126				
4-Chlorotoluene	24.830	1.0	25.00	0	99.3	74	128				
4-Isopropyltoluene	25.210	1.0	25.00	0	101	73	130				
4-Methyl-2-pentanone	261.160	10	250.0	0	104	58	134				
Acetone	249.930	10	250.0	0	100	40	135				
Acrolein	195.560	20	250.0	0	78.2	75	125				
Acrylonitrile	334.460	20	250.0	0	134	75	125				S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc. 3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

Advanced Technology Laboratories, Inc.
3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D110616LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **80420**
Client ID: **LCSW** Batch ID: **D11VW077** TestNo: **EPA 8260B** Analysis Date: **6/16/2011** SeqNo: **1277729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	23.970	1.0	25.00	0	95.9	81	122				
Bromobenzene	24.830	1.0	25.00	0	99.3	76	124				
Bromochloromethane	24.500	1.0	25.00	0	98.0	65	129				
Bromodichloromethane	24.600	1.0	25.00	0	98.4	76	121				
Bromoform	22.170	1.0	25.00	0	88.7	69	128				
Bromomethane	16.890	1.0	25.00	0	67.6	53	141				
Carbon disulfide	24.220	1.0	25.00	0	96.9	75	125				
Carbon tetrachloride	19.570	1.0	25.00	0	78.3	66	138				
Chlorobenzene	25.110	1.0	25.00	0	100	81	122				
Chloroethane	29.710	1.0	25.00	0	119	58	133				
Chloroform	24.630	1.0	25.00	0	98.5	69	128				
Chloromethane	18.730	1.0	25.00	0	74.9	56	131				
cis-1,2-Dichloroethene	24.530	1.0	25.00	0	98.1	72	126				
cis-1,3-Dichloropropene	20.230	1.0	25.00	0	80.9	69	131				
Dibromochloromethane	21.930	1.0	25.00	0	87.7	66	133				
Dibromomethane	25.620	1.0	25.00	0	102	76	125				
Dichlorodifluoromethane	23.200	1.0	25.00	0	92.8	53	153				
Ethylbenzene	25.130	1.0	25.00	0	101	73	127				
Freon-113	25.490	1.0	25.00	0	102	75	125				
Hexachlorobutadiene	24.510	1.0	25.00	0	98.0	67	131				
Isopropylbenzene	25.200	1.0	25.00	0	101	75	127				
m,p-Xylene	52.660	1.0	50.00	0	105	76	128				
Methylene chloride	22.650	5.0	25.00	0	90.6	63	137				
MTBE	21.230	1.0	25.00	0	84.9	65	123				
n-Butylbenzene	25.040	1.0	25.00	0	100	69	137				
n-Propylbenzene	25.310	1.0	25.00	0	101	72	129				
Naphthalene	23.420	1.0	25.00	0	93.7	54	138				
o-Xylene	25.060	1.0	25.00	0	100	80	121				
sec-Butylbenzene	25.540	1.0	25.00	0	102	72	127				
Styrene	25.710	1.0	25.00	0	103	65	134				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc.
3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D110616LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **80420**
Client ID: **LCSW** Batch ID: **D11VW077** TestNo: **EPA 8260B** Analysis Date: **6/16/2011** SeqNo: **1277729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
tert-Butylbenzene	25.000	1.0	25.00	0	100	70	129				
Tetrachloroethene	26.200	1.0	25.00	0	105	66	128				
Toluene	24.540	2.5	25.00	0	98.2	77	122				
trans-1,2-Dichloroethene	24.410	1.0	25.00	0	97.6	63	137				
trans-1,3-Dichloropropene	19.840	1.0	25.00	0	79.4	59	135				
Trichloroethene	23.570	1.0	25.00	0	94.3	70	127				
Trichlorofluoromethane	29.960	1.0	25.00	0	120	57	129				
Vinyl chloride	23.830	1.0	25.00	0	95.3	50	134				
Xylenes, Total	77.720	2.0	75.00	0	104	75	125				
Surr: 1,2-Dichloroethane-d4	23.540		25.00		94.2	72	119				
Surr: 4-Bromofluorobenzene	24.000		25.00		96.0	76	119				
Surr: Dibromofluoromethane	24.890		25.00		99.6	85	115				
Surr: Toluene-d8	24.030		25.00		96.1	81	120				

Sample ID: **N005957-003MMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **80420**
Client ID: **ZZZZZZ** Batch ID: **D11VW077** TestNo: **EPA 8260B** Analysis Date: **6/16/2011** SeqNo: **1277730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	23.910	1.0	25.00	0	95.6	81	129				
1,1,1-Trichloroethane	22.570	1.0	25.00	0	90.3	67	132				
1,1,2,2-Tetrachloroethane	21.190	1.0	25.00	0	84.8	63	128				
1,1,2-Trichloroethane	21.680	1.0	25.00	0	86.7	75	125				
1,1-Dichloroethane	24.000	1.0	25.00	0	96.0	69	133				
1,1-Dichloroethene	25.850	1.0	25.00	0	103	68	130				
1,1-Dichloropropene	23.720	1.0	25.00	0	94.9	73	132				
1,2,3-Trichlorobenzene	25.040	1.0	25.00	0	100	67	137				
1,2,3-Trichloropropane	19.990	1.0	25.00	0	80.0	73	124				
1,2,4-Trichlorobenzene	26.260	1.0	25.00	0	105	66	134				
1,2,4-Trimethylbenzene	24.880	1.0	25.00	0	99.5	74	132				
1,2-Dibromo-3-chloropropane	17.470	2.0	25.00	0	69.9	50	132				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc.
3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N005957-003MMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **80420**
Client ID: **ZZZZZZ** Batch ID: **D11VW077** TestNo: **EPA 8260B** Analysis Date: **6/16/2011** SeqNo: **1277730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	21.870	1.0	25.00	0	87.5	80	121				
1,2-Dichlorobenzene	24.990	1.0	25.00	0	100	71	122				
1,2-Dichloroethane	23.400	1.0	25.00	0	93.6	69	132				
1,2-Dichloropropane	22.680	1.0	25.00	0	90.7	75	125				
1,3,5-Trimethylbenzene	25.110	1.0	25.00	0	100	74	131				
1,3-Dichlorobenzene	26.180	1.0	25.00	0	105	75	124				
1,3-Dichloropropane	21.910	1.0	25.00	0	87.6	73	126				
1,4-Dichlorobenzene	25.850	1.0	25.00	0	103	74	123				
2,2-Dichloropropane	19.080	1.0	25.00	0	76.3	69	137				
2-Butanone	98.070	10	250.0	0	39.2	49	136				S
2-Chlorotoluene	25.770	1.0	25.00	0	103	73	126				
4-Chlorotoluene	25.370	1.0	25.00	0	101	74	128				
4-Isopropyltoluene	26.350	1.0	25.00	0	105	73	130				
4-Methyl-2-pentanone	193.040	10	250.0	0	77.2	58	134				
Acetone	73.340	10	250.0	0	29.3	40	135				S
Acrolein	189.070	20	250.0	0	75.6	75	125				
Acrylonitrile	316.620	20	250.0	0	127	75	125				S
Benzene	23.910	1.0	25.00	0	95.6	81	122				
Bromobenzene	24.650	1.0	25.00	0	98.6	76	124				
Bromochloromethane	23.340	1.0	25.00	0	93.4	65	129				
Bromodichloromethane	24.240	1.0	25.00	0	97.0	76	121				
Bromoform	19.320	1.0	25.00	0	77.3	69	128				
Bromomethane	18.480	1.0	25.00	0	73.9	53	141				
Carbon disulfide	24.150	1.0	25.00	0	96.6	75	125				
Carbon tetrachloride	19.880	1.0	25.00	0	79.5	66	138				
Chlorobenzene	25.580	1.0	25.00	0	102	81	122				
Chloroethane	29.130	1.0	25.00	0	117	58	133				
Chloroform	25.960	1.0	25.00	1.830	96.5	69	128				
Chloromethane	20.420	1.0	25.00	0	81.7	56	131				
cis-1,2-Dichloroethene	24.540	1.0	25.00	0	98.2	72	126				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc.
3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N005957-003MMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **80420**
Client ID: **ZZZZZZ** Batch ID: **D11VW077** TestNo: **EPA 8260B** Analysis Date: **6/16/2011** SeqNo: **1277730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,3-Dichloropropene	20.240	1.0	25.00	0	81.0	69	131				
Dibromochloromethane	20.930	1.0	25.00	0	83.7	66	133				
Dibromomethane	23.230	1.0	25.00	0	92.9	76	125				
Dichlorodifluoromethane	24.900	1.0	25.00	0	99.6	53	153				
Ethylbenzene	26.070	1.0	25.00	0	104	73	127				
Freon-113	25.230	1.0	25.00	0	101	75	125				
Hexachlorobutadiene	27.880	1.0	25.00	0	112	67	131				
Isopropylbenzene	26.260	1.0	25.00	0	105	75	127				
m,p-Xylene	54.310	1.0	50.00	0	109	76	128				
Methylene chloride	22.200	5.0	25.00	0	88.8	63	137				
MTBE	19.530	1.0	25.00	0	78.1	65	123				
n-Butylbenzene	26.940	1.0	25.00	0	108	69	137				
n-Propylbenzene	26.290	1.0	25.00	0	105	72	129				
Naphthalene	20.900	1.0	25.00	0	83.6	54	138				
o-Xylene	25.840	1.0	25.00	0	103	80	121				
sec-Butylbenzene	26.560	1.0	25.00	0	106	72	127				
Styrene	23.260	1.0	25.00	0	93.0	65	134				
tert-Butylbenzene	25.820	1.0	25.00	0	103	70	129				
Tetrachloroethene	26.970	1.0	25.00	0	108	66	128				
Toluene	24.850	2.5	25.00	0	99.4	77	122				
trans-1,2-Dichloroethene	24.450	1.0	25.00	0	97.8	63	137				
trans-1,3-Dichloropropene	18.880	1.0	25.00	0	75.5	59	135				
Trichloroethene	24.070	1.0	25.00	0	96.3	70	127				
Trichlorofluoromethane	30.320	1.0	25.00	0	121	57	129				
Vinyl chloride	25.350	1.0	25.00	0	101	50	134				
Xylenes, Total	80.150	2.0	75.00	0	107	75	125				
Surr: 1,2-Dichloroethane-d4	21.020		25.00		84.1	72	119				
Surr: 4-Bromofluorobenzene	24.440		25.00		97.8	76	119				
Surr: Dibromofluoromethane	24.020		25.00		96.1	85	115				
Surr: Toluene-d8	24.210		25.00		96.8	81	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N005957-003MMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **80420**
Client ID: **ZZZZZZ** Batch ID: **D11VW077** TestNo: **EPA 8260B** Analysis Date: **6/16/2011** SeqNo: **1277731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	24.470	1.0	25.00	0	97.9	81	129	23.91	2.32	20	
1,1,1-Trichloroethane	22.480	1.0	25.00	0	89.9	67	132	22.57	0.400	20	
1,1,2,2-Tetrachloroethane	21.190	1.0	25.00	0	84.8	63	128	21.19	0	20	
1,1,2-Trichloroethane	21.910	1.0	25.00	0	87.6	75	125	21.68	1.06	20	
1,1-Dichloroethane	23.870	1.0	25.00	0	95.5	69	133	24.00	0.543	20	
1,1-Dichloroethene	25.710	1.0	25.00	0	103	68	130	25.85	0.543	20	
1,1-Dichloropropene	23.850	1.0	25.00	0	95.4	73	132	23.72	0.547	20	
1,2,3-Trichlorobenzene	24.210	1.0	25.00	0	96.8	67	137	25.04	3.37	20	
1,2,3-Trichloropropane	20.470	1.0	25.00	0	81.9	73	124	19.99	2.37	20	
1,2,4-Trichlorobenzene	25.130	1.0	25.00	0	101	66	134	26.26	4.40	20	
1,2,4-Trimethylbenzene	25.220	1.0	25.00	0	101	74	132	24.88	1.36	20	
1,2-Dibromo-3-chloropropane	17.040	2.0	25.00	0	68.2	50	132	17.47	2.49	20	
1,2-Dibromoethane	21.080	1.0	25.00	0	84.3	80	121	21.87	3.68	20	
1,2-Dichlorobenzene	24.310	1.0	25.00	0	97.2	71	122	24.99	2.76	20	
1,2-Dichloroethane	23.890	1.0	25.00	0	95.6	69	132	23.40	2.07	20	
1,2-Dichloropropane	22.520	1.0	25.00	0	90.1	75	125	22.68	0.708	20	
1,3,5-Trimethylbenzene	25.450	1.0	25.00	0	102	74	131	25.11	1.34	20	
1,3-Dichlorobenzene	25.660	1.0	25.00	0	103	75	124	26.18	2.01	20	
1,3-Dichloropropane	22.390	1.0	25.00	0	89.6	73	126	21.91	2.17	20	
1,4-Dichlorobenzene	25.310	1.0	25.00	0	101	74	123	25.85	2.11	20	
2,2-Dichloropropane	18.630	1.0	25.00	0	74.5	69	137	19.08	2.39	20	
2-Butanone	92.880	10	250.0	0	37.2	49	136	98.07	5.44	20	S
2-Chlorotoluene	25.930	1.0	25.00	0	104	73	126	25.77	0.619	20	
4-Chlorotoluene	25.540	1.0	25.00	0	102	74	128	25.37	0.668	20	
4-Isopropyltoluene	26.360	1.0	25.00	0	105	73	130	26.35	0.0379	20	
4-Methyl-2-pentanone	190.490	10	250.0	0	76.2	58	134	193.0	1.33	20	
Acetone	71.870	10	250.0	0	28.7	40	135	73.34	2.02	20	S
Acrolein	180.390	20	250.0	0	72.2	75	125	189.1	4.70	20	S
Acrylonitrile	317.360	20	250.0	0	127	75	125	316.6	0.233	20	S
Benzene	23.920	1.0	25.00	0	95.7	81	122	23.91	0.0418	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N005957-003MMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **80420**
Client ID: **ZZZZZZ** Batch ID: **D11VW077** TestNo: **EPA 8260B** Analysis Date: **6/16/2011** SeqNo: **1277731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromobenzene	24.800	1.0	25.00	0	99.2	76	124	24.65	0.607	20	
Bromochloromethane	23.250	1.0	25.00	0	93.0	65	129	23.34	0.386	20	
Bromodichloromethane	24.290	1.0	25.00	0	97.2	76	121	24.24	0.206	20	
Bromoform	19.520	1.0	25.00	0	78.1	69	128	19.32	1.03	20	
Bromomethane	17.930	1.0	25.00	0	71.7	53	141	18.48	3.02	20	
Carbon disulfide	23.670	1.0	25.00	0	94.7	75	125	24.15	2.01	20	
Carbon tetrachloride	19.950	1.0	25.00	0	79.8	66	138	19.88	0.351	20	
Chlorobenzene	25.520	1.0	25.00	0	102	81	122	25.58	0.235	20	
Chloroethane	26.030	1.0	25.00	0	104	58	133	29.13	11.2	20	
Chloroform	25.890	1.0	25.00	1.830	96.2	69	128	25.96	0.270	20	
Chloromethane	20.090	1.0	25.00	0	80.4	56	131	20.42	1.63	20	
cis-1,2-Dichloroethene	24.090	1.0	25.00	0	96.4	72	126	24.54	1.85	20	
cis-1,3-Dichloropropene	19.790	1.0	25.00	0	79.2	69	131	20.24	2.25	20	
Dibromochloromethane	21.030	1.0	25.00	0	84.1	66	133	20.93	0.477	20	
Dibromomethane	22.790	1.0	25.00	0	91.2	76	125	23.23	1.91	20	
Dichlorodifluoromethane	24.320	1.0	25.00	0	97.3	53	153	24.90	2.36	20	
Ethylbenzene	26.020	1.0	25.00	0	104	73	127	26.07	0.192	20	
Freon-113	24.690	1.0	25.00	0	98.8	75	125	25.23	2.16	20	
Hexachlorobutadiene	27.160	1.0	25.00	0	109	67	131	27.88	2.62	20	
Isopropylbenzene	26.600	1.0	25.00	0	106	75	127	26.26	1.29	20	
m,p-Xylene	54.350	1.0	50.00	0	109	76	128	54.31	0.0736	20	
Methylene chloride	21.980	5.0	25.00	0	87.9	63	137	22.20	0.996	20	
MTBE	19.550	1.0	25.00	0	78.2	65	123	19.53	0.102	20	
n-Butylbenzene	26.770	1.0	25.00	0	107	69	137	26.94	0.633	20	
n-Propylbenzene	26.430	1.0	25.00	0	106	72	129	26.29	0.531	20	
Naphthalene	20.300	1.0	25.00	0	81.2	54	138	20.90	2.91	20	
o-Xylene	25.720	1.0	25.00	0	103	80	121	25.84	0.465	20	
sec-Butylbenzene	26.750	1.0	25.00	0	107	72	127	26.56	0.713	20	
Styrene	23.020	1.0	25.00	0	92.1	65	134	23.26	1.04	20	
tert-Butylbenzene	25.960	1.0	25.00	0	104	70	129	25.82	0.541	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N005957-003MMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **80420**
Client ID: **ZZZZZZ** Batch ID: **D11VW077** TestNo: **EPA 8260B** Analysis Date: **6/16/2011** SeqNo: **1277731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethene	26.990	1.0	25.00	0	108	66	128	26.97	0.0741	20	
Toluene	24.430	2.5	25.00	0	97.7	77	122	24.85	1.70	20	
trans-1,2-Dichloroethene	24.720	1.0	25.00	0	98.9	63	137	24.45	1.10	20	
trans-1,3-Dichloropropene	18.790	1.0	25.00	0	75.2	59	135	18.88	0.478	20	
Trichloroethene	24.040	1.0	25.00	0	96.2	70	127	24.07	0.125	20	
Trichlorofluoromethane	30.550	1.0	25.00	0	122	57	129	30.32	0.756	20	
Vinyl chloride	24.590	1.0	25.00	0	98.4	50	134	25.35	3.04	20	
Xylenes, Total	80.070	2.0	75.00	0	107	75	125	80.15	0.0999	20	
Surr: 1,2-Dichloroethane-d4	21.060		25.00		84.2	72	119		0		
Surr: 4-Bromofluorobenzene	24.310		25.00		97.2	76	119		0		
Surr: Dibromofluoromethane	23.980		25.00		95.9	85	115		0		
Surr: Toluene-d8	23.900		25.00		95.6	81	120		0		

Sample ID: **D110616MB4** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **80420**
Client ID: **PBW** Batch ID: **D11VW077** TestNo: **EPA 8260B** Analysis Date: **6/16/2011** SeqNo: **1277732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	1.0									
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,1-Dichloropropene	ND	1.0									
1,2,3-Trichlorobenzene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2,4-Trichlorobenzene	ND	1.0									
1,2,4-Trimethylbenzene	ND	1.0									
1,2-Dibromo-3-chloropropane	ND	2.0									
1,2-Dibromoethane	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D110616MB4** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **80420**
Client ID: **PBW** Batch ID: **D11VW077** TestNo: **EPA 8260B** Analysis Date: **6/16/2011** SeqNo: **1277732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,2-Dichloropropane	ND	1.0									
1,3,5-Trimethylbenzene	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2,2-Dichloropropane	ND	1.0									
2-Butanone	ND	10									
2-Chlorotoluene	ND	1.0									
4-Chlorotoluene	ND	1.0									
4-Isopropyltoluene	ND	1.0									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Acrolein	ND	20									
Acrylonitrile	ND	20									
Benzene	ND	1.0									
Bromobenzene	ND	1.0									
Bromochloromethane	ND	1.0									
Bromodichloromethane	ND	1.0									
Bromoform	ND	1.0									
Bromomethane	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Chloromethane	ND	1.0									
cis-1,2-Dichloroethene	ND	1.0									
cis-1,3-Dichloropropene	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D110616MB4** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **80420**
Client ID: **PBW** Batch ID: **D11VW077** TestNo: **EPA 8260B** Analysis Date: **6/16/2011** SeqNo: **1277732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dibromochloromethane	ND	1.0									
Dibromomethane	ND	1.0									
Dichlorodifluoromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Freon-113	ND	1.0									
Hexachlorobutadiene	ND	1.0									
Isopropylbenzene	ND	1.0									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	5.0									
MTBE	ND	1.0									
n-Butylbenzene	ND	1.0									
n-Propylbenzene	ND	1.0									
Naphthalene	ND	1.0									
o-Xylene	ND	1.0									
sec-Butylbenzene	ND	1.0									
Styrene	ND	1.0									
tert-Butylbenzene	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	2.5									
trans-1,2-Dichloroethene	ND	1.0									
trans-1,3-Dichloropropene	ND	1.0									
Trichloroethene	ND	1.0									
Trichlorofluoromethane	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	22.690		25.00		90.8	72	119				
Surr: 4-Bromofluorobenzene	25.390		25.00		102	76	119				
Surr: Dibromofluoromethane	24.200		25.00		96.8	85	115				
Surr: Toluene-d8	26.390		25.00		106	81	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C				**EPA 8270C**			
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
1,2,4-Trichlorobenzene	ND	4.4	10		µg/L	1	6/16/2011 06:16 PM
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	6/16/2011 06:16 PM
1,3-Dichlorobenzene	ND	5.1	10		µg/L	1	6/16/2011 06:16 PM
1,4-Dichlorobenzene	ND	4.5	10		µg/L	1	6/16/2011 06:16 PM
2,4,5-Trichlorophenol	ND	3.7	10		µg/L	1	6/16/2011 06:16 PM
2,4,6-Trichlorophenol	ND	4.5	10		µg/L	1	6/16/2011 06:16 PM
2,4-Dichlorophenol	ND	4.3	10		µg/L	1	6/16/2011 06:16 PM
2,4-Dimethylphenol	ND	3.7	10		µg/L	1	6/16/2011 06:16 PM
2,4-Dinitrophenol	ND	3.4	51		µg/L	1	6/16/2011 06:16 PM
2,4-Dinitrotoluene	ND	3.9	10		µg/L	1	6/16/2011 06:16 PM
2,6-Dinitrotoluene	ND	4.0	10		µg/L	1	6/16/2011 06:16 PM
2-Chloronaphthalene	ND	4.1	10		µg/L	1	6/16/2011 06:16 PM
2-Chlorophenol	ND	3.7	10		µg/L	1	6/16/2011 06:16 PM
2-Methylnaphthalene	ND	4.5	10		µg/L	1	6/16/2011 06:16 PM
2-Methylphenol	ND	2.6	10		µg/L	1	6/16/2011 06:16 PM
2-Nitroaniline	ND	4.2	51		µg/L	1	6/16/2011 06:16 PM
2-Nitrophenol	ND	4.8	10		µg/L	1	6/16/2011 06:16 PM
3,3'-Dichlorobenzidine	ND	3.6	20		µg/L	1	6/16/2011 06:16 PM
3-Nitroaniline	ND	4.0	51		µg/L	1	6/16/2011 06:16 PM
4,6-Dinitro-2-methylphenol	ND	2.9	51		µg/L	1	6/16/2011 06:16 PM
4-Bromophenyl-phenylether	ND	4.0	10		µg/L	1	6/16/2011 06:16 PM
4-Chloro-3-methylphenol	ND	3.5	51		µg/L	1	6/16/2011 06:16 PM
4-Chloroaniline	ND	4.6	20		µg/L	1	6/16/2011 06:16 PM
4-Chlorophenyl-phenylether	ND	3.6	10		µg/L	1	6/16/2011 06:16 PM
4-Methylphenol	ND	5.6	10		µg/L	1	6/16/2011 06:16 PM
4-Nitroaniline	ND	3.9	20		µg/L	1	6/16/2011 06:16 PM
4-Nitrophenol	ND	1.6	51		µg/L	1	6/16/2011 06:16 PM
Acenaphthene	ND	4.3	10		µg/L	1	6/16/2011 06:16 PM
Acenaphthylene	ND	3.9	10		µg/L	1	6/16/2011 06:16 PM
Anthracene	ND	3.8	10		µg/L	1	6/16/2011 06:16 PM
Benzo(a)anthracene	ND	5.2	10		µg/L	1	6/16/2011 06:16 PM
Benzo(a)pyrene	ND	5.6	10		µg/L	1	6/16/2011 06:16 PM
Benzo(b)fluoranthene	ND	5.7	10		µg/L	1	6/16/2011 06:16 PM
Benzo(g,h,i)perylene	ND	5.9	10		µg/L	1	6/16/2011 06:16 PM
Benzo(k)fluoranthene	ND	5.4	10		µg/L	1	6/16/2011 06:16 PM
Benzoic acid	ND	2.8	51		µg/L	1	6/16/2011 06:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C			**EPA 8270C**				
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
Benzyl alcohol	ND	4.5	20		µg/L	1	6/16/2011 06:16 PM
Bis(2-chloroethoxy)methane	ND	4.6	10		µg/L	1	6/16/2011 06:16 PM
Bis(2-chloroethyl)ether	ND	5.5	10		µg/L	1	6/16/2011 06:16 PM
Bis(2-chloroisopropyl)ether	ND	4.4	10		µg/L	1	6/16/2011 06:16 PM
Bis(2-ethylhexyl)phthalate	ND	2.8	10		µg/L	1	6/16/2011 06:16 PM
Butylbenzylphthalate	ND	3.5	10		µg/L	1	6/16/2011 06:16 PM
Chrysene	ND	2.3	10		µg/L	1	6/16/2011 06:16 PM
Di-n-butylphthalate	ND	3.0	10		µg/L	1	6/16/2011 06:16 PM
Di-n-octylphthalate	ND	3.1	10		µg/L	1	6/16/2011 06:16 PM
Dibenz(a,h)anthracene	ND	5.7	10		µg/L	1	6/16/2011 06:16 PM
Dibenzofuran	ND	3.8	10		µg/L	1	6/16/2011 06:16 PM
Diethylphthalate	ND	3.3	10		µg/L	1	6/16/2011 06:16 PM
Dimethylphthalate	ND	3.7	10		µg/L	1	6/16/2011 06:16 PM
Fluoranthene	ND	3.2	10		µg/L	1	6/16/2011 06:16 PM
Fluorene	ND	3.7	10		µg/L	1	6/16/2011 06:16 PM
Hexachlorobenzene	ND	4.0	10		µg/L	1	6/16/2011 06:16 PM
Hexachlorobutadiene	ND	5.1	20		µg/L	1	6/16/2011 06:16 PM
Hexachloroethane	ND	4.8	10		µg/L	1	6/16/2011 06:16 PM
Indeno(1,2,3-cd)pyrene	ND	5.7	10		µg/L	1	6/16/2011 06:16 PM
Isophorone	ND	4.4	10		µg/L	1	6/16/2011 06:16 PM
N-Nitrosodi-n-propylamine	ND	5.1	10		µg/L	1	6/16/2011 06:16 PM
N-Nitrosodiphenylamine	ND	4.1	10		µg/L	1	6/16/2011 06:16 PM
Naphthalene	ND	4.5	10		µg/L	1	6/16/2011 06:16 PM
Nitrobenzene	ND	4.7	10		µg/L	1	6/16/2011 06:16 PM
Pentachlorophenol	ND	3.0	51		µg/L	1	6/16/2011 06:16 PM
Phenanthrene	ND	3.7	10		µg/L	1	6/16/2011 06:16 PM
Phenol	ND	1.6	10		µg/L	1	6/16/2011 06:16 PM
Pyrene	ND	3.2	10		µg/L	1	6/16/2011 06:16 PM
Surr: 1,2-Dichlorobenzene-d4	68.4	0	27-100		%REC	1	6/16/2011 06:16 PM
Surr: 2,4,6-Tribromophenol	91.5	0	42-124		%REC	1	6/16/2011 06:16 PM
Surr: 2-Chlorophenol-d4	72.5	0	34-98		%REC	1	6/16/2011 06:16 PM
Surr: 2-Fluorobiphenyl	73.4	0	48-120		%REC	1	6/16/2011 06:16 PM
Surr: 2-Fluorophenol	58.5	0	20-120		%REC	1	6/16/2011 06:16 PM
Surr: 4-Terphenyl-d14	93.0	0	51-135		%REC	1	6/16/2011 06:16 PM
Surr: Nitrobenzene-d5	68.9	0	41-120		%REC	1	6/16/2011 06:16 PM
Surr: Phenol-d5	46.9	0	20-120		%REC	1	6/16/2011 06:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C			**EPA 8270C**				
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
1,2,4-Trichlorobenzene	ND	4.5	10		µg/L	1	6/16/2011 06:44 PM
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	6/16/2011 06:44 PM
1,3-Dichlorobenzene	ND	5.1	10		µg/L	1	6/16/2011 06:44 PM
1,4-Dichlorobenzene	ND	4.5	10		µg/L	1	6/16/2011 06:44 PM
2,4,5-Trichlorophenol	ND	3.7	10		µg/L	1	6/16/2011 06:44 PM
2,4,6-Trichlorophenol	ND	4.6	10		µg/L	1	6/16/2011 06:44 PM
2,4-Dichlorophenol	ND	4.4	10		µg/L	1	6/16/2011 06:44 PM
2,4-Dimethylphenol	ND	3.7	10		µg/L	1	6/16/2011 06:44 PM
2,4-Dinitrophenol	ND	3.4	51		µg/L	1	6/16/2011 06:44 PM
2,4-Dinitrotoluene	ND	3.9	10		µg/L	1	6/16/2011 06:44 PM
2,6-Dinitrotoluene	ND	4.1	10		µg/L	1	6/16/2011 06:44 PM
2-Chloronaphthalene	ND	4.1	10		µg/L	1	6/16/2011 06:44 PM
2-Chlorophenol	ND	3.8	10		µg/L	1	6/16/2011 06:44 PM
2-Methylnaphthalene	ND	4.6	10		µg/L	1	6/16/2011 06:44 PM
2-Methylphenol	ND	2.7	10		µg/L	1	6/16/2011 06:44 PM
2-Nitroaniline	ND	4.3	51		µg/L	1	6/16/2011 06:44 PM
2-Nitrophenol	ND	4.8	10		µg/L	1	6/16/2011 06:44 PM
3,3'-Dichlorobenzidine	ND	3.7	20		µg/L	1	6/16/2011 06:44 PM
3-Nitroaniline	ND	4.0	51		µg/L	1	6/16/2011 06:44 PM
4,6-Dinitro-2-methylphenol	ND	2.9	51		µg/L	1	6/16/2011 06:44 PM
4-Bromophenyl-phenylether	ND	4.0	10		µg/L	1	6/16/2011 06:44 PM
4-Chloro-3-methylphenol	ND	3.5	51		µg/L	1	6/16/2011 06:44 PM
4-Chloroaniline	ND	4.7	20		µg/L	1	6/16/2011 06:44 PM
4-Chlorophenyl-phenylether	ND	3.6	10		µg/L	1	6/16/2011 06:44 PM
4-Methylphenol	ND	5.6	10		µg/L	1	6/16/2011 06:44 PM
4-Nitroaniline	ND	4.0	20		µg/L	1	6/16/2011 06:44 PM
4-Nitrophenol	ND	1.6	51		µg/L	1	6/16/2011 06:44 PM
Acenaphthene	ND	4.3	10		µg/L	1	6/16/2011 06:44 PM
Acenaphthylene	ND	4.0	10		µg/L	1	6/16/2011 06:44 PM
Anthracene	ND	3.8	10		µg/L	1	6/16/2011 06:44 PM
Benzo(a)anthracene	ND	5.3	10		µg/L	1	6/16/2011 06:44 PM
Benzo(a)pyrene	ND	5.6	10		µg/L	1	6/16/2011 06:44 PM
Benzo(b)fluoranthene	ND	5.8	10		µg/L	1	6/16/2011 06:44 PM
Benzo(g,h,i)perylene	ND	6.0	10		µg/L	1	6/16/2011 06:44 PM
Benzo(k)fluoranthene	ND	5.5	10		µg/L	1	6/16/2011 06:44 PM
Benzoic acid	ND	2.8	51		µg/L	1	6/16/2011 06:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C			**EPA 8270C**				
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
Benzyl alcohol	ND	4.6	20		µg/L	1	6/16/2011 06:44 PM
Bis(2-chloroethoxy)methane	ND	4.7	10		µg/L	1	6/16/2011 06:44 PM
Bis(2-chloroethyl)ether	ND	5.6	10		µg/L	1	6/16/2011 06:44 PM
Bis(2-chloroisopropyl)ether	ND	4.4	10		µg/L	1	6/16/2011 06:44 PM
Bis(2-ethylhexyl)phthalate	ND	2.8	10		µg/L	1	6/16/2011 06:44 PM
Butylbenzylphthalate	ND	3.5	10		µg/L	1	6/16/2011 06:44 PM
Chrysene	ND	2.4	10		µg/L	1	6/16/2011 06:44 PM
Di-n-butylphthalate	ND	3.1	10		µg/L	1	6/16/2011 06:44 PM
Di-n-octylphthalate	ND	3.1	10		µg/L	1	6/16/2011 06:44 PM
Dibenz(a,h)anthracene	ND	5.8	10		µg/L	1	6/16/2011 06:44 PM
Dibenzofuran	ND	3.8	10		µg/L	1	6/16/2011 06:44 PM
Diethylphthalate	ND	3.3	10		µg/L	1	6/16/2011 06:44 PM
Dimethylphthalate	ND	3.8	10		µg/L	1	6/16/2011 06:44 PM
Fluoranthene	ND	3.2	10		µg/L	1	6/16/2011 06:44 PM
Fluorene	ND	3.7	10		µg/L	1	6/16/2011 06:44 PM
Hexachlorobenzene	ND	4.1	10		µg/L	1	6/16/2011 06:44 PM
Hexachlorobutadiene	ND	5.1	20		µg/L	1	6/16/2011 06:44 PM
Hexachloroethane	ND	4.8	10		µg/L	1	6/16/2011 06:44 PM
Indeno(1,2,3-cd)pyrene	ND	5.7	10		µg/L	1	6/16/2011 06:44 PM
Isophorone	ND	4.5	10		µg/L	1	6/16/2011 06:44 PM
N-Nitrosodi-n-propylamine	ND	5.2	10		µg/L	1	6/16/2011 06:44 PM
N-Nitrosodiphenylamine	ND	4.1	10		µg/L	1	6/16/2011 06:44 PM
Naphthalene	ND	4.6	10		µg/L	1	6/16/2011 06:44 PM
Nitrobenzene	ND	4.7	10		µg/L	1	6/16/2011 06:44 PM
Pentachlorophenol	ND	3.0	51		µg/L	1	6/16/2011 06:44 PM
Phenanthrene	ND	3.8	10		µg/L	1	6/16/2011 06:44 PM
Phenol	ND	1.6	10		µg/L	1	6/16/2011 06:44 PM
Pyrene	ND	3.3	10		µg/L	1	6/16/2011 06:44 PM
Surr: 1,2-Dichlorobenzene-d4	59.7	0	27-100		%REC	1	6/16/2011 06:44 PM
Surr: 2,4,6-Tribromophenol	83.8	0	42-124		%REC	1	6/16/2011 06:44 PM
Surr: 2-Chlorophenol-d4	64.7	0	34-98		%REC	1	6/16/2011 06:44 PM
Surr: 2-Fluorobiphenyl	65.5	0	48-120		%REC	1	6/16/2011 06:44 PM
Surr: 2-Fluorophenol	53.7	0	20-120		%REC	1	6/16/2011 06:44 PM
Surr: 4-Terphenyl-d14	91.6	0	51-135		%REC	1	6/16/2011 06:44 PM
Surr: Nitrobenzene-d5	61.4	0	41-120		%REC	1	6/16/2011 06:44 PM
Surr: Phenol-d5	42.5	0	20-120		%REC	1	6/16/2011 06:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C				**EPA 8270C**			
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
1,2,4-Trichlorobenzene	ND	4.5	10		µg/L	1	6/16/2011 07:13 PM
1,2-Dichlorobenzene	ND	4.9	10		µg/L	1	6/16/2011 07:13 PM
1,3-Dichlorobenzene	ND	5.2	10		µg/L	1	6/16/2011 07:13 PM
1,4-Dichlorobenzene	ND	4.6	10		µg/L	1	6/16/2011 07:13 PM
2,4,5-Trichlorophenol	ND	3.8	10		µg/L	1	6/16/2011 07:13 PM
2,4,6-Trichlorophenol	ND	4.6	10		µg/L	1	6/16/2011 07:13 PM
2,4-Dichlorophenol	ND	4.4	10		µg/L	1	6/16/2011 07:13 PM
2,4-Dimethylphenol	ND	3.7	10		µg/L	1	6/16/2011 07:13 PM
2,4-Dinitrophenol	ND	3.4	52		µg/L	1	6/16/2011 07:13 PM
2,4-Dinitrotoluene	ND	3.9	10		µg/L	1	6/16/2011 07:13 PM
2,6-Dinitrotoluene	ND	4.1	10		µg/L	1	6/16/2011 07:13 PM
2-Chloronaphthalene	ND	4.2	10		µg/L	1	6/16/2011 07:13 PM
2-Chlorophenol	ND	3.8	10		µg/L	1	6/16/2011 07:13 PM
2-Methylnaphthalene	ND	4.6	10		µg/L	1	6/16/2011 07:13 PM
2-Methylphenol	ND	2.7	10		µg/L	1	6/16/2011 07:13 PM
2-Nitroaniline	ND	4.3	52		µg/L	1	6/16/2011 07:13 PM
2-Nitrophenol	ND	4.9	10		µg/L	1	6/16/2011 07:13 PM
3,3'-Dichlorobenzidine	ND	3.7	21		µg/L	1	6/16/2011 07:13 PM
3-Nitroaniline	ND	4.1	52		µg/L	1	6/16/2011 07:13 PM
4,6-Dinitro-2-methylphenol	ND	3.0	52		µg/L	1	6/16/2011 07:13 PM
4-Bromophenyl-phenylether	ND	4.1	10		µg/L	1	6/16/2011 07:13 PM
4-Chloro-3-methylphenol	ND	3.6	52		µg/L	1	6/16/2011 07:13 PM
4-Chloroaniline	ND	4.7	21		µg/L	1	6/16/2011 07:13 PM
4-Chlorophenyl-phenylether	ND	3.6	10		µg/L	1	6/16/2011 07:13 PM
4-Methylphenol	ND	5.7	10		µg/L	1	6/16/2011 07:13 PM
4-Nitroaniline	ND	4.0	21		µg/L	1	6/16/2011 07:13 PM
4-Nitrophenol	ND	1.6	52		µg/L	1	6/16/2011 07:13 PM
Acenaphthene	ND	4.4	10		µg/L	1	6/16/2011 07:13 PM
Acenaphthylene	ND	4.0	10		µg/L	1	6/16/2011 07:13 PM
Anthracene	ND	3.8	10		µg/L	1	6/16/2011 07:13 PM
Benzo(a)anthracene	ND	5.3	10		µg/L	1	6/16/2011 07:13 PM
Benzo(a)pyrene	ND	5.7	10		µg/L	1	6/16/2011 07:13 PM
Benzo(b)fluoranthene	ND	5.8	10		µg/L	1	6/16/2011 07:13 PM
Benzo(g,h,i)perylene	ND	6.0	10		µg/L	1	6/16/2011 07:13 PM
Benzo(k)fluoranthene	ND	5.6	10		µg/L	1	6/16/2011 07:13 PM
Benzoic acid	ND	2.9	52		µg/L	1	6/16/2011 07:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-67-225-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 9:27:00 AM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C			**EPA 8270C**				
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
Benzyl alcohol	ND	4.6	21		µg/L	1	6/16/2011 07:13 PM
Bis(2-chloroethoxy)methane	ND	4.7	10		µg/L	1	6/16/2011 07:13 PM
Bis(2-chloroethyl)ether	ND	5.6	10		µg/L	1	6/16/2011 07:13 PM
Bis(2-chloroisopropyl)ether	ND	4.5	10		µg/L	1	6/16/2011 07:13 PM
Bis(2-ethylhexyl)phthalate	ND	2.8	10		µg/L	1	6/16/2011 07:13 PM
Butylbenzylphthalate	ND	3.5	10		µg/L	1	6/16/2011 07:13 PM
Chrysene	ND	2.4	10		µg/L	1	6/16/2011 07:13 PM
Di-n-butylphthalate	ND	3.1	10		µg/L	1	6/16/2011 07:13 PM
Di-n-octylphthalate	ND	3.1	10		µg/L	1	6/16/2011 07:13 PM
Dibenz(a,h)anthracene	ND	5.8	10		µg/L	1	6/16/2011 07:13 PM
Dibenzofuran	ND	3.9	10		µg/L	1	6/16/2011 07:13 PM
Diethylphthalate	ND	3.4	10		µg/L	1	6/16/2011 07:13 PM
Dimethylphthalate	ND	3.8	10		µg/L	1	6/16/2011 07:13 PM
Fluoranthene	ND	3.2	10		µg/L	1	6/16/2011 07:13 PM
Fluorene	ND	3.7	10		µg/L	1	6/16/2011 07:13 PM
Hexachlorobenzene	ND	4.1	10		µg/L	1	6/16/2011 07:13 PM
Hexachlorobutadiene	ND	5.2	21		µg/L	1	6/16/2011 07:13 PM
Hexachloroethane	ND	4.9	10		µg/L	1	6/16/2011 07:13 PM
Indeno(1,2,3-cd)pyrene	ND	5.8	10		µg/L	1	6/16/2011 07:13 PM
Isophorone	ND	4.5	10		µg/L	1	6/16/2011 07:13 PM
N-Nitrosodi-n-propylamine	ND	5.2	10		µg/L	1	6/16/2011 07:13 PM
N-Nitrosodiphenylamine	ND	4.1	10		µg/L	1	6/16/2011 07:13 PM
Naphthalene	ND	4.6	10		µg/L	1	6/16/2011 07:13 PM
Nitrobenzene	ND	4.8	10		µg/L	1	6/16/2011 07:13 PM
Pentachlorophenol	ND	3.0	52		µg/L	1	6/16/2011 07:13 PM
Phenanthrene	ND	3.8	10		µg/L	1	6/16/2011 07:13 PM
Phenol	ND	1.6	10		µg/L	1	6/16/2011 07:13 PM
Pyrene	ND	3.3	10		µg/L	1	6/16/2011 07:13 PM
Surr: 1,2-Dichlorobenzene-d4	52.8	0	27-100		%REC	1	6/16/2011 07:13 PM
Surr: 2,4,6-Tribromophenol	82.8	0	42-124		%REC	1	6/16/2011 07:13 PM
Surr: 2-Chlorophenol-d4	58.7	0	34-98		%REC	1	6/16/2011 07:13 PM
Surr: 2-Fluorobiphenyl	58.6	0	48-120		%REC	1	6/16/2011 07:13 PM
Surr: 2-Fluorophenol	48.0	0	20-120		%REC	1	6/16/2011 07:13 PM
Surr: 4-Terphenyl-d14	94.0	0	51-135		%REC	1	6/16/2011 07:13 PM
Surr: Nitrobenzene-d5	55.8	0	41-120		%REC	1	6/16/2011 07:13 PM
Surr: Phenol-d5	38.8	0	20-120		%REC	1	6/16/2011 07:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C			**EPA 8270C**				
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
1,2,4-Trichlorobenzene	ND	4.4	10		µg/L	1	6/16/2011 07:42 PM
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	6/16/2011 07:42 PM
1,3-Dichlorobenzene	ND	5.1	10		µg/L	1	6/16/2011 07:42 PM
1,4-Dichlorobenzene	ND	4.5	10		µg/L	1	6/16/2011 07:42 PM
2,4,5-Trichlorophenol	ND	3.7	10		µg/L	1	6/16/2011 07:42 PM
2,4,6-Trichlorophenol	ND	4.5	10		µg/L	1	6/16/2011 07:42 PM
2,4-Dichlorophenol	ND	4.3	10		µg/L	1	6/16/2011 07:42 PM
2,4-Dimethylphenol	ND	3.7	10		µg/L	1	6/16/2011 07:42 PM
2,4-Dinitrophenol	ND	3.4	51		µg/L	1	6/16/2011 07:42 PM
2,4-Dinitrotoluene	ND	3.9	10		µg/L	1	6/16/2011 07:42 PM
2,6-Dinitrotoluene	ND	4.0	10		µg/L	1	6/16/2011 07:42 PM
2-Chloronaphthalene	ND	4.1	10		µg/L	1	6/16/2011 07:42 PM
2-Chlorophenol	ND	3.7	10		µg/L	1	6/16/2011 07:42 PM
2-Methylnaphthalene	ND	4.5	10		µg/L	1	6/16/2011 07:42 PM
2-Methylphenol	ND	2.6	10		µg/L	1	6/16/2011 07:42 PM
2-Nitroaniline	ND	4.2	51		µg/L	1	6/16/2011 07:42 PM
2-Nitrophenol	ND	4.8	10		µg/L	1	6/16/2011 07:42 PM
3,3'-Dichlorobenzidine	ND	3.6	20		µg/L	1	6/16/2011 07:42 PM
3-Nitroaniline	ND	4.0	51		µg/L	1	6/16/2011 07:42 PM
4,6-Dinitro-2-methylphenol	ND	2.9	51		µg/L	1	6/16/2011 07:42 PM
4-Bromophenyl-phenylether	ND	4.0	10		µg/L	1	6/16/2011 07:42 PM
4-Chloro-3-methylphenol	ND	3.5	51		µg/L	1	6/16/2011 07:42 PM
4-Chloroaniline	ND	4.6	20		µg/L	1	6/16/2011 07:42 PM
4-Chlorophenyl-phenylether	ND	3.6	10		µg/L	1	6/16/2011 07:42 PM
4-Methylphenol	ND	5.6	10		µg/L	1	6/16/2011 07:42 PM
4-Nitroaniline	ND	3.9	20		µg/L	1	6/16/2011 07:42 PM
4-Nitrophenol	ND	1.6	51		µg/L	1	6/16/2011 07:42 PM
Acenaphthene	ND	4.3	10		µg/L	1	6/16/2011 07:42 PM
Acenaphthylene	ND	3.9	10		µg/L	1	6/16/2011 07:42 PM
Anthracene	ND	3.8	10		µg/L	1	6/16/2011 07:42 PM
Benzo(a)anthracene	ND	5.2	10		µg/L	1	6/16/2011 07:42 PM
Benzo(a)pyrene	ND	5.6	10		µg/L	1	6/16/2011 07:42 PM
Benzo(b)fluoranthene	ND	5.7	10		µg/L	1	6/16/2011 07:42 PM
Benzo(g,h,i)perylene	ND	5.9	10		µg/L	1	6/16/2011 07:42 PM
Benzo(k)fluoranthene	ND	5.4	10		µg/L	1	6/16/2011 07:42 PM
Benzoic acid	ND	2.8	51		µg/L	1	6/16/2011 07:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock,417981.ER.02.DM
Lab ID: N005957-007

Client Sample ID: MW-68-180-001
Collection Date: 6/14/2011 1:11:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C			**EPA 8270C**				
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
Benzyl alcohol	ND	4.5	20		µg/L	1	6/16/2011 07:42 PM
Bis(2-chloroethoxy)methane	ND	4.6	10		µg/L	1	6/16/2011 07:42 PM
Bis(2-chloroethyl)ether	ND	5.5	10		µg/L	1	6/16/2011 07:42 PM
Bis(2-chloroisopropyl)ether	ND	4.4	10		µg/L	1	6/16/2011 07:42 PM
Bis(2-ethylhexyl)phthalate	ND	2.8	10		µg/L	1	6/16/2011 07:42 PM
Butylbenzylphthalate	ND	3.5	10		µg/L	1	6/16/2011 07:42 PM
Chrysene	ND	2.3	10		µg/L	1	6/16/2011 07:42 PM
Di-n-butylphthalate	ND	3.0	10		µg/L	1	6/16/2011 07:42 PM
Di-n-octylphthalate	ND	3.1	10		µg/L	1	6/16/2011 07:42 PM
Dibenz(a,h)anthracene	ND	5.7	10		µg/L	1	6/16/2011 07:42 PM
Dibenzofuran	ND	3.8	10		µg/L	1	6/16/2011 07:42 PM
Diethylphthalate	ND	3.3	10		µg/L	1	6/16/2011 07:42 PM
Dimethylphthalate	ND	3.7	10		µg/L	1	6/16/2011 07:42 PM
Fluoranthene	ND	3.2	10		µg/L	1	6/16/2011 07:42 PM
Fluorene	ND	3.7	10		µg/L	1	6/16/2011 07:42 PM
Hexachlorobenzene	ND	4.0	10		µg/L	1	6/16/2011 07:42 PM
Hexachlorobutadiene	ND	5.1	20		µg/L	1	6/16/2011 07:42 PM
Hexachloroethane	ND	4.8	10		µg/L	1	6/16/2011 07:42 PM
Indeno(1,2,3-cd)pyrene	ND	5.7	10		µg/L	1	6/16/2011 07:42 PM
Isophorone	ND	4.4	10		µg/L	1	6/16/2011 07:42 PM
N-Nitrosodi-n-propylamine	ND	5.1	10		µg/L	1	6/16/2011 07:42 PM
N-Nitrosodiphenylamine	ND	4.1	10		µg/L	1	6/16/2011 07:42 PM
Naphthalene	ND	4.5	10		µg/L	1	6/16/2011 07:42 PM
Nitrobenzene	ND	4.7	10		µg/L	1	6/16/2011 07:42 PM
Pentachlorophenol	ND	3.0	51		µg/L	1	6/16/2011 07:42 PM
Phenanthrene	ND	3.7	10		µg/L	1	6/16/2011 07:42 PM
Phenol	ND	1.6	10		µg/L	1	6/16/2011 07:42 PM
Pyrene	ND	3.2	10		µg/L	1	6/16/2011 07:42 PM
Surr: 1,2-Dichlorobenzene-d4	51.7	0	27-100		%REC	1	6/16/2011 07:42 PM
Surr: 2,4,6-Tribromophenol	80.2	0	42-124		%REC	1	6/16/2011 07:42 PM
Surr: 2-Chlorophenol-d4	59.8	0	34-98		%REC	1	6/16/2011 07:42 PM
Surr: 2-Fluorobiphenyl	59.2	0	48-120		%REC	1	6/16/2011 07:42 PM
Surr: 2-Fluorophenol	48.9	0	20-120		%REC	1	6/16/2011 07:42 PM
Surr: 4-Terphenyl-d14	83.4	0	51-135		%REC	1	6/16/2011 07:42 PM
Surr: Nitrobenzene-d5	56.1	0	41-120		%REC	1	6/16/2011 07:42 PM
Surr: Phenol-d5	40.2	0	20-120		%REC	1	6/16/2011 07:42 PM

Qualifiers:
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock,417981.ER.02.DM
Lab ID: N005957-009

Client Sample ID: MW-70-105-001
Collection Date: 6/13/2011 12:07:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C				**EPA 8270C**			
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
1,2,4-Trichlorobenzene	ND	4.5	10		µg/L	1	6/16/2011 08:11 PM
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	6/16/2011 08:11 PM
1,3-Dichlorobenzene	ND	5.1	10		µg/L	1	6/16/2011 08:11 PM
1,4-Dichlorobenzene	ND	4.5	10		µg/L	1	6/16/2011 08:11 PM
2,4,5-Trichlorophenol	ND	3.7	10		µg/L	1	6/16/2011 08:11 PM
2,4,6-Trichlorophenol	ND	4.6	10		µg/L	1	6/16/2011 08:11 PM
2,4-Dichlorophenol	ND	4.4	10		µg/L	1	6/16/2011 08:11 PM
2,4-Dimethylphenol	ND	3.7	10		µg/L	1	6/16/2011 08:11 PM
2,4-Dinitrophenol	ND	3.4	51		µg/L	1	6/16/2011 08:11 PM
2,4-Dinitrotoluene	ND	3.9	10		µg/L	1	6/16/2011 08:11 PM
2,6-Dinitrotoluene	ND	4.1	10		µg/L	1	6/16/2011 08:11 PM
2-Chloronaphthalene	ND	4.1	10		µg/L	1	6/16/2011 08:11 PM
2-Chlorophenol	ND	3.8	10		µg/L	1	6/16/2011 08:11 PM
2-Methylnaphthalene	ND	4.6	10		µg/L	1	6/16/2011 08:11 PM
2-Methylphenol	ND	2.7	10		µg/L	1	6/16/2011 08:11 PM
2-Nitroaniline	ND	4.3	51		µg/L	1	6/16/2011 08:11 PM
2-Nitrophenol	ND	4.8	10		µg/L	1	6/16/2011 08:11 PM
3,3'-Dichlorobenzidine	ND	3.7	20		µg/L	1	6/16/2011 08:11 PM
3-Nitroaniline	ND	4.0	51		µg/L	1	6/16/2011 08:11 PM
4,6-Dinitro-2-methylphenol	ND	2.9	51		µg/L	1	6/16/2011 08:11 PM
4-Bromophenyl-phenylether	ND	4.0	10		µg/L	1	6/16/2011 08:11 PM
4-Chloro-3-methylphenol	ND	3.5	51		µg/L	1	6/16/2011 08:11 PM
4-Chloroaniline	ND	4.7	20		µg/L	1	6/16/2011 08:11 PM
4-Chlorophenyl-phenylether	ND	3.6	10		µg/L	1	6/16/2011 08:11 PM
4-Methylphenol	ND	5.6	10		µg/L	1	6/16/2011 08:11 PM
4-Nitroaniline	ND	4.0	20		µg/L	1	6/16/2011 08:11 PM
4-Nitrophenol	ND	1.6	51		µg/L	1	6/16/2011 08:11 PM
Acenaphthene	ND	4.3	10		µg/L	1	6/16/2011 08:11 PM
Acenaphthylene	ND	4.0	10		µg/L	1	6/16/2011 08:11 PM
Anthracene	ND	3.8	10		µg/L	1	6/16/2011 08:11 PM
Benzo(a)anthracene	ND	5.3	10		µg/L	1	6/16/2011 08:11 PM
Benzo(a)pyrene	ND	5.6	10		µg/L	1	6/16/2011 08:11 PM
Benzo(b)fluoranthene	ND	5.8	10		µg/L	1	6/16/2011 08:11 PM
Benzo(g,h,i)perylene	ND	6.0	10		µg/L	1	6/16/2011 08:11 PM
Benzo(k)fluoranthene	ND	5.5	10		µg/L	1	6/16/2011 08:11 PM
Benzoic acid	ND	2.8	51		µg/L	1	6/16/2011 08:11 PM

Qualifiers:
- B — Analyte detected in the associated Method Blank
- H — Holding times for preparation or analysis exceeded
- S — Spike/Surrogate outside of limits due to matrix interference
- DO — Surrogate Diluted Out
- E — Value above quantitation range
- ND — Not Detected at the Reporting Limit
- Results are wet unless otherwise specified

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock,417981.ER.02.DM
Lab ID: N005957-009

Client Sample ID: MW-70-105-001
Collection Date: 6/13/2011 12:07:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C			**EPA 8270C**				
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
Benzyl alcohol	ND	4.6	20		µg/L	1	6/16/2011 08:11 PM
Bis(2-chloroethoxy)methane	ND	4.7	10		µg/L	1	6/16/2011 08:11 PM
Bis(2-chloroethyl)ether	ND	5.6	10		µg/L	1	6/16/2011 08:11 PM
Bis(2-chloroisopropyl)ether	ND	4.4	10		µg/L	1	6/16/2011 08:11 PM
Bis(2-ethylhexyl)phthalate	ND	2.8	10		µg/L	1	6/16/2011 08:11 PM
Butylbenzylphthalate	ND	3.5	10		µg/L	1	6/16/2011 08:11 PM
Chrysene	ND	2.4	10		µg/L	1	6/16/2011 08:11 PM
Di-n-butylphthalate	ND	3.1	10		µg/L	1	6/16/2011 08:11 PM
Di-n-octylphthalate	ND	3.1	10		µg/L	1	6/16/2011 08:11 PM
Dibenz(a,h)anthracene	ND	5.8	10		µg/L	1	6/16/2011 08:11 PM
Dibenzofuran	ND	3.8	10		µg/L	1	6/16/2011 08:11 PM
Diethylphthalate	ND	3.3	10		µg/L	1	6/16/2011 08:11 PM
Dimethylphthalate	ND	3.8	10		µg/L	1	6/16/2011 08:11 PM
Fluoranthene	ND	3.2	10		µg/L	1	6/16/2011 08:11 PM
Fluorene	ND	3.7	10		µg/L	1	6/16/2011 08:11 PM
Hexachlorobenzene	ND	4.1	10		µg/L	1	6/16/2011 08:11 PM
Hexachlorobutadiene	ND	5.1	20		µg/L	1	6/16/2011 08:11 PM
Hexachloroethane	ND	4.8	10		µg/L	1	6/16/2011 08:11 PM
Indeno(1,2,3-cd)pyrene	ND	5.7	10		µg/L	1	6/16/2011 08:11 PM
Isophorone	ND	4.5	10		µg/L	1	6/16/2011 08:11 PM
N-Nitrosodi-n-propylamine	ND	5.2	10		µg/L	1	6/16/2011 08:11 PM
N-Nitrosodiphenylamine	ND	4.1	10		µg/L	1	6/16/2011 08:11 PM
Naphthalene	ND	4.6	10		µg/L	1	6/16/2011 08:11 PM
Nitrobenzene	ND	4.7	10		µg/L	1	6/16/2011 08:11 PM
Pentachlorophenol	ND	3.0	51		µg/L	1	6/16/2011 08:11 PM
Phenanthrene	ND	3.8	10		µg/L	1	6/16/2011 08:11 PM
Phenol	ND	1.6	10		µg/L	1	6/16/2011 08:11 PM
Pyrene	ND	3.3	10		µg/L	1	6/16/2011 08:11 PM
Surr: 1,2-Dichlorobenzene-d4	54.1	0	27-100		%REC	1	6/16/2011 08:11 PM
Surr: 2,4,6-Tribromophenol	95.1	0	42-124		%REC	1	6/16/2011 08:11 PM
Surr: 2-Chlorophenol-d4	63.4	0	34-98		%REC	1	6/16/2011 08:11 PM
Surr: 2-Fluorobiphenyl	60.6	0	48-120		%REC	1	6/16/2011 08:11 PM
Surr: 2-Fluorophenol	50.6	0	20-120		%REC	1	6/16/2011 08:11 PM
Surr: 4-Terphenyl-d14	93.4	0	51-135		%REC	1	6/16/2011 08:11 PM
Surr: Nitrobenzene-d5	57.1	0	41-120		%REC	1	6/16/2011 08:11 PM
Surr: Phenol-d5	43.3	0	20-120		%REC	1	6/16/2011 08:11 PM

Qualifiers:
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C				**EPA 8270C**			
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
1,2,4-Trichlorobenzene	ND	4.5	10		µg/L	1	6/16/2011 08:40 PM
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	6/16/2011 08:40 PM
1,3-Dichlorobenzene	ND	5.1	10		µg/L	1	6/16/2011 08:40 PM
1,4-Dichlorobenzene	ND	4.5	10		µg/L	1	6/16/2011 08:40 PM
2,4,5-Trichlorophenol	ND	3.7	10		µg/L	1	6/16/2011 08:40 PM
2,4,6-Trichlorophenol	ND	4.6	10		µg/L	1	6/16/2011 08:40 PM
2,4-Dichlorophenol	ND	4.4	10		µg/L	1	6/16/2011 08:40 PM
2,4-Dimethylphenol	ND	3.7	10		µg/L	1	6/16/2011 08:40 PM
2,4-Dinitrophenol	ND	3.4	51		µg/L	1	6/16/2011 08:40 PM
2,4-Dinitrotoluene	ND	3.9	10		µg/L	1	6/16/2011 08:40 PM
2,6-Dinitrotoluene	ND	4.1	10		µg/L	1	6/16/2011 08:40 PM
2-Chloronaphthalene	ND	4.1	10		µg/L	1	6/16/2011 08:40 PM
2-Chlorophenol	ND	3.8	10		µg/L	1	6/16/2011 08:40 PM
2-Methylnaphthalene	ND	4.6	10		µg/L	1	6/16/2011 08:40 PM
2-Methylphenol	ND	2.7	10		µg/L	1	6/16/2011 08:40 PM
2-Nitroaniline	ND	4.3	51		µg/L	1	6/16/2011 08:40 PM
2-Nitrophenol	ND	4.8	10		µg/L	1	6/16/2011 08:40 PM
3,3'-Dichlorobenzidine	ND	3.7	20		µg/L	1	6/16/2011 08:40 PM
3-Nitroaniline	ND	4.0	51		µg/L	1	6/16/2011 08:40 PM
4,6-Dinitro-2-methylphenol	ND	2.9	51		µg/L	1	6/16/2011 08:40 PM
4-Bromophenyl-phenylether	ND	4.0	10		µg/L	1	6/16/2011 08:40 PM
4-Chloro-3-methylphenol	ND	3.5	51		µg/L	1	6/16/2011 08:40 PM
4-Chloroaniline	ND	4.7	20		µg/L	1	6/16/2011 08:40 PM
4-Chlorophenyl-phenylether	ND	3.6	10		µg/L	1	6/16/2011 08:40 PM
4-Methylphenol	ND	5.6	10		µg/L	1	6/16/2011 08:40 PM
4-Nitroaniline	ND	4.0	20		µg/L	1	6/16/2011 08:40 PM
4-Nitrophenol	ND	1.6	51		µg/L	1	6/16/2011 08:40 PM
Acenaphthene	ND	4.3	10		µg/L	1	6/16/2011 08:40 PM
Acenaphthylene	ND	4.0	10		µg/L	1	6/16/2011 08:40 PM
Anthracene	ND	3.8	10		µg/L	1	6/16/2011 08:40 PM
Benzo(a)anthracene	ND	5.3	10		µg/L	1	6/16/2011 08:40 PM
Benzo(a)pyrene	ND	5.6	10		µg/L	1	6/16/2011 08:40 PM
Benzo(b)fluoranthene	ND	5.8	10		µg/L	1	6/16/2011 08:40 PM
Benzo(g,h,i)perylene	ND	6.0	10		µg/L	1	6/16/2011 08:40 PM
Benzo(k)fluoranthene	ND	5.5	10		µg/L	1	6/16/2011 08:40 PM
Benzoic acid	ND	2.8	51		µg/L	1	6/16/2011 08:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C			**EPA 8270C**				
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
Benzyl alcohol	ND	4.6	20		µg/L	1	6/16/2011 08:40 PM
Bis(2-chloroethoxy)methane	ND	4.7	10		µg/L	1	6/16/2011 08:40 PM
Bis(2-chloroethyl)ether	ND	5.6	10		µg/L	1	6/16/2011 08:40 PM
Bis(2-chloroisopropyl)ether	ND	4.4	10		µg/L	1	6/16/2011 08:40 PM
Bis(2-ethylhexyl)phthalate	ND	2.8	10		µg/L	1	6/16/2011 08:40 PM
Butylbenzylphthalate	ND	3.5	10		µg/L	1	6/16/2011 08:40 PM
Chrysene	ND	2.4	10		µg/L	1	6/16/2011 08:40 PM
Di-n-butylphthalate	ND	3.1	10		µg/L	1	6/16/2011 08:40 PM
Di-n-octylphthalate	ND	3.1	10		µg/L	1	6/16/2011 08:40 PM
Dibenz(a,h)anthracene	ND	5.8	10		µg/L	1	6/16/2011 08:40 PM
Dibenzofuran	ND	3.8	10		µg/L	1	6/16/2011 08:40 PM
Diethylphthalate	ND	3.3	10		µg/L	1	6/16/2011 08:40 PM
Dimethylphthalate	ND	3.8	10		µg/L	1	6/16/2011 08:40 PM
Fluoranthene	ND	3.2	10		µg/L	1	6/16/2011 08:40 PM
Fluorene	ND	3.7	10		µg/L	1	6/16/2011 08:40 PM
Hexachlorobenzene	ND	4.1	10		µg/L	1	6/16/2011 08:40 PM
Hexachlorobutadiene	ND	5.1	20		µg/L	1	6/16/2011 08:40 PM
Hexachloroethane	ND	4.8	10		µg/L	1	6/16/2011 08:40 PM
Indeno(1,2,3-cd)pyrene	ND	5.7	10		µg/L	1	6/16/2011 08:40 PM
Isophorone	ND	4.5	10		µg/L	1	6/16/2011 08:40 PM
N-Nitrosodi-n-propylamine	ND	5.2	10		µg/L	1	6/16/2011 08:40 PM
N-Nitrosodiphenylamine	ND	4.1	10		µg/L	1	6/16/2011 08:40 PM
Naphthalene	ND	4.6	10		µg/L	1	6/16/2011 08:40 PM
Nitrobenzene	ND	4.7	10		µg/L	1	6/16/2011 08:40 PM
Pentachlorophenol	ND	3.0	51		µg/L	1	6/16/2011 08:40 PM
Phenanthrene	ND	3.8	10		µg/L	1	6/16/2011 08:40 PM
Phenol	ND	1.6	10		µg/L	1	6/16/2011 08:40 PM
Pyrene	ND	3.3	10		µg/L	1	6/16/2011 08:40 PM
Surr: 1,2-Dichlorobenzene-d4	56.9	0	27-100		%REC	1	6/16/2011 08:40 PM
Surr: 2,4,6-Tribromophenol	96.8	0	42-124		%REC	1	6/16/2011 08:40 PM
Surr: 2-Chlorophenol-d4	68.8	0	34-98		%REC	1	6/16/2011 08:40 PM
Surr: 2-Fluorobiphenyl	63.9	0	48-120		%REC	1	6/16/2011 08:40 PM
Surr: 2-Fluorophenol	49.0	0	20-120		%REC	1	6/16/2011 08:40 PM
Surr: 4-Terphenyl-d14	94.1	0	51-135		%REC	1	6/16/2011 08:40 PM
Surr: Nitrobenzene-d5	62.3	0	41-120		%REC	1	6/16/2011 08:40 PM
Surr: Phenol-d5	41.0	0	20-120		%REC	1	6/16/2011 08:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	EB-70331-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 3:00:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C				**EPA 8270C**			
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
1,2,4-Trichlorobenzene	ND	4.6	10		µg/L	1	6/16/2011 09:09 PM
1,2-Dichlorobenzene	ND	4.9	10		µg/L	1	6/16/2011 09:09 PM
1,3-Dichlorobenzene	ND	5.2	10		µg/L	1	6/16/2011 09:09 PM
1,4-Dichlorobenzene	ND	4.6	10		µg/L	1	6/16/2011 09:09 PM
2,4,5-Trichlorophenol	ND	3.8	10		µg/L	1	6/16/2011 09:09 PM
2,4,6-Trichlorophenol	ND	4.7	10		µg/L	1	6/16/2011 09:09 PM
2,4-Dichlorophenol	ND	4.5	10		µg/L	1	6/16/2011 09:09 PM
2,4-Dimethylphenol	ND	3.8	10		µg/L	1	6/16/2011 09:09 PM
2,4-Dinitrophenol	ND	3.5	52		µg/L	1	6/16/2011 09:09 PM
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	6/16/2011 09:09 PM
2,6-Dinitrotoluene	ND	4.2	10		µg/L	1	6/16/2011 09:09 PM
2-Chloronaphthalene	ND	4.2	10		µg/L	1	6/16/2011 09:09 PM
2-Chlorophenol	ND	3.8	10		µg/L	1	6/16/2011 09:09 PM
2-Methylnaphthalene	ND	4.7	10		µg/L	1	6/16/2011 09:09 PM
2-Methylphenol	ND	2.7	10		µg/L	1	6/16/2011 09:09 PM
2-Nitroaniline	ND	4.3	52		µg/L	1	6/16/2011 09:09 PM
2-Nitrophenol	ND	4.9	10		µg/L	1	6/16/2011 09:09 PM
3,3'-Dichlorobenzidine	ND	3.7	21		µg/L	1	6/16/2011 09:09 PM
3-Nitroaniline	ND	4.1	52		µg/L	1	6/16/2011 09:09 PM
4,6-Dinitro-2-methylphenol	ND	3.0	52		µg/L	1	6/16/2011 09:09 PM
4-Bromophenyl-phenylether	ND	4.1	10		µg/L	1	6/16/2011 09:09 PM
4-Chloro-3-methylphenol	ND	3.6	52		µg/L	1	6/16/2011 09:09 PM
4-Chloroaniline	ND	4.8	21		µg/L	1	6/16/2011 09:09 PM
4-Chlorophenyl-phenylether	ND	3.7	10		µg/L	1	6/16/2011 09:09 PM
4-Methylphenol	ND	5.7	10		µg/L	1	6/16/2011 09:09 PM
4-Nitroaniline	ND	4.1	21		µg/L	1	6/16/2011 09:09 PM
4-Nitrophenol	ND	1.6	52		µg/L	1	6/16/2011 09:09 PM
Acenaphthene	ND	4.4	10		µg/L	1	6/16/2011 09:09 PM
Acenaphthylene	ND	4.0	10		µg/L	1	6/16/2011 09:09 PM
Anthracene	ND	3.9	10		µg/L	1	6/16/2011 09:09 PM
Benzo(a)anthracene	ND	5.4	10		µg/L	1	6/16/2011 09:09 PM
Benzo(a)pyrene	ND	5.7	10		µg/L	1	6/16/2011 09:09 PM
Benzo(b)fluoranthene	ND	5.9	10		µg/L	1	6/16/2011 09:09 PM
Benzo(g,h,i)perylene	ND	6.1	10		µg/L	1	6/16/2011 09:09 PM
Benzo(k)fluoranthene	ND	5.6	10		µg/L	1	6/16/2011 09:09 PM
Benzoic acid	ND	2.9	52		µg/L	1	6/16/2011 09:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ANALYTICAL RESULTS

Advanced Technology Laboratories, Inc.

