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May 28, 2010

Mr. Aaron Yue
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Subject: *First Quarter 2010 Interim Measures Performance and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station, Needles, California* (Document ID: PGE20100528A)

Dear Mr. Yue:

Enclosed is the *First Quarter 2010 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 Performance Monitoring Program and the Groundwater Monitoring Program and Surface Water Monitoring Program for the Topock project. This report presents the First Quarter (February 2010 through April 2010) 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 analysis related to the Groundwater Monitoring Program and Surface Water Monitoring Program during the reporting period.

The Interim Measures quarterly performance monitoring report is submitted in conformance with the reporting requirements in DTSC's Interim Measure 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, and April 28, 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
First Quarter 2010 Interim Measures Performance and Site-Wide Groundwater and Surface Water Monitoring Report

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Final Report

First Quarter 2010 Interim Measures Performance Monitoring and Site-Wide Groundwater and Surface Water Monitoring Report

PG&E Topock Compressor Station Needles, California

Document ID: PGE20100528A

Prepared for

California Department of Toxic Substances Control

on behalf of

Pacific Gas and Electric Company

May 28, 2010

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First Quarter 2010 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 Department of Toxic Substances Control

On behalf of

Pacific Gas and Electric Company

May 28, 2010

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Acronyms and Abbreviations

µg/L	micrograms per liter
bgs	below ground surface
BOR	United States Bureau of Reclamation
Cr(VI)	hexavalent chromium
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 Measures
IMCP	Interim Measures Contingency Plan
IM-3	Interim Measures Number 3
ORP	oxidation-reduction potential
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
VOCs	Volatile Organic Compounds

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 in 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:

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

The data presented were collected from February 1 through April 30, 2010. 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 DTSC in May 2009 (DTSC, 2009a).

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 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*, 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,* dated June 29, 2009 (CH2M HILL, 2009b).

For background and descriptions of the current groundwater and surface water sampling, analyses, and monitoring programs, refer to PG&E's *Fourth Quarter 2009 and Annual Interim Measures Performance Monitoring and Site-Wide Groundwater and Surface Water Monitoring Report, PG&E Topock Compressor Station*, dated March 15, 2010 (CH2M HILL, 2010).

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 123 groundwater monitoring wells, which consist of:

- One hundred six monitoring wells in California.
- 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 (2010a). 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 (2010b).

Figure 1-2 also 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 damaged several wells in the GMP monitoring network. The MW-58 monitoring well cluster previously consisted of two well locations and three sampling depths: 65 feet below ground surface (bgs), 115 feet bgs, and 205 feet bgs. As a result of this storm event, the Flexible Liner Underground Technologies (FLUTe™) well liner that allowed sampling at the 115 feet bgs and 205 feet bgs depth intervals was removed from the deeper of the two MW-58 wells. Initial inspections of the MW-58 FLUTe™ liner showed infiltration of silt on the inside of the liner. The removal team from FLUTe™ transported the liner back to their production facility for further inspection. Currently, the well that was completed with the FLUTe™ liner is an open bedrock borehole and is designated as MW-58BR. MW-58-65 was unaffected by modifications to the former FLUTe™ completion at MW-58BR. The storm event contributed to recharge sufficient for the first sampling of two 'perched' water table wells installed in the East Ravine area, the shallow MW-58 completion well constructed of 2-inch PVC, MW-58-65, and the similarly constructed MW-57-50. The perched well sampling results from February 2010 are included with this report in Section 3.3.3.

The two wells composing the MW-38 cluster were also damaged in the storm events during the week of January 18, 2010. Monitoring well MW-38S is filled with silt to 33 feet bgs, the surface completion has been destroyed, and this well is no longer usable as a groundwater sampling well. Monitoring well MW-38D is currently leaning at a 15- to 20-degree angle; however, no evidence of inundation was present. Monitoring well MW-38D is usable as a groundwater sampling well if a non-standard pump is used. Plans to rehabilitate or replace MW-38S and MW-38D are ongoing.

1.2 Interim Measure Performance Monitoring Program

In compliance with the requirements for IM monitoring and reporting outlined in the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) IM performance directive of March 2005, and in subsequent directives from the DTSC in 2007 (DTSC, 2005a; DTSC, 2007a-c), this document presents the First Quarter 2010 Performance Monitoring Program (PMP) evaluation report for the IM monitoring activities from February 1 through April 30, 2010.

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 Interim Measures Number 3 (IM-3). 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. 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, 2005b). 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, 2005c). 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, and July 17, 2008 (DTSC, 2007a, 2008a-b).

PMP Monitoring Networks

Figure 1-3 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 that were in service/active as of May 2010 are defined as:

- **Floodplain Wells** (monitoring wells on the Colorado River floodplain): MW-22, MW-27 cluster (three wells), MW-28 cluster (two wells), MW-30-50, MW-32-35, MW-33 cluster (three wells), MW-34 cluster (three wells), MW-36 cluster (six wells), MW-39 cluster (six wells), MW-42 cluster (two wells), MW-43 cluster (two wells), MW-44 cluster (three wells), MW-45-95, MW-46-175, and MW-49-135. Additionally, three pilot test wells (PT-2D, PT-5D, and PT-6D) are used to supplement hydraulic monitoring but are not formally part of the PMP.

- **Intermediate Wells** (monitoring wells located immediately north, west, and southwest of the floodplain): MW-20 cluster (three wells), MW-26, MW-31 cluster (two wells), MW-35 cluster (two wells), MW-47 cluster (two wells), MW-50-95, and MW-51.
- **Interior Wells** (monitoring wells located upgradient of IM pumping): MW-25.

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 1-3. Currently, 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 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 floodplain aquifer is considered to be hydraulically undivided. The subdivision of the aquifer into three depth intervals is an appropriate construct for presenting and evaluating groundwater quality data in the floodplain. The three-interval concept is also useful for presenting and evaluating lateral gradients while minimizing effects of vertical gradients and observing the influence of pumping from partially penetrating wells.

2.0 First Quarter 2010 Monitoring Activities

This section provides a summary of the monitoring and sampling activities completed during the First Quarter 2010.

2.1 Groundwater Monitoring Program

2.1.1 Monthly

One monthly GMP groundwater sampling event was conducted on February 8 and 9, 2010. This event included sampling five GMP monitoring wells (MW-34-80, MW-34-100, MW-44-115, MW-44-125, and MW-46-175) for Cr(VI) and chromium.

The active IM extraction wells (PE-1 and TW-3D) were sampled for Cr(VI) and chromium during February, March, and April.

During the February 2010 monthly sampling event, three wells comprising the MW-64 cluster were sampled monthly for the last time, as directed by DTSC in an email dated October 5, 2009 (DTSC, 2009b).

2.1.2 Semiannually

The first quarter GMP semiannual groundwater monitoring event was conducted between March 8 and March 18, 2010 and consisted of sampling:

- Sixty-nine groundwater monitoring wells, including three Arizona monitoring well clusters and 13 East Ravine wells.
- Two active IM extraction wells.
- One test well.

The above wells were sampled for Cr(VI), chromium, field oxidation-reduction potential (ORP), field specific conductance, and field pH. In addition, three wells (MW-10, MW-12, and MW-22) were sampled for California Code of Regulations Title 22 metals analyses, and two wells (MW-16 and MW-17) were sampled for background study metals.

Monitoring wells MW-12 and MW-48 were sampled between April 7 and April 9, 2010 due to access problems caused by the large rainfall event the week of January 18, 2010. Monitoring well PGE-8 was sampled in April 2010 after planning the logistics of sampling with temporary pumps and managing purge water from this deep 6-inch-diameter well.

2.1.3 Additional Monitoring Activities

The following monitoring activities were conducted at selected GMP wells during First Quarter 2010:

- As directed by DTSC, 19 GMP wells screened in fluvial sediments were sampled for arsenic during the March semiannual sampling event, as directed by DTSC in their Corrective Measures Study review comment No. 186 (DTSC, 2009c).
- As directed by DTSC, the open borehole MW-58BR was sampled for Cr(VI), chromium, and arsenic on March 25, 2010, after removal of the FLUTe™ liner.
- In accordance with the approved East Ravine Groundwater Investigation Work Plan, the perched wells MW-57-050 and MW-58-065 were sampled on February 16-17, 2010 for volatile organic compounds, Cr(VI), chromium, total dissolved solids (TDS), chloride, sulfate, nitrate, stable isotopes, pH, and ORP.

2.2 Surface Water Monitoring Program

Quarterly surface water sampling was conducted on April 5 and April 6, 2010 from the complete RMP monitoring network. Samples were analyzed for Cr(VI), chromium, specific conductance, and pH.

2.3 Performance Monitoring Program

PMP transducers are downloaded in the first week of every month (February, March, and April). The transducers in the key monitoring wells (MW-27-085, MW-31-135, MW-33-150, MW-34-100, and MW-45-095a) are downloaded weekly. During the week of April 19, 2010, key well transducers were downloaded daily to aid in monitoring landward gradients during the annual IM-3 shutdown.

3.0 Results for Site Wide Groundwater Monitoring and River Sampling

3.1 Groundwater Results for Cr(VI) and Chromium

Table 3-1 presents the results for Cr(VI), chromium, field ORP, field specific conductance, and field pH in groundwater samples collected from April 2009 through April 2010. During First Quarter 2010, the maximum detected Cr(VI) concentration was 11,100 µg/L at well MW-20-130. The laboratory reports for results from February through April 2010 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, respectively, from the First Quarter 2010 sampling event. Figures 3-1a through 3-1c also show the approximate outline of the areas where Cr(VI) was detected in samples at concentrations greater than 32 µg/L during the First Quarter 2010 semiannual monitoring 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 approximate outlines of monitoring wells with Cr(VI) concentrations 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, 2010).

During the First Quarter 2010 event, Cr(VI) and chromium were not detected in groundwater samples from the Arizona monitoring wells, with the exception of the result from MW-55-120 (5.58 µg/L), which was within background levels.

3.2 Surface Water Results for Cr(VI) and Chromium

Table 3-2 presents results of Cr(VI), chromium, specific conductance, and lab pH from the First Quarter 2010 (April) surface water monitoring event. Cr(VI) and chromium were not detected above the reporting limit at any in-channel, shoreline or other surface water monitoring locations during the First Quarter 2010 event.

3.3 Other Monitoring Results

3.3.1 Title 22 Metals

Table 3-3 presents the Title 22 metals results for the GMP monitoring wells sampled during the First Quarter 2010 event. In March 2010, samples from monitoring wells MW-10, MW-12, and MW-22 were analyzed for Title 22 metals. In addition to chromium, the trace metals detected during the March 2010 groundwater sampling event were arsenic, barium,

copper, molybdenum, selenium, vanadium, and zinc. The dissolved concentrations of the trace metals detected during the March 2010 event—other than chromium (in wells MW-10 and MW-12) and arsenic (in wells MW-12 and MW-22)—are below the respective federal and California maximum contaminant level drinking water standards.

3.3.2 Arsenic Sampling in Fluvial Wells

Nineteen fluvial wells were sampled for arsenic in the First Quarter 2010 event. These results are presented in Appendix B, Table B-1. Five of the fluvial well samples showed arsenic concentrations greater than the California maximum contaminant level of 10 µg/L. The maximum concentration was detected in MW-29 at 35 µg/L, where strongly reducing conditions are present.

The open borehole MW-58BR was also sampled for arsenic following the removal of the FLUTe™ well liner. The result from this sample (13 µg/L) is also shown in Table B-1 in Appendix B.

3.3.3 Perched Wells Sampling

Two shallow perched wells (MW-57-50 and MW-58-65) were sampled February 16-17, 2010 for VOCs, Cr(VI), chromium, TDS, Chloride, Sulfate, Nitrate, and stable isotopes in accordance with the approved East Ravine Work Plan. All VOCs results were non-detect. These results are presented in Appendix B, Table B-2.

3.4 Data Validation and Completeness

Laboratory analytical data from the First Quarter 2010 GMP sampling event were reviewed by project chemists to assess data quality and to identify deviations from analytical requirements. The completeness objectives were met for all method and analyte combinations. No significant analytical deficiencies were identified in the First Quarter 2010 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 April 2010. 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 1-3 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 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 of PMP Wells

The 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 in Figure 4-1. The Cr(VI) concentration contours shown for the Alluvial Aquifer have been updated to reflect the First Quarter 2010 groundwater sampling event.

Figure 4-2 presents the March 2010 Cr(VI) results for cross-section B, oriented parallel to the Colorado River. The location of cross-section B is shown in Figure 1-3. 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.

Figure 4-3 presents Cr(VI) concentration trend graphs for selected deep monitoring wells in the floodplain area through April 2010. 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 in Figure 1-3. Appendix C includes Cr(VI) concentration trend graphs for selected monitoring well clusters through April 2010.

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 First Quarter 2010 period. A review of Figure 4-3 and Appendix C indicates that Cr(VI) concentrations have remained steady or have decreased in many wells since IM and PE-1 pumping began in 2004 and 2005, respectively.

Key trends include:

- MW-33 cluster Cr(VI) concentrations have remained relatively stable since 2008, as shown in Figure C-1.
- MW-36 cluster Cr(VI) concentrations in the shallow and mid-depth wells have remained below reporting limits since 2004, as shown in Figure C-3.
- Deep well MW-36-90 Cr(VI) concentrations decreased after the start of IM pumping, diminishing further to reporting limits upon the initiation of PE-01 pumping in 2006, as shown in Figure C-3 and Figure 4-3.
- Deep well MW-36-100 Cr(VI) concentrations initially increased upon the startup of PE-01 pumping but decreased from 2007 through First Quarter 2010 to less than 100 μg/L, as shown in Figure C-3 and Figure 4-3.
- Shallow well MW-39-40 Cr(VI) concentrations have remained below reporting limits since 2004, as shown in Figure C-4, while mid-depth wells in the MW-39 cluster (MW-39-50, MW-39-60, and MW-39-70) showed concentrations decrease below reporting limits between 2005 and 2007, as shown in Figure C-4.
- In the deep well MW-39-080, Cr(VI) concentrations rapidly decreased after startup of IM pumping and declined to below the reporting limit in 2009. Deep well MW-39-100 concentrations also steadily declined since the start of IM pumping, with the lowest concentration observed to date in September 2009, as shown in Figure C-4.
- Deep well MW-44-115 has shown an overall downward trend since July 2006, as shown in Figure 4-3 and Figure C-5. Well MW-44-125 has also shown an overall downward trend since November 2008, as shown in Figure 4-3 and Figure C-5.
- Since 2006, concentrations in deep well MW-46-175 have shown some fluctuation within a generally stable range, that is concentrations have shown no net increase or decrease, as shown in Figure 4-3 and Figure C-6.
- MW-47 cluster Cr(VI) concentration trends have generally been stable since early 2008, as shown in Figure C-7. Well TW-04, a deeper well in this cluster, has shown an overall declining trend since October 2007.

As shown in Figure 4-3, well MW-34-100 has shown both short-term declines and increases in Cr(VI) concentrations since PE-1 pumping commenced. Since June 2006, concentrations at this well have shown a general downward trend with seasonal fluctuations, as shown in Figure 4-3. Landward gradients have been present at this location since IM pumping began; therefore, the periodic increases in concentration observed at MW-34-100 do not indicate any movement of the plume toward the river.

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. Current IMCP wells, trigger levels, and most recent sampling results are listed in Table 4-1. The IMCP well Cr(VI) results in First Quarter 2010 were all

below their assigned trigger levels. Appendix C includes Cr(VI) concentration trend graphs for the IMCP wells.

4.4 Extraction Systems Operations

Pumping data for the IM-3 groundwater extraction system for the first quarter reporting period of February 1 through April 30, 2010 are presented in Table 4-2. From February 1 through April 30, 2010, the volume of groundwater extracted and treated by the IM-3 system was 15,839,781 gallons. This resulted in removal of an estimated 62.6 kilograms (or 138 pounds) of chromium from the aquifer during the First Quarter 2010 reporting period. The average extraction rate for the IM system during the reporting period was 123.6 gallons per minute (gpm). The average monthly pumping rates were 127.4 gpm (February 2010), 129.0 gpm (March 2010), and 114.4 gpm (April 2010) during the reporting period.

During First Quarter 2010, extraction wells TW-3D and PE-1 operated at a combined pump rate of 135 gpm, excluding periods of planned and unplanned downtime. Extraction wells TW-2S and TW-2D were not operated during First Quarter 2010. The operational run-time percentage for the IM extraction system was 92.1 percent during this reporting period. The IM extraction system was shut down from April 19 through April 23, 2010 for scheduled annual plant maintenance. The operations log for the extraction system during the First Quarter 2010, 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. Three containers of solids from the IM-3 facility were disposed of at the Kettleman Hills Chemical Waste Management facility during First Quarter 2010. Daily inspections included general facility inspections, flow measurements, and site security monitoring. Daily logs with documentation of inspections are maintained onsite.

During the First Quarter 2010 reporting period, Cr(VI) concentrations in TW-3D have remained stable, ranging from a maximum value of 1,400 µg/L in February 2010 to a minimum value of 1,380 µg/L in March and April 2010, as shown in Table 4-3. TDS concentrations in TW-3D for this period have remained relatively stable, averaging about 5,100 milligrams per liter, as shown in Table 4-3.

The Cr(VI) concentrations in the extracted groundwater at well PE-1, located on the floodplain, have ranged from 13.7 to 22.6 µg/L during the reporting period, as shown in Table 4-3. TDS concentrations in PE-1 for this period have also remained stable, averaging about 3,200 milligrams per liter.

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 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 1-3.

Daily average groundwater and river elevations calculated from the pressure transducer data for First Quarter 2010 reporting period are summarized in Table E-1 in Appendix E. Groundwater elevations (or hydraulic heads) are adjusted for temperature and for 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 First Quarter 2010 reporting period are included in Appendix E. The elevation of the Colorado River measured at the I-3 gauge station (location shown in Figure 1-3) is also shown on the hydrographs.

Average First Quarter 2010 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. Note that 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 water levels that are not contoured in the plan view in Figure 4-4c.

For the First Quarter 2010 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 posted 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. Because this is the single data point in these depth intervals on the Arizona side, this area was not shown or included in contouring of 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.

Hydraulic gradients were measured during the First Quarter 2010 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 4-4 presents the average monthly hydraulic gradients that were measured between the gradient well pairs in February, March and April 2010. Using the data that are available, the overall average gradients for all well pairs ranged from 0.0043 to 0.0055 feet per foot

(ft/ft). This is 4.3 to 5.5 times greater than the required gradient of 0.001 ft/ft. The gradient for the northern well pair ranged from 1.9 to 2.4 times the target gradient of 0.001 ft/ft. For the central well pair, the average landward gradient ranged from 7.7 to 10.4 times the target gradient. The southern well pair gradients averaged 3.0 to 3.8 times the target gradient for the First Quarter 2010 reporting period.

Figure 4-6 presents graphs of the hydraulic gradients, monthly average pumping rates, and river levels for the quarterly period. While river levels were at their lowest stage of the year during February and there was a planned maintenance shutdown of IM-3 pumping in April 2010, strong landward gradients were measured each month.

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 May 2010 is based on the April 2010 BOR projections 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 4-5. The future projections shown in Figure 4-7 are based on BOR long-range projections of Davis Dam releases and Lake Havasu levels from April 2010. There is more uncertainty in these projections at longer times in the future since water demand is based on climatic factors.

Current BOR projections, shown in Table 4-5, show that the average Davis Dam release for May 2010 (15,500 cubic feet per second) will be greater than the actual release in April 2010 (14,762 cubic feet per second). Based on April 2010 BOR projections, it is anticipated that the Colorado River level at the I-3 gage location in May 2010 will be approximately 0.30 foot higher compared to the actual levels in April 2010. Current projections show that the water levels will increase during the next quarterly reporting period, followed by a decline during the fall, as shown in Figure 4-7.

4.7 Quarterly PMP Evaluation Summary

The groundwater elevation and hydraulic gradient data from February through April 2010 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 First Quarter 2010 were 4.3 to 5.5 times the required minimum magnitude. The current gradient well pairs are adequate to define the capture of the plume while pumping from extraction wells TW-3D and PE-1.

A total of 15,839,781 gallons of groundwater was extracted between February and April 2010 by the IM-3 treatment facility. An estimated 138 pounds (62.6 kilograms) of chromium were removed and treated during this quarter. The average pumping rate for the IM extraction system during First Quarter 2010, including system down time, was 123.6 gpm.

A review of the groundwater gradient maps for First Quarter 2010 (Figures 4-4a to 4-4c) shows that floodplain PMP monitoring wells where Cr(VI) was detected at greater than 20 μg/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 μg/L are oriented towards the TW-3D and PE-1 extraction wells.

The wells that are monitored in the IM pumping area (e.g., MW-36-100, MW-39-70, MW-39-80, and MW-39-100) generally continue to show overall declining Cr(VI) concentrations relative to prior monitoring results, as shown in Figure 4-3 and Appendix C. Presentation and evaluation of the Cr(VI) trends observed in the performance monitoring area during the First Quarter 2010 reporting period are discussed in Section 4.2.

Based on the hydraulic and monitoring data and evaluation presented in this report, the IM performance standard has been met for the First Quarter 2010 reporting 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 Second Quarter 2010 PMP-GMP Monitoring Report, which will be submitted by August 30, 2010.

5.1 Groundwater Monitoring Program

5.1.1 Quarterly Monitoring

The next quarterly monitoring event occurred in April 29, 2010 through May 7, 2010 during the Second Quarter 2010 quarterly sampling event. This sampling event was conducted at 37 GMP wells, including the wells located in the East Ravine area. The groundwater monitoring report for this quarterly monitoring event will be submitted by August 30, 2010.

5.1.2 Monthly Monitoring

Monthly sampling of the two active extraction wells (TW-3D and PE-1) will continue to be performed by IM-3 staff during the first two weeks of each month. Results will be reported in the Second Quarter 2010 quarterly monitoring report.

5.2 Surface Water Monitoring Program

The Second Quarter 2010 quarterly river monitoring event will be conducted at locations in the RMP monitoring network and is scheduled to occur July 13 and 14, 2010. Results will be reported in the Second Quarter 2010 quarterly 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 Second Quarter 2010, 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-33-135, MW-34-100, and MW-45-095) will continue to be conducted weekly during the Second Quarter 2010 reporting period. Downloads of the remainder of the transducers will occur during the first week of each month during the second quarter reporting period.

6.0 References

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Tables

Table 3-1

Goundwater Sampling Results, April 2009 through April 2010
First Quarter 2010 Interim Measures Performance Monitoring and Site-Wide
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PG&E Topock Compressor Station, Needles, California

Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
					ORP (mV)	Specific Conductance (µS/cm)	Field pH
MW-9	SA	09-Jun-09	---	340	32.0	3,210	7.2
		09-Jun-09 FD	---	340	FD	FD	FD
		24-Sep-09	311	260	60.4	3,180	7.6
MW-10	SA	09-Jun-09	---	---	33.0	3,070	7.3
		22-Sep-09	341	348	16.3	3,200	7.7
		11-Mar-10	2,880	3,140	-6.1	2,040	7.7
MW-12	SA	05-May-09	2,550	2,670	1.3	6,270	8.1
		10-Jun-09	---	---	35.0	6,540	8.0
		24-Sep-09	2,490	2,780	18.8	6,650	8.3
		24-Sep-09 FD	2,700	2,910	FD	FD	FD
		11-Dec-09	2,750	2,660	146	6,840	8.3
		06-Apr-10	1,960	1,900	73.7	6,150	8.4
		06-Apr-10 FD	1,960	1,840	FD	FD	FD
MW-13	SA	21-Sep-09	22.8	22.5	49.9	1,980	7.5
MW-14	SA	21-Sep-09	27.0	26.6	37.7	1,510	7.7
MW-15	SA	30-Sep-09	12.3	10.4	45.5	1,750	7.8
MW-16	SA	06-May-09	---	8.0	5.8	1,140	8.0
		28-Sep-09	9.1	8.6	56.5	1,110	7.9
		16-Mar-10	12.0	10.8	80.3	1,230	8.0
MW-17	SA	06-May-09	---	10.2	-36	1,780	7.8
		30-Sep-09	10.6	10.1	27.4	1,760	7.9
		11-Mar-10	16.4	15.1	-15	1,710	7.9
MW-18	SA	22-Sep-09	22.3	20.2	48.2	1,410	7.7
MW-19	SA	22-Sep-09	192	193	51.2	2,370	7.5
		18-Mar-10	542	453	93.4	2,450	7.5
MW-20-70	SA	25-Sep-09	2,430	2,650	106	3,140	7.6
		17-Mar-10	2,740	2,870	68.2	3,320	7.6
MW-20-100	MA	25-Sep-09	5,760	6,790	93.7	3,500	7.4
		17-Mar-10	5,690	5,740	61.1	3,480	7.4
MW-20-130	DA	25-Sep-09	10,800	11,000	81.7	12,600	7.5
		18-Mar-10	11,100	11,100	107	13,100	7.5
MW-21	SA	06-May-09	1.6	1.4	-27	11,300	6.8
		04-Aug-09	---	---	76.0	9,060	7.5

Refer to table footnotes for data qualifier explanation.

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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
					ORP (mV)	Specific Conductance (µS/cm)	Field pH
MW-21	SA	23-Sep-09	ND (1.0)	2.7	48.8	12,800	7.2
		09-Dec-09	ND (1.0)	ND (1.0)	-67 R	11,000	6.8
		10-Mar-10	1.4	1.2	-24	8,950	7.0
MW-22	SA	29-Apr-09	---	1.2	-100	29,700	6.9
		29-Sep-09	ND (1.0)	ND (1.0)	-61	20,800	6.9
		10-Dec-09	---	ND (1.0)	-52	34,200	6.8
		12-Mar-10	ND (2.1)	ND (1.0)	-87	34,300	6.8
MW-23-060	BR-SA	21-Jul-09	26.0	30.0	146	16,400	8.4
		24-Sep-09	30.5	25.6	24.1	17,000	9.4
		10-Dec-09	25.8	25.6	-1.9 R	16,200	11.3
		08-Mar-10	19.7	17.2	-9 R	10,700	10
MW-23-080	BR-SA	21-Jul-09	34.0	44.0	87.9	16,900	11.0
		23-Sep-09	29.7	28.1	-5.4 R	17,700	11.3
		10-Dec-09	21.8	22.4	-41 R	17,700	11.1
		08-Mar-10	11.3	9.6	-46 R	18,100	10.8
MW-24BR	BR	07-May-09	ND (0.2)	ND (1.0)	-170	15,000	7.9
		28-Sep-09	ND (2.1)	ND (1.0)	-65	15,100	8.1
		08-Dec-09	ND (1.0)	ND (1.0)	-180	14,900	7.8
		12-Mar-10	ND (1.0)	ND (1.0)	-140	15,500	8.1
MW-25	SA	21-Sep-09	455	495	85.6	1,270	7.3
		21-Sep-09 FD	457	482	FD	FD	FD
MW-26	SA	22-Sep-09	2,140	2,180	43.8	3,940	7.5
		16-Mar-10	2,280	2,270	70.5	4,230	7.4
MW-27-20	SA	01-Oct-09	ND (0.2)	ND (1.0)	-160	1,040	7.6
MW-27-60	MA	01-Oct-09	ND (0.2)	ND (1.0)	-100	1,820 R	7.8
		08-Dec-09	ND (0.2)	ND (1.0)	-64	1,810	8.2
MW-27-85	DA	30-Apr-09	ND (1.0)	ND (1.0)	-100	16,200	6.7
		01-Oct-09	ND (1.0)	ND (1.0)	-32	15,200	7.1
		08-Dec-09	ND (1.0)	ND (1.0)	-36	15,100	7.0
		09-Mar-10	ND (1.0)	ND (1.0)	-24	15,200	7.2
		29-Apr-10	---	---	-29	15,400	7.2
MW-28-25	SA	24-Sep-09	ND (0.2)	ND (1.0)	-120	1,140	7.4
		09-Mar-10	ND (0.2)	ND (1.0)	-25	1,200	7.5

Refer to table footnotes for data qualifier explanation.

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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
					ORP (mV)	Specific Conductance (µS/cm)	Field pH
MW-28-90	DA	30-Apr-09	ND (0.2)	ND (1.0)	-180	7,600	7.4
		24-Sep-09	ND (1.0)	ND (1.0)	-160	7,560	7.5
		09-Dec-09	ND (1.0)	ND (1.0)	-110	7,650	7.3
		09-Mar-10	ND (0.2)	ND (1.0)	-100	8,130	7.4
		29-Apr-10	---	---	-100	7,980	7.4
MW-29	SA	24-Sep-09	ND (1.0)	ND (1.0)	-180	2,620	7.5
		11-Mar-10	ND (0.2)	ND (1.0)	-110	3,480	7.4
MW-30-30	SA	04-Aug-09	---	---	-240	11,900	7.6
		24-Sep-09	ND (1.0)	ND (1.0)	-130	19,500	7.3
MW-30-50	MA	24-Sep-09	ND (0.21)	ND (1.0)	-90	1,590	8.0
MW-31-60	SA	21-Sep-09	424	417	54.9	3,320	7.6
		16-Mar-10	571	531	156	3,190	7.5
MW-31-135	DA	21-Sep-09	19.6	20.4	65.4	11,300	7.9
MW-32-20	SA	22-Sep-09	ND (5.2)	ND (1.0)	-150	53,300	6.8
MW-32-35	SA	22-Sep-09	ND (1.0)	ND (1.0)	-190	21,900	7.0
		09-Mar-10	ND (2.1)	ND (1.0)	-160	23,400	7.1
MW-33-40	SA	05-May-09	ND (0.2)	ND (1.0)	-72	5,270	8.3
		24-Sep-09	ND (0.21)	ND (1.0)	-130	6,600	8.1
		09-Dec-09	ND (1.0)	2.2	12.3	11,400	7.8
		11-Mar-10	ND (1.0)	ND (1.0)	-25	6,820	8.3
		30-Apr-10	---	---	-44	6,180	8.3
MW-33-90	MA	05-May-09	20.7	19.9	-87	10,700	7.4
		29-Sep-09	22.4	21.1	62.4	10,500	7.6
		09-Dec-09	23.1	24.4	37.9	10,600	7.5
		12-Mar-10	23.7	25.2	170	11,600	7.5
		30-Apr-10	---	---	-32	10,900	7.5
MW-33-150	DA	05-May-09	9.2	8.8	-91	17,100	7.6
		29-Sep-09	9.3 J	8.9	140	16,900	7.6
		29-Sep-09 FD	12.3 J	9.3	FD	FD	FD
		09-Dec-09	10.1	10.5	8.2 R	17,600	7.6
		11-Mar-10	10.6	11.6	0.6 R	18,000	7.7
		11-Mar-10 FD	10.5	10.1	FD	FD	FD
		30-Apr-10	---	---	-33	17,600	7.6

Refer to table footnotes for data qualifier explanation.