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	EB-70331-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 3:00:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3510C			**EPA 8270C**				
RunID: **MS3_110616A**	QC Batch: **37111**				PrepDate:	**6/16/2011**	Analyst: **JT**
Benzyl alcohol	ND	4.7	21		µg/L	1	6/16/2011 09:09 PM
Bis(2-chloroethoxy)methane	ND	4.8	10		µg/L	1	6/16/2011 09:09 PM
Bis(2-chloroethyl)ether	ND	5.7	10		µg/L	1	6/16/2011 09:09 PM
Bis(2-chloroisopropyl)ether	ND	4.5	10		µg/L	1	6/16/2011 09:09 PM
Bis(2-ethylhexyl)phthalate	ND	2.9	10		µg/L	1	6/16/2011 09:09 PM
Butylbenzylphthalate	ND	3.6	10		µg/L	1	6/16/2011 09:09 PM
Chrysene	ND	2.4	10		µg/L	1	6/16/2011 09:09 PM
Di-n-butylphthalate	ND	3.1	10		µg/L	1	6/16/2011 09:09 PM
Di-n-octylphthalate	ND	3.2	10		µg/L	1	6/16/2011 09:09 PM
Dibenz(a,h)anthracene	ND	5.9	10		µg/L	1	6/16/2011 09:09 PM
Dibenzofuran	ND	3.9	10		µg/L	1	6/16/2011 09:09 PM
Diethylphthalate	ND	3.4	10		µg/L	1	6/16/2011 09:09 PM
Dimethylphthalate	ND	3.8	10		µg/L	1	6/16/2011 09:09 PM
Fluoranthene	ND	3.3	10		µg/L	1	6/16/2011 09:09 PM
Fluorene	ND	3.8	10		µg/L	1	6/16/2011 09:09 PM
Hexachlorobenzene	ND	4.2	10		µg/L	1	6/16/2011 09:09 PM
Hexachlorobutadiene	ND	5.2	21		µg/L	1	6/16/2011 09:09 PM
Hexachloroethane	ND	4.9	10		µg/L	1	6/16/2011 09:09 PM
Indeno(1,2,3-cd)pyrene	ND	5.9	10		µg/L	1	6/16/2011 09:09 PM
Isophorone	ND	4.6	10		µg/L	1	6/16/2011 09:09 PM
N-Nitrosodi-n-propylamine	ND	5.3	10		µg/L	1	6/16/2011 09:09 PM
N-Nitrosodiphenylamine	ND	4.2	10		µg/L	1	6/16/2011 09:09 PM
Naphthalene	ND	4.7	10		µg/L	1	6/16/2011 09:09 PM
Nitrobenzene	ND	4.8	10		µg/L	1	6/16/2011 09:09 PM
Pentachlorophenol	ND	3.1	52		µg/L	1	6/16/2011 09:09 PM
Phenanthrene	ND	3.8	10		µg/L	1	6/16/2011 09:09 PM
Phenol	ND	1.6	10		µg/L	1	6/16/2011 09:09 PM
Pyrene	ND	3.3	10		µg/L	1	6/16/2011 09:09 PM
Surr: 1,2-Dichlorobenzene-d4	51.5	0	27-100		%REC	1	6/16/2011 09:09 PM
Surr: 2,4,6-Tribromophenol	72.5	0	42-124		%REC	1	6/16/2011 09:09 PM
Surr: 2-Chlorophenol-d4	57.3	0	34-98		%REC	1	6/16/2011 09:09 PM
Surr: 2-Fluorobiphenyl	56.1	0	48-120		%REC	1	6/16/2011 09:09 PM
Surr: 2-Fluorophenol	47.2	0	20-120		%REC	1	6/16/2011 09:09 PM
Surr: 4-Terphenyl-d14	81.5	0	51-135		%REC	1	6/16/2011 09:09 PM
Surr: Nitrobenzene-d5	53.9	0	41-120		%REC	1	6/16/2011 09:09 PM
Surr: Phenol-d5	37.4	0	20-120		%REC	1	6/16/2011 09:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

Date: *28-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: **LCS-37111** SampType: **LCS** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **6/16/2011** RunNo: **80418**
Client ID: **LCSW** Batch ID: **37111** TestNo: **EPA 8270C EPA 3510C** Analysis Date: **6/16/2011** SeqNo: **1278478**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	77.150	10	100.0	0	77.2	37	120				
1,2-Dichlorobenzene	68.520	10	100.0	0	68.5	33	120				
1,3-Dichlorobenzene	66.340	10	100.0	0	66.3	32	120				
1,4-Dichlorobenzene	66.270	10	100.0	0	66.3	32	120				
2,4,5-Trichlorophenol	96.330	10	100.0	0	96.3	49	120				
2,4,6-Trichlorophenol	91.140	10	100.0	0	91.1	49	126				
2,4-Dichlorophenol	79.070	10	100.0	0	79.1	48	120				
2,4-Dimethylphenol	84.520	10	100.0	0	84.5	28	120				
2,4-Dinitrophenol	79.850	50	100.0	0	79.8	25	130				
2,4-Dinitrotoluene	98.990	10	100.0	0	99.0	51	120				
2,6-Dinitrotoluene	93.700	10	100.0	0	93.7	49	120				
2-Chloronaphthalene	82.320	10	100.0	0	82.3	49	120				
2-Chlorophenol	70.790	10	100.0	0	70.8	37	120				
2-Methylnaphthalene	79.430	10	100.0	0	79.4	46	120				
2-Methylphenol	75.480	10	100.0	0	75.5	38	120				
2-Nitroaniline	81.710	50	100.0	0	81.7	48	120				
2-Nitrophenol	78.370	10	100.0	0	78.4	39	123				
3,3'-Dichlorobenzidine	183.160	20	200.0	0	91.6	20	120				
3-Nitroaniline	82.760	50	100.0	0	82.8	20	126				
4,6-Dinitro-2-methylphenol	83.910	50	100.0	0	83.9	40	130				
4-Bromophenyl-phenylether	86.200	10	100.0	0	86.2	52	120				
4-Chloro-3-methylphenol	87.640	50	100.0	0	87.6	47	120				
4-Chloroaniline	77.480	20	100.0	0	77.5	20	120				
4-Chlorophenyl-phenylether	87.720	10	100.0	0	87.7	50	120				
4-Methylphenol	75.410	10	100.0	0	75.4	32	120				
4-Nitroaniline	94.020	20	100.0	0	94.0	36	120				
4-Nitrophenol	76.810	50	100.0	0	76.8	20	120				
Acenaphthene	82.300	10	100.0	0	82.3	47	120				
Acenaphthylene	84.820	10	100.0	0	84.8	50	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc.
3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: **LCS-37111** SampType: **LCS** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **6/16/2011** RunNo: **80418**
Client ID: **LCSW** Batch ID: **37111** TestNo: **EPA 8270C EPA 3510C** Analysis Date: **6/16/2011** SeqNo: **1278478**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Anthracene	87.530	10	100.0	0	87.5	54	120				
Benzo(a)anthracene	91.780	10	100.0	0	91.8	56	100				
Benzo(a)pyrene	91.510	10	100.0	0	91.5	53	120				
Benzo(b)fluoranthene	106.510	10	100.0	0	107	45	124				
Benzo(g,h,i)perylene	90.190	10	100.0	0	90.2	38	123				
Benzo(k)fluoranthene	91.050	10	100.0	0	91.1	45	124				
Benzoic acid	47.060	50	100.0	0	47.1	20	120				
Benzyl alcohol	77.980	20	100.0	0	78.0	30	120				
Bis(2-chloroethoxy)methane	72.900	10	100.0	0	72.9	46	120				
Bis(2-chloroethyl)ether	67.570	10	100.0	0	67.6	37	120				
Bis(2-chloroisopropyl)ether	56.470	10	100.0	0	56.5	26	131				
Bis(2-ethylhexyl)phthalate	103.240	10	100.0	0	103	42	126				
Butylbenzylphthalate	104.320	10	100.0	0	104	46	120				
Chrysene	91.970	10	100.0	0	92.0	55	120				
Di-n-butylphthalate	100.140	10	100.0	0	100	54	120				
Di-n-octylphthalate	107.020	10	100.0	0	107	37	137				
Dibenz(a,h)anthracene	94.110	10	100.0	0	94.1	42	127				
Dibenzofuran	87.970	10	100.0	0	88.0	54	120				
Diethylphthalate	95.610	10	100.0	0	95.6	41	120				
Dimethylphthalate	92.000	10	100.0	0	92.0	25	127				
Fluoranthene	96.040	10	100.0	0	96.0	54	120				
Fluorene	89.310	10	100.0	0	89.3	50	120				
Hexachlorobenzene	86.510	10	100.0	0	86.5	52	120				
Hexachlorobutadiene	82.590	20	100.0	0	82.6	27	120				
Hexachloroethane	67.720	10	100.0	0	67.7	28	120				
Indeno(1,2,3-cd)pyrene	94.080	10	100.0	0	94.1	43	125				
Isophorone	82.110	10	100.0	0	82.1	50	120				
N-Nitrosodi-n-propylamine	71.780	10	100.0	0	71.8	34	128				
N-Nitrosodiphenylamine	83.650	10	100.0	0	83.6	48	120				
Naphthalene	72.390	10	100.0	0	72.4	39	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc. 3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: **LCS-37111** SampType: **LCS** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **6/16/2011** RunNo: **80418**
Client ID: **LCSW** Batch ID: **37111** TestNo: **EPA 8270C EPA 3510C** Analysis Date: **6/16/2011** SeqNo: **1278478**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrobenzene	70.690	10	100.0	0	70.7	44	120				
Pentachlorophenol	86.540	50	100.0	0	86.5	38	120				
Phenanthrene	87.560	10	100.0	0	87.6	51	120				
Phenol	61.280	10	100.0	0	61.3	20	120				
Pyrene	94.930	10	100.0	0	94.9	49	128				
Surr: 1,2-Dichlorobenzene-d4	69.950		100.0		70.0	27	100				
Surr: 2,4,6-Tribromophenol	111.690		100.0		112	42	124				
Surr: 2-Chlorophenol-d4	81.490		100.0		81.5	34	98				
Surr: 2-Fluorobiphenyl	85.110		100.0		85.1	48	120				
Surr: 2-Fluorophenol	73.210		100.0		73.2	20	120				
Surr: 4-Terphenyl-d14	104.760		100.0		105	51	135				
Surr: Nitrobenzene-d5	78.170		100.0		78.2	41	120				
Surr: Phenol-d5	69.320		100.0		69.3	20	120				

Sample ID: **N005957-003HMS** SampType: **MS** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **6/16/2011** RunNo: **80418**
Client ID: **ZZZZZZ** Batch ID: **37111** TestNo: **EPA 8270C EPA 3510C** Analysis Date: **6/16/2011** SeqNo: **1278479**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	75.604	10	104.2	0	72.6	37	120				
1,2-Dichlorobenzene	68.208	10	104.2	0	65.5	33	120				
1,3-Dichlorobenzene	65.948	10	104.2	0	63.3	32	120				
1,4-Dichlorobenzene	65.229	10	104.2	0	62.6	32	120				
2,4,5-Trichlorophenol	90.635	10	104.2	0	87.0	49	120				
2,4,6-Trichlorophenol	88.260	10	104.2	0	84.7	49	126				
2,4-Dichlorophenol	77.594	10	104.2	0	74.5	48	120				
2,4-Dimethylphenol	82.000	10	104.2	0	78.7	28	120				
2,4-Dinitrophenol	85.156	52	104.2	0	81.8	25	130				
2,4-Dinitrotoluene	96.458	10	104.2	0	92.6	51	120				
2,6-Dinitrotoluene	88.479	10	104.2	0	84.9	49	120				
2-Chloronaphthalene	79.552	10	104.2	0	76.4	49	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc. 3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: **N005957-003HMS** SampType: **MS** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **6/16/2011** RunNo: **80418**
Client ID: **ZZZZZZ** Batch ID: **37111** TestNo: **EPA 8270C EPA 3510C** Analysis Date: **6/16/2011** SeqNo: **1278479**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chlorophenol	72.604	10	104.2	0	69.7	37	120				
2-Methylnaphthalene	77.563	10	104.2	0	74.5	46	120				
2-Methylphenol	76.177	10	104.2	0	73.1	38	120				
2-Nitroaniline	78.208	52	104.2	0	75.1	48	120				
2-Nitrophenol	77.177	10	104.2	0	74.1	39	123				
3,3'-Dichlorobenzidine	170.135	21	208.3	0	81.7	20	120				
3-Nitroaniline	79.167	52	104.2	0	76.0	20	126				
4,6-Dinitro-2-methylphenol	84.104	52	104.2	0	80.7	40	130				
4-Bromophenyl-phenylether	82.521	10	104.2	0	79.2	52	120				
4-Chloro-3-methylphenol	82.563	52	104.2	0	79.3	47	120				
4-Chloroaniline	73.865	21	104.2	0	70.9	20	120				
4-Chlorophenyl-phenylether	84.083	10	104.2	0	80.7	50	120				
4-Methylphenol	75.042	10	104.2	0	72.0	32	120				
4-Nitroaniline	90.042	21	104.2	0	86.4	36	120				
4-Nitrophenol	61.500	52	104.2	0	59.0	20	120				
Acenaphthene	79.417	10	104.2	0	76.2	47	120				
Acenaphthylene	80.146	10	104.2	0	76.9	50	120				
Anthracene	84.781	10	104.2	0	81.4	54	120				
Benzo(a)anthracene	90.479	10	104.2	0	86.9	56	100				
Benzo(a)pyrene	89.292	10	104.2	0	85.7	53	120				
Benzo(b)fluoranthene	103.042	10	104.2	0	98.9	45	124				
Benzo(g,h,i)perylene	88.813	10	104.2	0	85.3	38	123				
Benzo(k)fluoranthene	89.865	10	104.2	0	86.3	45	124				
Benzoic acid	46.167	52	104.2	0	44.3	20	120				
Benzyl alcohol	75.417	21	104.2	0	72.4	30	120				
Bis(2-chloroethoxy)methane	71.844	10	104.2	0	69.0	46	120				
Bis(2-chloroethyl)ether	68.781	10	104.2	0	66.0	37	120				
Bis(2-chloroisopropyl)ether	57.156	10	104.2	0	54.9	26	131				
Bis(2-ethylhexyl)phthalate	101.615	10	104.2	0	97.6	42	126				
Butylbenzylphthalate	101.219	10	104.2	0	97.2	46	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: **N005957-003HMS** SampType: **MS** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **6/16/2011** RunNo: **80418**
Client ID: **ZZZZZZ** Batch ID: **37111** TestNo: **EPA 8270C EPA 3510C** Analysis Date: **6/16/2011** SeqNo: **1278479**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chrysene	89.115	10	104.2	0	85.6	55	120				
Di-n-butylphthalate	95.875	10	104.2	0	92.0	54	120				
Di-n-octylphthalate	104.281	10	104.2	0	100	37	137				
Dibenz(a,h)anthracene	93.250	10	104.2	0	89.5	42	127				
Dibenzofuran	82.979	10	104.2	0	79.7	54	120				
Diethylphthalate	92.427	10	104.2	0	88.7	41	120				
Dimethylphthalate	87.906	10	104.2	0	84.4	25	127				
Fluoranthene	92.302	10	104.2	0	88.6	54	120				
Fluorene	84.750	10	104.2	0	81.4	50	120				
Hexachlorobenzene	83.365	10	104.2	0	80.0	52	120				
Hexachlorobutadiene	81.479	21	104.2	0	78.2	27	120				
Hexachloroethane	67.208	10	104.2	0	64.5	28	120				
Indeno(1,2,3-cd)pyrene	92.490	10	104.2	0	88.8	43	125				
Isophorone	79.188	10	104.2	0	76.0	50	120				
N-Nitrosodi-n-propylamine	70.292	10	104.2	0	67.5	34	128				
N-Nitrosodiphenylamine	81.188	10	104.2	0	77.9	48	120				
Naphthalene	72.490	10	104.2	0	69.6	39	120				
Nitrobenzene	70.729	10	104.2	0	67.9	44	120				
Pentachlorophenol	86.813	52	104.2	0	83.3	38	120				
Phenanthrene	85.063	10	104.2	0	81.7	51	120				
Phenol	56.958	10	104.2	0	54.7	20	120				
Pyrene	92.719	10	104.2	0	89.0	49	128				
Surr: 1,2-Dichlorobenzene-d4	70.938		104.2		68.1	27	100				
Surr: 2,4,6-Tribromophenol	103.063		104.2		98.9	42	124				
Surr: 2-Chlorophenol-d4	80.250		104.2		77.0	34	98				
Surr: 2-Fluorobiphenyl	80.375		104.2		77.2	48	120				
Surr: 2-Fluorophenol	71.083		104.2		68.2	20	120				
Surr: 4-Terphenyl-d14	98.688		104.2		94.7	51	135				
Surr: Nitrobenzene-d5	74.615		104.2		71.6	41	120				
Surr: Phenol-d5	62.271		104.2		59.8	20	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: **N005957-003HMSD** SampType: **MSD** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **6/16/2011** RunNo: **80418**
Client ID: **ZZZZZZ** Batch ID: **37111** TestNo: **EPA 8270C EPA 3510C** Analysis Date: **6/16/2011** SeqNo: **1278480**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	83.469	10	104.2	0	80.1	37	120	75.60	9.89	20	
1,2-Dichlorobenzene	74.500	10	104.2	0	71.5	33	120	68.21	8.82	20	
1,3-Dichlorobenzene	70.771	10	104.2	0	67.9	32	120	65.95	7.06	20	
1,4-Dichlorobenzene	71.229	10	104.2	0	68.4	32	120	65.23	8.79	20	
2,4,5-Trichlorophenol	101.177	10	104.2	0	97.1	49	120	90.64	11.0	20	
2,4,6-Trichlorophenol	95.990	10	104.2	0	92.2	49	126	88.26	8.39	20	
2,4-Dichlorophenol	85.906	10	104.2	0	82.5	48	120	77.59	10.2	20	
2,4-Dimethylphenol	91.479	10	104.2	0	87.8	28	120	82.00	10.9	20	
2,4-Dinitrophenol	92.583	52	104.2	0	88.9	25	130	85.16	8.36	20	
2,4-Dinitrotoluene	106.240	10	104.2	0	102	51	120	96.46	9.65	20	
2,6-Dinitrotoluene	98.021	10	104.2	0	94.1	49	120	88.48	10.2	20	
2-Chloronaphthalene	88.521	10	104.2	0	85.0	49	120	79.55	10.7	20	
2-Chlorophenol	79.792	10	104.2	0	76.6	37	120	72.60	9.43	20	
2-Methylnaphthalene	86.458	10	104.2	0	83.0	46	120	77.56	10.8	20	
2-Methylphenol	83.740	10	104.2	0	80.4	38	120	76.18	9.46	20	
2-Nitroaniline	86.917	52	104.2	0	83.4	48	120	78.21	10.5	20	
2-Nitrophenol	86.542	10	104.2	0	83.1	39	123	77.18	11.4	20	
3,3'-Dichlorobenzidine	180.927	21	208.3	0	86.8	20	120	170.1	6.15	20	
3-Nitroaniline	88.063	52	104.2	0	84.5	20	126	79.17	10.6	20	
4,6-Dinitro-2-methylphenol	90.594	52	104.2	0	87.0	40	130	84.10	7.43	20	
4-Bromophenyl-phenylether	91.625	10	104.2	0	88.0	52	120	82.52	10.5	20	
4-Chloro-3-methylphenol	93.229	52	104.2	0	89.5	47	120	82.56	12.1	20	
4-Chloroaniline	81.563	21	104.2	0	78.3	20	120	73.86	9.91	20	
4-Chlorophenyl-phenylether	93.260	10	104.2	0	89.5	50	120	84.08	10.3	20	
4-Methylphenol	83.125	10	104.2	0	79.8	32	120	75.04	10.2	20	
4-Nitroaniline	97.271	21	104.2	0	93.4	36	120	90.04	7.72	20	
4-Nitrophenol	64.094	52	104.2	0	61.5	20	120	61.50	4.13	20	
Acenaphthene	89.135	10	104.2	0	85.6	47	120	79.42	11.5	20	
Acenaphthylene	89.927	10	104.2	0	86.3	50	120	80.15	11.5	20	
Anthracene	94.573	10	104.2	0	90.8	54	120	84.78	10.9	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: **N005957-003HMSD** SampType: **MSD** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **6/16/2011** RunNo: **80418**
Client ID: **ZZZZZZ** Batch ID: **37111** TestNo: **EPA 8270C EPA 3510C** Analysis Date: **6/16/2011** SeqNo: **1278480**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(a)anthracene	98.229	10	104.2	0	94.3	56	100	90.48	8.21	20	
Benzo(a)pyrene	96.760	10	104.2	0	92.9	53	120	89.29	8.03	20	
Benzo(b)fluoranthene	114.396	10	104.2	0	110	45	124	103.0	10.4	20	
Benzo(g,h,i)perylene	92.500	10	104.2	0	88.8	38	123	88.81	4.07	20	
Benzo(k)fluoranthene	94.073	10	104.2	0	90.3	45	124	89.86	4.58	20	
Benzoic acid	49.833	52	104.2	0	47.8	20	120	46.17	0	20	
Benzyl alcohol	83.010	21	104.2	0	79.7	30	120	75.42	9.59	20	
Bis(2-chloroethoxy)methane	80.396	10	104.2	0	77.2	46	120	71.84	11.2	20	
Bis(2-chloroethyl)ether	73.302	10	104.2	0	70.4	37	120	68.78	6.36	20	
Bis(2-chloroisopropyl)ether	63.302	10	104.2	0	60.8	26	131	57.16	10.2	20	
Bis(2-ethylhexyl)phthalate	109.135	10	104.2	0	105	42	126	101.6	7.14	20	
Butylbenzylphthalate	108.833	10	104.2	0	104	46	120	101.2	7.25	20	
Chrysene	96.958	10	104.2	0	93.1	55	120	89.11	8.43	20	
Di-n-butylphthalate	105.021	10	104.2	0	101	54	120	95.88	9.11	20	
Di-n-octylphthalate	112.510	10	104.2	0	108	37	137	104.3	7.59	20	
Dibenz(a,h)anthracene	97.583	10	104.2	0	93.7	42	127	93.25	4.54	20	
Dibenzofuran	93.552	10	104.2	0	89.8	54	120	82.98	12.0	20	
Diethylphthalate	101.188	10	104.2	0	97.1	41	120	92.43	9.05	20	
Dimethylphthalate	97.792	10	104.2	0	93.9	25	127	87.91	10.6	20	
Fluoranthene	102.229	10	104.2	0	98.1	54	120	92.30	10.2	20	
Fluorene	95.094	10	104.2	0	91.3	50	120	84.75	11.5	20	
Hexachlorobenzene	91.615	10	104.2	0	88.0	52	120	83.36	9.43	20	
Hexachlorobutadiene	88.688	21	104.2	0	85.1	27	120	81.48	8.47	20	
Hexachloroethane	71.375	10	104.2	0	68.5	28	120	67.21	6.01	20	
Indeno(1,2,3-cd)pyrene	98.073	10	104.2	0	94.2	43	125	92.49	5.86	20	
Isophorone	88.979	10	104.2	0	85.4	50	120	79.19	11.6	20	
N-Nitrosodi-n-propylamine	79.708	10	104.2	0	76.5	34	128	70.29	12.6	20	
N-Nitrosodiphenylamine	89.365	10	104.2	0	85.8	48	120	81.19	9.59	20	
Naphthalene	79.271	10	104.2	0	76.1	39	120	72.49	8.94	20	
Nitrobenzene	77.313	10	104.2	0	74.2	44	120	70.73	8.89	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: **N005957-003HMSD** SampType: **MSD** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **6/16/2011** RunNo: **80418**
Client ID: **ZZZZZZ** Batch ID: **37111** TestNo: **EPA 8270C EPA 3510C** Analysis Date: **6/16/2011** SeqNo: **1278480**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pentachlorophenol	92.125	52	104.2	0	88.4	38	120	86.81	5.94	20	
Phenanthrene	93.990	10	104.2	0	90.2	51	120	85.06	9.97	20	
Phenol	60.677	10	104.2	0	58.2	20	120	56.96	6.32	20	
Pyrene	100.854	10	104.2	0	96.8	49	128	92.72	8.41	20	
Surr: 1,2-Dichlorobenzene-d4	78.990		104.2		75.8	27	100		0		
Surr: 2,4,6-Tribromophenol	112.490		104.2		108	42	124		0		
Surr: 2-Chlorophenol-d4	88.729		104.2		85.2	34	98		0		
Surr: 2-Fluorobiphenyl	89.625		104.2		86.0	48	120		0		
Surr: 2-Fluorophenol	75.875		104.2		72.8	20	120		0		
Surr: 4-Terphenyl-d14	105.604		104.2		101	51	135		0		
Surr: Nitrobenzene-d5	82.042		104.2		78.8	41	120		0		
Surr: Phenol-d5	66.823		104.2		64.2	20	120		0		

Sample ID: **MB-37111** SampType: **MBLK** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **6/16/2011** RunNo: **80418**
Client ID: **PBW** Batch ID: **37111** TestNo: **EPA 8270C EPA 3510C** Analysis Date: **6/16/2011** SeqNo: **1278481**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	10									
1,2-Dichlorobenzene	ND	10									
1,3-Dichlorobenzene	ND	10									
1,4-Dichlorobenzene	ND	10									
2,4,5-Trichlorophenol	ND	10									
2,4,6-Trichlorophenol	ND	10									
2,4-Dichlorophenol	ND	10									
2,4-Dimethylphenol	ND	10									
2,4-Dinitrophenol	ND	50									
2,4-Dinitrotoluene	ND	10									
2,6-Dinitrotoluene	ND	10									
2-Chloronaphthalene	ND	10									
2-Chlorophenol	ND	10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: **MB-37111** SampType: **MBLK** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **6/16/2011** RunNo: **80418**
Client ID: **PBW** Batch ID: **37111** TestNo: **EPA 8270C EPA 3510C** Analysis Date: **6/16/2011** SeqNo: **1278481**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Methylnaphthalene	ND	10									
2-Methylphenol	ND	10									
2-Nitroaniline	ND	50									
2-Nitrophenol	ND	10									
3,3'-Dichlorobenzidine	ND	20									
3-Nitroaniline	ND	50									
4,6-Dinitro-2-methylphenol	ND	50									
4-Bromophenyl-phenylether	ND	10									
4-Chloro-3-methylphenol	ND	50									
4-Chloroaniline	ND	20									
4-Chlorophenyl-phenylether	ND	10									
4-Methylphenol	ND	10									
4-Nitroaniline	ND	20									
4-Nitrophenol	ND	50									
Acenaphthene	ND	10									
Acenaphthylene	ND	10									
Anthracene	ND	10									
Benzo(a)anthracene	ND	10									
Benzo(a)pyrene	ND	10									
Benzo(b)fluoranthene	ND	10									
Benzo(g,h,i)perylene	ND	10									
Benzo(k)fluoranthene	ND	10									
Benzoic acid	ND	50									
Benzyl alcohol	ND	20									
Bis(2-chloroethoxy)methane	ND	10									
Bis(2-chloroethyl)ether	ND	10									
Bis(2-chloroisopropyl)ether	ND	10									
Bis(2-ethylhexyl)phthalate	ND	10									
Butylbenzylphthalate	ND	10									
Chrysene	ND	10									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: MB-37111	SampType: MBLK	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 6/16/2011	RunNo: 80418
Client ID: PBW	Batch ID: 37111	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 6/16/2011	SeqNo: 1278481

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Di-n-butylphthalate	ND	10									
Di-n-octylphthalate	ND	10									
Dibenz(a,h)anthracene	ND	10									
Dibenzofuran	ND	10									
Diethylphthalate	ND	10									
Dimethylphthalate	ND	10									
Fluoranthene	ND	10									
Fluorene	ND	10									
Hexachlorobenzene	ND	10									
Hexachlorobutadiene	ND	20									
Hexachloroethane	ND	10									
Indeno(1,2,3-cd)pyrene	ND	10									
Isophorone	ND	10									
N-Nitrosodi-n-propylamine	ND	10									
N-Nitrosodiphenylamine	ND	10									
Naphthalene	ND	10									
Nitrobenzene	ND	10									
Pentachlorophenol	ND	50									
Phenanthrene	ND	10									
Phenol	ND	10									
Pyrene	ND	10									
Surr: 1,2-Dichlorobenzene-d4	58.100		100.0		58.1	27	100				
Surr: 2,4,6-Tribromophenol	79.210		100.0		79.2	42	124				
Surr: 2-Chlorophenol-d4	66.220		100.0		66.2	34	98				
Surr: 2-Fluorobiphenyl	63.670		100.0		63.7	48	120				
Surr: 2-Fluorophenol	59.910		100.0		59.9	20	120				
Surr: 4-Terphenyl-d14	88.180		100.0		88.2	51	135				
Surr: Nitrobenzene-d5	62.860		100.0		62.9	41	120				
Surr: Phenol-d5	54.690		100.0		54.7	20	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-65-160-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 1:31:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS-SIM							
EPA 3510C			**EPA 8270CSIM**				
RunID: **MS3_110615A**	QC Batch: **37097**				PrepDate:	**6/15/2011**	Analyst: **admir**
1-Methylnaphthalene	ND	0.098	0.21		ug/L	1	6/15/2011 08:34 PM
2-Methylnaphthalene	ND	0.11	0.21		ug/L	1	6/15/2011 08:34 PM
Acenaphthene	ND	0.094	0.21		ug/L	1	6/15/2011 08:34 PM
Acenaphthylene	ND	0.10	0.21		ug/L	1	6/15/2011 08:34 PM
Anthracene	ND	0.069	0.21		ug/L	1	6/15/2011 08:34 PM
Benzo(a)anthracene	ND	0.023	0.21		ug/L	1	6/15/2011 08:34 PM
Benzo(a)pyrene	ND	0.098	0.21		ug/L	1	6/15/2011 08:34 PM
Benzo(b)fluoranthene	ND	0.056	0.21		ug/L	1	6/15/2011 08:34 PM
Benzo(g,h,i)perylene	ND	0.091	0.21		ug/L	1	6/15/2011 08:34 PM
Benzo(k)fluoranthene	ND	0.048	0.21		ug/L	1	6/15/2011 08:34 PM
Chrysene	ND	0.032	0.21		ug/L	1	6/15/2011 08:34 PM
Dibenz(a,h)anthracene	ND	0.065	0.21		ug/L	1	6/15/2011 08:34 PM
Fluoranthene	ND	0.029	0.21		ug/L	1	6/15/2011 08:34 PM
Fluorene	ND	0.090	0.21		ug/L	1	6/15/2011 08:34 PM
Indeno(1,2,3-cd)pyrene	ND	0.073	0.21		ug/L	1	6/15/2011 08:34 PM
Naphthalene	ND	0.11	0.21		ug/L	1	6/15/2011 08:34 PM
Phenanthrene	ND	0.059	0.21		ug/L	1	6/15/2011 08:34 PM
Pyrene	ND	0.018	0.21		ug/L	1	6/15/2011 08:34 PM
Surr: 1,2-Dichlorobenzene-d4	41.0	0	27-100		%REC	1	6/15/2011 08:34 PM
Surr: 2-Fluorobiphenyl	50.0	0	34-135		%REC	1	6/15/2011 08:34 PM
Surr: 4-Terphenyl-d14	77.0	0	34-167		%REC	1	6/15/2011 08:34 PM
Surr: Nitrobenzene-d5	70.0	0	25-135		%REC	1	6/15/2011 08:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-66-165-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 3:37:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS-SIM							
EPA 3510C			**EPA 8270CSIM**				
RunID: **MS3_110615A**	QC Batch: **37097**				PrepDate:	**6/15/2011**	Analyst: **admir**
1-Methylnaphthalene	ND	0.095	0.20		ug/L	1	6/15/2011 09:04 PM
2-Methylnaphthalene	ND	0.11	0.20		ug/L	1	6/15/2011 09:04 PM
Acenaphthene	ND	0.091	0.20		ug/L	1	6/15/2011 09:04 PM
Acenaphthylene	ND	0.098	0.20		ug/L	1	6/15/2011 09:04 PM
Anthracene	ND	0.067	0.20		ug/L	1	6/15/2011 09:04 PM
Benzo(a)anthracene	ND	0.022	0.20		ug/L	1	6/15/2011 09:04 PM
Benzo(a)pyrene	ND	0.095	0.20		ug/L	1	6/15/2011 09:04 PM
Benzo(b)fluoranthene	ND	0.055	0.20		ug/L	1	6/15/2011 09:04 PM
Benzo(g,h,i)perylene	ND	0.088	0.20		ug/L	1	6/15/2011 09:04 PM
Benzo(k)fluoranthene	ND	0.046	0.20		ug/L	1	6/15/2011 09:04 PM
Chrysene	ND	0.031	0.20		ug/L	1	6/15/2011 09:04 PM
Dibenz(a,h)anthracene	ND	0.063	0.20		ug/L	1	6/15/2011 09:04 PM
Fluoranthene	ND	0.028	0.20		ug/L	1	6/15/2011 09:04 PM
Fluorene	ND	0.087	0.20		ug/L	1	6/15/2011 09:04 PM
Indeno(1,2,3-cd)pyrene	ND	0.071	0.20		ug/L	1	6/15/2011 09:04 PM
Naphthalene	ND	0.11	0.20		ug/L	1	6/15/2011 09:04 PM
Phenanthrene	ND	0.058	0.20		ug/L	1	6/15/2011 09:04 PM
Pyrene	ND	0.017	0.20		ug/L	1	6/15/2011 09:04 PM
Surr: 1,2-Dichlorobenzene-d4	48.0	0	27-100		%REC	1	6/15/2011 09:04 PM
Surr: 2-Fluorobiphenyl	54.0	0	34-135		%REC	1	6/15/2011 09:04 PM
Surr: 4-Terphenyl-d14	77.0	0	34-167		%REC	1	6/15/2011 09:04 PM
Surr: Nitrobenzene-d5	74.0	0	25-135		%REC	1	6/15/2011 09:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock,417981.ER.02.DM
Lab ID: N005957-005

Client Sample ID: MW-67-225-001
Collection Date: 6/14/2011 9:27:00 AM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS-SIM							
EPA 3510C			**EPA 8270CSIM**				
RunID: **MS3_110615A**	QC Batch: **37097**				PrepDate:	**6/15/2011**	Analyst: **admir**
1-Methylnaphthalene	ND	0.097	0.21		ug/L	1	6/15/2011 09:34 PM
2-Methylnaphthalene	ND	0.11	0.21		ug/L	1	6/15/2011 09:34 PM
Acenaphthene	ND	0.093	0.21		ug/L	1	6/15/2011 09:34 PM
Acenaphthylene	ND	0.10	0.21		ug/L	1	6/15/2011 09:34 PM
Anthracene	ND	0.068	0.21		ug/L	1	6/15/2011 09:34 PM
Benzo(a)anthracene	ND	0.023	0.21		ug/L	1	6/15/2011 09:34 PM
Benzo(a)pyrene	ND	0.097	0.21		ug/L	1	6/15/2011 09:34 PM
Benzo(b)fluoranthene	ND	0.056	0.21		ug/L	1	6/15/2011 09:34 PM
Benzo(g,h,i)perylene	ND	0.090	0.21		ug/L	1	6/15/2011 09:34 PM
Benzo(k)fluoranthene	ND	0.047	0.21		ug/L	1	6/15/2011 09:34 PM
Chrysene	ND	0.032	0.21		ug/L	1	6/15/2011 09:34 PM
Dibenz(a,h)anthracene	ND	0.064	0.21		ug/L	1	6/15/2011 09:34 PM
Fluoranthene	ND	0.029	0.21		ug/L	1	6/15/2011 09:34 PM
Fluorene	ND	0.089	0.21		ug/L	1	6/15/2011 09:34 PM
Indeno(1,2,3-cd)pyrene	ND	0.072	0.21		ug/L	1	6/15/2011 09:34 PM
Naphthalene	ND	0.11	0.21		ug/L	1	6/15/2011 09:34 PM
Phenanthrene	ND	0.059	0.21		ug/L	1	6/15/2011 09:34 PM
Pyrene	ND	0.018	0.21		ug/L	1	6/15/2011 09:34 PM
Surr: 1,2-Dichlorobenzene-d4	61.0	0	27-100		%REC	1	6/15/2011 09:34 PM
Surr: 2-Fluorobiphenyl	74.0	0	34-135		%REC	1	6/15/2011 09:34 PM
Surr: 4-Terphenyl-d14	81.0	0	34-167		%REC	1	6/15/2011 09:34 PM
Surr: Nitrobenzene-d5	92.0	0	25-135		%REC	1	6/15/2011 09:34 PM

Qualifiers:
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-68-180-001
Lab Order:	N005957	**Collection Date:**	6/14/2011 1:11:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS-SIM							
EPA 3510C			**EPA 8270CSIM**				
RunID: **MS3_110615A**	QC Batch: **37097**				PrepDate:	**6/15/2011**	Analyst: **admir**
1-Methylnaphthalene	ND	0.098	0.21		ug/L	1	6/15/2011 10:04 PM
2-Methylnaphthalene	ND	0.11	0.21		ug/L	1	6/15/2011 10:04 PM
Acenaphthene	ND	0.094	0.21		ug/L	1	6/15/2011 10:04 PM
Acenaphthylene	ND	0.10	0.21		ug/L	1	6/15/2011 10:04 PM
Anthracene	ND	0.069	0.21		ug/L	1	6/15/2011 10:04 PM
Benzo(a)anthracene	ND	0.023	0.21		ug/L	1	6/15/2011 10:04 PM
Benzo(a)pyrene	ND	0.098	0.21		ug/L	1	6/15/2011 10:04 PM
Benzo(b)fluoranthene	ND	0.056	0.21		ug/L	1	6/15/2011 10:04 PM
Benzo(g,h,i)perylene	ND	0.091	0.21		ug/L	1	6/15/2011 10:04 PM
Benzo(k)fluoranthene	ND	0.048	0.21		ug/L	1	6/15/2011 10:04 PM
Chrysene	ND	0.032	0.21		ug/L	1	6/15/2011 10:04 PM
Dibenz(a,h)anthracene	ND	0.065	0.21		ug/L	1	6/15/2011 10:04 PM
Fluoranthene	ND	0.029	0.21		ug/L	1	6/15/2011 10:04 PM
Fluorene	ND	0.090	0.21		ug/L	1	6/15/2011 10:04 PM
Indeno(1,2,3-cd)pyrene	ND	0.073	0.21		ug/L	1	6/15/2011 10:04 PM
Naphthalene	ND	0.11	0.21		ug/L	1	6/15/2011 10:04 PM
Phenanthrene	ND	0.059	0.21		ug/L	1	6/15/2011 10:04 PM
Pyrene	ND	0.018	0.21		ug/L	1	6/15/2011 10:04 PM
Surr: 1,2-Dichlorobenzene-d4	45.0	0	27-100		%REC	1	6/15/2011 10:04 PM
Surr: 2-Fluorobiphenyl	55.0	0	34-135		%REC	1	6/15/2011 10:04 PM
Surr: 4-Terphenyl-d14	72.0	0	34-167		%REC	1	6/15/2011 10:04 PM
Surr: Nitrobenzene-d5	78.0	0	25-135		%REC	1	6/15/2011 10:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-70-105-001
Lab Order:	N005957	**Collection Date:**	6/13/2011 12:07:00 PM
Project:	PG&E Topock,417981.ER.02.DM	**Matrix:**	GROUND WATER
Lab ID:	N005957-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS-SIM							
EPA 3510C			**EPA 8270CSIM**				
RunID: **MS3_110615A**	QC Batch: **37097**				PrepDate:	**6/15/2011**	Analyst: **admir**
1-Methylnaphthalene	ND	0.096	0.20		ug/L	1	6/15/2011 10:34 PM
2-Methylnaphthalene	ND	0.11	0.20		ug/L	1	6/15/2011 10:34 PM
Acenaphthene	ND	0.092	0.20		ug/L	1	6/15/2011 10:34 PM
Acenaphthylene	ND	0.099	0.20		ug/L	1	6/15/2011 10:34 PM
Anthracene	ND	0.067	0.20		ug/L	1	6/15/2011 10:34 PM
Benzo(a)anthracene	ND	0.022	0.20		ug/L	1	6/15/2011 10:34 PM
Benzo(a)pyrene	ND	0.096	0.20		ug/L	1	6/15/2011 10:34 PM
Benzo(b)fluoranthene	ND	0.055	0.20		ug/L	1	6/15/2011 10:34 PM
Benzo(g,h,i)perylene	ND	0.089	0.20		ug/L	1	6/15/2011 10:34 PM
Benzo(k)fluoranthene	ND	0.047	0.20		ug/L	1	6/15/2011 10:34 PM
Chrysene	ND	0.032	0.20		ug/L	1	6/15/2011 10:34 PM
Dibenz(a,h)anthracene	ND	0.063	0.20		ug/L	1	6/15/2011 10:34 PM
Fluoranthene	ND	0.029	0.20		ug/L	1	6/15/2011 10:34 PM
Fluorene	ND	0.088	0.20		ug/L	1	6/15/2011 10:34 PM
Indeno(1,2,3-cd)pyrene	ND	0.071	0.20		ug/L	1	6/15/2011 10:34 PM
Naphthalene	ND	0.11	0.20		ug/L	1	6/15/2011 10:34 PM
Phenanthrene	ND	0.058	0.20		ug/L	1	6/15/2011 10:34 PM
Pyrene	ND	0.017	0.20		ug/L	1	6/15/2011 10:34 PM
Surr: 1,2-Dichlorobenzene-d4	55.0	0	27-100		%REC	1	6/15/2011 10:34 PM
Surr: 2-Fluorobiphenyl	72.0	0	34-135		%REC	1	6/15/2011 10:34 PM
Surr: 4-Terphenyl-d14	84.0	0	34-167		%REC	1	6/15/2011 10:34 PM
Surr: Nitrobenzene-d5	90.0	0	25-135		%REC	1	6/15/2011 10:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *28-Jun-11*

CLIENT: CH2M HILL
Lab Order: N005957
Project: PG&E Topock,417981.ER.02.DM
Lab ID: N005957-010

Client Sample ID: MW-99-001
Collection Date: 6/14/2011 1:11:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS-SIM							
EPA 3510C			**EPA 8270CSIM**				
RunID: **MS3_110615A**	QC Batch: **37097**				PrepDate:	**6/15/2011**	Analyst: **admir**
1-Methylnaphthalene	ND	0.096	0.20		ug/L	1	6/15/2011 11:04 PM
2-Methylnaphthalene	ND	0.11	0.20		ug/L	1	6/15/2011 11:04 PM
Acenaphthene	ND	0.092	0.20		ug/L	1	6/15/2011 11:04 PM
Acenaphthylene	ND	0.099	0.20		ug/L	1	6/15/2011 11:04 PM
Anthracene	ND	0.067	0.20		ug/L	1	6/15/2011 11:04 PM
Benzo(a)anthracene	ND	0.022	0.20		ug/L	1	6/15/2011 11:04 PM
Benzo(a)pyrene	ND	0.096	0.20		ug/L	1	6/15/2011 11:04 PM
Benzo(b)fluoranthene	ND	0.055	0.20		ug/L	1	6/15/2011 11:04 PM
Benzo(g,h,i)perylene	ND	0.089	0.20		ug/L	1	6/15/2011 11:04 PM
Benzo(k)fluoranthene	ND	0.047	0.20		ug/L	1	6/15/2011 11:04 PM
Chrysene	ND	0.032	0.20		ug/L	1	6/15/2011 11:04 PM
Dibenz(a,h)anthracene	ND	0.063	0.20		ug/L	1	6/15/2011 11:04 PM
Fluoranthene	ND	0.029	0.20		ug/L	1	6/15/2011 11:04 PM
Fluorene	ND	0.088	0.20		ug/L	1	6/15/2011 11:04 PM
Indeno(1,2,3-cd)pyrene	ND	0.071	0.20		ug/L	1	6/15/2011 11:04 PM
Naphthalene	ND	0.11	0.20		ug/L	1	6/15/2011 11:04 PM
Phenanthrene	ND	0.058	0.20		ug/L	1	6/15/2011 11:04 PM
Pyrene	ND	0.017	0.20		ug/L	1	6/15/2011 11:04 PM
Surr: 1,2-Dichlorobenzene-d4	55.0	0	27-100		%REC	1	6/15/2011 11:04 PM
Surr: 2-Fluorobiphenyl	62.0	0	34-135		%REC	1	6/15/2011 11:04 PM
Surr: 4-Terphenyl-d14	72.0	0	34-167		%REC	1	6/15/2011 11:04 PM
Surr: Nitrobenzene-d5	84.0	0	25-135		%REC	1	6/15/2011 11:04 PM

Qualifiers:
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- E Value above quantitation range
- ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

Advanced Technology Laboratories, Inc.

Date: *28-Jun-11*

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_SIMPGE

Sample ID: **LCS-37097** SampType: **LCS** TestCode: **8270_W_SIM** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80462**
Client ID: **LCSW** Batch ID: **37097** TestNo: **EPA 8270CSI EPA 3510C** Analysis Date: **6/15/2011** SeqNo: **1278499**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	0.600	0.20	1.000	0	60.0	35	131				
2-Methylnaphthalene	0.780	0.20	1.000	0	78.0	36	121				
Acenaphthene	0.630	0.20	1.000	0	63.0	39	125				
Acenaphthylene	0.680	0.20	1.000	0	68.0	43	140				
Anthracene	0.590	0.20	1.000	0	59.0	41	132				
Benzo(a)anthracene	0.850	0.20	1.000	0	85.0	58	141				
Benzo(a)pyrene	0.740	0.20	1.000	0	74.0	31	142				
Benzo(b)fluoranthene	0.890	0.20	1.000	0	89.0	42	156				
Benzo(g,h,i)perylene	0.820	0.20	1.000	0	82.0	12	171				
Benzo(k)fluoranthene	0.660	0.20	1.000	0	66.0	49	165				
Chrysene	0.710	0.20	1.000	0	71.0	51	155				
Dibenz(a,h)anthracene	0.790	0.20	1.000	0	79.0	28	153				
Fluoranthene	0.690	0.20	1.000	0	69.0	47	158				
Fluorene	0.730	0.20	1.000	0	73.0	40	140				
Indeno(1,2,3-cd)pyrene	0.750	0.20	1.000	0	75.0	20	167				
Naphthalene	0.700	0.20	1.000	0	70.0	39	125				
Phenanthrene	0.670	0.20	1.000	0	67.0	46	144				
Pyrene	0.670	0.20	1.000	0	67.0	39	158				
Surr: 1,2-Dichlorobenzene-d4	0.510		1.000		51.0	27	100				
Surr: 2-Fluorobiphenyl	0.700		1.000		70.0	34	135				
Surr: 4-Terphenyl-d14	0.780		1.000		78.0	34	167				
Surr: Nitrobenzene-d5	0.920		1.000		92.0	25	135				

Sample ID: **N005957-003IMS** SampType: **MS** TestCode: **8270_W_SIM** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80462**
Client ID: **ZZZZZZ** Batch ID: **37097** TestNo: **EPA 8270CSI EPA 3510C** Analysis Date: **6/15/2011** SeqNo: **1278500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	2.449	0.20	4.082	0	60.0	35	131				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate ontside of limits due to matrix interference

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CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_SIMPGE

Sample ID: **N005957-003IMS** SampType: **MS** TestCode: **8270_W_SIM** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80462**
Client ID: **ZZZZZZ** Batch ID: **37097** TestNo: **EPA 8270CSI EPA 3510C** Analysis Date: **6/15/2011** SeqNo: **1278500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Methylnaphthalene	2.908	0.20	4.082	0	71.2	36	121				
Acenaphthene	2.571	0.20	4.082	0	63.0	39	125				
Acenaphthylene	2.949	0.20	4.082	0	72.3	43	140				
Anthracene	2.796	0.20	4.082	0	68.5	41	132				
Benzo(a)anthracene	3.367	0.20	4.082	0	82.5	58	141				
Benzo(a)pyrene	3.020	0.20	4.082	0	74.0	31	142				
Benzo(b)fluoranthene	3.071	0.20	4.082	0	75.2	42	156				
Benzo(g,h,i)perylene	3.255	0.20	4.082	0	79.8	12	171				
Benzo(k)fluoranthene	2.827	0.20	4.082	0	69.3	49	165				
Chrysene	2.653	0.20	4.082	0	65.0	51	155				
Dibenz(a,h)anthracene	3.092	0.20	4.082	0	75.8	28	153				
Fluoranthene	2.816	0.20	4.082	0	69.0	47	158				
Fluorene	3.010	0.20	4.082	0	73.8	40	140				
Indeno(1,2,3-cd)pyrene	2.949	0.20	4.082	0	72.3	20	167				
Naphthalene	2.643	0.20	4.082	0	64.8	39	125				
Phenanthrene	2.684	0.20	4.082	0	65.8	46	144				
Pyrene	2.541	0.20	4.082	0	62.3	39	158				
Surr: 1,2-Dichlorobenzene-d4	0.541		1.020		53.0	27	100				
Surr: 2-Fluorobiphenyl	0.755		1.020		74.0	34	135				
Surr: 4-Terphenyl-d14	0.776		1.020		76.0	34	167				
Surr: Nitrobenzene-d5	0.959		1.020		94.0	25	135				

Sample ID: **N005957-003IMSD** SampType: **MSD** TestCode: **8270_W_SIM** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80462**
Client ID: **ZZZZZZ** Batch ID: **37097** TestNo: **EPA 8270CSI EPA 3510C** Analysis Date: **6/15/2011** SeqNo: **1278501**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	2.398	0.20	4.082	0	58.8	35	131	2.449	2.11	30	
2-Methylnaphthalene	2.857	0.20	4.082	0	70.0	36	121	2.908	1.77	30	
Acenaphthene	2.490	0.20	4.082	0	61.0	39	125	2.571	3.23	30	
Acenaphthylene	2.847	0.20	4.082	0	69.8	43	140	2.949	3.52	30	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc.
3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_SIMPGE

Sample ID: **N005957-003IMSD** SampType: **MSD** TestCode: **8270_W_SIM** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80462**
Client ID: **ZZZZZZ** Batch ID: **37097** TestNo: **EPA 8270CSI EPA 3510C** Analysis Date: **6/15/2011** SeqNo: **1278501**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Anthracene	2.745	0.20	4.082	0	67.2	41	132	2.796	1.84	30	
Benzo(a)anthracene	3.327	0.20	4.082	0	81.5	58	141	3.367	1.22	30	
Benzo(a)pyrene	2.959	0.20	4.082	0	72.5	31	142	3.020	2.05	30	
Benzo(b)fluoranthene	3.082	0.20	4.082	0	75.5	42	156	3.071	0.332	30	
Benzo(g,h,i)perylene	3.235	0.20	4.082	0	79.2	12	171	3.255	0.629	30	
Benzo(k)fluoranthene	2.776	0.20	4.082	0	68.0	49	165	2.827	1.82	30	
Chrysene	2.602	0.20	4.082	0	63.8	51	155	2.653	1.94	30	
Dibenz(a,h)anthracene	3.071	0.20	4.082	0	75.2	28	153	3.092	0.662	30	
Fluoranthene	2.796	0.20	4.082	0	68.5	47	158	2.816	0.727	30	
Fluorene	2.949	0.20	4.082	0	72.3	40	140	3.010	2.05	30	
Indeno(1,2,3-cd)pyrene	2.929	0.20	4.082	0	71.8	20	167	2.949	0.694	30	
Naphthalene	2.602	0.20	4.082	0	63.8	39	125	2.643	1.56	30	
Phenanthrene	2.612	0.20	4.082	0	64.0	46	144	2.684	2.70	30	
Pyrene	2.561	0.20	4.082	0	62.8	39	158	2.541	0.800	30	
Surr: 1,2-Dichlorobenzene-d4	0.500		1.020		49.0	27	100		0		
Surr: 2-Fluorobiphenyl	0.724		1.020		71.0	34	135		0		
Surr: 4-Terphenyl-d14	0.765		1.020		75.0	34	167		0		
Surr: Nitrobenzene-d5	0.929		1.020		91.0	25	135		0		

Sample ID: **MB-37097** SampType: **MBLK** TestCode: **8270_W_SIM** Units: **ug/L** Prep Date: **6/15/2011** RunNo: **80462**
Client ID: **PBW** Batch ID: **37097** TestNo: **EPA 8270CSI EPA 3510C** Analysis Date: **6/15/2011** SeqNo: **1278502**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	0.20									
2-Methylnaphthalene	ND	0.20									
Acenaphthene	ND	0.20									
Acenaphthylene	ND	0.20									
Anthracene	ND	0.20									
Benzo(a)anthracene	ND	0.20									
Benzo(a)pyrene	ND	0.20									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N005957
Project: PG&E Topock,417981.ER.02.DM

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_SIMPGE

Sample ID: MB-37097	SampType: MBLK	TestCode: 8270_W_SIM	Units: ug/L	Prep Date: 6/15/2011	RunNo: 80462
Client ID: PBW	Batch ID: 37097	TestNo: EPA 8270CSI EPA 3510C		Analysis Date: 6/15/2011	SeqNo: 1278502

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(b)fluoranthene	ND	0.20									
Benzo(g,h,i)perylene	ND	0.20									
Benzo(k)fluoranthene	ND	0.20									
Chrysene	ND	0.20									
Dibenz(a,h)anthracene	ND	0.20									
Fluoranthene	ND	0.20									
Fluorene	ND	0.20									
Indeno(1,2,3-cd)pyrene	ND	0.20									
Naphthalene	ND	0.20									
Phenanthrene	ND	0.20									
Pyrene	ND	0.20									
Surr: 1,2-Dichlorobenzene-d4	0.460		1.000		46.0	27	100				
Surr: 2-Fluorobiphenyl	0.600		1.000		60.0	34	135				
Surr: 4-Terphenyl-d14	0.770		1.000		77.0	34	167				
Surr: Nitrobenzene-d5	0.830		1.000		83.0	25	135				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories, Inc.
3151 W. Post Rd. Las Vegas, NV 89118 Tel:702-307-2659 Fax:702-307-2691

CH2MHILL

CHAIN OF CUSTODY RECORD

Page 1 OF 1

Project Name PG&E Topock
Location Topock
Project Number 417981.ER.02.DM
Project Manager Mike C.
Sample Manager Shawn Duffy

Task Order
Project 2011-EASTRAVINE-GWINV-001
Turnaround Time 10 Days
Shipping Date: Verbal in 5 days for the organic analysis.
COC Number:

Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	2x1 Liter	2x1 Liter	2x1 Liter	2x1 Liter	1 Liter Poly	3 x 40 ml VOA	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	3 x 40 ml VOA	3 x 40 ml VOA
Preservatives:	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	4°C	H2SO4, pH<2, 4°C	H3PO4, 4°C	4°C	4°C	4°C	4°C	4°C	4°C	HCL,4°C	HCL,4°C
Filtered:	Field	Field	Field	Field	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Holding Time:	28	180	180	180	2	2	2	2	28	28	7	7	7	7	7	7	14	14
	Cr6 (E218.6) Field Filtered	Metals (7470ADis) Field Filtered	Metals (SW6010B/SW6020Adis) Field Filtered Title 22 Metals	Metals (6010BFF) Field Filtered Ca,Mg,Mn,K,Na,Fe	Anions (E300.0) Cl,SO4,NO3,NO2,Fl,Br,PO4	TDS (SM2540C)	Alkalinity (SM2320B)	TSS (SM2540)	Ammonia (SM4500NH3)	TOC (SM5310C)	TPH-Extractable (8015B-E)	SVOC (8270C)	PAHs (SW8270Sim)	PCBs (8082)	Pesticides (SW8081A)	Herbicide (SW8151A)	VOCs (8260B)	TPH-Purgable (SW8015B)

N005957	SAMPLE ID	DATE	TIME	Matrix	Number of Containers
-1	MW-65-160-001	6/13/11	1331	GW	18
2	MW-65-205-001	6/13/11	1426	GW	19
3	MW-66-165-001	6/13/11	1537	GW	75
4	MW-66-230-001	6/14/11	1207	GW	25
5	MW-67-225-001	6/14/11	0927	GW	25
6	MW-67-260-001	6/14/11	1053	GW	25
7	MW-68-180-001	6/14/11	1311	GW	25
8	MW-68-240-001	6/14/11	0803	GW	25
9	MW-70-105-001	6/13/11	1207	GW	18
10	MW-99-001	6/14/11	1311	GW	25
11	EB-70331-001	6/14/11	1500	GW	7
12	TEMP BLANK				1
13	TB-061111	6/11/11	1610	GW	1
				TOTAL	28

	Signatures	Date/Time
Approved by	[signature]	6/14/11 1540
Sampled by	[signature]	6/14/11 1540
Relinquished by	[signature]	6/14/11 1540
Received by	[signature] DMGalan	6/14/11 1540
Relinquished by	[signature] DMGalan	6/14/11 1847
Received by	[signature] GGESMUNDO	6/14/11 1848

Shipping Details

Method of Shipment:
On Ice: ~~yes~~ / no 2.6°C/3.2°C/2.8°C/2.6°C/2.2°C/2.6°C 2.8°C/2.6°C/4.8°C 1 ft 2
Airbill No:
Lab Name: ADVANCED TECHNOLOGY LABORATORIES
Lab Phone: (702) 307-2659

ATTN: Marlon

Special Instructions:
PLEASE HOLD EXTRA CONTAINERS FOR METHODS NOT LISTED ON THE COC. SAMPLE MW-66-165-001 HAS EXTRA VOLUME FOR LAB QC.