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PG&E Topock Compressor Station, Needles, California

Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
					ORP (mV)	Specific Conductance (µS/cm)	Field pH
MW-33-210	DA	05-May-09	10.5	12.4	-88	20,000	7.3
		29-Sep-09	11.8	11.4	59.3	19,600	7.4
		09-Dec-09	13.1	13.3	26.3	19,900	7.4
		11-Mar-10	14.4	15.9	9.4	20,700	7.5
		30-Apr-10	---	---	-27	20,400	7.4
MW-34-55	MA	30-Sep-09	ND (0.2)	ND (1.0)	-120	1,060	7.9
		17-Nov-09	---	---	-120	1,080	7.5
MW-34-80	DA	06-Apr-09	ND (1.0)	ND (1.0)	10.7	8,590	7.3
		30-Apr-09	ND (1.0)	ND (1.0)	-180	8,640	7.4
		09-Jun-09	ND (1.0)	ND (1.0)	5.3	8,170	7.2
		07-Jul-09	ND (0.2)	ND (1.0)	-39	7,600	7.3
		04-Aug-09	ND (0.2)	ND (1.0)	-300	6,850	7.9
		30-Sep-09	ND (1.0)	ND (1.0)	-47	8,230	7.4
		13-Oct-09	ND (1.0)	ND (1.0)	-4.1	8,200	7.5
		02-Nov-09	ND (1.0)	ND (1.0)	-290	8,090	8.1
		09-Dec-09	ND (1.0)	ND (1.0)	-57	8,050	7.4
		11-Jan-10	ND (1.0)	1.6	-58	8,020	7.2
		08-Feb-10	ND (1.0)	ND (1.0)	-34	8,070	7.4
		10-Mar-10	ND (0.2)	ND (1.0)	-77	8,330	7.3
		29-Apr-10	---	---	-6.9	8,570	7.4
MW-34-100	DA	06-Apr-09	74.7	83.8	24.9	18,600	7.4
		30-Apr-09	61.3 J	65.5	-130	18,500	7.5
		30-Apr-09 FD	77.6 J	65.8	FD	FD	FD
		09-Jun-09	108	112	37.0	18,000	7.2
		07-Jul-09	114	115	-11	16,800	7.5
		04-Aug-09	113	112	-250	11,700	7.9
		30-Sep-09	78.4	70.8	-6	18,400	7.5
		30-Sep-09 FD	78.9	72.6	FD	FD	FD
		14-Oct-09	211	208	-71	18,600	7.8
		02-Nov-09	152	146	-290	18,500	8.1
		02-Nov-09 FD	152	144	FD	FD	FD
		17-Nov-09	---	---	115 R	18,600	7.4
		09-Dec-09	211	203	22.5	18,400	7.6
		09-Dec-09 FD	211	211	FD	FD	FD
		11-Jan-10	243	231	66.6	20,000	8.0
		11-Jan-10 FD	254	235	FD	FD	FD

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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
					ORP (mV)	Specific Conductance (µS/cm)	Field pH
MW-34-100	DA	08-Feb-10	312	311	-10	18,900	7.6
		08-Feb-10 FD	316	372	FD	FD	FD
		10-Mar-10	153	129	-34	19,300	7.5
		10-Mar-10 FD	152	133	FD	FD	FD
		29-Apr-10	---	---	28.9	19,500	7.5
MW-35-60	SA	24-Sep-09	27.7	23.2	77.9	7,410	7.6
		24-Sep-09 FD	25.3	23.6	FD	FD	FD
		16-Mar-10	34.8	36.1	99.8	6,910	7.4
		16-Mar-10 FD	34.4	35.6	FD	FD	FD
MW-35-135	DA	24-Sep-09	33.4	30.8	100	9,920	8.0
		16-Mar-10	30.6	33.2	96.7	10,600	7.7
MW-36-20	SA	23-Sep-09	ND (1.0)	ND (1.0)	-190	3,920	8.1
MW-36-40	SA	30-Sep-09	ND (0.2)	ND (1.0)	-180	3,730	7.9
MW-36-50	MA	30-Sep-09	ND (0.2)	ND (1.0)	-130	1,230	7.9
MW-36-70	MA	22-Sep-09	ND (0.2)	ND (1.0)	36.8	12,800	3.3
MW-36-90	DA	23-Sep-09	ND (0.2)	ND (1.0)	-57	1,490	8.2
		12-Mar-10	0.25	ND (1.0)	-81	1,430	8.3
MW-36-100	DA	23-Sep-09	67.6	64.5	-170	11,500	7.1
		09-Mar-10	67.1	74.4	-140	12,600	7.2
MW-37S	MA	23-Sep-09	7.9	8.2	38.0	5,150	7.9
		23-Sep-09 FD	8.5	7.9	FD	FD	FD
MW-37D	DA	23-Sep-09	308	336	48.8	15,700	7.9
MW-39-40	SA	01-Oct-09	ND (1.0)	ND (1.0)	-130	8,490	7.4
MW-39-50	MA	01-Oct-09	ND (0.2)	ND (1.0)	5.3 R	1,990	8.1
MW-39-60	MA	01-Oct-09	ND (0.2)	ND (1.0)	38.2	2,720	7.9
MW-39-70	MA	01-Oct-09	ND (0.2)	ND (1.0)	48.9	4,090	7.6
MW-39-80	DA	01-Oct-09	ND (1.0)	1.4	33.8	10,800	7.1
MW-39-100	DA	29-Sep-09	451	451	61.0	20,900	6.8
MW-40S	SA	28-Sep-09	6.8	6.9	77.5	2,250	7.7
MW-40D	DA	28-Sep-09	116	114	53.4	16,300	7.5
MW-41S	SA	23-Sep-09	18.7	18.9	32.0	5,220	8.0

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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
					ORP (mV)	Specific Conductance (µS/cm)	Field pH
MW-41S	SA	23-Sep-09 FD	19.5	17.8	FD	FD	FD
MW-41M	DA	23-Sep-09	10.3	10.8	29.4	15,500	7.7
MW-41D	DA	23-Sep-09	ND (1.0)	2.2	62.8	22,400	7.9
		11-Mar-10	3.1	2.6	-71 R	23,100	7.8
MW-42-30	SA	23-Sep-09	---	---	-180	6,150	7.7
MW-42-55	MA	30-Apr-09	ND (1.0)	ND (1.0)	-170	12,200	7.4
		23-Sep-09	ND (1.0)	ND (1.0)	-190	10,600	7.4
		08-Dec-09	ND (1.0)	ND (1.0)	-120	10,800	7.2
		09-Mar-10	ND (1.0)	ND (1.0)	-130	11,000	7.4
		29-Apr-10	---	---	-100	10,500	7.5
MW-42-65	MA	30-Apr-09	ND (1.0)	ND (1.0)	-170	13,700	7.2
		23-Sep-09	ND (1.0)	ND (1.0)	-110	12,800	7.1
		08-Dec-09	ND (1.0)	ND (1.0)	-25	13,200	7.0
		09-Mar-10	ND (1.0)	ND (1.0)	-40	14,300	7.2
		29-Apr-10	---	---	-31	13,600	7.2
MW-43-25	SA	01-Oct-09	ND (0.2)	ND (1.0)	-170	1,300	7.5
MW-43-75	DA	01-Oct-09	ND (1.0)	ND (1.0)	-140	11,900	7.6
MW-43-90	DA	01-Oct-09	ND (1.0)	ND (1.0)	-95	18,900	6.9
MW-44-70	MA	01-May-09	ND (0.2)	ND (1.0)	-140	3,470	7.4
		21-Sep-09	ND (0.2)	ND (1.0)	-190	3,030	7.7
		07-Dec-09	ND (0.2)	ND (1.0)	-97	3,000	7.5
		08-Mar-10	ND (0.2)	ND (1.0)	-110	3,080	7.5
MW-44-115	DA	06-Apr-09	406	425	4.5	12,700	7.8
		06-Apr-09 FD	406	428	FD	FD	FD
		01-May-09	379	365	-210	12,900	7.9
		08-Jun-09	348	322	-20	12,700	7.7
		08-Jun-09 FD	349	351	FD	FD	FD
		06-Jul-09	333	308	-150	12,000	7.9
		03-Aug-09	316	300	-360	10,400	8.2
		21-Sep-09	302	304	-250	12,000	8.1
		21-Sep-09 FD	303	296	FD	FD	FD
		14-Oct-09	300	295	-110	12,300	8.0
		03-Nov-09	306	293	-25	12,300	7.9
		07-Dec-09	291	284	-94	12,300	7.9

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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
					ORP (mV)	Specific Conductance (µS/cm)	Field pH
MW-44-115	DA	12-Jan-10	282	279	-170	12,600	7.9
		09-Feb-10	219	256	-110	12,700	7.9
		08-Mar-10	325	269	-120	12,900	7.9
		30-Apr-10	---	---	-100	12,600	7.9
MW-44-125	DA	06-Apr-09	170	166	-5.1	12,800	7.7
		01-May-09	96.3	117	-190	13,400	7.9
		08-Jun-09	178	175	-35	13,000	7.7
		06-Jul-09	154	169	-150	12,600	7.9
		03-Aug-09	191	184	-380	11,000	8.4
		23-Sep-09	93.7	90.3	-200	12,700	8.0
		14-Oct-09	20.3	176	-120	13,400	8.1
		03-Nov-09	159	160	-250	13,100	8.1
		07-Dec-09	68.8	78.3	-97	13,400	8.2
		12-Jan-10	155	127	-190	13,800	8.0
		09-Feb-10	5.0	176	-160	14,400	8.2
		08-Mar-10	46.4 J	51.8	-160	13,300	7.9
		08-Mar-10 FD	58.0 J	54.6	FD	FD	FD
		30-Apr-10	---	---	-210	13,000	8.0
MW-45-095a	DA	29-Sep-09	---	---	-0.9	9,700	7.6
MW-46-175	DA	06-Apr-09	68.5	77.0	-8	17,700	8.2
		05-May-09	63.2	55.0	-160	17,800	8.3
		08-Jun-09	65.1	65.6	-26	18,200	8.2
		07-Jul-09	89.6	82.8	-130	15,900	8.4
		04-Aug-09	86.6	86.6	-300	11,300	8.6
		25-Sep-09	116	105	-120	17,600	8.4
		14-Oct-09	160	159	-99	17,700	8.6
		14-Oct-09 FD	165	155	FD	FD	FD
		02-Nov-09	150	142	-330	17,200	8.6
		08-Dec-09	169	163	-97	17,800	8.3
		12-Jan-10	200	194	-160	18,300	8.4
		08-Feb-10	177	190	-100	18,500	8.4
		11-Mar-10	177	154	-160	18,700	8.5
		30-Apr-10	---	---	-120	18,400	8.5
MW-46-205	DA	05-May-09	4.9	5.8	-100	21,600	8.3
		05-May-09 FD	5.4	5.3	FD	FD	FD

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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
					ORP (mV)	Specific Conductance (µS/cm)	Field pH
MW-46-205	DA	25-Sep-09	4.9	5.6	-91	21,500	8.4
		08-Dec-09	4.6	4.7	-49	21,900	8.2
		08-Dec-09 FD	4.9	4.9	FD	FD	FD
		11-Mar-10	5.7	6.5	-90	22,800	8.5
MW-47-55	SA	06-May-09	24.3	22.1	-17	4,440	7.5
		24-Sep-09	18.8	17.4	50.8	4,910	7.7
		09-Dec-09	53.3	46.4	-13 R	4,150	7.4
		16-Mar-10	37.4	40.8	83.1	4,220	7.5
MW-47-115	DA	06-May-09	20.2	18.7	42.0	13,300	7.5
		07-Jul-09	17.0	17.8	76.1	12,100	7.6
		07-Jul-09 FD	17.1	14.8	FD	FD	FD
		04-Aug-09	15.8	15.0	-200	9,310	7.8
		04-Aug-09 FD	15.8	13.5	FD	FD	FD
		24-Sep-09	17.2	16.3	46.2	13,200	7.7
		09-Dec-09	14.4	14.4	-55	14,300	7.5
		10-Mar-10	18.8	16.3	-5.6	14,100	7.7
MW-48	BR	06-May-09	ND (1.0)	---	-10	17,600	7.4
		23-Sep-09	ND (1.0)	ND (1.0)	122	18,300	7.3
		09-Dec-09	ND (1.0)	ND (1.0)	16.9	18,400	7.2
		08-Apr-10	ND (1.0)	ND (1.0)	89.0	19,200	7.0
MW-49-135	DA	22-Sep-09	ND (1.0)	ND (1.0)	84.6 R	13,500	7.9
MW-49-275	DA	22-Sep-09	ND (2.1)	1.8	-150	24,400	8.2
MW-49-365	DA	22-Sep-09	ND (2.1)	ND (1.0)	-230	37,900	8.0
MW-50-095	MA	06-May-09	62.2	72.2	-42	5,260	7.8
		24-Sep-09	40.3	39.6	55.6	5,120	8.1
		10-Dec-09	30.9	29.5	5.0	5,220	8.2
		12-Mar-10	24.9	25.3	-18 R	5,330	7.8
MW-50-200	DA	06-May-09	9,010	10,900	-20	22,100	7.8
		06-May-09 FD	9,400	10,800	FD	FD	FD
		25-Sep-09	6,380	7,450	76.6	20,900	8.0
		11-Dec-09	7,860	8,140	91.9	22,300	7.8
		11-Dec-09 FD	7,510	8,370	FD	FD	FD
		17-Mar-10	10,100	9,600	77.1	23,000	7.7
MW-51	MA	24-Sep-09	4,330	4,760	42.2	11,300	7.5

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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
					ORP (mV)	Specific Conductance (µS/cm)	Field pH
MW-51	MA	17-Mar-10	4,480	4,590	59.1	11,500	7.4
MW-52S	MA	29-Apr-09	ND (1.0)	ND (1.0)	-140	10,700	7.2
		29-Sep-09	ND (1.0)	ND (1.0)	-130	11,300	7.4
		10-Dec-09	ND (1.0)	1.6	-160	11,000	7.6
		10-Mar-10	ND (1.0)	ND (1.0)	-170	11,500	7.5
MW-52M	DA	29-Apr-09	ND (1.0)	ND (1.0)	-160	17,200	7.9
		29-Sep-09	ND (1.0)	ND (1.0)	-150	17,400	7.7
		10-Dec-09	ND (2.1)	1.8	-200	17,200	7.8
		10-Mar-10	ND (1.0)	ND (1.0)	-170	17,700	7.8
MW-52D	DA	29-Apr-09	ND (2.1)	ND (1.0)	-120	21,800	7.7
		29-Sep-09	ND (1.0)	ND (1.0)	-150	22,600	8.0
		10-Dec-09	ND (5.2)	1.6	-200	22,100	8.3
		10-Mar-10	ND (1.0)	ND (1.0)	-210	23,000	8.3
MW-53M	DA	29-Apr-09	ND (1.0)	ND (1.0)	-180	20,000	8.1
		29-Sep-09	ND (1.0)	ND (1.0)	-160	20,700	8.4
		10-Dec-09	ND (2.1)	1.9	-210	20,600	8.3
		10-Mar-10	ND (1.0)	ND (1.0)	-220	21,200	8.4
MW-53D	DA	29-Apr-09	ND (2.1)	ND (1.0)	-200	27,000	8.6
		29-Sep-09	ND (2.1)	ND (1.0)	-200	27,300	8.6
		10-Dec-09	ND (5.2)	ND (1.0)	-220	26,900	8.7
		10-Mar-10	ND (2.1)	ND (1.0)	-200	27,800	8.4
MW-54-85	DA	05-May-09	ND (1.0) J	ND (1.0)	-170	10,100	7.3
		22-Sep-09	ND (0.2)	ND (1.0)	-200	10,800	7.6
		08-Dec-09	ND (0.2)	ND (1.0)	-160	10,800	7.3
		09-Mar-10	ND (1.0)	ND (1.0)	-170	11,200	7.5
MW-54-140	DA	05-May-09	ND (1.0) J	ND (1.0)	-150	12,500	7.7
		22-Sep-09	ND (0.2)	ND (1.0)	-53	13,400	7.9
		08-Dec-09	ND (1.0)	ND (1.0)	-100	13,300	7.7
		09-Mar-10	ND (2.0)	ND (1.0)	-75	13,800	7.8
MW-54-195	DA	05-May-09	ND (2.0) J	ND (1.0)	-240	18,900	8.0
		22-Sep-09	ND (1.0)	ND (1.0)	-220	20,000	8.2
		08-Dec-09	ND (0.2)	ND (1.0)	-220	19,700	8.0
		09-Mar-10	ND (2.0)	ND (1.0)	-220	20,900	8.1
MW-55-45	MA	04-May-09	ND (0.2)	ND (1.0)	-170	1,550	7.6

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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
					ORP (mV)	Specific Conductance (µS/cm)	Field pH
MW-55-45	MA	22-Sep-09	ND (0.2)	ND (1.0)	-160	1,550	7.8
		07-Dec-09	ND (0.2)	ND (1.0)	-110	1,520	7.8
		08-Mar-10	ND (0.2)	ND (1.0)	-100	1,550	7.7
MW-55-120	DA	04-May-09	2.9	3.7	-87	9,110	7.9
		04-May-09 FD	2.9	3.7	FD	FD	FD
		22-Sep-09	4.0	5.1	-89	9,400	8.0
		22-Sep-09 FD	4.0	5.1	FD	FD	FD
		07-Dec-09	4.7	6.1	-42	9,430	7.9
		07-Dec-09 FD	4.6	5.8	FD	FD	FD
		08-Mar-10	5.6	6.1	-27	9,820	7.9
		08-Mar-10 FD	5.4	6.3	FD	FD	FD
MW-56S	SA	04-May-09	ND (0.2) J	ND (1.0)	-140	6,490	7.3
		30-Sep-09	ND (0.2)	ND (1.0)	-120	6,510	7.4
		10-Dec-09	ND (0.2)	ND (1.0)	-170	5,970	7.6
		18-Mar-10	ND (0.2)	ND (1.0)	-150	6,290	7.3
MW-56M	DA	04-May-09	ND (1.0) J	ND (1.0)	-130	14,700	7.3
		30-Sep-09	ND (0.2)	ND (1.0)	-110	15,000	7.4
		10-Dec-09	ND (1.0)	ND (1.0)	-160	14,900	7.4
		18-Mar-10	ND (1.0)	ND (1.0)	-140	15,500	7.2
MW-56D	DA	04-May-09	ND (5.0)	ND (1.0)	-230	21,500	8.5
		30-Sep-09	ND (1.0)	ND (1.0)	-120	21,700	7.9
		10-Dec-09	ND (2.0)	ND (1.0)	-140	21,500	8.0
		18-Mar-10	ND (2.0)	ND (5.0)	-92	21,600	7.7
MW-57-050	PA	17-Feb-10	86.0	88.0 LF	---	1,900	7.4
MW-57-070	BR	10-Jun-09	---	---	48.0	3,060	7.0
		21-Jul-09	340	350	287	3,140	6.6
		24-Sep-09	132	139	34.2	3,160	7.2
		10-Dec-09	84.4	103	-32 R	3,270	7.3
		16-Mar-10	542	449	41.1	1,250	7.3
MW-57-185	BR-DA	20-Jul-09	1.4	ND (4.9)	194	18,300	8.2
		23-Sep-09	1.1	2.4	-42 R	19,000	8.9
		09-Dec-09	2.1	2.6	-190	18,900	8.5
		09-Mar-10	6.8	6.7	-38	19,200	9.5
MW-58-065	BR-SA	17-Feb-10	ND (0.2)	8.0 LF	---	737	8.0

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Location ID	Aquifer Zone	Sample Date		Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
						ORP (mV)	Specific Conductance (µS/cm)	Field pH
MW-58-115	BR-MA	22-Jul-09		ND (1.0)	3.0	-320	6,590	6.8
		29-Sep-09		ND (1.0)	ND (1.0)	-160	12,300	7.3
		16-Dec-09		ND (1.0)	1.4	-180	8,810	7.4
MW-58-205	BR-DA	22-Jul-09		ND (1.0)	6.3	-340	16,300	7.4
		29-Sep-09		4.7	9.7	-250	4,550	7.4
		16-Dec-09		7.6	26.6	-280	5,330	7.8
MW-58BR[1]	BR	25-Mar-10		9.1	15.0	---	---	---
MW-59-100	SA	10-Jun-09		---	---	53.0	11,100	6.9
		22-Jul-09		5,100	4,900	90.1	10,800	6.9
		22-Jul-09	FD	5,100	4,800	FD	FD	FD
		24-Sep-09		4,630	5,300	62.5	11,900	7.0
		11-Dec-09		4,340	4,420	199	11,200	7.1
		17-Mar-10		5,320	5,270	104	13,100	6.9
MW-60-125	BR-SA	21-Jul-09		780	810	70.6	8,200	7.2
		05-Aug-09		---	---	-140	6,220	7.6
		24-Sep-09		570	619	-14	8,240	7.5
		10-Dec-09		532	592	-71	8,320	7.5
		17-Mar-10		657	592	77.2	9,480	7.5
MW-61-110	BR-SA	21-Jul-09		240	260	-9.6	15,100	7.3
		24-Sep-09		360	363	-20	15,900	7.7
		10-Dec-09		433	450	-76	16,400	7.7
		17-Mar-10		484	406	24.1	15,700	7.6
MW-62-065	BR-SA	22-Jul-09		290	300	51.8	5,810	7.3
		24-Sep-09		236	251	29.0	5,780	7.6
		10-Dec-09		219	247	-17 R	5,760	7.5
		16-Mar-10		397	372	63.7	6,170	7.3
MW-62-110	BR-MA	22-Jul-09		74.0	71.0	-94	8,950	8.1
		29-Sep-09		4.4	31.3	-130	8,580	7.8
		16-Dec-09		381	460	-120	8,840	7.7
		20-Jan-10		---	---	-70	8,830	7.8
		10-Feb-10		---	---	-110	8,960	7.9
		11-Mar-10		628	684	-110	9,360	7.8
MW-62-190	BR-DA	22-Jul-09		ND (1.0)	2.0	-310	28,800	7.7
		29-Sep-09		147	50.3	-230	18,600	7.6

Refer to table footnotes for data qualifier explanation.

Table 3-1

Goundwater Sampling Results, April 2009 through April 2010
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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
					ORP (mV)	Specific Conductance (µS/cm)	Field pH
MW-62-190	BR-DA	16-Dec-09	ND (1.0)	1.6	-190	18,300	7.7
		20-Jan-10	---	---	-160	18,700	7.8
		10-Feb-10	---	---	-150	18,700	8.0
		11-Mar-10	ND (1.0)	ND (1.0)	-140	19,600	7.9
MW-63-065	BR-SA	15-Apr-09	ND (0.2)	2.3	12.0	10,900	7.1
		20-Jul-09	0.54	ND (2.9)	308	6,650	6.5
		20-Jul-09 FD	0.54	ND (3.0)	FD	FD	FD
		22-Sep-09	0.65	1.2	66.1	6,930	7.3
		22-Sep-09 FD	0.54	1.9	FD	FD	FD
		09-Dec-09	0.63	1.1	40.4	6,840	7.1
		09-Dec-09 FD	ND (1.0)	ND (1.0)	FD	FD	FD
		09-Mar-10	ND (1.0)	ND (1.0)	12.2	7,620	7.1
		09-Mar-10 FD	1.1	ND (1.0)	FD	FD	FD
MW-64-150	BR-SA	22-Jul-09	ND (1.0)	5.2	-30 R	8,860	7.4
		29-Sep-09	ND (1.0)	1.5	-200	9,760	6.8
		12-Oct-09	ND (1.0)	ND (1.0)	-320	9,760	7.1
		04-Nov-09	ND (1.0)	ND (1.0)	-300	9,820	7.1
		16-Dec-09	ND (1.0)	1.8	-290	10,900	7.1
		19-Jan-10	ND (1.0)	ND (1.0)	-95	11,900	7.0
		10-Feb-10	ND (1.0)	ND (1.0)	-44	11,800	7.3
		11-Mar-10	ND (1.0)	ND (1.0)	67.5	11,500	6.9
MW-64-205	BR-DA	22-Jul-09	5.7	17.0	26.0 R	14,800	7.3
		29-Sep-09	ND (1.0)	2.5	-240	14,200	6.7
		12-Oct-09	1.6	6.0	-300	13,800	7.1
		04-Nov-09	1.4	5.6	-310	14,100	7.1
		16-Dec-09	ND (1.0)	5.6	-180	15,200	7.0
		19-Jan-10	ND (1.0)	3.2	-190	15,400	7.1
		10-Feb-10	ND (1.0)	ND (1.0)	-81	16,300	7.4
		11-Mar-10	ND (1.0)	ND (1.0)	-140	16,700	7.2
MW-64-260	BR-DA	22-Jul-09	ND (1.0)	4.8	29.0 R	10,900	7.3
		29-Sep-09	1.4	1.4	-280	14,200	6.8
		12-Oct-09	ND (1.0)	1.3	-310	13,300	7.2
		04-Nov-09	1.9	1.2	-290	11,600	7.1
		16-Dec-09	ND (1.0)	2.2	-210	15,100	7.0
		19-Jan-10	ND (1.0)	ND (1.0)	-210	15,700	7.0

Refer to table footnotes for data qualifier explanation.

Table 3-1

Goundwater Sampling Results, April 2009 through April 2010
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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
					ORP (mV)	Specific Conductance (µS/cm)	Field pH
MW-64-260	BR-DA	10-Feb-10	ND (1.0)	ND (1.0)	-210	16,400	7.2
		11-Mar-10	ND (1.0)	ND (1.0)	-220	16,600	7.2
PE-1	DA	01-Apr-09	21.4	20.8	---	---	---
		06-May-09	18.6	18.1	---	---	---
		03-Jun-09	18.7	19.8	---	---	---
		01-Jul-09	20.4	19.2	---	---	---
		05-Aug-09	19.2	17.5	---	---	---
		02-Sep-09	19.6	17.9	---	---	---
		01-Oct-09	---	---	216	5,630	7.5
		07-Oct-09	20.7	18.6 LF	---	---	---
		04-Nov-09	19.9	19.6 LF	---	---	---
		02-Dec-09	19.7	19.4	---	---	---
		06-Jan-10	20.0	19.6 LF	---	---	---
		03-Feb-10	22.6	19.1 LF	---	---	---
		03-Mar-10	20.8	17.3 LF	---	---	---
		07-Apr-10	13.7	15.4 LF	---	---	---
PGE-7BR	BR	16-Mar-10	ND (1.0)	ND (1.0)	-270	20,200	9.2
PGE-8	BR	08-Apr-10	ND (1.0)	3.0	-270	21,600	8.3
Park Moabi-3	MA	01-Oct-09	9.9	9.5	345	1,430	7.7
Park Moabi-4	MA	01-Oct-09	21.0	18.0	726	1,870	7.9
TW-1	MA	22-Sep-09	3,740	4,130	87.5	7,180	7.4
		15-Mar-10	3,430	4,010	49.5	7,520	7.2
TW-2S	MA	01-Oct-09	831	880	230	2,530	7.7
TW-2D	DA	01-Oct-09	356	352	253	8,690	7.2
TW-3D	DA	01-Apr-09	1,270	1,320	---	---	---
		06-May-09	1,610	1,450	---	---	---
		03-Jun-09	1,470	1,500	---	---	---
		01-Jul-09	1,500	1,360	---	---	---
		05-Aug-09	1,190	1,270	---	---	---
		02-Sep-09	1,220	1,360	---	---	---
		07-Oct-09	1,330	1,340 LF	---	---	---
		04-Nov-09	1,160	1,310 LF	---	---	---
		02-Dec-09	1,410	1,340	---	---	---
		06-Jan-10	1,300	1,350 LF	---	---	---

Refer to table footnotes for data qualifier explanation.

Table 3-1

Goundwater Sampling Results, April 2009 through April 2010
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Location ID	Aquifer Zone	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Selected Field Parameters		
					ORP (mV)	Specific Conductance (µS/cm)	Field pH
TW-3D	DA	03-Feb-10	1,400	1,320 LF	---	---	---
		03-Mar-10	1,380	1,340 LF	---	---	---
		07-Apr-10	1,380	1,310 LF	---	---	---
TW-4	DA	06-May-09	13.5	14.4	-68	20,700	7.7
		23-Sep-09	10.7	11.1	40.5	21,800	7.7
		23-Sep-09 FD	10.1	10.5	FD	FD	FD
		09-Dec-09	10.1	10.4	-63	21,800	7.5
TW-5	DA	23-Sep-09	10.4	9.6	-30	13,800	8.0

NOTES:

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

[1] This sample collected from a 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.

Sampling results from East Ravine wells prior to August 1, 2009 can be found in the ERGI Report.

Results for the following wells were rejected on July 22, 2009 due to suspected influence from flute liners: MW-58-115, MW-58-205, MW-62-110, MW-62-190, MW-64-150, MW-64-205, and MW-64-260.

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 and are not included in this table.

Wells are assigned to seperate Aquifer zones for results reporting:
SA: shallow interval of Alluvial Aquifer
MA: mid-depth interval of Alluvial Aquifer
DA: deep interval of Alluvial Aquifer
BR: well completed in bedrock (Miocene Conglomerate or pre-Tertiary crystalline rock)

Refer to table footnotes for data qualifier explanation.

Table 3-2
Surface Water Sampling Results, February 2010 through April 2010
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Location	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Specific Conductance (µS/cm)	Lab pH
In-channel Locations					
C-BNS-D	04/09/2009	ND (0.2)	ND (1.0)	945	8.31 J
C-BNS-D	07/07/2009	ND (0.2)	ND (1.0)	987	8.25 J
C-BNS-D	09/08/2009	ND (0.2)	ND (1.0)	982	8.24 J
C-BNS-D	12/14/2009	ND (0.2)	ND (1.0)	984	8.33 J
C-BNS-D	01/19/2010	ND (0.2)	ND (1.0)	967	8.26 J
C-BNS-D	04/05/2010	ND (0.2)	ND (1.0)	976	8.32 J
C-CON-S	04/10/2009	ND (0.2)	ND (1.0)	978	8.32 J
C-CON-S	07/08/2009	ND (0.2)	ND (1.0)	988	8.34 J
C-CON-S	09/09/2009	ND (0.2)	ND (1.0)	972	8.28 J
C-CON-S	12/15/2009	ND (0.2)	ND (1.0)	985	8.34 J
C-CON-S	01/20/2010	ND (0.2)	ND (1.0)	964	8.34 J
C-CON-S	04/06/2010	ND (0.2)	ND (1.0)	962	8.34 J
C-CON-D	04/10/2009	ND (0.2)	ND (1.0)	969	8.31 J
C-CON-D	07/08/2009	ND (0.2)	ND (1.0)	996	8.32 J
C-CON-D	09/09/2009	ND (0.2)	ND (1.0)	979	8.29 J
C-CON-D	12/15/2009	ND (0.2)	ND (1.0)	1000	8.32 J
C-CON-D	01/20/2010	ND (0.2)	ND (1.0)	953	8.33 J
C-CON-D	04/06/2010	ND (0.2)	ND (1.0)	959	8.32 J
C-I-3-S	04/09/2009	ND (0.2)	ND (1.0)	970	8.33 J
C-I-3-S	07/07/2009	ND (0.2)	ND (1.0)	992	8.30 J
C-I-3-S	09/08/2009	ND (0.2)	ND (1.0)	973	8.28 J
C-I-3-S	12/14/2009	ND (0.2)	ND (1.0)	991	8.30 J
C-I-3-S	01/19/2010	ND (0.2)	ND (1.0)	936	8.36 J
C-I-3-S	04/05/2010	ND (0.2)	ND (1.0)	955	8.29 J
C-I-3-D	04/09/2009	ND (0.2)	ND (1.0)	963	8.30 J
C-I-3-D	07/07/2009	ND (0.2)	ND (1.0)	965	8.33 J
C-I-3-D	09/08/2009	ND (0.2)	ND (1.0)	975	8.29 J
C-I-3-D	12/14/2009	ND (0.2)	ND (1.0)	989	8.27 J
C-I-3-D	01/19/2010	ND (0.2)	ND (1.0)	975	8.34 J
C-I-3-D	04/05/2010	ND (0.2)	ND (1.0)	969	8.37 J
C-MAR-S	04/09/2009	ND (0.2)	ND (1.0)	1040	7.60 J
C-MAR-S	07/07/2009	ND (0.2)	ND (1.0)	1080	7.82 J
C-MAR-S	09/08/2009	ND (0.2)	ND (1.0)	992	7.98 J
C-MAR-S	01/19/2010	ND (0.2)	ND (1.0)	1890	7.89 J
C-MAR-S	04/05/2010	ND (0.2)	ND (1.0)	1150	7.65 J
C-MAR-D	04/09/2009	ND (0.2)	ND (1.0)	1040	7.63 J
C-MAR-D	07/07/2009	ND (0.2)	ND (1.0)	1070	7.85 J

Table 3-2
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Location	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Specific Conductance (µS/cm)	Lab pH
In-channel Locations					
C-MAR-D	09/08/2009	ND (0.2)	ND (1.0)	1010	8.04 J
C-MAR-D	12/14/2009	ND (0.2)	ND (1.0)	1160	7.89 J
C-MAR-D	01/19/2010	ND (0.2)	ND (1.0)	1860	7.86 J
C-MAR-D	04/05/2010	ND (0.2)	ND (1.0)	1130	7.67 J
C-NR1-S	04/10/2009	ND (0.2)	ND (1.0)	956	8.31 J
C-NR1-S	07/08/2009	ND (0.2)	ND (1.0)	981	8.28 J
C-NR1-S	09/09/2009	ND (0.2)	ND (1.0)	970	8.27 J
C-NR1-S	12/15/2009	ND (0.2)	ND (1.0)	987	8.34 J
C-NR1-S	01/20/2010	ND (0.2)	ND (1.0)	955	8.34 J
C-NR1-S	04/06/2010	ND (0.2)	ND (1.0)	967	8.34 J
C-NR1-D	04/10/2009	ND (0.2)	ND (1.0)	962	8.32 J
C-NR1-D	07/08/2009	ND (0.2)	ND (1.0)	994	8.29 J
C-NR1-D	09/09/2009	ND (0.2)	ND (1.0)	1010	8.24 J
C-NR1-D	12/15/2009	ND (0.2)	ND (1.0)	990	8.30 J
C-NR1-D	01/20/2010	ND (0.2)	ND (1.0)	958	8.35 J
C-NR1-D	04/06/2010	ND (0.2)	ND (1.0)	975	8.33 J
C-NR3-S	04/10/2009	ND (0.2)	ND (1.0)	965	8.32 J
C-NR3-S	07/08/2009	ND (0.2)	ND (1.0)	977	8.27 J
C-NR3-S	09/09/2009	ND (0.2)	ND (1.0)	969	8.24 J
C-NR3-S	12/15/2009	ND (0.2)	ND (1.0)	988	8.32 J
C-NR3-S	01/20/2010	ND (0.2)	ND (1.0)	958	8.31 J
C-NR3-S	04/06/2010	ND (0.2)	ND (1.0)	941	8.33 J
C-NR3-D	04/10/2009	ND (0.2)	ND (1.0)	961	8.32 J
C-NR3-D	07/08/2009	ND (0.2)	ND (1.0)	988	8.30 J
C-NR3-D	09/09/2009	ND (0.2)	ND (1.0)	964	8.26 J
C-NR3-D	12/15/2009	ND (0.2)	ND (1.0)	982	8.31 J
C-NR3-D	01/20/2010	ND (0.2)	ND (1.0)	951	8.33 J
C-NR3-D	04/06/2010	ND (0.2)	ND (1.0)	954	8.32 J
C-NR4-S	04/10/2009	ND (0.2)	ND (1.0)	969	8.30 J
C-NR4-S	07/08/2009	ND (0.2)	ND (1.0)	987	8.29 J
C-NR4-S	09/09/2009	ND (0.2)	ND (1.0)	962	8.24 J
C-NR4-S	12/15/2009	ND (0.2)	ND (1.0)	992	8.31 J
C-NR4-S	01/20/2010	ND (0.2)	ND (1.0)	950	8.21 J
C-NR4-S	04/06/2010	ND (0.2)	ND (1.0)	963	8.31 J
C-NR4-D	04/10/2009	ND (0.2)	ND (1.0)	971	8.31 J
C-NR4-D	07/08/2009	ND (0.2)	ND (1.0)	992	8.25 J
C-NR4-D	09/09/2009	ND (0.2)	ND (1.0)	975	8.25 J