Report Copy to
Shawn Duffy
(530) 229-3303

CH2MHILL

CHAIN OF CUSTODY RECORD

Project Name PG&E Topock
Location Topock
Project Number 417981.ER.02.DM
Project Manager Mike C.
Sample Manager Shawn Duffy

Task Order
Project 2011-EASTRAVINE-GWINV-001
Turnaround Time 10 Days
Shipping Date: Verbal in 5 days for the organic analysis.
COC Number:

Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	2x1 Liter	2x1 Liter	2x1 Liter	2x1 Liter	1 Liter Poly	3 x 40 ml VOA	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	9 X 1L Amber	3 x 40 ml VOA	3 x 40 ml VOA
Preservatives:	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	4°C	H2SO4, pH<2, 4°C	H3PO4, 4°C	4°C	4°C	4°C	4°C	4°C	4°C	HCL,4°C	HCL,4°C
Filtered:	Field	Field	Field	Field	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Holding Time:	28	180	180	180	2	2	2	2	28	28	7	7	7	7	7	7	14	14
	Cr6 (E218.6) Field Filtered	Metals (7470ADis) Field Filtered	Metals (SW6010B/SW6020Adis) Field Filtered Title 22 Metals	Metals (6010BFF) Field Filtered Ca,Mg,Mn,K,Na,Fe	Anions (E300.0) Cl,SO4,NO3,NO2,Fl,Br,PO4	TDS (SM2540C)	Alkalinity (SM2320B)	TSS (SM2540)	Ammonia (SM4500NH3)	TOC (SM5310C)	TPH-Extractable (8015B-E)	SVOC (8270C)	PAHs (SW8270Sim)	PCBs (8082)	Pesticides (SW8081A)	Herbicide (SW8151A)	VOCs (8260B)	TPH-Purgable (SW8015B)

SAMPLE ID	DATE	TIME	Matrix	Number of Containers
MW-65-160-001	6/13/11	1331	GW	18
MW-65-205-001	6/13/11	1426	GW	19
MW-66-165-001	6/13/11	1537	GW	75
MW-66-230-001	6/14/11	1207	GW	25
MW-67-225-001	6/14/11	0927	GW	25
MW-67-260-001	6/14/11	1053	GW	25
MW-68-180-001	6/14/11	1311	GW	25
MW-68-240-001	6/14/11	0803	GW	25
MW-70-105-001	6/13/11	1207	GW	18
MW-99-001	6/14/11	1311	GW	25
EB-70331-001	6/14/11	1500	GW	7
TEMP BLANK				1
TB-061111	6/11/11	1610	GW	1
			TOTAL	289

	Signatures	Date/Time
Approved by	Eli Ludwig	6/14/11 1540
Sampled by	Eli Ludwig	6/14/11 1540
Relinquished by	[illegible]	6/14/11 1540
Received by	D McGalan	6/14/11 1540
Relinquished by	D McGalan	6/14/11 1597
Received by	GGETSMAN	6/14/11 1848

Shipping Details
Method of Shipment:
On Ice: ~~yes~~ / no 2.6°C/5.2°C/2.8°C/2.6°C/2.2°C/2.6°C 2.8°C/2.6°C/4.8°C IR#2
Airbill No:
Lab Name: ADVANCED TECHNOLOGY LABORATORIES
Lab Phone: (702) 307-2659
ATTN: Marion

Special Instructions:
PLEASE HOLD EXTRA CONTAINERS FOR METHODS NOT LISTED ON THE COC. SAMPLE MW-66-165-001 HAS EXTRA VOLUME FOR LAB QC.

Report Copy to Shawn Duffy (530) 229-3303

Advanced Technology Laboratories, Inc.

Please review the checklist below. Any NO and/or NA signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Sample Receipt Checklist

Cooler Received/Opened On: 6/14/2011 Workorder: N005957

Rep sample Temp (Deg C): 2.6,3.2,2.8,2.6,2.2,2.6,2.8, IR Gun ID: 2

Temp Blank: ☐ Yes ☑ No

Carrier name: ATL

Last 4 digits of Tracking No.: Packing Material Used: Bubble Wrap

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☐	No ☑	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☑	No ☐	NA ☐
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☑	No ☐	NA ☐
Was Client notified?	Yes ☑	No ☐	NA ☐

Comments: see correspondence

Checklist Completed B NS 6/15/11

Reviewed By: [signature]

Advanced Technology Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atlglobal.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:
D-Tek
2722 Loker Ave W Ste B
Carlsbad, CA 92010

TEL: (760) 930-2555
FAX: (760) 930-2510
Acct #:

Field Sampler: Eli Ludwig

15-Jun-11

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests: EPA 8151		
N005957-001L / MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	32OZA	1		
N005957-003L / MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	32OZA	1		
N005957-005L / MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	32OZA	1		
N005957-007L / MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	32OZA	1		
N005957-009L / MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	32OZA	1		
N005957-010L / MW-99-001	Ground Water	6/14/2011 1:11:00 PM	32OZA	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N005957 Please fax results by:6/21/2011

Please analyze for Herbicides by EPA 8151

Please use N005957-3L as sample and MS/MSD (3-32 oz amber bottles)

		Date/Time			Date/Time
Relinquished by:	[illegible]	6/15/11 3pm	**Received by:**		
Relinquished by:			**Received by:**		

SAMPLE CALCULATION

METHOD: SM 2540C
TEST NAME: Total Filterable Residue
MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying
B = weight of dish in g
C = volume of sample used in mL

For **N005957-001C,** TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(61.4207-61.1734)*1000000}{100}$$
$$= 2473 \text{ mg/L}$$

Reporting result in two significant figures,

TDS = 2500 mg/L

SAMPLE CALCULATION

METHOD: SM 2540D
TEST NAME: Total Non-Filterable Residue
MATRIX: Water

FORMULA:

Calculate TSS concentration in mg/L, in the original sample as follows:

$$\text{TSS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying
B = weight of dish in g
C = volume of sample used in mL

For **N005957-001C,** TSS concentration in mg/L is calculated as follows:

$$\text{TSS, mg/L} = \frac{(1.4470-14462)*1000000}{100}$$
$$= 8$$

Reporting result in two significant figures,

TSS = 8 mg/L

Since reporting limit is 10 mg/L, therefore:

TSS = ND

Sample ID: **N005957-001C @ pH 7.96**

A. Standardization of Sulfuric Acid (titrant):

Normality of acid = (A)(B)/(53.00)(C)

Where:

A, grams weighed for Na_2CO_3 solution (MS/MSD Stock Solution)
B, mL Na2CO3 solution taken for tritration, and
C, ml of sulfuric acid used to inflection point

Spike Standards

MS/MSD Stock Na_2CO_3, ACS Grade (1.00 ml = 2500 ug as $CaCO_3$): Dissolve 2.650 grams of Na_2CO_3 in distilled water and dilute to 1 liter.

LCS Na_2CO_3, ACS Grade (1.00 ml = 2500 ug as $CaCO_3$): Dissolve 2.650 grams of Na_2CO_3 in distilled water and dilute to 1 liter. The reagent must be purchased from a secondary source

Therefore,

Normality of Acid = (2.65g/L) (5mL) / (53.00) (12.5 mL)

= 0.02 N

B. CALCULATION OF ALKALINITY (for a 50 ml sample)

Total Alkalinity (as $CaCO_3$), mg/L = $M_{vol.}$ * N H_2SO_4 * DF * 1000

Where:

$M_{vol.}$, volume titrant used to reach pH 4.5, ml
N, Normality of H_2SO_4
DF, Dilution Factor = (50 ml) / (Vol. of Sample used)

Therefore,

Total Alkalinity (as $CaCO_3$), mg/L = (3.55mL) (0.02 N) (1) * 1000

= 71mg/L

Reporting results in two significant figures,

= **71 mg/L** as $CaCO_3$

C. SPECIATED ALKALINITY:

Phenolphthalein Alkalinity

P alkalinity, mg/L as $CaCO_3$ = $P_{vol.}$ * N H_2SO_4 * DF * 1000

= (0) (0.02 N) (1) * 1000

= **0**

Total Alkalinity

T alkalinity, mg/L as $CaCO_3$ = $M_{vol.}$ * N H_2SO_4 * DF * 1000

= (3.55 mL) (0.02 N) (1) * 1000

= **71 mg/L** as CaCO3

Where:

$P_{vol.}$ - volume titrant used to reach pH 8.3, ml
$M_{vol.}$ - volume titrant used to reach pH 4.5, ml
N - Normality of H_2SO_4
DF - Dilution Factor = (50 ml) / (Vol. of Sample used)

Then OH, CO_3, HCO_3 alkalinities as $CaCO_3$ will be calculated as follows:

Result of Titration	**OH Alkalinity as $CaCO_3$**	**CO_3 Alkalinity as $CaCO_3$**	**HCO_3 Alkalinity as $CaCO_3$**
P = 0	0	0	T
P < ½ T	0	2P	T – 2P
P = ½ T	0	2P	0
P > ½ T	2P – T	2(T – P)	0
P = T	T	0	0

Therefore,

OH Alkalinity as $CaCO_3$ = **0**

CO_3 Alkalinity as $CaCO_3$ = **0**

HCO_3 Alkalinity as $CaCO_3$ = **71 mg/L**

Reporting results in two significant figures,

OH Alkalinity as $CaCO_3$ = **0**

CO_3 Alkalinity as $CaCO_3$ = **0**

HCO_3 Alkalinity as $CaCO_3$ = **71 mg/L**

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: WATER

FORMULA:

Calculate the Chloride concentration, in mg/L, in the original sample as follows:

Chloride, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N005957-001C**, concentration in mg/L are calculated as follows:

Chloride, mg/L	=	4.939 * 200
	=	987.8 mg/L

Reporting **N005957-001C**, results in two significant figures,

Chloride, mg/L	**=**	**990 mg/L**

MS 6/22/11

SAMPLE CALCULATION

METHOD: SM4500-NH3C
TEST NAME: Ammonia-Nitrogen
MATRIX: Water

FORMULA:

Calculate the Ammonia as N concentration , in mg/L , in the original sample as follows:

Ammonia as N, mg/L = A*DF

Where:

A= mg/L, UV-VIS NH3 as N calculated concentration
DF= dilution factor

For **N005957-001E,** concentration in mg/L is calculated as follows:

Ammonia as N, mg/L = 0.540 *1

= 0.540 mg/L

Reporting result in two significant figures,

Ammonia as N = 0.54 mg/L

SAMPLE CALCULATION

METHOD: EPA 8015B
TEST NAME: Diesel Range Organics by GC/FID
MATRIX: Water

FORMULA:

Calculate the TPH-Diesel concentration, in ug/L, in the original sample as follows:

$$\text{TPH-Diesel, ug/mL} = \frac{A * 1\text{mL} * DF}{B}$$

Where:

A = ug/mL, GC TPH-Diesel calculated concentration
B = volume of sample in L
DF = Dilution factor

For **N005957-001G,** concentration in ug/L is calculated as follows:

$$\text{TPH-Diesel, ug/L} = \frac{23.89\ \text{ug/mL} * 1\text{mL} * 1}{0.98\text{L}}$$

$$= 24.37755\ \text{ug/L}$$

Reporting result in two significant figures,

TPH-Diesel, ug/L = 24 ug/L

Note: Sample calculated value is below the PQL. Reported results as ND (not detected).

SAMPLE CALCULATION

METHOD: EPA 8015B
TEST NAME: Gasoline Range Organics by GC/FID
MATRIX: Water

FORMULA:

Calculate the TPH-Gasoline concentration, in ug/L , in the original sample as follows:

TPH-Gasoline, ug/L = A*DF*1000

Where:

A = mg/L, GC TPH-Gasoline calculated concentration

For **N005957-001M** concentration in ug/L are calculated as follows:

TPH-Gasoline, ug/L = 0.030 *1000

= 30 ug/L

Reporting result in two significant figures,

TPH-Gasoline = 30 ug/L

Since the reporting limit is 100 ug/L,

TPH-Gasoline= ND

MS 6/20/11

SAMPLE CALCULATION

METHOD: EPA 8081
TEST NAME: Organochlorine Pesticides by GC/ECD
MATRIX: Water

FORMULA:

Calculate the OCP concentration, in ug/L, in the original sample as follows:

$$\text{OCP Analyte, ug/L} = \frac{A*0.005L*DF}{B}$$

Where:

A = ug/L, GC OCP Analyte calculated concentration
B = Volume of sample in L
DF = Dilution factor

For **N005957-001J,** concentration in ug/L is calculated as follows:

$$\text{Beta-BHC, ug/L} = \frac{61.006 * 0.005 *1}{0.98}$$

$$= 0.311255 \text{ ug/L}$$

Reporting result in two significant figures,

Beta-BHC, ug/L = 0.31 ug/L

SAMPLE CALCULATION

METHOD: EPA 8082
TEST NAME: Polychlorinated Biphenyls by GC/ECD
MATRIX: Water

FORMULA:

Calculate the PCB concentration, in ug/L, in the original sample as follows:

$$\text{PCB Aroclor, ug/L} = \frac{A*0.005L*DF}{B}$$

Where:

A = ug/L, GC PCB Aroclor calculated concentration
B = Volume of sample in L
DF = Dilution factor

For **N005957-001J,** concentration in ug/L is calculated as follows:

$$\text{Tetrachloro-m-xylene, ug/L} = \frac{82.78 * 0.005 *1}{0.98}$$

$$= 0.422255 \text{ ug/L}$$

Reporting result in two significant figures,

Tetrachloro-m-xylene, ug/L = 0.42 ug/L

SAMPLE CALCULATION

METHOD: EPA 8260B
TEST NAME: VOLATILE ORGANIC COMPOUNDS BY GC/MS
MATRIX: WATER

CALCULATION OF TARGET PARAMETERS

Calculate the target analyte concentrations using internal standard quantitation

$$C_X \text{ ,ug/L} = \frac{A_X * C_{IS}}{\text{Ave RF} * A_{IS}}$$

where:

A_x = Area of the TOTAL ion for the compound being measured
C_{IS} = Concentration of the specific internal standard in ug/L
A_{IS} = Area of the characteristic ion of the specific internal standard
C_x = Concentration of the compound being measured in ug/L

N005957-003M

For Chloroform the corresponding Internal Standard is Pentafluorobenzene

Ave RF	0.688
Area of Chloroform	16534
Area of Internal Standard	328182
Conc of Internal Standard (ug/L)	25.00

Conc of Chloroform (ug/L)= $\frac{16534 * 25.00\text{ug/L}}{0.688 * 328182}$

Conc of Chloroform (ug/L)= 1.830689735

Reporting result in three significant figures,

Concentration of Chloroform = 1.83 ug/L

MS 6/17/11

SAMPLE CALCULATION

METHOD: EPA 8270C
TEST NAME: SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS
MATRIX: WATER

CALCULATION OF TARGET PARAMETERS

Calculate the target analyte concentrations using internal standard quantitation

$$C_X \text{ ,ug/L} = \frac{A_X * C_{IS} * V * 1000 * DF}{\text{Ave RF} * A_{IS} * V_X}$$

(Dry basis)

where:

A_x = Area of the TOTAL ion for the compound being measured
C_{IS} = Concentration of the specific internal standard in mg/L
A_{IS} = Area of the characteristic ion of the specific internal standard
C_x = Concentration of the compound being measured in ug/L
V = Final Volume of sample in Liter
V_X= Volume of sample in L
DF = Dilution Factor

N005957-001H

For 2-Fluorophenol the corresponding Internal Standard is 1,4-Dichlorobenzene-d4

Ave RF	1.084
Area of 2-Fluorophenol	558832
Area of Internal Standard	352356
Conc of Internal Standard (mg/L)	40.00
Final Volume in L	0.001
Volume of sample in L	0.99
Dilution Factor	1

Conc of 2-Fluorophenol (ug/L)= $\frac{558832 * 40.00\text{mg/L} * 0.001\text{L} * 1000 * 1}{1.084 * 352356 * 0.99\text{L}}$

Conc of 2-Fluorophenol (ug/L)= 59.114648

Reporting result in two significant figures,

Concentration of 2-Fluorophenol = 59 ug/L

SAMPLE CALCULATION

METHOD: EPA 8270C
TEST NAME: SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS
MATRIX: WATER

CALCULATION OF TARGET PARAMETERS

Calculate the target analyte concentrations using internal standard quantitation

$$C_X \text{ ,ug/L} = \frac{A_X * C_{IS} * V * 1000 * DF}{\text{Ave RF} * A_{IS} * Vx}$$

where:

A_x = Area of the TOTAL ion for the compound being measured
C_{IS} = Concentration of the specific internal standard in mg/L
A_{IS} = Area of the characteristic ion of the specific internal standard
C_x = Concentration of the compound being measured in ug/kg
V = Final Volume of sample in Liter
V_X = Volume of sample used in L
DF = Dilution Factor

N005957-001I

For 1,2-Dichlorobenzene-d4 the corresponding Internal Standard is 1,4-Dichlorobenzene-d4

Ave RF	1.034
Area of 1,2-Dichlorobenzene-d4	6656
Area of Internal Standard	31343
Conc of Internal Standard (mg/L)	2.00
Final Volume in L	0.001
Volume of sample in L	0.93
Dilution Factor	1

$$\text{Conc of 1,2-Dichlorobenzene-d4 (ug/L)} = \frac{6656 * 2.00\text{mg/L} * 0.001\text{L} * 1000 * 1}{1.034 * 31343 * 0.96\text{L}}$$

Conc of 1,2-Dichlorobenzene-d4 (ug/L)= 0.4416714

Reporting result in two significant figures,

Concentration of 1,2-Dichlorobenzene-d4 = 0.44 ug/L

D-TEK Analytical Laboratories, Inc.
2722 Loker Avenue West, Suite B
Carlsbad, CA 92010
Tel: (760) 930-2555 Fax: (760) 930-2510

ADVANCED TECHNOLOGY LABORATORIES
3151-3153 W Post Rd
Las Vegas, NV 89118

Attn: Nancy Sibucao

Date of Report:	**6/28/11**
Sampling Date:	**6/13/11**
Date Sample Received:	**6/16/11**
Date Extracted:	**6/20/11**
Date Analyzed:	**June 21, 2011**
Analyzed By:	**EA**
Method:	**EPA 8151A**
Prep Method:	**8151A**
Sample Type:	**Water**
Work Order Number:	**N005957**
Sample Log Number:	**11-2973 to 11-2978**

The sample(s) were analyzed with EPA methodology or equivalent methods as specified on the attached "Analyses Results" report.

The results of these analyses and the quality control data are enclosed.

Ellen Atienza
Operations Manager

D-TEK Analytical Laboratories, Inc.

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ADVANCED TECHNOLOGY LABORATORIES
3151-3153 W Post Rd
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Attn: Nancy Sibucao

Date of Report:	**6/28/11**
Sampling Date:	**6/13/11**
Date Sample Received:	**6/16/11**
Date Extracted:	**6/20/11**
Date Analyzed:	**June 21, 2011**
Analyzed By:	**EA**
Sample Type:	**Water**
Method:	**EPA 8151A**
Units:	**µg/l**

ANALYSES RESULTS

		Log Number:	**11-2973**	**11-2974**
		Sample ID:	**N005957-001L**	**N005957-003L**
Analysis	**PQL**		**MW-65-160-001**	**MW-66-165-001**
2,4-D	0.04		ND	ND
2,4, DB	0.2		ND	ND
2,4,5-T	0.06		ND	ND
Dalapon	0.02		ND	ND
Dicamba	0.03		ND	ND
Dichloroprop	0.04		ND	ND
Dinoseb	0.05		ND	ND
MCPA	10.0		ND	ND
MCPP	8.0		ND	ND
4-Nitrophenol	1.0		ND	ND
Pentachlorophenol	0.05		ND	ND
Silvex (2,4,5-TP)	0.05		ND	ND

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ADVANCED TECHNOLOGY LABORATORIES
3151-3153 W Post Rd
Las Vegas, NV 89118

Attn: Nancy Sibucao

Date of Report:	**6/28/11**
Sampling Date:	**6/13/11**
Date Sample Received:	**6/16/11**
Date Extracted:	**6/20/11**
Date Analyzed:	**June 21, 2011**
Analyzed By:	**EA**
Sample Type:	**Water**
Method:	**EPA 8151A**
Units:	**µg/l**

ANALYSES RESULTS

		Log Number:	**11-2975**	**11-2976**
		Sample ID:	**N005957-005L**	**N005957-007L**
Analysis	**PQL**		**MW-67-225-001**	**MW-68-180-001**
2,4-D	0.04		ND	ND
2,4, DB	0.2		ND	ND
2,4,5-T	0.06		ND	ND
Dalapon	0.02		ND	ND
Dicamba	0.03		ND	ND
Dichloroprop	0.04		ND	ND
Dinoseb	0.05		ND	ND
MCPA	10.0		ND	ND
MCPP	8.0		ND	ND
4-Nitrophenol	1.0		ND	ND
Pentachlorophenol	0.05		ND	ND
Silvex (2,4,5-TP)	0.05		ND	ND

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ADVANCED TECHNOLOGY LABORATORIES
3151-3153 W Post Rd
Las Vegas, NV 89118

Attn: Nancy Sibucao

Date of Report:	**6/28/11**
Sampling Date:	**6/13/11**
Date Sample Received:	**6/16/11**
Date Extracted:	**6/20/11**
Date Analyzed:	**June 21, 2011**
Analyzed By:	**EA**
Sample Type:	**Water**
Method:	**EPA 8151A**
Units:	**µg/l**

ANALYSES RESULTS

		Log Number:	**11-2977**	**11-2978**
		Sample ID:	**N005957-009L**	**N005957-010L**
Analysis	**PQL**		**MW-70-105-001**	**MW-99-001**
2,4-D	0.04		ND	ND
2,4, DB	0.2		ND	ND
2,4,5-T	0.06		ND	ND
Dalapon	0.02		ND	ND
Dicamba	0.03		ND	ND
Dichloroprop	0.04		ND	ND
Dinoseb	0.05		ND	ND
MCPA	10.0		ND	ND
MCPP	8.0		ND	ND
4-Nitrophenol	1.0		ND	ND
Pentachlorophenol	0.05		ND	ND
Silvex (2,4,5-TP)	0.05		ND	ND

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QUALITY CONTROL DATA REPORT

Date:	**6/28/11**
Attn:	**Nancy Sibucao**
Sample Log #:	**11-2973 to 11-2978**
Date Extracted:	**6/20/11**
Date Analyzed:	**June 21, 2011**
Analysis Method:	**EPA 8151A**

METHOD BLANK

No target analytes were detected in the method blank.

LABORATORY CONTROL STANDARD

Compound	% Recovery	QC Limits *
2,4-D	62	50-180
2,4,5-TP (Silvex)	88	42-180
2,4,5-T	84	68-160

Matrix Spike (11-2974)

Compound	Spike % Recovery	Spike Dup. % Recovery	MS/MSD % RPD **
2,4-D	61	52	16
2,4,5-TP (Silvex)	100	85	16
2,4,5-T	87	79	10

*QC limits applies to LCS, MS and MSD
** RPD limits = 30

QUALITY CONTROL TERMINOLOGY

- **LCS - LABORATORY CONTROL SAMPLE.** Reported as % recovery of an independent standard carried through all sample preparation procedures to verify method performance. Acceptable range is based on historical laboratory control data and EPA requirements. Any out-of-control QC data is clearly indicated.
- **Spike-** environmental sample is matrix spiked with method compounds and % recovery of concentration spiked into sample is calculated. Reported as % recovery. Acceptable range for "Normal Matrix Sample" is based on historical laboratory control data. Any out-of-control QC data is clearly indicated.
- **Surrogates-** Compounds representative of a group of compounds. Surrogates are spiked into environmental samples and % recovery of concentration spiked is calculated and reported. Acceptable range varies depending on sample matrix and analysis method. Any out-of-control QC data is clearly indicated.

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SURROGATE RECOVERIES
(DCAA)

Log #	Percent Recovery:
Method Blank	126
11-2973	47
11-2974	73
11-2975	100
11-2976	108
11-2977	70
11-2978	121
LCS	67
11-2974 MS	74
11-2974 MSD	82

QC Limits: 43 to 169%

Ellen Atienza
Operations Manager

QUALITY CONTROL TERMINOLOGY

- **LCS - LABORATORY CONTROL SAMPLE.** Reported as % recovery of an independent standard carried through all sample preparation procedures to verify method performance. Acceptable range is based on historical laboratory control data and EPA requirements. Any out-of-control QC data is clearly indicated.
- **Spike-** environmental sample is matrix spiked with method compounds and % recovery of concentration spiked into sample is calculated. Reported as % recovery. Acceptable range for "Normal Matrix Sample" is based on historical laboratory control data. Any out-of-control QC data is clearly indicated.
- **Surrogates-** Compounds representative of a group of compounds. Surrogates are spiked into environmental samples and % recovery of concentration spiked is calculated and reported. Acceptable range varies depending on sample matrix and analysis method. Any out-of-control QC data is clearly indicated.

1126948

Advanced Technology Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
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CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:
D-Tek
2722 Loker Ave W Ste B
Carlsbad, CA 92010

TEL: (760) 930-2555
FAX: (760) 930-2510
Acct #:

Field Sampler: Eli Ludwig

15-Jun-11

Sample ID		Matrix	Date Collected	Bottle Type	EPA 8151	Requested Tests
N005957-001L	/ MW-65-160-001	Ground Water	6/13/2011 1:31:00 PM	32OZA	1	11-2973
N005957-003L	/ MW-66-165-001	Ground Water	6/13/2011 3:37:00 PM	32OZA	1	11-2974
N005957-005L	/ MW-67-225-001	Ground Water	6/14/2011 9:27:00 AM	32OZA	1	11-2975
N005957-007L	/ MW-68-180-001	Ground Water	6/14/2011 1:11:00 PM	32OZA	1	11-2976
N005957-009L	/ MW-70-105-001	Ground Water	6/13/2011 12:07:00 PM	32OZA	1	11-2977
N005957-010L	/ MW-99-001	Ground Water	6/14/2011 1:11:00 PM	32OZA	1	11-2978

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N005957 Please fax results by:6/21/2011

Please analyze for Herbicides by EPA 8151

Please use N005957-3L as sample and MS/MSD (3-32 oz amber bottles)

		Date/Time			Date/Time
Relinquished by:	[signature]	6/15/11 3pm	**Received by:**	ONTRAC	
Relinquished by:	ONTRAC		**Received by:**	[signature]	6/16/11 0950

October 11, 2011

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N006539

RE: PG&E Topock,405681.MP.02.GM.0

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on September 28, 2011 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for gsgesmundt

Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.

CLIENT: CH2M HILL
Project: PG&E Topock,405681.MP.02.GM.0
Lab Order: N006539

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Advanced Technology Laboratories, Inc.
3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

Date: ***11-Oct-11***

CLIENT: CH2M HILL
Project: PG&E Topock,405681.MP.02.GM.0
Lab Order: N006539
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N006539-001A	MW-28-090-181	Water	9/26/2011 3:47:00 PM	9/28/2011	
N006539-001B	MW-28-090-181	Water	9/26/2011 3:47:00 PM	9/28/2011	
N006539-002A	MW-42-055-181	Water	9/26/2011 12:17:00 PM	9/28/2011	
N006539-002B	MW-42-055-181	Water	9/26/2011 12:17:00 PM	9/28/2011	
N006539-003A	MW-42-065-181	Water	9/26/2011 1:07:00 PM	9/28/2011	
N006539-003B	MW-42-065-181	Water	9/26/2011 1:07:00 PM	9/28/2011	
N006539-004A	MW-46-175-181	Water	9/26/2011 3:02:00 PM	9/28/2011	
N006539-004B	MW-46-175-181	Water	9/26/2011 3:02:00 PM	9/28/2011	
N006539-005A	MW-102-181	Water	9/27/2011 7:10:00 AM	9/28/2011	
N006539-005B	MW-102-181	Water	9/27/2011 7:10:00 AM	9/28/2011	
N006539-006A	MW-33-040-181	Water	9/27/2011 2:02:00 PM	9/28/2011	
N006539-006B	MW-33-040-181	Water	9/27/2011 2:02:00 PM	9/28/2011	
N006539-007A	MW-33-210-181	Water	9/27/2011 3:18:00 PM	9/28/2011	
N006539-008A	MW-44-115-181	Water	9/27/2011 12:19:00 PM	9/28/2011	
N006539-008B	MW-44-115-181	Water	9/27/2011 12:19:00 PM	9/28/2011	
N006539-009A	MW-44-125-181	Water	9/27/2011 11:46:00 AM	9/28/2011	
N006539-009B	MW-44-125-181	Water	9/27/2011 11:46:00 AM	9/28/2011	
N006539-010A	TW-01-181	Water	9/28/2011 9:11:00 AM	9/28/2011	
N006539-010B	TW-01-181	Water	9/28/2011 9:11:00 AM	9/28/2011	

Advanced Technology Laboratories, Inc.
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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-28-090-181
Lab Order:	N006539	**Collection Date:**	9/26/2011 3:47:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110928A**	QC Batch: **R81698**				PrepDate:		Analyst: **CEI**
Specific Conductance	7200	0.10	0.10		umhos/cm	1	9/28/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-42-055-181
Lab Order:	N006539	**Collection Date:**	9/26/2011 12:17:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110928A**	QC Batch: **R81698**				PrepDate:		Analyst: **CEI**
Specific Conductance	6300	0.10	0.10		umhos/cm	1	9/28/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-42-065-181
Lab Order:	N006539	**Collection Date:**	9/26/2011 1:07:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110928A**	QC Batch: **R81698**				PrepDate:		Analyst: **CEI**
Specific Conductance	9100	0.10	0.10		umhos/cm	1	9/28/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-46-175-181
Lab Order:	N006539	**Collection Date:**	9/26/2011 3:02:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110928A**	QC Batch: **R81698**				PrepDate:		Analyst: **CEI**
Specific Conductance	17000	0.10	0.10		umhos/cm	1	9/28/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-102-181
Lab Order:	N006539	**Collection Date:**	9/27/2011 7:10:00 AM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110928A**	QC Batch: **R81698**				PrepDate:		Analyst: **CEI**
Specific Conductance	12000	0.10	0.10		umhos/cm	1	9/28/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-33-040-181
Lab Order:	N006539	**Collection Date:**	9/27/2011 2:02:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110928A**	QC Batch: **R81698**				PrepDate:		Analyst: **CEI**
Specific Conductance	12000	0.10	0.10		umhos/cm	1	9/28/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-33-210-181
Lab Order:	N006539	**Collection Date:**	9/27/2011 3:18:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110928A**	QC Batch: **R81698**				PrepDate:		Analyst: **CEI**
Specific Conductance	18000	0.10	0.10		umhos/cm	1	9/28/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-44-115-181
Lab Order:	N006539	**Collection Date:**	9/27/2011 12:19:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110928A**	QC Batch: **R81698**				PrepDate:		Analyst: **CEI**
Specific Conductance	11000	0.10	0.10		umhos/cm	1	9/28/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-44-125-181
Lab Order:	N006539	**Collection Date:**	9/27/2011 11:46:00 AM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110928A**	QC Batch: **R81698**				PrepDate:		Analyst: **CEI**
Specific Conductance	11000	0.10	0.10		umhos/cm	1	9/28/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	TW-01-181
Lab Order:	N006539	**Collection Date:**	9/28/2011 9:11:00 AM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110928A**	QC Batch: **R81698**				PrepDate:		Analyst: **CEI**
Specific Conductance	7000	0.10	0.10		umhos/cm	1	9/28/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***11-Oct-11***

CLIENT: CH2M HILL
Work Order: N006539
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_WPGE

Sample ID: **LCS-R81698** SampType: **LCS** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81698**
Client ID: **LCSW** Batch ID: **R81698** TestNo: **EPA 120.1** Analysis Date: **9/28/2011** SeqNo: **1313668**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	9670.000	0.10	9986	0	96.8	85	115				

Sample ID: **N006539-007ADUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81698**
Client ID: **ZZZZZZ** Batch ID: **R81698** TestNo: **EPA 120.1** Analysis Date: **9/28/2011** SeqNo: **1313676**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	17830.000	0.10						17900	0.392	10	

Sample ID: **N006539-007AMS** SampType: **MS** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81698**
Client ID: **ZZZZZZ** Batch ID: **R81698** TestNo: **EPA 120.1** Analysis Date: **9/28/2011** SeqNo: **1313677**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	28060.000	0.20	9986	17900	102	75	125				

Sample ID: **N006539-007AMSD** SampType: **MSD** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81698**
Client ID: **ZZZZZZ** Batch ID: **R81698** TestNo: **EPA 120.1** Analysis Date: **9/28/2011** SeqNo: **1313678**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	28080.000	0.20	9986	17900	102	75	125	28060	0.0713	10	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-46-175-181
Lab Order:	N006539	**Collection Date:**	9/26/2011 3:02:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_110928A**	QC Batch: **R81722**				PrepDate:		Analyst: **QBM**
Nitrate as N	ND	0.055	2.5		mg/L	5	9/28/2011 01:35 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-102-181
Lab Order:	N006539	**Collection Date:**	9/27/2011 7:10:00 AM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_110928A**	QC Batch: **R81722**				PrepDate:		Analyst: **QBM**
Nitrate as N	ND	0.022	1.0		mg/L	2	9/28/2011 01:49 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-44-115-181
Lab Order:	N006539	**Collection Date:**	9/27/2011 12:19:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_110928A**	QC Batch: **R81722**				PrepDate:		Analyst: **QBM**
Nitrate as N	ND	0.022	1.0		mg/L	2	9/28/2011 02:05 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-44-125-181
Lab Order:	N006539	**Collection Date:**	9/27/2011 11:46:00 AM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_110928A**	QC Batch: **R81722**				PrepDate:		Analyst: **QBM**
Nitrate as N	ND	0.022	1.0		mg/L	2	9/28/2011 02:16 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	TW-01-181
Lab Order:	N006539	**Collection Date:**	9/28/2011 9:11:00 AM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_110928A**	QC Batch: **R81722**				PrepDate:		Analyst: **QBM**
Nitrate as N	24	0.22	10		mg/L	20	9/28/2011 02:54 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***11-Oct-11***

CLIENT: CH2M HILL
Work Order: N006539
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 300W_NO3PGE

Sample ID: **MB-R81722_NO3** SampType: **MBLK** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81722**
Client ID: **PBW** Batch ID: **R81722** TestNo: **EPA 300.0** Analysis Date: **9/28/2011** SeqNo: **1314120**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50									

Sample ID: **LCS-R81722_NO3** SampType: **LCS** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81722**
Client ID: **LCSW** Batch ID: **R81722** TestNo: **EPA 300.0** Analysis Date: **9/28/2011** SeqNo: **1314121**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	2.416	0.50	2.500	0	96.6	90	110				

Sample ID: **N006539-004BDUP** SampType: **DUP** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81722**
Client ID: **ZZZZZZ** Batch ID: **R81722** TestNo: **EPA 300.0** Analysis Date: **9/28/2011** SeqNo: **1314126**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.955	2.5						0.9550	0	20	

Sample ID: **N006539-010BMS** SampType: **MS** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81722**
Client ID: **ZZZZZZ** Batch ID: **R81722** TestNo: **EPA 300.0** Analysis Date: **9/28/2011** SeqNo: **1314128**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	72.840	10	50.00	24.50	96.7	80	120				

Sample ID: **N006539-010BMSD** SampType: **MSD** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81722**
Client ID: **ZZZZZZ** Batch ID: **R81722** TestNo: **EPA 300.0** Analysis Date: **9/28/2011** SeqNo: **1314131**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	72.480	10	50.00	24.50	96.0	80	120	72.84	0.495	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-28-090-181
Lab Order:	N006539	**Collection Date:**	9/26/2011 3:47:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A				**EPA 6020**			
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate:	**10/3/2011**	Analyst: **JT**
Arsenic	2.0	0.0025	0.10		µg/L	1	10/4/2011 06:21 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-42-055-181
Lab Order:	N006539	**Collection Date:**	9/26/2011 12:17:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A				**EPA 6020**			
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate:	**10/3/2011**	Analyst: **JT**
Arsenic	13	0.0025	0.10		µg/L	1	10/4/2011 07:34 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-42-065-181
Lab Order:	N006539	**Collection Date:**	9/26/2011 1:07:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate:	**10/3/2011**	Analyst: **JT**
Arsenic	2.3	0.0025	0.10		µg/L	1	10/4/2011 07:46 PM
Manganese	1300	2.3	12		µg/L	25	10/5/2011 06:32 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-46-175-181
Lab Order:	N006539	**Collection Date:**	9/26/2011 3:02:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate:	**10/3/2011**	Analyst: **JT**
Molybdenum	170	0.24	2.5		µg/L	5	10/4/2011 08:04 PM
Selenium	ND	1.4	2.5		µg/L	5	10/4/2011 08:04 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-102-181
Lab Order:	N006539	**Collection Date:**	9/27/2011 7:10:00 AM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate:	**10/3/2011**	Analyst: **JT**
Arsenic	3.8	0.0025	0.10		µg/L	1	10/4/2011 08:10 PM
Manganese	630	0.46	2.5		µg/L	5	10/4/2011 08:16 PM
Molybdenum	150	0.24	2.5		µg/L	5	10/4/2011 08:16 PM
Selenium	ND	1.4	2.5		µg/L	5	10/4/2011 08:16 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-33-040-181
Lab Order:	N006539	**Collection Date:**	9/27/2011 2:02:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A				**EPA 6020**			
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate:	**10/3/2011**	Analyst: **JT**
Arsenic	11	0.0025	0.10		µg/L	1	10/4/2011 08:22 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-44-115-181
Lab Order:	N006539	**Collection Date:**	9/27/2011 12:19:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate:	**10/3/2011**	Analyst: **JT**
Arsenic	6.1	0.012	0.50		µg/L	5	10/5/2011 11:50 AM
Manganese	4.1	0.091	0.50		µg/L	1	10/5/2011 06:44 PM
Molybdenum	82	0.24	2.5		µg/L	5	10/5/2011 11:50 AM
Selenium	ND	1.4	2.5		µg/L	5	10/5/2011 11:50 AM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-44-125-181
Lab Order:	N006539	**Collection Date:**	9/27/2011 11:46:00 AM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate: **10/3/2011**		Analyst: **JT**
Arsenic	4.2	0.012	0.50		µg/L	5	10/5/2011 12:02 PM
Manganese	590	0.46	2.5		µg/L	5	10/5/2011 07:03 PM
Molybdenum	140	0.24	2.5		µg/L	5	10/5/2011 12:02 PM
Selenium	ND	1.4	2.5		µg/L	5	10/5/2011 12:02 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	TW-01-181
Lab Order:	N006539	**Collection Date:**	9/28/2011 9:11:00 AM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006539-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate:	**10/3/2011**	Analyst: **JT**
Molybdenum	15	0.047	0.50		µg/L	1	10/5/2011 12:08 PM
Selenium	25	0.29	0.50		µg/L	1	10/5/2011 12:08 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***11-Oct-11***

CLIENT: CH2M HILL
Work Order: N006539
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **MB-37937** SampType: **MBLK** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **PBW** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID: **LCS-37937** SampType: **LCS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **LCSW** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314367**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.009	0.10	10.00	0	100	85	115				
Manganese	100.460	0.50	100.0	0	100	85	115				
Molybdenum	9.849	0.50	10.00	0	98.5	85	115				
Selenium	9.784	0.50	10.00	0	97.8	85	115				

Sample ID: **N006539-001A-MS** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314373**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.992	0.10	10.00	1.981	100	75	125				
Selenium	8.607	0.50	10.00	0	86.1	75	125				

Sample ID: **N006539-001A-MS** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314374**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	269.236	2.5	100.0	172.8	96.4	75	125				
Molybdenum	31.122	2.5	10.00	19.39	117	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N006539
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N006539-001A-MSD** SampType: **MSD** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314375**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.643	0.10	10.00	1.981	96.6	75	125	11.99	2.96	20	
Selenium	8.758	0.50	10.00	0	87.6	75	125	8.607	1.73	20	

Sample ID: **N006539-001A-MSD** SampType: **MSD** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314379**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	268.986	2.5	100.0	172.8	96.1	75	125	269.2	0.0930	20	
Molybdenum	31.057	2.5	10.00	19.39	117	75	125	31.12	0.212	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CH2MHILL

CHAIN OF CUSTODY RECORD

9/28/2011 9:32:45 AM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 9/28/2011
COC Number: 1

			Container:	500 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1 Liter Poly	1 Liter Poly			
			Preservatives:	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C			
			Filtered:	Field	Field	Field	Field	NA	NA			
			Holding Time:	180	180	180	180	2	2			
	DATE	TIME	Matrix	Arsenic (6020) Field Filtered	Metals (6020AFF) Field Filtered Mn	Metals (6020AFF) Field Filtered Mo,Se	Metals (6020AFF) Field Filtered Mo,Se,Mn	Specific Conductance (E120.1)	Anions (E300.0) Nitrate		Number of Containers	COMMENTS
MW-28-090-181	9/26/2011	15:47	Water	X				X		N006539-1	2	
MW-42-055-181	9/26/2011	12:17	Water	X				X		2	2	
MW-42-065-181	9/26/2011	13:07	Water	X	X			X		3	2	
MW-46-175-181	9/26/2011	15:02	Water			X		X	X	4	2	
MW-102-181	9/27/2011	7:10	Water	X			X	X	X	5	2	
MW-33-040-181	9/27/2011	14:02	Water	X				X		6	2	
MW-33-210-181	9/27/2011	15:18	Water					X		7	1	
MW-44-115-181	9/27/2011	12:19	Water	X			X	X	X	8	2	
MW-44-125-181	9/27/2011	11:46	Water	X			X	X	X	9	2	
TW-01-181	9/28/2011	9:11	Water			X		X	X	10	2	
										TOTAL NUMBER OF CONTAINERS	19	

	Signatures	Date/Time
Approved by		9-28-11 1025
Sampled by		
Relinquished by		
Received by	S. PMGalang	9/28/11 1025
Relinquished by		
Received by		

Shipping Details
Method of Shipment: courier
On Ice: yes / no
Airbill No:
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN:
Sample Custody
and
Marlon

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

CH2MHILL

CHAIN OF CUSTODY RECORD

9/28/2011 9:32:45 AM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 9/28/2011
COC Number: 1

			Container:	500 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1 Liter Poly	1 Liter Poly			
			Preservatives:	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C			
			Filtered:	Field	Field	Field	Field	NA	NA			
			Holding Time:	180	180	180	180	2	2			
	DATE	TIME	Matrix	Arsenic (6020) Field Filtered	Metals (6020AFF) Field Filtered Mn	Metals (6020AFF) Field Filtered Mo,Se	Metals (6020AFF) Field Filtered Mo,Se,Mn	Specific Conductance (E120.1)	Anions (E300.0) Nitrate		Number of Containers	COMMENTS
MW-28-090-181	9/26/2011	15:47	Water	X				X			2	
MW-42-055-181	9/26/2011	12:17	Water	X				X			2	
MW-42-065-181	9/26/2011	13:07	Water	X	X			X			2	
MW-46-175-181	9/26/2011	15:02	Water			X		X	X		2	
MW-102-181	9/27/2011	7:10	Water	X			X	X	X		2	
MW-33-040-181	9/27/2011	14:02	Water	X				X			2	
MW-33-210-181	9/27/2011	15:18	Water					X			1	
MW-44-115-181	9/27/2011	12:19	Water	X			X	X	X		2	
MW-44-125-181	9/27/2011	11:46	Water	X			X	X	X		2	
TW-01-181	9/28/2011	9:11	Water			X		X	X		2	
										TOTAL NUMBER OF CONTAINERS	19	

	Signatures	Date/Time
Approved by		9-28-11 1025
Sampled by		
Relinquished by		
Received by	PMGalan	9/28/11 1025
Relinquished by	PMGalan	9/28/11 1312
Received by		9/28/11 1312

Shipping Details
Method of Shipment: courier
On Ice: (yes) / no
Airbill No:
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN:
Sample Custody
and
Marlon

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

Advanced Technology Laboratories, Inc.

Please review the checklist below. Any NO and/or NA signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Sample Receipt Checklist

Cooler Received/Opened On: 9/28/2011 Workorder: N006539

Rep sample Temp (Deg C): 4.2 IR Gun ID: 1

Temp Blank: ☐ Yes ☑ No

Carrier name: ATL

Last 4 digits of Tracking No.: Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed B NS 9/29/11 Reviewed By: 9/30/11

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: WATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N006539-010B**, concentration in mg/L are calculated as follows:

Nitrate, mg/L = 1.225 * 20

= 24.5 mg/L

Reporting **N006539-010B**, results in two significant figures,

Nitrate, mg/L = 24 mg/L

Sample Calculation

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

Arsenic, ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = dilution factor
PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N006539-001A**, the concentration in mg/L is calculated as follows:

Arsenic, ug/L = 1.981 * 1 * (25/25)

= 1.981 ug/L

Reporting results in two significant figures,

Arsenic, ug/L = 2.0

Advanced Technology Laboratories, Inc.

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N006539
Test Method: EPA 6020
Analysis Date: 10/04/11

Matrix: Water
Batch No.: 37937

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Jojo Tenorio

Dilution Test is not applicable to Se. The calc. Values were < 25X the RL. PS @ 2X passes the criteria.

Sample ID	Analyte	&Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N006539-001A-DT 5X	Arsenic	µg/L	1.933389539	PASS	1.980568286	2.38%	10
N006539-001A-DT 5X	Selenium	µg/L	0	NA	0		10
N006539-001A-DT 25X	Manganese	µg/L	183.3039942	PASS	172.8476844	-6.05%	10
N006539-001A-DT 25X	Molybdenum	µg/L	19.03536379	PASS	19.3940915	1.85%	10

Advanced Technology Laboratories, Inc.

Date: *06-Oct-11*

CLIENT: CH2M HILL
Work Order: N006539
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N006539-001A-PS 2** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314371**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	22.169	0.20	20.00	1.981	101	75	125				
Selenium	17.881	1.0	20.00	0	89.4	75	125				

Sample ID: **N006539-001A-PS 5** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314372**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	646.642	2.5	500.0	172.8	94.8	75	125				
Molybdenum	75.567	2.5	50.00	19.39	112	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

October 11, 2011

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N006554

RE: PG&E Topock, 405681.MP.02.GM.0

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on September 29, 2011 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for gsgesmundt

Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.

CLIENT: CH2M HILL
Project: PG&E Topock, 405681.MP.02.GM.0
Lab Order: N006554

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for SM 5310C:

Matrix Spike(MS) and Matrix Spike Duplicate(MSD) were not performed due to limited sample. LCS/LCSD was used instead to measure precision.

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Advanced Technology Laboratories, Inc.

Date: ***11-Oct-11***

CLIENT: CH2M HILL
Project: PG&E Topock, 405681.MP.02.GM.0
Lab Order: N006554
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N006554-001A	MW-57-185-181	Water	9/28/2011 4:40:00 PM	9/29/2011	
N006554-001B	MW-57-185-181	Water	9/28/2011 4:40:00 PM	9/29/2011	
N006554-002A	MW-63-065-181	Water	9/28/2011 1:47:00 PM	9/29/2011	
N006554-002B	MW-63-065-181	Water	9/28/2011 1:47:00 PM	9/29/2011	
N006554-003A	MW-21-181	Water	9/29/2011 10:48:00 AM	9/29/2011	
N006554-004A	MW-23-060-181	Water	9/29/2011 12:51:00 PM	9/29/2011	
N006554-004B	MW-23-060-181	Water	9/29/2011 12:51:00 PM	9/29/2011	
N006554-005A	MW-23-080-181	Water	9/29/2011 2:06:00 PM	9/29/2011	
N006554-005B	MW-23-080-181	Water	9/29/2011 2:06:00 PM	9/29/2011	
N006554-006A	MW-62-065-181	Water	9/29/2011 3:18:00 PM	9/29/2011	
N006554-006B	MW-62-065-181	Water	9/29/2011 3:18:00 PM	9/29/2011	
N006554-007A	MW-62-110-181	Water	9/29/2011 3:51:00 PM	9/29/2011	
N006554-007B	MW-62-110-181	Water	9/29/2011 3:51:00 PM	9/29/2011	
N006554-007C	MW-62-110-181	Water	9/29/2011 3:51:00 PM	9/29/2011	
N006554-008A	MW-62-190-181	Water	9/29/2011 3:57:00 PM	9/29/2011	
N006554-008B	MW-62-190-181	Water	9/29/2011 3:57:00 PM	9/29/2011	
N006554-008C	MW-62-190-181	Water	9/29/2011 3:57:00 PM	9/29/2011	

Advanced Technology Laboratories, Inc.
3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-57-185-181
Lab Order:	N006554	**Collection Date:**	9/28/2011 4:40:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110930C**	QC Batch: **R81699**				PrepDate:		Analyst: **CEI**
Specific Conductance	17000	0.10	0.10		umhos/cm	1	9/30/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-63-065-181
Lab Order:	N006554	**Collection Date:**	9/28/2011 1:47:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110930C**	QC Batch: **R81699**				PrepDate:		Analyst: **CEI**
Specific Conductance	7500	0.10	0.10		umhos/cm	1	9/30/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-21-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 10:48:00 AM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110930C**	QC Batch: **R81699**				PrepDate:		Analyst: **CEI**
Specific Conductance	13000	0.10	0.10		umhos/cm	1	9/30/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-23-060-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 12:51:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110930C**	QC Batch: **R81699**				PrepDate:		Analyst: **CEI**
Specific Conductance	16000	0.10	0.10		umhos/cm	1	9/30/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-23-080-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 2:06:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110930C**	QC Batch: **R81699**				PrepDate:		Analyst: **CEI**
Specific Conductance	16000	0.10	0.10		umhos/cm	1	9/30/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-62-065-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 3:18:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110930C**	QC Batch: **R81699**				PrepDate:		Analyst: **CEI**
Specific Conductance	6300	0.10	0.10		umhos/cm	1	9/30/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-62-110-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 3:51:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110930C**	QC Batch: **R81699**				PrepDate:		Analyst: **CEI**
Specific Conductance	8700	0.10	0.10		umhos/cm	1	9/30/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-62-190-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 3:57:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110930C**	QC Batch: **R81699**				PrepDate:		Analyst: **CEI**
Specific Conductance	17000	0.10	0.10		umhos/cm	1	9/30/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***11-Oct-11***

CLIENT: CH2M HILL
Work Order: N006554
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_WPGE

Sample ID: **LCS-R81699** SampType: **LCS** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81699**
Client ID: **LCSW** Batch ID: **R81699** TestNo: **EPA 120.1** Analysis Date: **9/30/2011** SeqNo: **1313682**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	9820.000	0.10	9986	0	98.3	85	115				

Sample ID: **N006554-007BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81699**
Client ID: **ZZZZZZ** Batch ID: **R81699** TestNo: **EPA 120.1** Analysis Date: **9/30/2011** SeqNo: **1313690**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	8720.000	0.10						8720	0	10	

Sample ID: **N006554-007BMS** SampType: **MS** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81699**
Client ID: **ZZZZZZ** Batch ID: **R81699** TestNo: **EPA 120.1** Analysis Date: **9/30/2011** SeqNo: **1313691**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	19020.000	0.20	9986	8720	103	75	125				

Sample ID: **N006554-007BMSD** SampType: **MSD** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81699**
Client ID: **ZZZZZZ** Batch ID: **R81699** TestNo: **EPA 120.1** Analysis Date: **9/30/2011** SeqNo: **1313692**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	19060.000	0.20	9986	8720	104	75	125	19020	0.210	10	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-57-185-181
Lab Order:	N006554	**Collection Date:**	9/28/2011 4:40:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_110930A**	QC Batch: **R81724**				PrepDate:		Analyst: **QBM**
Nitrate as N	ND	0.055	2.5		mg/L	5	9/30/2011 09:16 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-63-065-181
Lab Order:	N006554	**Collection Date:**	9/28/2011 1:47:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_110930A**	QC Batch: **R81724**				PrepDate:		Analyst: **QBM**
Nitrate as N	1.4	0.022	1.0		mg/L	2	9/30/2011 09:27 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-62-065-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 3:18:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_110930A**	QC Batch: **R81724**				PrepDate:		Analyst: **QBM**
Nitrate as N	3.5	0.022	1.0		mg/L	2	9/30/2011 09:38 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-62-110-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 3:51:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_110930A**	QC Batch: **R81724**				PrepDate:		Analyst: **QBM**
Nitrate as N	3.0	0.022	1.0		mg/L	2	9/30/2011 09:49 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-62-190-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 3:57:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_110930A**	QC Batch: **R81724**				PrepDate:		Analyst: **QBM**
Nitrate as N	ND	0.055	2.5		mg/L	5	9/30/2011 10:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***11-Oct-11***

CLIENT: CH2M HILL
Work Order: N006554
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 300W_NO3PGE

Sample ID: **MB-R81724_NO3** SampType: **MBLK** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81724**
Client ID: **PBW** Batch ID: **R81724** TestNo: **EPA 300.0** Analysis Date: **9/30/2011** SeqNo: **1314222**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50									

Sample ID: **LCS-R81724_NO3** SampType: **LCS** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81724**
Client ID: **LCSW** Batch ID: **R81724** TestNo: **EPA 300.0** Analysis Date: **9/30/2011** SeqNo: **1314223**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	2.434	0.50	2.500	0	97.4	90	110				

Sample ID: **N006554-006BMS** SampType: **MS** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81724**
Client ID: **ZZZZZZ** Batch ID: **R81724** TestNo: **EPA 300.0** Analysis Date: **9/30/2011** SeqNo: **1314229**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.466	1.0	5.000	3.464	100	80	120				

Sample ID: **N006554-006BMSD** SampType: **MSD** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81724**
Client ID: **ZZZZZZ** Batch ID: **R81724** TestNo: **EPA 300.0** Analysis Date: **9/30/2011** SeqNo: **1314230**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.452	1.0	5.000	3.464	99.8	80	120	8.466	0.166	20	

Sample ID: **N006554-007BDUP** SampType: **DUP** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81724**
Client ID: **ZZZZZZ** Batch ID: **R81724** TestNo: **EPA 300.0** Analysis Date: **9/30/2011** SeqNo: **1314231**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	2.922	1.0						2.958	1.22	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-57-185-181
Lab Order:	N006554	**Collection Date:**	9/28/2011 4:40:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate: **10/3/2011**		Analyst: **JT**
Arsenic	13	0.012	0.50		µg/L	5	10/5/2011 01:08 PM
Manganese	520	0.46	2.5		µg/L	5	10/5/2011 08:09 PM
Molybdenum	88	0.24	2.5		µg/L	5	10/5/2011 01:08 PM
Selenium	ND	1.4	2.5		µg/L	5	10/5/2011 01:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-63-065-181
Lab Order:	N006554	**Collection Date:**	9/28/2011 1:47:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate: **10/3/2011**		Analyst: **JT**
Arsenic	1.5	0.0025	0.10		µg/L	1	10/5/2011 01:14 PM
Manganese	15	0.091	0.50		µg/L	1	10/5/2011 08:15 PM
Molybdenum	24	0.24	2.5		µg/L	5	10/5/2011 01:20 PM
Selenium	ND	1.4	2.5		µg/L	5	10/5/2011 01:20 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-23-060-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 12:51:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate:	**10/3/2011**	Analyst: **JT**
Arsenic	2.1	0.012	0.50		µg/L	5	10/5/2011 01:32 PM
Manganese	ND	0.46	2.5		µg/L	5	10/5/2011 08:33 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-23-080-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 2:06:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate:	**10/3/2011**	Analyst: **JT**
Arsenic	3.5	0.012	0.50		µg/L	5	10/5/2011 02:14 PM
Manganese	ND	0.46	2.5		µg/L	5	10/6/2011 10:39 AM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-62-065-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 3:18:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate: **10/3/2011**		Analyst: **JT**
Arsenic	1.3	0.0025	0.10		µg/L	1	10/5/2011 02:20 PM
Manganese	13	0.091	0.50		µg/L	1	10/5/2011 09:21 PM
Molybdenum	14	0.24	2.5		µg/L	5	10/5/2011 02:26 PM
Selenium	3.0	0.29	0.50		µg/L	1	10/5/2011 02:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-62-110-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 3:51:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate: **10/3/2011**		Analyst: **JT**
Arsenic	11	0.012	0.50		µg/L	5	10/5/2011 02:38 PM
Manganese	210	0.46	2.5		µg/L	5	10/5/2011 09:39 PM
Molybdenum	54	0.24	2.5		µg/L	5	10/5/2011 02:38 PM
Selenium	3.2	1.4	2.5		µg/L	5	10/5/2011 02:38 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-62-190-181
Lab Order:	N006554	**Collection Date:**	9/29/2011 3:57:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006554-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate:	**10/3/2011**	Analyst: **JT**
Arsenic	6.6	0.012	0.50		µg/L	5	10/5/2011 02:50 PM
Manganese	1100	2.3	12		µg/L	25	10/6/2011 10:57 AM
Molybdenum	85	1.2	12		µg/L	25	10/5/2011 03:07 PM
Selenium	ND	7.2	12		µg/L	25	10/5/2011 03:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***11-Oct-11***

CLIENT: CH2M HILL
Work Order: N006554
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **MB-37937** SampType: **MBLK** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **PBW** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID: **LCS-37937** SampType: **LCS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **LCSW** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314367**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.009	0.10	10.00	0	100	85	115				
Manganese	100.460	0.50	100.0	0	100	85	115				
Molybdenum	9.849	0.50	10.00	0	98.5	85	115				
Selenium	9.784	0.50	10.00	0	97.8	85	115				

Sample ID: **N006539-001A-MS** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314373**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.992	0.10	10.00	1.981	100	75	125				
Selenium	8.607	0.50	10.00	0	86.1	75	125				

Sample ID: **N006539-001A-MS** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314374**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	269.236	2.5	100.0	172.8	96.4	75	125				
Molybdenum	31.122	2.5	10.00	19.39	117	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N006554
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N006539-001A-MSD** SampType: **MSD** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314375**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.643	0.10	10.00	1.981	96.6	75	125	11.99	2.96	20	
Selenium	8.758	0.50	10.00	0	87.6	75	125	8.607	1.73	20	

Sample ID: **N006539-001A-MSD** SampType: **MSD** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314379**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	268.986	2.5	100.0	172.8	96.1	75	125	269.2	0.0930	20	
Molybdenum	31.057	2.5	10.00	19.39	117	75	125	31.12	0.212	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CH2MHILL

CHAIN OF CUSTODY RECORD

9/29/2011 4:08:20 PM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 9/29/2011
COC Number: 3

			Container:	500 ml Poly	500 ml Poly	500 ml Poly	1 Liter Poly	1 Liter Poly	3 x 40 ml VOA			
			Preservatives:	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	H2SO4, 4°C			
			Filtered:	Field	Field	Field	NA	NA	NA			
			Holding Time:	180	180	180	2	2	28			
	DATE	TIME	Matrix	Arsenic (6020) Field Filtered	Metals (6020AFF) Field Filtered Mn	Metals (6020AFF) Field Filtered Mo,Se,Mn	Specific Conductance (E120.1)	Anions (E300.0) Nitrate	TOC (SM5310C)		Number of Containers	COMMEN
MW-57-185-181	9/28/2011	16:40	Water	X		X	X	X		N0065554-1	2	
MW-63-065-181	9/28/2011	13:47	Water	X		X	X	X		2	2	
MW-21-181	9/29/2011	10:48	Water				X			3	1	
MW-23-060-181	9/29/2011	12:51	Water	X	X		X			4	2	
MW-23-080-181	9/29/2011	14:06	Water	X	X		X			5	2	
MW-62-065-181	9/29/2011	15:18	Water	X		X	X	X		6	2	
MW-62-110-181	9/29/2011	15:51	Water	X		X	X	X	X	7	5	
MW-62-190-181	9/29/2011	15:57	Water	X		X	X	X	X	8	5	
										TOTAL NUMBER OF CONTAINERS	21	

	Signatures	Date/Time
Approved by		9-29-11
Sampled by		1615
Relinquished by		
Received by	PMGalan	9/29/11 1615
Relinquished by	PMGalan	9/29/11 1819
Received by		9/29/11 1819

Shipping Details
Method of Shipment: courier
On Ice: ~~yes~~ no 3.2°C
Airbill No: 1R#2
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN:
Sample Custody
and
Marlon

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

CH2MHILL

CHAIN OF CUSTODY RECORD

9/29/2011 4:08:20 PM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 9/29/2011
COC Number: 3

			Container:	500 ml Poly	500 ml Poly	500 ml Poly	1 Liter Poly	1 Liter Poly	3 x 40 ml VOA			
			Preservatives:	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	H2SO4, 4°C			
			Filtered:	Field	Field	Field	NA	NA	NA			
			Holding Time:	180	180	180	2	2	28			
	DATE	TIME	Matrix	Arsenic (6020) Field Filtered	Metals (6020AFF) Field Filtered Mn	Metals (6020AFF) Field Filtered Mo,Se,Mn	Specific Conductance (E120.1)	Anions (E300.0) Nitrate	TOC (SM5310C)		Number of Containers	COMMENTS
MW-57-185-181	9/28/2011	16:40	Water	X		X	X	X			2	
MW-63-065-181	9/28/2011	13:47	Water	X		X	X	X			2	
MW-21-181	9/29/2011	10:48	Water				X				1	
MW-23-060-181	9/29/2011	12:51	Water	X	X		X				2	
MW-23-080-181	9/29/2011	14:06	Water	X	X		X				2	
MW-62-065-181	9/29/2011	15:18	Water	X		X	X	X			2	
MW-62-110-181	9/29/2011	15:51	Water	X		X	X	X	X		5	
MW-62-190-181	9/29/2011	15:57	Water	X		X	X	X	X		5	
										TOTAL NUMBER OF CONTAINERS	21	

	Signatures	Date/Time
Approved by		9-29-11
Sampled by		1615
Relinquished by		
Received by	PMGalan	9/29/11 1615
Relinquished by	PMGalan	9/29/11 1819
Received by		9/29/11 1819

Shipping Details

Method of Shipment: courier
On Ice: ~~yes~~ no 3.2°C
Airbill No: 1R#2
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN:
Sample Custody
and
Marlon

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

Advanced Technology Laboratories, Inc.