Table 3-2
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Location	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Specific Conductance (µS/cm)	Lab pH
In-channel Locations					
C-NR4-D	12/15/2009	ND (0.2)	ND (1.0)	984	8.29 J
C-NR4-D	01/20/2010	ND (0.2)	ND (1.0)	962	8.32 J
C-NR4-D	04/06/2010	ND (0.2)	ND (1.0)	951	8.28 J
C-R22a-S	04/09/2009	ND (0.2)	ND (1.0)	960	8.32 J
C-R22a-S	07/07/2009	ND (0.2)	ND (1.0)	988	8.35 J
C-R22a-S	09/08/2009	ND (0.2)	ND (1.0)	959	8.31 J
C-R22a-S	12/14/2009	ND (0.2)	ND (1.0)	1000	8.21 J
C-R22a-S	01/19/2010	ND (0.2)	ND (1.0)	965	8.36 J
C-R22a-S	04/05/2010	ND (0.2)	ND (1.0)	989	8.37 J
C-R22a-D	04/09/2009	ND (0.2)	ND (1.0)	965	8.32 J
C-R22a-D	07/07/2009	ND (0.2)	ND (1.0)	995	8.32 J
C-R22a-D	09/08/2009	ND (0.2)	ND (1.0)	967	8.28 J
C-R22a-D	12/14/2009	ND (0.2)	ND (1.0)	1010	8.31 J
C-R22a-D	01/19/2010	ND (0.2)	ND (1.0)	994	8.35 J
C-R22a-D	04/05/2010	ND (0.2)	ND (1.0)	974	8.35 J
C-R27-S	04/10/2009	ND (0.2)	ND (1.0)	963	8.32 J
C-R27-S	07/07/2009	ND (0.2)	ND (1.0)	996	8.32 J
C-R27-S	09/08/2009	ND (0.2)	ND (1.0)	965	8.28 J
C-R27-S	12/14/2009	ND (0.2)	ND (1.0)	982	8.28 J
C-R27-S	01/19/2010	ND (0.2)	ND (1.0)	985	8.32 J
C-R27-S	04/05/2010	ND (0.2)	ND (1.0)	960	8.32 J
C-R27-D	04/10/2009	ND (0.2)	ND (1.0)	975	8.33 J
C-R27-D	07/07/2009	ND (0.2)	ND (1.0)	992	8.29 J
C-R27-D	09/08/2009	ND (0.2)	ND (1.0)	963	8.26 J
C-R27-D	12/14/2009	ND (0.2)	ND (1.0)	997	8.26 J
C-R27-D	01/19/2010	ND (0.2)	ND (1.0)	976	8.33 J
C-R27-D	04/05/2010	ND (0.2)	ND (1.0)	984	8.36 J
C-TAZ-S	04/09/2009	ND (0.2)	ND (1.0)	962	8.37 J
C-TAZ-S	07/07/2009	ND (0.2)	ND (1.0)	994	8.37 J
C-TAZ-S	09/08/2009	ND (0.2)	ND (1.0)	972	8.27 J
C-TAZ-S	12/14/2009	ND (0.2)	ND (1.0)	991	8.34 J
C-TAZ-S	01/19/2010	ND (0.2)	ND (1.0)	971	8.27 J
C-TAZ-S	04/05/2010	ND (0.2)	ND (1.0)	947	8.35 J
C-TAZ-D	04/09/2009	ND (0.2)	ND (1.0)	936	8.30 J
C-TAZ-D	07/07/2009	ND (0.2)	ND (1.0)	993	8.34 J
C-TAZ-D	09/08/2009	ND (0.2)	ND (1.0)	962	8.29 J
C-TAZ-D	12/14/2009	ND (0.2)	ND (1.0)	976	8.32 J

Table 3-2
Surface Water Sampling Results, February 2010 through April 2010
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Location	Sample Date	Hexavalent Chromium (µg/L)	Dissolved Chromium (µg/L)	Specific Conductance (µS/cm)	Lab pH
In-channel Locations					
C-TAZ-D	01/19/2010	ND (0.2)	ND (1.0)	971	8.37 J
C-TAZ-D	04/05/2010	ND (0.2)	ND (1.0)	990	8.40 J
Shoreline Samples					
R-19	04/10/2009	ND (0.2)	ND (1.0)	967	8.33 J
R-19	07/08/2009	ND (0.2)	ND (1.0)	983	8.43 J
R-19	09/09/2009	ND (0.2)	ND (1.0)	1000	8.31 J
R-19	12/14/2009	ND (0.2)	ND (1.0)	981	8.26 J
R-19	01/19/2010	ND (0.2)	ND (1.0)	967	8.32 J
R-19	04/05/2010	ND (0.2)	ND (1.0)	952	8.28 J
R-28	04/09/2009	ND (0.2)	ND (1.0)	951	8.34 J
R-28	07/08/2009	ND (0.2)	ND (1.0)	981	8.44 J
R-28	09/09/2009	ND (0.2)	ND (1.0)	987	8.27 J
R-28	12/14/2009	ND (0.2)	ND (1.0)	998	8.28 J
R-28	01/20/2010	ND (0.2)	ND (1.0)	964	8.34 J
R-28	04/05/2010	ND (0.2)	ND (1.0)	979	8.36 J
R63	04/10/2009	ND (0.2)	ND (1.0)	1010	7.95 J
R63	07/08/2009	ND (0.2)	ND (1.0)	1020	7.86 J
R63	07/08/2009 FD	ND (0.2)	ND (1.0)	1020	7.92 J
R63	09/08/2009	ND (0.2)	ND (1.0)	1000	8.21 J
R63	12/14/2009	ND (0.2)	ND (1.0)	992	8.34 J
R63	01/19/2010	ND (0.2)	ND (1.0)	1030	8.34 J
R63	04/05/2010	ND (0.2)	ND (1.0)	971	8.42 J
RRB	04/10/2009	ND (0.2)	ND (1.0)	969	8.32 J
RRB	07/08/2009	ND (0.2)	ND (1.0)	984	8.27 J
RRB	09/09/2009	ND (0.2)	ND (1.0)	998	8.11 J
RRB	12/15/2009	ND (0.2)	ND (1.0)	1060	8.07 J
RRB	01/20/2010	ND (0.2)	ND (1.0)	1150	7.85 J
RRB	04/06/2010	ND (0.2)	ND (1.0)	985	8.25 J
Other Surface Water Monitoring Locations					
SW1	04/10/2009	ND (0.2)	ND (1.0)	1010	7.69 J
SW1	07/08/2009	ND (0.2)	ND (1.0)	1040	7.88 J
SW1	09/09/2009	ND (0.2)	ND (1.0)	1040	7.89 J
SW1	12/15/2009	ND (0.2)	ND (1.0)	1010	7.90 J
SW1	01/20/2010	ND (0.2)	ND (1.0)	1040	7.81 J
SW1	04/06/2010	ND (0.2)	ND (1.0)	1030	7.81 J
SW2	04/09/2009	ND (0.2)	ND (1.0)	968	8.34 J

Table 3-2
Surface Water Sampling Results, February 2010 through April 2010
First Quarter 2010 Interim Measures 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
Other Surface Water Monitoring Locations					
SW2	07/07/2009	ND (0.2)	ND (1.0)	990	8.47 J
SW2	09/09/2009	ND (0.2)	ND (1.0)	1010	8.04 J
SW2	12/15/2009	ND (0.2)	ND (1.0)	1000	8.02 J
SW2	01/20/2010	ND (0.2)	ND (1.0)	973	7.55 J
SW2	04/06/2010	ND (0.2)	ND (1.0)	1000	7.79 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
(---) data not collected or not available

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

Other analytical methods: dissolved chromium (total) - Method SW6020A, specific conductance - EPA 120.1, pH -SM4500-HB.

Table 3-3
Title 22 Metals Results, March 2010
First Quarter 2010 Interim Measures Performance Monitoring and Site-Wide
Groundwater and Surface Water Monitoring Report
PG&E Topock Compressor Station, Needles, California

	California MCL:	6	10	1,000	4	5	NE	50	1,000*	15	2	NE	100	50	100*	2	NE	5,000*
Well ID	**Sample Date**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Cobalt**	**Chromium**	**Copper**	**Lead**	**Mercury**	**Molybdenum**	**Nickel**	**Selenium**	**Silver**	**Thallium**	**Vanadium**	**Zinc**
MW-10	03/11/2010	ND (10)	---	28.0	ND (1.0)	ND (3.0)	ND (3.0)	**3,140**	ND (5.0)	ND (10)	ND (0.2)	220	ND (5.0)	6.8	ND (3.0)	ND (0.5)	40.0	27.0
MW-12	04/06/2010	ND (10)	**63.0**	44.0 ND	(1.0)	ND (3.0)	ND (3.0)	**1,900**	6.1 N	D (10)	ND (0.2)	21.0	ND (5.0)	10.0	ND (3.0)	ND (0.5)	14.0	20.0
FD	04/06/2010	ND (10)	**63.0**	42.0 ND	(1.0)	ND (3.0)	ND (3.0)	**1,840**	17.0 ND	(10)	ND (0.2)	19.0	ND (5.0)	8.7	ND (3.0)	ND (0.5)	14.0	18.0
MW-22	03/12/2010	ND (10)	**12.1**	130 ND	(1.0)	ND (3.0)	ND (3.0)	ND (1.0)	ND (5.0)	ND (10)	ND (0.2) J	7.0	ND (5.0)	ND (5.0)	ND (3.0)	ND (0.5)	ND (3.0)	18.0

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.

Analytes detected above MCL are in bold.

TABLE 4-1
Assessment Monitoring Wells and Trigger Levels for IM Performance Monitoring
First Quarter 2010 Interim Measures Performance Monitoring and
Site-Wide Groundwater and Surface Water Monitoring Report
PG&E Topock Compressor Station, Needles, California

Assessment Monitoring Well	July 2008 Cr(VI) Trigger Level [a] (µg/L)	Most Recent Cr(VI) Concentration (µg/L)	Most Recent Cr(VI) Concentration Date	Cr(VI) Concentration Trend 2009 - 2010 [c]
Shallow Zone Wells				
MW-21	20	1.4	10-Mar-10	NA
MW-32-20	20	ND (5.2)	22-Sep-09	NA
MW-32-35	20	ND (2.1)	9-Mar-10	NA
MW-33-40	20	ND (1.0)	11-Mar-10	NA
MW-39-40	20	ND (1.0)	1-Oct-09	NA
MW-47-55	150	37.4	16-Mar-10	fluctuating, overall stable
Mid-Depth Zone Wells				
MW-33-90	25	23.7	12-Mar-10	stable
MW-36-70	20	ND (0.2)	22-Sep-09	NA
MW-42-55	20	ND (1.0)	9-Mar-10	NA
MW-42-65	20	ND (1.0)	9-Mar-10	NA
MW-44-70	20	ND (0.2)	8-Mar-10	NA
Deep Zone Wells				
MW-27-85	20	ND (1.0)	9-Mar-10	NA
MW-28-90	20	ND (0.2)	9-Mar-10	NA
MW-33-150	20	10.6	11-Mar-10	stable
MW-33-210	20	14.4	11-Mar-10	increasing
MW-34-80	20	ND (0.2)	10-Mar-10	NA
MW-34-100	750	153	10-Mar-10	overall decreasing
MW-43-75	20	ND (1.0)	1-Oct-09	NA
MW-43-90	20	ND (1.0)	1-Oct-09	NA
MW-44-115	1,200	325	8-Mar-10	overall decreasing
MW-44-125	475	58.0J	8-Mar-10	overall decreasing
MW-46-175	225	177	11-Mar-10	fluctuating
MW-46-205	20	5.7	11-Mar-10	stable
MW-47-115	31 [b]	18.8	10-Mar-10	stable

Notes:

[a] The IM Contingency Plan and hexavalent chromium [Cr(VI)] trigger levels were updated July 17, 2008 (DTSC 2008d). Concentrations in micrograms per liter (mg/L).

[b] An updated trigger level for MW-47-115, based on Shewart statistical control limit calculated from data through May 2009, was approved by DTSC by email June 24, 2009.

[c] Chromium concentration plots for selected wells are included in Appendix C.

ND = not detected at listed reporting limit.

NA = not applicable.

J = concentration or RL estimated by laboratory or data validation.

TABLE 4-2
Pumping Rate and Extracted Volume for IM System, February 2010 through April 2010
First Quarter 2010 Interim Measures Performance Monitoring and
Site-Wide Groundwater and Surface Water Monitoring Report
PG&E Topock Compressor Station, Needles, California

Extraction Well ID	February 2010		March 2010		April 2010		First Quarter 2010		Project to Date [a]
	Average Pumping Rate [b] (gpm)	Volume Pumped (gal)	Average Pumping Rate [b] (gpm)	Volume Pumped (gal)	Average Pumping Rate [b] (gpm)	Volume Pumped (gal)	Average Pumping Rate [b] (gpm)	Volume Pumped (gal)	Cumulative Volume Pumped (gal)
TW-02S	0.00	0	0.00	0	0.00	0	0.00	0	1,000,780
TW-02D	0.00	0	0.00	0	0.00	0	0.00	0	53,104,680
TW-03D	101.52	4,093,366	103.11	4,602,738	90.95	3,928,894	98.53	12,624,998	224,387,763
PE-01	25.86	1,042,864	25.92	1,157,128	23.49	1,014,791	25.09	3,214,783	65,636,880
TOTAL	**127.4**	**5,136,230**	**129.0**	**5,759,866**	**114.4**	**4,943,685**	**123.6**	**15,839,781**	344,130,102
								Volume Pumped from the MW-20 Well Cluster	1,527,724
								Total Volume Pumped (gal)	345,657,826
								Total Volume Pumped (ac-ft)	1,060.8

NOTES:

gpm gallons per minute
gal gallons
ac-ft acre-feet

[a] Interim measure groundwater extraction at the Topock site was initiated in March 2004.

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

Table 4-3

Analytical Results for Extraction Wells, November 2008 through April 2010
First Quarter 2010 Interim Measures 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	06-Nov-08	1,810	1,650	5,350
	04-Dec-08	1,360	1,570	5,430
	09-Jan-09	1,300	1,570	5,770
	04-Feb-09	1,620	1,330	5,970
	04-Mar-09	1,280	1,280	5,630
	01-Apr-09	1,320	1,270	5,700
	06-May-09	1,450	1,610	5,020
	03-Jun-09	1,500	1,470	5,340
	01-Jul-09	1,360	1,500	5,300
	05-Aug-09	1,270	1,190	5,270
	02-Sep-09	1,360	1,220	5,140
	07-Oct-09	1,340	1,330	5,530
	04-Nov-09	1,310	1,160	5,810
	02-Dec-09	1,340	1,410	5,370
	06-Jan-10	1,350	1,300	5,350
	03-Feb-10	1,320	1,400	5,220
	03-Mar-10	1,340	1,380	5,080
	07-Apr-10	1,310	1,380	5,110
PE-1	06-Nov-08	27.7	29.8	3,520
	04-Dec-08	32.3	28.8	3,700
	09-Jan-09	27.6	33.4	3,740
	04-Feb-09	25.5	26.3	3,500
	04-Mar-09	22.4	23.5	3,490
	01-Apr-09	20.8	21.4	3,690
	06-May-09	18.1	18.6	3,460
	03-Jun-09	19.8	18.7	3,490
	01-Jul-09	19.2	20.4	3,460
	05-Aug-09	17.5	19.2	3,560
	02-Sep-09	17.9	19.6	3,420
	07-Oct-09	18.6	20.7	3,360
	04-Nov-09	19.6	19.9	3,620
	02-Dec-09	19.4	19.7	3,430
	06-Jan-10	19.6	20.0	3,110
	03-Feb-10	19.1	22.6	3,330
	03-Mar-10	17.3	20.8	3,080
	07-Apr-10	15.4	13.7	3,120

NOTES:

µg/L = concentration in micrograms per liter
mg/L = concentration in milligrams per liter

Analytical results from inactive extraction wells are presented in Table B-2.

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

Dissolved chromium (total) was analyzed by Method SW6010B or SW6020, hexavalent chromium analyzed by Method SM3500-CrB and total dissolved solids were analyzed by Method SM2540C.

TABLE 4-4

Average Hydraulic Gradients Measured at Well Pairs, February through April 2010
First Quarter 2010 Interim Measures Performance 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	February	0.0051	NA
	March	0.0055	NA
	April	0.0043	NA
Northern Gradient Pair MW-31-135 / MW-33-150	February	0.0019	28 / 28
	March	0.0024	31 / 31
	April	0.0021	30 / 30
Central Gradient Pair MW-45-95 / MW-34-100	February	0.0099	28 / 28
	March	0.0104	31 / 31
	April	0.0077	30 / 30
Southern Gradient Pair MW-45-95 / MW-27-85	February	0.0036	28 / 28
	March	0.0038	31 / 31
	April	0.0030	30 / 30

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.
INC = Data incomplete, less than 75% of data available over reporting period due to rejection or field equipment malfunction

TABLE 4-5
Predicted and Actual Monthly Average Davis Dam Discharge and Colorado River Elevation at I-3
First Quarter 2010 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 2007	8,600	8,796	-196	453.2	453.6	0.4
February 2007	9,800	11,680	-1,880	453.6	454.3	0.7
March 2007	14,300	14,554	-254	455.1	455.6	0.5
April 2007	17,300	16,818	482	456.4	456.4	0.0
May 2007	16,800	16,199	601	456.5	456.4	-0.1
June 2007	16,000	16,212	-212	456.4	456.4	0.0
July 2007	14,900	14,897	3	455.8	456.0	0.2
August 2007	12,100	12,776	-676	454.7	455.4	0.7
September 2007	12,700	13,050	-350	454.8	455.4	0.5
October 2007	10,600	10,324	276	454.0	454.3	0.3
November 2007	9,100	8,387	713	453.6	453.6	0.0
December 2007	5,700	6,445	-745	452.3	452.7	0.4
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	454.3	0.2
December 2009	9,000	8,650	350	453.6	453.5	-0.1
January 2010	9,900	7,415	2,485	453.9	453.4	-0.5
February 2010	7,700	7,961	-261	453.0	453.4	0.4
March 2010	14,700	14,014	686	455.5	455.4	-0.1
April 2010	16,100	14,762	1,338	455.3	455.9	0.7
May 2010	15,500			456.2		

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 February 2010 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.

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
- 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 GMP, RMP, and PMP monitoring locations and identifications.

FIGURE 1-1
LOCATIONS OF IM-3 FACILITIES AND MONITORING LOCATIONS

FIRST QUARTER 2010 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
- Shoreline Surface Water Monitoring Location
- River Channel Surface Water Monitoring Location
- Other Surface Water Monitoring Location
- Property Boundary

Sampling Frequency for GMP and RMP April 2010

MW-17	Biennial Sampling
MW-9	Annual Sampling
MW-22	Semiannual Sampling
MW-12	Quarterly Sampling
MW-34-100	Monthly Sampling

Notes:

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

[b] These wells will be sampled annually for the water quality snapshot.

[c] Background metals collected semiannually.

[d] Shoreline, river channel, and other surface water monitoring locations are sampled twice daily during periods of low river stage (typically November – January) otherwise quarterly.

N

0 500 1,000 Feet

California State Plane NAD83 Zone 5 US Feet

FIGURE 1-2
MONITORING LOCATIONS AND SAMPLING FREQUENCY FOR GMP AND RMP

FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
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FIGURE 1-3
LOCATIONS OF WELLS AND CROSS-SECTIONS USED FOR IM PERFORMANCE MONITORING

FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
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LEGEND

Alluvial Aquifer Well Sampled During March 2010 Sampling Event

Bedrock Well Sampled During March 2010 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 - March 2010

Not detected at analytical reporting limit

Concentration between reporting limit and 32 µg/L

Concentration ≥ 32 µg/L

Approximate outline of monitoring wells in Alluvial Aquifer and Bedrock with Cr(VI) concentrations ≥ 32 µg/L based on March 2010 groundwater sampling.

Approximate bedrock contact at 455 ft MSL elevation

Note:
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, MARCH 2010

FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
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LEGEND

Alluvial Aquifer Well Sampled During March 2010 Sampling Event

Bedrock Well Sampled During March 2010 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 - March 2010

Not detected at analytical reporting limit

Concentration between reporting limit and 32 µg/L

Concentration ≥ 32 µg/L

Approximate outline of monitoring wells in Alluvial Aquifer and Bedrock with Cr(VI) concentrations ≥ 32 µg/L based on March 2010 groundwater sampling.

Approximate bedrock contact at 425 ft MSL elevation

Note:
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, MARCH 2010

FIRST QUARTER 2010 INERTIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
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NEEDLES, CALIFORNIA

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LEGEND

Alluvial Aquifer Well Sampled During March 2010 Sampling Event

Bedrock Well Sampled During March 2010 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 - March 2010

Not detected at analytical reporting limit

Concentration between reporting limit and 32 µg/L

Concentration ≥ 32 µg/L

Approximate outline of monitoring wells in Alluvial Aquifer and Bedrock with Cr(VI) concentrations ≥ 32 µg/L based on March 2010 groundwater sampling.

Approximate bedrock contact at 395 ft MSL elevation

Note:

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 MARCH 2010

FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
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NEEDLES, CALIFORNA

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Shallow Wells (Upper Depth Interval)

Mid-Depth Wells (Middle-Depth Interval)

Deep Wells (Lower Depth Interval)

LEGEND

- Alluvial Aquifer Well Sampled During March 2010 Sampling Event
- Bedrock Well Sampled During March 2010 Sampling Event

6.48 Concentration of hexavalent chromium [Cr(VI)] in groundwater, micrograms per liter (µg/L). Results posted are maximum Cr(VI) concentrations from March 2010 groundwater sampling.

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

Cr(VI) Concentrations - March 2010

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

50 — Inferred Cr(VI) concentration contour within Alluvial aquifer depth interval based on March 2010 sampling results.

Hydrogeologic Section A showing aquifer depth intervals and March 2010 Cr(VI) sampling results

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.

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. The beige shading shows the area of bedrock groundwater and Cr(VI) concentrations for bedrock monitoring wells for the first quarter 2010 results presentation. 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.

FIGURE 4-1
MAXIMUM Cr(VI) CONCENTRATIONS IN ALLUVIAL AQUIFER, MARCH 2010
FIRST QUARTER INERTIM MEASRUES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNA

CH2MHILL

ES052710053215PHX_PG&E Topock

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Notes:
ND = Not detected at listed concentration.
J = Concentration or RL estimated by laboratory or data validation.

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

See Figure 1-3 for map of this cross-section.

water level

well screen 3,810

boring depth (feet) 103'

-— — 50 -— —
Inferred Cr(VI) concentration contour from March 2010 sampling.

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

ND (1)	Not detected at listed reporting limit (ppb)
29	Less than 32 µg/L
3,810	Greater than 32 µg/L

FIGURE 4-2
Cr(VI) CONCENTRATIONS
FLOODPLAIN CROSS-SECTION B,
MARCH 2010

FIRST QUARTER 2010 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\CHALL6\DOCUMENTS\GINT\2010_1Q\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 APRIL 2010
FIRST QUARTER 2010 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 February 1 through April 30, 2010. See Table E-2 in Appendix E for number of days available for averaging.

2. Approximate limits of 20 and 50 parts per billion hexavalent chromium from March 2010 sampling (Figure 4-1).

3. River elevations at R- river stations (blue label) are interpolated from the maximum average river elevation at I-3 and RRB using a river gradient of 7.79×10^{-5} ft/ft calculated from data collected February 19, 2010 through April 30,2010. The RRB station was dry during the low river period up to February 19, 2010.

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-22 455.19 — 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 Greater Than 75% of Reporting Period

FIGURE 4-4a
AVERAGE GROUNDWATER ELEVATIONS FOR SHALLOW WELLS AND RIVER ELEVATIONS, FEBRUARY THROUGH APRIL 2010

FIRST QUARTER 2010 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 February 1 through April 30, 2010.
See Table E-2 in Appendix E for number of days available for averaging.

2. Approximate limits of 20 and 50 ppb hexavalent chromium from March 2010 sampling. The placement of 20 ppb contour on mid-depth map is based on shallow and deep chromium distribution maps (Figure 4-1).

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

Bedrock Contact at 425 ft elevation

Interpreted Groundwater Flow Direction

Monitoring Well

Extraction Well

Groundwater Elevation Contour 0.2 ft (dashed where inferred)

FIGURE 4-4b
AVERAGE GROUNDWATER ELEVATIONS FOR MID-DEPTH WELLS, FEBRUARY THROUGH APRIL 2010

FIRST QUARTER 2010 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 February 1 through April, 30 2010.
See Table E-2 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 March 2010 sampling.

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

4. Well MW-46-175 is screened deeper that other wells. As a result, it is not representative of the elevation interval of the aquifer contoured in this map. These data are not posted but contoured.

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 395 ft elevation

Monitoring Well

Extraction Well

Groundwater Elevation Contour 0.2 ft (dashed where inferred)

INC Data Incomplete Greater Than 75% of Reporting Period

FIGURE 4-4c
AVERAGE GROUNDWATER ELEVATIONS FOR DEEP WELLS, FEBRUARY THROUGH APRIL 2010

FIRST QUARTER 2010 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 February 1, 2010 through April 30, 2010 measured with transducers at 30 minute intervals.

Groundwater elevations adjusted for salinity and temperature.
Well MW-36-90* is excluded from contouring.
Well MW-20-130* 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, less than 75% data available over the monitoring period due to rejection or field equipment malfunction.

Legend:

MW-30-50

Inferred water table

well screen

103 boring depth (feet)

20 — Inferred hexavalent chromium contour (ppb) from March 2010 sampling.

455.23 — Monthly 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 FEBRUARY 2010 THROUGH APRIL 2010

FIRST QUARTER 2010 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\CHALL6\DOCUMENTS\GINT\2010_1Q\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 4-2 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 4-4 and Section 4.5 for discussion of gradient data.

FIGURE 4-6
MEASURED HYDRAULIC GRADIENTS, RIVER ELEVATION, AND PUMPING RATE, FEBRUARY 2010 THROUGH APRIL 2010

FIRST QUARTER 2010 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 May 2010 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

FIRST QUARTER 2010 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, February through April 2010
(Provided on CD-ROM with hardcopy submittal)

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 03-24-2010
EMAX Batch No.: 10C146

Attn: Priya Kumar

CH2M HILL
155 Grand, Suite 1000
Oakland CA 94612

Subject: Laboratory Report
Project: PG&E's Topock Gas Compressor Stat

Enclosed is the Laboratory report for samples received on 03/11/10.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-55-045-165-AZ	C146-01	03/08/10	WATER	DISSOLVED METALS IN WATER & WASTE CHROMIUM HEXAVALENT BY IC
MW-55-120-165-AZ	C146-02	03/08/10	WATER	DISSOLVED METALS IN WATER & WASTE CHROMIUM HEXAVALENT BY IC
MW-90-165-AZ	C146-03	03/08/10	WATER	DISSOLVED METALS IN WATER & WASTE CHROMIUM HEXAVALENT BY IC
MW-54-085-165-AZ	C146-04	03/09/10	WATER	DISSOLVED METALS IN WATER & WASTE CHROMIUM HEXAVALENT BY IC
MW-54-140-165-AZ	C146-05	03/09/10	WATER	DISSOLVED METALS IN WATER & WASTE CHROMIUM HEXAVALENT BY IC
MW-54-195-165-AZ	C146-06	03/09/10	WATER	DISSOLVED METALS IN WATER & WASTE CHROMIUM HEXAVALENT BY IC

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that the results included in this report meet all NELAC requirements unless noted in the Case Narrative.

EMax

10C146

CH2MHILL CH-0408

CHAIN OF CUSTODY RECORD

3/10/2010 2:44:13 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.AZ.01
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-165-AZ
Turnaround Time 12 Days
Shipping Date: 3/10/2010
COC Number: 2

				Container:	250 ml Poly	250 ml Poly			
				Preservatives:	(NH□)□SO□/NH□OH, 4°C	HNO□, 4°C			
				Filtered:	Field	Field			
				Holding Time:	28	180			
		DATE	TIME	Matrix	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010BCRFF) Field Filtered Chromium		Number of Containers	COMMENTS
1	MW-55-045-165-AZ	3/8/2010	13:03	Water	x	x		2	
2	MW-55-120-165-AZ	3/8/2010	13:56	Water	x	x		2	
3	MW-90-165-AZ	3/8/2010	12:20	Water	x	x		2	
4	MW-54-085-165-AZ	3/9/2010	8:49	Water	x	x		2	
5	MW-54-140-165-AZ	3/9/2010	9:40	Water	x	x		2	
6	MW-54-195-165-AZ	3/9/2010	10:46	Water	x	x		2	
							TOTAL NUMBER OF CONTAINERS	12	

T=2.4°C

	Signatures	Date/Time
Approved by		3-10-10
Sampled by		1600
Relinquished by		
Received by		3/10/10 1600
Relinquished by		3/10/10 2100
Received by		3/10/10 21:00

Shipping Details
Method of Shipment: FedEx
On Ice: yes / no
Airbill No:
Lab Name:
Lab Phone:

ATTN:
Sample Custody

Special Instructions:
March 8-17, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

3-11-10 1432

1551

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 10C146
☑ EMAX Courier		Recepient I. LATEL
☐ Client Delivery		Date 3-11-10
☐ Third Party		Time 1432

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☐ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☑ Plastic Bag
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 2.4 °C	☐ Cooler 2 ____ °C	☐ Cooler 3 ____ °C	☐ Cooler 4 ____ °C	☐ Cooler 5 ____ °C
	☐ Cooler 6 ____ °C	☐ Cooler 7 ____ °C	☐ Cooler 8 ____ °C	☐ Cooler 9 ____ °C	☐ Cooler 10 ____ °C

Comments: ☐ **PM was informed on non-compliant coolers imediately.**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code

REVIEWS

Sample Labeling [signature] Date 3-11-10

SRF [signature] Date 3/11/10

PM [signature] Date 3/12/10

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	____
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4	____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	____		
C4	____	H2	____		

CLIENT: CH2M HILL TOPOCK

SDG: 10C146

Analyst names:

1. D200.8: Christopher Capulong
2. 218.6: Emmery Lee

CASE NARRATIVE

Client : CH2M HILL

Project : PG&E'S TOPOCK GAS COMPRESSOR STAT

SDG : 10C146

METHOD 200.8
DISSOLVED CHROMIUM BY ICP-MS

A total of six (6) water samples were received on 03/11/10 for Dissolved Metals In Water & Waste analysis, Method 200.8 in accordance with Methods for the Determination of Metals in Environmental Samples, Supplement 1 (EPA/600/R-94/111) and Project QAPP.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IMC012WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED CHROMIUM BY ICP-MS

Client : CH2M HILL
Project : PG&E'S TOPDCK GAS COMPRESSOR STAT

SDG NO. : 10C146
Instrument ID : T-I98

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMC012WB	1	NA	03/17/1015:56	03/15/1011:00	98C12019	98C12015	IMC012W	Method Blank
LCS1W	IMC012WL	1	NA	03/17/1016:03	03/15/1011:00	98C12020	98C12015	IMC012W	Lab Control Sample (LCS)
LCD1W	IMC012WC	1	NA	03/17/1016:09	03/15/1011:00	98C12021	98C12015	IMC012W	LCS Duplicate
MW-55-045-165-AZAS	C146-01A	1	NA	03/17/1018:14	03/15/1011:00	98C12041	98C12039	IMC012W	Analytical Spike Sample
MW-55-045-165-AZ	C146-01	1	NA	03/17/1018:20	03/15/1011:00	98C12042	98C12039	IMC012W	Field Sample
MW-55-045-165-AZDL	C146-01J	5	NA	03/17/1018:27	03/15/1011:00	98C12043	98C12039	IMC012W	Diluted Sample
MW-55-120-165-AZ	C146-02	1	NA	03/17/1018:33	03/15/1011:00	98C12044	98C12039	IMC012W	Field Sample
MW-90-165-AZ	C146-03	1	NA	03/17/1018:39	03/15/1011:00	98C12045	98C12039	IMC012W	Field Sample
MW-54-085-165-AZ	C146-04	1	NA	03/17/1018:46	03/15/1011:00	98C12046	98C12039	IMC012W	Field Sample
MW-54-140-165-AZ	C146-05	1	NA	03/17/1018:52	03/15/1011:00	98C12047	98C12039	IMC012W	Field Sample
MW-54-195-165-AZ	C146-06	1	NA	03/17/1018:58	03/15/1011:00	98C12048	98C12039	IMC012W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 200.8
DISSOLVED CHROMIUM BY ICP-MS

Client	: CH2M HILL	Date Collected:	03/08/10
Project	: PG&E'S TOPOCK GAS COMPRESSOR STAT	Date Received:	03/11/10
SDG NO.	: 10C146	Date Extracted:	03/15/10 11:00
Sample ID:	MW-55-045-165-AZ	Date Analyzed:	03/17/10 18:20
Lab Samp ID:	C146-01	Dilution Factor:	1
Lab File ID:	98C12042	Matrix :	WATER
Ext Btch ID:	IMC012W	% Moisture :	NA
Calib. Ref.:	98C12039	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Chromium	ND	1.00	0.500

METHOD 200.8
DISSOLVED CHROMIUM BY ICP-MS

Client	: CH2M HILL	Date Collected:	03/08/10
Project	: PG&E'S TOPOCK GAS COMPRESSOR STAT	Date Received:	03/11/10
SDG NO.	: 10C146	Date Extracted:	03/15/10 11:00
Sample ID:	MW-55-120-165-AZ	Date Analyzed:	03/17/10 18:33
Lab Samp ID:	C146-02	Dilution Factor:	1
Lab File ID:	98C12044	Matrix :	WATER
Ext Btch ID:	IMC012W	% Moisture :	NA
Calib. Ref.:	98C12039	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Chromium	6.1	1.00	0.500