Please review the checklist below. Any NO and/or NA signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Sample Receipt Checklist

Cooler Received/Opened On: 9/29/2011 Workorder: N006554

Rep sample Temp (Deg C): 3.2 IR Gun ID: 2

Temp Blank: ☐ Yes ☑ No

Carrier name: ATL

Last 4 digits of Tracking No.: Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed B NS 9/30/11 Reviewed By: 10/3/11

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: WATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N006554-002B**, concentration in mg/L are calculated as follows:

Nitrate, mg/L	=	0.691 * 2
	=	1.382 mg/L

Reporting **N006554-002B**, results in two significant figures,

Nitrate, mg/L	**=**	**1.4 mg/L**

MS 10/5/11

Sample Calculation

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

Arsenic, ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = dilution factor
PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N006554-001A**, the concentration in mg/L is calculated as follows:

Arsenic, ug/L = 2.643 * 5 * (25/25)

= 13.215 ug/L

Reporting results in two significant figures,

Arsenic, ug/L = 13

Advanced Technology Laboratories, Inc.

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N006554
Test Method: EPA 6020
Analysis Date: 10/04/11

Matrix: Water
Batch No.: 37937

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Jojo Tenorio

Dilution Test is not applicable to Se. The calc. Values were < 25X the RL. PS @ 2X passes the criteria.

Sample ID	Analyte	&Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N006539-001A-DT 5X	Arsenic	µg/L	1.933389539	PASS	1.980568286	2.38%	10
N006539-001A-DT 5X	Selenium	µg/L	0	NA	0		10
N006539-001A-DT 25X	Manganese	µg/L	183.3039942	PASS	172.8476844	-6.05%	10
N006539-001A-DT 25X	Molybdenum	µg/L	19.03536379	PASS	19.3940915	1.85%	10

Advanced Technology Laboratories, Inc.

Date: *06-Oct-11*

CLIENT: CH2M HILL
Work Order: N006554
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N006539-001A-PS 2** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314371**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	22.169	0.20	20.00	1.981	101	75	125				
Selenium	17.881	1.0	20.00	0	89.4	75	125				

Sample ID: **N006539-001A-PS 5** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314372**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	646.642	2.5	500.0	172.8	94.8	75	125				
Molybdenum	75.567	2.5	50.00	19.39	112	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

October 11, 2011

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N006560

RE: PG&E Topock, 405681.MP.02.GM.0

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on September 30, 2011 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for gsgesmundt

Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.

CLIENT: CH2M HILL
Project: PG&E Topock, 405681.MP.02.GM.0
Lab Order: N006560

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

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Advanced Technology Laboratories, Inc.

Date: ***11-Oct-11***

CLIENT: CH2M HILL
Project: PG&E Topock, 405681.MP.02.GM.0
Lab Order: N006560
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N006560-001A	MW-57-070-181	Water	9/29/2011 5:05:00 AM	9/30/2011	
N006560-002A	MW-24BR-181	Water	9/30/2011 9:32:00 AM	9/30/2011	
N006560-003A	MW-48-181	Water	9/30/2011 10:08:00 AM	9/30/2011	
N006560-004A	MW-61-110-181	Water	9/30/2011 11:18:00 AM	9/30/2011	
N006560-004B	MW-61-110-181	Water	9/30/2011 11:18:00 AM	9/30/2011	

Advanced Technology Laboratories, Inc.
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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-57-070-181
Lab Order:	N006560	**Collection Date:**	9/29/2011 5:05:00 AM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006560-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110930D**	QC Batch: **R81711**				PrepDate:		Analyst: **CEI**
Specific Conductance	2400	0.10	0.10		umhos/cm	1	9/30/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-24BR-181
Lab Order:	N006560	**Collection Date:**	9/30/2011 9:32:00 AM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006560-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110930D**	QC Batch: **R81711**				PrepDate:		Analyst: **CEI**
Specific Conductance	14000	0.10	0.10		umhos/cm	1	9/30/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-48-181
Lab Order:	N006560	**Collection Date:**	9/30/2011 10:08:00 AM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006560-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110930D**	QC Batch: **R81711**				PrepDate:		Analyst: **CEI**
Specific Conductance	17000	0.10	0.10		umhos/cm	1	9/30/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-61-110-181
Lab Order:	N006560	**Collection Date:**	9/30/2011 11:18:00 AM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006560-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_110930D**	QC Batch: **R81711**				PrepDate:		Analyst: **CEI**
Specific Conductance	15000	0.10	0.10		umhos/cm	1	9/30/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***11-Oct-11***

CLIENT: CH2M HILL
Work Order: N006560
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_WPGE

Sample ID: **LCS-R81711** SampType: **LCS** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81711**
Client ID: **LCSW** Batch ID: **R81711** TestNo: **EPA 120.1** Analysis Date: **9/30/2011** SeqNo: **1313876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1451.000	0.10	1411	0	103	85	115				

Sample ID: **N006560-001ADUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81711**
Client ID: **ZZZZZZ** Batch ID: **R81711** TestNo: **EPA 120.1** Analysis Date: **9/30/2011** SeqNo: **1313879**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	2415.000	0.10						2410	0.207	10	

Sample ID: **N006560-001AMS** SampType: **MS** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81711**
Client ID: **ZZZZZZ** Batch ID: **R81711** TestNo: **EPA 120.1** Analysis Date: **9/30/2011** SeqNo: **1313880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	3762.000	0.20	1411	2410	95.8	75	125				

Sample ID: **N006560-001AMSD** SampType: **MSD** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81711**
Client ID: **ZZZZZZ** Batch ID: **R81711** TestNo: **EPA 120.1** Analysis Date: **9/30/2011** SeqNo: **1313881**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	3758.000	0.20	1411	2410	95.5	75	125	3762	0.106	10	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-61-110-181
Lab Order:	N006560	**Collection Date:**	9/30/2011 11:18:00 AM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006560-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_111001A**	QC Batch: **R81759**				PrepDate:		Analyst: **QBM**
Nitrate as N	ND	0.060	2.5		mg/L	5	10/1/2011 10:14 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***11-Oct-11***

CLIENT: CH2M HILL
Work Order: N006560
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 300W_NO3PGE

Sample ID: **MB-R81759_NO3** SampType: **MBLK** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81759**
Client ID: **PBW** Batch ID: **R81759** TestNo: **EPA 300.0** Analysis Date: **10/1/2011** SeqNo: **1315438**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50									

Sample ID: **LCS-R81759_NO3** SampType: **LCS** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81759**
Client ID: **LCSW** Batch ID: **R81759** TestNo: **EPA 300.0** Analysis Date: **10/1/2011** SeqNo: **1315439**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	2.422	0.50	2.500	0	96.9	90	110				

Sample ID: **N006560-004ADUP** SampType: **DUP** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81759**
Client ID: **ZZZZZZ** Batch ID: **R81759** TestNo: **EPA 300.0** Analysis Date: **10/1/2011** SeqNo: **1315441**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.825	2.5						0.8900	0	20	

Sample ID: **N006560-004AMS** SampType: **MS** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81759**
Client ID: **ZZZZZZ** Batch ID: **R81759** TestNo: **EPA 300.0** Analysis Date: **10/1/2011** SeqNo: **1315442**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.400	2.5	12.50	0.8900	92.1	80	120				

Sample ID: **N006560-004AMSD** SampType: **MSD** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81759**
Client ID: **ZZZZZZ** Batch ID: **R81759** TestNo: **EPA 300.0** Analysis Date: **10/1/2011** SeqNo: **1315443**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.450	2.5	12.50	0.8900	92.5	80	120	12.40	0.402	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***11-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-61-110-181
Lab Order:	N006560	**Collection Date:**	9/30/2011 11:18:00 AM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006560-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111004B**	QC Batch: **37937**				PrepDate:	**10/3/2011**	Analyst: **JT**
Arsenic	3.3	0.012	0.50		µg/L	5	10/5/2011 12:56 PM
Manganese	270	0.46	2.5		µg/L	5	10/5/2011 07:57 PM
Molybdenum	24	0.24	2.5		µg/L	5	10/5/2011 12:56 PM
Selenium	ND	1.4	2.5		µg/L	5	10/5/2011 12:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***11-Oct-11***

CLIENT: CH2M HILL
Work Order: N006560
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **MB-37937** SampType: **MBLK** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **PBW** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID: **LCS-37937** SampType: **LCS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **LCSW** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314367**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.009	0.10	10.00	0	100	85	115				
Manganese	100.460	0.50	100.0	0	100	85	115				
Molybdenum	9.849	0.50	10.00	0	98.5	85	115				
Selenium	9.784	0.50	10.00	0	97.8	85	115				

Sample ID: **N006539-001A-MS** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314373**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.992	0.10	10.00	1.981	100	75	125				
Selenium	8.607	0.50	10.00	0	86.1	75	125				

Sample ID: **N006539-001A-MS** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314374**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	269.236	2.5	100.0	172.8	96.4	75	125				
Molybdenum	31.122	2.5	10.00	19.39	117	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N006560
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N006539-001A-MSD** SampType: **MSD** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314375**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.643	0.10	10.00	1.981	96.6	75	125	11.99	2.96	20	
Selenium	8.758	0.50	10.00	0	87.6	75	125	8.607	1.73	20	

Sample ID: **N006539-001A-MSD** SampType: **MSD** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/3/2011** RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314379**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	268.986	2.5	100.0	172.8	96.1	75	125	269.2	0.0930	20	
Molybdenum	31.057	2.5	10.00	19.39	117	75	125	31.12	0.212	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CH2MHILL

CHAIN OF CUSTODY RECORD

9/30/2011 1:58:59 PM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 9/30/2011
COC Number: 4

			Container:	500 ml Poly	500 ml Poly	1 Liter Poly	1 Liter Poly			
			Preservatives:	HNO3, 4°C	HNO3, 4°C	4°C	4°C			
			Filtered:	Field	Field	NA	NA			
			Holding Time:	180	180	2	2			
	DATE	TIME	Matrix	Arsenic (6020) Field Filtered	Metals (6020AFF) Field Filtered Mo,Se,Mn	Specific Conductance (E120.1)	Anions (E300.0) Nitrate		Number of Containers	COMMENTS
MW-57-070-181	9/29/2011	17:05	Water			X		N006560 — 1	1	
MW-24BR-181	9/30/2011	9:32	Water			X		2	1	
MW-48-181	9/30/2011	10:08	Water			X		3	1	
MW-61-110-181	9/30/2011	11:18	Water	X	X	X	X	4	2	
								TOTAL NUMBER OF CONTAINERS	5	

	Signatures	Date/Time
Approved by		9-30-11
Sampled by		1410
Relinquished by		
Received by	JMGalang	9/30/11 HW
Relinquished by	JMGalang	9/30/11
Received by		

Shipping Details
Method of Shipment: courier
On Ice: ~~yes~~ / no 3.2°C
Airbill No: 1 Box #2
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN:
Sample Custody
and
Marlon

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

CH2MHILL

CHAIN OF CUSTODY RECORD

9/30/2011 1:58:59 PM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 9/30/2011
COC Number: 4

			Container:	500 ml Poly	500 ml Poly	1 Liter Poly	1 Liter Poly			
			Preservatives:	HNO3, 4°C	HNO3, 4°C	4°C	4°C			
			Filtered:	Field	Field	NA	NA			
			Holding Time:	180	180	2	2			
	DATE	TIME	Matrix	Arsenic (6020) Field Filtered	Metals (6020AFF) Field Filtered Mo,Se,Mn	Specific Conductance (E120.1)	Anions (E300.0) Nitrate		Number of Containers	COMMENTS
MW-57-070-181	9/29/2011	17:05	Water			X			1	
MW-24BR-181	9/30/2011	9:32	Water			X			1	
MW-48-181	9/30/2011	10:08	Water			X			1	
MW-61-110-181	9/30/2011	11:18	Water	X	X	X	X		2	
								TOTAL NUMBER OF CONTAINERS	5	

	Signatures	Date/Time
Approved by	[signature]	9-30-11
Sampled by		1410
Relinquished by		
Received by	[signature]	9/30/11 1410
Relinquished by	[signature]	9/30/11 1610
Received by	[signature]	9/30/11 1650

Shipping Details

Method of Shipment: courier
On Ice: ~~yes~~ / no 3.2°C
Airbill No: 1R#2
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN:
Sample Custody
and
Marlon

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

Advanced Technology Laboratories, Inc.

Please review the checklist below. Any NO and/or NA signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Sample Receipt Checklist

Cooler Received/Opened On: 9/30/2011 Workorder: N006560

Rep sample Temp (Deg C): 3.2 IR Gun ID: 2

Temp Blank: ☐ Yes ☑ No

Carrier name: ATL

Last 4 digits of Tracking No.: Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed B NS 9/30/11

Reviewed By: 10/4/11

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: WATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N006560-004A**, concentration in mg/L are calculated as follows:

Nitrate, mg/L	=	0.178 * 5
	=	0.890 mg/L

Since the reporting limit is 2.5 mg/L, therefore

Nitrate, mg/L	**=**	**ND**

MS 10/10/11

Sample Calculation

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

Arsenic, ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = dilution factor
PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N006560-004B**, the concentration in mg/L is calculated as follows:

Arsenic, ug/L = 0.656 * 5 * (25/25)

= 3.28 ug/L

Reporting results in two significant figures,

Arsenic, ug/L = 3.3

Advanced Technology Laboratories, Inc.

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N006560
Test Method: EPA 6020
Analysis Date: 10/04/11

Matrix: Water
Batch No.: 37937

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Jojo Tenorio

Dilution Test is not applicable to Se. The calc. Values were < 25X the RL. PS @ 2X passes the criteria.

Sample ID	Analyte	&Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N006539-001A-DT 5X	Arsenic	µg/L	1.933389539	PASS	1.980568286	2.38%	10
N006539-001A-DT 5X	Selenium	µg/L	0	NA	0		10
N006539-001A-DT 25X	Manganese	µg/L	183.3039942	PASS	172.8476844	-6.05%	10
N006539-001A-DT 25X	Molybdenum	µg/L	19.03536379	PASS	19.3940915	1.85%	10

Advanced Technology Laboratories, Inc.

Date: *06-Oct-11*

CLIENT: CH2M HILL
Work Order: N006560
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N006539-001A-PS 2** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314371**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	22.169	0.20	20.00	1.981	101	75	125				
Selenium	17.881	1.0	20.00	0	89.4	75	125				

Sample ID: **N006539-001A-PS 5** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **81732**
Client ID: **ZZZZZZ** Batch ID: **37937** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/4/2011** SeqNo: **1314372**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	646.642	2.5	500.0	172.8	94.8	75	125				
Molybdenum	75.567	2.5	50.00	19.39	112	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

October 19, 2011

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N006586

RE: PG&E Topock, 405681.MP.02.GM.0

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on October 05, 2011 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for gsgosmundt

Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PG&E Topock, 405681.MP.02.GM.0
Lab Order: N006586

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

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Advanced Technology Laboratories, Inc.

Date: ***19-Oct-11***

CLIENT: CH2M HILL
Project: PG&E Topock, 405681.MP.02.GM.0
Lab Order: N006586
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N006586-001A	MW-100-181	Water	10/3/2011 7:05:00 AM	10/5/2011	
N006586-001B	MW-100-181	Water	10/3/2011 7:05:00 AM	10/5/2011	
N006586-002A	MW-101-181	Water	10/3/2011 5:10:00 PM	10/5/2011	
N006586-002B	MW-101-181	Water	10/3/2011 5:10:00 PM	10/5/2011	
N006586-003A	MW-103-181	Water	10/3/2011 5:50:00 PM	10/5/2011	
N006586-003B	MW-103-181	Water	10/3/2011 5:50:00 PM	10/5/2011	
N006586-004A	MW-27-085-181	Water	10/3/2011 11:59:00 AM	10/5/2011	
N006586-004B	MW-27-085-181	Water	10/3/2011 11:59:00 AM	10/5/2011	
N006586-005A	MW-34-080-181	Water	10/3/2011 1:40:00 PM	10/5/2011	
N006586-005B	MW-34-080-181	Water	10/3/2011 1:40:00 PM	10/5/2011	
N006586-006A	MW-34-100-181	Water	10/3/2011 2:53:00 PM	10/5/2011	
N006586-006B	MW-34-100-181	Water	10/3/2011 2:53:00 PM	10/5/2011	
N006586-007A	MW-53D-181	Water	10/3/2011 4:41:00 PM	10/5/2011	
N006586-007B	MW-53D-181	Water	10/3/2011 4:41:00 PM	10/5/2011	
N006586-008A	MW-33-090-181	Water	10/4/2011 10:00:00 AM	10/5/2011	
N006586-009A	MW-33-150-181	Water	10/4/2011 8:34:00 AM	10/5/2011	
N006586-010A	MW-50-200-181	Water	10/4/2011 3:26:00 PM	10/5/2011	
N006586-011A	MW-59-100-181	Water	10/4/2011 2:24:00 PM	10/5/2011	
N006586-011B	MW-59-100-181	Water	10/4/2011 2:24:00 PM	10/5/2011	
N006586-012A	MW-60-125-181	Water	10/4/2011 1:25:00 PM	10/5/2011	
N006586-012B	MW-60-125-181	Water	10/4/2011 1:25:00 PM	10/5/2011	

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-100-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 7:05:00 AM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_111005B**	QC Batch: **R81761**			PrepDate:			Analyst: **CEI**
Specific Conductance	12000	0.10	0.10		umhos/cm	1	10/5/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-101-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 5:10:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_111005B**	QC Batch: **R81761**			PrepDate:			Analyst: **CEI**
Specific Conductance	17000	0.10	0.10		umhos/cm	1	10/5/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-103-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 5:50:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_111005C**	QC Batch: **R81823**			PrepDate:			Analyst: **CEI**
Specific Conductance	33000	0.10	0.10		umhos/cm	1	10/5/2011

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-27-085-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 11:59:00 AM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_111005B**	QC Batch: **R81761**			PrepDate:			Analyst: **CEI**
Specific Conductance	12000	0.10	0.10		umhos/cm	1	10/5/2011

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-34-080-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 1:40:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_111005B**	QC Batch: **R81761**			PrepDate:			Analyst: **CEI**
Specific Conductance	7800	0.10	0.10		umhos/cm	1	10/5/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-34-100-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 2:53:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_111005B**	QC Batch: **R81761**			PrepDate:			Analyst: **CEI**
Specific Conductance	17000	0.10	0.10		umhos/cm	1	10/5/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-53D-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 4:41:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_111005C**	QC Batch: **R81823**			PrepDate:			Analyst: **CEI**
Specific Conductance	33000	0.10	0.10		umhos/cm	1	10/5/2011

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-33-090-181
Lab Order:	N006586	**Collection Date:**	10/4/2011 10:00:00 AM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_111005B**	QC Batch: **R81761**			PrepDate:			Analyst: **CEI**
Specific Conductance	10000	0.10	0.10		umhos/cm	1	10/5/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-33-150-181
Lab Order:	N006586	**Collection Date:**	10/4/2011 8:34:00 AM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_111005B**	QC Batch: **R81761**			PrepDate:			Analyst: **CEI**
Specific Conductance	16000	0.10	0.10		umhos/cm	1	10/5/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-50-200-181
Lab Order:	N006586	**Collection Date:**	10/4/2011 3:26:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_111005B**	QC Batch: **R81761**			PrepDate:			Analyst: **CEI**
Specific Conductance	19000	0.10	0.10		umhos/cm	1	10/5/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-59-100-181
Lab Order:	N006586	**Collection Date:**	10/4/2011 2:24:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_111005B**	QC Batch: **R81761**			PrepDate:			Analyst: **CEI**
Specific Conductance	10000	0.10	0.10		umhos/cm	1	10/5/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-60-125-181
Lab Order:	N006586	**Collection Date:**	10/4/2011 1:25:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_111005B**	QC Batch: **R81761**			PrepDate:			Analyst: **CEI**
Specific Conductance	8200	0.10	0.10		umhos/cm	1	10/5/2011

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***19-Oct-11***

CLIENT: CH2M HILL
Work Order: N006586
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_WPGE

Sample ID: **LCS-R81761** SampType: **LCS** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81761**
Client ID: **LCSW** Batch ID: **R81761** TestNo: **EPA 120.1** Analysis Date: **10/5/2011** SeqNo: **1315469**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	9800.000	0.10	9986	0	98.1	85	115				

Sample ID: **N006586-012BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81761**
Client ID: **ZZZZZZ** Batch ID: **R81761** TestNo: **EPA 120.1** Analysis Date: **10/5/2011** SeqNo: **1315482**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	8180.000	0.10						8200	0.244	10	

Sample ID: **N006586-012BMS** SampType: **MS** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81761**
Client ID: **ZZZZZZ** Batch ID: **R81761** TestNo: **EPA 120.1** Analysis Date: **10/5/2011** SeqNo: **1315483**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	17980.000	0.20	9986	8200	97.9	75	125				

Sample ID: **N006586-012BMSD** SampType: **MSD** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81761**
Client ID: **ZZZZZZ** Batch ID: **R81761** TestNo: **EPA 120.1** Analysis Date: **10/5/2011** SeqNo: **1315484**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	17960.000	0.20	9986	8200	97.7	75	125	17980	0.111	10	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N006586
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_WPGE

Sample ID: **LCS-R81823** SampType: **LCS** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81823**
Client ID: **LCSW** Batch ID: **R81823** TestNo: **EPA 120.1** Analysis Date: **10/5/2011** SeqNo: **1316961**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	100000.000	0.10	99880	0	100	85	115				

Sample ID: **N006586-007BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81823**
Client ID: **ZZZZZZ** Batch ID: **R81823** TestNo: **EPA 120.1** Analysis Date: **10/5/2011** SeqNo: **1316964**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	32800.000	0.10						32800	0	10	

Sample ID: **N006586-007BMS** SampType: **MS** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81823**
Client ID: **ZZZZZZ** Batch ID: **R81823** TestNo: **EPA 120.1** Analysis Date: **10/5/2011** SeqNo: **1316965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	139200.000	0.20	99880	32800	107	75	125				

Sample ID: **N006586-007BMSD** SampType: **MSD** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81823**
Client ID: **ZZZZZZ** Batch ID: **R81823** TestNo: **EPA 120.1** Analysis Date: **10/5/2011** SeqNo: **1316966**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	139000.000	0.20	99880	32800	106	75	125	139200	0.144	10	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-59-100-181
Lab Order:	N006586	**Collection Date:**	10/4/2011 2:24:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_111006A**	QC Batch: **R81799**			PrepDate:			Analyst: **QBM**
Nitrate as N	4.0	0.060	2.5		mg/L	5	10/6/2011 09:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-60-125-181
Lab Order:	N006586	**Collection Date:**	10/4/2011 1:25:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_111006A**	QC Batch: **R81799**			PrepDate:			Analyst: **QBM**
Nitrate as N	2.6	0.060	2.5		mg/L	5	10/6/2011 09:56 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***19-Oct-11***

CLIENT: CH2M HILL
Work Order: N006586
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 300W_NO3PGE

Sample ID: **MB-R81799_NO3** SampType: **MBLK** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81799**
Client ID: **PBW** Batch ID: **R81799** TestNo: **EPA 300.0** Analysis Date: **10/6/2011** SeqNo: **1316320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50									

Sample ID: **LCS-R81799_NO3** SampType: **LCS** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81799**
Client ID: **LCSW** Batch ID: **R81799** TestNo: **EPA 300.0** Analysis Date: **10/6/2011** SeqNo: **1316321**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	2.438	0.50	2.500	0	97.5	90	110				

Sample ID: **N006586-011BMS** SampType: **MS** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81799**
Client ID: **ZZZZZZ** Batch ID: **R81799** TestNo: **EPA 300.0** Analysis Date: **10/6/2011** SeqNo: **1316324**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	16.020	2.5	12.50	4.040	95.8	80	120				

Sample ID: **N006586-011BMSD** SampType: **MSD** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81799**
Client ID: **ZZZZZZ** Batch ID: **R81799** TestNo: **EPA 300.0** Analysis Date: **10/6/2011** SeqNo: **1316325**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	15.970	2.5	12.50	4.040	95.4	80	120	16.02	0.313	20	

Sample ID: **N006586-012BDUP** SampType: **DUP** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81799**
Client ID: **ZZZZZZ** Batch ID: **R81799** TestNo: **EPA 300.0** Analysis Date: **10/6/2011** SeqNo: **1316326**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	2.575	2.5						2.570	0.194	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-103-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 5:50:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A		**EPA 6010B**				
RunID: **ICP2_111011A**	QC Batch: **37985**				PrepDate:	**10/6/2011**	Analyst: **KAB**
Iron	220	14	20		ug/L	1	10/10/2011 01:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-53D-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 4:41:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A		**EPA 6010B**				
RunID: **ICP2_111011A**	QC Batch: **37985**				PrepDate:	**10/6/2011**	Analyst: **KAB**
Iron	220	14	20		ug/L	1	10/10/2011 01:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***19-Oct-11***

CLIENT: CH2M HILL
Work Order: N006586
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-37985** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **10/6/2011** RunNo: **81779**
Client ID: **PBW** Batch ID: **37985** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **10/10/2011** SeqNo: **1315873**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-37985** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **10/6/2011** RunNo: **81779**
Client ID: **LCSW** Batch ID: **37985** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **10/10/2011** SeqNo: **1315874**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10098.757	20	10000	0	101	85	115				

Sample ID: **N006586-003A-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **10/6/2011** RunNo: **81779**
Client ID: **ZZZZZZ** Batch ID: **37985** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **10/10/2011** SeqNo: **1315878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	9119.485	20	10000	215.8	89.0	75	125				

Sample ID: **N006586-003A-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **10/6/2011** RunNo: **81779**
Client ID: **ZZZZZZ** Batch ID: **37985** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **10/10/2011** SeqNo: **1315879**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	9081.528	20	10000	215.8	88.7	75	125	9119	0.417	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-100-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 7:05:00 AM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111006A**	QC Batch: **37979**			PrepDate:	**10/6/2011**		Analyst: **JT**
Arsenic	1.4	0.012	0.50		µg/L	5	10/6/2011 01:46 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-101-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 5:10:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111006A**	QC Batch: **37979**			PrepDate:	**10/6/2011**		Analyst: **JT**
Arsenic	1.4	0.012	0.50		µg/L	5	10/6/2011 03:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-103-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 5:50:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **ICP7_111006A**	QC Batch: **37979**				PrepDate:	**10/6/2011**	Analyst: **JT**
Arsenic	2.9	0.012	0.50		µg/L	5	10/6/2011 03:14 PM
Manganese	1800	2.3	12		µg/L	25	10/6/2011 05:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-27-085-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 11:59:00 AM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **ICP7_111006A**	QC Batch: **37979**			PrepDate:	**10/6/2011**		Analyst: **JT**
Arsenic	1.4	0.012	0.50		µg/L	5	10/6/2011 03:26 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-34-080-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 1:40:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **ICP7_111006A**	QC Batch: **37979**			PrepDate:	**10/6/2011**		Analyst: **JT**
Arsenic	1.5	0.012	0.50		µg/L	5	10/6/2011 03:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-34-100-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 2:53:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **ICP7_111006A**	QC Batch: **37979**			PrepDate:	**10/6/2011**		Analyst: **JT**
Arsenic	1.3	0.012	0.50		µg/L	5	10/6/2011 04:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-53D-181
Lab Order:	N006586	**Collection Date:**	10/3/2011 4:41:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **ICP7_111006A**	QC Batch: **37979**				PrepDate:	**10/6/2011**	Analyst: **JT**
Arsenic	3.0	0.012	0.50		µg/L	5	10/6/2011 04:39 PM
Manganese	1800	2.3	12		µg/L	25	10/6/2011 05:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-59-100-181
Lab Order:	N006586	**Collection Date:**	10/4/2011 2:24:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **ICP7_111006A**	QC Batch: **37979**				PrepDate: **10/6/2011**		Analyst: **JT**
Arsenic	2.0	0.012	0.50		µg/L	5	10/6/2011 04:51 PM
Manganese	1.9	0.091	0.50		µg/L	1	10/6/2011 04:45 PM
Molybdenum	ND	1.2	12		µg/L	25	10/6/2011 05:34 PM
Selenium	5.6	1.4	2.5		µg/L	5	10/6/2011 04:51 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: ***19-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-60-125-181
Lab Order:	N006586	**Collection Date:**	10/4/2011 1:25:00 PM
Project:	PG&E Topock, 405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006586-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **ICP7_111006A**	QC Batch: **37979**				PrepDate:	**10/6/2011**	Analyst: **JT**
Arsenic	1.7	0.012	0.50		µg/L	5	10/6/2011 05:03 PM
Manganese	14	0.46	2.5		µg/L	5	10/6/2011 05:03 PM
Molybdenum	20	1.2	12		µg/L	25	10/6/2011 05:58 PM
Selenium	ND	7.2	12		µg/L	25	10/6/2011 05:58 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***19-Oct-11***

CLIENT: CH2M HILL
Work Order: N006586
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **MB-37979** SampType: **MBLK** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/6/2011** RunNo: **81821**
Client ID: **PBW** Batch ID: **37979** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/6/2011** SeqNo: **1316876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.007	0.10									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID: **LCS-37979** SampType: **LCS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/6/2011** RunNo: **81821**
Client ID: **LCSW** Batch ID: **37979** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/6/2011** SeqNo: **1316877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.955	0.10	10.00	0	99.6	85	115				
Manganese	96.789	0.50	100.0	0	96.8	85	115				
Molybdenum	9.790	0.50	10.00	0	97.9	85	115				
Selenium	9.665	0.50	10.00	0	96.6	85	115				

Sample ID: **N006586-001A-MS** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/6/2011** RunNo: **81821**
Client ID: **ZZZZZZ** Batch ID: **37979** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/6/2011** SeqNo: **1316883**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.917	0.50	10.00	1.368	105	75	125				
Molybdenum	32.925	2.5	10.00	22.04	109	75	125				
Selenium	9.800	2.5	10.00	0	98.0	75	125				

Sample ID: **N006586-001A-MS** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/6/2011** RunNo: **81821**
Client ID: **ZZZZZZ** Batch ID: **37979** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/6/2011** SeqNo: **1316884**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	185.300	0.50	100.0	101.0	84.3	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N006586
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N006586-001A-MSD** SampType: **MSD** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/6/2011** RunNo: **81821**
Client ID: **ZZZZZZ** Batch ID: **37979** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/6/2011** SeqNo: **1316885**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	190.472	0.50	100.0	101.0	89.4	75	125	185.3	2.75	20	

Sample ID: **N006586-001A-MSD** SampType: **MSD** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/6/2011** RunNo: **81821**
Client ID: **ZZZZZZ** Batch ID: **37979** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/6/2011** SeqNo: **1316889**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.584	0.50	10.00	1.368	102	75	125	11.92	2.84	20	
Molybdenum	33.177	2.5	10.00	22.04	111	75	125	32.92	0.764	20	
Selenium	9.388	2.5	10.00	0	93.9	75	125	9.800	4.29	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CH2MHILL

CHAIN OF CUSTODY RECORD

10/5/2011 10:00:42 AM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 10/5/2011
COC Number: 7

			Container:	500 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1 Liter Poly	1 Liter Poly			
			Preservatives:	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C			
			Filtered:	Field	Field	Field	Field	NA	NA			
			Holding Time:	180	180	180	180	2	2			
	DATE	TIME	Matrix	Arsenic (6020) Field Filtered	Metals (6020AFF) Field Filtered Mn	Metals (6020AFF) Field Filtered Mo,Se,Mn	Metals (6010BFF) Field Filtered Fe	Specific Conductance (E120.1)	Anions (E300.0) Nitrate		Number of Containers	COMMENTS
MW-100-181	10/3/2011	7:05	Water	X				X		N006586-1	2	
MW-101-181	10/3/2011	17:10	Water	X				X		2	2	
MW-103-181	10/3/2011	17:50	Water	X	X		X	X		3	2	
MW-27-085-181	10/3/2011	11:59	Water	X				X		4	2	
MW-34-080-181	10/3/2011	13:40	Water	X				X		5	2	
MW-34-100-181	10/3/2011	14:53	Water	X				X		6	2	
MW-53D-181	10/3/2011	16:41	Water	X	X		X	X		7	2	
MW-33-090-181	10/4/2011	10:00	Water					X		8	1	
MW-33-150-181	10/4/2011	8:34	Water					X		9	1	
MW-50-200-181	10/4/2011	15:26	Water					X		10	1	
MW-59-100-181	10/4/2011	14:24	Water	X		X		X	X	11	2	
MW-60-125-181	10/4/2011	13:25	Water	X		X		X	X	12	2	
										TOTAL NUMBER OF CONTAINERS	21	

	Signatures	Date/Time
Approved by		10-5-11
Sampled by		1122
Relinquished by		
Received by	J. PM Gaby	10/5/11 1122
Relinquished by	J. PM Gaby	10/5/11 1335
Received by		10/5/11 1335

Shipping Details

Method of Shipment: courier
On Ice: ~~yes~~ / no 2.4°C
Airbill No: 1B#1
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN:
Sample Custody
and
Marlon

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

38

CH2MHILL

CHAIN OF CUSTODY RECORD

10/5/2011 10:00:42 AM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 10/5/2011
COC Number: 7

			Container:	500 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1 Liter Poly	1 Liter Poly			
			Preservatives:	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C			
			Filtered:	Field	Field	Field	Field	NA	NA			
			Holding Time:	180	180	180	180	2	2			
	DATE	TIME	Matrix	Arsenic (6020) Field Filtered	Metals (6020AFF) Field Filtered Mn	Metals (6020AFF) Field Filtered Mo,Se,Mn	Metals (6010BFF) Field Filtered Fe	Specific Conductance (E120.1)	Anions (E300.0) Nitrate		Number of Containers	COMMENTS
MW-100-181	10/3/2011	7:05	Water	X				X			2	
MW-101-181	10/3/2011	17:10	Water	X				X			2	
MW-103-181	10/3/2011	17:50	Water	X	X		X	X			2	
MW-27-085-181	10/3/2011	11:59	Water	X				X			2	
MW-34-080-181	10/3/2011	13:40	Water	X				X			2	
MW-34-100-181	10/3/2011	14:53	Water	X				X			2	
MW-53D-181	10/3/2011	16:41	Water	X	X		X	X			2	
MW-33-090-181	10/4/2011	10:00	Water					X			1	
MW-33-150-181	10/4/2011	8:34	Water					X			1	
MW-50-200-181	10/4/2011	15:26	Water					X			1	
MW-59-100-181	10/4/2011	14:24	Water	X		X		X	X		2	
MW-60-125-181	10/4/2011	13:25	Water	X		X		X	X		2	
										TOTAL NUMBER OF CONTAINERS	21	

	Signatures	Date/Time
Approved by		10-5-11
Sampled by		1122
Relinquished by		
Received by	S. PM Gray	10/5/11 1122
Relinquished by	S. PM Gray	10/5/11 1355
Received by		10/5/11 1335

Shipping Details

Method of Shipment: courier
On Ice: ~~yes~~ / no 2.4°C
Airbill No: IR# 1
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN:
Sample Custody
and
Marlon

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

Advanced Technology Laboratories, Inc.

Please review the checklist below. Any NO and/or NA signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Sample Receipt Checklist

Cooler Received/Opened On: 10/5/2011 Workorder: N006586

Rep sample Temp (Deg C): 2.4 IR Gun ID: 1

Temp Blank: ☐ Yes ☑ No

Carrier name: ATL

Last 4 digits of Tracking No.: Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed B NS 10/5/11

Reviewed By: 10/6/11

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: WATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N006586-011B**, concentration in mg/L are calculated as follows:

Nitrate, mg/L	=	0.808 * 5
	=	4.040 mg/L

Reporting **N006586-011B**, results in two significant figures,

Nitrate, mg/L	**=**	**4.0 mg/L**

MS 10/12/11

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: METALS BY ICP
MATRIX: WATER

FORMULA:

Calculate the individual metal concentration, in ug/L, in the original sample as follows:

$$M, \text{ ug/L} = \frac{A*C*DF*1000}{B}$$

where:
M= concentration of the metal in ug/L
A= mg/L, ICP calculated concentration
B= volume of sample, Liter
C= final volume of digestate, Liter
DF= dilution factor

For N006586-003A, concentration in ug/L are calculated as follows:

$$Fe, \text{ ug/L} = 0.21584 \frac{\text{mg/L} * 0.025 \text{ L} * 1000}{0.025 \text{ L}}$$

Fe = 215.84 ug/L

Reporting result in two significant figures,

Fe = 220 ug/L

fc. 10/11/2011

DILUTION TEST

Analytical Method:	**EPA 6010B / 200.7**	**Matrix:**	**Water**
Digestion Method:	**EPA 3010A**	**Amount of Sample:**	**25 mL**
Date of Analysis:	**10/10/2011**	**Units:**	**ug/L**
Digestion Date:	**10/6/2011**		
Instrument Name:	**ICP2**		
Analysts:	**KB**		

Work Order # : **N006586-003A**
Batch # : **37985**

Analyte	A	B	Difference	% D
Iron	215.8	254.896	-39.09600	-18.1

FORMULA:

$$\%D = \frac{(A-B)*100}{A}$$

where:

% D = % Difference
A= ug/L, ICP calculated concentration of the original sample
B= ug/L, ICP calculated concentration @5x dilution

SD 10/18

Advanced Technology Laboratories, Inc.

Date: *11-Oct-11*

CLIENT: CH2M HILL
Work Order: N006586
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N006586-003ADT** SampType: **DT** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **10/6/2011** RunNo: **81779**
Client ID: **ZZZZZZ** Batch ID: **37985** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **10/10/2011** SeqNo: **1315875**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	254.896	100						215.8	16.6	10	R

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories, Inc.

Date: *11-Oct-11*

CLIENT: CH2M HILL
Work Order: N006586
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N006586-003A-PS 2** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **81779**
Client ID: **ZZZZZZ** Batch ID: **37985** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **10/10/2011** SeqNo: **1315880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	19357.222	40	20000	215.8	95.7	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Sample Calculation

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

Arsenic, ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = dilution factor
PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N006586-001A**, the concentration in mg/L is calculated as follows:

Arsenic, ug/L = 0.274 * 5 * (25/25)

= 1.37 ug/L

Reporting results in two significant figures,

Arsenic, ug/L = 1.4

10/18/11

Advanced Technology Laboratories, Inc.

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N006586
Test Method: EPA 6020
Analysis Date: 10/06/11

Matrix: Water
Batch No.: 37979

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Jojo Tenorio

Dilution Test is not applicable to Se. The calc. Values were < 25X the RL. PS @ 5X passes the criteria

Sample ID	Analyte	&Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N006586-001A-DT 5X	Manganese	µg/L	107.3259412	PASS	101.0476756	-6.21%	10
N006586-001A-DT 25X	Arsenic	µg/L	1.362477768	PASS	1.367877254	0.39%	10
N006586-001A-DT 25X	Molybdenum	µg/L	20.85142696	PASS	22.03548328	5.37%	10
N006586-001A-DT 25X	Selenium	µg/L	0	NA	0		10

SJ 10/18

Advanced Technology Laboratories, Inc.

Date: *13-Oct-11*

CLIENT: CH2M HILL
Work Order: N006586
Project: PG&E Topock, 405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N006586-001A-PS 2** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **81821**
Client ID: **ZZZZZZ** Batch ID: **37979** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/6/2011** SeqNo: **1316881**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	296.158	1.0	200.0	101.0	97.6	75	125				

Sample ID: **N006586-001A-PS 5** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **81821**
Client ID: **ZZZZZZ** Batch ID: **37979** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/6/2011** SeqNo: **1316882**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	54.299	0.50	50.00	1.368	106	75	125				
Molybdenum	79.469	2.5	50.00	22.04	115	75	125				
Selenium	49.336	2.5	50.00	0	98.7	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

October 18, 2011

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N006600

RE: PG&E Topock,405681.MP.02.GM.0

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on October 06, 2011 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for gsgosmundt

Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.

CLIENT: CH2M HILL
Project: PG&E Topock,405681.MP.02.GM.0
Lab Order: N006600

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Advanced Technology Laboratories, Inc.
3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

Date: ***18-Oct-11***

CLIENT: CH2M HILL
Project: PG&E Topock,405681.MP.02.GM.0
Lab Order: N006600
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N006600-001A	MW-12-181	Water	10/6/2011 3:42:00 PM	10/6/2011	
N006600-001B	MW-12-181	Water	10/6/2011 3:42:00 PM	10/6/2011	

Advanced Technology Laboratories, Inc.
3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***18-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-12-181
Lab Order:	N006600	**Collection Date:**	10/6/2011 3:42:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006600-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **WETCHEM_111006B**	QC Batch: **R81805**			PrepDate:			Analyst: **CEI**
Specific Conductance	6700	0.10	0.10		umhos/cm	1	10/6/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

Date: ***18-Oct-11***

CLIENT: CH2M HILL
Work Order: N006600
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_WPGE

Sample ID: **LCS-R81805** SampType: **LCS** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81805**
Client ID: **LCSW** Batch ID: **R81805** TestNo: **EPA 120.1** Analysis Date: **10/6/2011** SeqNo: **1316386**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	9650.000	0.10	9986	0	96.6	85	115				

Sample ID: **N006600-001BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81805**
Client ID: **ZZZZZZ** Batch ID: **R81805** TestNo: **EPA 120.1** Analysis Date: **10/6/2011** SeqNo: **1316390**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	6711.000	0.10						6710	0.0149	10	

Sample ID: **N006600-001BMS** SampType: **MS** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81805**
Client ID: **ZZZZZZ** Batch ID: **R81805** TestNo: **EPA 120.1** Analysis Date: **10/6/2011** SeqNo: **1316391**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	16420.000	0.20	9986	6710	97.2	75	125				

Sample ID: **N006600-001BMSD** SampType: **MSD** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **81805**
Client ID: **ZZZZZZ** Batch ID: **R81805** TestNo: **EPA 120.1** Analysis Date: **10/6/2011** SeqNo: **1316392**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	16380.000	0.20	9986	6710	96.8	75	125	16420	0.244	10	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories, Inc.
3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***18-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-12-181
Lab Order:	N006600	**Collection Date:**	10/6/2011 3:42:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006600-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **IC2_111007A**	QC Batch: **R81814**			PrepDate:			Analyst: **QBM**
Nitrate as N	9.8	0.060	2.5		mg/L	5	10/7/2011 10:13 AM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

Date: ***18-Oct-11***

CLIENT: CH2M HILL
Work Order: N006600
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 300W_NO3PGE

Sample ID: **MB-R81814_NO3** SampType: **MBLK** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81814**
Client ID: **PBW** Batch ID: **R81814** TestNo: **EPA 300.0** Analysis Date: **10/7/2011** SeqNo: **1316795**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50									

Sample ID: **LCS-R81814_NO3** SampType: **LCS** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81814**
Client ID: **LCSW** Batch ID: **R81814** TestNo: **EPA 300.0** Analysis Date: **10/7/2011** SeqNo: **1316796**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	2.455	0.50	2.500	0	98.2	90	110				

Sample ID: **N006599-001BDUP** SampType: **DUP** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81814**
Client ID: **ZZZZZZ** Batch ID: **R81814** TestNo: **EPA 300.0** Analysis Date: **10/7/2011** SeqNo: **1316802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	2.850	2.5						2.835	0.528	20	

Sample ID: **N006599-001BMS** SampType: **MS** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81814**
Client ID: **ZZZZZZ** Batch ID: **R81814** TestNo: **EPA 300.0** Analysis Date: **10/7/2011** SeqNo: **1316803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	14.475	2.5	12.50	2.835	93.1	80	120				

Sample ID: **N006599-001BMSD** SampType: **MSD** TestCode: **300W_NO3P** Units: **mg/L** Prep Date: RunNo: **81814**
Client ID: **ZZZZZZ** Batch ID: **R81814** TestNo: **EPA 300.0** Analysis Date: **10/7/2011** SeqNo: **1316806**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	14.550	2.5	12.50	2.835	93.7	80	120	14.48	0.517	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: ***18-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-12-181
Lab Order:	N006600	**Collection Date:**	10/6/2011 3:42:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006600-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A		**EPA 6010B**				
RunID: **ICP2_111011B**	QC Batch: **38004**				PrepDate: **10/8/2011**		Analyst: **KAB**
Antimony	ND	5.4	10		ug/L	1	10/10/2011 03:17 PM
Barium	66	0.20	3.0		ug/L	1	10/10/2011 03:17 PM
Beryllium	ND	0.090	1.0		ug/L	1	10/10/2011 03:17 PM
Cadmium	ND	0.23	3.0		ug/L	1	10/10/2011 03:17 PM
Cobalt	ND	0.31	3.0		ug/L	1	10/10/2011 03:17 PM
Copper	ND	0.53	5.0		ug/L	1	10/10/2011 03:17 PM
Lead	ND	1.5	10		ug/L	1	10/10/2011 03:17 PM
Molybdenum	11	0.49	5.0		ug/L	1	10/10/2011 03:17 PM
Nickel	ND	1.1	5.0		ug/L	1	10/10/2011 03:17 PM
Silver	ND	0.72	3.0		ug/L	1	10/10/2011 03:17 PM
Vanadium	10	0.19	3.0		ug/L	1	10/10/2011 03:17 PM
Zinc	ND	4.6	10		ug/L	1	10/10/2011 03:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***18-Oct-11***

CLIENT: CH2M HILL
Work Order: N006600
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-38004** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **10/8/2011** RunNo: **81781**
Client ID: **PBW** Batch ID: **38004** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **10/10/2011** SeqNo: **1315887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	10									
Barium	ND	3.0									
Beryllium	ND	1.0									
Cadmium	ND	3.0									
Cobalt	ND	3.0									
Copper	ND	5.0									
Lead	ND	10									
Molybdenum	ND	5.0									
Nickel	ND	5.0									
Silver	ND	3.0									
Vanadium	ND	3.0									
Zinc	ND	10									

Sample ID: **LCS-38004** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **10/8/2011** RunNo: **81781**
Client ID: **LCSW** Batch ID: **38004** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **10/10/2011** SeqNo: **1315888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	494.223	10	500.0	0	98.8	85	115				
Barium	493.014	3.0	500.0	0	98.6	85	115				
Beryllium	510.331	1.0	500.0	0	102	85	115				
Cadmium	494.008	3.0	500.0	0	98.8	85	115				
Cobalt	492.642	3.0	500.0	0	98.5	85	115				
Copper	520.946	5.0	500.0	0	104	85	115				
Lead	529.348	10	500.0	0	106	85	115				
Molybdenum	495.038	5.0	500.0	0	99.0	85	115				
Nickel	491.980	5.0	500.0	0	98.4	85	115				
Silver	498.068	3.0	500.0	0	99.6	85	115				
Vanadium	486.925	3.0	500.0	0	97.4	85	115				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N006600
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **LCS-38004** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **10/8/2011** RunNo: **81781**
Client ID: **LCSW** Batch ID: **38004** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **10/10/2011** SeqNo: **1315888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	496.524	10	500.0	0	99.3	85	115				

Sample ID: **N006598-001A-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **10/8/2011** RunNo: **81781**
Client ID: **ZZZZZZ** Batch ID: **38004** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **10/12/2011** SeqNo: **1316307**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	517.893	10	500.0	0	104	75	125				
Barium	476.942	3.0	500.0	14.31	92.5	75	125				
Beryllium	506.780	1.0	500.0	0	101	75	125				
Cadmium	478.911	3.0	500.0	0	95.8	75	125				
Cobalt	463.239	3.0	500.0	0	92.6	75	125				
Copper	525.426	5.0	500.0	10.37	103	75	125				
Lead	485.150	10	500.0	0	97.0	75	125				
Molybdenum	520.312	5.0	500.0	16.04	101	75	125				
Nickel	464.382	5.0	500.0	1.360	92.6	75	125				
Silver	517.244	3.0	500.0	1.689	103	75	125				
Vanadium	473.002	3.0	500.0	0.2107	94.6	75	125				
Zinc	604.400	10	500.0	113.6	98.2	75	125				

Sample ID: **N006598-001A-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **10/8/2011** RunNo: **81781**
Client ID: **ZZZZZZ** Batch ID: **38004** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **10/12/2011** SeqNo: **1316308**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	521.044	10	500.0	0	104	75	125	517.9	0.606	20	
Barium	482.862	3.0	500.0	14.31	93.7	75	125	476.9	1.23	20	
Beryllium	507.829	1.0	500.0	0	102	75	125	506.8	0.207	20	
Cadmium	483.676	3.0	500.0	0	96.7	75	125	478.9	0.990	20	
Cobalt	468.172	3.0	500.0	0	93.6	75	125	463.2	1.06	20	
Copper	532.609	5.0	500.0	10.37	104	75	125	525.4	1.36	20	
Lead	487.373	10	500.0	0	97.5	75	125	485.1	0.457	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N006600
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N006598-001A-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **10/8/2011** RunNo: **81781**
Client ID: **ZZZZZZ** Batch ID: **38004** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **10/12/2011** SeqNo: **1316308**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	520.705	5.0	500.0	16.04	101	75	125	520.3	0.0756	20	
Nickel	468.241	5.0	500.0	1.360	93.4	75	125	464.4	0.828	20	
Silver	519.298	3.0	500.0	1.689	104	75	125	517.2	0.396	20	
Vanadium	478.074	3.0	500.0	0.2107	95.6	75	125	473.0	1.07	20	
Zinc	612.111	10	500.0	113.6	99.7	75	125	604.4	1.27	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: ***18-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-12-181
Lab Order:	N006600	**Collection Date:**	10/6/2011 3:42:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006600-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **ICP7_111012A**	QC Batch: **37999**			PrepDate:	**10/12/2011**		Analyst: **JT**
Arsenic	47	0.0025	0.10		µg/L	1	10/12/2011 02:49 PM
Chromium	3200	4.0	12		µg/L	25	10/12/2011 03:01 PM
Selenium	9.7	0.29	0.50		µg/L	1	10/12/2011 02:49 PM
Thallium	ND	0.076	2.5		µg/L	5	10/12/2011 02:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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Advanced Technology Laboratories, Inc.

Date: ***18-Oct-11***

CLIENT: CH2M HILL
Work Order: N006600
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **MB-37999** SampType: **MBLK** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/12/2011** RunNo: **81807**
Client ID: **PBW** Batch ID: **37999** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/12/2011** SeqNo: **1316452**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.005	0.10									
Chromium	ND	0.50									
Selenium	ND	0.50									
Thallium	ND	0.50									

Sample ID: **LCS-37999** SampType: **LCS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/12/2011** RunNo: **81807**
Client ID: **LCSW** Batch ID: **37999** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/12/2011** SeqNo: **1316453**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.984	0.10	10.00	0	99.8	85	115				
Chromium	10.491	0.50	10.00	0	105	85	115				
Selenium	9.827	0.50	10.00	0	98.3	85	115				
Thallium	10.111	0.50	10.00	0	101	85	115				

Sample ID: **N006598-001A-MS** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/12/2011** RunNo: **81807**
Client ID: **ZZZZZZ** Batch ID: **37999** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/12/2011** SeqNo: **1316459**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.684	0.10	10.00	0.3140	104	75	125				
Chromium	10.309	0.50	10.00	0.9574	93.5	75	125				
Selenium	12.055	0.50	10.00	3.192	88.6	75	125				

Sample ID: **N006598-001A-MS** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/12/2011** RunNo: **81807**
Client ID: **ZZZZZZ** Batch ID: **37999** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/12/2011** SeqNo: **1316460**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	10.639	2.5	10.00	0	106	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: CH2M HILL
Work Order: N006600
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N006598-001A-MSD** SampType: **MSD** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/12/2011** RunNo: **81807**
Client ID: **ZZZZZZ** Batch ID: **37999** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/12/2011** SeqNo: **1316461**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.696	0.10	10.00	0.3140	104	75	125	10.68	0.111	20	
Chromium	10.385	0.50	10.00	0.9574	94.3	75	125	10.31	0.736	20	
Selenium	12.100	0.50	10.00	3.192	89.1	75	125	12.06	0.375	20	

Sample ID: **N006598-001A-MSD** SampType: **MSD** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **10/12/2011** RunNo: **81807**
Client ID: **ZZZZZZ** Batch ID: **37999** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/12/2011** SeqNo: **1316465**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	10.747	2.5	10.00	0	107	75	125	10.64	1.01	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: ***18-Oct-11***

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-12-181
Lab Order:	N006600	**Collection Date:**	10/6/2011 3:42:00 PM
Project:	PG&E Topock,405681.MP.02.GM.0	**Matrix:**	WATER
Lab ID:	N006600-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7470A							
RunID: **AA1_111010A**	QC Batch: **38002**			PrepDate: **10/10/2011**			Analyst: **CEI**
Mercury	ND	0.028	0.20		µg/L	1	10/10/2011

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories, Inc.

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Advanced Technology Laboratories, Inc.

Date: ***18-Oct-11***

CLIENT: CH2M HILL
Work Order: N006600
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 7470_W_DISSPGE

Sample ID: **LCS-38002** SampType: **LCS** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **10/10/2011** RunNo: **81776**
Client ID: **LCSW** Batch ID: **38002** TestNo: **EPA 7470A** Analysis Date: **10/10/2011** SeqNo: **1315807**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.742	0.20	10.00	0	97.4	85	115				

Sample ID: **MB-38002** SampType: **MBLK** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **10/10/2011** RunNo: **81776**
Client ID: **PBW** Batch ID: **38002** TestNo: **EPA 7470A** Analysis Date: **10/10/2011** SeqNo: **1315809**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID: **N006600-001A-MS** SampType: **MS** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **10/10/2011** RunNo: **81776**
Client ID: **ZZZZZZ** Batch ID: **38002** TestNo: **EPA 7470A** Analysis Date: **10/10/2011** SeqNo: **1315816**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	19.028	0.20	20.00	0	95.1	75	125				

Sample ID: **N006600-001A-MSD** SampType: **MSD** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **10/10/2011** RunNo: **81776**
Client ID: **ZZZZZZ** Batch ID: **38002** TestNo: **EPA 7470A** Analysis Date: **10/10/2011** SeqNo: **1315817**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	19.581	0.20	20.00	0	97.9	75	125	19.03	2.87	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CH2MHILL

CHAIN OF CUSTODY RECORD

10/6/2011 3:58:41 PM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 10/6/2011
COC Number: 10

				Metals (6000/7000) Field Filtered Title22(SbBaBeCdCoCuPbHgMo	Specific Conductance (E120.1)	Anions (E300.0) Nitrate		Number of Containers	COMMENTS
Container:				500 ml Poly	1 Liter Poly	1 Liter Poly			
Preservatives:				HNO3, 4°C	4°C	4°C			
Filtered:				Field	NA	NA			
Holding Time:				180	2	2			
DATE	TIME	Matrix							
MW-12-181	10/6/2011	15:42	Water	X	X	X	N006600-1	2	
							TOTAL NUMBER OF CONTAINERS	2	

	Signatures	Date/Time
Approved by		10-6-11
Sampled by		1600
Relinquished by		
Received by	PMGalan	10/6/11 1606
Relinquished by	PMGalan	10/6/11 1709
Received by		

Shipping Details

Method of Shipment: courier
On Ice: ~~yes~~ no 1.6 °C
Airbill No: 1D#2
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN:
Sample Custody
and
Marlon

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

CH2MHILL

CHAIN OF CUSTODY RECORD

10/6/2011 3:58:41 PM

Project Name PG&E Topock
Location Topock
Project Manager Jay Piper
Sample Manager Shawn Duffy
Project Number 405681.MP.02.GM.0
Task Order
Project 2011-GMP-181-Q3
Turnaround Time 10 Days
Shipping Date: 10/6/2011
COC Number: 10

				Metals (6000/7000) Field Filtered Title22(SbBaBeCdCoCuPbHgMo	Specific Conductance (E120.1)	Anions (E300.0) Nitrate		Number of Containers	COMMENTS
Container:				500 ml Poly	1 Liter Poly	1 Liter Poly			
Preservatives:				HNO3, 4°C	4°C	4°C			
Filtered:				Field	NA	NA			
Holding Time:				180	2	2			
DATE	TIME	Matrix							
MW-12-181	10/6/2011	15:42	Water	X	X	X		2	
							TOTAL NUMBER OF CONTAINERS	2	

	Signatures	Date/Time
Approved by		10-6-11
Sampled by		1600
Relinquished by		
Received by	PMGalen	10/6/11 1600
Relinquished by	PMGalen	10/6/11 1709
Received by		10/6/11 1709

Shipping Details

Method of Shipment: courier
On Ice: ~~yes~~ / no 1.6 C
Airbill No: ~~IB#~~ 2
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN:
Sample Custody
and
Marlon

Special Instructions:
Sept 26-Oct-5, 2011

Report Copy to
Shawn Duffy
(530) 229-3303

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Advanced Technology Laboratories, Inc.

Please review the checklist below. Any NO and/or NA signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Sample Receipt Checklist

Cooler Received/Opened On: 10/6/2011 Workorder: N006600

Rep sample Temp (Deg C): 1.6 IR Gun ID: 2

Temp Blank: ☐ Yes ☑ No

Carrier name: ATL

Last 4 digits of Tracking No.: Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed B NS 10/7/11

Reviewed By: 10/12/11

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: WATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N006600-001B**, concentration in mg/L are calculated as follows:

Nitrate, mg/L	=	1.953 * 5
	=	9.765 mg/L

Reporting **N006600-001B**, results in two significant figures,

Nitrate, mg/L	**=**	**9.8 mg/L**

MC 10/13/11

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: METALS BY ICP
MATRIX: WATER

FORMULA:

Calculate the individual metal concentration, in ug/L, in the original sample as follows:

$$M, \text{ug/L} = \frac{A*C*DF*1000}{B}$$

where:
M= concentration of the metal in mg/L
A= mg/L, ICP calculated concentration
B= volume of sample, Liter
C= final volume of digestate, Liter
DF= dilution factor

For N006600-001A, concentration in ug/L are calculated as follows:

$$Ba, \text{ug/L} = \frac{0.06557 \text{ mg/L} * 0.025 \text{ L} * 1 * 1000}{0.025 \text{ L}}$$

Ba = 65.57 ug/L

Reporting result in two significant figures,

Ba = 66 ug/L

10/14/2011

Advanced Technology Laboratories, Inc.