Revised Report

7004

METHOD 200.8
DISSOLVED CHROMIUM BY ICP-MS

Client	: CH2M HILL	Date Collected:	03/08/10
Project	: PG&E'S TOPOCK GAS COMPRESSOR STAT	Date Received:	03/11/10
SDG NO.	: 10C146	Date Extracted:	03/15/10 11:00
Sample ID:	MW-90-165-AZ	Date Analyzed:	03/17/10 18:39
Lab Samp ID:	C146-03	Dilution Factor:	1
Lab File ID:	98C12045	Matrix :	WATER
Ext Btch ID:	IMC012W	% Moisture :	NA
Calib. Ref.:	98C12039	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Chromium	6.27	1.00	0.500

METHOD 200.8
DISSOLVED CHROMIUM BY ICP-MS

Client	: CH2M HILL	Date Collected:	03/09/10
Project	: PG&E'S TOPOCK GAS COMPRESSOR STAT	Date Received:	03/11/10
SDG NO.	: 10C146	Date Extracted:	03/15/10 11:00
Sample ID:	MW-54-085-165-AZ	Date Analyzed:	03/17/10 18:46
Lab Samp ID:	C146-04	Dilution Factor:	1
Lab File ID:	98C12046	Matrix :	WATER
Ext Btch ID:	IMC012W	% Moisture :	NA
Calib. Ref.:	98C12039	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Chromium	ND	1.00	0.500

METHOD 200.8
DISSOLVED CHROMIUM BY ICP-MS

Client	: CH2M HILL	Date Collected:	03/09/10
Project	: PG&E'S TOPOCK GAS COMPRESSOR STAT	Date Received:	03/11/10
SDG NO.	: 10C146	Date Extracted:	03/15/10 11:00
Sample ID:	MW-54-140-165-AZ	Date Analyzed:	03/17/10 18:52
Lab Samp ID:	C146-05	Dilution Factor:	1
Lab File ID:	98C12047	Matrix :	WATER
Ext Btch ID:	IMC012W	% Moisture :	NA
Calib. Ref.:	98C12039	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Chromium	ND	1.00	0.500

METHOD 200.8
DISSOLVED CHROMIUM BY ICP-MS

Client	: CH2M HILL	Date Collected:	03/09/10
Project	: PG&E'S TOPOCK GAS COMPRESSOR STAT	Date Received:	03/11/10
SDG NO.	: 10C146	Date Extracted:	03/15/10 11:00
Sample ID:	MW-54-195-165-AZ	Date Analyzed:	03/17/10 18:58
Lab Samp ID:	C146-06	Dilution Factor:	1
Lab File ID:	98C12048	Matrix :	WATER
Ext Btch ID:	IMC012W	% Moisture :	NA
Calib. Ref.:	98C12039	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Chromium	ND	1.00	0.500

METHOD 200.8
DISSOLVED CHROMIUM BY ICP-MS

Client	: CH2M HILL	Date Collected:	NA
Project	: PG&E'S TOPOCK GAS COMPRESSOR STAT	Date Received:	03/15/10
SDG NO.	: 10C146	Date Extracted:	03/15/10 11:00
Sample ID:	MBLK1W	Date Analyzed:	03/17/10 15:56
Lab Samp ID:	IMC012WB	Dilution Factor:	1
Lab File ID:	98C12019	Matrix :	WATER
Ext Btch ID:	IMC012W	% Moisture :	NA
Calib. Ref.:	98C12015	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Chromium	ND	1.00	0.500

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
SDG NO.: 10C146
METHOD: METHOD 200.8 (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IMC012WB	IMC012WL	IMC012WC		
LAB FILE ID:	98C12019	98C12020	9BC12021		
DATIME EXTRCTD:	03/15/1011:00	03/15/1011:00	03/15/1011:00	DATE COLLECTED:	NA
DATIME ANALYZD:	03/17/1015:56	03/17/1016:03	03/17/1016:09	DATE RECEIVED:	03/15/10
PREP. BATCH:	IMC012W	IMC012W	IMC012W		
CALIB. REF:	98C12015	98C12015	98C12015		

ACCESSION:

PARAMETER	BLNK RSLT ug/L	SPIKE AMT ug/L	BS RSLT ug/L	BS % REC	SPIKE AMT ug/L	BSD RSLT ug/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Chromium	ND	25.0	23.4	94	25.0	23.5	94	0	85-115	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
BATCH NO.: 10C146
METHOD: METHOD 200.8 (DISSOLVED)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	MW-55-045-165-	MW-55-045-165-		
EMAX SAMP ID:	C146-01	C146-01J		
LAB FILE ID:	98C12042	98C12043		
DATE EXTRACTED:	03/15/1011:00	03/15/1011:00	DATE COLLECTED:	03/08/10
DATE ANALYZED:	03/17/1018:20	03/17/1018:27	DATE RECEIVED:	03/11/10
PREP. BATCH:	IMC012W	IMC012W		
CALIB. REF:	98C12039	98C12039		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SERIAL DIL RSLT (ug/L)	DIF RSLT %	QC LIMIT (%)
Chromium	ND	ND	0	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
SDG NO.: 10C146
METHOD: METHOD 200.8 (DISSOLVED)

MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	MW-55-045-165-AZ			
CONTROL NO.:	C146-01	C146-01A		
LAB FILE ID:	98C12042	98C12041		
DATIME EXTRCTD:	03/15/1011:00	03/15/1011:00	DATE COLLECTED:	03/08/10
DATIME ANALYZD:	03/17/1018:20	03/17/1018:14	DATE RECEIVED:	03/11/10
PREP. BATCH:	IMC012W	IMC012W		
CALIB. REF:	98C12039	98C12039		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	AS RSLT (ug/L)	AS % REC	QC LIMIT (%)
Chromium	ND	25.0	24.9	100	75-125

CASE NARRATIVE

Client : CH2M HILL

Project : PG&E'S TOPOCK GAS COMPRESSOR STAT

SDG : 10C146

METHOD 218.6
HEXAVALENT CHROMIUM

A total of six (6) water samples were received on 03/11/10 for Chromium Hexavalent by IC analysis, Method 218.6 in accordance with Methods for the Determination of Metals in Environmental Samples, Supplement 1 (EPA/600/R-94/111) and Project QAPP.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for HCC003WL/C were all within QC limits.

Matrix QC Sample
Matrix QC samples were analyzed at the frequency prescribed by the project.
Percent recovery for C146-01M was within project QC limits.
Percent recovery for C146-02M was within project QC limits.
Percent recovery for C146-03M was within project QC limits.
Percent recovery for C146-04M was within project QC limits.
Percent recovery for C146-05M was within project QC limits.
Percent recovery for C146-06M was within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 218.6
HEXAVALENT CHROMIUM

Client : CH2M HILL
Project : PG&E'S TOPOCK GAS COMPRESSOR STAT
Batch No. : 10C146

Matrix : WATER
Instrument ID : I59

SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DLF	MOIST	RL (ug/L)	MDL (ug/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HCC003WB	ND	1	NA	0.200	0.100	03/12/1015:09	NA	IC12003	IC12001	HCC003W	NA	NA
LCS1W	HCC003WL	1.97	1	NA	0.200	0.100	03/12/1015:19	NA	IC12004	IC12001	HCC003W	NA	NA
LCD1W	HCC003WC	1.84	1	NA	0.200	0.100	03/12/1015:30	NA	IC12005	IC12001	HCC003W	NA	NA
MW-55-045-165-AZ	C146-01	ND	1	NA	0.200	0.100	03/12/1015:40	NA	IC12006	IC12001	HCC003W	03/08/1013:03	03/11/10
MW-55-045-165-AZMS	C146-01M	1.03	1	NA	0.200	0.100	03/12/1015:51	NA	IC12007	IC12001	HCC003W	03/08/1013:03	03/11/10
MW-55-120-165-AZ	C146-02	5.58	1	NA	0.200	0.100	03/12/1016:01	NA	IC12008	IC12001	HCC003W	03/08/1013:56	03/11/10
MW-55-120-165-AZMS	C146-02M	10.4	1	NA	0.200	0.100	03/12/1016:16	NA	IC12009	IC12001	HCC003W	03/08/1013:56	03/11/10
MW-90-165-AZ	C146-03	5.44	1	NA	0.200	0.100	03/12/1016:26	NA	IC12010	IC12001	HCC003W	03/08/1012:20	03/11/10
MW-90-165-AZMS	C146-03M	10.3	1	NA	0.200	0.100	03/12/1016:39	NA	IC12011	IC12001	HCC003W	03/08/1012:20	03/11/10
MW-54-085-165-AZ	C146-04T	ND	5	NA	1.00	0.500	03/12/1018:13	NA	IC12020	IC12012	HCC003W	03/09/1008:49	03/11/10
MW-54-085-165-AZMS	C146-04G	4.50	5	NA	1.00	0.500	03/12/1018:23	NA	IC12021	IC12012	HCC003W	03/09/1008:49	03/11/10
MW-54-140-165-AZ	C146-05I	ND	10	NA	2.00	1.00	03/12/1019:57	NA	IC12028	IC12022	HCC003W	03/09/1009:40	03/11/10
MW-54-140-165-AZMSD	C146-05H	9.19	10	NA	2.00	1.00	03/12/1020:07	NA	IC12029	IC12022	HCC003W	03/09/1009:40	03/11/10
MW-54-195-165-AZ	C146-06I	ND	10	NA	2.00	1.00	03/12/1020:17	NA	IC12030	IC12022	HCC003W	03/09/1010:46	03/11/10
MW-54-195-165-AZMSD	C146-06H	8.96	10	NA	2.00	1.00	03/12/1020:28	NA	IC12031	IC12022	HCC003W	03/09/1010:46	03/11/10

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
BATCH NO.: 10C146
METHOD: METHOD 218.6

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	HCCDD3WB	HCC003WL	HCC003WC		
LAB FILE ID:	IC12003	IC12004	IC12005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	03/12/1015:09	03/12/1015:19	03/12/1015:30	DATE RECEIVED:	NA
PREP. BATCH:	HCC003W	HCC003W	HCC003W		
CALIB. REF:	IC12001	IC12001	IC12001		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Hexavalent Chromium	ND	2.00	1.97	98	2.00	1.84	92	7	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
BATCH NO.: 10C146
METHOD: METHOD 218.6

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-55-045-165-AZ
LAB SAMP ID: C146-01 C146-01M
LAB FILE ID: IC12006 IC12007
DATE EXTRACTED: NA NA DATE COLLECTED: 03/08/10 13:03
DATE ANALYZED: 03/12/1015:40 03/12/1015:51 DATE RECEIVED: 03/11/10
PREP. BATCH: HCC003W HCC003W
CALIB. REF: IC12001 IC12001

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	QC LIMIT (%)
Hexavalent Chromium	ND	1.00	1.03	103	90-110

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
BATCH NO.: 10C146
METHOD: METHOD 218.6

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MW-55-120-165-AZ
LAB SAMP ID: C146-02 C146-02M
LAB FILE ID: IC12008 IC12009
DATE EXTRACTED: NA NA DATE COLLECTED: 03/08/10 13:56
DATE ANALYZED: 03/12/1016:01 03/12/1016:16 DATE RECEIVED: 03/11/10
PREP. BATCH: HCC003W HCC003W
CALIB. REF: IC12001 IC12001

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	QC LIMIT (%)
Hexavalent Chromium	5.58	5.00	10.4	97	90-110

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
BATCH NO.: 10C146
METHOD: METHOD 218.6

==========

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-90-165-AZ			
LAB SAMP ID:	C146-03	C146-03M		
LAB FILE ID:	IC12010	IC12011		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	03/08/10 12:20
DATE ANALYZED:	D3/12/1016:26	03/12/1016:39	DATE RECEIVED:	03/11/10
PREP. BATCH:	HCC003W	HCC003W		
CALIB. REF:	1C12001	1C12001		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	QC LIMIT (%)
Hexavalent Chromium	5.44	5.00	10.3	97	90-110

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
BATCH NO.: 10C146
METHOD: METHOD 218.6

==========

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	5	5		
SAMPLE ID:	MW-54-085-165-AZ			
LAB SAMP ID:	C146-04T	C146-04G		
LAB FILE ID:	IC12020	IC12021		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	03/09/10 08:49
DATE ANALYZED:	03/12/1018:13	03/12/1018:23	DATE RECEIVED:	03/11/10
PREP. BATCH:	HCC003W	HCC003W		
CALIB. REF:	IC12012	IC12012		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	QC LIMIT (%)
Hexavalent Chromium	ND	5.00	4.50	90	90-110

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
BATCH NO.: 10C146
METHOD: METHOD 218.6

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 10 10
SAMPLE ID: MW-54-140-165-AZ
LAB SAMP ID: C146-05I C146-05H
LAB FILE ID: IC12028 IC12029
DATE EXTRACTED: NA NA DATE COLLECTED: 03/09/10 09:40
DATE ANALYZED: 03/12/1019:57 03/12/1020:07 DATE RECEIVED: 03/11/10
PREP. BATCH: HCC003W HCC003W
CALIB. REF: IC12022 IC12022

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	QC LIMIT (%)
Hexavalent Chromium	ND	10.0	9.19	92	90-110

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
BATCH NO.: 10C146
METHOD: METHOD 218.6

==========

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 10 10
SAMPLE ID: MW-54-195-165-AZ
LAB SAMP ID: C146-06I C146-06H
LAB FILE ID: IC12030 IC12031
DATE EXTRACTED: NA NA DATE COLLECTED: 03/09/10 10:46
DATE ANALYZED: 03/12/1020:17 03/12/1020:28 DATE RECEIVED: 03/11/10
PREP. BATCH: HCC003W HCC003W
CALIB. REF: IC12022 IC12022

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	QC LIMIT (%)
Hexavalent Chromium	ND	10.0	8.96	90	90-110

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 04-05-2010
EMAX Batch No.: 10C262

Attn: Priya Kumar

CH2M HILL
155 Grand, Suite 1000
Oakland CA 94612

Subject: Laboratory Report
Project: PG&E's Topock Gas Compressor Stat

Enclosed is the Laboratory report for samples received on 03/22/10.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW-56D-165-AZ	C262-01	03/18/10	WATER	DISSOLVED METALS IN WATER & WASTE CHROMIUM HEXAVALENT BY IC
MW-56M-165-AZ	C262-02	03/18/10	WATER	DISSOLVED METALS IN WATER & WASTE CHROMIUM HEXAVALENT BY IC
MW-56S-165-AZ	C262-03	03/18/10	WATER	DISSOLVED METALS IN WATER & WASTE CHROMIUM HEXAVALENT BY IC

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that the results included in this report meet all NELAC requirements unless noted in the Case Narrative.

EMAX-AZ

CHAIN OF CUSTODY RECORD

10C262

COC Number

TURNAROUND TIME 12 days

DATE 3-18-10 PAGE 1 OF 1

COMPANY CH2M Hill/PGE

PROJECT NAME PG&E Topock

PHONE (530) 229-3303 FAX (530) 339-3303

ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612

P.O. NUMBER 390378.MP.02.GM.02 TEAM 1

SAMPLERS (SIGNATURE

	SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Fld Filtered	Diss Cr (6010B Cr FF) Fld Filtered	NUMBER OF CONTAINERS	COMMENTS
1	MW-56D-165-AZ	3-18-10	1232	water	X	X	2	
2	MW-56m-165-AZ		1312		X	X	2	
3	MW-56S-165-AZ		1350		X	X	2	

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/Agency	Date/Time
Signature (Relinquished)		Barry Collom	CH2M Hill	3-19-10 15:30
Signature (Received)	Rafael Davila	Rafael	T.L.I	3-19-10 15:30
Signature (Relinquished)	Rafael Davila	Rafael	T.L.I	3-19-10 20:30
Signature (Received)	L. Shabenne	Linda	TLI	3/19/10 20:30
Signature (Relinquished)	L. Shabenne	Linda	TLI	3/22/10 9:40
Signature (Received)	Keith Stout	Keith	EMAX	3/22/10

Keith Stout Keith Emax 3/22/10 9:40 3/22/10 1531

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ T=2.8C °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

1001

EMAX LABORATORIES, INC.

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN 10C262
☑ EMAX Courier	See cve	Recepient I PATEL
☐ Client Delivery		Date 3-22-10
☐ Third Party		Time 1531

COC Inspection

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time/Location	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☐ Preservative (if any)	☑ TAT
Safety Issues	☑ None	☐ High concentrations expected	☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☐ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☑ plastic bag
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 2.8 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C

Comments: ☐ **PM was informed on non-compliant coolers imediately.**

DISCREPANCIES

LSID	LSCID	Sample Label ID/COC ID	Discrepancy Code	Corrective Action Code

REVIEWS

Sample Labeling [signature] Date 3-22-10

SRF [signature] Date 3/22/10

PM [signature] Date 3/23/10

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Project Management
A1	Analysis is not indicated in COC	D1	Date and/or time is not indicated in COC	R1	Hold sample(s); wait for further instructions
A2	Analysis is not indicated in label	D2	Date and/or time is not indicated in label	R2	Proceed as indicated in COC
A3	Analysis is inconsistent in COC vis-à-vis label	D3	Date and/or time is inconsistent in COC vis-à-vis label	R3	Refer to attached instruction
A4	_____	E1	Insuficient preservative	R4	Cancel the analysis
B1	Sample ID is not indicated in COC	E2	Improper preservation	R5	_____
B2	Sample ID is not indicated in label	F1	Insufficient Sample	R6	_____
B3	Sample ID is inconsistent in COC vis-à-vis label	F2	Bubble is> 6mm		
B4	_____	G1	Temperature is out of range		
C1	Wrong container	G2	Out of Holding Time		
C2	Broken container	G3	>20 % solid particle		
C3	Leaking container	H1	_____		
C4	_____	H2	_____		

CLIENT: CH2M HILL TOPOCK

SDG: 10C262

Analyst names:

1. D200.8: Christopher Capulong
2. 218.6: Emmery Lee

CASE NARRATIVE

Client : CH2M HILL

Project : PG&E'S TOPOCK GAS COMPRESSOR STAT

SDG : 10C262

METHOD 200.8
DISSOLVED CHROMIUM BY ICP-MS

A total of three (3) water samples were received on 03/22/10 for Dissolved Metals In Water & Waste analysis, Method 200.8 in accordance with Methods for the Determination of Metals in Environmental Samples, Supplement 1 (EPA/600/R-94/111) and Project QAPP.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IMC019WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recoveries for C262-03M/S were within project QC limits.
In addition Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Sample C262-01 was reported from DF 5 run due to out of QC limit of internal standard in non-dilution run. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED CHROMIUM BY ICP-MS

Client : CH2M HILL
Project : PG&E'S TOPOCK GAS COMPRESSOR STAT

SDG NO. : 10C262
Instrument ID : T-I98

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMC019WB	1	NA	03/30/1019:50	03/24/1012:00	98C18065	98C18063	IMC019W	Method Blank
LCS1W	IMC019WL	1	NA	03/30/1019:56	03/24/1012:00	98C18066	98C18063	IMC019W	Lab Control Sample (LCS)
LCD1W	IMC019WC	1	NA	03/30/1020:02	03/24/1012:00	98C18067	98C18063	IMC019W	LCS Duplicate
MW-56S-165-AZMS	C262-03M	1	NA	03/30/1020:09	03/24/1012:00	98C18068	98C18063	IMC019W	Matrix Spike Sample (MS)
MW-56S-165-AZMSD	C262-03S	1	NA	03/30/1020:15	03/24/1012:00	98C18069	98C18063	IMC019W	MS Duplicate (MSD)
MW-56S-165-AZAS	C262-03A	1	NA	03/30/1020:21	03/24/1012:00	98C18070	98C18063	IMC019W	Analytical Spike Sample
MW-56S-165-AZ	C262-03	1	NA	03/30/1020:27	03/24/1012:00	98C18071	98C18063	IMC019W	Field Sample
MW-56S-165-AZDL	C262-03J	5	NA	03/30/1020:33	03/24/1012:00	98C18072	98C18063	IMC019W	Diluted Sample
MW-56M-165-AZ	C262-02	1	NA	03/30/1021:11	03/24/1012:00	98C18078	98C18075	IMC019W	Field Sample
MW-56D-165-AZ	C262-01T	5	NA	04/01/1023:13	03/24/1012:00	98D01091	98D01089	IMC019W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD 200.8
DISSOLVED CHROMIUM BY ICP-MS

Client	: CH2M HILL	Date Collected:	03/18/10
Project	: PG&E'S TOPOCK GAS COMPRESSOR STAT	Date Received:	03/22/10
SDG NO.	: 10C262	Date Extracted:	03/24/10 12:00
Sample ID	: MW-56D-165-AZ	Date Analyzed:	04/01/10 23:13
Lab Samp ID	: C262-01T	Dilution Factor:	5
Lab File ID	: 98D01091	Matrix	: WATER
Ext Btch ID	: IMC019W	% Moisture	: NA
Calib. Ref.	: 98D01089	Instrument ID	: EMAXTI98

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Chromium	ND	5.00	2.50

METHOD 200.8
DISSOLVED CHROMIUM BY ICP-MS

Client	: CH2M HILL	Date Collected:	03/18/10
Project	: PG&E'S TOPOCK GAS COMPRESSOR STAT	Date Received:	03/22/10
SDG NO.	: 10C262	Date Extracted:	03/24/10 12:00
Sample ID:	MW-56M-165-AZ	Date Analyzed:	03/30/10 21:11
Lab Samp ID:	C262-02	Dilution Factor:	1
Lab File ID:	98C18078	Matrix :	WATER
Ext Btch ID:	IMC019W	% Moisture :	NA
Calib. Ref.:	98C18075	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Chromium	ND	1.00	0.500

METHOD 200.8
DISSOLVED CHROMIUM BY ICP-MS

Client	: CH2M HILL	Date Collected:	03/18/10
Project	: PG&E'S TOPOCK GAS COMPRESSOR STAT	Date Received:	03/22/10
SDG NO.	: 10C262	Date Extracted:	03/24/10 12:00
Sample ID:	MW-56S-165-AZ	Date Analyzed:	03/30/10 20:27
Lab Samp ID:	C262-03	Dilution Factor:	1
Lab File ID:	98C18071	Matrix :	WATER
Ext Btch ID:	IMC019W	% Moisture :	NA
Calib. Ref.:	98C18063	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Chromium	ND	1.00	0.500

METHOD 200.8
DISSOLVED CHROMIUM BY ICP-MS

Client	: CH2M HILL	Date Collected:	NA
Project	: PG&E'S TOPOCK GAS COMPRESSOR STAT	Date Received:	03/24/10
SDG NO.	: 10C262	Date Extracted:	03/24/10 12:00
Sample ID:	MBLK1W	Date Analyzed:	03/30/10 19:50
Lab Samp ID:	IMC019WB	Dilution Factor:	1
Lab File ID:	98C18065	Matrix :	WATER
Ext Btch ID:	IMC019W	% Moisture :	NA
Calib. Ref.:	98C18063	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Chromium	ND	1.00	0.500

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
SDG NO.: 10C262
METHOD: METHOD 200.8 (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IMC019WB	IMC019WL	IMC019WC		
LAB FILE ID:	98C18065	98C18066	98C18067		
DATIME EXTRCTD:	03/24/1012:00	03/24/1012:00	03/24/1012:00	DATE COLLECTED:	NA
DATIME ANALYZD:	03/30/1019:50	03/30/1019:56	03/30/1020:02	DATE RECEIVED:	03/24/10
PREP. BATCH:	IMC019W	IMC019W	IMC019W		
CALIB. REF:	98C18063	98C18063	98C18063		

ACCESSION:

PARAMETER	BLNK RSLT ug/L	SPIKE AMT ug/L	BS RSLT ug/L	BS % REC	SPIKE AMT ug/L	BSD RSLT ug/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Chromium	ND	25.0	24.3	97	25.0	24.4	98	1	85-115	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
SDG NO.: 10C262
METHOD: METHOD 200.8 (DISSOLVED)

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MW-56S-165-AZ				
CONTROL NO.:	C262-03	C262-03M	C262-03S		
LAB FILE ID:	98C18071	98C18068	98C18069		
DATIME EXTRCTD:	03/24/1012:00	03/24/1012:00	03/24/1012:00	DATE COLLECTED:	03/18/10
DATIME ANALYZD:	03/30/1020:27	03/30/1020:09	03/30/1020:15	DATE RECEIVED:	03/22/10
PREP. BATCH:	IMC019W	IMC019W	IMC019W		
CALIB. REF:	98C18063	98C18063	98C18063		

ACCESSION:

PARAMETER	SMPL RSLT ug/L	SPIKE AMT ug/L	MS RSLT ug/L	MS % REC	SPIKE AMT ug/L	MSD RSLT ug/L	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Chromium	ND	25.0	23.2	93	25.0	23.6	94	2	75-125	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
BATCH NO.: 10C262
METHOD: METHOD 200.8 (DISSOLVED)

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	MW-56S-165-AZ	MW-56S-165-AZDL		
EMAX SAMP ID:	C262-03	C262-03J		
LAB FILE ID:	98C18071	98C18072		
DATE EXTRACTED:	03/24/1012:00	03/24/1012:00	DATE COLLECTED:	03/18/10
DATE ANALYZED:	03/30/1020:27	03/30/1020:33	DATE RECEIVED:	03/22/10
PREP. BATCH:	IMC019W	IMC019W		
CALIB. REF:	98C18063	98C18063		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SERIAL DIL RSLT (ug/L)	DIF RSLT %	QC LIMIT (%)
Chromium	ND	ND	0	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
SDG NO.: 10C262
METHOD: METHOD 200.8 (DISSOLVED)

MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	MW-56S-165-AZ			
CONTROL NO.:	C262-03	C262-03A		
LAB FILE ID:	98C18071	98C18070		
DATIME EXTRCTD:	03/24/1012:00	03/24/1012:00	DATE COLLECTED:	03/18/10
DATIME ANALYZD:	03/30/1020:27	03/30/1020:21	DATE RECEIVED:	03/22/10
PREP. BATCH:	IMC019W	IMC019W		
CALIB. REF:	98C18063	98C18063		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	AS RSLT (ug/L)	AS % REC	QC LIMIT (%)
Chromium	ND	25.0	25.0	100	75-125

CASE NARRATIVE

Client : CH2M HILL

Project : PG&E'S TOPOCK GAS COMPRESSOR STAT

SDG : 10C262

METHOD 218.6
HEXAVALENT CHROMIUM

A total of three (3) water samples were received on 03/22/10 for Chromium Hexavalent by IC analysis, Method 218.6 in accordance with Methods for the Determination of Metals in Environmental Samples, Supplement 1 (EPA/600/R-94/111) and Project QAPP.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for HCC011WL/C were all within QC limits.

Matrix QC Sample
Matrix QC sample was analyzed at the frequency prescribed by the project.
Percent recovery for C262-01H was within project QC limits.
Percent recovery for C262-02G was within project QC limits.
Percent recovery for C262-03M was within project QC limits.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

METHOD 218.6
HEXAVALENT CHROMIUM

Client : CH2M HILL
Project : PG&E'S TOPOCK GAS COMPRESSOR STAT
Batch No. : 10C262

Matrix : WATER
Instrument ID : I59

SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DLF	MOIST	RL (ug/L)	MDL (ug/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HCC011WB	ND	1	NA	0.200	0.100	03/24/1011:41	NA	IC24003	IC24001	HCC011W	NA	NA
LCS1W	HCC011WL	1.98	1	NA	0.200	0.100	03/24/1011:51	NA	IC24004	IC24001	HCC011W	NA	NA
LCD1W	HCC011WC	1.90	1	NA	0.200	0.100	03/24/1012:02	NA	IC24005	IC24001	HCC011W	NA	NA
MW-56D-165-AZ	C262-01I	ND	10	NA	2.00	1.00	03/24/1013:48	NA	IC24014	IC24012	HCC011W	03/18/1012:32	03/22/10
MW-56D-165-AZMS	C262-01H	9.00	10	NA	2.00	1.00	03/24/1013:58	NA	IC24015	IC24012	HCC011W	03/18/1012:32	03/22/10
MW-56M-165-AZ	C262-02T	ND	5	NA	1.00	0.500	03/24/1014:09	NA	IC24016	IC24012	HCC011W	03/18/1013:12	03/22/10
MW-56M-165-AZMS	C262-02G	4.67	5	NA	1.00	0.500	03/24/1014:19	NA	IC24017	IC24012	HCC011W	03/18/1013:12	03/22/10
MW-56S-165-AZ	C262-03	ND	1	NA	0.200	0.100	03/24/1014:29	NA	IC24018	IC24012	HCC011W	03/18/1013:50	03/22/10
MW-56S-165-AZMS	C262-03M	0.918	1	NA	0.200	0.100	03/24/1014:40	NA	IC24019	IC24012	HCC011W	03/18/1013:50	03/22/10

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
BATCH NO.: 10C262
METHOD: METHOD 218.6

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	HCC011WB	HCC011WL	HCC011WC		
LAB FILE ID:	IC24003	IC24004	IC24005		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	03/24/1011:41	03/24/1011:51	03/24/1012:02	DATE RECEIVED:	NA
PREP. BATCH:	HCC011W	HCC011W	HCC011W		
CALIB. REF:	IC24001	IC24001	IC24001		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Hexavalent Chromium	ND	2.00	1.98	99	2.00	1.90	95	4	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
BATCH NO.: 10C262
METHOD: METHOD 218.6

==========

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	10	10		
SAMPLE ID:	MW-56D-165-AZ			
LAB SAMP ID:	C262-01I	C262-01H		
LAB FILE ID:	IC24014	IC24015		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	03/18/10 12:32
DATE ANALYZED:	03/24/1013:48	03/24/1013:58	DATE RECEIVED:	03/22/10
PREP. BATCH:	HCC011W	HCC011W		
CALIB. REF:	IC24012	IC24012		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	QC LIMIT (%)
Hexavalent Chromium	ND	10.0	9.00	90	90-110

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
BATCH NO.: 10C262
METHOD: METHOD 218.6

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MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 5 5
SAMPLE ID: MW-56M-165-AZ
LAB SAMP ID: C262-02T C262-02G
LAB FILE ID: IC24016 IC24017
DATE EXTRACTED: NA NA DATE COLLECTED: 03/18/10 13:12
DATE ANALYZED: 03/24/1014:09 03/24/1014:19 DATE RECEIVED: 03/22/10
PREP. BATCH: HCC011W HCC011W
CALIB. REF: IC24012 IC24012

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	QC LIMIT (%)
Hexavalent Chromium	ND	5.00	4.67	93	90-110

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: CH2M HILL
PROJECT: PG&E'S TOPOCK GAS COMPRESSOR STAT
BATCH NO.: 10C262
METHOD: METHOD 218.6

==========

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MW-56S-165-AZ			
LAB SAMP ID:	C262-03	C262-03M		
LAB FILE ID:	IC24018	IC24019		
DATE EXTRACTED:	NA	NA	DATE COLLECTED:	03/18/10 13:50
DATE ANALYZED:	03/24/1014:29	03/24/1014:40	DATE RECEIVED:	03/22/10
PREP. BATCH:	HCC011W	HCC011W		
CALIB. REF:	IC24012	IC24012		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	QC LIMIT (%)
Hexavalent Chromium	ND	1.00	0.918	92	90-110

Dr. Yi Wang
Director of Stable Isotopes, ZYMAX FORENSICS
Environmental Forensics Solutions from DPRA
600 S. Andreasen Dr., Suite B
Escondido, CA 92029
Tel: 760.781.3338 ext 43
Fax: 760.781.3339
Cell: 609.721.2843
Email: yi.wang@zymaxusa.com

REPORT OF ISOTOPE ANALYSES

Report Date: March 3rd, 2010

Samples from Shawn Duffy for $\delta^{18}O$ and δD (‰ VSMOW) analysis

ZymaX ID	Sample ID	$\delta^{18}O$	δD
41764-1	MW-57-050-perched	-8.61	-64.75
41764-2	MW-58-065-perched	-10.06	-77.76
	Analytical Precision (1σ)	0.18	0.08

QC STDs ZymaX ID	NI $\delta^{18}O$	NI δD
QC-01	-11.68	-89.45
QC-02	-11.94	-89.57
Mean	-11.81	-89.51
STDEV	0.18	0.08

ZYMAX FORENSICS ISOTOPE LABORATORY ANALYSES

Gas

^{13}C and D of C1 to C4; ^{13}C of CO_2; C-14 of Methane and CO_2; ^{34}S of H_2S; ^{15}N and ^{18}O of N_2O gas

Oil, Extract, Fraction and Kerogen

Compound-Specific ^{13}C and D of MTBE,Chlorinated Solvents,PAH,Gasoline,Oil; Bulk ^{13}C, D/H, ^{34}S, and ^{15}N

Water

D and ^{18}O; ^{34}S and ^{18}O of dissolved sulfate; ^{34}S of dissolved H_2S; ^{37}Cl, ^{13}C and D of chlorinated solvents

^{15}N and ^{18}O of dissolved Nitrate; ^{15}N of Ammonia; ^{13}C of dissolved CO_2 and Carbonate/Bicarbonate

Soil and Minerals:

^{13}C, ^{15}N, ^{34}S, D/H, ^{18}O; C-14 of carbonate or organics

ZYMAX

CHAIN OF CUSTODY RECORD

COC Number

TURNAROUND TIME Special

DATE 2-17-10 PAGE 1 OF 1

COMPANY CH2M Hill

PROJECT NAME PG&E Topock

PHONE (530) 229-3303 FAX (530) 339-3303

ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612

P.O. NUMBER 390378.MP.02.GM.04 TEAM 1

SAMPLERS (SIGNATURE

SAMPLE I.D.	DATE	TIME	DESCRIPTION	CF-IRMS deuterium oxygen	NUMBER OF CONTAINERS	COMMENTS
MW-57-050-perched	2-17-10	0830	groundwater	X	1	41764-1
MW-58-065-perched	"	0900	"	X	1	2

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Collom	CH2M Hill	2-18-10 1525
Signature (Received) Bonifacio Dayag	B. DAYAG	TCI	2-18-10 1525
Signature (Relinquished) Bonifacio Dayag	B. Dayag	TCI	2-18-10 2000
Signature (Received)	T Pippen Jones	Zymax	2/23/10 1100
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

Dr. Yi Wang
Director of ZymaX Forensics Isotope
600 S. Andreasen Dr., Suite B
Escondido, CA 92029
Tel: 760.781.3338 ext 43
Fax: 760.781.3339
Cell: 609.721.2843
Email: yi.wang@zymaxusa.com

REPORT OF ISOTOPE ANALYSES

Report Date: March 24th, 2010

Samples from Shawn Duffy for $\delta^{18}O$ and δD (‰ VSMOW) analysis

ZymaX ID	Sample ID	$\delta^{18}O$	δD
41778-1	MW-34-080-165	-12.13	-91.56
	Analytical Precision (1σ)	0.22	0.18

QC STDs ZymaX ID	NI $\delta^{18}O$	NI δD
QC-01	-11.85	-88.93
QC-02	-12.16	-89.19
Mean	-12.01	-89.06
STDEV	0.22	0.18

ZYMAX FORENSICS ISOTOPE LABORATORY ANALYSES

Gas

^{13}C and D of C1 to C4; ^{13}C of CO_2; C-14 of Methane and CO_2; ^{34}S of H_2S; ^{15}N and ^{18}O of N_2O gas

Oil, Extract, Fraction and Kerogen

Compound-Specific ^{13}C and D of MTBE,Chlorinated Solvents,PAH,Gasoline,Oil; Bulk ^{13}C, D/H, ^{34}S, and ^{15}N

Water

D and ^{18}O; ^{34}S and ^{18}O of dissolved sulfate; ^{34}S of dissolved H_2S; ^{37}Cl, ^{13}C and D of chlorinated solvents
^{15}N and ^{18}O of dissolved Nitrate; ^{15}N of Ammonia; ^{13}C of dissolved CO_2 and Carbonate/Bicarbonate

Soil and Minerals:

^{13}C, ^{15}N, ^{34}S, D/H, ^{18}O; C-14 of carbonate or organics

Zymax

CH2MHILL

CHAIN OF CUSTODY RECORD

3/10/2010 3:34:41 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.GM.04
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-165-Q1
Turnaround Time 10 Days
Shipping Date: 3/10/2010
COC Number: 7

				Container:	250 ml Poly			
				Preservatives:	4°C			
				Filtered:	NA			
				Holding Time:	NA			
	DATE	TIME	Matrix	Oxy_Deut (CF-IRMS)			Number of Containers	COMMENTS
MW-34-080-165	3/10/2010	14:40	Water	X	41778-1		1	
						TOTAL NUMBER OF CONTAINERS	1	

	Signatures	Date/Time
Approved by		3-10-10
Sampled by		1600
Relinquished by		
Received by		3/10/10 1600
Relinquished by		3/10/10 2100
Received by		3/18/10 1300

Shipping Details
Method of Shipment: FedEx
On Ice: yes / no
Airbill No:
Lab Name:
Lab Phone:

ATTN:
Sample Custody

Special Instructions:
March 8-17, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

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

March 3, 2010

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

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2010-GMP-164, GROUNDWATER MONITORING PROJECT, TLI NO.: 987791

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2010-GMP-164 groundwater-monitoring project for Hexavalent and 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 on February 10, 2010, 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

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

TRUESDAIL LABORATORIES, INC.

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REPORT

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

Laboratory No.: 987791
Date Received: February 10, 2010

Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 218.6 *Chromium Hexavalent* µg/L	SW 6020 *Chromium Dissolved* µg/L
987791-1	MW-34-080-164	02/08/10; 12:30	ND	ND
987791-2	MW-34-100-164	02/08/10; 13:32	312	311
987791-3	MW-46-175-164	02/08/10; 14:54	177	190
987791-4	MW-91-164	02/08/10; 13:05	316	372
987791-5	MW-44-115-164	02/09/10; 11:06	219	256
987791-6	MW-44-125-164	02/09/10; 10:32	4.99	176
987791-7	MW-64-150-164	02/10/10; 15:24	ND	ND
987791-8	MW-64-205-164	02/10/10; 15:35	ND	ND
987791-9	MW-64-250-164	02/10/10; 15:42	ND	ND

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 0.001ppm will have two (2) significant figures.
Result above or equal to 0.001ppm 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.

TRUESDAIL LABORATORIES, INC.

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Nine (9) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 02CrH10L

Laboratory No.: 987791
Date: March 3, 2010
Collected: February 8 - 10, 2010
Received: February 10, 2010
Prep/ Analyzed: February 16, 2010
Analytical Batch: 02CrH10L

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
987791-1	MW-34-080-164	12:30	15:08	µg/L	5.25	1.05	ND
987791-2	MW-34-100-164	13:32	14:48	µg/L	26.2	5.24	312
987791-3	MW-46-175-164	14:54	13:02	µg/L	10.5	2.10	177
987791-4	MW-91-164	13:05	14:58	µg/L	26.2	5.24	316
987791-5	MW-44-115-164	11:06	13:23	µg/L	26.2	5.24	219
987791-6	MW-44-125-164	10:32	19:57	µg/L	5.25	1.05	4.99
987791-7	MW-64-150-164	15:24	20:07	µg/L	5.25	1.05	ND
987791-8	MW-64-205-164	15:35	20:28	µg/L	5.25	1.05	ND
987791-9	MW-64-250-164	15:42	19:01	µg/L	5.25	1.05	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Nine (9) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 02CrH10L

Laboratory No.: 987791
Date: March 3, 2010
Collected: February 8 - 10, 2010
Received: February 10, 2010
Prep/ Analyzed: February 16, 2010
Analytical Batch: 02CrH10L

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987791-3	177	180	1.68%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	987791-1	0.00	5.25	1.00	5.25	5.20	5.25	99.0%	90-110%	Yes
MS	987791-2	312	26.2	15.0	393	724	705	105%	90-110%	Yes
MS	987791-3	177	10.5	20.0	210	403	387	108%	90-110%	Yes
MS	987791-4	316	26.2	15.0	393	721	709	103%	90-110%	Yes
MS	987791-5	219	26.2	10.0	262	504	481	109%	90-110%	Yes
MS	987791-6	4.99	5.25	1.00	5.25	9.88	10.2	93.1%	90-110%	Yes
MS	987791-7	0.00	5.25	1.00	5.25	5.34	5.25	102%	90-110%	Yes
MS	987791-8	0.00	5.25	1.00	5.25	5.14	5.25	97.9%	90-110%	Yes
MS	987791-9	0.00	5.25	1.00	5.25	5.34	5.25	102%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	4.80	5.00	96.0%	90% - 110%	Yes
MRCVS#1	9.87	10.0	98.7%	95% - 105%	Yes
MRCVS#2	10.0	10.0	100%	95% - 105%	Yes
MRCVS#3	9.58	10.0	95.8%	95% - 105%	Yes
MRCVS#4	9.92	10.0	99.2%	95% - 105%	Yes
LCS	5.02	5.00	100%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Nine (9) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 021610C

Laboratory No.: 987791
Date: March 3, 2010
Collected: February 8 - 10, 2010
Received: February 10, 2010
Prep/ Analyzed: February 16, 2010
Analytical Batch: 021610C

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
987791-1	MW-34-080-164	12:30	SW 6020	21:30	µg/L	5.00	1.00	ND
987791-3	MW-46-175-164	14:54	SW 6020	21:43	µg/L	5.00	1.00	190
987791-4	MW-91-164	13:05	SW 6020	21:50	µg/L	5.00	1.00	372
987791-7	MW-64-150-164	15:24	SW 6020	22:23	µg/L	5.00	1.00	ND
987791-8	MW-64-205-164	15:35	SW 6020	22:29	µg/L	5.00	1.00	ND
987791-9	MW-64-250-164	15:42	SW 6020	22:36	µg/L	5.00	1.00	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Nine (9) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 021610C

Laboratory No.: 987791
Date: March 3, 2010
Collected: February 8 - 10, 2010
Received: February 10, 2010
Prep/ Analyzed: February 16, 2010
Analytical Batch: 021610C

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987763-1	18.2	17.9	1.66%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	987763-1	18.2	5.00	50.0	250	236	268	87.1%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	49.8	50.0	99.6%	90% - 110%	Yes
MRCVS#1	49.6	50.0	99.2%	90% - 110%	Yes
MRCVS#2	45.3	50.0	90.6%	90% - 110%	Yes
MRCVS#3	45.2	50.0	90.4%	90% - 110%	Yes
ICS	45.2	50.0	90.4%	80% - 120%	Yes
LCS	51.2	50.0	102%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Nine (9) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 021710A

Laboratory No.: 987791
Date: March 3, 2010
Collected: February 8 - 10, 2010
Received: February 10, 2010
Prep/ Analyzed: February 17, 2010
Analytical Batch: 021710A

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
987791-2	MW-34-100-164	13:32	SW 6020	14:51	µg/L	5.00	1.00	311

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987761-9	2.51	2.42	3.65%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	987761-9	2.51	5.00	50.0	250	223	253	88.2%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	51.2	50.0	102%	90% - 110%	Yes
MRCVS#1	49.7	50.0	99.4%	90% - 110%	Yes
MRCVS#2	48.8	50.0	97.6%	90% - 110%	Yes
MRCVS#3	45.4	50.0	90.8%	90% - 110%	Yes
ICS	46.1	50.0	92.2%	80% - 120%	Yes
LCS	51.8	50.0	104%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Nine (9) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 030210B

Laboratory No.: 987791
Date: March 3, 2010
Collected: February 8 - 10, 2010
Received: February 10, 2010
Prep/ Analyzed: March 2, 2010
Analytical Batch: 030210B

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
987791-5	MW-44-115-164	11:06	SW 6020	16:16	µg/L	5.00	1.00	256
987791-6	MW-44-125-164	10:32	SW 6020	16:23	µg/L	5.00	1.00	176

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987881-1	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	987881-1	0.00	5.00	50.0	250	232	250	92.8%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	49.1	50.0	98.2%	90% - 110%	Yes
MRCVS#1	48.6	50.0	97.2%	90% - 110%	Yes
MRCVS#2	49.3	50.0	98.6%	90% - 110%	Yes
ICS	48.6	50.0	97.2%	80% - 120%	Yes
LCS	48.7	50.0	97.4%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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987791

CH2MHILL

CHAIN OF CUSTODY RECORD

2/10/2010 4:22:19 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.GM.04
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-164
Turnaround Time 10 Days
Shipping Date: 2/10/2010
COC Number: 1

				Container:	2x250 ml Poly	250 ml Poly	250 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		
		DATE	TIME	Matrix	Cr6 (E218.6R) Field Filtered	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010B/CRFF) Field Filtered Chromium	Number of Containers	COMMENT
-1	MW-34-080-164	2/8/2010	12:30	Water	X		X	3	
-2	MW-34-100-164	2/8/2010	13:32	Water		X	X	2	
3	MW-46-175-164	2/8/2010	14:54	Water		X	X	2	
-4	MW-91-164	2/8/2010	13:05	Water		X	X	2	
-5	MW-44-115-164	2/9/2010	11:06	Water		X	X	2	pH=2
-6	MW-44-125-164	2/9/2010	10:32	Water		X	X	2	
-7	MW-64-150-164	2/10/2010	15:24	Water		X	X	2	
-8	MW-64-205-164	2/10/2010	15:35	Water		X	X	2	
-9	MW-64-250-164	2/10/2010	15:42	Water		X	X	2	
							TOTAL NUMBER OF CONTAINERS	19	

For Sample Conditions See Form Attached

Rec'd 02/10/10 987791

ALERT !! Level III QC

	Signatures	Date/Time
Approved by		2-10-10 1625
Sampled by		
Relinquished by		
Received by	Felipe Reyes	2-10-10 16:25
Relinquished by		2-10-10 21:00 H
Received by	Shebuccine	2/10/10 21:00

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:
Feb 8-9, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

034

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: [redacted] **Lab #** 987791

Date Delivered: 2 / 10 /10 **Time:** 21:00 **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? Temperature (if yes)? 4 °C	☑ Yes	☐ No	☐ N/A
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? Preserved (if yes) by: ☑ **Truesdail** ☐ Client	☑ Yes	☐ No	☐ N/A
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? If not, notify Project Manager.	☑ Yes	☐ No	☐ N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☑ Std	☑ Yes	☐ No	☐ N/A

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: Rafael Davila

\\MATRIX\env\Discrp.FormBlank.doc

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March 22, 2010

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

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2010-GMP-165-Q1, GROUNDWATER MONITORING PROJECT, TLI NO.: 988273

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2010-GMP-165-Q1 groundwater-monitoring project for Hexavalent and 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 on March 10, 2010, 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 sample date and time for sample MW-75-165 differed between the chain of custody (3/9/10 @ 17:25) and the sample container (3/8/10 @ 07:56). Mr. Shawn Duffy of CH2M Hill stated that the information on the sample container was correct.

On sample MW-34-080-165, the straight run for the matrix spike 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 results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Mr. Shawn Duffy requested that Total Dissolved Arsenic be analyzed for sample MW-34-080-165.

Total Dissolved Chromium was analyzed by SW 6020 rather than SW 6010B as requested on the chain of custody with Mr. Shawn Duffy's approval.

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

TRUESDAIL LABORATORIES, INC.

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REPORT

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

Laboratory No.: 988273
Date Received: March 10, 2010

Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 218.6 *Chromium Hexavalent* µg/L	SW 6020 *Chromium Dissolved* µg/L	SW 6020 *Arsenic Dissolved* µg/L
988273-1	MW-72-165	03/08/10; 17:15	ND	---	---
988273-2	MW-73-165	03/09/10; 07:50	ND	---	---
988273-3	MW-74-165	03/09/10; 11:26	ND	---	---
988273-4	MW-75-165	03/08/10; 07:56	ND	---	---
988273-5	MW-76-165	03/09/10; 17:25	ND	---	---
988273-6	MW-34-080-165	03/10/10; 14:40	ND	ND	1.29

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 0.001ppm will have two (2) significant figures.
Result above or equal to 0.001ppm 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 Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Six (6) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10D

Laboratory No.: 988273
Date: March 22, 2010
Collected: March 8 - 10, 2010
Received: March 10, 2010
Prep/ Analyzed: March 11, 2010
Analytical Batch: 03CrH10D

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988273-1	MW-72-165	17:15	09:06	µg/L	1.05	0.20	ND
988273-2	MW-73-165	07:50	09:17	µg/L	1.05	0.20	ND
988273-3	MW-74-165	11:26	09:27	µg/L	1.05	0.20	ND
988273-4	MW-75-165	07:56	11:01	µg/L	1.05	0.20	ND
988273-5	MW-76-165	17:25	11:12	µg/L	1.05	0.20	ND
988273-6	MW-34-080-165	14:40	11:22	µg/L	1.05	0.20	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Six (6) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10D

Laboratory No.: 988273
Date: March 22, 2010
Collected: March 8 - 10, 2010
Received: March 10, 2010
Prep/ Analyzed: March 11, 2010
Analytical Batch: 03CrH10D

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988275-2	6.77	6.77	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988273-1	0.00	1.06	1.00	1.06	1.10	1.06	104%	90-110%	Yes
MS	988273-2	0.00	1.06	1.00	1.06	1.14	1.06	108%	90-110%	Yes
MS	988273-3	0.00	1.06	1.00	1.06	1.12	1.06	106%	90-110%	Yes
MS	988273-4	0.00	1.06	1.00	1.06	1.16	1.06	109%	90-110%	Yes
MS	988273-5	0.00	1.06	1.00	1.06	1.12	1.06	106%	90-110%	Yes
MS	988273-6	0.00	1.06	1.00	1.06	1.01	1.06	95.3%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.03	5.00	101%	90% - 110%	Yes
MRCVS#1	10.0	10.0	100%	95% - 105%	Yes
MRCVS#2	10.3	10.0	103%	95% - 105%	Yes
MRCVS#3	10.4	10.0	104%	95% - 105%	Yes
MRCVS#4	9.56	10.0	95.6%	95% - 105%	Yes
LCS	5.14	5.00	103%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Six (6) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 031510A

Laboratory No.: 988273
Date: March 22, 2010
Collected: March 8 - 10, 2010
Received: March 10, 2010
Prep/ Analyzed: March 15, 2010
Analytical Batch: 031510A

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988273-6	MW-34-080-165	14:40	SW 6020	16:21	µg/L	5.00	1.00	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988250-1	61.8	60.8	1.63%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988250-1	61.8	5.00	50.0	250	286	312	89.7%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	47.2	50.0	94.4%	90% - 110%	Yes
MRCVS#1	47.7	50.0	95.4%	90% - 110%	Yes
MRCVS#2	45.4	50.0	90.8%	90% - 110%	Yes
MRCVS#3	48.3	50.0	96.6%	90% - 110%	Yes
ICS	42.7	50.0	85.4%	80% - 120%	Yes
LCS	48.5	50.0	97.0%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Sean Carroll
Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Six (6) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 031510A

Laboratory No.: 988273
Date: March 22, 2010
Collected: March 8 - 10, 2010
Received: March 10, 2010
Prep/ Analyzed: March 15, 2010
Analytical Batch: 031510A

Investigation: **Total Dissolved Arsenic by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Arsenic

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988273-6	MW-34-080-165	14:40	SW 6020	16:21	µg/L	5.00	1.00	1.29

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988250-1	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988250-1	0.00	5.00	50.0	250	240	250	96.0%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	49.1	50.0	98.2%	90% - 110%	Yes
MRCVS#1	48.8	50.0	97.6%	90% - 110%	Yes
MRCVS#2	47.0	50.0	94.0%	90% - 110%	Yes
MRCVS#3	49.6	50.0	99.2%	90% - 110%	Yes
ICS	44.9	50.0	89.8%	80% - 120%	Yes
LCS	49.8	50.0	99.6%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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TLI

988273

CH2MHILL

CHAIN OF CUSTODY RECORD

3/10/2010 4:04:38 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.GM.04
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-165-Q1
Turnaround Time 10 Days
Shipping Date: 3/10/2010
COC Number: 8

				Container:	2x250 ml Poly	250 ml Poly	250 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			
		DATE	TIME	Matrix	Cr6 (E218.6R) Field Filtered	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010BCRFF) Field Filtered Chromium	For Sample Conditions See Form Attached	Number of Containers	COMMENTS
1	MW-72-165	3/8/2010	17:15	Water		x			1	
2	MW-73-165	3/9/2010	7:50	Water		x			1	
3	MW-74-165	3/9/2010	11:26	Water		x			1	
4	MW-75-165	3/9/2010	17:25	Water		x			1	
5	MW-76-165	3/9/2010	17:25	Water		x			1	
6	MW-34-080-165	3/10/2010	14:40	Water	x		x		3	pH=2
								TOTAL NUMBER OF CONTAINERS	8	

ALERT !!
Level III QC

	Signatures	Date/Time
Approved by		3-10-10
Sampled by		1600
Relinquished by		
Received by		3/10/10 1600
Relinquished by		3/10/10 2100
Received by	L. Strahmann	3/10/10 21:00

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:
March 8-17, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

026

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: [redacted] **Lab #** 988273

Date Delivered: 3 / 10 /10 **Time:** 21:05 **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 WATER
16. Comments: _____
17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Rafael Davila

\\MATRIX\env\Discrp.FormBlank.doc

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March 31, 2010

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

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2010-GMP-ER-165, GROUNDWATER MONITORING PROJECT, TLI NO.: 988275

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2010-GMP-ER-165 groundwater-monitoring project for Hexavalent and 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 on March 10, 2010, 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.

Total Dissolved Chromium, for sample MW-57-185-165, was re-analyzed due to the discrepancy between the Total Dissolved Chromium and Hexavalent Chromium results. The result from the re-analysis is reported.

Total Dissolved Chromium was analyzed by SW 6020 rather than SW 6010B as requested on the chain of custody with Mr. Shawn Duffy's approval.

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

TRUESDAIL LABORATORIES, INC.

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REPORT

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

Laboratory No.: 988275
Date Received: March 10, 2010
Revision 1

Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 218.6 *Chromium Hexavalent* µg/L	SW 6020 *Chromium Dissolved* µg/L
988275-1	MW-101-165	12:15	1.1	ND
988275-2	MW-57-185-165	17:00	6.8	6.7
988275-3	MW-63-065-165	14:25	ND	ND

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 0.001ppm will have two (2) significant figures.
Result above or equal to 0.001ppm 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 Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10D

Laboratory No.: 988275
Date: May 26, 2010
Collected: March 9, 2010
Received: March 10, 2010
Prep/ Analyzed: March 11, 2010
Analytical Batch: 03CrH10D
Revision 1

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988275-1	MW-101-165	12:15	13:17	µg/L	5.25	1.0	1.1
988275-2	MW-57-185-165	17:00	14:19	µg/L	10.5	2.1	6.8
988275-3	MW-63-065-165	14:25	13:48	µg/L	5.25	1.0	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10D

Laboratory No.: 988275
Date: May 26, 2010
Collected: March 9, 2010
Received: March 10, 2010
Prep/ Analyzed: March 11, 2010
Analytical Batch: 03CrH10D
Revision 1

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988275-2	6.77	6.77	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988275-1	1.1	5.25	1.00	5.25	6.38	6.31	101%	90-110%	Yes
MS	988275-2	6.8	10.5	1.00	10.5	16.5	17.3	92.7%	90-110%	Yes
MS	988275-3	0.98	5.25	1.00	5.25	6.25	6.23	100%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.03	5.00	101%	90% - 110%	Yes
MRCVS#1	10.0	10.0	100%	95% - 105%	Yes
MRCVS#2	10.3	10.0	103%	95% - 105%	Yes
MRCVS#3	10.4	10.0	104%	95% - 105%	Yes
MRCVS#4	9.56	10.0	95.6%	95% - 105%	Yes
LCS	5.14	5.00	103%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 031610A

Laboratory No.: 988275
Date: May 26, 2010
Collected: March 9, 2010
Received: March 10, 2010
Prep/ Analyzed: March 16, 2010
Analytical Batch: 031610A
Revision 1

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988275-1	MW-101-165	12:15	SW 6020	14:49	µg/L	5.00	1.0	ND
988275-3	MW-63-065-165	14:25	SW 6020	15:55	µg/L	5.00	1.0	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988275-1	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988275-1	0.00	5.00	50.0	250	234	250	93.6%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	51.6	50.0	103%	90% - 110%	Yes
MRCVS#1	48.0	50.0	96.0%	90% - 110%	Yes
MRCVS#2	47.0	50.0	94.0%	90% - 110%	Yes
MRCVS#3	46.7	50.0	93.4%	90% - 110%	Yes
ICS	47.4	50.0	94.8%	80% - 120%	Yes
LCS	47.8	50.0	95.6%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 032910A

Laboratory No.: 988275
Date: May 26, 2010
Collected: March 9, 2010
Received: March 10, 2010
Prep/ Analyzed: March 29, 2010
Analytical Batch: 032910A
Revision 1

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988275-2	MW-57-185-165	17:00	SW 6020	13:20	µg/L	5.00	1.00	6.7

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988513-3	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988513-3	0.00	5.00	50.0	250	223	250	89.2%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	49.3	50.0	98.6%	90% - 110%	Yes
MRCVS#1	47.9	50.0	95.8%	90% - 110%	Yes
MRCVS#2	45.4	50.0	90.8%	90% - 110%	Yes
MRCVS#3	47.3	50.0	94.6%	90% - 110%	Yes
ICS	49.0	50.0	98.0%	80% - 120%	Yes
LCS	47.1	50.0	94.2%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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.

+LT

988275

CH2MHILL

CHAIN OF CUSTODY RECORD

3/10/2010 3:28:07 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.GM.04
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-ER-165
Turnaround Time 10 Days
Shipping Date: 3/10/2010
COC Number: 5

				Container:	250 ml Poly	250 ml Poly			
				Preservatives:	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C			
				Filtered:	Field	Field			
				Holding Time:	28	180			
		DATE	TIME	Matrix	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010B/CRFF) Field Filtered Chromium		Number of Containers	COMMENTS
-1	MW-101-165	3/9/2010	12:15	Water	X	X		2	
-2	MW-57-185-165	3/9/2010	17:00	Water	X	X		2	pH=2
-3	MW-63-065-165	3/9/2010	14:25	Water	X	X		2	
							TOTAL NUMBER OF CONTAINERS	6	

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

	Signatures	Date/Time
Approved by		3-10-10
Sampled by		1600
Relinquished by		
Received by		3/10/10 1600
Relinquished by		3/10/10 2100
Received by		3/10/10 21:00

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:

Report Copy to
Shawn Duffy
(530) 229-3303

026

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: CH2M Hill **Lab #** 988275

Date Delivered: 3/10/10 **Time:** 21:00 **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 WATER
16. Comments: _____
17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Rafael Davila

\\MATRIX\ent\Discrp.FormBlank.doc

TRUESDAIL LABORATORIES, INC.
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14201 FRANKLIN AVENUE
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www.truesdail.com

March 25, 2010

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

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2010-GMP-FLOODPLAIN-165, GROUNDWATER MONITORING PROJECT, TLI NO.: 988276

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2010-GMP-Floodplain-165 groundwater-monitoring project for Hexavalent and 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 on March 10, 2010, 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.

On sample MW-28-090-165, the straight run for the matrix spike 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 results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Hexavalent Chromium, for samples MW-99-165, was re-analyzed due to the discrepancy between the Total Dissolved Chromium and Hexavalent Chromium results. The discrepancy may have been caused by matrix interference during the original Hexavalent Chromium analysis. The result from the re-analysis is reported.

Mr. Shawn Duffy requested that Total Dissolved Arsenic be analyzed by SW 6020 on samples 988276-3 and 988276-7 through 988276-13.

Total Dissolved Chromium was analyzed by SW 6020 rather than SW 6010B as requested on the chain of custody with Mr. Shawn Duffy's approval.

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

TRUESDAIL LABORATORIES, INC.

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REPORT

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

Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04

Laboratory No.: 988276
Date Received: March 10, 2010
Revision 1

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 218.6 *Chromium Hexavalent* µg/L	SW 6020 *Chromium Dissolved* µg/L	SW 6020 *Arsenic Dissolved* µg/L
988276-1	MW-23-060-165	03/08/10; 16:07	19.7	17.2	---
988276-2	MW-23-080-165	03/08/10; 17:40	11.3	9.6	---
988276-3	MW-44-070-165	03/08/10; 13:36	ND	ND	3.0
988276-4	MW-44-115-165	03/08/10; 14:36	325	269	---
988276-5	MW-44-125-165	03/08/10; 16:47	46.4	51.8	---
988276-6	MW-99-165	03/08/10; 12:21	58.0	54.6	---
988276-7	MW-27-085-165	03/09/10; 09:27	ND	ND	1.4
988276-8	MW-28-025-165	03/09/10; 12:01	ND	ND	2.0
988276-9	MW-28-090-165	03/09/10; 13:04	ND	ND	2.1
988276-10	MW-32-035-165	03/09/10; 14:13	ND	ND	24.4
988276-11	MW-36-100-165	03/09/10; 15:49	67.1	74.4	4.5
988276-12	MW-42-055-165	03/09/10; 10:17	ND	ND	11.8
988276-13	MW-42-065-165	03/09/10; 10:56	ND	ND	2.1

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 0.001ppm will have two (2) significant figures.
Result above or equal to 0.001ppm 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 Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Thirteen (13) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10D

Laboratory No.: 988276
Date: March 25, 2010
Collected: March 8 - 9, 2010
Received: March 10, 2010
Prep/ Analyzed: March 11, 2010
Analytical Batch: 03CrH10D

Investigation: Hexavalent Chromium by IC using EPA 218.6

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988276-1	MW-23-060-165	16:07	15:11	µg/L	5.25	1.05	19.7
988276-2	MW-23-080-165	17:40	15:53	µg/L	5.25	1.05	11.3
988276-3	MW-44-070-165	13:36	15:32	µg/L	1.05	0.20	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988275-2	6.77	6.77	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988276-1	19.7	5.25	5.00	26.3	47.0	46.0	104%	90-110%	Yes
MS	988276-2	11.3	5.25	5.00	26.3	37.8	37.6	101%	90-110%	Yes
MS	988276-3	0.00	1.06	1.00	1.06	1.06	1.06	100%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	—	<0.200	Yes
MRCCS	5.03	5.00	101%	90% - 110%	Yes
MRCVS#1	10.0	10.0	100%	95% - 105%	Yes
MRCVS#2	10.3	10.0	103%	95% - 105%	Yes
MRCVS#3	10.4	10.0	104%	95% - 105%	Yes
MRCVS#4	9.6	10.0	95.6%	95% - 105%	Yes
LCS	5.14	5.00	103%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Thirteen (13) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10E

Laboratory No.: 988276
Date: March 25, 2010
Collected: March 8 - 9, 2010
Received: March 10, 2010
Prep/ Analyzed: March 12, 2010
Analytical Batch: 03CrH10E

Investigation: Hexavalent Chromium by IC using EPA 218.6

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988276-4	MW-44-115-165	14:36	08:46	µg/L	26.2	5.24	325
988276-5	MW-44-125-165	16:47	09:38	µg/L	5.25	1.05	46.4
988276-7	MW-27-085-165	09:27	12:14	µg/L	5.25	1.05	ND
988276-8	MW-28-025-165	12:01	11:22	µg/L	1.05	0.20	ND
988276-9	MW-28-090-165	13:04	11:33	µg/L	1.05	0.20	ND
988276-12	MW-42-055-165	10:17	15:50	µg/L	5.25	1.05	ND
988276-13	MW-42-065-165	10:56	17:04	µg/L	5.25	1.05	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Thirteen (13) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10E

Laboratory No.: 988276
Date: March 25, 2010
Collected: March 8 - 9, 2010
Received: March 10, 2010
Prep/ Analyzed: March 12, 2010
Analytical Batch: 03CrH10E

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988276-4	325	322	0.93%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988276-4	325	26.2	15.0	393	753	718	109%	90-110%	Yes
MS	988276-5	46.4	5.25	10.0	52.5	102	98.9	106%	90-110%	Yes
MS	988276-7	0.00	5.25	1.00	5.25	5.70	5.25	109%	90-110%	Yes
MS	988276-8	0.090	1.06	1.00	1.06	1.25	1.15	109%	90-110%	Yes
MS	988276-9	0.00	1.06	1.00	1.06	1.11	1.06	105%	90-110%	Yes
MS	988276-12	0.00	5.25	1.00	5.25	5.42	5.25	103%	90-110%	Yes
MS	988276-13	0.00	5.25	1.00	5.25	5.44	5.25	104%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.18	5.00	104%	90% - 110%	Yes
MRCVS#1	9.74	10.0	97.4%	95% - 105%	Yes
MRCVS#2	10.2	10.0	102%	95% - 105%	Yes
MRCVS#3	10.3	10.0	103%	95% - 105%	Yes
MRCVS#4	10.4	10.0	104%	95% - 105%	Yes
LCS	5.36	5.00	107%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Thirteen (13) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10F

Laboratory No.: 988276
Date: March 25, 2010
Collected: March 8 - 9, 2010
Received: March 10, 2010
Prep/ Analyzed: March 15, 2010
Analytical Batch: 03CrH10F

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988276-10	MW-32-035-165	14:13	13:09	µg/L	10.5	2.10	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988308-2	153	153	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988276-10	0.00	10.5	1.00	10.5	10.6	10.5	101%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.15	5.00	103%	90% - 110%	Yes
MRCVS#1	9.88	10.0	98.8%	95% - 105%	Yes
MRCVS#2	9.92	10.0	99.2%	95% - 105%	Yes
MRCVS#3	9.85	10.0	98.5%	95% - 105%	Yes
LCS	5.16	5.00	103%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Thirteen (13) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10L

Laboratory No.: 988276
Date: March 25, 2010
Collected: March 8 - 9, 2010
Received: March 10, 2010
Prep/ Analyzed: March 23, 2010
Analytical Batch: 03CrH10L

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988276-6	MW-99-165	12:21	13:50	µg/L	5.25	1.05	58.0
988276-11	MW-36-100-165	15:49	14:01	µg/L	5.25	1.05	67.1

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988436-1	3430	3600	4.84%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988276-6	58.0	5.25	15.0	79	129	137	90.2%	90-110%	Yes
MS	988276-11	67.1	5.25	15.0	78.8	141	146	93.8%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.50	5.00	110%	90% - 110%	Yes
MRCVS#1	9.86	10.0	98.6%	95% - 105%	Yes
MRCVS#2	9.88	10.0	98.8%	95% - 105%	Yes
MRCVS#3	9.88	10.0	98.8%	95% - 105%	Yes
MRCVS#4	9.59	10.0	95.9%	95% - 105%	Yes
LCS	4.98	5.00	99.6%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Thirteen (13) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 031610A

Laboratory No.: 988276
Date: May 26, 2010
Collected: March 8 - 9, 2010
Received: March 10, 2010
Prep/ Analyzed: March 16, 2010
Analytical Batch: 031610A
Revision 1