Date: *14-Oct-11*

CLIENT: CH2M HILL
Work Order: N006600
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N006598-001A-PS 2** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **81781**
Client ID: **ZZZZZZ** Batch ID: **38004** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **10/12/2011** SeqNo: **1316309**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1071.429	20	1000	0	107	75	125				
Barium	976.257	6.0	1000	14.31	96.2	75	125				
Beryllium	1028.873	2.0	1000	0	103	75	125				
Cadmium	1003.843	6.0	1000	0	100	75	125				
Cobalt	965.669	6.0	1000	0	96.6	75	125				
Copper	1079.187	10	1000	10.37	107	75	125				
Lead	1052.637	20	1000	0	105	75	125				
Molybdenum	1019.690	10	1000	16.04	100	75	125				
Nickel	967.615	10	1000	1.360	96.6	75	125				
Silver	1035.546	6.0	1000	1.689	103	75	125				
Vanadium	983.689	6.0	1000	0.2107	98.3	75	125				
Zinc	1162.308	20	1000	113.6	105	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

Arsenic, ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = dilution factor
PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N006600-001A**, the concentration in mg/L is calculated as follows:

Arsenic, ug/L = 46.673 * 1 * (25/25)

= 46.763 ug/L

Reporting results in two significant figures,

Arsenic, ug/L = 47

Advanced Technology Laboratories, Inc.

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N006600
Test Method: EPA 6020
Analysis Date: 10/12/11

Matrix: Water
Batch No.: 37999

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Jojo Tenorio

Dilution Test is not applicable to As & Se. The calc. Values were < 25X the RL. PS @ 2X & PS @ 5X passes the criteria

Sample ID	Analyte	&Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N006598-001A-DT 5X	Chromium	µg/L	1.028629814	PASS	0.957411955	-7.44%	10
N006598-001A-DT 5X	Arsenic	µg/L	0.361923258	NA	0.313976331	-15.27%	10
N006598-001A-DT 5X	Selenium	µg/L	3.247585832	PASS	3.192354164	-1.73%	10
N006598-001A-DT 25X	Thallium	µg/L	0	NA	0		10

Advanced Technology Laboratories, Inc.

Date: *13-Oct-11*

CLIENT: CH2M HILL
Work Order: N006600
Project: PG&E Topock,405681.MP.02.GM.0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N006598-001A-PS 2** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **81807**
Client ID: **ZZZZZZ** Batch ID: **37999** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/12/2011** SeqNo: **1316457**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	22.000	0.20	20.00	0.3140	108	75	125				
Chromium	20.689	1.0	20.00	0.9574	98.7	75	125				
Selenium	22.008	1.0	20.00	3.192	94.1	75	125				

Sample ID: **N006598-001A-PS 5** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **81807**
Client ID: **ZZZZZZ** Batch ID: **37999** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **10/12/2011** SeqNo: **1316458**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	55.383	2.5	50.00	0	111	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Sample Calculation

METHOD: EPA 7470
TEST NAME: Mercury in Water by Cold-Vapor Technique
MATRIX: Aqueous

FORMULA:

Calculate the Mercury concentration, in ug/L, in the original sample as follows:

Mercury, ug/L = A * DF * PF * 0.5

where:

A = ug/L, calculated concentration
DF = dilution factor
PF = Final Vol. of Digestate in mL / Wt. of Sample used in mL
0.5, is the coversion factor.

For Sample **N006600-001A**, the concentration in ug/L is calculated as follows:

Mercury, ug/L	=	0 * 1 * (50/25) * 0.5
	=	0.0 ug/L

Reporting results in two significant figures,

Mercury, ug/L	**=**	**0.0**
Mercury, ug/L	**=**	**ND**

Appendix B
Other Groundwater Monitoring Results

Table B-1
Arsenic Results in Monitoring Wells, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Well ID	Aquifer Zone	Sample Date		Dissolved Arsenic (µg/L)
MW-10	SA	07-Dec-10		7.2
		07-Dec-10	FD	6.9
MW-12	SA	30-Sep-10		53.4
		30-Sep-10	FD	55.4
		16-Dec-10		53.0
		10-Feb-11		48.0
		06-May-11		49.0
		06-Oct-11		47.0
MW-13	SA	07-Dec-10		1.9
MW-16	SA	10-Dec-10		9.7
		02-May-11		10.0
MW-17	SA	14-Dec-10		1.2
		03-May-11		1.3
MW-20-130 [1]	DA	10-Feb-11		4.9
		06-May-11		5.1
MW-22	SA	07-Dec-10		12.0
		03-May-11		12.0
MW-23-060	BR	14-Dec-10		3.0
		04-May-11		2.5
		29-Sep-11		2.1
MW-23-080	BR	14-Dec-10		2.6
		04-May-11		3.3
		04-May-11	FD	3.4
		29-Sep-11		3.5
MW-25	SA	07-Dec-10		1.5
MW-26	SA	15-Dec-10		1.7
		05-May-11		1.4
MW-27-20	SA	07-Dec-10		2.9
MW-27-60	MA	07-Dec-10		7.1
MW-27-85	DA	01-Oct-10		1.8
		07-Dec-10		1.4
		08-Feb-11		1.3
		08-Feb-11	FD	1.3
		28-Apr-11		1.4
		28-Apr-11	FD	1.4
		03-Oct-11		1.4
		03-Oct-11	FD	1.4

Table B-1
Arsenic Results in Monitoring Wells, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Well ID	Aquifer Zone	Sample Date		Dissolved Arsenic (µg/L)
MW-28-25	SA	08-Dec-10		1.7
		02-May-11		2.0
MW-28-90	DA	28-Sep-10		2.3
		08-Dec-10		1.8
		08-Feb-11		1.7
		02-May-11		2.0
		26-Sep-11		2.0
MW-29	SA	14-Dec-10		21.0
		29-Apr-11		9.0
MW-30-30	SA	07-Dec-10		1.6
MW-30-50	MA	07-Dec-10		9.7
MW-31-60	SA	15-Dec-10		1.1
MW-31-135	DA	15-Dec-10		3.7
MW-32-20	SA	08-Dec-10		2.6
MW-32-35	SA	09-Dec-10		22.0
		02-May-11		26.0
MW-33-40	SA	28-Sep-10		19.4
		10-Dec-10		11.0
		09-Feb-11		12.0
		02-May-11		19.0
		27-Sep-11		11.0
MW-33-90	MA	10-Dec-10		1.3
MW-34-55	MA	07-Dec-10		2.5
MW-34-80	DA	01-Oct-10		1.5
		07-Dec-10		1.3
		07-Feb-11		1.3
		07-Feb-11	FD	1.2
		28-Apr-11		1.4
		03-Oct-11		1.5
MW-34-100	DA	01-Oct-10		1.7
		01-Oct-10	FD	1.7
		09-Nov-10		1.6
		08-Dec-10		1.3
		08-Dec-10	FD	1.3
		11-Jan-11		1.2
		07-Feb-11		1.5
		28-Apr-11		1.4

Table B-1
Arsenic Results in Monitoring Wells, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Well ID	Aquifer Zone	Sample Date		Dissolved Arsenic (µg/L)
MW-34-100	DA	28-Apr-11	FD	1.3
		03-Oct-11		1.3
		03-Oct-11	FD	1.4
MW-35-135	DA	14-Dec-10		0.9
MW-36-20	SA	07-Dec-10		1.9
MW-36-40	SA	07-Dec-10		4.7
MW-36-50	MA	08-Dec-10		3.6
MW-36-70	MA	07-Dec-10		7.1
MW-36-90	DA	08-Dec-10		17.0
		08-Dec-10	FD	18.0
		02-May-11		19.0
MW-36-100	DA	15-Dec-10		5.1
		03-May-11		6.3
MW-37S	MA	10-Dec-10		1.7
MW-39-50	MA	08-Dec-10		8.6
MW-39-60	MA	09-Dec-10		6.0
MW-39-100	DA	14-Dec-10		2.2
MW-40D	DA	15-Dec-10		4.2
		05-May-11		4.3
MW-41D	DA	08-Dec-10		2.4
MW-41M	DA	08-Dec-10		2.0
MW-41S	SA	08-Dec-10		2.0
		08-Dec-10	FD	1.9
MW-42-30	SA	06-Dec-10		2.2
MW-42-55	MA	27-Sep-10		12.5
		06-Dec-10		12.0
		07-Feb-11		12.0
		29-Apr-11		13.0
		26-Sep-11		13.0
MW-42-65	MA	27-Sep-10		3.0
		06-Dec-10		1.8
		07-Feb-11		1.9
		29-Apr-11		2.2
		26-Sep-11		2.3
MW-43-25	SA	09-Dec-10		19.0
		29-Apr-11		20.0

Table B-1
Arsenic Results in Monitoring Wells, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Well ID	Aquifer Zone	Sample Date		Dissolved Arsenic (µg/L)
MW-43-75	DA	09-Dec-10		11.0
MW-43-90	DA	09-Dec-10		3.7
		29-Apr-11		3.3
MW-44-70	MA	09-Dec-10		3.1
		03-May-11		3.3
MW-44-115	DA	09-Dec-10		5.1
		09-Dec-10	FD	5.0
		03-May-11		5.6
		27-Sep-11		6.1
MW-44-125	DA	09-Dec-10		4.0
		09-Dec-10	FD	3.8
		03-May-11		3.7
		03-May-11	FD	3.4
		27-Sep-11		4.2
		27-Sep-11	FD	3.8
MW-45-095a	DA	14-Dec-10		3.6
MW-47-55	SA	13-Dec-10		1.1
		13-Dec-10	FD	1.2
MW-49-135	DA	13-Dec-10		1.6
MW-51	MA	16-Dec-10		3.9
		06-May-11		3.9
MW-52D	DA	09-Dec-10		3.3
		03-May-11		3.3
MW-52M	DA	09-Dec-10		1.3
		03-May-11		1.2
MW-52S	MA	09-Dec-10		0.35
		03-May-11		0.5
MW-53D	DA	09-Dec-10		2.9
		03-May-11		3.2 J
		03-Oct-11		3.0
		03-Oct-11	FD	2.9
MW-53M	DA	10-Dec-10		1.0
		03-May-11		0.96
MW-54-85	DA	05-May-11		ND (5.0)
MW-54-140	DA	05-May-11		ND (5.0)
MW-54-195	DA	05-May-11		ND (5.0) J
		05-May-11	FD	ND (5.0) J

Table B-1
Arsenic Results in Monitoring Wells, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Well ID	Aquifer Zone	Sample Date		Dissolved Arsenic (µg/L)
MW-57-070	BR	15-Dec-10		1.4
		15-Dec-10	FD	1.5
MW-57-185	BR	09-Dec-10		11.0
		03-May-11		12.0
		28-Sep-11		13.0
MW-58BR-LWR	BR	16-Sep-10		3.2
		07-Oct-10		3.2
MW-58BR-LWR-160	BR	10-Feb-11		1.6
		04-Apr-11		1.6
MW-58BR-UPR	BR	14-Sep-10		5.9
		06-Oct-10		5.6
MW-58BR-UPR-160	BR	01-Feb-11		1.9
		18-Mar-11		1.8
MW-59-100	SA	16-Dec-10		2.1
		06-May-11		2.0
		04-Oct-11		2.0
MW-60-125	BR	16-Dec-10		1.4
		16-Dec-10	FD	1.5
		05-May-11		1.8
		04-Oct-11		1.7
MW-61-110	BR	15-Dec-10		3.2
		05-May-11		3.4
		30-Sep-11		3.3
MW-62-065	BR	15-Dec-10		0.99
		29-Sep-11		1.3
MW-62-110	BR	29-Sep-10		19.5
		16-Dec-10		14.0
		09-Feb-11		14.0
		05-May-11		14.0
		29-Sep-11		11.0
MW-62-190	BR	29-Sep-10		9.5
		16-Dec-10		8.1
		09-Feb-11		8.0
		05-May-11		6.5
		29-Sep-11		6.6
MW-63-065	BR	06-Dec-10		1.6
		03-May-11		1.6

Table B-1
Arsenic Results in Monitoring Wells, July 2010 through October 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report,
PG&E Topock Compressor Station, Needles, California

Well ID	Aquifer Zone	Sample Date	Dissolved Arsenic (µg/L)
MW-63-065	BR	28-Sep-11	1.5
MW-64-150	BR	25-Aug-10	10.4
		29-Sep-10	8.2
MW-64-205	BR	25-Aug-10	6.3
		29-Sep-10	6.6
MW-64-260	BR	25-Aug-10	3.4
		29-Sep-10	2.6
MW-64BR [2]	BR	20-Dec-10	5.3
MW-64BR-LWR-150	BR	24-Feb-11	4.5
		20-Apr-11	3.9
MW-64BR-UPR-150	BR	26-Jan-11	2.8
		12-Apr-11	3.1
OW-3D	DA	08-Dec-10	2.6

NOTES:

µg/L = micrograms per liter.
FD = field duplicate.

[1] Data collected February 2011 due to field logistical issues.
[2] One-time sample collected from an open borehole.

As a results of a series of storm events in January 2010 the MW-58 cluster (MW-58-115 and MW-58-205) was inundated with flood water. This floodwater destroyed the Flexible Liner Underground Technologies™ well liner that allowed discrete sampling at the 115 feet below ground surface (bgs) and 205 feet bgs depth intervals and was consequently removed from the borehole. The MW-58 bedrock well cluster is now an open borehole. In September 2010 a packer system was installed in the borehole at about 115 ft bgs that divided the open borehole into upper (UPR) and lower (LWR) intervals. In January 2011 the packer was moved to a new location at about 160 ft bgs. Monitoring continues at this well as part of the East Ravine Investigation as of June 2011. Results will be reported under separate cover in late 2011 (CH2M HILL, 2010).

In accordance with DTSC direction, the Flexible Liner Underground Technologies (FLUTe) multi-level monitoring system, which allowed discrete sampling at the 150, 205 and 260 ft bgs depth intervals, was removed from the MW-64BR borehole in December 2010. Following removal of the FLUTe system, the open borehole was developed and a sample of the open borehole was collected on December 20, 2010. At the direction of DTSC, a packer system was installed in January 2011 at about 150 ft bgs. Monitoring continues at this well as part of the East Ravine Investigation as of June 2011. Results will be reported under separate cover in late 2011 (CH2M HILL, 2010).

The California primary drinking water standards Maximum Contaminant Level (MCL) for Arsenic is 10 ug/L. The background level for Arsenic at the site is 24.3 ug/L.

Wells are assigned to separate Aquifer zones for results reporting:
SA: shallow interval of Alluvial Aquifer.
MA: mid-depth interval of Alluvial Aquifer.
DA: deep interval of Alluvial Aquifer.
PA: perched aquifer (unsaturated zone).
BR: well completed in bedrock (Miocene Conglomerate or pre-Tertiary crystalline rock).
BR-S: well completed in shallowest portion of BR.
BR-M: well completed in middle portion of BR.
BR-D: well completed in deeper portion of BR.

Table B-2
Analytical Results for New Compressor Station and East Ravine Wells, June 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report,
PG&E Topock Compressor Station, Needles, California

Analyte	Method	Units	MW-65-160 6/13/2011	MW-65-225 6/13/2011	MW-66-165 6/13/2011	MW-66-230 6/14/2011	MW-67-225 6/14/2011	MW-67-260 6/14/2011	MW-68-180 6/14/2011	MW-68-180 FD	MW-68-240 6/14/2011	MW-70-105 6/13/2011
Anions												
Bromide	300	mg/L	0.91	ND (1.0)	1.4	ND (1.0)	1.3	ND (1.0)	ND (0.5)	ND (0.5)	ND (1.0)	ND (0.5)
Chloride	300	mg/L	990	5,200	980	5,900	1,800	5,400	480	500	4,100	480
Fluoride	300	mg/L	2.6	10.0	ND (5.0)	ND (25)	5.5	10.0	2.2	2.2	5.5	4.7
Nitrate (as nitrogen)	300	mg/L	2.5	ND (1.0)	26.0	5.4	13.0	ND (1.0)	5.2 J	6.7 J	1.5	ND (0.5)
Nitrite as Nitrogen	300	mg/L	ND (10)	ND (50)	ND (10)	ND (25)	ND (10)	ND (25)	ND (2.5)	ND (2.5)	ND (25)	ND (2.5)
Orthophosphate	300	mg/L	ND (0.1)	ND (0.2)	ND (0.1) J	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.1)	ND (0.1)	ND (0.2)	ND (0.1)
Sulfate	300	mg/L	360	910	510	910	910	760	400	420	730	130
Dioxins and Furans												
1,2,3,4,6,7,8-HpCDD	SW8290	pg/L	ND (6.3)	---	ND (4.8)	---	ND (2.8)	---	ND (4.4)	ND (5.1)	---	ND (4.1)
1,2,3,4,6,7,8-HpCDF	SW8290	pg/L	ND (3.5)	---	ND (3.4)	---	ND (4.6)	---	ND (2.6)	ND (3.3)	---	ND (2.9)
1,2,3,4,7,8,9-HpCDF	SW8290	pg/L	ND (4.5)	---	ND (4.4)	---	ND (2.2)	---	ND (3.4)	ND (4.3)	---	ND (3.8)
1,2,3,4,7,8-HxCDD	SW8290	pg/L	ND (4.9)	---	ND (3.6)	---	ND (3.3)	---	ND (3.4)	ND (16)	---	ND (4.9)
1,2,3,4,7,8-HxCDF	SW8290	pg/L	ND (2.6)	---	ND (2.2)	---	ND (2.3)	---	ND (2.0)	ND (6.3)	---	ND (2.5)
1,2,3,6,7,8-HxCDD	SW8290	pg/L	ND (5.1)	---	ND (3.8)	---	ND (2.1)	---	ND (3.5)	ND (5.8)	---	ND (5.2)
1,2,3,6,7,8-HxCDF	SW8290	pg/L	ND (2.3)	---	ND (2.0)	---	3.1 J	---	ND (1.9)	ND (4.8)	---	ND (2.3)
1,2,3,7,8,9-HxCDD	SW8290	pg/L	ND (4.7)	---	ND (3.5)	---	ND (5.1)	---	ND (3.3)	ND (5.3)	---	ND (4.8)
1,2,3,7,8,9-HxCDF	SW8290	pg/L	ND (3.1)	---	ND (2.6)	---	ND (3.0)	---	ND (2.4)	ND (3.7)	---	ND (3.0)
1,2,3,7,8-PeCDD	SW8290	pg/L	ND (3.6)	---	ND (4.5)	---	ND (2.2)	---	ND (3.2)	ND (5.7)	---	ND (4.0)
1,2,3,7,8-PeCDF	SW8290	pg/L	ND (2.4)	---	ND (2.4)	---	ND (1.4)	---	ND (2.7)	ND (5.4)	---	ND (2.5)
2,3,4,6,7,8-HxCDF	SW8290	pg/L	ND (2.7)	---	ND (2.3)	---	ND (1.5)	---	ND (2.1)	ND (3.0)	---	ND (2.6)
2,3,4,7,8-PeCDF	SW8290	pg/L	ND (2.4)	---	ND (2.4)	---	ND (2.0)	---	ND (2.7)	ND (2.8)	---	ND (2.5)
2,3,7,8-TCDD	SW8290	pg/L	ND (4.0)	---	ND (4.1)	---	ND (2.1)	---	ND (4.4)	ND (4.3)	---	ND (4.2)
2,3,7,8-TCDF	SW8290	pg/L	ND (3.4)	---	ND (4.7)	---	ND (2.8)	---	ND (4.4)	ND (5.5)	---	ND (4.4)
OCDD	SW8290	pg/L	ND (9.6) J	---	ND (11)	---	ND (12)	---	ND (6.5)	ND (13)	---	ND (19)
OCDF	SW8290	pg/L	ND (9.6)	---	ND (8.2)	---	ND (9.9)	---	ND (4.7)	ND (13)	---	ND (5.2)
TEQ Avian	SW8290	pg/L	ND (7.8)	---	ND (8.8)	---	5.7	---	ND (8.2)	ND (11)	---	ND (8.6)
TEQ Human	SW8290	pg/L	ND (5.7)	---	ND (6.0)	---	3.8	---	ND (5.4)	ND (8.1)	---	ND (6.1)
TEQ Mammals	SW8290	pg/L	ND (5.7)	---	ND (6.0)	---	3.8	---	ND (5.4)	ND (8.1)	---	ND (6.1)
Field Parameters												
Oxidation reduction potential	FIELD	mV	-130	-36	28	-52	-90	-170	-34	---	60	-230
pH	FIELD		7.8	7.5	7.3	7.9	7.7	8.2	8.0	---	7.5	8.2
Specific conductance	FIELD	µS/cm	4,150	15,300	4,620	19,100	7,800	17,500	2,760	---	14,300	2,170
General Chemistry												
Alkalinity, bicarb as CaCO3	2320B	mg/L	71.0	56.0	94.0	35.0	120	32.0	120	110	68.0	86.0
Alkalinity, carb as CaCO3	2320B	mg/L	ND (5.0) J	ND (5.0) J	ND (5.0) J	ND (5.0) J	ND (5.0) J	ND (5.0) J	ND (5.0) J	ND (5.0) J	ND (5.0) J	ND (5.0) J
Alkalinity, hydroxide	2320B	mg/L	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Alkalinity, total as CaCO3	2320B	mg/L	71.0	56.0	94.0	35.0	120	32.0	120	110	68.0	86.0

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Analyte	Method	Units	MW-65-160 6/13/2011	MW-65-225 6/13/2011	MW-66-165 6/13/2011	MW-66-230 6/14/2011	MW-67-225 6/14/2011	MW-67-260 6/14/2011	MW-68-180 6/14/2011	MW-68-180 FD	MW-68-240 6/14/2011	MW-70-105 6/13/2011
General Chemistry												
Ammonia as nitrogen	SM4500NH3C	mg/L	0.54	0.34	0.16	ND (0.1)	0.38	0.17	0.17	0.24	0.15	ND (0.1)
Total dissolved solids	SM2540C	mg/L	2,500	9,600	2,900	10,000	4,100	8,900	1,600	1,700	7,700	1,100
Total Suspended Solids (TSS)	SM2540D	mg/L	ND (10)	35.0	52.0	22.0	13.0	20.0	170	140	98.0	19.0
Herbicides												
2,4,5-T	SW8151	µg/L	ND (0.06) J	---	ND (0.06)	---	ND (0.06)	---	ND (0.06)	ND (0.06)	---	ND (0.06)
2,4,5-TP (Silvex)	SW8151	µg/L	ND (0.05) J	---	ND (0.05)	---	ND (0.05)	---	ND (0.05)	ND (0.05)	---	ND (0.05)
2,4-D	SW8151	µg/L	ND (0.04) J	---	ND (0.04)	---	ND (0.04)	---	ND (0.04)	ND (0.04)	---	ND (0.04)
2,4-DB	SW8151	µg/L	ND (0.2) J	---	ND (0.2)	---	ND (0.2)	---	ND (0.2)	ND (0.2)	---	ND (0.2)
Dalapon	SW8151	µg/L	ND (0.02) J	---	ND (0.02)	---	ND (0.02)	---	ND (0.02)	ND (0.02)	---	ND (0.02)
Dicamba	SW8151	µg/L	ND (0.03) J	---	ND (0.03)	---	ND (0.03)	---	ND (0.03)	ND (0.03)	---	ND (0.03)
Dichlorprop	SW8151	µg/L	ND (0.04) J	---	ND (0.04)	---	ND (0.04)	---	ND (0.04)	ND (0.04)	---	ND (0.04)
Dinoseb	SW8151	µg/L	ND (0.05) J	---	ND (0.05)	---	ND (0.05)	---	ND (0.05)	ND (0.05)	---	ND (0.05)
MCPA	SW8151	µg/L	ND (10) J	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
MCPP	SW8151	µg/L	ND (8.0) J	---	ND (8.0)	---	ND (8.0)	---	ND (8.0)	ND (8.0)	---	ND (8.0)
Metals												
Antimony, dissolved	6010B	µg/L	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
Arsenic, dissolved	6020A	µg/L	1.2	1.8	1.4	4.6	2.7	11.0	2.8	3.1	1.7	4.9
Barium, dissolved	6010B	µg/L	140	77.0	64.0	67.0	88.0	130	58.0	65.0	86.0	51.0
Beryllium, dissolved	6010B	µg/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Cadmium, dissolved	6010B	µg/L	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)
Calcium, dissolved	6010B	µg/L	210,000	430,000	230,000 J	360,000	150,000	250,000	100,000	100,000	330,000	29,000
Chromium, Hexavalent	2186	µg/L	13.0	120	560	5,100	1,900	1,800	2,600	2,700	420	0.38
Chromium, total dissolved	6010B/6020A	µg/L	17.0	120	570	4,700	1,900	1,600	2,300	2,400	400	1.2
Cobalt, dissolved	6010B	µg/L	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)
Copper, dissolved	6010B	µg/L	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Iron, dissolved	6010B	µg/L	46.0	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	310 J	1,800 J	260	36.0
Lead, dissolved	6010B	µg/L	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
Magnesium, dissolved	6010B	µg/L	37,000	24,000	46,000	7,200	10,000	5,100	14,000	14,000	14,000	5,200
Manganese, dissolved	6010B	µg/L	590	1,100	130	45.0	240	600	130	150	360	190
Mercury, dissolved	7470A	µg/L	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)
Molybdenum, dissolved	6010B	µg/L	42.0	37.0	8.7	43.0	37.0	72.0	54.0	53.0	21.0	170
Nickel, dissolved	6010B	µg/L	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Potassium, dissolved	6010B	µg/L	23,000	59,000	21,000 J	69,000	32,000	62,000	17,000	17,000	55,000	14,000
Selenium, dissolved	6020A	µg/L	2.5	1.9	40.0	4.8	68.0	ND (2.5)	5.5	5.1	4.0	0.97
Silver, dissolved	6010B	µg/L	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)
Sodium, dissolved	6010B	µg/L	510,000	2,800,000	570,000 J	3,700,000	1,400,000	3,500,000	460,000	450,000	2,400,000	370,000
Thallium, dissolved	6020A	µg/L	ND (0.5)	5.3	ND (0.5)	ND (2.5)	ND (2.5)	ND (2.5)	ND (0.5)	ND (0.5)	ND (2.5)	ND (0.5)

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Analyte	Method	Units	MW-65-160 6/13/2011	MW-65-225 6/13/2011	MW-66-165 6/13/2011	MW-66-230 6/14/2011	MW-67-225 6/14/2011	MW-67-260 6/14/2011	MW-68-180 6/14/2011	MW-68-180 FD	MW-68-240 6/14/2011	MW-70-105 6/13/2011
Metals												
Vanadium, dissolved	6010B	µg/L	ND (3.0)	ND (3.0)	5.3	ND (3.0)	ND (3.0)	ND (3.0)	3.6	5.5	ND (3.0)	ND (3.0)
Zinc, dissolved	6010B	µg/L	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	11.0	13.0	ND (10)
Pesticides												
4,4-DDD	8081A	µg/L	ND (0.051)	---	ND (0.052)	---	ND (0.051)	---	ND (0.051)	ND (0.051)	---	ND (0.051)
4,4-DDE	8081A	µg/L	ND (0.051)	---	ND (0.052)	---	ND (0.051)	---	ND (0.051)	ND (0.051)	---	ND (0.051)
4,4-DDT	8081A	µg/L	ND (0.051)	---	ND (0.052)	---	ND (0.051)	---	ND (0.051)	ND (0.051)	---	ND (0.051)
Aldrin	8081A	µg/L	ND (0.026)	---	ND (0.026)	---	ND (0.025)	---	ND (0.026)	ND (0.025)	---	ND (0.026)
alpha-BHC	8081A	µg/L	ND (0.026)	---	ND (0.026)	---	ND (0.025)	---	ND (0.026)	ND (0.025)	---	ND (0.026)
alpha-Chlordane	8081A	µg/L	ND (0.026)	---	ND (0.026)	---	ND (0.025)	---	ND (0.026)	ND (0.025)	---	ND (0.026)
beta-BHC	8081A	µg/L	0.31	---	ND (0.026)	---	ND (0.025)	---	ND (0.026)	ND (0.025)	---	ND (0.026)
delta-BHC	8081A	µg/L	0.093	---	ND (0.026)	---	ND (0.025)	---	ND (0.026)	ND (0.025)	---	ND (0.026)
Dieldrin	8081A	µg/L	ND (0.051)	---	ND (0.052)	---	ND (0.051)	---	ND (0.051)	ND (0.051)	---	ND (0.051)
Endo sulfan I	8081A	µg/L	ND (0.026)	---	ND (0.026)	---	ND (0.025)	---	ND (0.026)	ND (0.025)	---	ND (0.026)
Endo sulfan II	8081A	µg/L	ND (0.051)	---	ND (0.052)	---	ND (0.051)	---	ND (0.051)	ND (0.051)	---	ND (0.051)
Endosulfan sulfate	8081A	µg/L	ND (0.051)	---	ND (0.052)	---	ND (0.051)	---	ND (0.051)	ND (0.051)	---	ND (0.051)
Endrin	8081A	µg/L	ND (0.051)	---	ND (0.052)	---	ND (0.051)	---	ND (0.051)	ND (0.051)	---	ND (0.051)
Endrin aldehyde	8081A	µg/L	ND (0.051)	---	ND (0.052)	---	ND (0.051)	---	ND (0.051)	ND (0.051)	---	ND (0.051)
gamma-BHC	8081A	µg/L	ND (0.026)	---	ND (0.026)	---	ND (0.025)	---	ND (0.026)	ND (0.025)	---	ND (0.026)
gamma-Chlordane	8081A	µg/L	ND (0.026)	---	ND (0.026)	---	ND (0.025)	---	ND (0.026)	ND (0.025)	---	ND (0.026)
Heptachlor	8081A	µg/L	ND (0.026)	---	ND (0.026)	---	ND (0.025)	---	ND (0.026)	ND (0.025)	---	ND (0.026)
Heptachlor Epoxide	8081A	µg/L	ND (0.026)	---	ND (0.026)	---	ND (0.025)	---	ND (0.026)	ND (0.025)	---	ND (0.026)
Methoxy chlor	8081A	µg/L	ND (0.26)	---	ND (0.26)	---	ND (0.25)	---	ND (0.26)	ND (0.25)	---	ND (0.26)
Toxaphene	8081A	µg/L	ND (2.6)	---	ND (2.6)	---	ND (2.5)	---	ND (2.6)	ND (2.5)	---	ND (2.6)
Polyaromatic Hydrocarbons												
1-Methyl naphthalene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
2-Methyl naphthalene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Acenaphthene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Acenaphthylene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Anthracene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
B(a)P Equivalent	8270SIM	µg/L	ND (0.18)	---	ND (0.18)	---	ND (0.18)	---	ND (0.18)	ND (0.18)	---	ND (0.18)
Benzo (a) anthracene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Benzo (a) pyrene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Benzo (b) fluoranthene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Benzo (ghi) perylene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Benzo (k) fluoranthene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Chrysene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Dibenzo (a,h) anthracene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)

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Polyaromatic Hydrocarbons												
Fluoranthene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Fluorene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Indeno (1,2,3-cd) pyrene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Naphthalene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
PAH High molecular weight	8270SIM	µg/L	ND (0.0)	---	ND (0.0)	---	ND (0.0)	---	ND (0.0)	ND (0.0)	---	ND (0.0)
PAH Low molecular weight	8270SIM	µg/L	ND (0.0)	---	ND (0.0)	---	ND (0.0)	---	ND (0.0)	ND (0.0)	---	ND (0.0)
Phenanthrene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Pyrene	8270SIM	µg/L	ND (0.21)	---	ND (0.2)	---	ND (0.21)	---	ND (0.21)	ND (0.2)	---	ND (0.2)
Polychlorinated Biphenyls												
Aroclor 1016	8082	µg/L	ND (0.51)	---	ND (0.52)	---	ND (0.51)	---	ND (0.51)	ND (0.51)	---	ND (0.51)
Aroclor 1221	8082	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Aroclor 1232	8082	µg/L	ND (0.51)	---	ND (0.52)	---	ND (0.51)	---	ND (0.51)	ND (0.51)	---	ND (0.51)
Aroclor 1242	8082	µg/L	ND (0.51)	---	ND (0.52)	---	ND (0.51)	---	ND (0.51)	ND (0.51)	---	ND (0.51)
Aroclor 1248	8082	µg/L	ND (0.51)	---	ND (0.52)	---	ND (0.51)	---	ND (0.51)	ND (0.51)	---	ND (0.51)
Aroclor 1254	8082	µg/L	ND (0.51)	---	ND (0.52)	---	ND (0.51)	---	ND (0.51)	ND (0.51)	---	ND (0.51)
Aroclor 1260	8082	µg/L	ND (0.51)	---	ND (0.52)	---	ND (0.51)	---	ND (0.51)	ND (0.51)	---	ND (0.51)
Aroclor 1262	8082	µg/L	ND (0.51)	---	ND (0.52)	---	ND (0.51)	---	ND (0.51)	ND (0.51)	---	ND (0.51)
Aroclor 1268	8082	µg/L	ND (0.51)	---	ND (0.52)	---	ND (0.51)	---	ND (0.51)	ND (0.51)	---	ND (0.51)
Semivolatile Organic Compounds												
1,2,4-Trichlorobenzene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
1,2-Dichlorobenzene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
1,3-Dichlorobenzene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
1,4-Dichlorobenzene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
2,4,5-Trichlorophenol	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
2,4,6-Trichlorophenol	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
2,4-Dichlorophenol	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
2,4-Dimethylphenol	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
2,4-Dinitrophenol	8270C	µg/L	ND (51)	---	ND (51)	---	ND (52)	---	ND (51)	ND (51)	---	ND (51)
2,4-Dinitrotoluene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
2,6-Dinitrotoluene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
2-Chloro naphthalene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
2-Chlorophenol	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
2-Methyl naphthalene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
2-Methylphenol	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
2-Nitroaniline	8270C	µg/L	ND (51)	---	ND (51)	---	ND (52)	---	ND (51)	ND (51)	---	ND (51)
2-Nitrophenol	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
3,3-Dichlorobenzidene	8270C	µg/L	ND (20)	---	ND (20)	---	ND (21)	---	ND (20)	ND (20)	---	ND (20)

Table B-2
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Analyte	Method	Units	MW-65-160 6/13/2011	MW-65-225 6/13/2011	MW-66-165 6/13/2011	MW-66-230 6/14/2011	MW-67-225 6/14/2011	MW-67-260 6/14/2011	MW-68-180 6/14/2011	MW-68-180 FD	MW-68-240 6/14/2011	MW-70-105 6/13/2011
Semivolatile Organic Compounds												
3-Nitroaniline	8270C	µg/L	ND (51)	---	ND (51)	---	ND (52)	---	ND (51)	ND (51)	---	ND (51)
4,6-Dinitro-2-methylphenol	8270C	µg/L	ND (51)	---	ND (51)	---	ND (52)	---	ND (51)	ND (51)	---	ND (51)
4-Bromophenyl phenyl ether	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
4-Chloro-3-methylphenol	8270C	µg/L	ND (51)	---	ND (51)	---	ND (52)	---	ND (51)	ND (51)	---	ND (51)
4-Chloroaniline	8270C	µg/L	ND (20)	---	ND (20)	---	ND (21)	---	ND (20)	ND (20)	---	ND (20)
4-Chlorophenyl phenyl ether	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
4-Methylphenol	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
4-Nitroaniline	8270C	µg/L	ND (20)	---	ND (20)	---	ND (21)	---	ND (20)	ND (20)	---	ND (20)
4-Nitrophenol	8270C	µg/L	ND (51)	---	ND (51)	---	ND (52)	---	ND (51)	ND (51)	---	ND (51)
Acenaphthene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Acenaphthylene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Anthracene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Benzo (a) anthracene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Benzo (a) pyrene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Benzo (b) fluoranthene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Benzo (ghi) perylene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Benzo (k) fluoranthene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Benzoic acid	8270C	µg/L	ND (51)	---	ND (51)	---	ND (52)	---	ND (51)	ND (51)	---	ND (51)
Benzyl alcohol	8270C	µg/L	ND (20)	---	ND (20)	---	ND (21)	---	ND (20)	ND (20)	---	ND (20)
Bis (2-chloroethoxy) methane	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Bis (2-chloroethyl) ether	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Bis (2-chloroisopropyl) ether	8270C	µg/L	ND (10) J	---	ND (10) J	---	ND (10) J	---	ND (10) J	ND (10) J	---	ND (10) J
Bis (2-ethylhexyl) phthalate	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Butyl benzyl phthalate	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Chrysene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Dibenzo (a,h) anthracene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Dibenzofuran	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Diethyl phthalate	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Dimethyl phthalate	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Di-N-butyl phthalate	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Di-N-octyl phthalate	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Fluoranthene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Fluorene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Hexachlorobenzene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Hexachlorobutadiene	8270C	µg/L	ND (20)	---	ND (20)	---	ND (21)	---	ND (20)	ND (20)	---	ND (20)
Hexachloroethane	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Indeno (1,2,3-cd) pyrene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)

Table B-2
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Analyte	Method	Units	MW-65-160 6/13/2011	MW-65-225 6/13/2011	MW-66-165 6/13/2011	MW-66-230 6/14/2011	MW-67-225 6/14/2011	MW-67-260 6/14/2011	MW-68-180 6/14/2011	MW-68-180 FD	MW-68-240 6/14/2011	MW-70-105 6/13/2011
Semivolatile Organic Compounds												
Isophorone	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Naphthalene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Nitrobenzene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
N-Nitroso-di-n-propylamine	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
N-nitrosodiphenylamine	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Pentachloro phenol	8270C	µg/L	ND (51)	---	ND (51)	---	ND (52)	---	ND (51)	ND (51)	---	ND (51)
Phenanthrene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Phenol	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Pyrene	8270C	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Total Petroleum Hydrocarbons												
TPH as diesel	8015M	µg/L	ND (51)	---	ND (51) J	---	ND (51)	---	ND (51)	ND (51)	---	75.0
TPH as gasoline	8015M	µg/L	ND (100)	---	ND (100)	---	ND (100)	---	ND (100)	ND (100)	---	ND (100)
TPH as motor oil	8015M	µg/L	ND (51)	---	ND (51)	---	ND (51)	---	ND (51)	ND (51)	---	ND (51)
Volatile Organic Compounds												
1,1,1,2-Tetrachloroethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,1,1-Trichloroethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,1,2,2-Tetrachloroethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,1,2-Trichloroethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,1,2-Trichlorotrifluoroethane (Freon 113)	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,1-Dichloroethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,1-Dichloroethene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,1-Dichloropropene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,2,3-Trichlorobenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,2,3-Trichloropropane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,2,4-Trichlorobenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,2,4-Trimethylbenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,2-Dibromo-3-chloropropane	8260	µg/L	ND (2.0)	---	ND (2.0)	---	ND (2.0)	---	ND (2.0)	ND (2.0)	---	ND (2.0)
1,2-Dibromoethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,2-Dichlorobenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,2-Dichloroethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,2-Dichloropropane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,3,5-Trimethylbenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,3-Dichlorobenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,3-Dichloropropane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
1,4-Dichlorobenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
2,2-Dichloropropane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
2-Chlorotoluene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)

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Analyte	Method	Units	MW-65-160 6/13/2011	MW-65-225 6/13/2011	MW-66-165 6/13/2011	MW-66-230 6/14/2011	MW-67-225 6/14/2011	MW-67-260 6/14/2011	MW-68-180 6/14/2011	MW-68-180 FD	MW-68-240 6/14/2011	MW-70-105 6/13/2011
Volatile Organic Compounds												
4-Isopropyltoluene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Acetone	8260	µg/L	ND (10)	---	ND (10) J	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Acrolein	8260	µg/L	ND (20)	---	ND (20) J	---	ND (20)	---	ND (20)	ND (20)	---	ND (20)
Acrylonitrile	8260	µg/L	ND (20)	---	ND (20)	---	ND (20)	---	ND (20)	ND (20)	---	ND (20)
Benzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Bromobenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Bromochloromethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Bromodichloromethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Bromoform	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Bromomethane	8260	µg/L	ND (1.0) J	---	ND (1.0) J	---	ND (1.0) J	---	ND (1.0) J	ND (1.0) J	---	ND (1.0) J
Carbon disulfide	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Carbon tetrachloride	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Chlorobenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Chloroethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Chloroform	8260	µg/L	ND (1.0)	---	1.8	---	1.3	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Chloromethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
cis-1,2-Dichloroethene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
cis-1,3-Dichloropropene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Dibromochloromethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Dibromomethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Dichlorodifluoromethane	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Ethylbenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Hexachlorobutadiene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Isopropylbenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
m,p-Xylenes	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Methyl ethyl ketone	8260	µg/L	ND (10)	---	ND (10) J	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Methyl isobutyl ketone	8260	µg/L	ND (10)	---	ND (10)	---	ND (10)	---	ND (10)	ND (10)	---	ND (10)
Methyl tert-butyl ether (MTBE)	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Methylene chloride	8260	µg/L	ND (5.0)	---	ND (5.0)	---	ND (5.0)	---	ND (5.0)	ND (5.0)	---	ND (5.0)
Naphthalene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
N-Butylbenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
N-Propylbenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
o-Xylene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
p-Chlorotoluene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
sec-Butylbenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Styrene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
tert-Butylbenzene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)

Table B-2
Analytical Results for New Compressor Station and East Ravine Wells, June 2011
Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report,
PG&E Topock Compressor Station, Needles, California

Analyte	Method	Units	MW-65-160 6/13/2011	MW-65-225 6/13/2011	MW-66-165 6/13/2011	MW-66-230 6/14/2011	MW-67-225 6/14/2011	MW-67-260 6/14/2011	MW-68-180 6/14/2011	MW-68-180 FD	MW-68-240 6/14/2011	MW-70-105 6/13/2011
Volatile Organic Compounds												
Tetrachloroethene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Toluene	8260	µg/L	ND (2.5)	---	ND (2.5)	---	ND (2.5)	---	ND (2.5)	ND (2.5)	---	ND (2.5)
trans-1,2-Dichloroethene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
trans-1,3-Dichloropropene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Trichloroethene	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Trichlorofluoromethane (Freon 11)	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Vinyl chloride	8260	µg/L	ND (1.0)	---	ND (1.0)	---	ND (1.0)	---	ND (1.0)	ND (1.0)	---	ND (1.0)
Xylenes, total	8260	µg/L	ND (2.0)	---	ND (2.0)	---	ND (2.0)	---	ND (2.0)	ND (2.0)	---	ND (2.0)

NOTES:

ND not detected at listed reporting limit.
ug/L micrograms per liter.
mg/L milligrams per liter.
J concentration or RL estimated by laboratory or data validation.

Appendix C
Groundwater Monitoring Data for GMP and Interim Measures Monitoring Wells

Table C-1

Chemical Performance Monitoring Analytical Results, March 2005 through October 2011

Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Location	Sample Date	Total Dissolved Solids	Oxygen-18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Alkalinity (total)	Dissolved Metals				
										Calcium	Magnesium	Potassium	Sodium	Boron
Monitoring Wells														
MW-20-70	10-Mar-05	1940	-7.1	-59.0	740	378	9.98	ND (1.0)	81.7	198	55.4	9.89	431	0.412
	15-Jun-05	1980	-7.0	-60.0	749	388	9.79	ND (1.0)	73.8	189	55.4	10.5	433	0.414
	15-Jun-05 FD	2050	-8.3	-57.0	760	392	9.81	ND (1.0)	71.3	204	60.7	11.4	468	0.445
	11-Oct-05	1950	-7.2	-57.0	737	359	9.48	0.641	69.9	198	49.9	14.6	323	0.402
	15-Dec-05	1830	-7.1	-49.0	645	326	9.90	ND (1.0)	77.8	138	42.3	14.5	267	0.441
	10-Mar-06	1940	-7.2	-54.0	679	358	10.5	ND (0.5)	82.2	161	48.6	9.22	424	0.427
	05-May-06	1750	-8.2	-55.9	696	376	9.86	0.574	74.5	162	49.2	9.55	461	0.476
	03-Oct-06	1890	-8.1	-60.4	677	357	13.0	ND (5.0)	85.0	158	47.6	9.82	472	0.535
	03-Oct-06 FD	1840	-8.1	-60.5	669	352	12.9	ND (5.0)	80.0	154	45.9	9.51	466	0.515
	13-Dec-06	1910	-7.6	-61.2	678	352	12.7	0.699	77.5	149	44.3	9.09	458	0.459
	14-Mar-07	1740	-8.5	-64.3	689	358	13.7	0.641	80.0	139	42.2	8.83	451	0.503
	03-May-07	1750	-8.4	-66.7	697	344	25.1	ND (1.0)	77.5	139	41.2	8.65	390	0.477
	11-Oct-07	1820	-8.2	-63.9	699	367	15.6	ND (1.0)	80.0	130	39.1	11.0	600	0.54
	12-Mar-08	1790	-7.6	-65.2	695	360	22.1	ND (1.0)	77.0	139	41.2	10.7	403	0.51
	07-Oct-08	1900	-8.5	-64.4	650	360	15.0	0.61	83.0	136	37.9	10.5	400	0.608
	12-Mar-09	1900	-7.74	-60.8	670	330	17.0	ND (1.0)	79.0	128	40.2	9.95	496	0.549
	25-Sep-09	1700	-8.7	-66.4	700	310	16.0	ND (2.5)	74.0	130	33.0	9.70	390	0.42
	16-Dec-10	1700	-7.5	-62.3	680	320	16.0	0.51	79.0	130	33.0	12.0	400	0.51
MW-20-100 [a]	10-Mar-05	2490	-5.2	-49.0	466	511	9.98	ND (1.0)	84.2	133	19.8	8.98	712	0.859
	15-Jun-05	2500	-4.7	-46.0	921	506	9.02	ND (1.0)	84.0	137	21.3	9.06	592	0.713
	11-Oct-05	2400	-5.3	-48.0	887	484	8.87	0.731	82.3	170	23.7	15.2	500	0.718
	15-Dec-05	2340	-5.4	-40.0	813	404	9.65	ND (1.0)	82.7	136	21.4	14.8	406	0.709
	10-Mar-06	2500	-5.6	-50.3	861	475	9.94	ND (0.5)	92.5	171	27.0	7.75	597	0.803
	05-May-06	2260	-5.1	-46.4	927	522	9.99	ND (1.0)	82.5	193	32.0	10.8	577	0.716

Table C-1

Chemical Performance Monitoring Analytical Results, March 2005 through October 2011

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Location	Sample Date	Total Dissolved Solids	Oxygen-18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Alkalinity (total)	Dissolved Metals				
										Calcium	Magnesium	Potassium	Sodium	Boron
Monitoring Wells														
MW-20-100 [a]	03-Oct-06	2320	-5.8	-51.5	863	456	13.4	ND (5.0)	90.0	202	34.4	10.9 J	568	0.874
	13-Dec-06	1960	-6.2	-54.4	861	459	12.3	0.83	97.5	205	32.2	11.4	579	0.889
	13-Dec-06 FD	2200	-6.2	-54.5	874	457	12.2	0.851	92.5	205	32.2	9.55	575	0.881
	14-Mar-07	2180	-6.8	-57.8	847	477	14.2	0.785	87.5	194	31.7	9.90	521	0.715
	03-May-07	2300	-7.3	-59.2	879	493	23.2	ND (1.0)	87.5	209	36.0	12.0 J	559	0.699
	03-May-07 FD	2330	-6.7	-59.3	888	484	19.7	ND (1.0)	87.5	208	34.6	9.63 J	532	0.686
	10-Oct-07	2160	-7.2	-57.2	858	468	3.25	ND (1.0)	92.0	190	32.0	15.0	560	0.81
	12-Mar-08	2470	-6.9	-58.3	827	442	19.2	ND (1.0)	870	218	35.4	11.9	469	0.702
	08-Oct-08	2200	-7.9	-60.2	760	420	16.0	ND (1.0)	90.0	215	36.8	10.3	453	0.669
	13-Mar-09	2200	-7.08	-58.2	770	420	16.0	ND (1.0)	97.0	213	36.4	11.6	543	0.89
	25-Sep-09	2000	-7.67	-62.8	750	400	16.0	ND (2.5)	89.0	200	30.0	12.0	430	0.70
	10-Feb-11	1800	-7.0	-58.8	610	380	15.0	0.57	120	180	28.0	14.0	400	0.81
MW-20-130 [a]	09-Mar-05	5520	-5.8	-56.0	3120	1080	10.9	ND (1.0)	68.9	219	12.1	24.7	2250	1.90
	09-Mar-05 FD	6200	-5.4	-51.0	3080	1080	10.9	ND (1.0)	68.9	231	12.8	25.4	2390	1.99
	15-Jun-05	7790	-5.0	-48.0	3410	1230	11.1	ND (1.0)	68.7	352	23.2	31.3	2980	2.75
	07-Oct-05	7330	-5.0	-47.0	3010	1210	10.9	1.04 J	72.4	349	13.9	38.4	2070	2.41
	16-Dec-05	7860	-5.8	-43.0	3260	1000	10.7	ND (2.5)	63.2	324	16.3	44.4	1780	1.98
	10-Mar-06	8610	-5.5	-48.8	3370	1250	10.6	ND (0.5)	74.5	312	18.9	27.7	2730	2.03
	05-May-06	7700	-5.3	-47.2	3900	1280	8.95	ND (1.0)	69.2	349	20.3	27.7	2810	2.40
	18-Oct-06	8450	-6.3	-51.4	3680	1100	11.5	ND (5.0)	70.0	358	20.9	28.0	2870	2.28
	13-Dec-06	7890	-6.0	-54.9	3970	1250	10.6	0.896	72.5	335	19.7	27.6	2900	2.31
	13-Dec-06 FD	8250	-5.9	-54.4	3950	1260	10.5	1.09	72.5	328	19.1	27.3	2830	2.24
	08-Mar-07	8450	-6.5	-57.7	3930	1240	11.3	1.08	70.0	353	21.3	27.0	2760	2.24
	08-Mar-07 FD	8510	-6.6	-57.4	3900	1210	11.3	1.06	72.5	351	21.3	26.8	2750	2.19

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Location	Sample Date	Total Dissolved Solids	Oxygen-18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Alkalinity (total)	Dissolved Metals				
										Calcium	Magnesium	Potassium	Sodium	Boron
Monitoring Wells														
MW-20-130 [a]	03-May-07	8150	-7.7	-60.0	4020	1310	9.80 J	ND (1.0)	75.0	338	22.5	27.8	2550	2.49
	03-May-07 FD	8100	-6.9	-60.1	3950	1290	20.4 J	ND (1.0)	72.5	338	21.9	27.3	2550	2.47
	05-Oct-07	7980	-7.0	-57.5	3670	1070	11.6	ND (1.0)	77.0	310	19.0	31.0	2900	2.40
	12-Mar-08	8460	-6.2	-58.7	3690	1220	14.3	ND (1.0)	75.0	342	23.4	47.0	2260	2.07
	08-Oct-08	7800	-7.3	-59.6	3500	1200	12.0	ND (2.5)	81.0	329	22.0	40.1	1990	2.23
	13-Mar-09	8100	-6.58	-56.4	3600	1100	11.0	ND (2.5)	79.0	350	22.7	41.4	2550	2.16
	25-Sep-09	6500	-7.59	-61.7	3500	1100	13.0	ND (2.5)	76.0	280	17.0	33.0	2400	2.00
	10-Feb-11	5900	-6.6	-59.0	3100	1100	13.0	1.00	80.0	310	18.0	50.0	2100	2.20
MW-25	09-Mar-05	877	-8.4	-62.0	247	169	3.64	ND (0.5)	158	77.6	16.1	6.24	211	0.441
	14-Jun-05	942	-8.6	-61.0	289	183	3.89	ND (0.5)	137	93.5	20.0	8.91	253	0.464
	14-Jun-05 FD	980	-7.2	-59.0	294	185	3.94	ND (0.5)	137	100	20.9	9.06	268	0.475
	04-Oct-05	950	-8.2	-68.0	252	171	3.77	ND (0.5)	141	83.3	14.9	9.93	164	0.362
	04-Oct-05 FD	910	-8.3	-60.0	251	171	3.75	ND (0.5)	146	94.6	15.3	10.2	185	0.371
	14-Dec-05	838	-8.4	-55.0	224	158	3.74	ND (0.5)	153	75.5	14.5	9.80	143	0.396
	14-Dec-05 FD	896	-8.4	-50.0	219	155	3.75	ND (0.5)	156	73.0	14.1	9.71	151	0.382
	09-Mar-06	910	-8.4	-64.1	245	164	3.83	ND (0.5)	170	76.4	15.6	6.97	210	0.39
	03-May-06	907	-9.0	-59.4	272	172	3.95	ND (0.5)	150	78.0	17.3	7.38	222	0.418
	03-May-06 FD	924	-9.0	-61.0	274	173	3.94	ND (0.5)	155	79.7	17.8	7.53	245	0.431
	03-Oct-06	892	-8.9	-62.7	222	158	4.09	ND (0.5)	163	73.3	15.0	7.25	206	0.466
	06-Mar-07	843	-9.0	-66.9	221	164	3.95	ND (0.5)	160	72.9	14.4	6.85	203	0.459
	02-Oct-07	796	-9.0	-65.8	189	155	4.58	ND (1.0)	180	66.0	14.0	7.90	200	0.49
	02-Oct-07 FD	758	-9.0	-65.7	195	157	4.40	ND (1.0)	190	63.0	13.0	7.70	220	0.46
	07-Oct-08	740	-9.9	-68.5	170	150	4.30	ND (0.5)	200	59.2	12.9	9.89	143	0.559
	07-Oct-08 FD	730	-10.1	-69.1	170	150	4.40	ND (0.5)	210	58.4	12.9	10.2	144	0.559

Table C-1

Chemical Performance Monitoring Analytical Results, March 2005 through October 2011

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Location	Sample Date	Total Dissolved Solids	Oxygen-18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Alkalinity (total)	Dissolved Metals				
										Calcium	Magnesium	Potassium	Sodium	Boron
Monitoring Wells														
MW-25	21-Sep-09	660	-8.91	-69.9	180	130	4.30	ND (0.5)	200	64.0	12.0	7.20	180	0.46
	21-Sep-09 FD	650	-8.87	-69.5	180	130	4.30	ND (0.5)	200	64.0	12.0	7.90	190	0.47
	07-Dec-10	780	-9.4	-68.9	220	120	4.80	ND (1.0)	180	74.0	15.0	10.0	180	0.43
MW-26	08-Mar-05	1840	-8.8	-70.0	756	370	4.48	ND (0.5)	98.7	166	41.6	10.7	439	0.557
	08-Mar-05 FD	1800	-8.7	-70.0	708	338	4.45	ND (0.5)	96.1	166	40.9	11.4	438	0.559
	13-Jun-05	2130	-8.2	-65.0	847	371	4.90	ND (0.5)	103	178	44.6	14.0	511	0.663
	04-Oct-05	2120	-7.8	-68.0	779	372	4.88	0.601	109	166	40.4	19.8	352	0.526
	12-Dec-05	2610	-8.5	-55.0	788	372	4.88	0.546	99.7	162	39.9	20.3	349	0.613
	08-Mar-06	2070	-8.6	-60.4	772	324	4.90	ND (0.5)	121	155	38.1	11.7	434 J	0.621
	01-May-06	2130	-8.9	-62.7	927	382	4.87	ND (0.5)	121	165	42.0	12.8	555	0.723
	03-Oct-06	2220	-8.8	-63.0	894	370	6.22	ND (2.5)	105	170	43.9	12.8	510	0.692
	12-Mar-07	2280	-9.0	-67.0	917	387	6.02	0.646	90.0	163	41.6	12.9	621	0.622
	02-Oct-07	2180	-8.6	-66.3	945	391	7.84	ND (1.0)	100	170	42.0	15.0	620	0.66
	12-Mar-08	2500	-8.1	-67.2	908	398	10.7 J	ND (1.0)	103	176	44.1 J	16.2 J	498	0.589
	12-Mar-08 FD	2420	-8.9	-68.2	905	398	7.61 J	ND (1.0)	102	160	32.8 J	12.7 J	462	0.601
	08-Oct-08	2400	-8.7	-66.5	930	440	10.0	ND (1.0)	110	183	45.8	14.6	555	0.591
	10-Mar-09	2300	-8.41	-65.3	870	440 J	9.80	1.40	100	172	47.9	14.8	585	0.604
	10-Mar-09 FD	2300	-8.68	-65.8	860	440 J	9.70	1.50	100	174	46.2	15.6	631	0.65
	22-Sep-09	2200	-9.04	-68.3	870	450	10.0	ND (1.0)	100	170	39.0	14.0	550	0.59
	15-Dec-10	---	---	---	900	480	12.0	---	100	180	40.0	---	560	---
MW-27-20	08-Mar-05	1250	-12	-102.0	190	432	ND (0.5)	ND (0.5)	215	137	56.6	4.89	195	ND (0.2)
	18-Jul-05	---	-11.9	-98.0	81.9	228	ND (0.5)	ND (0.5)	160	96.1	30.1	4.27	94.8	ND (0.2)
	05-Oct-05	742	-11.8	-102.0	91.1	252	ND (0.5)	ND (0.5)	175	88.6	31.4	5.48	81.0	ND (0.2)
	14-Dec-05	1020	-11.7	-91.0	118	347	ND (0.5)	ND (0.5)	216	116	41.8	6.96	116	ND (0.2)

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Location	Sample Date	Total Dissolved Solids	Oxygen-18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Alkalinity (total)	Dissolved Metals				
										Calcium	Magnesium	Potassium	Sodium	Boron
Monitoring Wells														
MW-27-20	06-Mar-06	664	-12.1	-90.9	89.7	231	ND (0.2)	ND (0.2)	385	89.1	28.8	4.90	103	ND (0.2)
	14-Jun-06	730	-12	-89.8	98.3	272	ND (0.5)	ND (0.5)	195	91.1	28.5	2.79 J	96.9	ND (0.2)
	03-Oct-06	600	-13.1	-96.6	90.8	261	ND (0.5)	ND (0.5)	160	102	34.5	6.45	113	ND (0.2)
	02-Oct-07	802	-12.5	-96.3	102	320	ND (1.0)	ND (1.0)	170	97.0	34.0	5.30	150	0.22
	03-Oct-08	---	---	---	94.0	240	ND (0.5)	---	---	87.9	29.5	---	110	---
	01-Oct-09	---	---	---	88.0	230	ND (0.5)	---	130	84.0	25.0	---	87.0	---
	07-Dec-10	---	---	---	86.0	220	ND (0.5)	---	200	87.0	29.0	---	93.0	---
MW-28-25	10-Mar-05	880	-12.2	-95.0	112	302	ND (0.5)	ND (0.5)	204	129	36.3	3.50	122	ND (0.2)
	15-Jun-05	974	-11.6	-91.0	108	359	ND (0.5)	ND (0.5)	221	133	38.9	6.54	117	ND (0.2)
	06-Oct-05	884	-11.7	-95.0	99.8	300	ND (0.5)	ND (0.5)	197	123	37.0	6.61	88.7	ND (0.2)
	16-Dec-05	1010	-11.4	-90.0	128	348	ND (0.5)	ND (0.5)	212	134	41.5	6.46	107	ND (0.2)
	09-Mar-06	746	-11.5	-93.9	84.4	225	ND (0.5)	ND (0.5)	244	98.5	27.5	4.15 J	88.5	ND (0.2)
	05-May-06	741	-11.4	-90.3	110	302	ND (0.5)	ND (0.5)	216	117	35.7	5.77	118	ND (0.2)
	11-Oct-06	1050	-12.2	-95.0	86.3	247	ND (0.5)	ND (0.5)	225	133	40.8	5.47	132	ND (0.2)
	04-Oct-07	812	-12.1	-98.7	110	307	ND (1.0)	ND (1.0)	230	120	37.0 J	4.80	150	0.26 J
	08-Oct-08	---	---	---	100	280	ND (0.5)	---	220	109	34.7	---	102	---
	24-Sep-09	---	---	---	94.0	240	ND (0.5)	---	200	100	27.0	---	100 J	---
	08-Dec-10	---	---	---	90.0	230	ND (0.5)	---	190	110	31.0	---	95.0	---
MW-30-30	10-Mar-05	38800	-9.8	-79.0	16000	4270	ND (5.0)	7.91	421	1590	1600	95.4	13600	4.97
	07-Oct-05	36400	-8.5	-75.0	17600	4000	ND (0.5)	ND (10)	521	1020	842	93.6	7650	5.20
	15-Dec-05	35700	-8.7	-59.0	19700	4070	ND (1.0)	3.13	504	1060	894	110	8540	6.14
	13-Mar-06	39700 J	-8.8	-70.5	18600	4530	ND (0.5)	ND (50)	650	1050	892	77.2	11300	4.62
	02-May-06	32400	-10.3	-70.7	15400	3300	ND (0.5)	ND (5.0)	756	882	828	59.4	10300	3.95
	10-Oct-06	29400	-9.4	-68.7	17800	4400	ND (2.5)	ND (2.5)	550	729	653	55.0	10200	4.32

Table C-1

Chemical Performance Monitoring Analytical Results, March 2005 through October 2011

Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Location	Sample Date	Total Dissolved Solids	Oxygen-18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Alkalinity (total)	Dissolved Metals				
										Calcium	Magnesium	Potassium	Sodium	Boron
Monitoring Wells														
MW-30-30	08-Oct-07	27400	-9.0	-73.9	13700	3370	ND (1.0)	3.88	800	650	540	56.0	9600	4.50
	24-Sep-09	---	---	---	5800	1700	ND (5.0)	---	550	280	220	---	3800	---
	07-Dec-10	---	---	---	7200	1900	ND (1.0)	---	790	390	290	---	4800	---
MW-30-50	10-Mar-05	6470 J	-8.3	-68.0	4660	672	ND (0.5)	1.03	324	335	107	16.5	2040	1.15
	07-Oct-05	6860	-9.4	-79.0	3060	857	ND (0.5)	0.899 J	252	438	101	37.0	1780	1.27
	16-Dec-05	5850	-10.5	-65.0	2360	578	ND (0.5)	0.645	212	265	77.9	32.9	1260	1.19
	09-Mar-06	5380	-9.8	-83.5	2420	651	ND (0.5)	ND (0.5)	275	226	66.2	14.6	1640	1.18
	02-May-06	5420	-10.4	-73.6	2380	612	ND (0.5)	3.41	261	243	70.3	16.4	1750	1.22
	11-Oct-06	4170	-10.7	-82.2	1980	468	ND (0.5)	ND (0.5)	290	171	48.5	14.0	1370	1.11
	11-Oct-06 FD	3930	-11	-82.6	1810	462	ND (0.5)	ND (0.5)	298	163	46.1	14.1	1340	1.08
	24-Sep-09	---	---	---	---	---	---	---	220	19.0	4.80	---	270	---
	07-Dec-10	---	-12.2	-97.5	140	220	ND (0.5)	---	200	15.0	4.20	---	260	---
MW-31-60	09-Mar-05	1540	-8.6	-63.0	649	210	4.94	ND (0.5)	76.6	108	17.3	5.97	424	0.401
	13-Jun-05	1660	-8.2	-65.0	745	207	4.12	ND (0.5)	70.0	121	18.9	6.57	403	0.388
	06-Oct-05	1660	-8.6	-65.0	691	206	4.01	ND (0.5)	77.3	109	16.5	9.75	308	0.462
	13-Dec-05	1620	-8.7	-54.0	669	199	4.14	ND (0.5)	73.0	87.0	15.4	9.32	275	0.359
	15-Mar-06	1560 J	-8.6	-65.6	661	191	4.37	ND (0.5)	89.3	106	17.5	7.30	403	0.393
	15-Mar-06 FD	1640 J	-8.6	-64.9	662	192	4.34	ND (0.5)	81.9	101	16.8	6.94	391	0.383
	01-May-06	1630	-9.6	-63.2	691	209	4.58	ND (0.5)	79.6	118	20.1	7.78	467	0.449
	05-Oct-06	1620	-9.4	-66.3	687	205	5.00	ND (0.5)	80.0	113	20.6	9.60 J	325	0.464
	12-Mar-07	1750	-9.3	-69.0	757	222	4.93	ND (0.5)	72.5	116	20.3	6.05	454	0.402 J
	04-Oct-07	1720	-9.4	-69.6	799	208	5.15	ND (1.0)	80.0	150	26.0	7.30	580	0.64
	06-Oct-08	2000	-10.2	-72.2	810	240	4.20	ND (1.0)	81.0	150	26.0	9.39	460	0.399
	21-Sep-09	1800	-9.23	-72.1	870	220	3.70	ND (1.0)	75.0	160	26.0	9.60	480	0.43

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Location	Sample Date	Total Dissolved Solids	Oxygen-18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Alkalinity (total)	Dissolved Metals				
										Calcium	Magnesium	Potassium	Sodium	Boron
Monitoring Wells														
MW-31-60	15-Dec-10	2000	-9.0	-69.3	840	210	3.50	ND (0.5)	78.0	170	27.0	12.0	440	0.43
MW-32-20	09-Mar-05	12500	-7.2	-65.0	6930	1660	ND (0.5)	3.51	123	838	302	36.9	4000	2.76
	17-Jun-05	10200	-9.0	-67.0	4810	690	ND (0.5)	ND (2.5)	676	566	231	23.3	2620	1.75
	04-Oct-05	28800	-7.8	-65.0	14200	2420	ND (5.0)	6.19	733	1380 J	613 J	91.1 J	5400 J	4.75 J
	16-Dec-05	24600	-7.8	-61.0	12200	2140	ND (1.0)	3.48	861	1470	552	90.4	4950	4.16
	10-Mar-06	20900	-8.3	-65.5	10600	1970	ND (0.5)	ND (0.5)	432	1350	530	56.1	6440	3.54
	04-May-06	16900	-8.1	-64.9	9430	1380	ND (0.5)	2.35	218	937	445	46.0	4780	2.87
	02-Oct-06	46200 J	-8.6	-67.1	20200	3190	ND (2.5)	7.30	660	1870	1070	87.0	11300	6.34
	11-Dec-06	37900	-8.0	-67.0	17900	3020	ND (5.0)	7.67	825	1530	785	81.7	8420	4.98
	06-Mar-07	27600	-8.7	-72.7	16200	2210	0.925	5.93	765	1460	635	64.4	7110	3.92
	30-Apr-07	17700	-9.6	-78.1	9820	1310	ND (0.2)	3.78	770	965	484	51.4	5520	3.02
	01-Oct-07	37200	-8.3	-70.1	20600	3160	ND (1.0)	6.44	700	1800	1100	93.0	9900	5.70
	10-Mar-08	26000	-9.4	-72.6	15800	2280	ND (1.0)	5.66	800	1190	710	67.4	11600	2.31
	03-Oct-08	---	---	---	21000	3500	ND (5.0)	---	640	1700	1080	---	9550	---
	10-Mar-09	29000	-8.91	-70.5	15000	2100 J	ND (5.0)	15.0	750	1620	970	96.6	7020	3.53
	22-Sep-09	---	---	---	20000	3600	ND (5.0)	---	730	1800	740	---	9300	---
	08-Dec-10	---	---	---	17000	4100	ND (5.0)	---	830	1600	720	---	11000	---
MW-32-35	09-Mar-05	3560	-8.2	-68.0	1770	465	ND (0.5)	0.845	260	312	85.5	13.0	944	1.07
	17-Jun-05	7550	-9.5	-72.0	3520	787	ND (0.5)	ND (2.5)	223	506	120	14.8	2110	1.18
	04-Oct-05	8340	-8.3	-70.0	3840	765	ND (0.5)	ND (5.0)	208	567	134	29.3	1530	1.26
	16-Dec-05	7660	-8.8	-63.0	3510	710	ND (1.0)	1.02	219	606	128	30.0	1580	1.25
	10-Mar-06	9230	-8.6	-74.0	4210	1010	ND (0.5)	ND (0.5)	234	654	129	19.2	2360	1.13
	04-May-06	9840	-9.1	-67.8	4960	1130	ND (0.5)	ND (0.5)	218	693	148	19.5	2800	1.38
	02-Oct-06	11200	-9.4	-71.4	5430	1050	ND (2.5)	ND (2.5)	290	839	165	23.9	3260	1.48

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Location	Sample Date	Total Dissolved Solids	Oxygen-18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Alkalinity (total)	Dissolved Metals				
										Calcium	Magnesium	Potassium	Sodium	Boron
Monitoring Wells														
MW-32-35	11-Dec-06	10400	-9.0	-70.4	5090	1000	ND (0.5)	1.90	338	845	173	22.5	2620	1.43
	06-Mar-07	12600	-10.2	-75.4	6070	1200	ND (0.5)	2.65	360	1080	209	23.5	2910	1.35
	30-Apr-07	12100	-9.9	-78.7	6610	1280	ND (0.2)	2.60	475	1250	273	26.2	3280	1.35
	01-Oct-07	13700	-8.9	-72.7	6830	1120	ND (1.0)	2.62	490	1000	390	29.0	4000	1.70
	03-Oct-08	15000	-9.8	-73.1	7600	1300	ND (2.5)	3.10	550	829	150	52.3	3490	1.49
	22-Sep-09	13000	-9.32	-75.2	6900	1400	ND (2.5)	2.80	530	880	400	53.0	3100	1.70
	09-Dec-10	11000	-10.2	-84.2	5500	1600	ND (2.5)	ND (2.5)	590	750	390 J	51.0 J	3000	1.70 J
MW-34-55	10-Mar-05	6230	-10.8	-82.0	2620	739	ND (0.5)	0.654	240	366	71.3	29.1	1900	1.19
	15-Jul-05	---	-10.3	-84.0	2250	607	ND (0.5)	ND (0.5)	242	247	52.0	16.5	1420	1.02
	05-Oct-05	5150	-10.6	-88.0	2170	619	ND (0.5)	ND (0.5)	232	272	59.1	25.8	1230	1.20
	14-Dec-05	5100	-10.8	-74.0	2150	552	ND (0.5)	0.588	236	217	45.0	27.2	965	0.937
	08-Mar-06	4850	-10.8	-86.8	2080	593	ND (0.5)	ND (0.5)	272	256	54.2	13.5	1640	0.956
	03-May-06	4320	-11.5	-84.3	2070	500	ND (0.5)	ND (0.5)	302	198	44.8	11.1	1360	0.846
	04-Oct-06	1680 J	-12.2	-94.8	443	230	ND (0.5)	ND (0.5)	368	37.6	8.08	4.59	536	0.54
	03-Oct-07	730	-11.3	-96.6	109	266	ND (1.0)	ND (1.0)	190	15.0	3.30	3.30	290	0.26
	07-Oct-08	700	-13	-100.0	100	250	ND (0.5)	---	170	72.4	16.9	5.26	192	0.248
	30-Sep-09	700	-12.3	-101.0	---	---	---	---	160	77.0	17.0	4.40	120	0.15
	07-Dec-10	590	-12.1	-98.8	87.0	230	ND (0.5)	ND (0.5)	140	81.0	19.0	5.10	100	0.10
MW-34-80	08-Mar-05	6940	-10.4	-83.0	4180	1040	ND (0.5)	1.01	304	439	68.1	28.0	2750	1.65
	15-Mar-05	8980	---	---	3920	ND (5.0)	ND (1.0)	---	288	445	65.7	29.7	2990	---
	30-Jun-05	7840	-8.4	-82.0	3910	979	ND (0.5)	ND (0.5)	302	497	76.5	27.7	2670	1.66
	05-Oct-05	10200	-10.1	-85.0	3880	1060	ND (0.5)	ND (0.5)	302	429	72.5	47.4	1660	1.57
	14-Dec-05	8800	-10.2	-71.0	3700	880	ND (0.5)	0.854	297	432	68.3	54.9	1710	1.54
	09-Mar-06	7830	-9.9	-86.8	3520	986	ND (0.5)	ND (0.5)	313	383	65.8	24.0	2420	1.49

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Location	Sample Date	Total Dissolved Solids	Oxygen-18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Alkalinity (total)	Dissolved Metals				
										Calcium	Magnesium	Potassium	Sodium	Boron
Monitoring Wells														
MW-34-80	03-May-06	7950	-11.7	-77.6	3700	921	ND (0.5)	ND (0.5)	297	425	70.3	23.9	2480	1.38
	04-Oct-06	7080	-11.3	-81.8	3210	786	ND (0.5)	0.737	268	341	65.4	21.1	2170	1.31
	12-Dec-06	6510	-10.5	-80.9	3190	789	ND (0.5)	0.742	288	298	62.9	18.9	2040	1.26
	05-Mar-07	6360 J	-11.5	-85.8	3300	783	ND (0.5)	0.72	205	315	68.3	19.4	2020	1.29
	30-Apr-07	6390	-11.5	-88.9	3320 J	889 J	ND (0.2)	ND (1.0)	245	282	57.0	18.6	2080	1.33
	03-Oct-07	5490	-11.3	-87.8	2630	696	ND (1.0)	ND (1.0)	240	220	53.0	21.0	2000	1.20
	13-Dec-07	5420	-10.9	-88.6	2380	698	ND (1.0)	ND (1.0)	264	193	49.1	25.4	1450	1.09
	12-Mar-08	5500	-11.4	-87.3	2510	739	ND (1.0)	ND (1.0)	238	237	52.6	19.2	2030	1.14
	06-May-08	5820	-11.4	-87.3	2460	753	ND (0.2)	0.525	216	230	49.0	30.0	1600	1.20
	07-Oct-08	5300	-11.8	-87.6	2400	720	ND (2.0)	ND (2.0)	250	223	46.3	22.0	1220	0.765
	10-Dec-08	5300	-11	-93.1	2190	698	ND (1.0)	ND (1.0)	253	147	45.2	20.6	3880	1.11
	10-Mar-09	5100	-10.9	-84.8	2300	700 J	ND (2.5)	ND (2.5)	240	219	46.3	22.2	1480	1.08
	30-Apr-09	5830	-11.5	-85.8	2340	768	ND (1.0)	ND (1.0)	237	219	50.0	24.6	1510	1.11
	30-Sep-09	4000	-10.8	-88.9	2300	710	ND (1.0)	ND (1.0)	230	240	46.0	22.0	1500	0.98
	09-Dec-09	4580	-11.9	-89.1	2200	690	ND (1.0)	ND (1.0)	230	---	---	---	---	---
	10-Mar-10	4900	-12.1	-91.6	2100	660	ND (1.0)	ND (1.0)	240	220 J	41.0	28.0	1400 J	0.93
	07-Dec-10	4600	-11.1	-87.3	2300	700	ND (1.0)	ND (1.0)	220	240	47.0	24.0	1300	1.00
MW-34-100	14-Mar-05	10800	---	---	5010	1210	ND (1.0)	---	175	221	17.4	34.1	3600	---
	21-Jun-05	11300	-9.7	-75.0	5350	1270	1.05	ND (0.5)	179	229	17.4	27.1	3510	2.22
	21-Jun-05 FD	10900 J	-9.5	-77.0	4920	1180	1.03	ND (0.5)	179	243	18.2	32.1	3740	2.36
	05-Oct-05	10400	-9.9	-83.0	4530	1150	1.20	ND (0.5)	172	171	13.8	55.2	2450	2.57
	05-Oct-05 FD	10400	-9.9	-83.0	4680	1200	1.21	ND (0.5)	172	228	14.1	50.9	2730	2.57
	14-Dec-05	---	---	---	---	---	---	---	---	226	14.9	62.9	2530	2.32
	14-Dec-05 FD	---	---	---	---	---	---	---	---	220	15.1	64.2	2530	2.40

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Location	Sample Date	Total Dissolved Solids	Oxygen-18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Alkalinity (total)	Dissolved Metals				
										Calcium	Magnesium	Potassium	Sodium	Boron
Monitoring Wells														
MW-34-100	08-Mar-06	10000	-11.4	-75.5 J	4720	1180	1.39	---	152	179	12.1	32.5	3580	2.41
	08-Mar-06 FD	10100	-10.1	-102 J	4920	1220	1.39	---	159	182	11.9	36.5	3530	2.46
	30-Apr-07	10600	-10.9	-80.7	5920	1040	1.38	---	123	186	12.0	31.5	3840	2.39
	30-Apr-07 FD	11900	-11.2	-82.1	5880	1050	1.37	---	123	189	12.0	32.1	3920	2.40
	03-Oct-07	10700	-10.2	-78.2	5350	970	1.19	ND (1.0)	120	170	11.0	44.0	4300	2.50
	03-Oct-07 FD	10500	-10.6	-78.4	5360	953	1.03	ND (1.0)	120	160	10.0	43.0	4300	2.40
	07-Oct-08	11000	-10.9	-80.8	5400	1200	ND (2.5)	ND (2.5)	140	158	10.6	54.5	2970 J	2.35
	07-Oct-08 FD	11000	-11	-81.3	5600	1200	ND (2.5)	ND (2.5)	140	184	11.5	56.7	3880 J	2.59
	30-Sep-09	---	---	---	5500	1300	ND (5.0)	---	170	200	11.0	73.0	3800	2.30
	30-Sep-09 FD	---	---	---	5600	1300	ND (5.0)	---	170	---	---	---	---	---
	17-Nov-09	11000	-10.5	-82.4	---	---	---	ND (1.0)	---	---	---	---	---	---
	08-Dec-10	10000	-9.8	-79.5	5800	1300	ND (2.5)	ND (2.5)	140 J	190	9.60	52.0 J	4100	2.60
	08-Dec-10 FD	9900	-10	-80.4	5700	1200	ND (1.0)	ND (1.0)	89.0 J	180	9.80	60.0 J	4000	2.50
MW-50-200 [a]	10-Feb-11	---	---	---	6900	1000	6.40	---	39.0	590	32.0	75.0	4100	---
	10-Feb-11 FD	---	---	---	7000	1100	6.10	---	39.0	570	31.0	73.0	4000	---
PGE-8 [a]	10-Feb-11	---	---	---	6100	2000	ND (2.5)	---	53.0	870	20.0	96.0 J	3800	---
Surface Water Stations														
R-27	07-Mar-05	669	-12.3	-102.0	92.7	244	ND (0.5)	ND (0.5)	136	82.8	31.3	4.72	108	ND (0.2)
	14-Jun-05	686	-11.4	-92.0	90.9	266	ND (0.5)	ND (0.5)	127	81.9	29.8	6.04	98.9	ND (0.2)
	05-Oct-05	678	-11.6	-94.0	85.1	255	ND (0.5)	ND (0.5)	130	101	36.2	6.56	91.2	ND (0.2)
	16-Dec-05	718	-11.7	-87.0	87.9	253	ND (0.5)	ND (0.5)	126	85.5	29.5	5.99	75.6	ND (0.2)
	06-Mar-06	656	-11.8	-92.1	90.6	268	ND (0.5)	ND (0.5)	144	83.5	29.4	5.44 J	101	ND (0.2)
	03-May-06	567	-12.8	-93.9	93.1	267	ND (0.5)	ND (0.5)	139	87.0	31.1	3.12 J	106	ND (0.2)
	04-Oct-06	752 J	-12.2	-94.9	91.5	261	ND (0.5)	ND (0.5)	128	82.9	31.5	6.24 J	98.1	ND (0.2)

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Location	Sample Date	Total Dissolved Solids	Oxygen-18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Alkalinity (total)	Dissolved Metals				
										Calcium	Magnesium	Potassium	Sodium	Boron
Surface Water Stations														
R-27	20-Dec-06	680	-12.7	-98.1	94.5	266	ND (0.5)	ND (0.5)	138	83.2	30.9	3.64	106	ND (0.2)
	13-Mar-07	750 J	-13	-99.5	96.5	267	0.537	ND (0.5)	130	86.9	31.3	4.73	106	ND (0.2)
	08-May-07	715 J	-12.9	-104.0	92.6	269	ND (0.5)	ND (0.5)	143	84.3	29.8	5.55	100	ND (0.2)
	11-Sep-07	650	-12.5	-101.0	89.4	253	0.336	ND (0.2)	132	74.2	28.9	5.47	86.5	ND (0.2)
	05-Dec-07	---	-11.7	-99.0	94.7	256	ND (1.0)	ND (0.2)	137	89.8	31.7	6.60	93.4	0.157
	02-Apr-08	---	---	---	93.0	267	ND (1.0)	ND (1.0)	136	80.2	30.7	5.50	106	0.432
	17-Jun-08	682	-13	-101.0	91.6	254	ND (1.0)	ND (1.0)	134	76.2	31.8	6.69	89.7	ND (0.2)
R-28	08-Mar-05	651	-12.5	-102.0	90.4	231	ND (13)	ND (0.5)	132	83.7	31.4	5.02	107	ND (0.2)
	14-Jun-05	680	-11.6	-95.0	91.2	268	ND (0.5)	ND (0.5)	127	78.5	28.5	5.08	94.5	ND (0.2)
	05-Oct-05	672	-11.6	-94.0	85.5	255	ND (0.5)	ND (0.5)	122	85.7	30.4	6.30	77.0	ND (0.2)
	16-Dec-05	710	-11.5	-83.0	88.1	254	ND (0.5)	ND (0.5)	126	87.2	29.8	6.11	76.8	ND (0.2)
	06-Mar-06	675	-12.3	-93.4	91.0	270	ND (0.5)	ND (0.5)	146	76.6	26.6	5.22 J	91.5	ND (0.2)
	03-May-06	586	-13	-92.1	93.4	270	ND (0.5)	ND (0.5)	136	88.1	31.4	4.04 J	107	ND (0.2)
	04-Oct-06	644 J	-12.6	-95.3	90.9	259	ND (0.5)	ND (0.5)	133	84.2	32.1	6.17 J	96.5	ND (0.2)
	20-Dec-06	615	-12.4	-99.6	93.3	262	ND (0.5)	ND (0.5)	143	85.7	32.0	4.66	108	ND (0.2)
	14-Mar-07	710	-12.8	-100.0	96.7	268	0.534	ND (0.5)	133	87.9	31.0	5.71	105	ND (0.2)
	09-May-07	690	-13	-102.0	95.8	271	ND (0.5)	ND (0.5)	143	86.1	30.5	5.92	103	ND (0.2)
	12-Sep-07	682	-12.4	-99.4	106	296	0.372	ND (0.2)	122	73.8	29.9	6.36	89.2	ND (0.2)
	06-Dec-07	---	-11.7	-98.6	96.5	258	0.345	ND (0.2)	139	75.7	30.4	6.62	79.4	ND (0.2)
	02-Apr-08	---	---	---	92.5	309	ND (1.0)	ND (1.0)	137	84.7	31.4	5.58	108	0.467
	18-Jun-08	672	-13.2	-102.0	89.4	248	ND (1.0)	ND (1.0)	132	43.3	31.1	6.95	93.9	ND (0.2)
	17-Sep-08	640	---	---	91.4	256	ND (0.5)	ND (0.5)	132	83.4	31.2	6.48	78.0	ND (0.2)
	04-Dec-08	649	-11.9	-97.0	97.4	260	ND (1.0)	ND (1.0)	135	81.7	30.0	5.95	114	0.262
	21-Jan-09	652	-12	-96.7	91.5	253	ND (0.5)	ND (0.5)	134	79.2	27.8	6.01	91.7	ND (0.2)

Table C-1

Chemical Performance Monitoring Analytical Results, March 2005 through October 2011

Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Location	Sample Date	Total Dissolved Solids	Oxygen-18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Alkalinity (total)	Dissolved Metals				
										Calcium	Magnesium	Potassium	Sodium	Boron
Surface Water Stations														
R-28	09-Apr-09	643	-12.4	-97.8	92.7	250	ND (1.0)	ND (0.5)	138	79.6	28.8	5.44	97.0	ND (0.2)
	08-Jul-09	632	-12.8	-98.6	84.5	239	ND (0.5)	ND (0.5)	131	79.6	27.3	6.17	86.9	ND (0.2)
	09-Sep-09	640	-12.5	-99.1	86.0	236	ND (1.0)	ND (1.0)	131	74.8	26.2	6.01	78.7	ND (0.2)
	14-Dec-09	612	-13	-98.3	89.7	244	ND (1.0)	ND (1.0)	131	73.5	26.7	4.98	88.2	ND (0.2)
	21-Dec-10	602	-12.1	-102.0	91.0	223	ND (0.5)	ND (0.5)	133	69.1	24.8	4.75	87.8	ND (0.2)

NOTES:

FD = field duplicate sample.
ND =parameter not detected at the listed reporting limit.
J = concentration or reporting limit estimated by laboratory or data validation.
--- = data not collected or available.

[a] Data collected February 2011 due to field logistical issues.

General chemistry 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 (total) reported as calcium carbonate. Nitrate reported as Nitrogen (N).

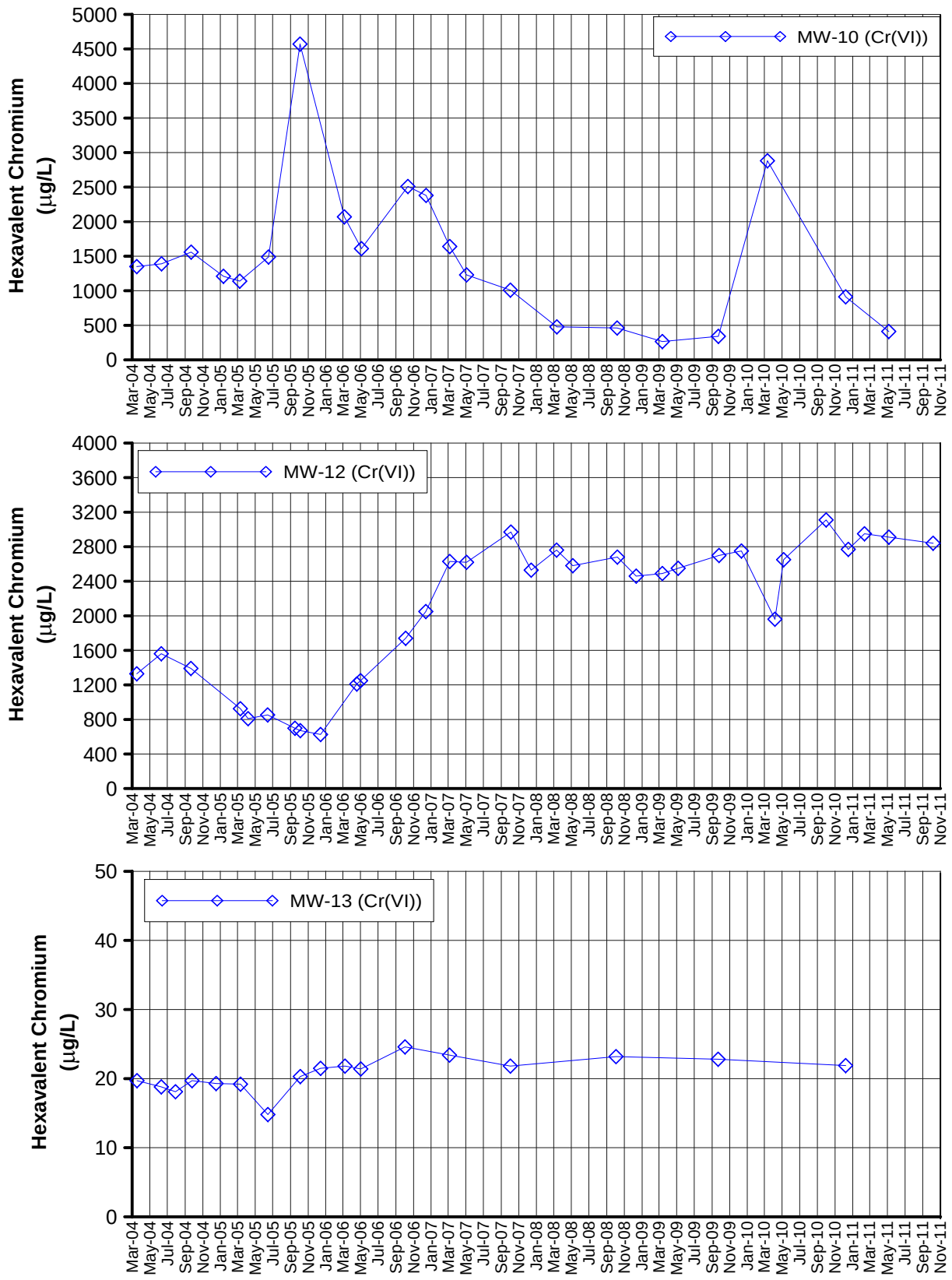

FIGURE C-1
HEXAVALENT CHROMIUM
IN MW-10, MW-12, AND MW-13
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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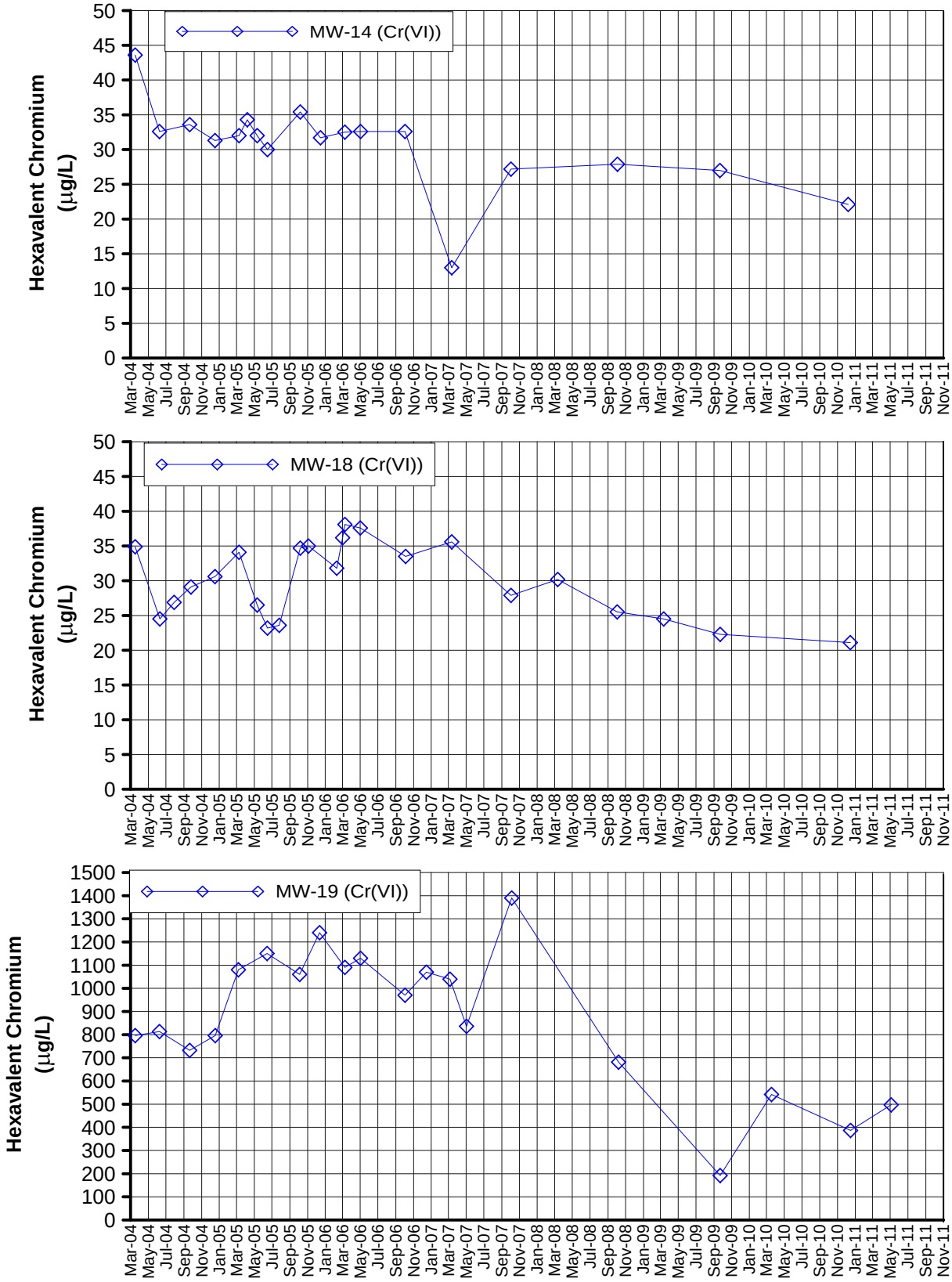

FIGURE C-2
HEXAVALENT CHROMIUM
IN MW-14, MW-18, AND MW-19
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND
SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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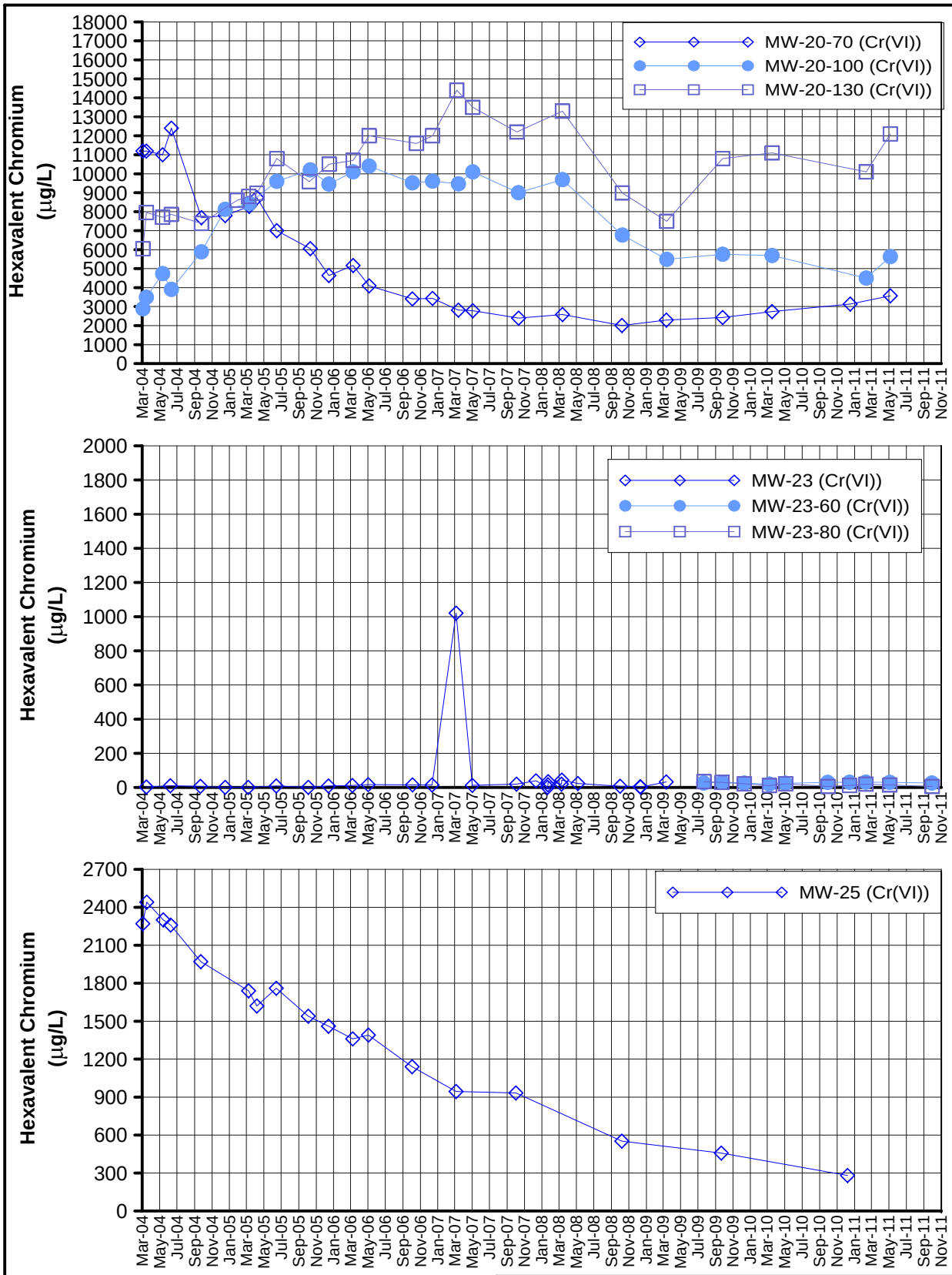

Notes:
1) Fourth Quarter 2010 data for MW-20-100 and MW-20-130 collected in February 2011 due to logistical issues.

FIGURE C-3
HEXAVALENT CHROMIUM
IN MW-20, MW-23, AND MW-25 CLUSTERS
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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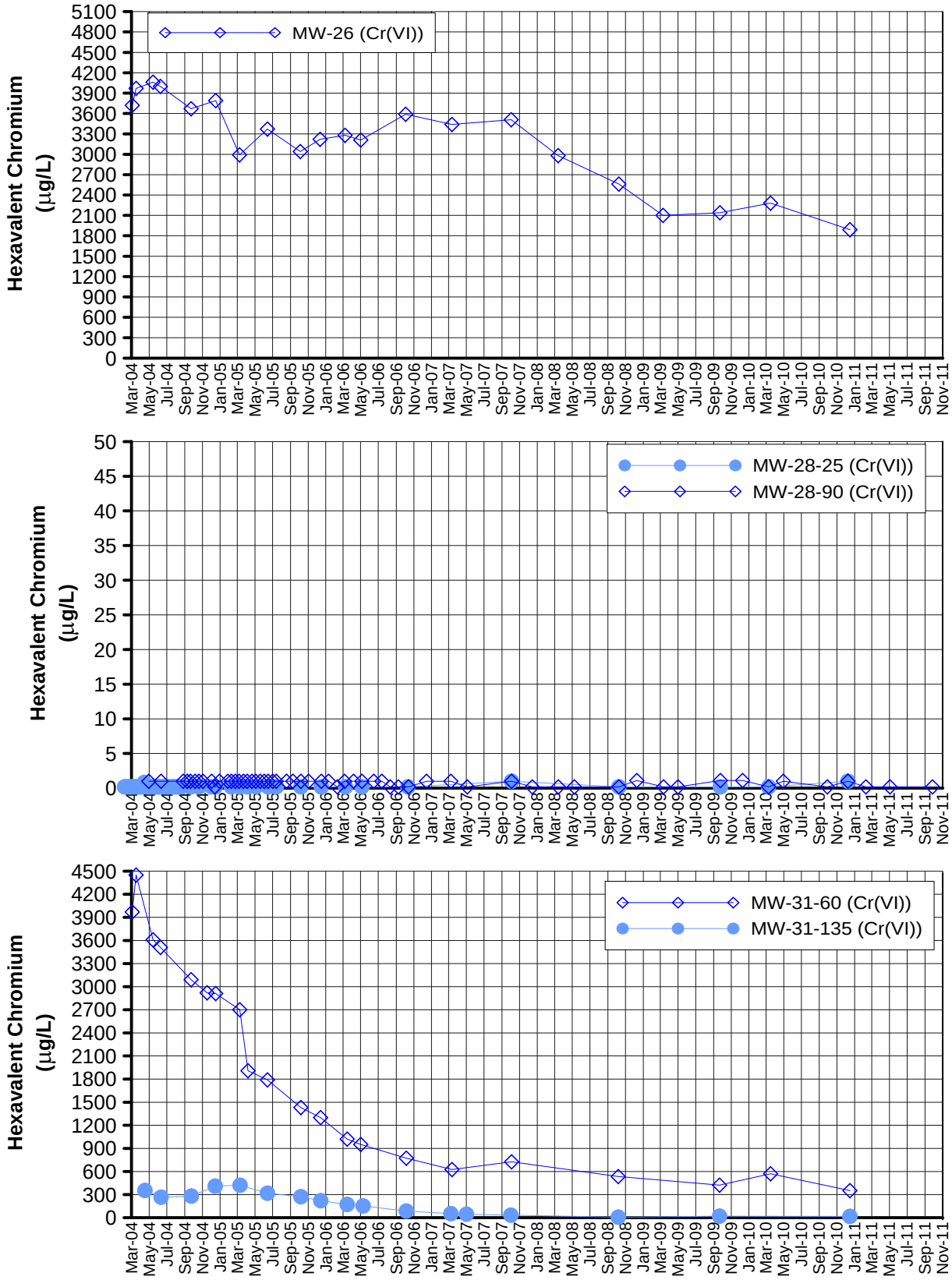

Notes:
1) The IM Contingency Plan and hexavalent chromium [Cr(VI)] trigger levels were updated July 17, 2008 (DTSC, 2008b).
2) The trigger level for MW-28-90 is 20 µg/L.

FIGURE C-4
HEXAVALENT CHROMIUM
IN MW-26, MW-28, AND MW-31 CLUSTERS
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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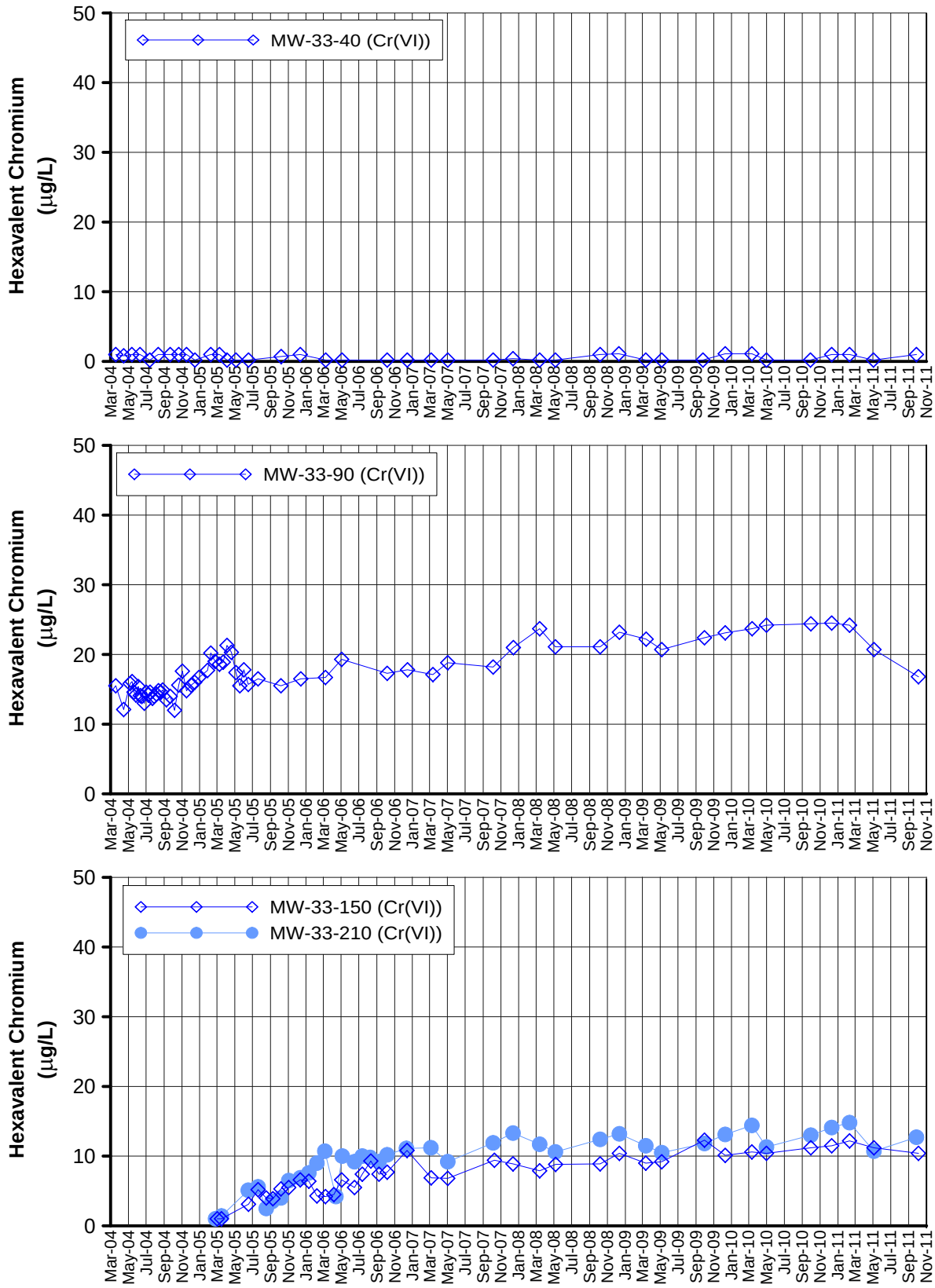

Notes:
1) The IM Contingency Plan and hexavalent chromium [Cr(VI)] trigger levels were updated July 17, 2008 (DTSC, 2008b).
2) The trigger level for MW-33-40 is 20 µg/L.
3) The trigger level for MW-33-90 is 25 µg/L.
4) The trigger level for MW-33-150 is 20 µg/L.
5) The trigger level for MW-33-210 is 20 µg/L.

FIGURE C-5
HEXAVALENT CHROMIUM
IN MW-33 CLUSTER
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
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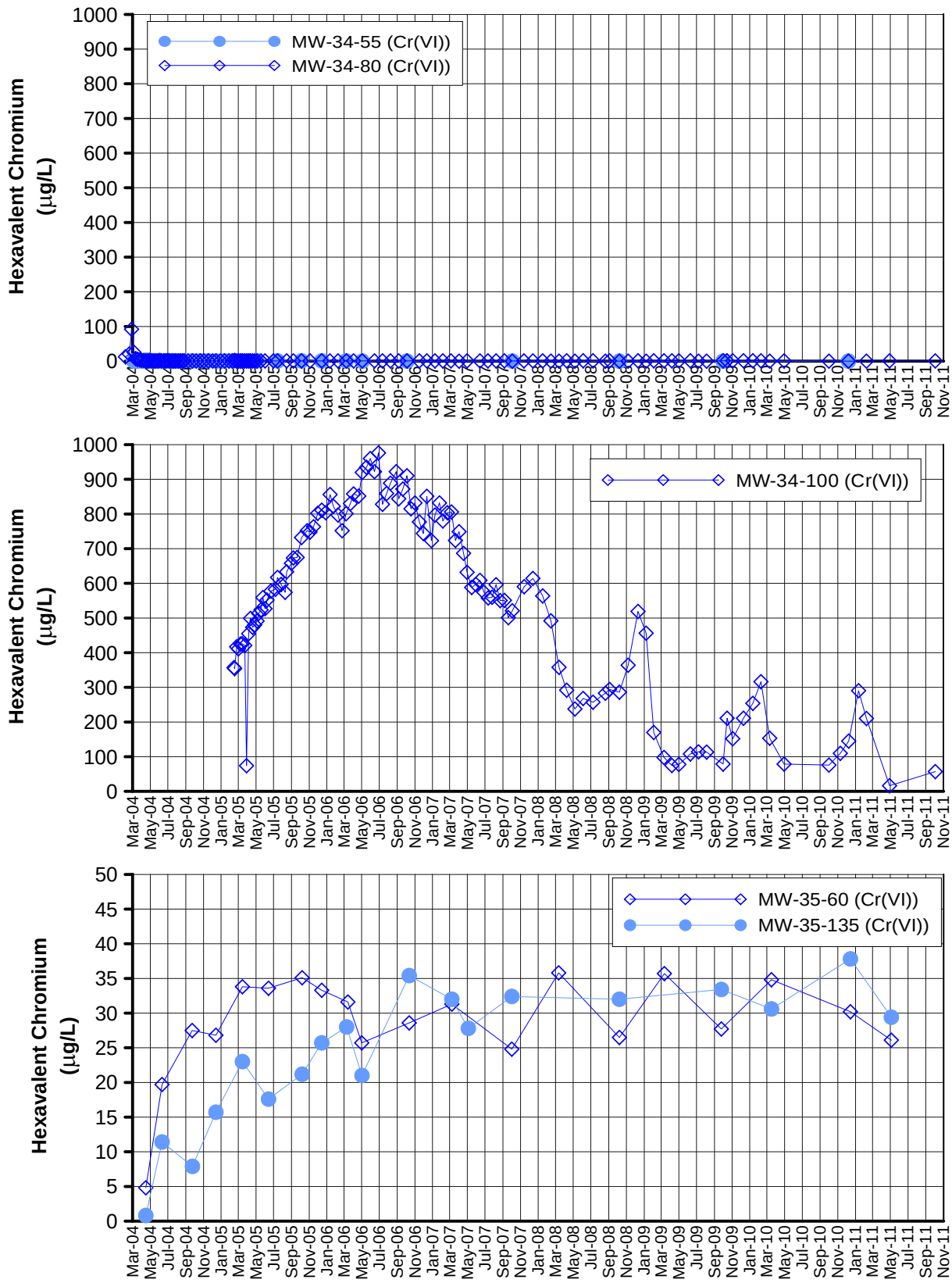

Notes:

1) The IM Contingency Plan and hexavalent chromium [Cr(VI)] trigger levels were updated July 17, 2008 (DTSC, 2008b).

2) The trigger level for MW-34-80 is 20 µg/L.

3) The trigger level for MW-34-100 is 750 µg/L.

FIGURE C-6
HEXAVALENT CHROMIUM
IN MW-34 AND MW-35 CLUSTERS

THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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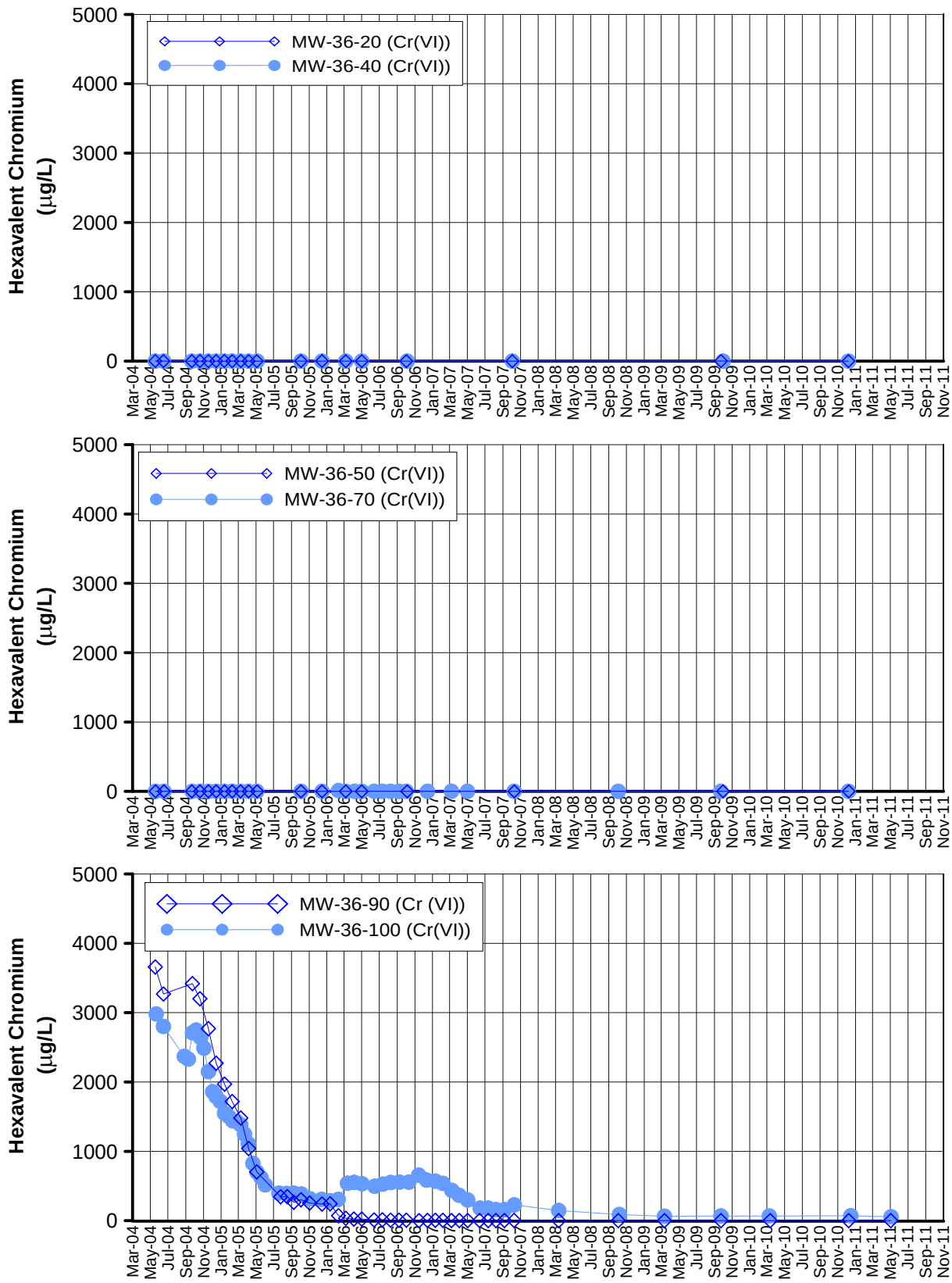

Notes:
1) The IM Contingency Plan and hexavalent chromium [Cr(VI)] trigger levels were updated July 17, 2008 (DTSC, 2008b).
2) The trigger level for MW-36-70 is 20 µg/L.

FIGURE C-7
HEXAVALENT CHROMIUM
IN MW-36 CLUSTER
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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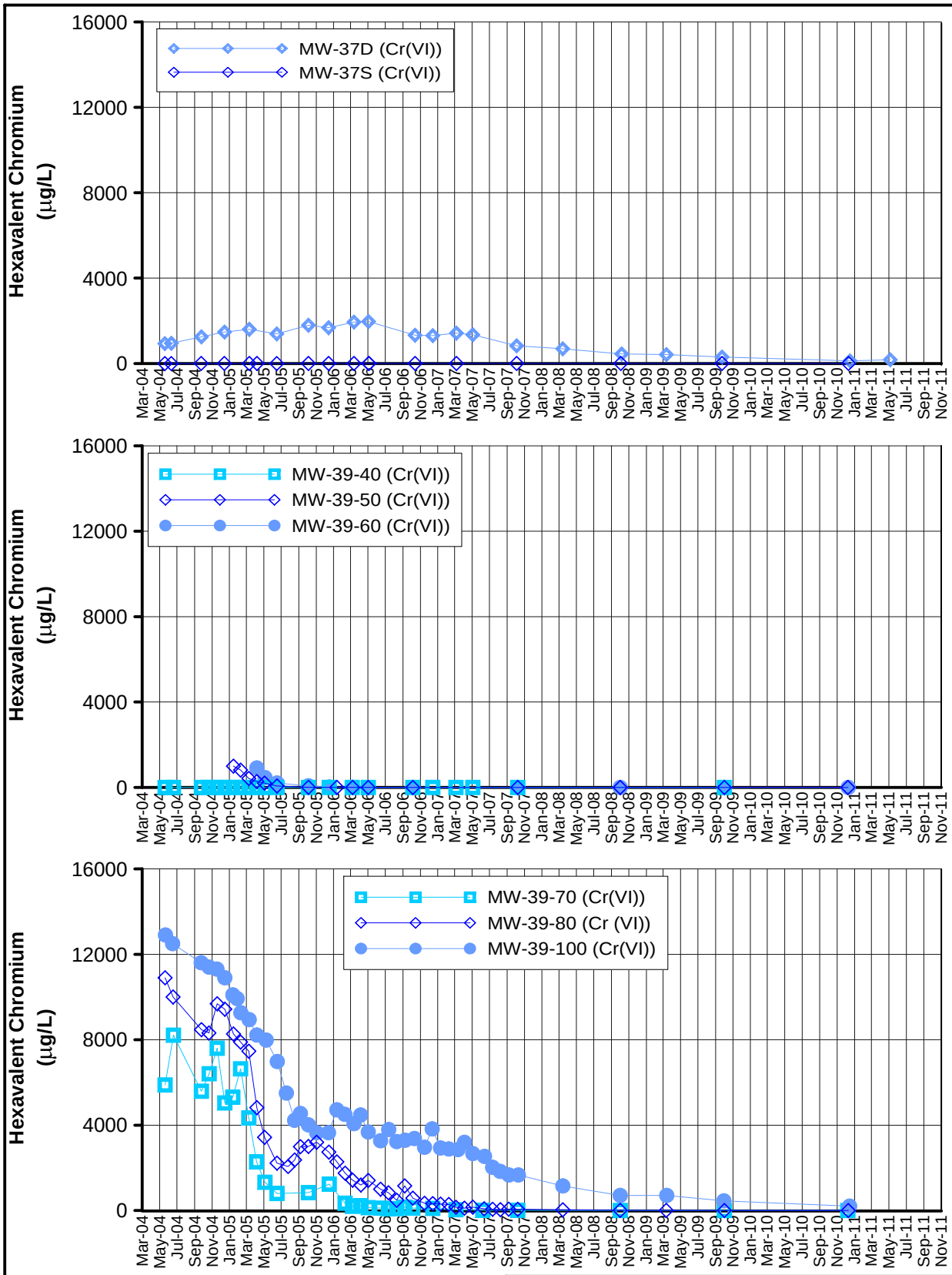

Notes:
1) The IM Contingency Plan and hexavalent chromium [Cr(VI)] trigger levels were updated July 17, 2008 (DTSC, 2008b).
2) The trigger level for MW-39-40 is 20 µg/L.

FIGURE C-8
HEXAVALENT CHROMIUM
IN MW-37 AND MW-39 CLUSTERS
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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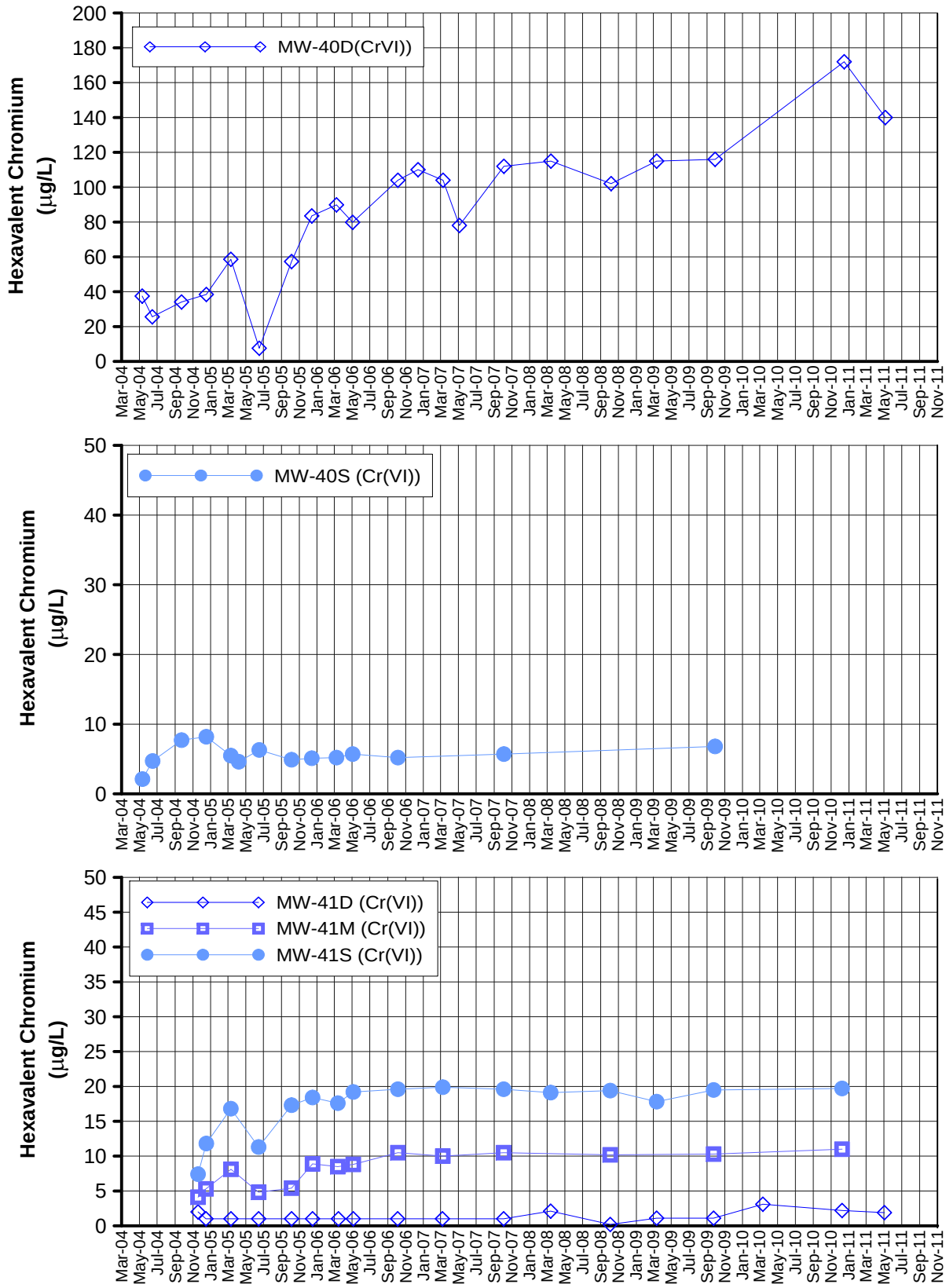

FIGURE C-9
HEXAVALENT CHROMIUM
IN MW-40 AND MW-41 CLUSTERS
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND
SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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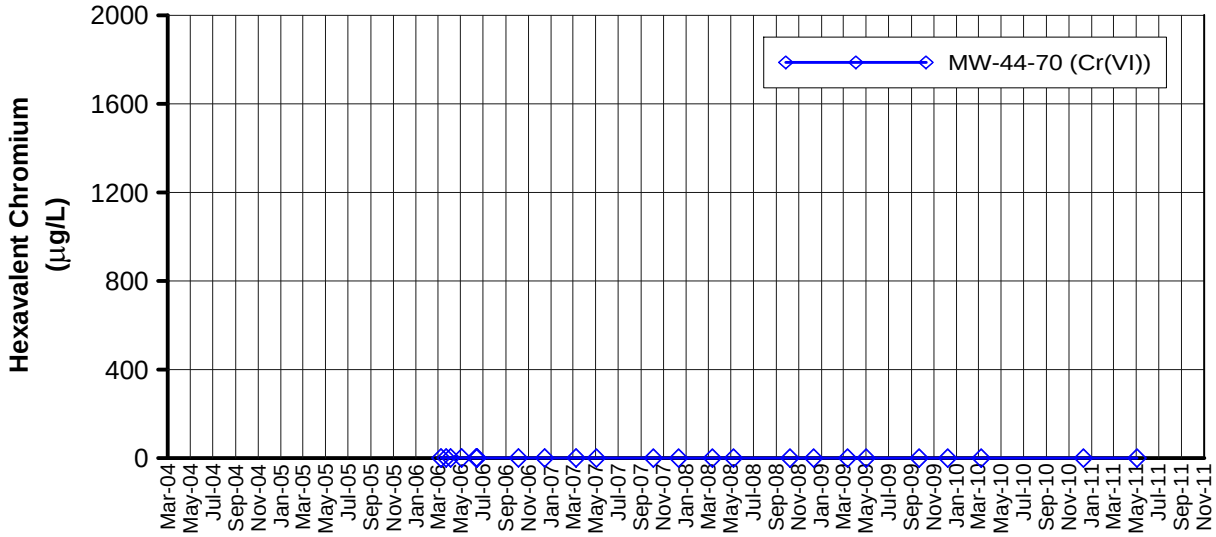

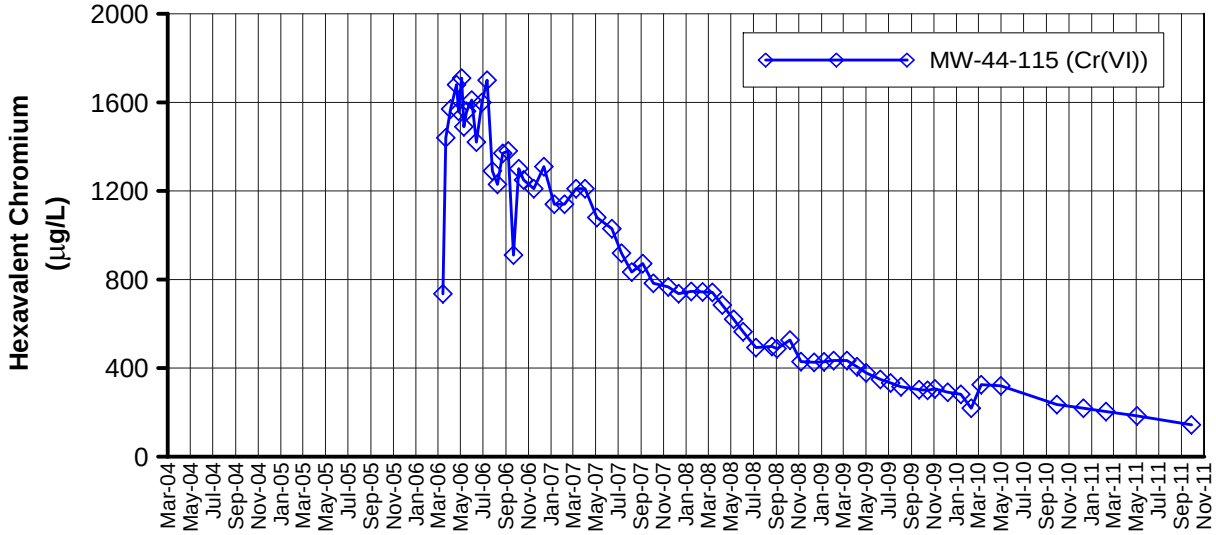

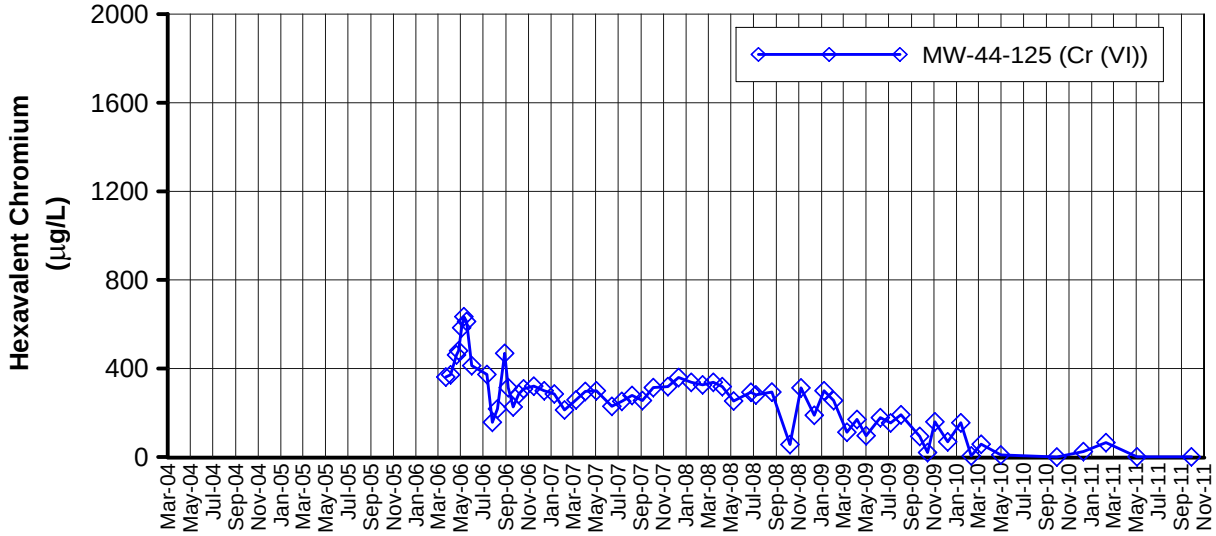

Notes:
1) The IM Contingency Plan and hexavalent chromium [Cr(VI)] trigger levels were updated July 17, 2008 (DTSC, 2008b).
2) The trigger level for MW-44-70 is 20 µg/L.
3) The trigger level for MW-44-115 is 1,200 µg/L.
4) The trigger level for MW-44-125 is 475 µg/L.