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988276-1	MW-23-060-165	16:07	SW 6020	16:01	µg/L	5.00	1.0	17.2
988276-2	MW-23-080-165	17:40	SW 6020	16:08	µg/L	5.00	1.0	9.6
988276-3	MW-44-070-165	13:36	SW 6020	16:14	µg/L	5.00	1.0	ND
988276-4	MW-44-115-165	14:36	SW 6020	16:21	µg/L	5.00	1.0	269
988276-5	MW-44-125-165	16:47	SW 6020	16:28	µg/L	5.00	1.0	51.8
988276-6	MW-99-165	12:21	SW 6020	16:34	µg/L	5.00	1.0	54.6
988276-7	MW-27-085-165	09:27	SW 6020	16:41	µg/L	5.00	1.0	ND
988276-8	MW-28-025-165	12:01	SW 6020	16:47	µg/L	5.00	1.0	ND
988276-9	MW-28-090-165	13:04	SW 6020	17:07	µg/L	5.00	1.0	ND
988276-10	MW-32-035-165	14:13	SW 6020	17:14	µg/L	5.00	1.0	ND
988276-11	MW-36-100-165	15:49	SW 6020	17:20	µg/L	5.00	1.0	74.4
988276-12	MW-42-055-165	10:17	SW 6020	17:27	µg/L	5.00	1.0	ND
988276-13	MW-42-065-165	10:56	SW 6020	17:34	µg/L	5.00	1.0	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sem Cam

For Mona Nassimi, Manager
Analytical Services

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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 Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Thirteen (13) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 031610A

Laboratory No.: 988276
Date: March 25, 2010
Collected: March 8 - 9, 2010
Received: March 10, 2010
Prep/ Analyzed: March 16, 2010
Analytical Batch: 031610A

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988275-1	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988275-1	0.00	5.00	50.0	250	234	250	93.6%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	51.6	50.0	103%	90% - 110%	Yes
MRCVS#1	48.0	50.0	96.0%	90% - 110%	Yes
MRCVS#2	47.0	50.0	94.0%	90% - 110%	Yes
MRCVS#3	46.7	50.0	93.4%	90% - 110%	Yes
ICS	47.4	50.0	94.8%	80% - 120%	Yes
LCS	47.8	50.0	95.6%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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Prep. Batch: 031610A

Laboratory No.: 988276
Date: May 26, 2010
Collected: March 8 - 9, 2010
Received: March 10, 2010
Prep/ Analyzed: March 16, 2010
Analytical Batch: 031610A
Revision 1

Investigation: **Total Dissolved Arsenic by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Arsenic

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988276-3	MW-44-070-165	13:36	SW 6020	16:14	µg/L	5.00	1.0	3.0
988276-7	MW-27-085-165	09:27	SW 6020	16:41	µg/L	5.00	1.0	1.4
988276-8	MW-28-025-165	12:01	SW 6020	16:47	µg/L	5.00	1.0	2.0
988276-9	MW-28-090-165	13:04	SW 6020	17:07	µg/L	5.00	1.0	2.1
988276-10	MW-32-035-165	14:13	SW 6020	17:14	µg/L	5.00	1.0	24.4
988276-11	MW-36-100-165	15:49	SW 6020	17:20	µg/L	5.00	1.0	4.5
988276-12	MW-42-055-165	10:17	SW 6020	17:27	µg/L	5.00	1.0	11.8
988276-13	MW-42-065-165	10:56	SW 6020	17:34	µg/L	5.00	1.0	2.1

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
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Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 031610A

Laboratory No.: 988276
Date: March 25, 2010
Collected: March 8 - 9, 2010
Received: March 10, 2010
Prep/ Analyzed: March 16, 2010
Analytical Batch: 031610A

Investigation: **Total Dissolved Arsenic by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988275-1	1.72	1.69	1.76%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988275-1	1.72	5.00	50.0	250	249	252	98.9%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	54.2	50.0	108%	90% - 110%	Yes
MRCVS#1	50.4	50.0	101%	90% - 110%	Yes
MRCVS#2	49.0	50.0	98.0%	90% - 110%	Yes
MRCVS#3	49.0	50.0	98.0%	90% - 110%	Yes
ICS	47.3	50.0	94.6%	80% - 120%	Yes
LCS	49.8	50.0	99.6%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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TLI 988276

CH2MHILL — **CHAIN OF CUSTODY RECORD** — 3/10/2010 3:17:16 PM — Page 1 OF 2

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.GM.04
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-FLOODPLAIN-165
Turnaround Time 10 Days
Shipping Date: 3/10/2010
COC Number: 3

Rec'd 03/10/10 slid 988276

* Where provided w/ 2 Cr6 bottles please analyze 1 + hold 1

ALERT !! Level III QC

For Sample Conditions See Form Attached

	Container	2x250 ml Poly	2x250 ml Poly	250 ml Poly	250 ml Poly		
	Preservatives	(NH□)□S O□/NHO OH, 4°C	(NH□)□S O□/NHO OH, 4°C	(NH□)□S OO/NHO OH, 4°C	HNOO, 4°C		
	Filtered	Field	Field	Field	Field		
	Holding Time	28	28	28	180		
		Cr6 (E218.6R) Field Filtered	Cr6 (SM3500B) Field Filtered	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010B/CRFF) Field Filtered Chromium	Number of Containers	COMMENTS
-1 MW-23-080-165	3/8/2010 16:07 Water			X	X	2	
-2 MW-23-080-165	3/8/2010 17:40 Water	X	~~X~~		X	~~2~~ 3	3 Bre
-3 MW-44-070-165	3/8/2010 13:36 Water	X			X	3	
MW-44-070-165-EB	3/8/2010 12:24 Water			X		1	Hold
-4 MW-44-115-165	3/8/2010 14:36 Water			X	X	2	
-5 MW-44-125-165	3/8/2010 16:47 Water			X	X	2	
-6 MW-99-165	3/8/2010 12:21 Water			X	X	2	
-7 MW-27-085-165	3/9/2010 9:27 Water	X			X	3	
MW-27-085-165-EB	3/9/2010 8:25 Water			X		1	Hold
-8 MW-28-025-165	3/9/2010 12:01 Water	X			X	3	
-9 MW-28-090-165	3/9/2010 13:04 Water	X			X	3	
MW-28-090-165-EB	3/9/2010 12:26 Water			X	~~X~~ Bre	1	Hold
-10 MW-32-035-165	3/9/2010 14:13 Water	X		~~X~~	X	~~2~~ 3	3 Bre
-11 MW-36-100-165	3/9/2010 15:49 Water		X		X	~~2~~ 3	3 2
-12 MW-42-055-165	3/9/2010 10:17 Water	X			X	3	

pH<2 pH<2 pH<2 pH<2

	Signatures	Date/Time
Approved by		3-10-10
Sampled by		1600
Relinquished by		
Received by		3/10/10 1600
Relinquished by		3/10/10 2100
Received by		3/10/10 21:00

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:

Report Copy to
Shawn Duffy
(530) 229-3303

058

TLI 988276

CH2MHILL

CHAIN OF CUSTODY RECORD

3/10/2010 3:17:16 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.GM.04
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-FLOODPLAIN-165
Turnaround Time 10 Days
Shipping Date: 3/10/2010
COC Number: 3

				Cr6 (E218.6R) Field Filtered	Cr6 (SM3500B) Field Filtered	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010BCRFF) Field Filtered Chromium		Number of Containers	COMMENTS
Container:				2x250 ml Poly	2x250 ml Poly	250 ml Poly	250 ml Poly			
Preservatives:				(NHO)□SOD/NHOOH, 4°C	(NHO)□SOD/NHOOH, 4°C	(NHO)□SOD/NHOOH, 4°C	HNO□, 4°C			
Filtered:				Field	Field	Field	Field			
Holding Time:				28	28	28	180			
MW-42-055-165-EB	3/9/2010	9:49	Water			X			1	Hold
MW-42-065-165	3/9/2010	10:56	Water	X			X	pH=2	3	
MW-42-065-165-EB	3/9/2010	10:27	Water			X			1	Hold
								TOTAL NUMBER OF CONTAINERS	37	

* Where provided 2 w/Cr6 bottles please analyze 1 + hold 1

ALERT !!
Level III QC

For Sample Conditions See Form Attached

	Signatures	Date/Time
Approved by		3-10-10
Sampled by		
Relinquished by		1600
Received by		3/10/10 1600
Relinquished by		3/10/10 2000
Received by		3/10/10 [illegible]

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:

Report Copy to
Shawn Duffy
(530) 229-3303

059

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: CH2M Hill **Lab #** 988276

Date Delivered: 3 / 10 /10 **Time:** 21:00 **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 WATER
16. Comments: _____
17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Rafael Davila

\\MATRIX\env\Discrp.FormBlank.doc

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May 17, 2010

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 2010-GMP-165-Q1, GROUNDWATER MONITORING PROJECT, TLI NO.: 988308

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2010-GMP-165-Q1 groundwater-monitoring project for Hexavalent and 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 on March 12, 2010, 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.

Mr. Shawn Duffy requested that Total Dissolved Arsenic be analyzed by SW 6020 on samples 988308-2, 988308-4 through 988308-9, 988308-11, 988308-12, 988308-25, and 988308-28.

Sample 988308-24 was re-analyzed for Hexavalent Chromium by EPA 218.6 instead of by SM 3500-Cr B as requested on the chain of custody per the request of Mr. Shawn Duffy. The result from the re-analysis was reported.

Total Dissolved Chromium, for samples 988308-1, 988308-13, 988308-14, 988308-15, 988308-17, and 988308-21, were re-analyzed due to the discrepancy between the Total Dissolved Chromium and Hexavalent Chromium results. The results from the re-analysis are reported.

Total Dissolved Chromium was analyzed by SW 6020 rather than SW 6010B as requested on the chain of custody with Mr. Shawn Duffy's approval.

On May 14, 2010, Mr. Shawn Duffy requested that Total Dissolved Arsenic by SW 6020 be reported for samples 988308-18 through 988308-22.

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

TRUESDAIL LABORATORIES, INC.

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REPORT

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

Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04

Laboratory No.: 988308
Date Received: March 12, 2010
Revision 2

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 218.6 *Chromium Hexavalent* µg/L	SM 3500-Cr B *Chromium Hexavalent* µg/L	SW 6020 *Chromium Dissolved* µg/L	SW 6020 *Arsenic Dissolved* µg/L
988308-1	MW-21-165	03/10/10; 11:10	1.4	---	1.2	---
988308-2	MW-34-100-165	03/10/10; 15:31	153	---	129	1.7
988308-3	MW-47-115-165	03/10/10; 15:46	18.8	---	16.3	---
988308-4	MW-52D-165	03/10/10; 10:36	ND	---	ND	3.5
988308-5	MW-52M-165	03/10/10; 09:30	ND	---	ND	1.4
988308-6	MW-52S-165	03/10/10; 09:23	ND	---	ND	ND
988308-7	MW-53D-165	03/10/10; 12:40	ND	---	ND	2.7
988308-8	MW-53M-165	03/10/10; 11:46	ND	---	ND	ND
988308-9	MW-93-165	03/10/10; 11:48	152	---	133	1.4
988308-10	MW-10-165	03/11/10; 13:51	---	2880	3140	---
988308-11	MW-29-165	03/11/10; 09:17	ND	---	ND	35.0
988308-12	MW-33-040-165	03/11/10; 13:31	ND	---	ND	17.7
988308-13	MW-33-150-165	03/11/10; 14:21	10.6	---	11.6	---
988308-14	MW-33-210-165	03/11/10; 15:18	14.4	---	15.9	---
988308-15	MW-41D-165	03/11/10; 10:43	3.2	---	2.6	---
988308-16	MW-46-175-165	03/11/10; 11:02	177	---	154	---
988308-17	MW-46-205-165	03/11/10; 12:03	5.7	---	6.5	---
988308-18	MW-62-110-165	03/11/10; 14:47	---	628	684	10.3
988308-19	MW-62-190-165	03/11/10; 14:58	ND	---	ND	9.4
988308-20	MW-64-150-165	03/11/10; 15:37	ND	---	ND	12.5
988308-21	MW-64-205-165	03/11/10; 15:48	ND	---	ND	8.5
988308-22	MW-64-260-165	03/11/10; 16:02	ND	---	ND	2.9
988308-23	MW-96-165	03/11/10; 09:55	10.5	---	10.1	---
988308-24	MW-17-165	03/11/10; 09:58	16.4	---	15.1	---
988308-25	MW-22-165	03/12/10; 10:22	ND	---	ND	12.1
988308-26	MW-24BR-165	03/12/10; 08:27	ND	---	ND	---
988308-27	MW-33-090-165	03/12/10; 09:16	23.7	---	25.2	---
988308-28	MW-36-090-165	03/12/10; 12:07	0.25	---	ND	16.4
988308-29	MW-50-095-165	03/12/10; 12:07	24.9	---	25.3	---

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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155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10F

Laboratory No.: 988308
Date: May 26, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 15, 2010
Analytical Batch: 03CrH10F
Revision 1

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988308-1	MW-21-165	11:10	14:01	µg/L	5.25	1.0	1.4
988308-2	MW-34-100-165	15:31	14:11	µg/L	10.5	2.1	153
988308-3	MW-47-115-165	15:46	15:03	µg/L	5.25	1.0	18.8
988308-4	MW-52D-165	10:36	16:16	µg/L	5.25	1.0	ND
988308-5	MW-52M-165	09:30	16:37	µg/L	5.25	1.0	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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TRUESDAIL LABORATORIES, INC.

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www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10F

Laboratory No.: 988308
Date: May 26, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 15, 2010
Analytical Batch: 03CrH10F
Revision 1

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988308-2	153	153	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988308-1	1.4	5.25	1.00	5.25	6.38	6.61	95.6%	90-110%	Yes
MS	988308-2	153	10.5	15.0	158	310	311	99.7%	90-110%	Yes
MS	988308-3	18.8	5.25	5.00	26.3	45.9	45.1	103%	90-110%	Yes
MS	988308-4	0.00	5.25	1.00	5.25	4.95	5.25	94.3%	90-110%	Yes
MS	988308-5	0.00	5.25	1.00	5.25	5.07	5.25	96.6%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.15	5.00	103%	90% - 110%	Yes
MRCVS#1	9.88	10.0	98.8%	95% - 105%	Yes
MRCVS#2	9.92	10.0	99.2%	95% - 105%	Yes
MRCVS#3	9.85	10.0	98.5%	95% - 105%	Yes
LCS	5.16	5.00	103%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10G

Laboratory No.: 988308
Date: May 26, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 16, 2010
Analytical Batch: 03CrH10G
Revision 1

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988308-6	MW-52S-165	09:23	09:18	µg/L	5.25	1.0	ND
988308-7	MW-53D-165	12:40	10:41	µg/L	10.5	2.1	ND
988308-8	MW-53M-165	11:46	10:20	µg/L	5.25	1.0	ND
988308-9	MW-93-165	11:48	12:15	µg/L	10.5	2.1	152
988308-11	MW-29-165	09:17	11:12	µg/L	1.05	0.20	ND
988308-12	MW-33-040-165	13:31	12:36	µg/L	5.25	1.0	ND
988308-13	MW-33-150-165	14:21	14:20	µg/L	5.25	1.0	10.6
988308-14	MW-33-210-165	15:18	15:43	µg/L	10.5	2.1	14.4
988308-15	MW-41D-165	10:43	16:15	µg/L	10.5	2.1	3.2
988308-16	MW-46-175-165	11:02	16:35	µg/L	10.5	2.1	177

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10G

Laboratory No.: 988308
Date: May 26, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 16, 2010
Analytical Batch: 03CrH10G
Revision 1

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988308-9	152	152	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988308-6	0.00	5.25	1.00	5.25	5.14	5.25	97.9%	90-110%	Yes
MS	988308-7	0.00	10.5	1.00	10.5	10.3	10.5	98.1%	90-110%	Yes
MS	988308-8	0.00	5.25	1.00	5.25	5.06	5.25	96.4%	90-110%	Yes
MS	988308-9	152	10.5	15.0	158	315	310	103%	90-110%	Yes
MS	988308-11	0.00	1.06	1.00	1.06	0.970	1.06	91.5%	90-110%	Yes
MS	988308-12	0.00	5.25	1.00	5.25	5.20	5.25	99.0%	90-110%	Yes
MS	988308-13	10.6	5.25	15.0	78.8	91.1	89.4	102%	90-110%	Yes
MS	988308-14	14.4	10.5	5.00	52.5	68.8	66.9	104%	90-110%	Yes
MS	988308-15	3.2	10.5	1.00	10.5	13.6	13.7	99.5%	90-110%	Yes
MS	988308-16	177	10.5	20.0	210	399	387	106%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.09	5.00	102%	90% - 110%	Yes
MRCVS#1	9.99	10.0	99.9%	95% - 105%	Yes
MRCVS#2	10.1	10.0	101%	95% - 105%	Yes
MRCVS#3	10.2	10.0	102%	95% - 105%	Yes
MRCVS#4	10.2	10.0	102%	95% - 105%	Yes
MRCVS#5	10.2	10.0	102%	95% - 105%	Yes
LCS	5.13	5.00	103%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10J

Laboratory No.: 988308
Date: May 26, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 17, 2010
Analytical Batch: 03CrH10J
Revision 1

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988308-17	MW-46-205-165	12:03	14:06	µg/L	5.25	1.0	5.7
988308-19	MW-62-190-165	14:58	14:27	µg/L	5.25	1.0	ND
988308-20	MW-64-150-165	15:37	14:47	µg/L	5.25	1.0	ND
988308-21	MW-64-205-165	15:48	16:42	µg/L	5.25	1.0	ND
988308-22	MW-64-260-165	16:02	17:03	µg/L	5.25	1.0	ND
988308-23	MW-96-165	09:55	16:21	µg/L	5.25	1.0	10.5

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10J

Laboratory No.: 988308
Date: May 26, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 17, 2010
Analytical Batch: 03CrH10J
Revision 1

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988308-23	10.5	10.6	0.95%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988308-17	5.7	5.25	1.00	5.25	10.6	11.0	92.6%	90-110%	Yes
MS	988308-19	0.00	5.25	1.00	5.25	5.12	5.25	97.5%	90-110%	Yes
MS	988308-20	0.00	5.25	1.00	5.25	5.39	5.25	103%	90-110%	Yes
MS	988308-21	0.00	5.25	1.00	5.25	5.39	5.25	103%	90-110%	Yes
MS	988308-22	0.00	5.25	1.00	5.25	5.31	5.25	101%	90-110%	Yes
MS	988308-23	10.5	5.25	5.00	26.3	37.3	36.8	102%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.15	5.00	103%	90% - 110%	Yes
MRCVS#1	9.99	10.0	99.9%	95% - 105%	Yes
MRCVS#2	10.0	10.0	100%	95% - 105%	Yes
MRCVS#3	10.2	10.0	102%	95% - 105%	Yes
MRCVS#4	10.0	10.0	100%	95% - 105%	Yes
LCS	5.18	5.00	104%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10K

Laboratory No.: 988308
Date: May 26, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 19, 2010
Analytical Batch: 03CrH10K
Revision 1

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988308-25	MW-22-165	10:22	18:43	µg/L	10.5	2.1	ND
988308-26	MW-24BR-165	08:27	18:06	µg/L	5.25	1.0	ND
988308-27	MW-33-090-165	09:16	14:52	µg/L	5.25	1.0	23.7
988308-28	MW-36-090-165	12:07	14:10	µg/L	1.05	0.20	0.25
988308-29	MW-50-095-165	12:07	16:40	µg/L	5.25	1.0	24.9

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 031610B

Laboratory No.: 988308
Date: May 26, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 16, 2010
Analytical Batch: 031610B
Revision 1

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988308-2	MW-34-100-165	15:31	SW 6020	19:52	µg/L	5.00	1.0	129
988308-3	MW-47-115-165	15:46	SW 6020	19:59	µg/L	5.00	1.0	16.3
988308-4	MW-52D-165	10:36	SW 6020	20:18	µg/L	5.00	1.0	ND
988308-5	MW-52M-165	09:30	SW 6020	20:25	µg/L	5.00	1.0	ND
988308-6	MW-52S-165	09:23	SW 6020	20:32	µg/L	5.00	1.0	ND
988308-7	MW-53D-165	12:40	SW 6020	20:38	µg/L	5.00	1.0	ND
988308-8	MW-53M-165	11:46	SW 6020	20:45	µg/L	5.00	1.0	ND
988308-9	MW-93-165	11:48	SW 6020	20:52	µg/L	5.00	1.0	133
988308-11	MW-29-165	09:17	SW 6020	21:05	µg/L	5.00	1.0	ND
988308-12	MW-33-040-165	13:31	SW 6020	21:11	µg/L	5.00	1.0	ND
988308-16	MW-46-175-165	11:02	SW 6020	21:51	µg/L	5.00	1.0	154
988308-18	MW-62-110-165	14:47	SW 6020	22:04	µg/L	5.00	1.0	684
988308-19	MW-62-190-165	14:58	SW 6020	22:11	µg/L	5.00	1.0	ND
988308-20	MW-64-150-165	15:37	SW 6020	22:18	µg/L	5.00	1.0	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 031810B

Laboratory No.: 988308
Date: May 26, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 18, 2010
Analytical Batch: 031810B
Revision 1

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988308-10	MW-10-165	13:51	SW 6020	15:49	µg/L	10.0	2.0	3140
988308-22	MW-64-260-165	16:02	SW 6020	16:15	µg/L	5.00	1.0	ND
988308-23	MW-96-165	09:55	SW 6020	16:21	µg/L	5.00	1.0	10.1
988308-24	MW-17-165	09:58	SW 6020	16:28	µg/L	5.00	1.0	15.1
988308-25	MW-22-165	10:22	SW 6020	16:35	µg/L	5.00	1.0	ND
988308-26	MW-24BR-165	08:27	SW 6020	16:41	µg/L	5.00	1.0	ND
988308-27	MW-33-090-165	09:16	SW 6020	16:48	µg/L	5.00	1.0	25.2
988308-28	MW-36-090-165	12:07	SW 6020	16:55	µg/L	5.00	1.0	ND
988308-29	MW-50-095-165	12:07	SW 6020	17:01	µg/L	5.00	1.0	25.3

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 032910A

Laboratory No.: 988308
Date: May 26, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 29, 2010
Analytical Batch: 032910A
Revision 1

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988308-1	MW-21-165	11:10	SW 6020	14:42	µg/L	5.00	1.0	1.2
988308-13	MW-33-150-165	14:21	SW 6020	13:40	µg/L	5.00	1.0	11.6
988308-14	MW-33-210-165	15:18	SW 6020	15:02	µg/L	5.00	1.0	15.9
988308-15	MW-41D-165	10:43	SW 6020	14:07	µg/L	5.00	1.0	2.6
988308-17	MW-46-205-165	12:03	SW 6020	14:55	µg/L	5.00	1.0	6.5
988308-21	MW-64-205-165	15:48	SW 6020	15:09	µg/L	5.00	1.0	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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TUSTIN, CALIFORNIA 92780-7008
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www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 031610B

Laboratory No.: 988308
Date: May 26, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 16, 2010
Analytical Batch: 031610B
Revision 2

Investigation: **Total Dissolved Arsenic by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Arsenic

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988308-2	MW-34-100-165	15:31	SW 6020	19:52	µg/L	5.00	1.0	1.7
988308-4	MW-52D-165	10:36	SW 6020	20:18	µg/L	5.00	1.0	3.5
988308-5	MW-52M-165	09:30	SW 6020	20:25	µg/L	5.00	1.0	1.4
988308-6	MW-52S-165	09:23	SW 6020	20:32	µg/L	5.00	1.0	ND
988308-7	MW-53D-165	12:40	SW 6020	20:38	µg/L	5.00	1.0	2.7
988308-8	MW-53M-165	11:46	SW 6020	20:45	µg/L	5.00	1.0	ND
988308-9	MW-93-165	11:48	SW 6020	20:52	µg/L	5.00	1.0	1.4
988308-11	MW-29-165	09:17	SW 6020	21:05	µg/L	5.00	1.0	35.0
988308-12	MW-33-040-165	13:31	SW 6020	21:11	µg/L	5.00	1.0	17.7
988308-18	MW-62-110-165	14:47	SW 6020	22:04	µg/L	5.00	1.0	10.3
988308-19	MW-62-190-165	14:58	SW 6020	22:11	µg/L	5.00	1.0	9.4
988308-20	MW-64-150-165	15:37	SW 6020	22:18	µg/L	5.00	1.0	12.5

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 031610B

Laboratory No.: 988308
Date: May 26, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 16, 2010
Analytical Batch: 031610B
Revision 1

Investigation: **Total Dissolved Arsenic by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988308-1	4.5	4.5	1.33%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988308-1	4.5	5.00	50.0	250	256	255	101%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	50.2	50.0	100%	90% - 110%	Yes
MRCVS#1	48.7	50.0	97.4%	90% - 110%	Yes
MRCVS#2	48.3	50.0	96.6%	90% - 110%	Yes
MRCVS#3	48.8	50.0	97.6%	90% - 110%	Yes
ICS	47.8	50.0	95.6%	80% - 120%	Yes
LCS	49.6	50.0	99.2%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 031810B

Laboratory No.: 988308
Date: May 26, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 18, 2010
Analytical Batch: 031810B
Revision 2

Investigation: **Total Dissolved Arsenic by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Arsenic

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988308-21	MW-64-205-165	15:48	SW 6020	16:08	µg/L	5.00	1.0	8.5
988308-22	MW-64-260-165	16:02	SW 6020	16:15	µg/L	5.00	1.0	2.9
988308-25	MW-22-165	10:22	SW 6020	16:35	µg/L	5.00	1.0	12.1
988308-28	MW-36-090-165	12:07	SW 6020	16:55	µg/L	5.00	1.0	16.4

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988362	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988362	0.00	5.00	50.0	250	252	250	101%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	51.3	50.0	103%	90% - 110%	Yes
MRCVS#1	49.4	50.0	98.8%	90% - 110%	Yes
MRCVS#2	47.5	50.0	95.0%	90% - 110%	Yes
MRCVS#3	48.2	50.0	96.4%	90% - 110%	Yes
ICS	47.1	50.0	94.2%	80% - 120%	Yes
LCS	50.6	50.0	101%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10K

Laboratory No.: 988308
Date: March 31, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 19, 2010
Analytical Batch: 03CrH10K

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988308-27	23.7	23.5	0.85%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988308-25	0.00	10.5	1.00	10.5	9.48	10.5	90.3%	90-110%	Yes
MS	988308-26	0.00	5.25	1.00	5.25	5.59	5.25	106%	90-110%	Yes
MS	988308-27	23.7	5.25	5.00	26.3	48.0	50.0	92.6%	90-110%	Yes
MS	988308-28	0.25	1.06	1.00	1.06	1.29	1.31	98.1%	90-110%	Yes
MS	988308-29	24.9	5.25	5.00	26.3	52.0	51.2	103%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.45	5.00	109%	90% - 110%	Yes
MRCVS#1	9.56	10.0	95.6%	95% - 105%	Yes
MRCVS#2	10.1	10.0	101%	95% - 105%	Yes
MRCVS#3	9.87	10.0	98.7%	95% - 105%	Yes
LCS	5.47	5.00	109%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10O

Laboratory No.: 988308
Date: March 31, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 30, 2010
Analytical Batch: 03CrH10O

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988308-24	MW-17-165	09:58	08:46	µg/L	1.05	0.20	16.4

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988308-24	16.4	16.5	0.61%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988308-24	16.4	1.08	20.0	21.6	38.8	38.0	104%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	—	<0.200	Yes
MRCCS	5.04	5.00	101%	90% - 110%	Yes
MRCVS#1	9.94	10.0	99.4%	95% - 105%	Yes
LCS	4.95	5.00	99.0%	90% - 110%	Yes

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DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10C

Laboratory No.: 988308
Date: March 31, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 16, 2010
Analytical Batch: 03CrH10C

Investigation: Hexavalent Chromium by SM 3500-Cr B

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988308-10	MW-10-165	13:51	15:23	µg/L	25.0	250	2880
988308-18	MW-62-110-165	14:47	15:27	µg/L	25.0	250	628

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988308-10	2880	2860	0.70%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988308-10	2880	25.0	100	2500	5170	5380	91.6%	85-115%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<10.0	---	<10.0	Yes
MRCCS	57.6	60.0	96.0%	90% - 110%	Yes
MRCVS#1	58.7	60.0	97.8%	90% - 110%	Yes
LCS	95.7	100	95.7%	90% - 110%	Yes

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DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 031810B

Laboratory No.: 988308
Date: March 31, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 18, 2010
Analytical Batch: 031810B

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988308-10	MW-10-165	13:51	SW 6020	15:49	µg/L	10.0	2.00	3140
988308-22	MW-64-260-165	16:02	SW 6020	16:15	µg/L	5.00	1.00	ND
988308-23	MW-96-165	09:55	SW 6020	16:21	µg/L	5.00	1.00	10.1
988308-24	MW-17-165	09:58	SW 6020	16:28	µg/L	5.00	1.00	15.1
988308-25	MW-22-165	10:22	SW 6020	16:35	µg/L	5.00	1.00	ND
988308-26	MW-24BR-165	08:27	SW 6020	16:41	µg/L	5.00	1.00	ND
988308-27	MW-33-090-165	09:16	SW 6020	16:48	µg/L	5.00	1.00	25.2
988308-28	MW-36-090-165	12:07	SW 6020	16:55	µg/L	5.00	1.00	ND
988308-29	MW-50-095-165	12:07	SW 6020	17:01	µg/L	5.00	1.00	25.3

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mone Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 032910A

Laboratory No.: 988308
Date: March 31, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 29, 2010
Analytical Batch: 032910A

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988308-1	MW-21-165	11:10	SW 6020	14:42	µg/L	5.00	1.00	1.24
988308-13	MW-33-150-165	14:21	SW 6020	13:40	µg/L	5.00	1.00	11.6
988308-14	MW-33-210-165	15:18	SW 6020	15:02	µg/L	5.00	1.00	15.9
988308-15	MW-41D-165	10:43	SW 6020	14:07	µg/L	5.00	1.00	2.58
988308-17	MW-46-205-165	12:03	SW 6020	14:55	µg/L	5.00	1.00	6.48
988308-21	MW-64-205-165	15:48	SW 6020	15:09	µg/L	5.00	1.00	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-nine (29) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 031610B

Laboratory No.: 988308
Date: May 17, 2010
Collected: March 10 - 12, 2010
Received: March 12, 2010
Prep/ Analyzed: March 16, 2010
Analytical Batch: 031610B
Revision 1

Investigation: **Total Dissolved Arsenic by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Arsenic

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988308-2	MW-34-100-165	15:31	SW 6020	19:52	µg/L	5.00	1.00	1.72
988308-4	MW-52D-165	10:36	SW 6020	20:18	µg/L	5.00	1.00	3.49
988308-5	MW-52M-165	09:30	SW 6020	20:25	µg/L	5.00	1.00	1.39
988308-6	MW-52S-165	09:23	SW 6020	20:32	µg/L	5.00	1.00	ND
988308-7	MW-53D-165	12:40	SW 6020	20:38	µg/L	5.00	1.00	2.74
988308-8	MW-53M-165	11:46	SW 6020	20:45	µg/L	5.00	1.00	ND
988308-9	MW-93-165	11:48	SW 6020	20:52	µg/L	5.00	1.00	1.40
988308-11	MW-29-165	09:17	SW 6020	21:05	µg/L	5.00	1.00	35.0
988308-12	MW-33-040-165	13:31	SW 6020	21:11	µg/L	5.00	1.00	17.7
988308-18	MW-62-110-165	14:47	SW 6020	22:04	µg/L	5.00	1.00	10.3
988308-19	MW-62-190-165	14:58	SW 6020	22:11	µg/L	5.00	1.00	9.37
988308-20	MW-64-150-165	15:37	SW 6020	22:18	µg/L	5.00	1.00	12.5

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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.

TLI #2

988308

CH2MHILL

CHAIN OF CUSTODY RECORD

3/12/2010 3:14:42 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.GM.04
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-165-Q1
Turnaround Time 10 Days
Shipping Date: 3/12/2010
COC Number: 9

Container:	2x250 ml Poly	250 ml Poly	250 ml Poly	250 ml Poly
Preservatives:	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C
Filtered:	Field	Field	Field	Field
Holding Time:	28	28	28	180

* When provided 2 ea Cr6 bottles, please analyze 1 + hold 1

Rec'd 03/12/10
s/ 988308

		DATE	TIME	Matrix	Cr6 (E218.6R) Field Filtered	Cr6 (SM3500B) Field Filtered	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010BCRFF) Field Filtered Chromium	Number of Containers	COMMENTS
	MW-81-165	3/1/2010	13:05	Water			X		1	Hold
-1	MW-21-165	3/10/2010	11:10	Water	X			X	3	
-2	MW-34-100-165	3/10/2010	15:31	Water			X	X	2	
-3	MW-47-115-165	3/10/2010	15:46	Water			X	X	2	
-4	MW-52D-165	3/10/2010	10:36	Water	X			X	3	
-5	MW-52M-165	3/10/2010	9:30	Water	X			X	3	pH=2
-6	MW-52S-165	3/10/2010	9:23	Water	X			X	3	
-7	MW-53D-165	3/10/2010	12:40	Water	X			X	3	
-8	MW-53M-165	3/10/2010	11:46	Water	X			X	3	
	MW-78-165	3/10/2010	16:08	Water			X		1	Hold
-9	MW-93-165	3/10/2010	11:48	Water			X	X	2	
-10	MW-10-165	3/11/2010	13:51	Water		X		X	2	
-11	MW-29-165	3/11/2010	9:17	Water	X			X	3	pH=2
-12	MW-33-040-165	3/11/2010	13:31	Water	X			X	3	
	MW-33-040-165-EB	3/11/2010	13:00	Water			X		1	Hold

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

	Signatures	Date/Time
Approved by		3-12-10
Sampled by		
Relinquished by		
Received by	Hipolito	3-12-10 15:45
Relinquished by	Hipolito	3-12-10 21:00
Received by	Shabenina	3/12/10 21:00

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:
March 8-17, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

090

CH2MHILL — **CHAIN OF CUSTODY RECORD** — 3/12/2010 3:14:43 PM —

988308

Project Name: PG&E Topock
Location: Topock
Project Number: 390378 MP.02.GM.04
Project Manager: Jay Piper
Sample Manager: Shawn Duffy

Task Order:
Project: 2010-GMP-165-Q1
Turnaround Time: 10 Days
Shipping Date: 3/12/2010
COC Number: 9

	Container:	2x250 ml Poly	250 ml Poly	250 ml Poly	250 ml Poly
	Preservatives:	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C
	Filtered:	Field	Field	Field	Field
	Holding Time:	28	28	28	180

		DATE	TIME	Matrix	Cr6 (E218.6R) Field Filtered	Cr6 (SM3500B) Field Filtered	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010B/CRFF) Field Filtered Chromium	Number of Containers	COMMENTS
-13	MW-33-150-165	3/11/2010	14:21	Water			X	X	2	
-14	MW-33-210-165	3/11/2010	15:18	Water			X	X	2	
-15	MW-41D-165	3/11/2010	10:43	Water			X	X	2	
-16	MW-46-175-165	3/11/2010	11:02	Water			X	X	2	
-17	MW-46-205-165	3/11/2010	12:03	Water			X	X	2	MS-2
-18	MW-62-110-165	3/11/2010	14:47	Water		X		X	2	
-19	MW-62-190-165	3/11/2010	14:58	Water			X	X	2	
-20	MW-64-150-165	3/11/2010	15:37	Water			X	X	2	
-21	MW-64-205-165	3/11/2010	15:48	Water			X	X	2	
-22	MW-64-260-165	3/11/2010	16:02	Water			X	X	2	
	MW-79-165	3/11/2010	15:40	Water			X		1	Hold
-23	MW-96-165	3/11/2010	9:55	Water			X	X	2	
-24	MW-17-165 3/11/10	~~3/12/2010~~	9:58	Water		X		X	~~2~~	2 Blc
-25	MW-22-165 6PD 6/26/10	3/12/2010	10:22	Water			X	X	2	
-26	MW-24BR-165	3/12/2010	8:27	Water			X	X	2	

ALERT !! Level III QC

	Signatures	Date/Time
Approved by		3-12-10
Sampled by		
Relinquished by		
Received by		3-12-10 15:45
Relinquished by		3-12-10 21:00
Received by		3/12/10 21:00

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:
March 8-17, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

FROM ... MAR 15 2010 11:06/ST. 11:05/No. 6830000958 P 3

TLI #2

CH2MHILL

CHAIN OF CUSTODY RECORD

3/12/2010 3:14:43 PM

988308

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.GM.04
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-165-Q1
Turnaround Time 10 Days
Shipping Date: 3/12/2010
COC Number: 9

				Cr6 (E218.6R) Field Filtered	Cr6 (SM3500B) Field Filtered	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010BCRFF) Field Filtered Chromium		Number of Containers	COMMENTS
Container:				2x250 ml Poly	250 ml Poly	250 ml Poly	250 ml Poly			
Preservatives:				(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C			
Filtered:				Field	Field	Field	Field			
Holding Time:				28	28	28	180			
	DATE	TIME	Matrix							
27 MW-33-090-165	3/12/2010	9:16	Water			X	X		2	
28 MW-36-090-165	3/12/2010	12:07	Water			X	X		2	
29 MW-50-095-165	3/12/2010	12:07	Water			X	X		2	pH=2
MW-80-165	3/12/2010	9:05	Water			X			1	Hold
MW-82-185	3/12/2010	12:21	Water			X			1	Hold
MW-29-165-EB	3-11-10	0813	"			X			1	Hold
MW-21-165-EB	3-9-10	1215	"			X			1	Hold
								TOTAL NUMBER OF CONTAINERS	75	

ALERT !! Level III QC

	Signatures	Date/Time
Approved by		3-12-10
Sampled by		
Relinquished by		
Received by		3-12-10 1545
Relinquished by		3-12-10 21:00
Received by		3/12/10 21:00

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:
March 8-17, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

092

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: CH2M HILL **Lab #** 988308

Date Delivered: 3/12/10 **Time:** 21:00 **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 WATER
16. Comments: _____
17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Rafael Dávila

\\MATRIX\uuv\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

March 31, 2010

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

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2010-GMP-165-Q1, GROUNDWATER MONITORING PROJECT, TLI NO.: 988436

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2010-GMP-165-Q1 groundwater-monitoring project for Hexavalent and 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 on March 19, 2010, 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.

Sample MW-16-165 was re-analyzed for Hexavalent Chromium by EPA 218.6 instead of by SM 3500-Cr6 B as requested on the chain of custody per the request of Mr. Shawn Duffy. The result from the re-analysis 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

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

TRUESDAIL LABORATORIES, INC.

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REPORT

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

Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04

Laboratory No.: **988436**
Date Received: **March 19, 2010**
Revision 2

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 218.6 *Chromium Hexavalent* µg/L	SM 3500-Cr B *Chromium Hexavalent* µg/L	SW 6020 *Chromium Dissolved* µg/L
988436-1	TW-01-165	03/15/10; 14:48	3430	---	4010
988436-2	MW-31-60-165	03/16/10; 14:55	---	571	531
988436-3	MW-16-165	03/16/10; 14:20	12.0	---	10.8
988436-4	MW-35-060-165	03/16/10; 14:30	34.8	---	36.1
988436-5	MW-97-165	03/16/10; 15:17	34.4	---	35.6
988436-6	MW-35-135-165	03/16/10; 15:28	30.6	---	33.2
988436-7	MW-47-055-165	03/16/10; 15:40	37.4	---	40.8
988436-8	PGE-07BR-165	03/16/10; 15:15	ND	---	ND
988436-9	MW-57-070-165	03/16/10; 13:32	---	542	449
988436-10	MW-62-065-165	03/16/10; 14:28	---	397	372
988436-11	MW-61-110-165	03/17/10; 15:08	---	484	406
988436-12	MW-60-125-165	03/17/10; 14:30	---	657	592
988436-13	MW-20-070-165	03/17/10; 14:10	---	2740	2870
988436-14	MW-26-165	03/16/10; 15:35	---	2280	2270
988436-15	MW-51-165	03/17/10; 15:25	---	4480	4590
988436-16	MW-59-100-165	03/17/10; 14:47	---	5320	5270
988436-17	MW-20-100-165	03/17/10; 10:55	---	5690	5740
988436-18	MW-50-200-165	03/17/10; 15:52	---	10100	9600
988436-19	MW-20-130-165	03/18/10; 12:22	---	11100	11100
988436-20	MW-19-165	03/18/10; 14:43	---	542	453

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 0.001ppm will have two (2) significant figures.
Result above or equal to 0.001ppm 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 Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty (20) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10L

Laboratory No.: 988436
Date: March 31, 2010
Collected: March 15 - 18, 2010
Received: March 19, 2010
Prep/ Analyzed: March 23, 2010
Analytical Batch: 03CrH10L

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988436-1	TW-01-165	17:28	09:45	µg/L	210	42.0	3430
988436-4	MW-35-060-165	11:01	08:53	µg/L	5.25	1.05	34.8
988436-5	MW-97-165	09:23	09:03	µg/L	5.25	1.05	34.4
988436-6	MW-35-135-165	11:47	09:14	µg/L	5.25	1.05	30.6
988436-7	MW-47-055-165	12:43	09:24	µg/L	5.25	1.05	37.4
988436-8	PGE-07BR-165	13:18	13:29	µg/L	5.25	1.05	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty (20) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10L

Laboratory No.: 988436
Date: March 31, 2010
Collected: March 15 - 18, 2010
Received: March 19, 2010
Prep/ Analyzed: March 23, 2010
Analytical Batch: 03CrH10L

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988436-1	3430	3600	4.84%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988436-1	3430	210	20.0	4200	7360	7630	93.6%	90-110%	Yes
MS	988436-4	34.8	5.25	10.0	52.5	87.7	87.3	101%	90-110%	Yes
MS	988436-5	34.4	5.25	10.0	52.5	87.3	86.9	101%	90-110%	Yes
MS	988436-6	30.6	5.25	10.0	52.5	82.7	83.1	99.2%	90-110%	Yes
MS	988436-7	37.4	5.25	10.0	52.5	89.2	89.9	98.7%	90-110%	Yes
MS	988436-8	0.00	5.25	1.00	5.25	4.89	5.25	93.1%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.50	5.00	110%	90% - 110%	Yes
MRCVS#1	9.86	10.0	98.6%	95% - 105%	Yes
MRCVS#2	9.88	10.0	98.8%	95% - 105%	Yes
MRCVS#3	9.88	10.0	98.8%	95% - 105%	Yes
MRCVS#4	9.59	10.0	95.9%	95% - 105%	Yes
LCS	4.98	5.00	99.6%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty (20) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10O

Laboratory No.: 988436
Date: March 31, 2010
Collected: March 15 - 18, 2010
Received: March 19, 2010
Prep/ Analyzed: March 30, 2010
Analytical Batch: 03CrH10O

Investigation: Hexavalent Chromium by IC using EPA 218.6

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988436-3	MW-16-165	10:11	09:18	µg/L	1.05	0.20	12.0

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988308-24	16.4	16.5	0.61%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988436-3	12.0	1.09	15.0	16.4	27.8	28.4	96.6%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.04	5.00	101%	90% - 110%	Yes
MRCVS#1	9.94	10.0	99.4%	95% - 105%	Yes
LCS	4.95	5.00	99.0%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty (20) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10D

Laboratory No.: 988436
Date: March 31, 2010
Collected: March 15 - 18, 2010
Received: March 19, 2010
Prep/ Analyzed: March 23, 2010
Analytical Batch: 03CrH10D

Investigation: **Hexavalent Chromium by SM 3500-Cr B**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988436-2	MW-31-60-165	08:30	15:53	µg/L	25.0	250	571
988436-9	MW-57-070-165	15:16	15:55	µg/L	25.0	250	542
988436-10	MW-62-065-165	17:22	15:56	µg/L	25.0	250	397
988436-11	MW-61-110-165	08:47	15:57	µg/L	25.0	250	484
988436-12	MW-60-125-165	11:15	16:01	µg/L	25.0	250	657
988436-13	MW-20-070-165	12:10	16:04	µg/L	25.0	250	2740
988436-14	MW-26-165	12:57	16:05	µg/L	25.0	250	2280
988436-15	MW-51-165	14:05	16:06	µg/L	25.0	250	4480
988436-16	MW-59-100-165	15:23	16:07	µg/L	25.0	250	5320
988436-17	MW-20-100-165	16:20	16:08	µg/L	25.0	250	5690
988436-18	MW-50-200-165	17:13	16:09	µg/L	25.0	250	10100

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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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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 Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty (20) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10D

Laboratory No.: 988436
Date: March 31, 2010
Collected: March 15 - 18, 2010
Received: March 19, 2010
Prep/ Analyzed: March 23, 2010
Analytical Batch: 03CrH10D

Investigation: **Hexavalent Chromium by SM 3500-Cr B**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988436-11	484	484	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988436-11	484	25.0	100	2500	2880	2984	95.8%	85-115%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<10.0	---	<10.0	Yes
MRCCS	59.9	60.0	99.8%	90% - 110%	Yes
MRCVS#1	62.2	60.0	104%	90% - 110%	Yes
MRCVS#2	59.9	60.0	99.8%	90% - 110%	Yes
LCS	99.2	100	99.2%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty (20) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 03CrH10E

Laboratory No.: 988436
Date: March 31, 2010
Collected: March 15 - 18, 2010
Received: March 19, 2010
Prep/ Analyzed: March 23, 2010
Analytical Batch: 03CrH10E

Investigation: **Hexavalent Chromium by SM 3500-Cr B**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988436-19	MW-20-130-165	09:20	17:18	µg/L	25.0	250	11100
988436-20	MW-19-165	10:28	17:19	µg/L	25.0	250	542

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988436-20	542	542	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988436-20	542	25.0	100	2500	3000	3042	98.3%	85-115%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<10.0	---	<10.0	Yes
MRCCS	59.9	60.0	99.8%	90% - 110%	Yes
MRCVS#1	58.7	60.0	97.8%	90% - 110%	Yes
LCS	96.9	100	96.9%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty (20) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 032210C

Laboratory No.: 988436
Date: March 31, 2010
Collected: March 15 - 18, 2010
Received: March 19, 2010
Prep/ Analyzed: March 22, 2010
Analytical Batch: 032210C

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988436-1	TW-01-165	17:28	SW 6020	20:04	µg/L	10.0	2.00	4010
988436-2	MW-31-60-165	08:30	SW 6020	17:58	µg/L	5.00	1.00	531
988436-3	MW-16-165	10:11	SW 6020	19:57	µg/L	5.00	1.00	10.8
988436-4	MW-35-060-165	11:01	SW 6020	18:38	µg/L	5.00	1.00	36.1
988436-5	MW-97-165	09:23	SW 6020	18:44	µg/L	5.00	1.00	35.6
988436-6	MW-35-135-165	11:47	SW 6020	18:51	µg/L	5.00	1.00	33.2
988436-7	MW-47-055-165	12:43	SW 6020	18:58	µg/L	5.00	1.00	40.8
988436-8	PGE-07BR-165	13:18	SW 6020	19:04	µg/L	5.00	1.00	ND
988436-9	MW-57-070-165	15:16	SW 6020	19:11	µg/L	5.00	1.00	449
988436-10	MW-62-065-165	17:22	SW 6020	19:18	µg/L	5.00	1.00	372
988436-11	MW-61-110-165	08:47	SW 6020	19:24	µg/L	5.00	1.00	406
988436-12	MW-60-125-165	11:15	SW 6020	19:31	µg/L	5.00	1.00	592
988436-20	MW-19-165	10:28	SW 6020	20:50	µg/L	5.00	1.00	453

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty (20) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 032210C

Laboratory No.: 988436
Date: March 31, 2010
Collected: March 15 - 18, 2010
Received: March 19, 2010
Prep/ Analyzed: March 22, 2010
Analytical Batch: 032210C

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988436-2	531	536	0.94%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988436-2	531	5.00	50.0	250	778	781	98.8%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	47.4	50.0	94.8%	90% - 110%	Yes
MRCVS#1	47.7	50.0	95.4%	90% - 110%	Yes
MRCVS#2	48.8	50.0	97.6%	90% - 110%	Yes
MRCVS#3	48.4	50.0	96.8%	90% - 110%	Yes
ICS	47.1	50.0	94.2%	80% - 120%	Yes
LCS	47.7	50.0	95.4%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty (20) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.04
P.O. No.: 390378.MP.02.GM.04
Prep. Batch: 032310A

Laboratory No.: 988436
Date: March 31, 2010
Collected: March 15 - 18, 2010
Received: March 19, 2010
Prep/ Analyzed: March 23, 2010
Analytical Batch: 032310A

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988436-13	MW-20-070-165	12:10	SW 6020	11:49	µg/L	10.0	2.00	2870
988436-14	MW-26-165	12:57	SW 6020	11:56	µg/L	10.0	2.00	2270
988436-15	MW-51-165	14:05	SW 6020	12:02	µg/L	20.0	4.00	4590
988436-16	MW-59-100-165	15:23	SW 6020	12:09	µg/L	20.0	4.00	5270
988436-17	MW-20-100-165	16:20	SW 6020	12:15	µg/L	20.0	4.00	5740
988436-18	MW-50-200-165	17:13	SW 6020	12:55	µg/L	50.0	10.0	9600
988436-19	MW-20-130-165	09:20	SW 6020	12:29	µg/L	50.0	10.0	11100

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988276-6	60.3	55.6	8.11%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988276-6	60.3	5.00	50.0	250	307	310	98.7%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	48.4	50.0	96.8%	90% - 110%	Yes
MRCVS#1	49.2	50.0	98.4%	90% - 110%	Yes
MRCVS#2	48.5	50.0	97.0%	90% - 110%	Yes
ICS	46.6	50.0	93.2%	80% - 120%	Yes
LCS	48.7	50.0	97.4%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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CHAIN OF CUSTODY RECORD

[2010-GMP-165-Q1] 988436

COC Number
Turnaround Time 10 Days
Date 3-18-10 Page 2 OF 3

COMPANY E2
PROJECT PG&E Topock
ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612
PHONE (530) 229-3303 FAX (530) 339-3303
P.O. NUM 390378.MP.02.GM.04 TEAM 1
SAMPLERS (SIGNATURE

Container	2x250 ml Poly	250 ml Poly	250 ml Poly	250 ml Poly	250 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
	Cr6 (E218.6R) Field Filtered	Cr6 (SM3500B) Field Filtered	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010B/CHF-1) Field Filtered	Metals (6010B/CF) Field Filtered, Background Study Suite (see notes)

ALERT !!
Level III QC

SAMPLE ID.	DATE	TIME	Matrix	Cr6 (E218.6R) Field Filtered	Cr6 (SM3500B) Field Filtered	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010B/CHF-1) Field Filtered	Metals (6010B/CF) Field Filtered, Background Study Suite (see notes)	Number of Containers	COMMENTS
-9 MW-57-070-165	3-16-10	1516	water		X		X		2	
-10 MW-62-065-165		1722			X		X		2	pH=2
-11 MW-61-110-165	3-17-10	0847			X		X		2	
MW-84-165	3-16-10	1745				X			1	hold
-12 MW-60-125-165	3-17-10	1115			X		X		2	
-13 MW-20-070-165		1210			X		X		2	
-14 MW-26-165		1257			X		X		2	pH 2
-15 MW-51-165		1405			X		X		2	
-16 MW-59-100-165		1523			X		X		2	

Note: the Sampling date is 3/16/10 for MW-26
SPD 3/22/10

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Collom	CH2M Hill	3-19-10 15:30
Signature (Received) Rafael Davi	Rafael	T.L.I	3-19-10 15:30
Signature (Relinquished) Rafael Davi	Rafael	T.L.I	3-19-10 20:30
Signature (Received) L. Shakeeme	Linda	TLI	MAR 19 2010 20:30
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

SAMPLE CONDITIONS
RECEIVED COOL ☐ WARM ☐ °F
CUSTODY SEALED YES ☐ NO ☐
SPECIAL REQUIREMENTS:

FROM (MON) MAR 22 2010 9:50/ST. 9:48/No. 6800000010 P 4

TLI #3

Rec'd 03/19/10
s1# 988436

TRUESDAIL LABORATORIES, INC.
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(714) 730-6239 FAX: (714) 730-6462
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CHAIN OF CUSTODY RECORD

[2010-GMP-165-Q1]

988436

COC Number
Turnaround Time 10 Days
Date 3-18-10 Page 1 OF 3

COMPANY E2
PROJECT PG&E Topock
ADDRESS 155 Grand Ave Ste 1000, Oakland, CA 94612
PHONE (530) 229-3303 FAX (530) 339-3303
P.O. NUM 390378.MP.02.GM.04 TEAM 1
SAMPLERS (SIGNATURE

Container	2x250 ml Poly	250 ml Poly	250 ml Poly	250 ml Poly	250 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

ALERT !!
Level III QC

For Sample Conditions See Form Attached

	SAMPLE I.D.	DATE	TIME	Matrix	Cr6 (E218.6R) Field Filtered	Cr6 (SM3500B) Field Filtered	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010BCRFF) Field Filtered Chromium	Metals (6010BFF) Field Filtered Background Study Suite (see notes)	Number of Containers	COMMENTS
-1.	TW-01-165	3-15-10	1728	water			X	X		2	pH=2
	MW-83-165		1745				X			1	Hold
-2	MW-31-60-165	3-16-10	0930			X		X		2	
-3	MW-16-165		1011			X		X		2	
-4.	MW-35-060-165		1101				X	X		2	
-5.	MW-97-165		0923				X	X		2	pH=2
-6.	MW-35-135-165		1147				X	X		2	
-7.	MW-47-055-165		1243				X	X		2	
-8.	PGE-07BR-165		1318				X	X		2	

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Relinquished		Barry Collom	CH2M Hill	3-19-10 15:30
Received	Rafael Davila	Rafael	T.L.I	3-19-10 15:30
Relinquished	Rafael Davila	Rafael	T.L.I	3-19-10 20:30
Received	L. Shabunina	Leida	TLI	MAR 19 2010
Relinquished				
Received				

SAMPLE CONDITIONS
RECEIVED COOL ☐ WARM ☐ °F
CUSTODY SEALED YES ☐ NO ☐
SPECIAL REQUIREMENTS:

052

TLI #3

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CHAIN OF CUSTODY RECORD

[2010-GMP-165-Q1] 988436

COC Number
Turnaround Time 10 Days
Date 3-18-10 Page 2 OF 3

COMPANY E2
PROJECT PG&E Topock
ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612
PHONE (530) 229-3303 FAX (530) 339-3303
P.O. NUM 390378.MP.02.GM.04 TEAM 1
SAMPLERS (SIGNATURE

ALERT !!
Level III QC

Container:	2x250 ml Poly	250 ml Poly	250 ml Poly	250 ml Poly	250 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
	Cr6 (E218.6R) Field Filtered	Cr6 (SM3500B) Field Filtered	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010BCRFF) Field Filtered Chromium	Metals (6010BFF) Field Filtered Background Study Suite (see notes)

	SAMPLE I.D.	DATE	TIME	Matrix	Cr6 (E218.6R) Field Filtered	Cr6 (SM3500B) Field Filtered	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010BCRFF) Field Filtered Chromium	Metals (6010BFF) Field Filtered Background Study Suite (see notes)	Number of Containers	COMMENTS
-9	MW-57-070-165	3-16-10	1516	water		X		X		2	
-10	MW-62-065-165		1722			X		X		2	pH=2
-11	MW-61-110-165	3-17-10	0847			X		X		2	
•	MW-84-165	3-16-10	1745				X			1	hold
-12	MW-60-125-165	3-17-10	1115			X		X		2	
-13	MW-20-070-165		1210			X		X		2	
-14	MW-26-165		1257			X		X		2	pH=2
-15	MW-51-165		1405			X		X		2	
-16	MW-59-100-165		1523			X		X		2	

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)		Barry Collen	CH2M Hill	3-19-10 15:30
Signature (Received)	Rafael Davila	Rafael	TLI	3-19-10 15:30
Signature (Relinquished)	Rafael Davila	Rafael	TLI	3-19-10 20:30
Signature (Received)	L. Shabunina	Linda	TLI	MAR 19 2010 20:30
Signature (Relinquished)				
Signature (Received)				

SAMPLE CONDITIONS
RECEIVED COOL ☐ WARM ☐ °F
CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

053

TLI #3

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14201 Franklin Avenue, Tustin, CA 92780-7008
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CHAIN OF CUSTODY RECORD

[2010-GMP-165-Q1] 988436

COC Number
Turnaround Time 10 Days
Date 3-18-10 Page 3 OF 3

COMPANY E2
PROJECT PG&E Topock
ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612
PHONE (530) 229-3303 FAX (530) 339-3303
P.O. NUM 390378.MP.02.GM.04 TEAM 1
SAMPLERS (SIGNATURE

Container:	2x250 ml Poly	250 ml Poly	250 ml Poly	250 ml Poly	250 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

ALERT !!
Level III QC

	SAMPLE I.D.	DATE	TIME	Matrix	Cr6 (E218.6R) Field Filtered	Cr6 (SM3500B) Field Filtered	Cr6 (E218.6) Field Filtered	Dissolved Chromium (6010B/CRFF) Field Filtered Chromium	Metals (6010B/FF) Field Filtered Background Study Suite (see notes)	Number of Containers	COMMENTS
-17	MW-20-100-165	3-17-10	1620	water		X		X		2	pH-2
-18	MW-50-200-165		1713			X		X		2	
	MW-85-165		1739				X			1	Hold
-19	MW-20-130-165	3-18-10	0920			X		X		2	pH-2
-20	MW-19-165		1028			X		X		2	
	~~MW-56D-165~~ BRL										
	MW-77-165		1949				X			1	Hold

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Relinquished		Barry Callan	CH2M Hill	3-19-10 15:30
Received	Rafael Davila	Rafael	T.L.I	3-19-10 15:30
Relinquished	Rafael Davila	Rafael	T.L.I	3-19-10 18:30
Received	L. Trabucco	Linda	TLI	MAR 19 2010 20:30
Relinquished				
Received				

SAMPLE CONDITIONS
RECEIVED COOL ☐ WARM ☐ °F
CUSTODY SEALED YES ☐ NO ☐
SPECIAL REQUIREMENTS:

054

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 988436

Date Delivered: 03/19/10 **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)? 4.2° 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: L. Shabenine

ALERT!! Level III QC

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www.truesdail.com

April 21, 2010

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

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2010-GMP-165, GROUNDWATER MONITORING PROJECT, TLI NO.: 988700

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2010-GMP-165 groundwater-monitoring project for Hexavalent and 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 on April 8, 2010, 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.

Total Dissolved Chromium, for sample MW-48-165, was re-analyzed 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

TRUESDAIL LABORATORIES, INC.

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REPORT

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

Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.03
P.O. No.: 390378.MP.02.GM.03

Laboratory No.: 988700
Date Received: April 8, 2010

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 218.6 *Chromium Hexavalent* µg/L	SM 3500-Cr B *Chromium Hexavalent* µg/L	SW 6020 *Chromium Dissolved* µg/L
988700-1	MW-12-165	04/06/10; 12:05	---	1960	1900
988700-2	MW-90-165	04/06/10; 13:05	---	1960	1840
988700-3	MW-48-165	04/08/10; 08:17	ND	---	ND

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 0.001ppm will have two (2) significant figures
Result above or equal to 0.001ppm 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 Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.03
P.O. No.: 390378.MP.02.GM.03
Prep. Batch: 04CrH10E

Laboratory No.: 988700
Date: April 21, 2010
Collected: April 6 - 8, 2010
Received: April 8, 2010
Prep/ Analyzed: April 14, 2010
Analytical Batch: 04CrH10E

Investigation: **Hexavalent Chromium by IC using EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988700-3	MW-48-165	08:17	14:29	µg/L	5.25	1.05	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988702-16	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988700-3	0.00	5.25	1.00	5.25	5.27	5.25	100%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	4.70	5.00	94.0%	90% - 110%	Yes
MRCVS#1	10.3	10.0	103%	95% - 105%	Yes
MRCVS#2	10.4	10.0	104%	95% - 105%	Yes
MRCVS#3	10.3	10.0	103%	95% - 105%	Yes
LCS	5.07	5.00	101%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.03
P.O. No.: 390378.MP.02.GM.03
Prep. Batch: 04CrH10B

Laboratory No.: 988700
Date: April 21, 2010
Collected: April 6 - 8, 2010
Received: April 8, 2010
Prep/ Analyzed: April 12, 2010
Analytical Batch: 04CrH10B

Investigation: Hexavalent Chromium by SM 3500-Cr B

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988700-1	MW-12-165	12:05	15:51	µg/L	25.0	250	1960
988700-2	MW-90-165	13:05	15:52	µg/L	25.0	250	1960

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988700-2	1960	1960	0.0%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988700-2	1960	25.0	100	2500	4360	4460	96.0%	85-115%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<10.0	---	<10.0	Yes
MRCCS	62.2	60.0	104%	90% - 110%	Yes
MRCVS#1	63.3	60.0	106%	90% - 110%	Yes
LCS	99.2	100	99.2%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.03
P.O. No.: 390378.MP.02.GM.03
Prep. Batch: 041510B

Laboratory No.: 988700
Date: April 21, 2010
Collected: April 6 - 8, 2010
Received: April 8, 2010
Prep/ Analyzed: April 15, 2010
Analytical Batch: 041510B

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988700-1	MW-12-165	12:05	SW 6020	15:25	µg/L	5.00	1.00	1900
988700-2	MW-90-165	13:05	SW 6020	15:52	µg/L	5.00	1.00	1840

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988700-1	1900	1860	2.13%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988700-1	1900	5.00	50.0	250	2140	2150	96.0%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	50.3	50.0	101%	90% - 110%	Yes
MRCVS#1	49.0	50.0	98.0%	90% - 110%	Yes
MRCVS#2	49.6	50.0	99.2%	90% - 110%	Yes
MRCVS#3	48.1	50.0	96.2%	90% - 110%	Yes
ICS	49.8	50.0	99.6%	80% - 120%	Yes
LCS	50.4	50.0	101%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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 Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.03
P.O. No.: 390378.MP.02.GM.03
Prep. Batch: 042010A

Laboratory No.: 988700
Date: April 21, 2010
Collected: April 6 - 8, 2010
Received: April 8, 2010
Prep/ Analyzed: April 20, 2010
Analytical Batch: 042010A

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988700-3	MW-48-165	08:17	SW 6020	15:13	µg/L	5.00	1.00	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988701-5	11800	11700	0.85%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988701-5	11800	50.0	50.0	2500	13900	14300	84.0%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	48.4	50.0	96.8%	90% - 110%	Yes
MRCVS#1	48.6	50.0	97.2%	90% - 110%	Yes
MRCVS#2	47.9	50.0	95.8%	90% - 110%	Yes
MRCVS#3	49.5	50.0	99.0%	90% - 110%	Yes
ICS	49.3	50.0	98.6%	80% - 120%	Yes
LCS	49.4	50.0	98.8%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nessimi, Manager
Analytical Services

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.

GMP- TLI

CHAIN OF CUSTODY RECORD

988700

COC Number

TURNAROUND TIME

DATE 4-8-10 PAGE 1 OF 1

COMPANY

PROJECT NAME PG&E Topock

PHONE (530) 229-3303 FAX (530) 339-3303

ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612

P.O. NUMBER 390378.MP.02GM.03 TEAM 1

SAMPLERS (SIGNATURE

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr-6 (218.6) filtered	Cr 6 (SM 3500B) filtered	diss Cr (6010B-REF) filtered	NUMBER OF CONTAINERS	COMMENTS
-1 MW-12-165	4-6-10	1205	water		X	X	2	
-2 MW-90-165	"	1305	"		X	X	2	pH=2
MW-86-165	"	1230	"	X			1	Hold
-3 MW-48-165	4-8-10	0817	"	X		X	2	pH=2

For Sample Conditions
See Form Attached

ALERT !!
Level III QC

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Cullum	CH2M Hill	4-8-10 1600
Signature (Received)	Hipolito	FL	4-8-10 1600
Signature (Relinquished)	Hipolito	FL	4-8-10 2130
Signature (Received)	Hipolito	FL	4-8-10
Signature (Relinquished)			
Signature (Received) L. Shaber	Linda	TLI	[redacted] 2010 21:30

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: CH2M HILL **Lab #** 988700

Date Delivered: 4 / 8 /10 **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? Temperature (if yes)? 4° C.	☑ Yes	☐ No	☐ N/A
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? Preserved (if yes) by: ☑ **Truesdail** ☐ Client	☑ Yes	☐ No	☐ N/A
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? If not, notify Project Manager.	☑ Yes	☐ No	☐ N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☑ Std	☑ Yes	☐ No	☐ N/A

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: Rafael Dovita

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April 21, 2010

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

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2010-RMP-166, SURFACEWATER MONITORING PROJECT, TLI NO.: 988702

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2010-RMP-166 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 April 8, 2010, 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.

All samples for pH analysis by SM 4500-H B were received past the method specified holding time.

Total Dissolved Chromium was analyzed by SW 6020 rather than SW 6010B as requested on the chain of custody with Mr. Shawn Duffy's approval.