FIGURE C-10
HEXAVALENT CHROMIUM
IN MW-44 CLUSTER
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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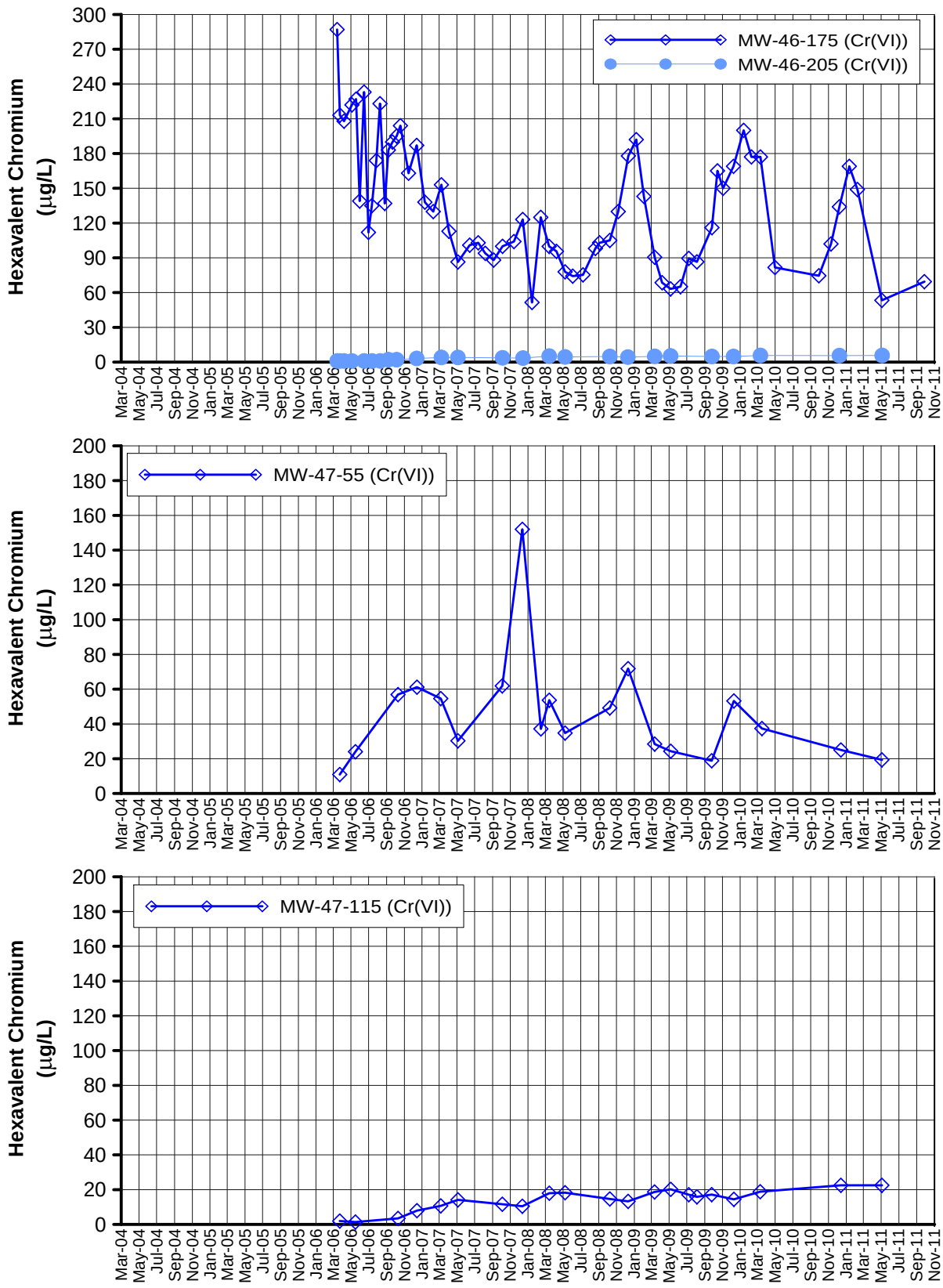

Notes:
1) The IM Contingency Plan and hexavalent chromium [Cr(VI)] trigger levels were updated July 17, 2008 (DTSC, 2008b).
2) The trigger level for MW-46-175 is 225 µg/L.
3) The trigger level for MW-46-205 is 20 µg/L.
4) The trigger level for MW-47-55 is 475 µg/L.
5) The trigger level for MW-47-115 is 31 µg/L.

FIGURE C-11
HEXAVALENT CHROMIUM
IN MW-46 AND MW-47 CLUSTERS
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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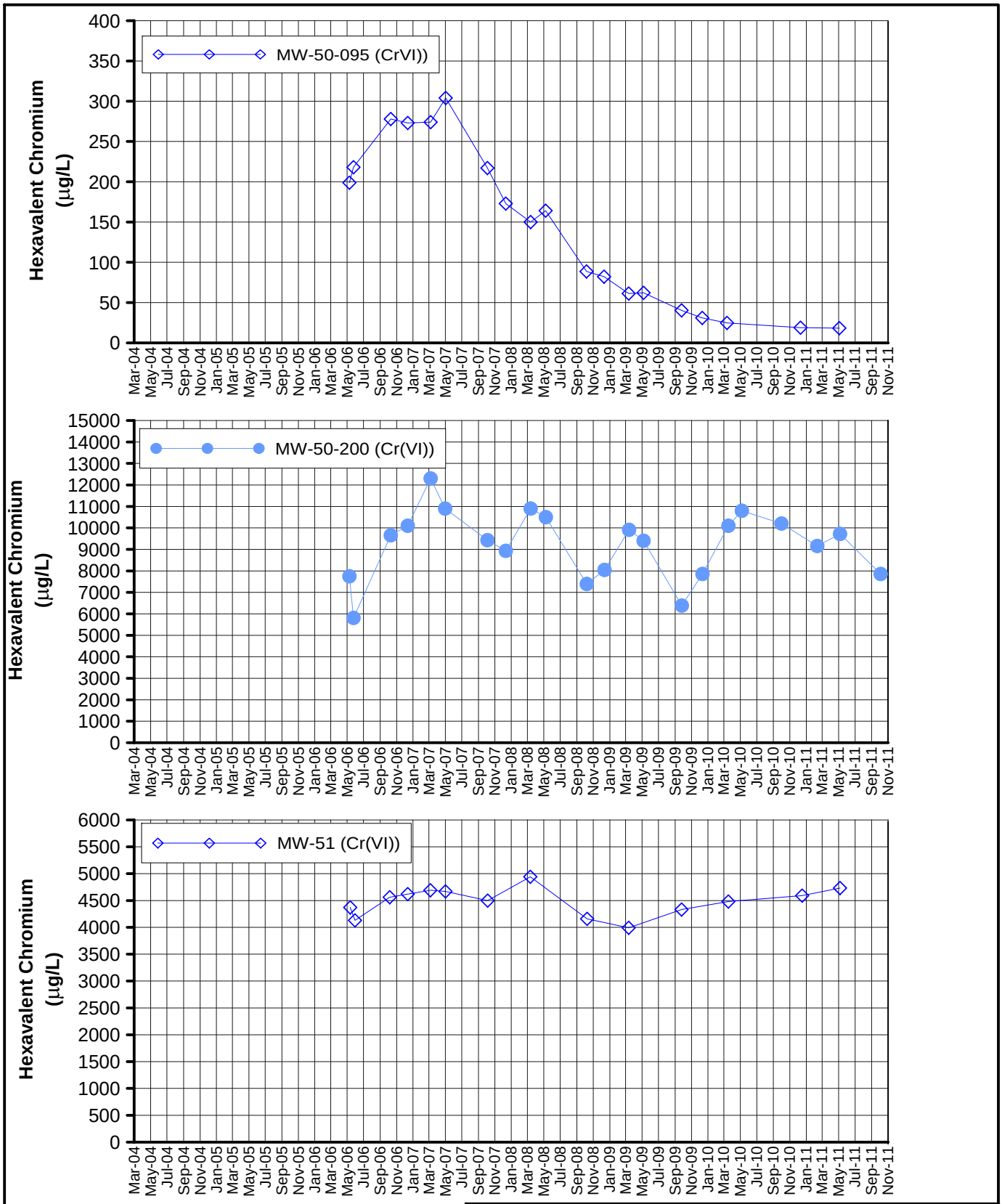

Notes:
1) Fourth Quarter 2010 data for MW-50-200 collected in February 2011 due to logistical issues.

FIGURE C-12
HEXAVALENT CHROMIUM
IN MW-50 AND MW-51 CLUSTERS
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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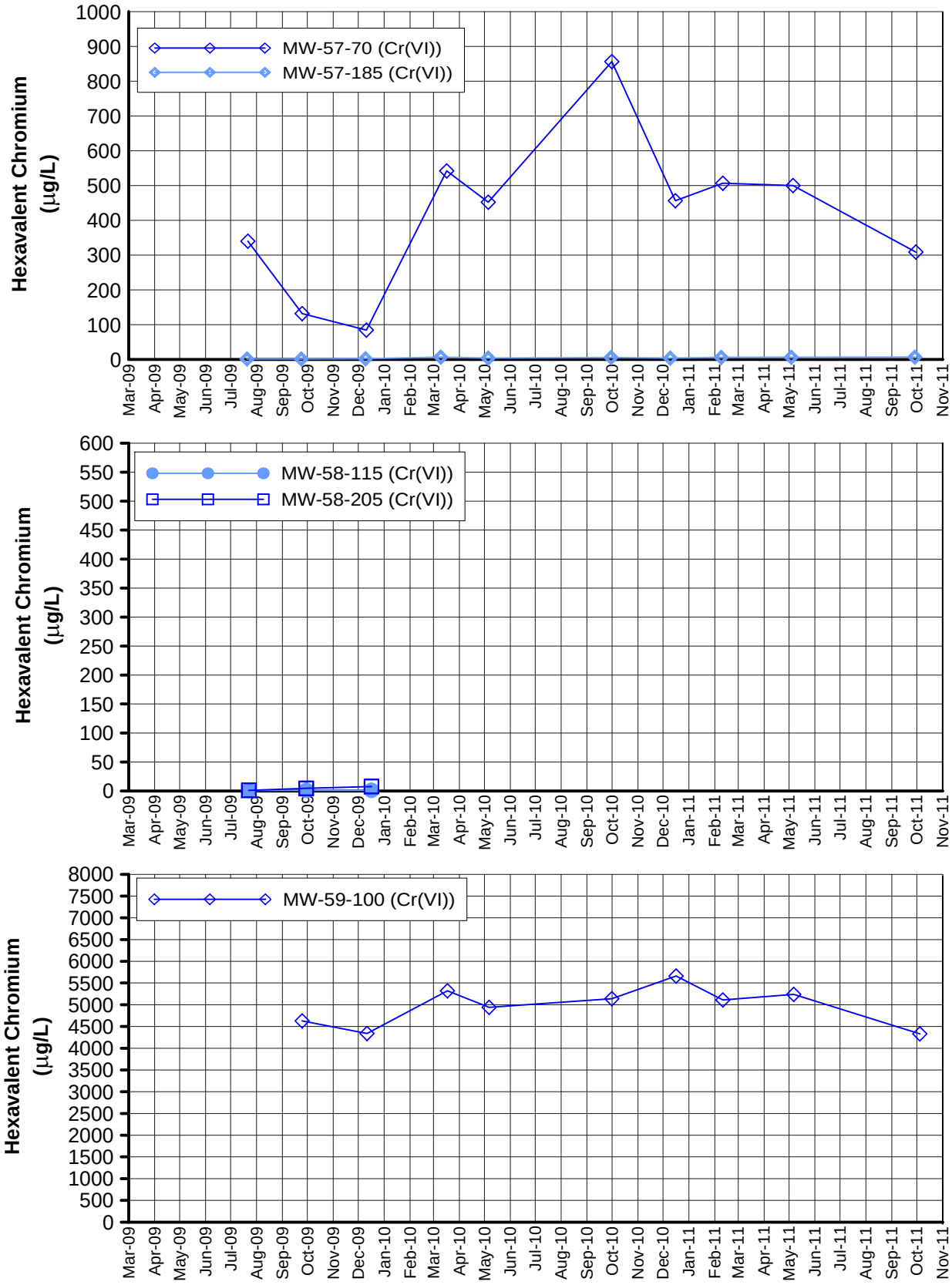

FIGURE C-13
HEXAVALENT CHROMIUM
IN MW-57, MW-58 and MW-59 CLUSTERS
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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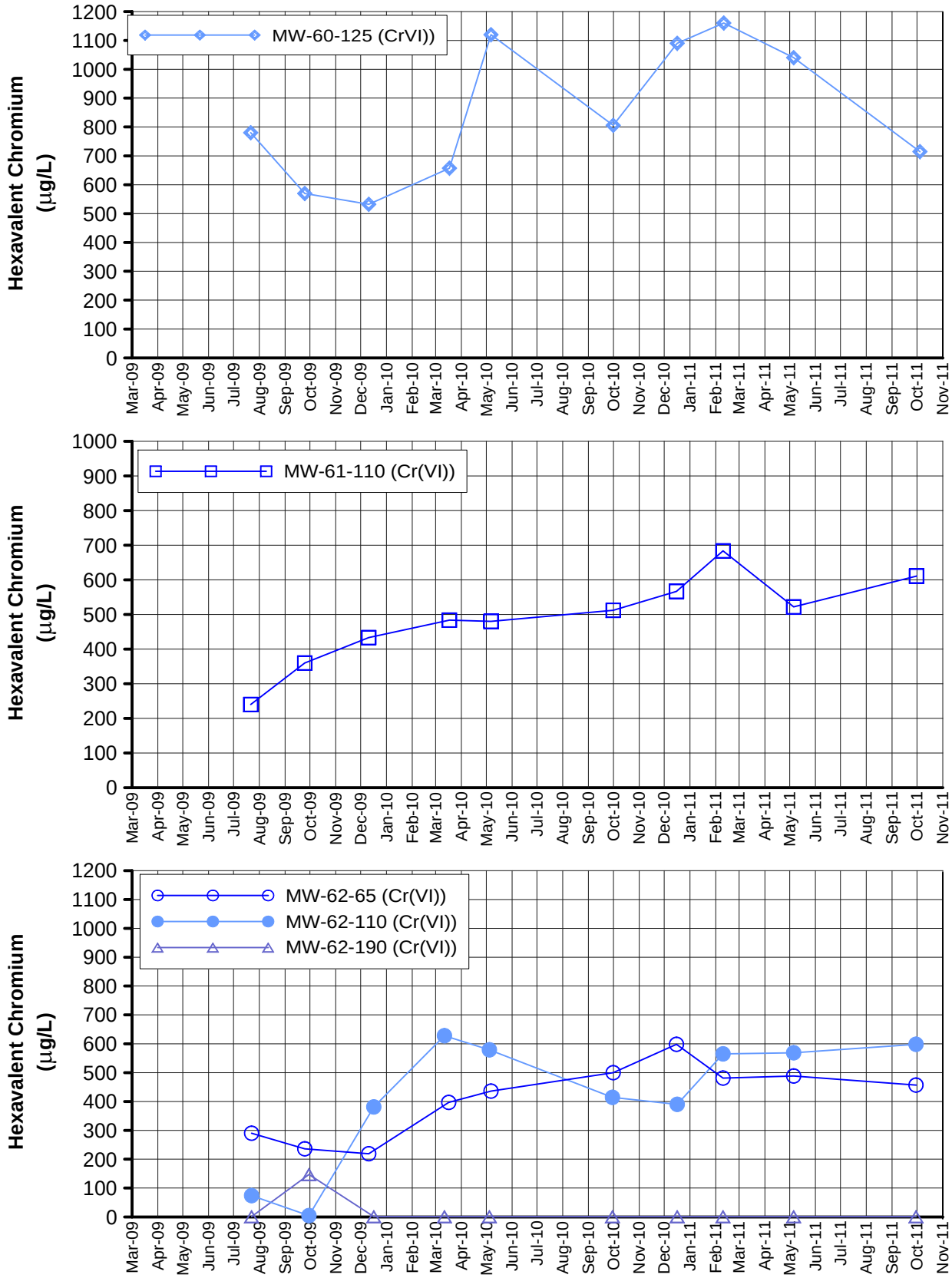

FIGURE C-14
HEXAVALENT CHROMIUM
IN MW-60-125, MW-61-110 AND THE MW-62 CLUSTER
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

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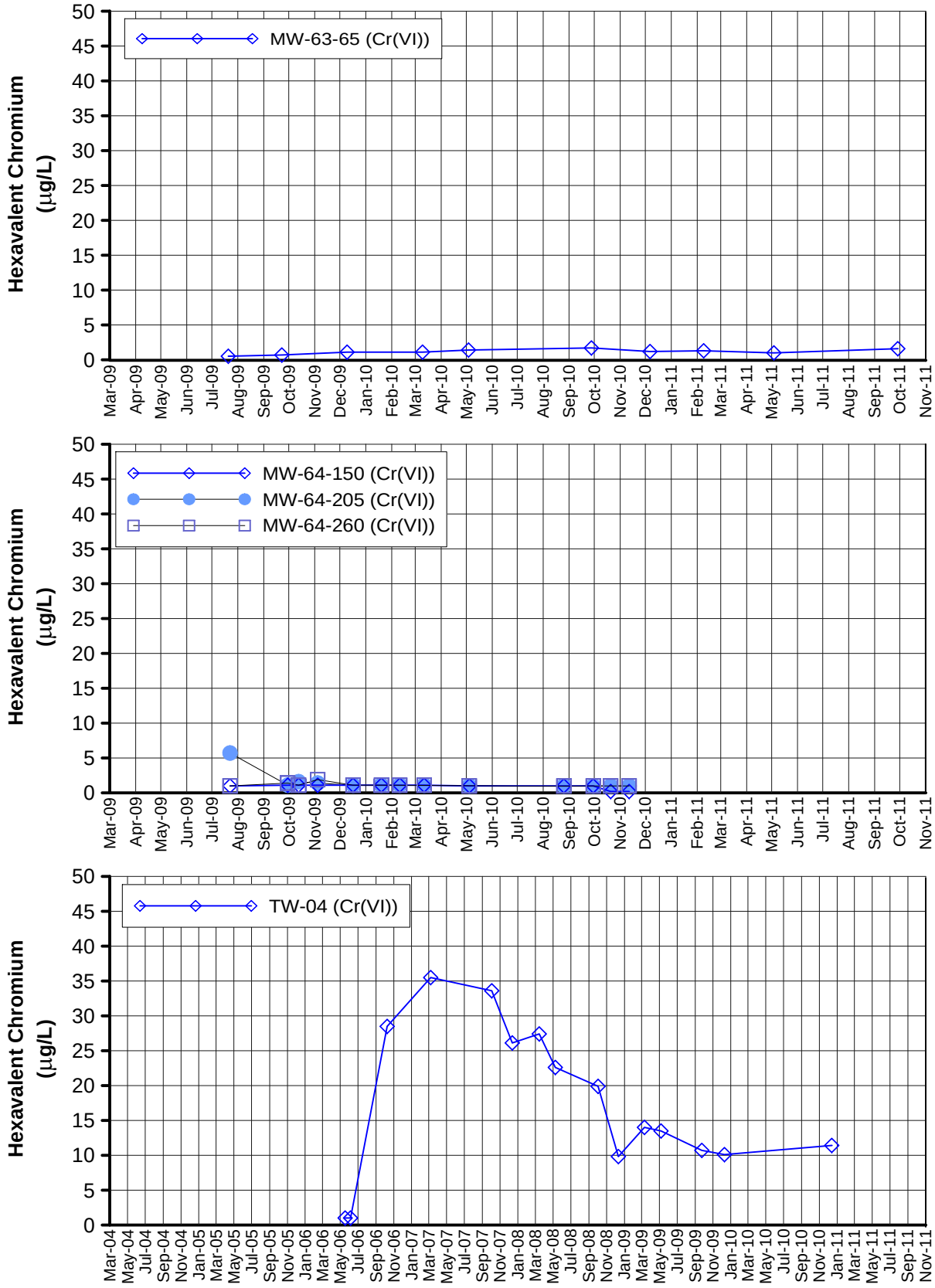

FIGURE C-15
HEXAVALENT CHROMIUM
IN MW-63-065, THE MW-64 CLUSTER, AND TW-04
THIRD QUARTER 2011 INTERIM MEASURES
PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND
SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION,
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Appendix D
Interim Measure Extraction System Operations Log, Third Quarter 2011

APPENDIX D

Interim Measures Extraction System Operations Log, Third Quarter 2011, PG&E Topock Performance Monitoring Program

During the third quarter of 2011 (July through October), extraction wells TW-3D and PE-1 operated at a target pump rate of at 135 gallons per minute, excluding periods of planned and unplanned downtime. Extraction wells TW-2D and TW-2S were not operated during Third Quarter of 2011. The operational run time for the Interim Measure groundwater extraction system (combined or individual pumping) was approximately 94.9 percent during Third Quarter 2011.

The Interim Measure Number 3 (IM-3) facility treated approximately 22,562,451 gallons of extracted groundwater during Third Quarter 2011. The IM-3 facility also treated approximately 13,515 gallons of water generated from the groundwater monitoring program and 29,700 gallons of water from IM-3 injection well development. Seven containers of solids from the IM-3 facility were transported offsite during the reporting period.

Periods of planned and unplanned extraction system downtime (that together resulted in approximately 5.1 percent of downtime during Third Quarter 2011) are summarized below. The times shown are in Pacific Standard Time to be consistent with other data collected (e.g., water level data) at the site.

D.1 July 2011

- **July 3, 2011 (unplanned):** The extraction well system was offline from 9:40 p.m. to 9:52 p.m. due to City of Needles power imbalance that shut down extraction wells. Extraction system downtime was 12 minutes.
- **July 4, 2011 (planned):** The extraction well system was offline from 5:08 a.m. to 5:12 a.m. due to changing back to City of Needles power from generator power. Extraction system downtime was 4 minutes.
- **July 5, 2011 (unplanned):** The extraction well system was offline from 11:08 p.m. to 11:14 p.m. due to City of Needles power imbalance that shut down extraction wells. Extraction system downtime was 6 minutes.
- **July 6, 2011 (planned):** The extraction well system was offline from 8:04 a.m. to 11:26 a.m. and from 11:28 a.m. to 11:50 a.m. due to changing back to City of Needles power from generator power and monthly scheduled oxidation tank maintenance. Extraction system downtime was 3 hours and 44 minutes.

- **July 7, 2011 (planned):** The extraction well system was offline from 10:24 a.m. to 10:26 a.m. and from 10:46 a.m. to 10:48 a.m. due to testing of critical alarms and leak detection system. Extraction system downtime was 4 minutes.
- **July 13-14, 2011 (unplanned):** The extraction well system was offline from 11:44 p.m. on July 13th to 12:10 a.m. on July 14th and from 12:12 a.m. to 12:58 a.m. on July 14th due to reduced microfilter performance. Extraction system downtime was 1 hour and 12 minutes.
- **July 14, 2011 (planned):** The extraction well system was offline from 10:00 a.m. to 12:32 p.m. due to scheduled maintenance on sludge control valve 410. Extraction system downtime was 2 hours and 32 minutes.
- **July 27-28, 2011 (planned):** The extraction well system was offline from 4:12 a.m. to 5:28 a.m. on July 27th and from 7:14 a.m. on July 27th to 12:46 p.m. on July 28th for monthly schedule maintenance. Extraction system downtime was 1 day and 6 hours and 48 minutes.
- **July 28, 2011 (unplanned):** The extraction well system was offline from 6:16 p.m. to 6:24 p.m. due to City of Needles power imbalance that shut down extraction wells. Extraction system downtime was 8 minutes.

D.2 August 2011

- **August 1, 2011 (unplanned):** The extraction well system was offline from 6:28 a.m. to 6:32 a.m. due to computer rebooting to clear alarms. Extraction system downtime was 4 minutes.
- **August 2, 2011 (planned):** The extraction well system was offline from 10:38 a.m. to 11:42 a.m. due to tank management to control tank levels. Extraction system downtime was 1 hour and 4 minutes.
- **August 3, 2011 (planned):** The extraction well system was offline from 12:32 p.m. to 12:34 p.m., 12:36 p.m. to 12:38 p.m., and 12:54 p.m. to 12:58 p.m. due to testing of critical alarms and leak detection system. Extraction system downtime was 8 minutes.
- **August 3, 2011 (unplanned):** The extraction well system was offline from 7:26 p.m. to 8:18 p.m. due to City of Needles power imbalance that shut down extraction wells. Extraction system downtime was 52 minutes.
- **August 6, 2011 (unplanned):** The extraction well system was offline from 5:32 p.m. to 6:20 p.m. due to microfilter repair. Extraction system downtime was 48 minutes.
- **August 11, 2011 (unplanned):** The extraction well system was offline from 8:32 a.m. to 10:18 a.m. reduced microfilter performance. Extraction system downtime was 1 hour and 46 minutes.
- **August 15, 2011 (planned):** The extraction well system was offline from 3:26 a.m. to 3:54 a.m. due to tank level management in preparation for monthly schedule maintenance. Extraction system downtime was 28 minutes.

- **August 15-18, 2011 (planned):** The extraction well system was offline from 5:22 a.m. on August 15th to 12:38 p.m. on August 18th, from 12:48 p.m. to 1:34 p.m. on August 18th, and from 4:18 p.m. to 7:16 p.m. on August 18th for monthly scheduled maintenance. Extraction system downtime was 3 days and 11 hours.
- **August 22, 2011 (planned):** The extraction well system was offline from 8:32 a.m. to 10:44 a.m. and from 10:58 a.m. to 11:00 a.m. due to chemical mixing pump maintenance. Extraction system downtime was 2 hours and 14 minutes.
- **August 30, 2011 (planned):** The extraction well system was offline from 8:52 a.m. to 11:02 a.m. due to primary reverse osmosis system maintenance. Extraction system downtime was 2 hours and 10 minutes.

D.3 September 2011

- **September 7, 2011 (planned):** The extraction well system was offline from 10:18 a.m. to 10:22 a.m., 10:24 a.m. to 10:28 a.m., 10:50 a.m. to 10:52 a.m., 10:58 a.m. to 11:00 a.m., and 11:18 a.m. to 11:20 a.m. due to testing of critical alarms and leak detection system. Extraction system downtime was 14 minutes.
- **September 13, 2011 (unplanned):** The extraction well system was offline from 4:18 a.m. to 4:26 a.m. due City of Needles power imbalance that shut down extraction wells and from 11:52 a.m. to 11:58 a.m. due to return to City of Needles power from generator power once City of Needles power was restored. Extraction system downtime was 14 minutes.
- **September 13, 2011 (planned):** The extraction well system was offline from 5:14 a.m. to 5:16 a.m. due to testing of leak detection system after City of Needles power imbalance that shut down extraction wells. Extraction system downtime was 2 minutes.
- **September 14, 2011 (planned):** The extraction well system was offline from 7:32 a.m. to 7:34 a.m., 7:42 a.m. to 7:44 a.m., 7:52 a.m. to 7:54 a.m., 8:02 a.m. to 8:04 a.m., and 8:20 a.m. to 8:22 a.m. due to testing of leak detection system. Extraction system downtime was 10 minutes.
- **September 21, 2011 (planned):** The extraction well system was offline from 1:54 p.m. to 2:02 p.m. due to testing of plant instrumentation and controls updates. Extraction system downtime was 8 minutes.
- **September 28, 2011 (planned):** The extraction well system was offline from 12:22 p.m. to 12:44 p.m. due to primary reverse osmosis system maintenance. Extraction system downtime was 22 minutes.

D.4 October 2011

- **October 5, 2011 (planned):** The extraction well system was offline from 8:56 a.m. to 8:58 a.m., 9:10 a.m. to 9:12 a.m., 9:14 a.m., to 9:16 a.m., 9:58 a.m. to10:00 a.m., and 10:36 a.m. to 10:38 a.m. due to testing of critical alarms and leak detection system. Extraction system downtime was 10 minutes.

- **October 14, 2011 (unplanned):** The extraction well system was offline from 2:16 a.m. to 1:16 p.m., 1:26 p.m. to 3:54 p.m., and 4:10 p.m. to 4:14 p.m. due to a polymer system failure. Extraction system downtime was 13 hours and 32 minutes.
- **October 14, 2011 (unplanned):** The extraction well system was offline from 5:26 p.m. to 6:38 p.m. due to decreased microfilter performance. Extraction system downtime was 1 hour and 12 minutes.
- **October 15, 2011 (planned):** The extraction well system was offline from 11:20 a.m. to 11:58 a.m. due to high water level in the raw water storage tank from receiving off site water. Extraction system downtime was 38 minutes.
- **October 18, 2011 (planned):** The extraction well system was offline from 6:30 a.m. to 6:52 a.m. when City of Needles power utility adjusted power feed to plant. Extraction system downtime was 22 minutes.
- **October 25, 2011 (unplanned):** The extraction well system was offline from 12:52 p.m. to 2:28 p.m. due to reduced microfilter performance. Extraction system downtime was 1 hour and 36 minutes.
- **October 31, 2011 (unplanned):** The extraction well system was offline from 9:46 p.m. to 9:58 a.m. due to reduced microfilter performance. Extraction system downtime was 12 minutes.

Appendix E
Hydraulic Data for Interim Measures Reporting Period

Table E-1

Average Monthly and Quarterly Groundwater Elevations, Third Quarter 2011

Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

Well ID	Aquifer Zone	July 2011	August 2011	September 2011	October 2011	Quarter Average	Days in Quarter Average
I-3	River Station	456.30	455.67	455.25	454.30	455.38	123
MW-20-070	Shallow Zone	455.17	454.81	454.19	453.67	454.49	119
MW-20-100	Middle Zone	454.67	454.35	453.73	453.18	454.01	119
MW-20-130	Deep Zone	454.28	453.99	453.32	452.75	453.61	119
MW-22	Shallow Zone	455.89	455.51	455.20	454.73	455.36	116
MW-25	Shallow Zone	456.58	456.32	455.91	455.52	456.11	117
MW-26	Shallow Zone	456.22	INC	INC	INC	INC	42
MW-27-020	Shallow Zone	456.23	455.53	455.08	454.28	455.33	116
MW-27-060	Middle Zone	456.10	455.42	454.99	454.18	455.23	116
MW-27-085	Deep Zone	456.17	455.53	455.09	454.23	455.26	123
MW-28-025	Shallow Zone	456.27	455.57	455.11	454.28	455.35	117
MW-28-090	Deep Zone	456.27	455.61	455.13	454.37	455.39	117
MW-30-050	Middle Zone	455.87	455.30	454.82	454.09	455.07	116
MW-31-060	Shallow Zone	455.98	455.53	455.05	454.49	455.30	117
MW-31-135	Deep Zone	455.33	454.95	454.40	453.78	454.62	123
MW-32-035	Shallow Zone	455.96	455.36	454.91	454.23	455.16	116
MW-33-040	Shallow Zone	456.20	455.64	455.18	454.39	455.32	118
MW-33-090	Middle Zone	456.37	455.83	455.38	454.65	455.52	118
MW-33-150	Deep Zone	456.31	455.78	455.33	454.59	455.50	123
MW-34-055	Middle Zone	456.23	455.57	455.11	454.28	455.35	116
MW-34-080	Deep Zone	456.20	455.60	INC	INC	INC	74
MW-34-100	Deep Zone	456.01	455.41	454.94	454.10	455.11	123
MW-35-060	Shallow Zone	456.65	456.00	455.57	454.86	455.81	117
MW-35-135	Deep Zone	456.86	456.36	455.94	455.37	456.17	117
MW-36-020	Shallow Zone	456.06	455.47	455.01	454.30	455.25	117
MW-36-040	Shallow Zone	456.02	455.40	454.93	454.18	455.18	117
MW-36-050	Middle Zone	455.99	455.38	454.89	454.13	455.14	117
MW-36-070	Middle Zone	455.91	455.30	454.83	454.06	455.07	117
MW-36-090	Deep Zone	455.12	454.62	454.05	453.37	454.33	117
MW-36-100	Deep Zone	455.48	454.98	454.39	453.71	454.68	117
MW-39-040	Shallow Zone	455.83	455.27	454.78	454.07	455.04	116
MW-39-050	Middle Zone	455.65	455.10	454.66	453.94	454.89	116
MW-39-060	Middle Zone	455.47	454.96	454.44	453.75	454.70	116
MW-39-070	Middle Zone	455.08	454.64	454.07	453.43	454.35	116
MW-39-080	Deep Zone	455.29	454.85	454.28	453.64	454.56	116
MW-39-100	Deep Zone	455.77	455.28	454.72	454.09	455.01	116
MW-42-030	Shallow Zone	455.76	455.19	454.74	454.05	454.98	116
MW-42-065	Middle Zone	456.03	455.45	454.99	454.28	455.24	116
MW-43-025	Shallow Zone	456.28	455.54	455.05	454.22	455.33	116
MW-43-090	Deep Zone	456.63	455.90	455.37	454.53	455.67	116
MW-44-070	Middle Zone	455.83	455.45	455.02	454.22	455.17	117
MW-44-115	Deep Zone	455.73	455.20	454.69	453.98	454.94	117
MW-44-125	Deep Zone	456.16	455.68	455.09	454.37	455.37	117
MW-45-095a	Deep Zone	455.20	454.81	454.03	453.32	454.34	123
MW-46-175	Deep Zone	456.08	455.56	455.06	454.38	455.31	117
MW-47-055	Shallow Zone	456.53	456.00	455.56	454.96	455.80	117
MW-47-115	Deep Zone	456.48	456.00	455.56	454.97	455.79	117
MW-49-135	Deep Zone	456.56	456.00	455.56	454.88	455.79	117

Table E-1

Average Monthly and Quarterly Groundwater Elevations, Third Quarter 2011

Third Quarter 2011 Interim Measure Performance Monitoring and Site-wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California

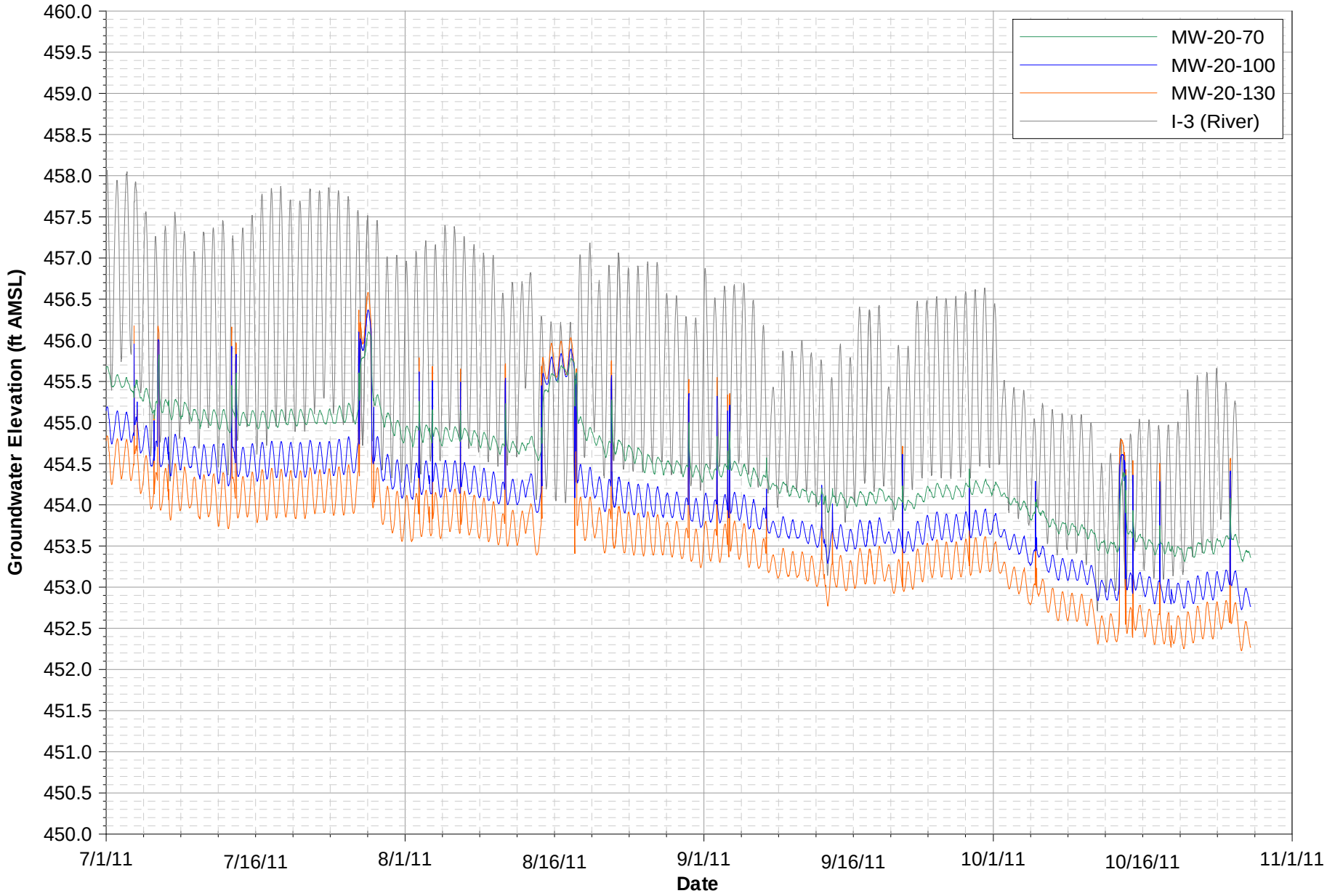
Well ID	Aquifer Zone	July 2011	August 2011	September 2011	October 2011	Quarter Average	Days in Quarter Average
MW-50-095	Middle Zone	456.13	455.70	455.25	454.72	455.49	117
MW-51	Middle Zone	456.18	455.92	455.51	455.12	455.71	118
MW-54-085	Deep Zone	456.48	455.82	455.41	454.59	455.61	119
MW-54-140	Deep Zone	456.59	455.97	455.58	454.88	455.79	119
MW-54-195	Deep Zone	456.84	456.26	455.87	455.21	456.07	119
MW-55-045	Middle Zone	456.87	456.40	456.12	455.68	456.29	119
MW-55-120	Deep Zone	456.99	456.57	456.33	455.96	456.48	119
PT2D	Deep Zone	454.81	454.37	453.77	453.13	454.06	117
PT5D	Deep Zone	455.15	454.70	454.14	453.48	454.41	117
PT6D	Deep Zone	455.44	454.98	454.39	453.72	454.67	117
RRB	River Station	456.58	455.99	455.56	454.64	455.74	117

NOTES:

Averages reported in ft AMSL (feet above mean sea level).

Quarterly Average = average of daily averages over reporting period.

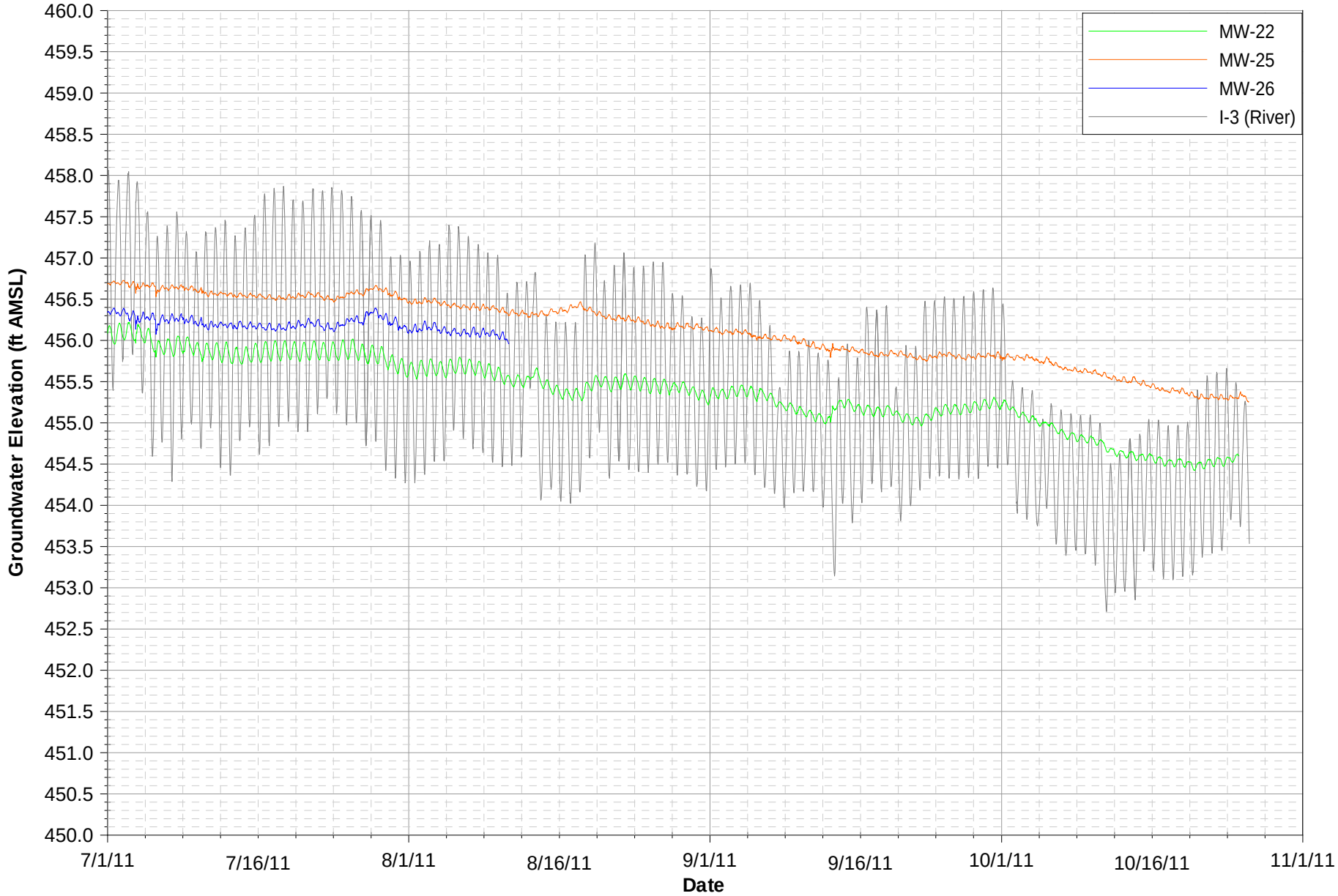
INC = Data incomplete, less than 75% of data available over reporting period due to rejection or field equipment malfunction.



Notes:
Data subject to review.

FIGURE E-1A
MW-20 CLUSTER HYDROGRAPHS
THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



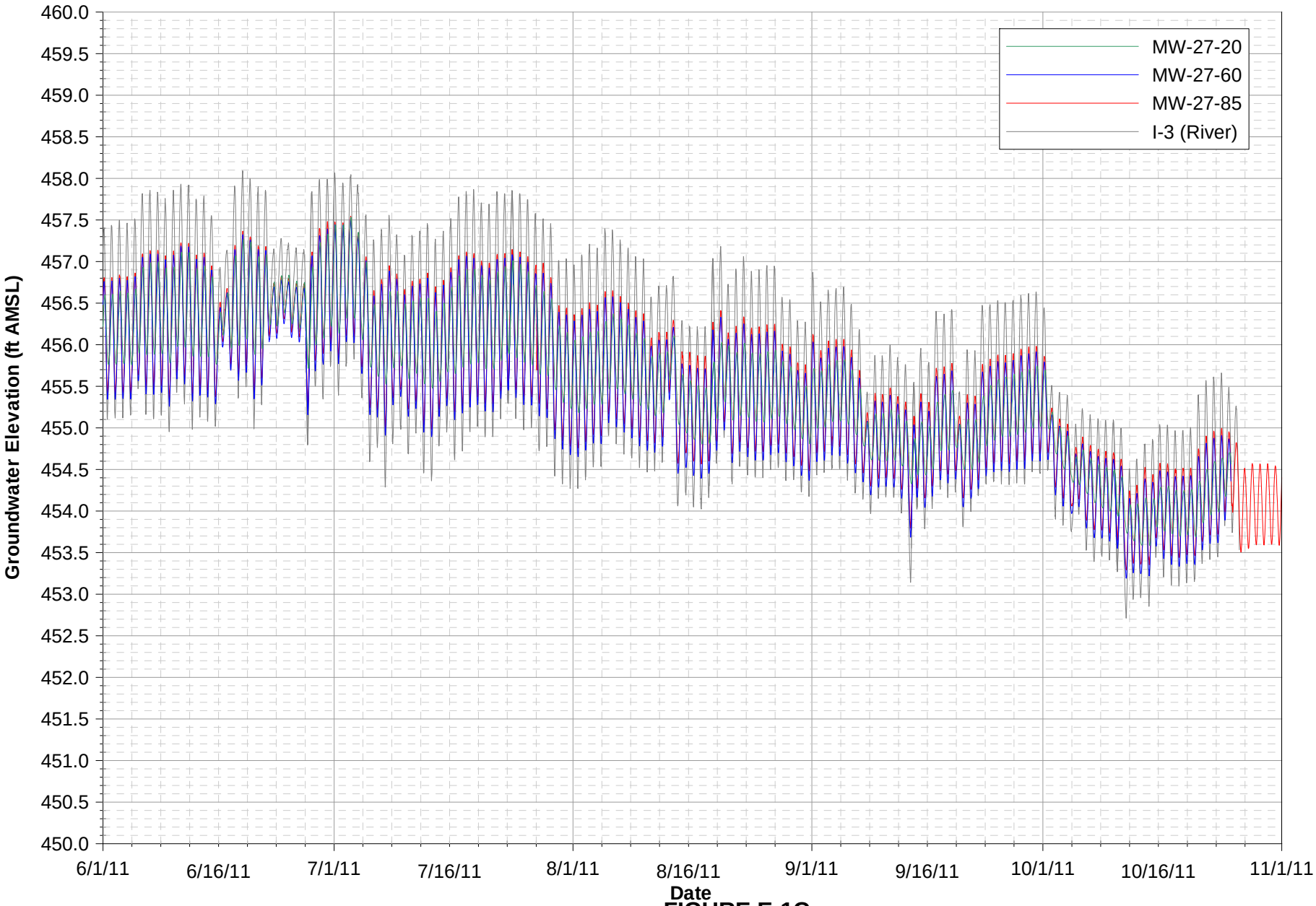
Notes:
Data subject to review.
MW-26 data unavailable after August 11, 2011 due to tranducer failure.

FIGURE E-1B

MW-22, MW-25, AND MW-26 HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



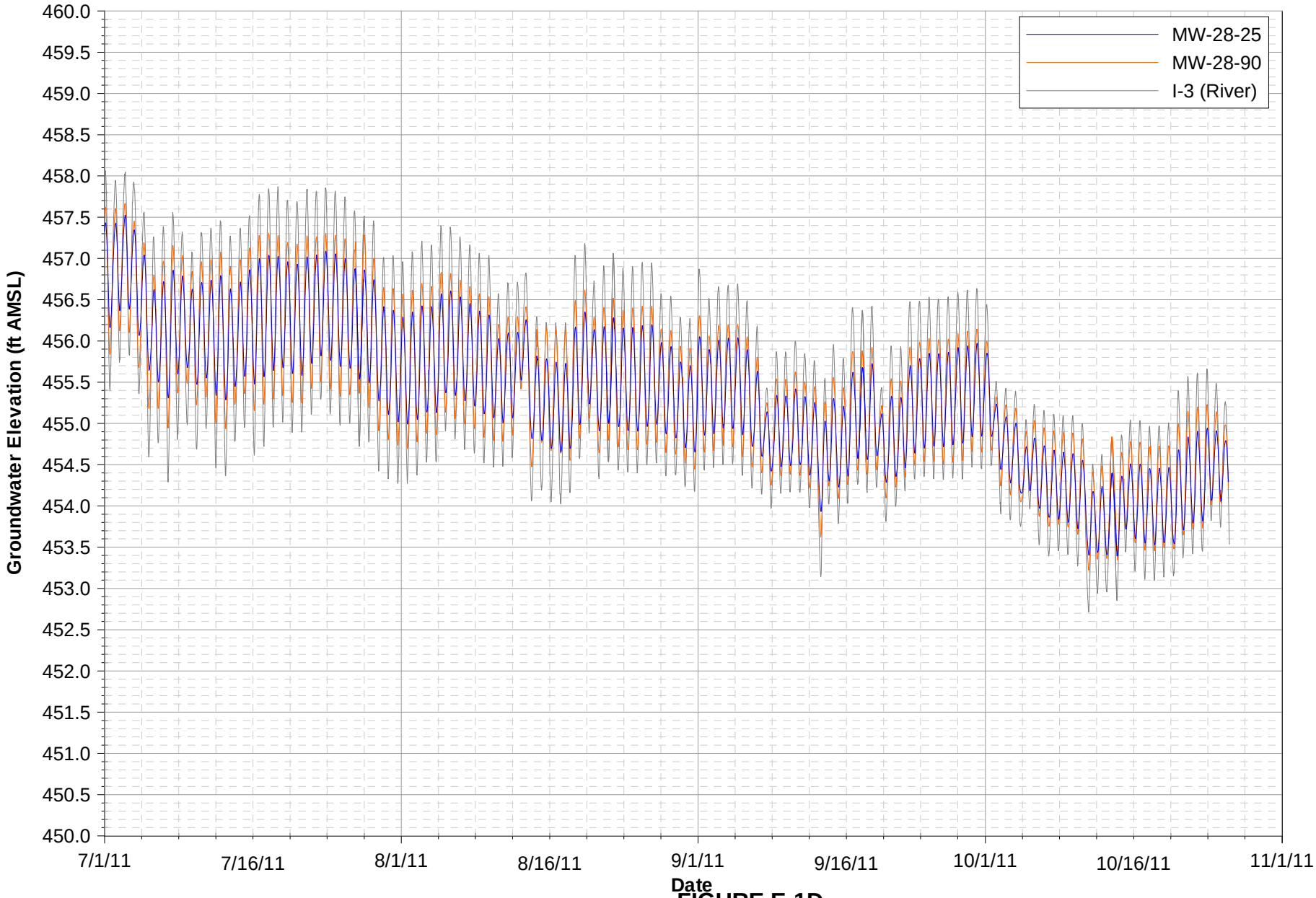
Notes:
Data subject to review.

FIGURE E-1C

MW-27 CLUSTER HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



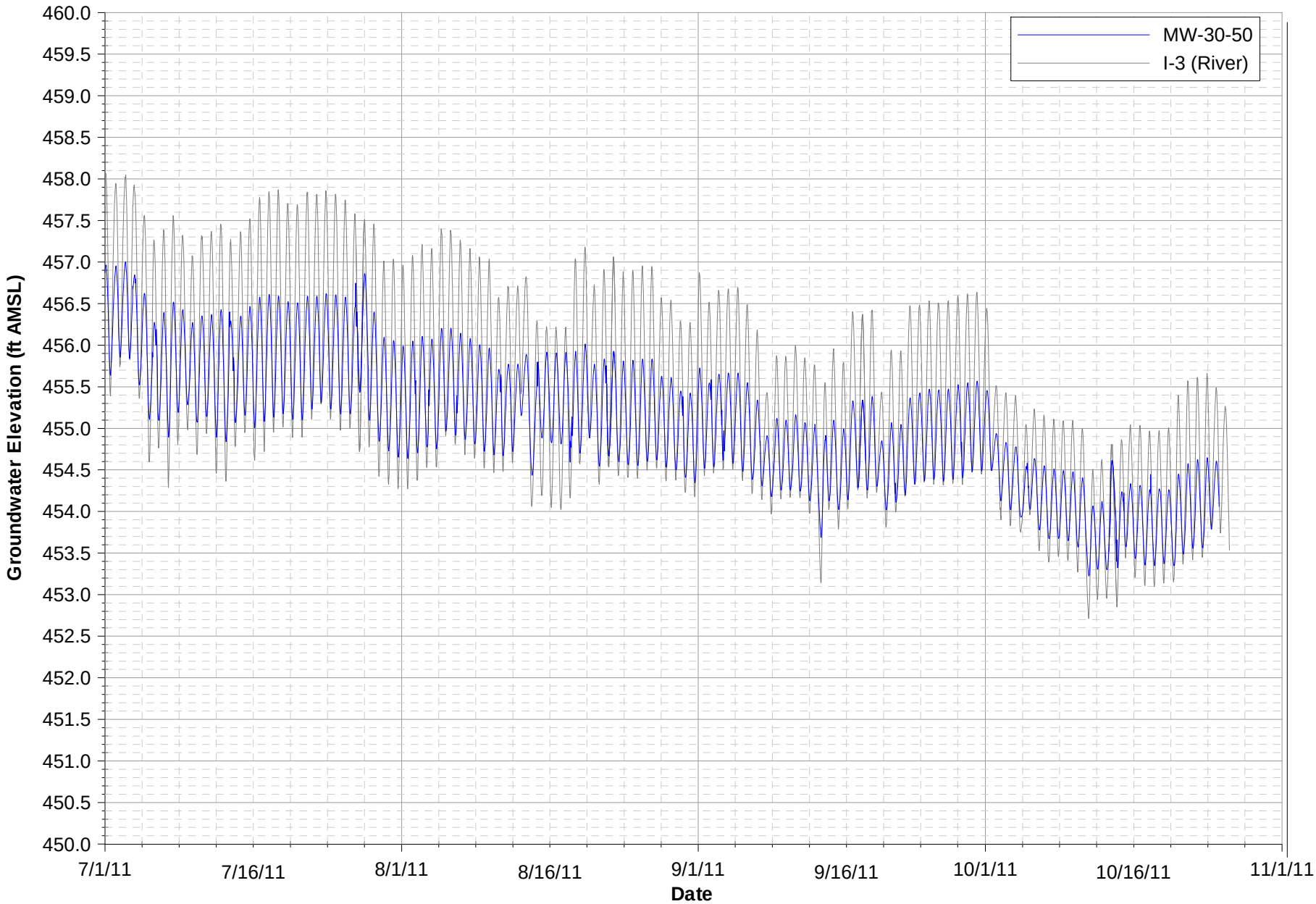
Notes:
Data subject to review.

FIGURE E-1D

MW-28 CLUSTER HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT, PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



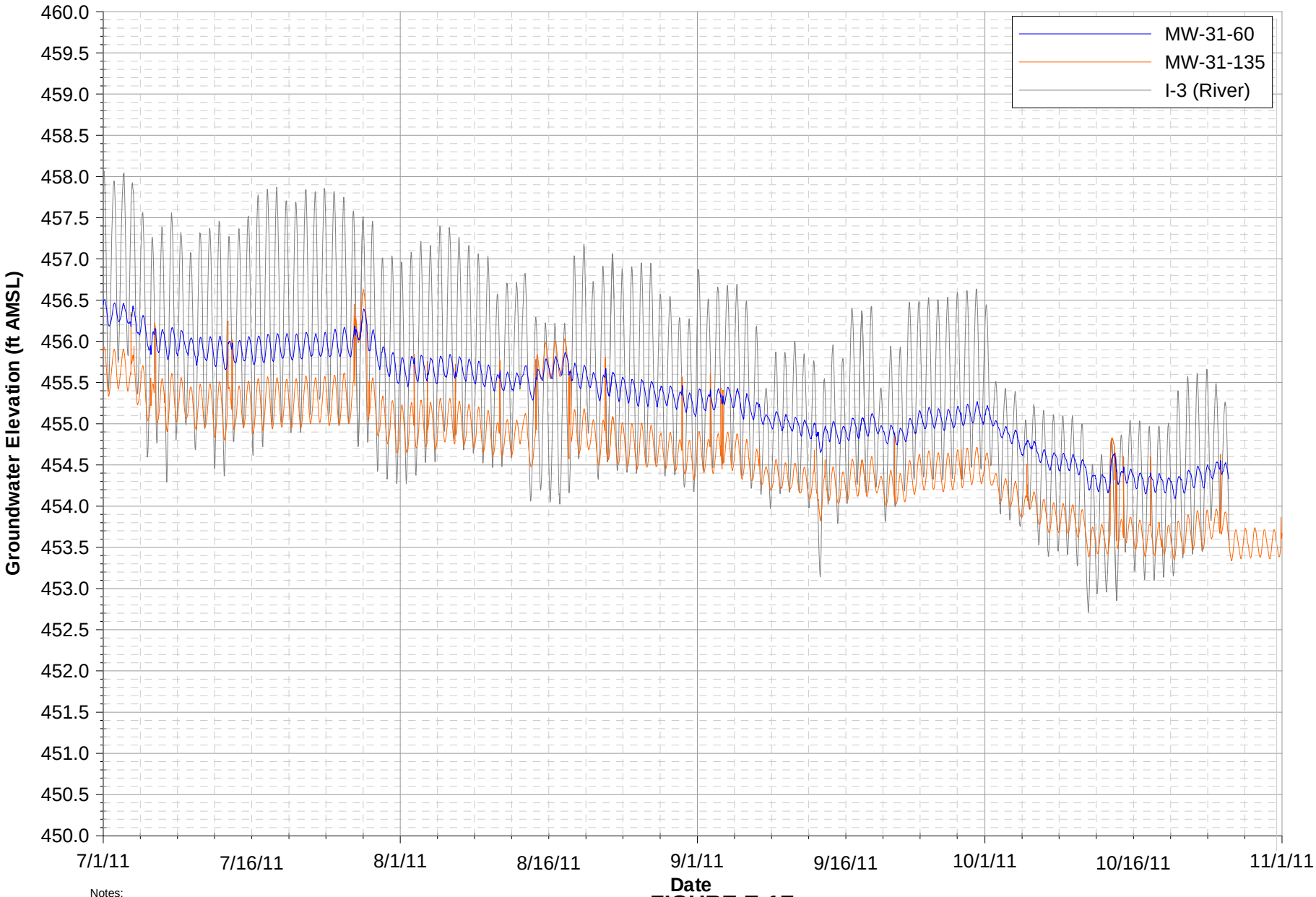
Notes:
Data subject to review.

FIGURE E-1E

MW-30-50 HYDROGRAPH

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT, PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



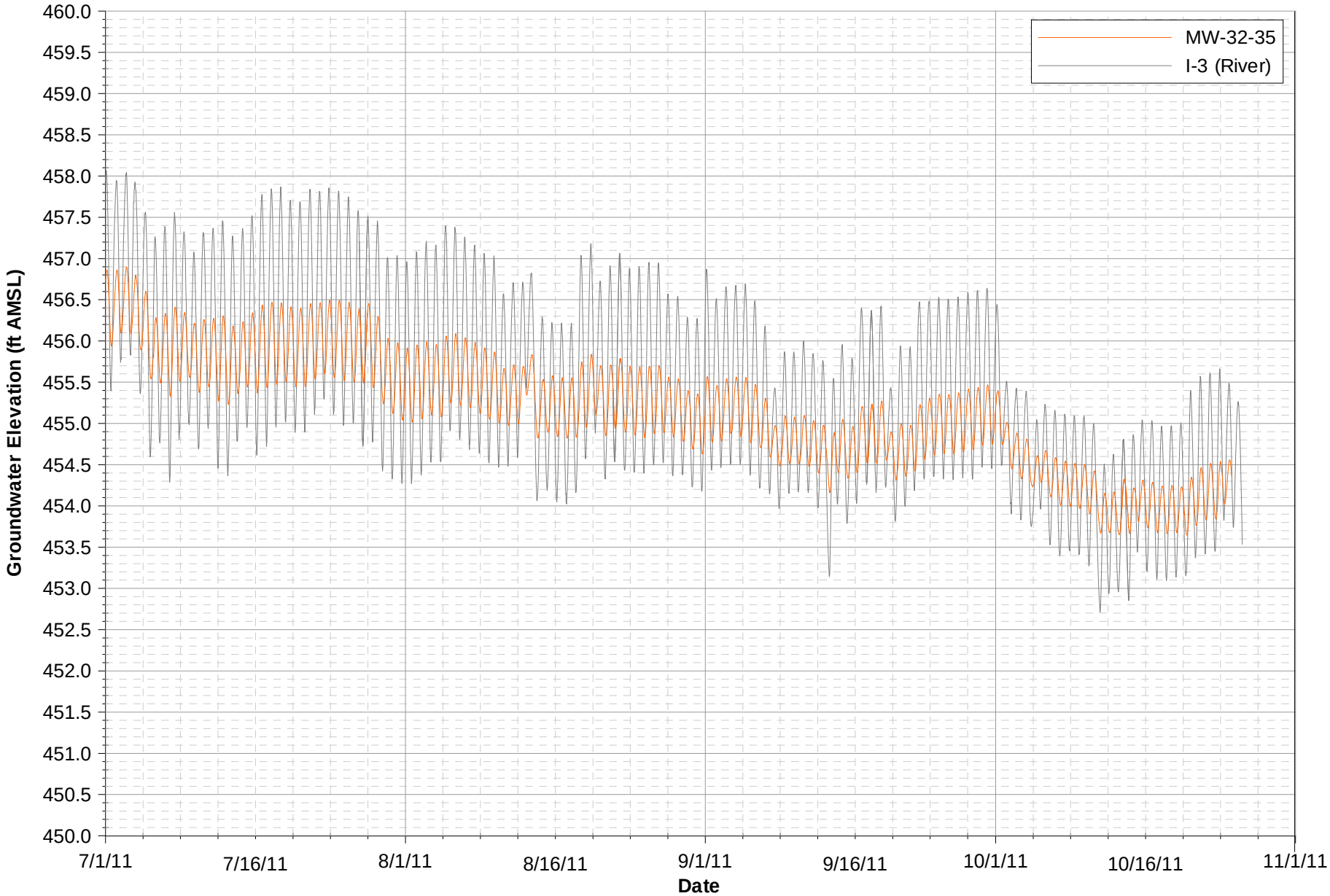
Notes:
Data subject to review.

FIGURE E-1F

MW-31 CLUSTER HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

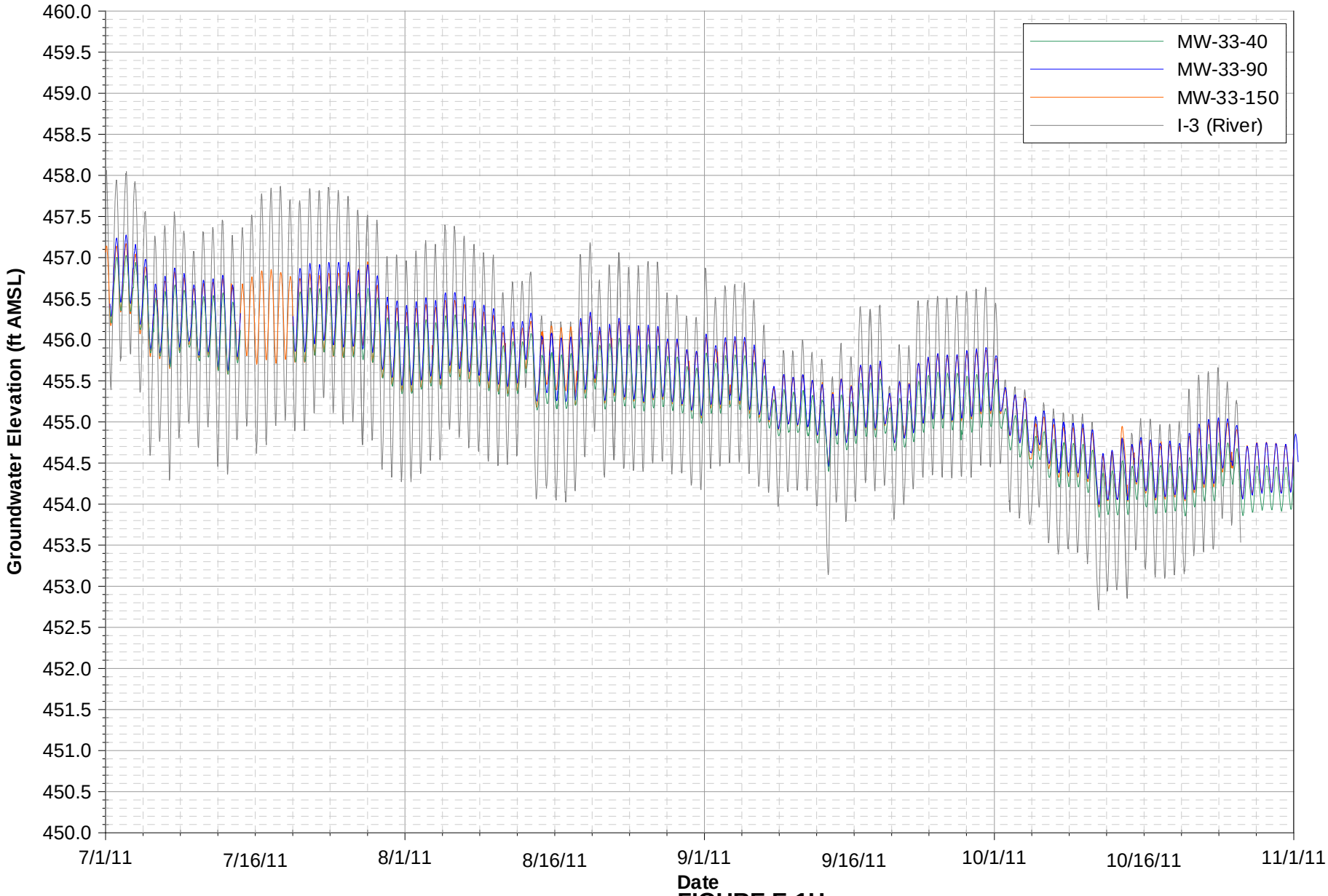
CH2MHILL



Notes:
Data subject to review.

FIGURE E-1G
MW-32 HYDROGRAPH
THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



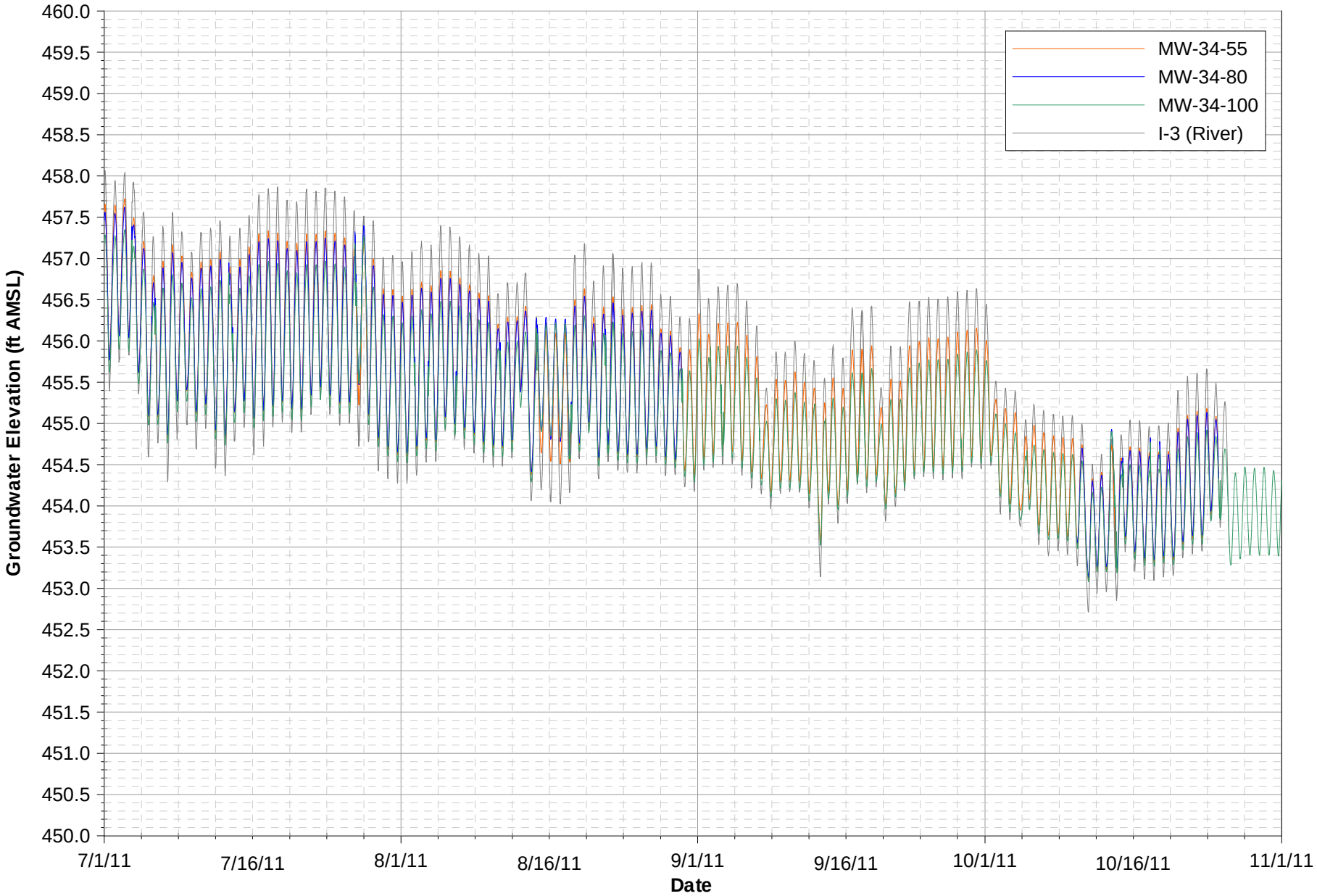
Notes:
Data subject to review.
MW-33-40 data unavailable from July 14, 2011 through July 20, 2011 due to tranducer failure.
MW-33-90 data unavailable from July 14, 2011 through July 20, 2011 due to tranducer failure.

FIGURE E-1H

MW-33 CLUSTER HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT, PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



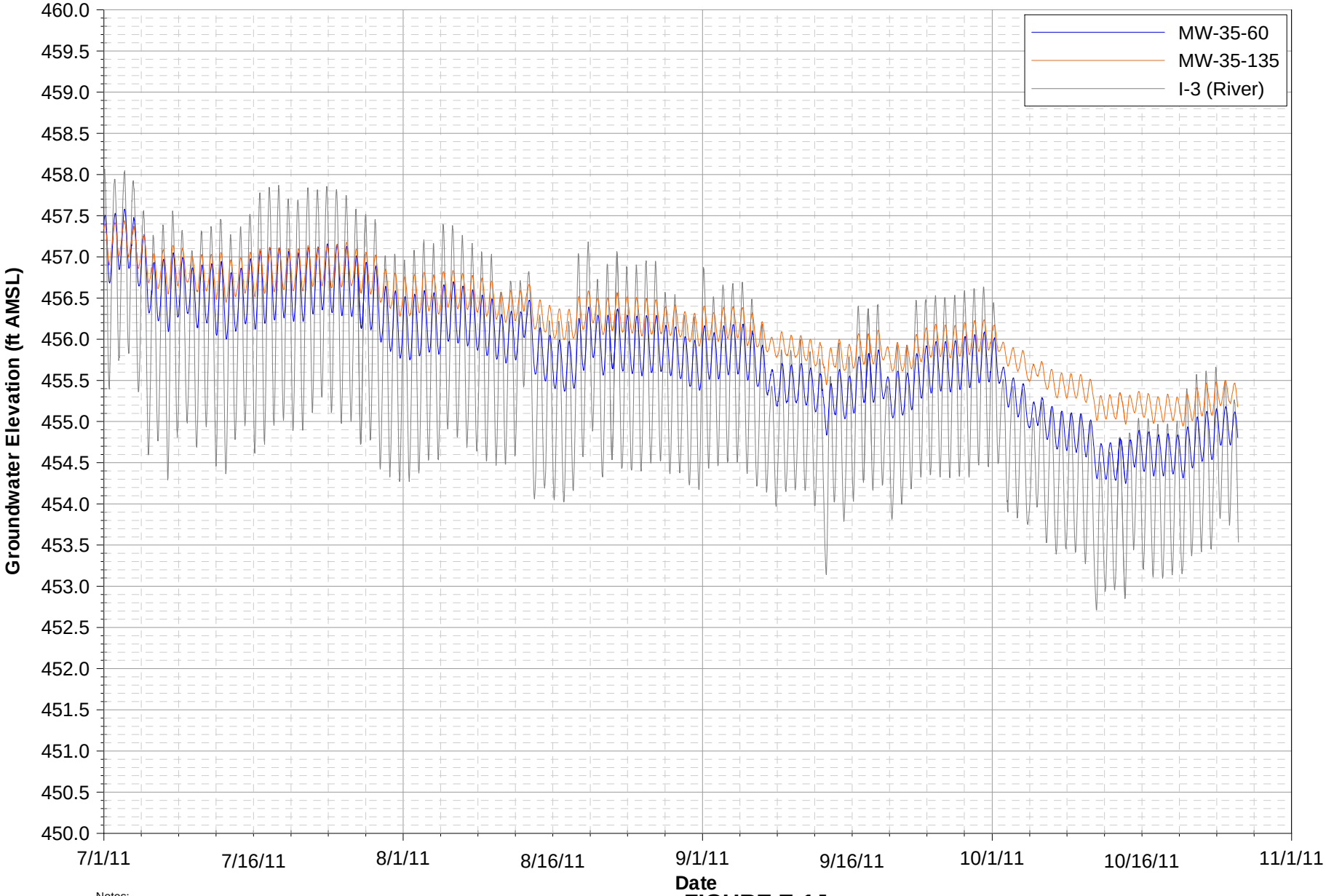
Notes:
Data subject to review.
MW-34-80 data unavailable from August 30, 2011 through October 10, 2011 due to transducer failure.

FIGURE E-1I

MW-34 CLUSTER HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT, PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



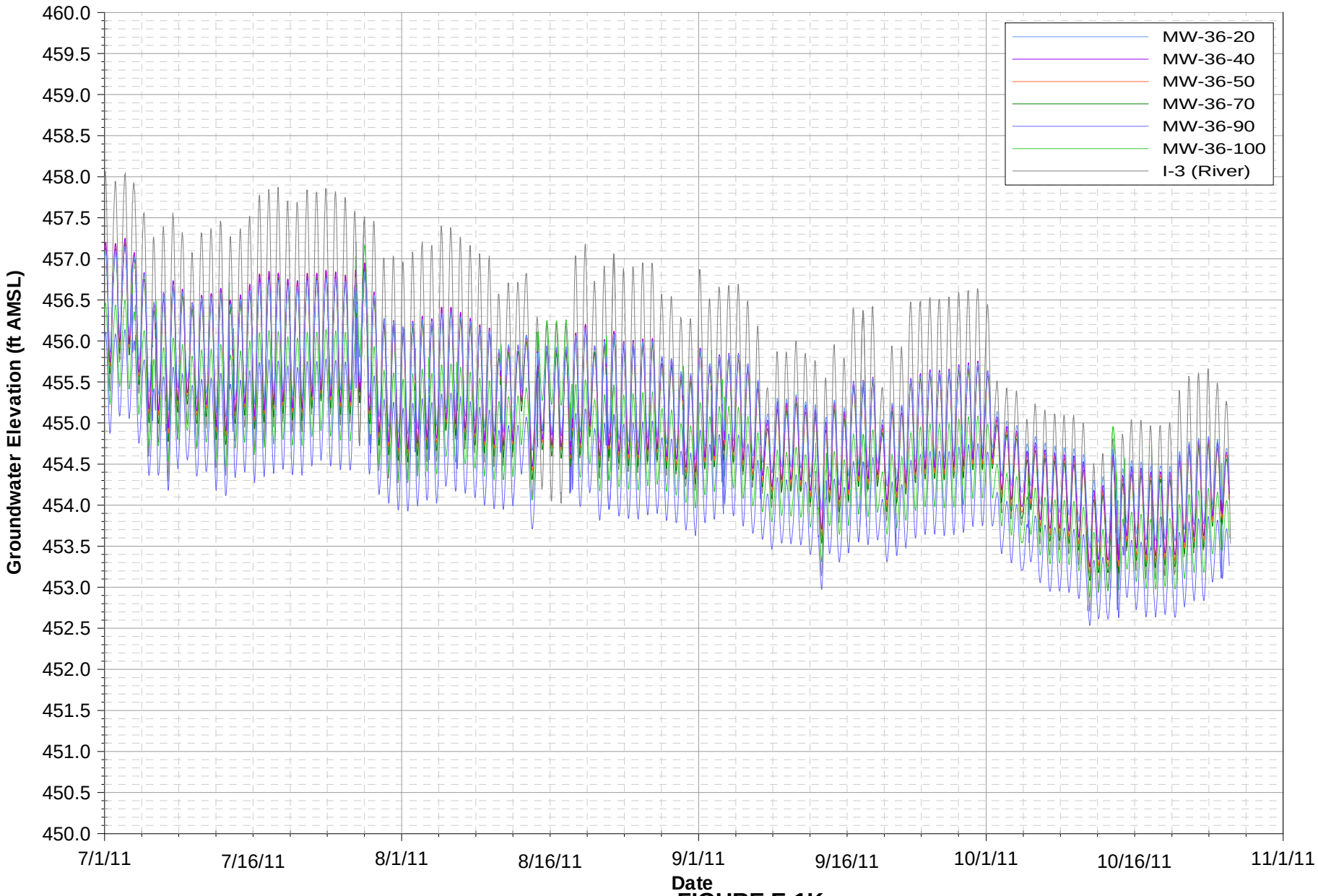
Notes:
Data subject to review.

FIGURE E-1J

MW-35 CLUSTER HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT, PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



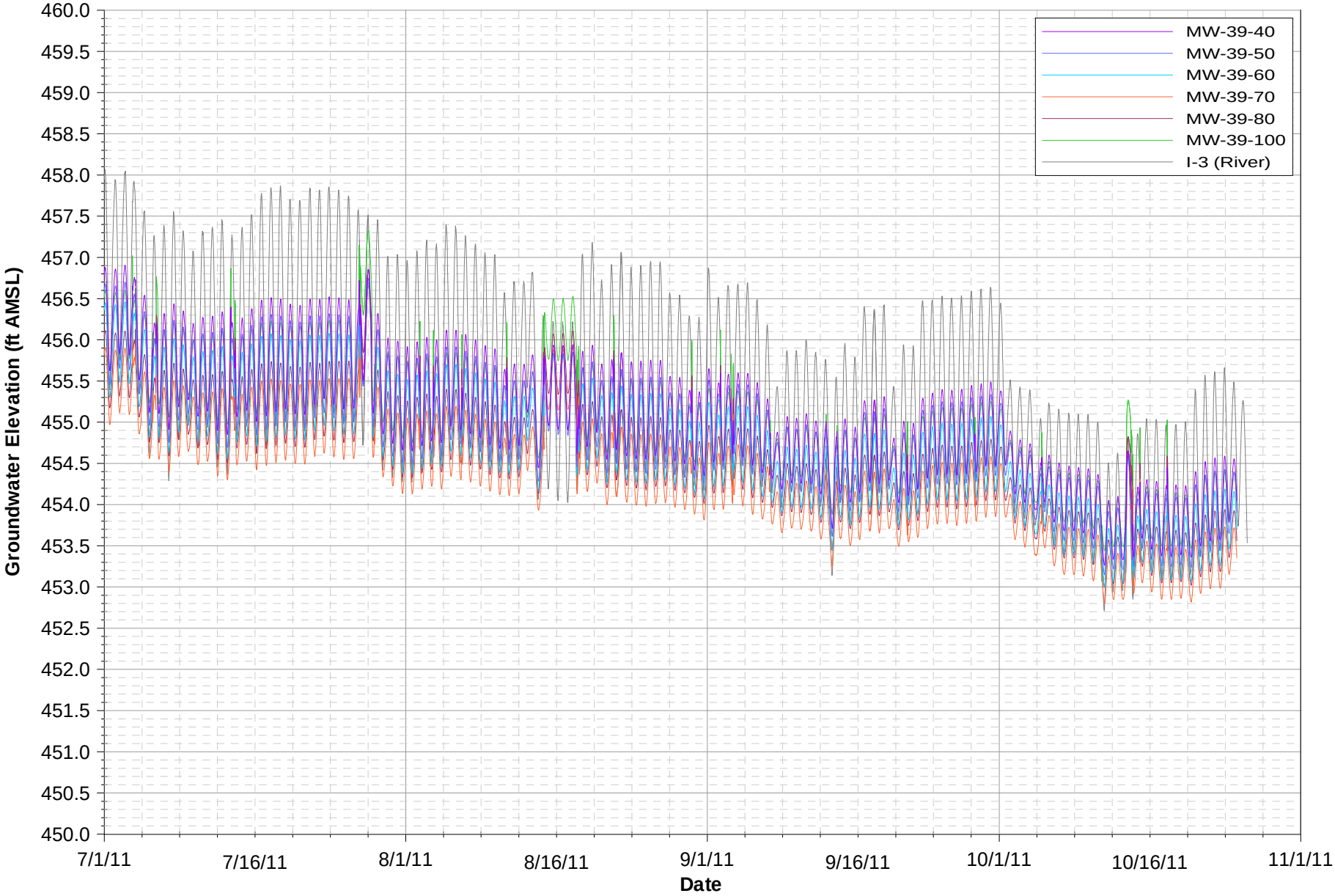
Notes:
Data subject to review.

FIGURE E-1K

MW-36 CLUSTER HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



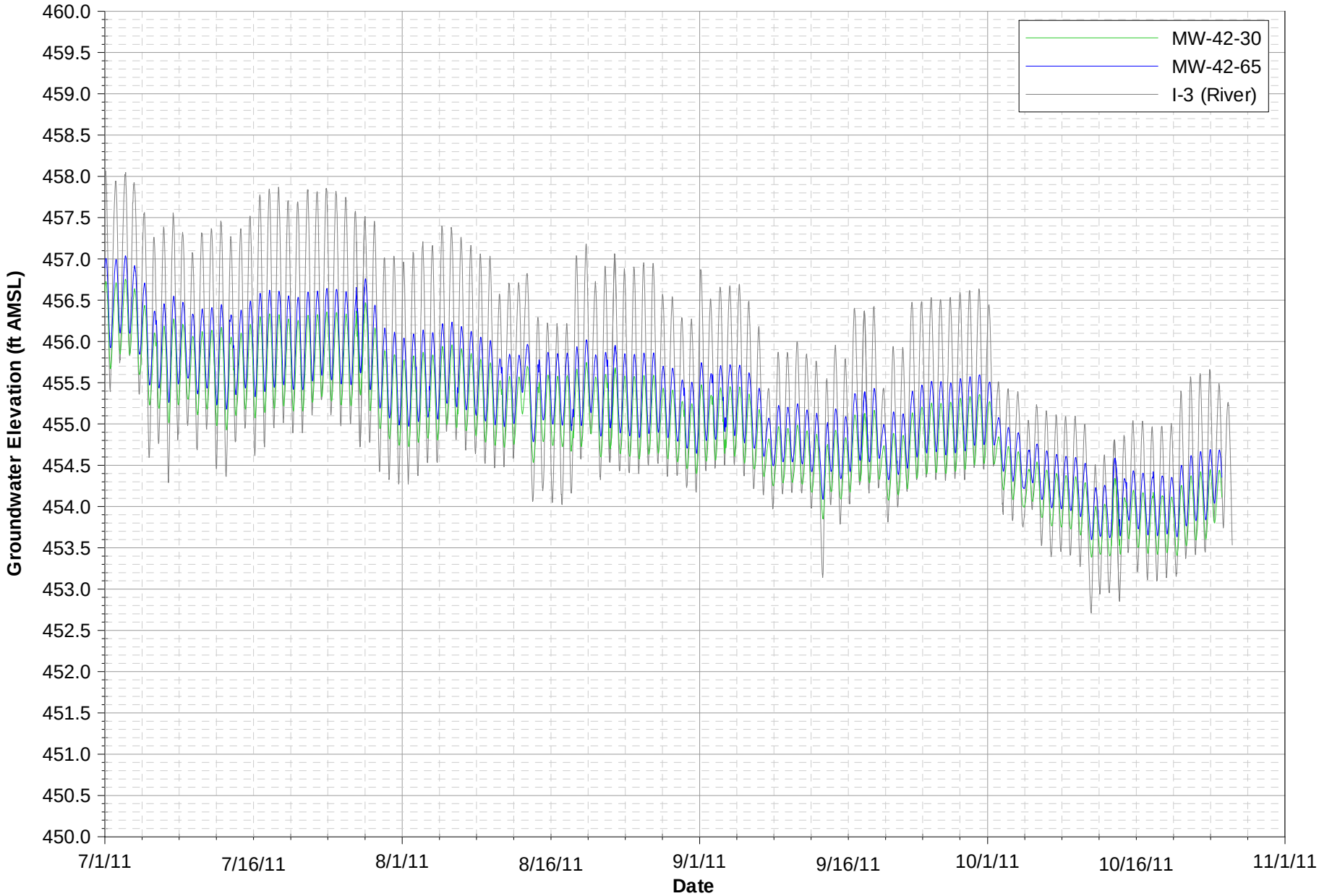
Notes:
Data subject to review.

FIGURE E-1L

MW-39 CLUSTER HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



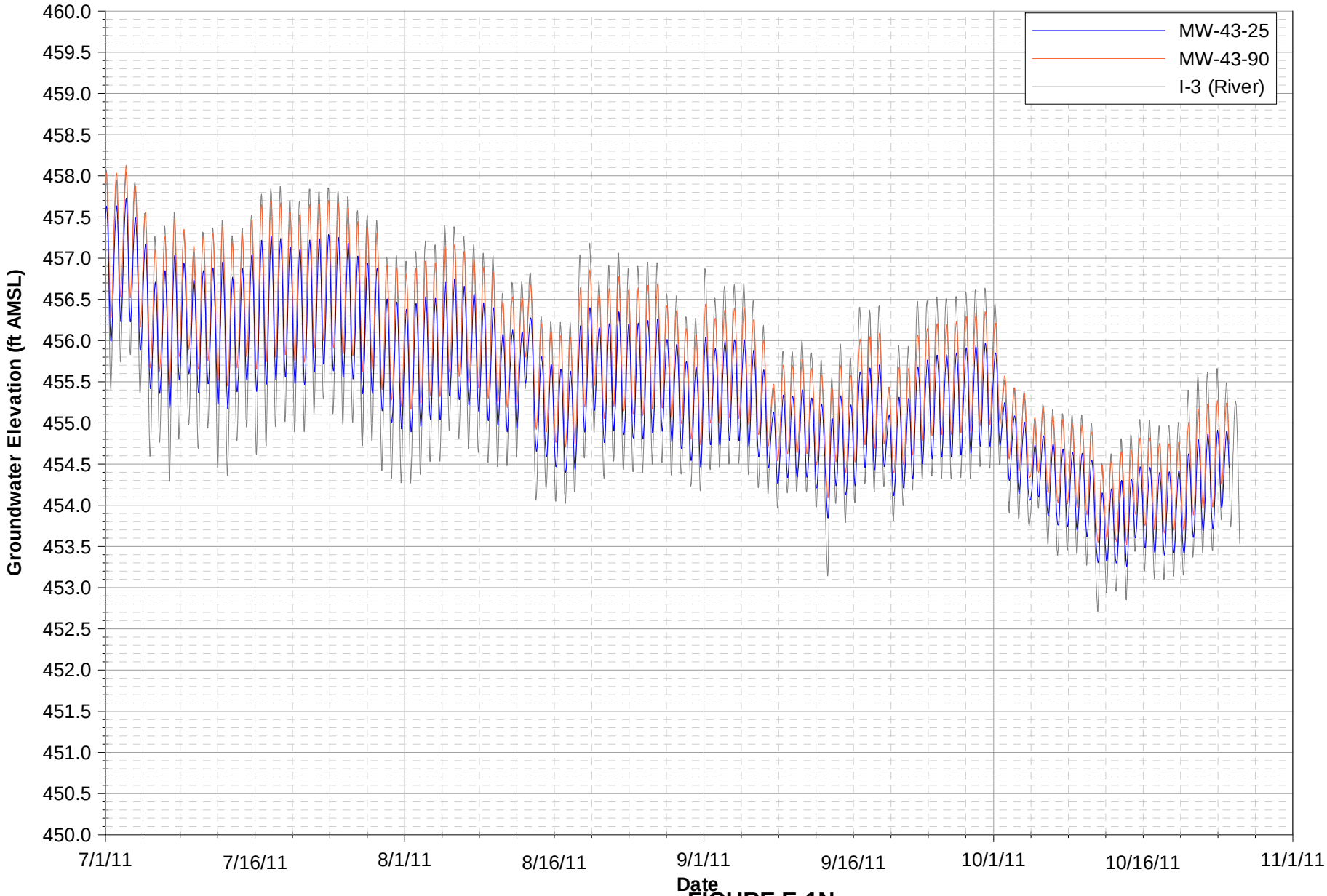
Notes:
Data subject to review.

FIGURE E-1M

MW-42 CLUSTER HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



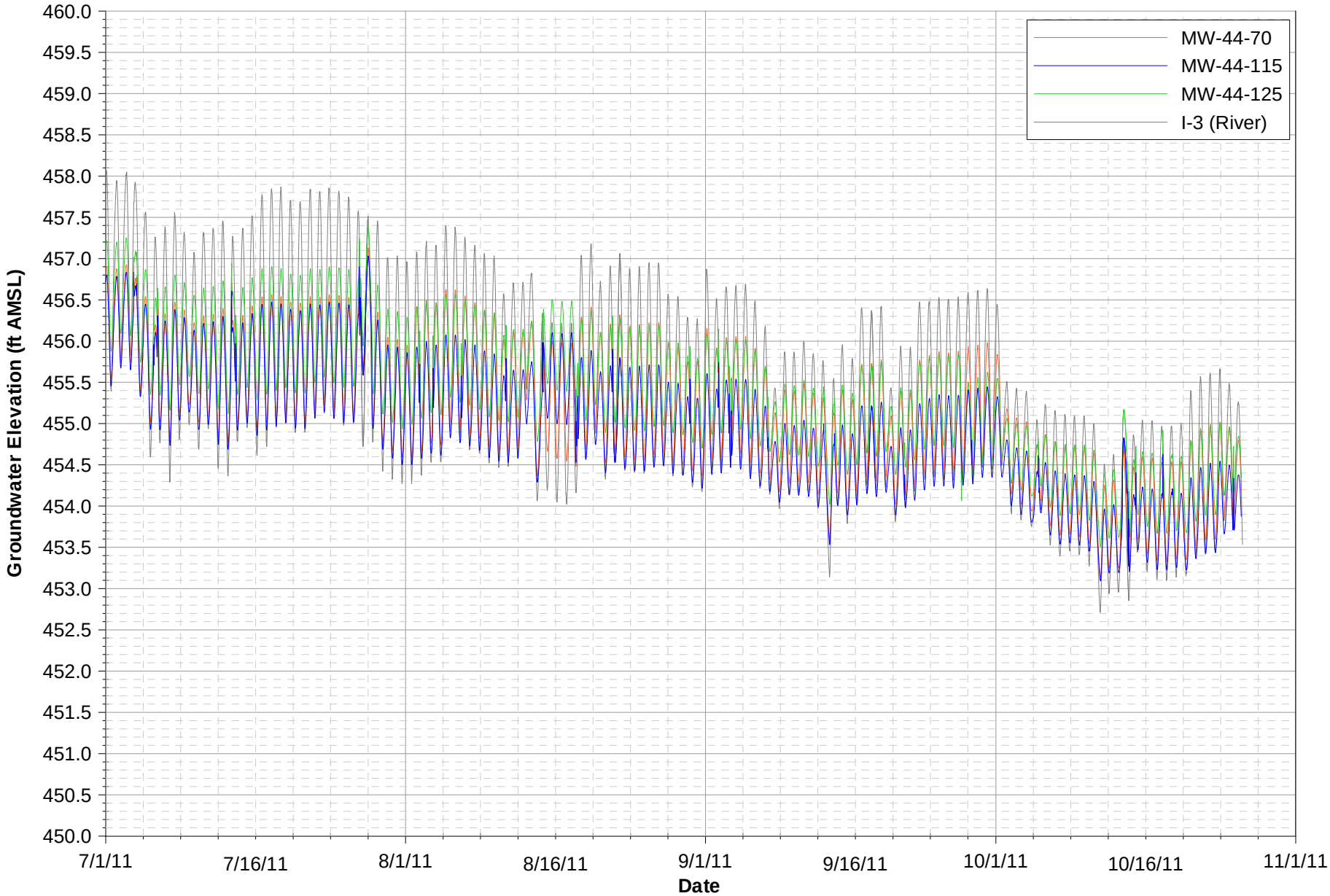
Notes:
Data subject to review.

FIGURE E-1N

MW-43 CLUSTER HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



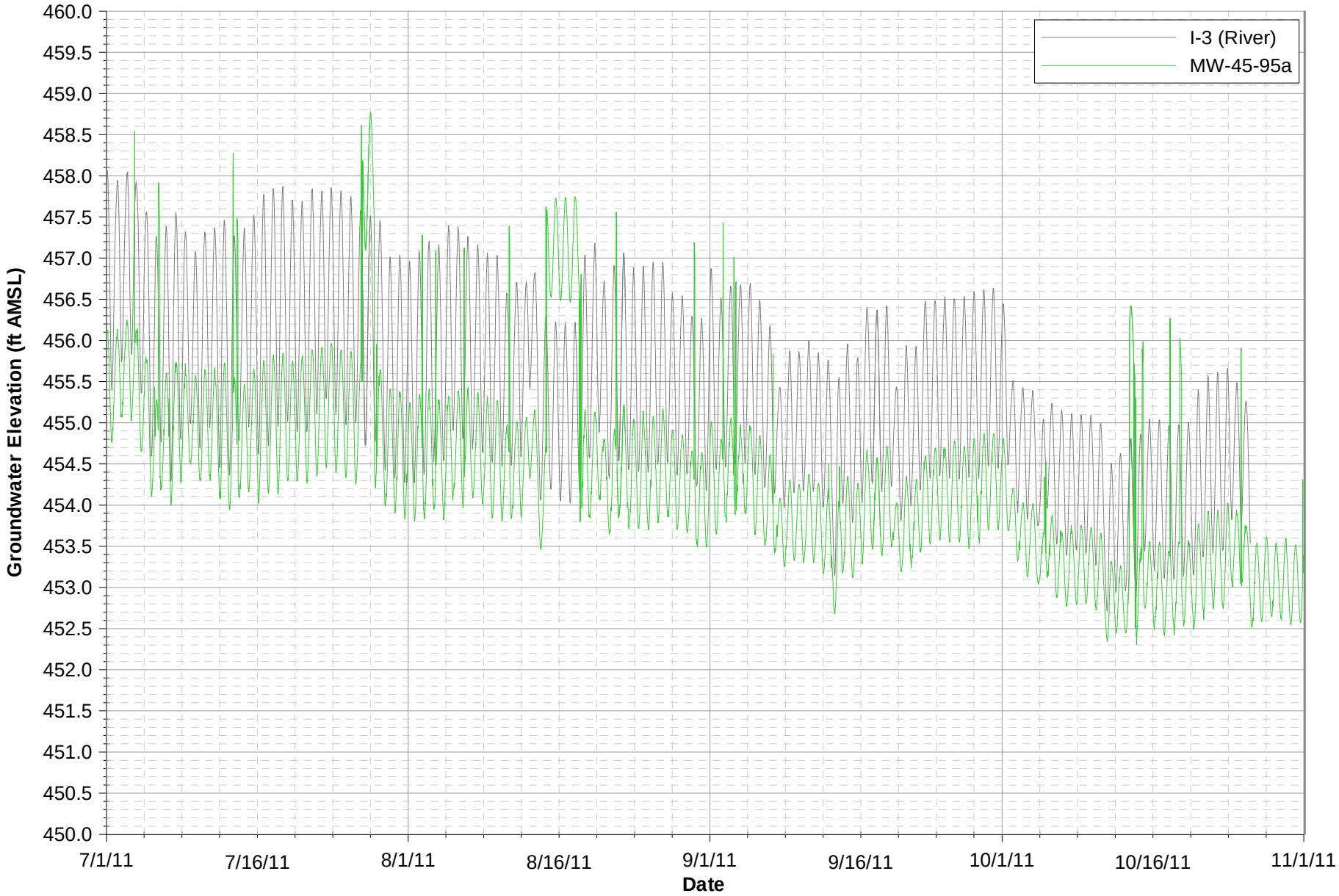
Notes:
Data subject to review..

FIGURE E-1O

MW-44 CLUSTER HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

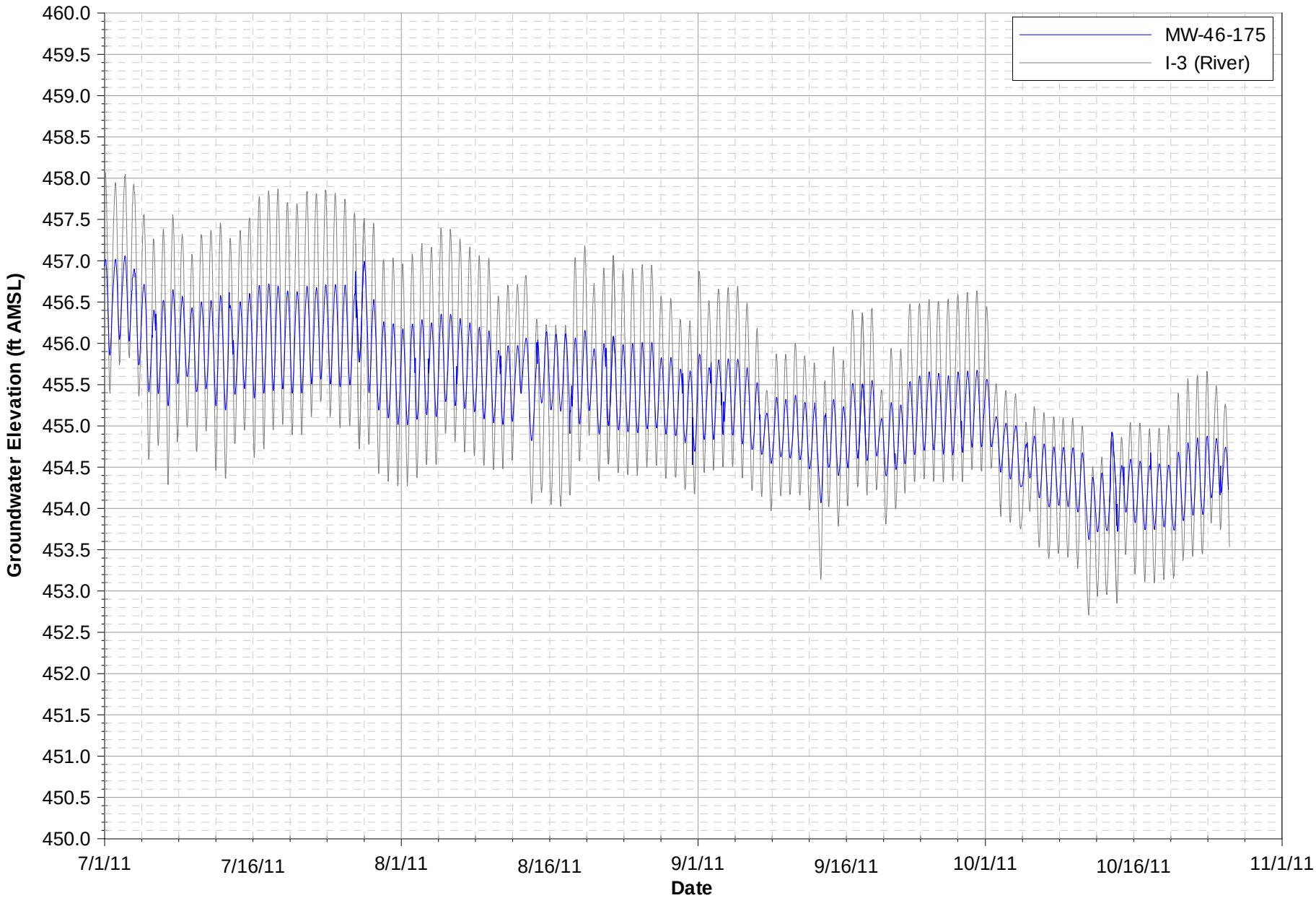
CH2MHILL



Notes:
Data subject to review.

FIGURE E-1P
MW-45-95a HYDROGRAPH
THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

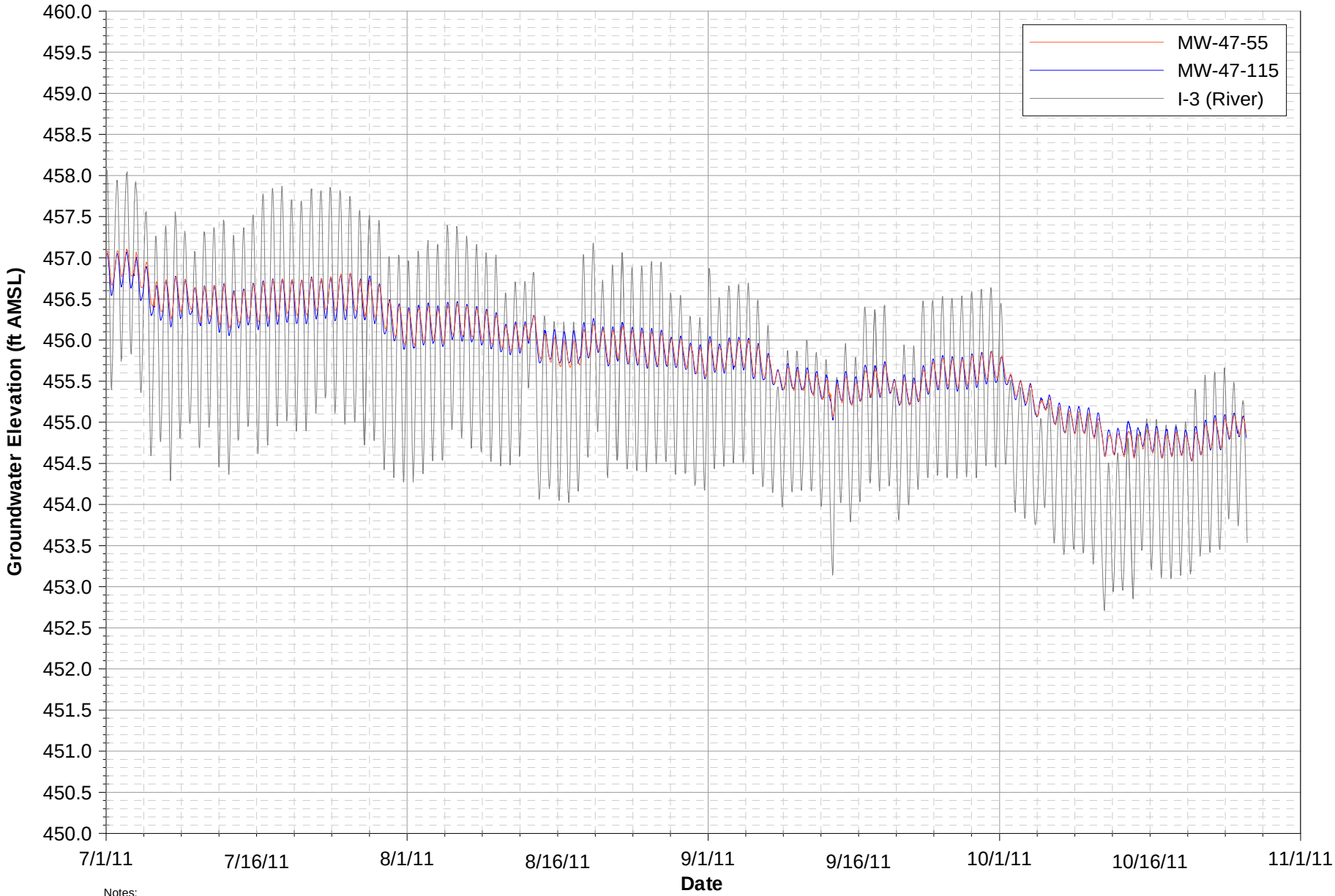
CH2MHILL



Notes:
Data subject to review.

FIGURE E-1Q
MW-46 HYDROGRAPH
THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



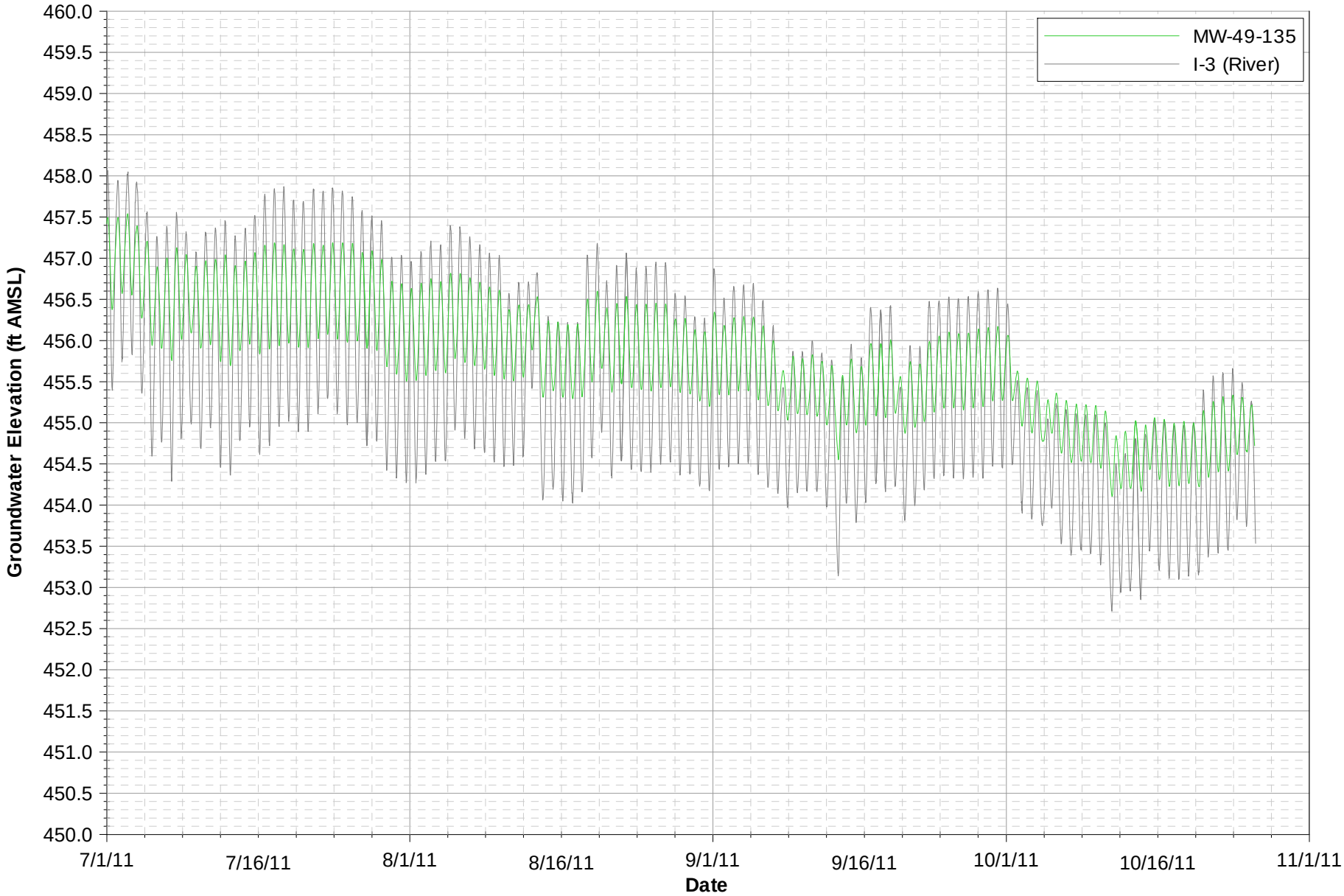
Notes:
Data subject to review.

FIGURE E-1R

MW-47 CLUSTER HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT, PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

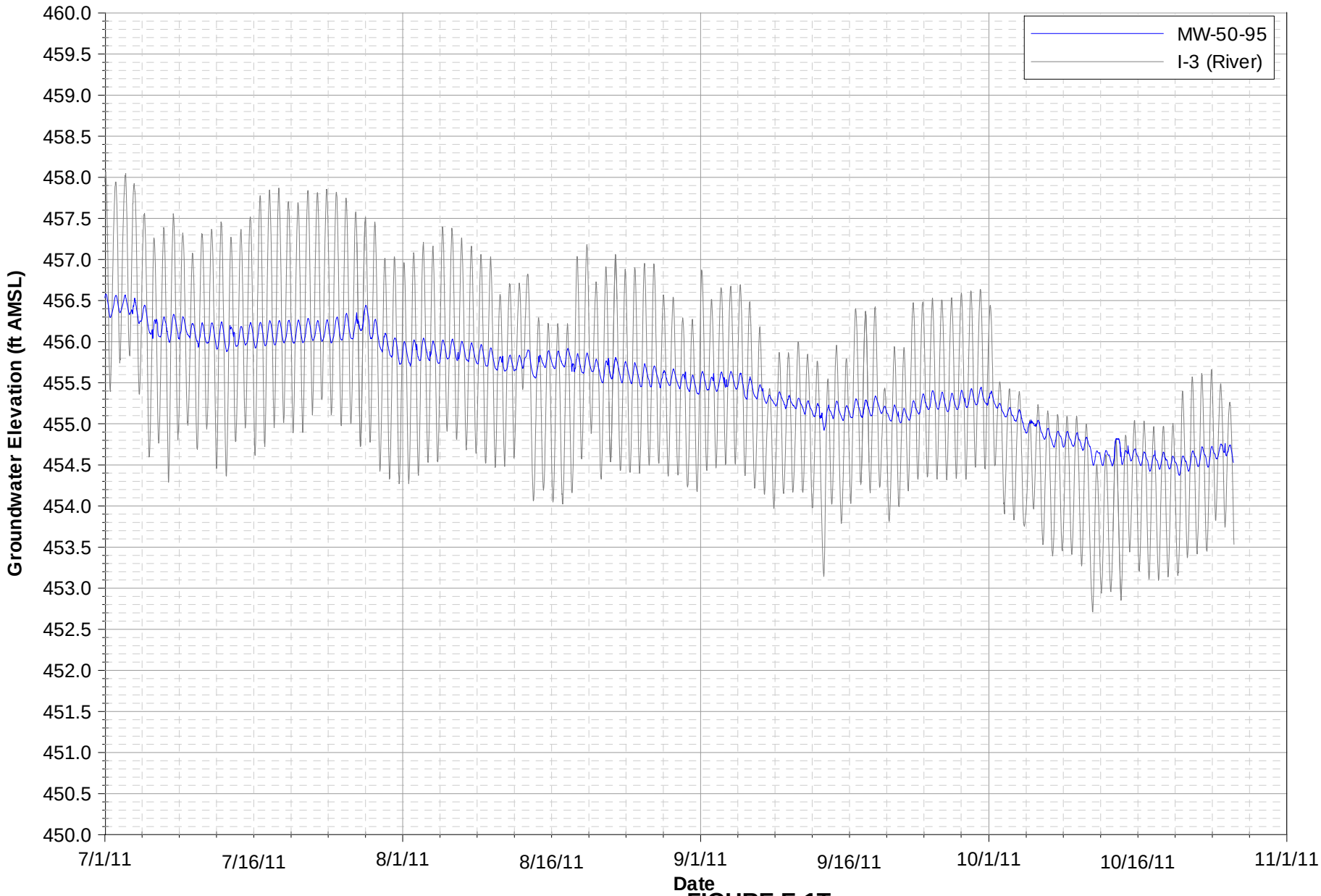
CH2MHILL



Notes:
Data subject to review.

FIGURE E-1S
MW-49 HYDROGRAPH
THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

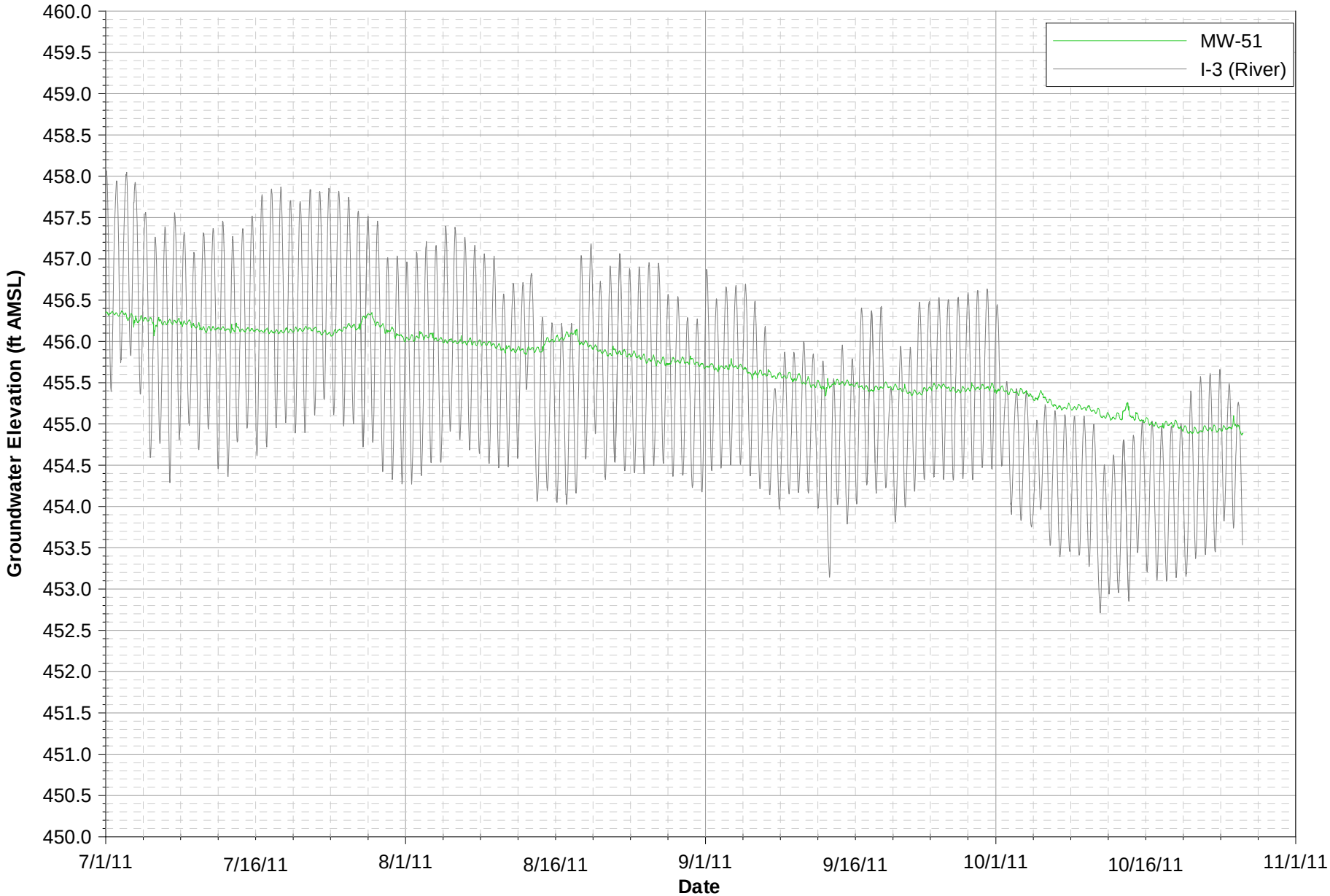
CH2MHILL



Notes:
Data subject to review.

FIGURE E-1T
MW-50 HYDROGRAPH
THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



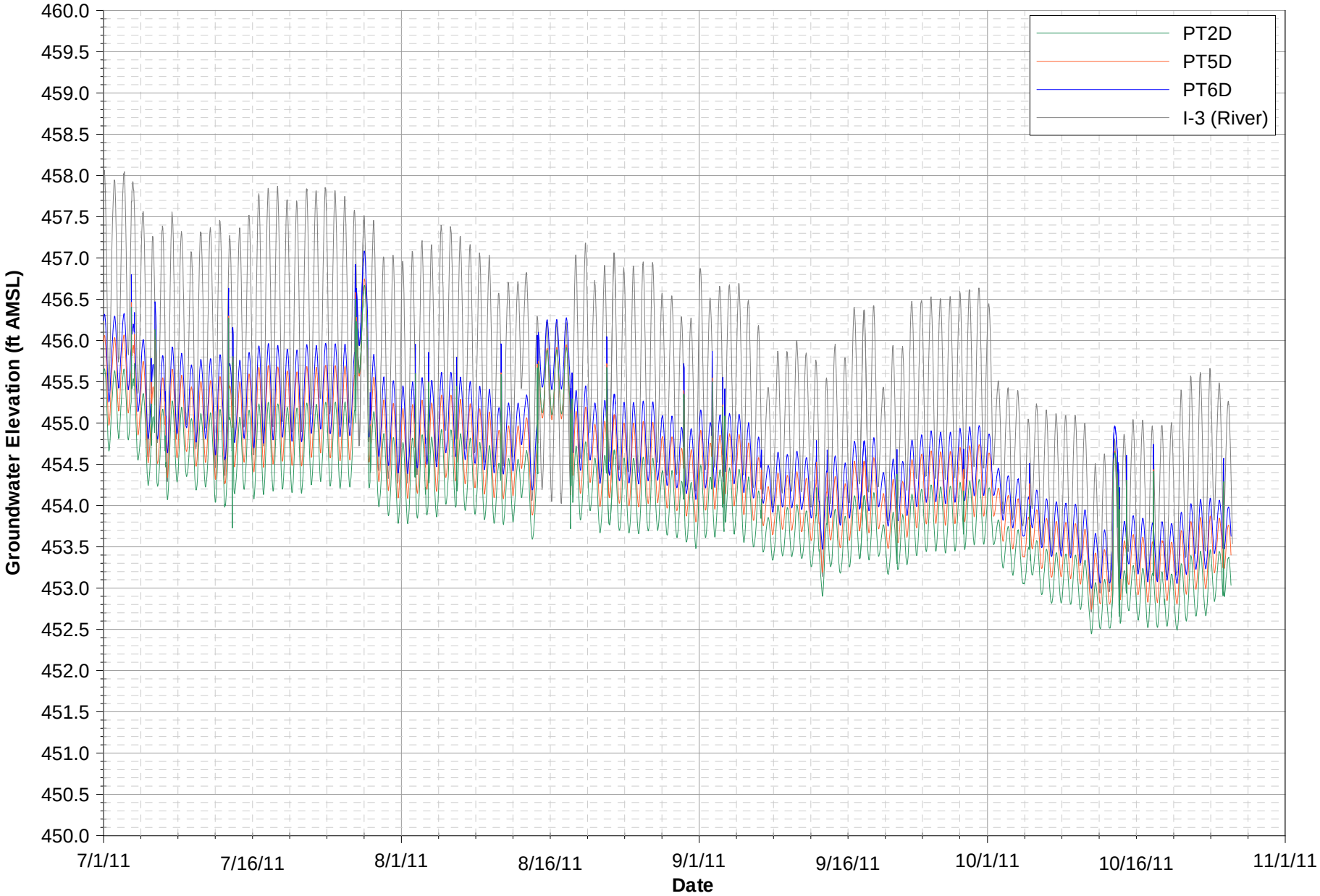
Notes:
Data subject to review.

FIGURE E-1U

MW-26 & MW-51 HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

CH2MHILL



Note:
Data subject to review.

FIGURE E-1V

INSITU PILOT STUDY WELL HYDROGRAPHS

THIRD QUARTER 2011 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT,
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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