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

TRUESDAIL LABORATORIES, INC.
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Event 2010-RMP-166 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-166	2.00	No			
C-I-3-D-166	2.00	No			
C-I-3-S-166	2.00	No			
C-MAR-D-166	2.00	No			
C-MAR-S-166	2.00	No			
C-R22A-D-166	2.00	No			
C-R22A-S-166	2.00	No			
C-R27-D-163	2.00	No			
C-R27-S-166	2.00	No			
C-TAZ-D-166	2.00	No			
C-TAZ-S-166	2.00	No			
R-19-166	2.00	No			
R-28-166	2.00	No			
R63-166	2.00	No			
C-CON-D-166	2.00	No			
C-CON-S-166	2.00	No			
C-NR1-D-166	2.00	No			
C-NR1-S-166	2.00	No			
C-NR3-D-166	2.00	No			
C-NR3-S-166	2.00	No			
C-NR4-D-166	2.00	No			
C-NR4-S-166	2.00	No			
SW1-166	2.00	No			
SW2-166	2.00	No			

TRUESDAIL LABORATORIES, INC.
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Event 2010-RMP-166 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-166	9.50	No			
C-I-3-D-166	9.50	No			
C-I-3-S-166	9.50	No			
C-MAR-D-166	9.50	No			
C-MAR-S-166	9.50	No			
C-R22A-D-166	9.50	No			
C-R22A-S-166	9.50	No			
C-R27-D-163	9.50	No			
C-R27-S-166	9.50	No			
C-TAZ-D-166	9.50	No			
C-TAZ-S-166	9.50	No			
R-19-166	9.50	No			
R-28-166	9.50	No			
R63-166	9.50	No			
C-CON-D-166	9.50	No			
C-CON-S-166	9.50	No			
C-NR1-D-166	9.50	No			
C-NR1-S-166	9.50	No			
C-NR3-D-166	9.50	No			
C-NR3-S-166	9.50	No			
C-NR4-D-166	9.50	No			
C-NR4-S-166	9.50	No			
RRB-166	9.50	No			
SW1-166	9.50	No			
SW2-166	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.: 988702
Date Received: April 8, 2010

Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 120.1 *EC* *µ mhos/cm*	SM 4500-H B *pH* *Units*	SW 6020 *Chromium Dissolved* µg/L	EPA 218.6 *Chromium Hexavalent* µg/L
988702-1	C-BNS-D-166	04/05/10; 12:50	976	8.32 J	ND	ND
988702-2	C-I-3-D-166	04/05/10; 10:43	969	8.37 J	ND	ND
988702-3	C-I-3-S-166	04/05/10; 10:59	955	8.29 J	ND	ND
988702-4	C-MAR-D-166	04/05/10; 14:58	1130	7.67 J	ND	ND
988702-5	C-MAR-S-166	04/05/10; 15:14	1150	7.65 J	ND	ND
988702-6	C-R22A-D-166	04/05/10; 11:52	974	8.35 J	ND	ND
988702-7	C-R22A-S-166	04/05/10; 12:02	989	8.37 J	ND	ND
988702-8	C-R27-D-163	04/05/10; 13:27	984	8.36 J	ND	ND
988702-9	C-R27-S-166	04/05/10; 13:42	960	8.32 J	ND	ND
988702-10	C-TAZ-D-166	04/05/10; 09:54	990	8.40 J	ND	ND
988702-11	C-TAZ-S-166	04/05/10; 10:07	947	8.35 J	ND	ND
988702-12	R-19-166	04/05/10; 14:31	952	8.28 J	ND	ND
988702-13	R-28-166	04/05/10; 14:13	979	8.36 J	ND	ND
988702-14	R63-166	04/05/10; 11:21	971	8.42 J	ND	ND
988702-15	C-CON-D-166	04/06/10; 10:55	959	8.32 J	ND	ND
988702-16	C-CON-S-166	04/06/10; 11:15	962	8.34 J	ND	ND
988702-17	C-NR1-D-166	04/06/10; 11:55	975	8.33 J	ND	ND
988702-18	C-NR1-S-166	04/06/10; 12:06	967	8.34 J	ND	ND
988702-19	C-NR3-D-166	04/06/10; 13:10	954	8.32 J	ND	ND

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Client: E2 Consulting Engineers, Inc.

Laboratory No.: 988702

Lab I.D.	Sample I.D.	Sample Time	EPA 120.1 *EC* *µmhos/cm*	SM 4500-H B *pH* *Units*	SW 6020 *Chromium Dissolved* µg/L	EPA 218.6 *Chromium Hexavalent* µg/L
988702-20	C-NR3-S-166	04/06/10; 13:21	941	8.33 J	ND	ND
988702-21	C-NR4-D-166	04/06/10; 14:10	951	8.28 J	ND	ND
988702-22	C-NR4-S-166	04/06/10; 14:20	963	8.31 J	ND	ND
988702-23	RRB-166	04/06/10; 10:18	985	8.25 J	ND	ND
988702-24	SW1-166	04/06/10; 16:18	1030	7.81 J	ND	ND
988702-25	SW2-166	04/06/10; 16:45	1000	7.79 J	ND	ND

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 Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01
Prep. Batch: 041310A

Laboratory No.: 988702
Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 13, 2010
Analytical Batch: 041310A

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988702-1	C-BNS-D-166	12:50	SW 6020	11:01	µg/L	5.00	1.00	ND
988702-2	C-I-3-D-166	10:43	SW 6020	11:28	µg/L	5.00	1.00	ND
988702-3	C-I-3-S-166	10:59	SW 6020	11:34	µg/L	5.00	1.00	ND
988702-4	C-MAR-D-166	14:58	SW 6020	11:55	µg/L	5.00	1.00	ND
988702-5	C-MAR-S-166	15:14	SW 6020	12:01	µg/L	5.00	1.00	ND
988702-6	C-R22A-D-166	11:52	SW 6020	12:08	µg/L	5.00	1.00	ND
988702-7	C-R22A-S-166	12:02	SW 6020	12:15	µg/L	5.00	1.00	ND
988702-8	C-R27-D-163	13:27	SW 6020	12:22	µg/L	5.00	1.00	ND
988702-9	C-R27-S-166	13:42	SW 6020	12:28	µg/L	5.00	1.00	ND
988702-10	C-TAZ-D-166	09:54	SW 6020	12:35	µg/L	5.00	1.00	ND
988702-11	C-TAZ-S-166	10:07	SW 6020	12:42	µg/L	5.00	1.00	ND
988702-12	R-19-166	14:31	SW 6020	12:49	µg/L	5.00	1.00	ND
988702-13	R-28-166	14:13	SW 6020	12:55	µg/L	5.00	1.00	ND
988702-14	R63-166	11:21	SW 6020	13:16	µg/L	5.00	1.00	ND
988702-15	C-CON-D-166	10:55	SW 6020	13:22	µg/L	5.00	1.00	ND
988702-16	C-CON-S-166	11:15	SW 6020	13:29	µg/L	5.00	1.00	ND
988702-17	C-NR1-D-166	11:55	SW 6020	13:36	µg/L	5.00	1.00	ND
988702-18	C-NR1-S-166	12:06	SW 6020	13:43	µg/L	1.00	1.00	ND
988702-19	C-NR3-D-166	13:10	SW 6020	13:49	µg/L	1.00	1.00	ND
988702-20	C-NR3-S-166	13:21	SW 6020	13:56	µg/L	1.00	1.00	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01
Prep. Batch: 041310A

Laboratory No.: 988702
Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 13, 2010
Analytical Batch: 041310A

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988702-1	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988702-1	0.00	5.00	50.0	250	249	250	99.6%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	53.6	50.0	107%	90% - 110%	Yes
MRCVS#1	53.5	50.0	107%	90% - 110%	Yes
MRCVS#2	53.2	50.0	106%	90% - 110%	Yes
MRCVS#3	52.9	50.0	106%	90% - 110%	Yes
ICS	52.3	50.0	105%	80% - 120%	Yes
LCS	53.4	50.0	107%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01
Prep. Batch: 041310B

Laboratory No.: 988702
Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 13, 2010
Analytical Batch: 041310B

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988702-21	C-NR4-D-166	14:10	SW 6020	15:24	µg/L	5.00	1.00	ND
988702-22	C-NR4-S-166	14:20	SW 6020	15:51	µg/L	5.00	1.00	ND
988702-23	RRB-166	10:18	SW 6020	15:58	µg/L	5.00	1.00	ND
988702-24	SW1-166	16:18	SW 6020	16:18	µg/L	5.00	1.00	ND
988702-25	SW2-166	16:45	SW 6020	16:25	µg/L	5.00	1.00	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988702-21	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988702-21	0.00	5.00	50.0	250	252	250	101%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	52.2	50.0	104%	90% - 110%	Yes
MRCVS#1	49.1	50.0	98.2%	90% - 110%	Yes
MRCVS#2	48.5	50.0	97.0%	90% - 110%	Yes
ICS	51.3	50.0	103%	80% - 120%	Yes
LCS	48.6	50.0	97.2%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

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

Laboratory No.: 988702

Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01

Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 13, 2010
Analytical Batch: 04CrH10D

Investigation: **Hexavalent Chromium by EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988702-1	C-BNS-D-166	12:50	11:11	µg/L	1.05	0.20	ND
988702-2	C-I-3-D-166	10:43	11:21	µg/L	1.05	0.20	ND
988702-3	C-I-3-S-166	10:59	11:31	µg/L	1.05	0.20	ND
988702-4	C-MAR-D-166	14:58	12:49	µg/L	1.05	0.20	ND
988702-5	C-MAR-S-166	15:14	13:21	µg/L	1.05	0.20	ND
988702-6	C-R22A-D-166	11:52	13:31	µg/L	1.05	0.20	ND
988702-7	C-R22A-S-166	12:02	14:24	µg/L	1.05	0.20	ND
988702-8	C-R27-D-163	13:27	14:34	µg/L	1.05	0.20	ND
988702-9	C-R27-S-166	13:42	14:45	µg/L	1.05	0.20	ND
988702-10	C-TAZ-D-166	09:54	15:58	µg/L	1.05	0.20	ND
988702-11	C-TAZ-S-166	10:07	16:09	µg/L	1.05	0.20	ND
988702-12	R-19-166	14:31	16:19	µg/L	1.05	0.20	ND
988702-13	R-28-166	14:13	17:01	µg/L	1.05	0.20	ND
988702-14	R63-166	11:21	17:11	µg/L	1.05	0.20	ND
988702-15	C-CON-D-166	10:55	17:21	µg/L	1.05	0.20	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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REPORT

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

Laboratory No.: 988702

Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01

Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 13, 2010
Analytical Batch: 04CrH10D

Investigation: **Hexavalent Chromium by EPA 218.6**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987389-1	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988702-1	0.00	1.06	1.00	1.06	1.09	1.06	103%	90-110%	Yes
MS	988702-2	0.00	1.06	1.00	1.06	1.05	1.06	99.1%	90-110%	Yes
MS	988702-3	0.00	1.06	1.00	1.06	1.06	1.06	100%	90-110%	Yes
MS	988702-4	0.00	1.06	1.00	1.06	1.14	1.06	108%	90-110%	Yes
MS	988702-5	0.00	1.06	1.00	1.06	1.08	1.06	102%	90-110%	Yes
MS	988702-6	0.00	1.06	1.00	1.06	1.05	1.06	99.1%	90-110%	Yes
MS	988702-7	0.00	1.06	1.00	1.06	1.04	1.06	98.1%	90-110%	Yes
MS	988702-8	0.00	1.06	1.00	1.06	1.13	1.06	107%	90-110%	Yes
MS	988702-9	0.00	1.06	1.00	1.06	1.14	1.06	108%	90-110%	Yes
MS	988702-10	0.00	1.06	1.00	1.06	1.09	1.06	103%	90-110%	Yes
MS	988702-11	0.00	1.06	1.00	1.06	1.06	1.06	100%	90-110%	Yes
MS	988702-12	0.00	1.06	1.00	1.06	1.05	1.06	99.1%	90-110%	Yes
MS	988702-13	0.00	1.06	1.00	1.06	1.12	1.06	106%	90-110%	Yes
MS	988702-14	0.00	1.06	1.00	1.06	1.11	1.06	105%	90-110%	Yes
MS	988702-15	0.00	1.06	1.00	1.06	1.08	1.06	102%	90-110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

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

Laboratory No.: 988702

Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01

Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 13, 2010
Analytical Batch: 04CrH10D

Investigation: **Hexavalent Chromium by EPA 218.6**

QA/QC Summary

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	4.99	5.00	99.8%	90% - 110%	Yes
MRCVS#1	10.4	10.0	104%	95% - 105%	Yes
MRCVS#2	9.91	10.0	99.1%	95% - 105%	Yes
MRCVS#3	9.72	10.0	97.2%	95% - 105%	Yes
MRCVS#4	9.92	10.0	99.2%	95% - 105%	Yes
LCS	4.96	5.00	99.2%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

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

Laboratory No.: 988702

Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01

Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 14, 2010
Analytical Batch: 04CrH10E

Investigation: **Hexavalent Chromium by EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988702-16	C-CON-S-166	11:15	08:11	µg/L	1.05	0.20	ND
988702-17	C-NR1-D-166	11:55	08:21	µg/L	1.05	0.20	ND
988702-18	C-NR1-S-166	12:06	08:31	µg/L	1.05	0.20	ND
988702-19	C-NR3-D-166	13:10	09:25	µg/L	1.05	0.20	ND
988702-20	C-NR3-S-166	13:21	10:08	µg/L	1.05	0.20	ND
988702-21	C-NR4-D-166	14:10	10:18	µg/L	1.05	0.20	ND
988702-22	C-NR4-S-166	14:20	11:00	µg/L	1.05	0.20	ND
988702-23	RRB-166	10:18	11:10	µg/L	1.05	0.20	ND
988702-24	SW1-166	16:18	11:21	µg/L	1.05	0.20	ND
988702-25	SW2-166	16:45	11:31	µg/L	1.05	0.20	ND

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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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

REPORT

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

Laboratory No.: 988702

Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01

Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 14, 2010
Analytical Batch: 04CrH10E

Investigation: **Hexavalent Chromium by EPA 218.6**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988702-16	ND	ND	0.00%	< 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988702-16	0.00	1.06	1.00	1.06	1.11	1.06	105%	90-110%	Yes
MS	988702-17	0.00	1.06	1.00	1.06	1.09	1.06	103%	90-110%	Yes
MS	988702-18	0.00	1.06	1.00	1.06	1.10	1.06	104%	90-110%	Yes
MS	988702-19	0.00	1.06	1.00	1.06	1.12	1.06	106%	90-110%	Yes
MS	988702-20	0.00	1.06	1.00	1.06	1.12	1.06	106%	90-110%	Yes
MS	988702-21	0.00	1.06	1.00	1.06	1.14	1.06	108%	90-110%	Yes
MS	988702-22	0.00	1.06	1.00	1.06	1.16	1.06	109%	90-110%	Yes
MS	988702-23	0.00	1.06	1.00	1.06	1.05	1.06	99.1%	90-110%	Yes
MS	988702-24	0.00	1.06	1.00	1.06	1.05	1.06	99.1%	90-110%	Yes
MS	988702-25	0.00	1.06	1.00	1.06	1.07	1.06	101%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	4.70	5.00	94.0%	90% - 110%	Yes
MRCVS#1	10.3	10.0	103%	95% - 105%	Yes
MRCVS#2	10.4	10.0	104%	95% - 105%	Yes
MRCVS#3	10.3	10.0	103%	95% - 105%	Yes
LCS	5.07	5.00	101%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01

Laboratory No.: 988702
Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 13, 2010
Analytical Batch: 04EC10E

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	MDL	DF	RL	Results
988702-1	C-BNS-D-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	976
988702-2	C-I-3-D-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	969
988702-3	C-I-3-S-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	955
988702-4	C-MAR-D-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	1130
988702-5	C-MAR-S-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	1150
988702-6	C-R22A-D-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	974
988702-7	C-R22A-S-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	989
988702-8	C-R27-D-163	µmhos/cm	EPA 120.1	0.038	1.00	2.00	984
988702-9	C-R27-S-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	960
988702-10	C-TAZ-D-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	990
988702-11	C-TAZ-S-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	947
988702-12	R-19-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	952
988702-13	R-28-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	979
988702-14	R63-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	971
988702-15	C-CON-D-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	959
988702-16	C-CON-S-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	962
988702-17	C-NR1-D-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	975
988702-18	C-NR1-S-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	967
988702-19	C-NR3-D-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	954
988702-20	C-NR3-S-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	941

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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REPORT

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

Laboratory No.: 988702

Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01

Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 13, 2010
Analytical Batch: 04EC10E

Investigation: **Specific Conductivity by EPA 120.1**

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988702-10	990	992	0.20%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00	---	<2.00	Yes
MRCCS	705	706	99.9%	90% - 110%	Yes
MRCVS#1	994	998	99.6%	90% - 110%	Yes
MRCVS#2	994	998	99.6%	90% - 110%	Yes
LCS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

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

Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01

Laboratory No.: 988702
Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 13, 2010
Analytical Batch: 04EC10F

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	MDL	DF	RL	Results
988702-21	C-NR4-D-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	951
988702-22	C-NR4-S-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	963
988702-23	RRB-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	985
988702-24	SW1-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	1030
988702-25	SW2-166	µmhos/cm	EPA 120.1	0.038	1.00	2.00	1000

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988702-24	1030	1030	0.00%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00	---	<2.00	Yes
MRCCS	704	706	99.7%	90% - 110%	Yes
MRCVS#1	994	998	99.6%	90% - 110%	Yes
LCS	704	706	99.7%	90% - 110%	Yes
LCSD	704	706	99.7%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

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Attention: Shawn Duffy
Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01

Laboratory No.: 988702
Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 9, 2010
Analytical Batch: 04PH10J

Investigation:

pH by SM 4500-H B

Analytical Results pH

TLI I.D.	Field I.D.	Run Time	Units	MDL	RL	Results
988702-1	C-BNS-D-166	10:10	pH	0.025	2.00	8.32 J
988702-2	C-I-3-D-166	10:12	pH	0.025	2.00	8.37 J
988702-3	C-I-3-S-166	10:15	pH	0.025	2.00	8.29 J
988702-4	C-MAR-D-166	10:18	pH	0.025	2.00	7.67 J
988702-5	C-MAR-S-166	10:20	pH	0.025	2.00	7.65 J
988702-6	C-R22A-D-166	10:25	pH	0.025	2.00	8.35 J
988702-7	C-R22A-S-166	10:28	pH	0.025	2.00	8.37 J
988702-8	C-R27-D-163	10:30	pH	0.025	2.00	8.36 J
988702-9	C-R27-S-166	10:33	pH	0.025	2.00	8.32 J
988702-10	C-TAZ-D-166	10:35	pH	0.025	2.00	8.40 J
988702-11	C-TAZ-S-166	10:55	pH	0.025	2.00	8.35 J
988702-12	R-19-166	10:58	pH	0.025	2.00	8.28 J
988702-13	R-28-166	11:00	pH	0.025	2.00	8.36 J
988702-14	R63-166	11:02	pH	0.025	2.00	8.42 J
988702-15	C-CON-D-166	11:05	pH	0.025	2.00	8.32 J
988702-16	C-CON-S-166	11:08	pH	0.025	2.00	8.34 J
988702-17	C-NR1-D-166	11:10	pH	0.025	2.00	8.33 J
988702-18	C-NR1-S-166	11:12	pH	0.025	2.00	8.34 J
988702-19	C-NR3-D-166	11:15	pH	0.025	2.00	8.32 J
988702-20	C-NR3-S-166	11:20	pH	0.025	2.00	8.33 J

ND: Below the reporting limit (Not Detected).
RL: Reporting Limit.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

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Analytical Services

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155 Grand Ave. Suite 1000
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Attention: Shawn Duffy

Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01

Laboratory No.: 988702
Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 9, 2010
Analytical Batch: 04PH10J

Investigation: pH by SM 4500-H B

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate	988702-10	8.40	8.40	0.00	± 0.100 Units	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Difference (Units)	Acceptance Limits	QC Within Control
MRCVS	7.03	7.00	0.03	± 0.100 Units	Yes
LCS	7.01	7.00	0.01	± 0.100 Units	Yes
LCSD	7.02	7.00	0.02	± 0.100 Units	Yes

ND: Below the reporting limit (Not Detected).
RL: Reporting Limit.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Twenty-five (25) Surfacewater Samples
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.RM.01
P.O. No.: 390378.MP.02.RM.01

Laboratory No.: 988702
Date: April 21, 2010
Collected: April 5 - 6, 2010
Received: April 8, 2010
Prep/ Analyzed: April 9, 2010
Analytical Batch: 04PH10K

Investigation:

pH by SM 4500-H B

Analytical Results pH

TLI I.D.	Field I.D.	Run Time	Units	MDL	RL	Results
988702-21	C-NR4-D-166	11:42	pH	0.025	2.00	8.28 J
988702-22	C-NR4-S-166	11:45	pH	0.025	2.00	8.31 J
988702-23	RRB-166	11:47	pH	0.025	2.00	8.25 J
988702-24	SW1-166	11:50	pH	0.025	2.00	7.81 J
988702-25	SW2-166	11:52	pH	0.025	2.00	7.79 J

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate	988702-25	7.79	7.79	0.00	± 0.100 Units	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Difference (Units)	Acceptance Limits	QC Within Control
MRCVS	7.03	7.00	0.03	± 0.100 Units	Yes
LCS	7.02	7.00	0.02	± 0.100 Units	Yes
LCSD	7.02	7.00	0.02	± 0.100 Units	Yes

ND: Below the reporting limit (Not Detected).
RL: Reporting Limit.

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RMP

988702

CH2MHILL

CHAIN OF CUSTODY RECORD

4/7/2010 6:14:39 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.RM.01
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-RMP-166
Turnaround Time 10 Days
Shipping Date: 4/8/2010
COC Number: 1

				Container:	3X250 ml Poly	250 Poly	250 ml Poly	1 Liter Poly	1 Liter Poly		
				Preservatives:	(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	4°C	4°C		
				Filtered:	Field	Field	Field	NA	NA		
				Holding Time:	28	28	180	28	28		
	DATE	TIME	Matrix		Metals (E218.6 - river) Field Filtered	Field QC Metals (E218.6-river) Field Filtered	Dissolved Chromium (6010B/CRFF) Field Filtered Chromium	Specific Conductance (E120.1)	PH (SM4500HB)	Number of Containers	COMMENTS
C-BNS-D-166	4/5/2010	12:50	Water		X		X	X	X	5	
C-I-3-D-166	4/5/2010	10:43	Water		X		X	X	X	5	
C-I-3-S-166	4/5/2010	10:59	Water		X		X	X	X	5	
C-MAR-D-166	4/5/2010	14:58	Water		X		X	X	X	5	pH-D
C-MAR-S-166	4/5/2010	15:14	Water		X		X	X	X	5	
C-MW-80-166	4/5/2010	12:58	Water			X				1	Hold
C-MW-81-166	4/5/2010	15:22	Water			X				1	Hold
C-R22A-D-166	4/5/2010	11:52	Water		X		X	X	X	5	
C-R22A-S-166	4/5/2010	12:02	Water		X		X	X	X	5	
C-R27-D-166	4/5/2010	13:27	Water		X		X	X	X	5	
C-R27-S-166	4/5/2010	13:42	Water		X		X	X	X	5	
C-TAZ-D-166	4/5/2010	9:54	Water		X		X	X	X	5	pH-D
C-TAZ-S-166	4/5/2010	10:07	Water		X		X	X	X	5	
R-19-166	4/5/2010	14:31	Water		X		X	X	X	5	
R-28-166	4/5/2010	14:13	Water		X		X	X	X	5	

* Where provided 3 ea Cr6 bottles, please analyze 1 + hold 2

For Sample Conditions See Form Attached

Signatures	Date/Time
Approved by	
Sampled by	4-8-10 1600
Relinquished by	
Received by	Hipolito 4-8-10 1600
Relinquished by	Hipolito 4-8-10 2130
Received by	L-Shubunna APR 08 2010 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:
April 5-9, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

ALERT !!
Level III QC

RMP

988702

CH2MHILL

CHAIN OF CUSTODY RECORD

4/7/2010 6:14:39 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.RM.01
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-RMP-166
Turnaround Time 10 Days
Shipping Date: 4/8/2010
COC Number: 1

				Metals (E218.6 - river) Field Filtered	Field QC Metals (E218.6-river) Field Filtered	Dissolved Chromium (6010BCRFP) Field Filtered Chromium	Specific Conductance (E120.1)	PH (SM4500HE)		Number of Containers	COMMENTS
Container:				3X250 ml Poly	250 Poly	250 ml Poly	1 Liter Poly	1 Liter Poly			
Preservatives:				(NH4)2SO 4/NH4OH 4°C	(NH4)2SO 4/NH4OH, 4°C	HNO3, 4°C	4°C	4°C			
Filtered:				Field	Field	Field	NA	NA			
Holding Time:				28	28	180	28	28			
14	R63-166	4/5/2010	11:21	Water	X		X	X	X	5	pH = 2
•	RMP-AB1-166	4/5/2010	15:23	Water		X				1	Hold
15	C-CON-D-166	4/6/2010	10:55	Water	X		X	X	X	5	
16	C-CON-S-166	4/6/2010	11:15	Water	X		X	X	X	5	pH = 2
•	C-MW-82-166	4/6/2010	14:31	Water		X				1	Hold
•	C-MW-83-166	4/6/2010	14:28	Water		X				1	Hold
17	C-NR1-D-166	4/6/2010	11:55	Water	X		X	X	X	5	
18	C-NR1-S-166	4/6/2010	12:06	Water	X		X	X	X	5	
19	C-NR3-D-166	4/6/2010	13:10	Water	X		X	X	X	5	
20	C-NR3-S-166	4/6/2010	13:21	Water	X		X	X	X	5	pH = 2
21	C-NR4-D-166	4/6/2010	14:10	Water	X		X	X	X	5	
22	C-NR4-S-166	4/6/2010	14:20	Water	X		X	X	X	5	
•	RMP-AB2-166	4/6/2010	14:33	Water		X				1	Hold
23	RRB-166	4/6/2010	10:18	Water	X		X	X	X	5	
24	SW1-166	4/6/2010	16:18	Water	X		X	X	X	5	

* Where provided 3 ea. Cr6 bottles, please analyze 1 + hold 2

	Signatures	Date/Time
Approved by		4-8-10 1600
Sampled by		
Relinquished by		
Received by		4-8-10 1600
Relinquished by		4-8-10 21:30
Received by	L. Shabunia	APR 08 2010 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:
April 5-9, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

ALERT!!
Level III QC

RMP

988702

CH2MHILL

CHAIN OF CUSTODY RECORD

4/7/2010 6:14:40 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.RM.01
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-RMP-166
Turnaround Time 10 Days
Shipping Date: 4/8/2010
COC Number: 1

				Metals (E218.6 - river) Field Filtered	Field QC Metals (E218.6-river) Field Filtered	Dissolved Chromium (6010BCRFF) Field Filtered Chromium	Specific Conductance (E120.1)	PH (SM4500HE)		Number of Containers	COMMENTS
Container:				3X250 ml Poly	250 Poly	250 ml Poly	1 Liter Poly	1 Liter Poly			
Preservatives:				(NH4)2SO4/NH4OH, 4°C	(NH4)2SO4/NH4OH, 4°C	HNO3, 4°C	4°C	4°C			
Filtered:				Field	Field	Field	NA	NA			
Holding Time:				28	28	180	28	28			
	DATE	TIME	Matrix								
SW2-166	4/6/2010	16:45	Water	X		X	X	X		5	PH=2
									TOTAL NUMBER OF CONTAINERS	131	

* Where provided 3 ea Cr6 bottles please analyze 1 + hold 2

ALERT !!
Level III QC

	Signatures	Date/Time
Approved by		4-8-10
Sampled by		1600
Relinquished by		
Received by	Hipolito	4-8-10 1600
Relinquished by	Hipolito	4-8-10 2130
Received by	L. Shabinny	APR 08 2010 21:22

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:
April 5-9, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: CH2M HILL **Lab #** 988702

Date Delivered: 4 / 8 /10 **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)? 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: ☑ **Truesdall** ☐ 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 **Truesdall** Log-In/Receiving: Rafael Davila

\\MATRIX\env\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

April 28, 2010

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

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK 2010-GMP-165, GROUNDWATER MONITORING PROJECT, TLI NO.: 988821

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock 2010-GMP-165 groundwater-monitoring project for Hexavalent and 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 on April 14, 2010, 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.

Total Dissolved Chromium was analyzed by SW 6020 rather than SW 6010B as requested on the chain of custody with Mr. Shawn Duffy's approval.

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
Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.

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REPORT

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

Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.03
P.O. No.: 390378.MP.02.GM.03

Laboratory No.: 988821
Date Received: April 14, 2010

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 218.6 *Chromium Hexavalent* µg/L	SW 6020 *Chromium Dissolved* µg/L
988821	PGE-08-165	17:50	ND	2.97

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 0.001ppm will have two (2) significant figures.
Result above or equal to 0.001ppm 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 Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.03
P.O. No.: 390378.MP.02.GM.03
Prep. Batch: 04CrH10F

Laboratory No.: 988821
Date: April 28, 2010
Collected: April 8, 2010
Received: April 14, 2010
Prep/ Analyzed: April 15, 2010
Analytical Batch: 04CrH10F

Investigation: Hexavalent Chromium by IC using EPA 218.6

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988821	PGE-08-165	17:50	09:26	µg/L	5.25	1.05	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988698-4	30.3	30.2	0.33%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988821	0.00	5.25	1.00	5.25	5.00	5.25	95.2%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	4.84	5.00	96.8%	90% - 110%	Yes
MRCVS#1	9.85	10.0	98.5%	95% - 105%	Yes
MRCVS#2	10.2	10.0	102%	95% - 105%	Yes
MRCVS#3	10.4	10.0	104%	95% - 105%	Yes
MRCVS#4	10.2	10.0	102%	95% - 105%	Yes
MRCVS#5	9.96	10.0	99.6%	95% - 105%	Yes
MRCVS#6	10.4	10.0	104%	95% - 105%	Yes
LCS	5.41	5.00	108%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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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(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 390378.MP.02.GM.03
P.O. No.: 390378.MP.02.GM.03
Prep. Batch: 041510B

Laboratory No.: 988821
Date: April 28, 2010
Collected: April 8, 2010
Received: April 14, 2010
Prep/ Analyzed: April 15, 2010
Analytical Batch: 041510B

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Dissolved Chromium

TLI I.D.	Field I.D.	Sample Time	Method	Run Time	Units	DF	RL	Results
988821	PGE-08-165	17:50	SW 6020	16:19	µg/L	5.00	1.00	2.97

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988700-1	1900	1860	2.13%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988700-1	1900	5.00	50.0	250	2140	2150	96.0%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	50.3	50.0	101%	90% - 110%	Yes
MRCVS#1	49.0	50.0	98.0%	90% - 110%	Yes
MRCVS#2	49.6	50.0	99.2%	90% - 110%	Yes
MRCVS#3	48.1	50.0	96.2%	90% - 110%	Yes
ICS	49.8	50.0	99.6%	80% - 120%	Yes
LCS	50.4	50.0	101%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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.

CHAIN OF CUSTODY RECORD

988821

COC Number

TURNAROUND TIME

DATE 4-14-10 PAGE 1 OF 1

COMPANY	CH2M HILL
PROJECT NAME	PG&E Topock
PHONE	(530) 229-3303 FAX (530) 339-3303
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612
P.O. NUMBER	390378.MP.02.GM.03 TEAM 1
SAMPLERS (SIGNATURE	

Rec'd 04/14/10
s 988821

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (E218.6) filtered	diss Cr (6010BCREF) filtered	NUMBER OF CONTAINERS	COMMENTS
PGE-08-165	4-8-10	1750	water	X	X	2	pH=2

ALERT !!
Level III QC

For Sample Conditions See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Collom	CH2M HILL	4-14-10 1615
Signature (Received) Bonifacio Dayag	B. DAYAG	TLI	4-14-10 1515
Signature (Relinquished) Bonifacio Dayag	B. DAYAG	TLI	4-14-10 2030
Signature (Received) L. Shakuchine	Linda	TLI	4/14/10 20:30
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: CH2M Hill **Lab #** 988821

Date Delivered: 4/14/10 **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? Temperature (if yes)? 4°C	☑ Yes	☐ No	☐ N/A
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? Preserved (if yes) by: ☑ **Truesdail** ☐ Client	☑ Yes	☐ No	☐ N/A
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? If not, notify Project Manager.	☑ Yes	☐ No	☐ N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☑ Std	☑ Yes	☐ No	☐ N/A

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: Rafael Davila

\\MATRIX\srv\Discrp.FormBlank.doc

Advanced Technology Laboratories - Las Vegas **Date:** *05-Mar-10*

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N003774

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS

Samples were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time except for pH analysis.

Samples for dissolved analysis were filtered in the laboratory.

Analytical Comments for EPA 8260B, Volatile Organic Compounds by GC/MS:

1. Continuing Calibration Verification for Acetone and 2-butanone were bias high, however, the samples were None-Detect for Acetone and 2-butanone.

2. Matrix Spike and Matrix Spike Duplicate for sample N003774-003 were out of recovery criteria for Acetone, Bromoform and 2-Butanone possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories - Las Vega

Date: *05-Mar-10*

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N003774
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N003774-001A	MW-57-050-perched	Ground Water	2/17/2010 8:30:00 AM	2/17/2010	3/5/2010
N003774-001B	MW-57-050-perched	Ground Water	2/17/2010 8:30:00 AM	2/17/2010	3/5/2010
N003774-001C	MW-57-050-perched	Ground Water	2/17/2010 8:30:00 AM	2/17/2010	3/5/2010
N003774-002A	MW-58-065-Perched	Ground Water	2/17/2010 9:00:00 AM	2/17/2010	3/5/2010
N003774-002B	MW-58-065-Perched	Ground Water	2/17/2010 9:00:00 AM	2/17/2010	3/5/2010
N003774-002C	MW-58-065-Perched	Ground Water	2/17/2010 9:00:00 AM	2/17/2010	3/5/2010
N003774-003A	MW-57-050-Perched	Ground Water	2/16/2010 1:10:00 PM	2/17/2010	3/5/2010
N003774-004A	MW-58-065-Perched	Ground Water	2/16/2010 1:30:00 PM	2/17/2010	3/5/2010

Advanced Technology Laboratories
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *05-Mar-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-57-050-perched
Lab Order:	N003774	**Collection Date:**	2/17/2010 8:30:00 AM
Project:	PG&E Topock	**Matrix:**	GROUND WATER
Lab ID:	N003774-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
				SM2540C			
RunID: **WETCHEM_100218B**	QC Batch: **34022**				PrepDate:	**2/18/2010**	Analyst: **CEI**
Total Dissolved Solids (Residue, Filterable)	1100	12	12		mg/L	1	2/18/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *05-Mar-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-58-065-Perched
Lab Order:	N003774	**Collection Date:**	2/17/2010 9:00:00 AM
Project:	PG&E Topock	**Matrix:**	GROUND WATER
Lab ID:	N003774-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
				SM2540C			
RunID: **WETCHEM_100218B**	QC Batch: **34022**				PrepDate:	**2/18/2010**	Analyst: **CEI**
Total Dissolved Solids (Residue, Filterable)	370	10	10		mg/L	1	2/18/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID: **MB-34022** SampType: **MBLK** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **2/18/2010** RunNo: **75874**
Client ID: **PBW** Batch ID: **34022** TestNo: **SM2540C** Analysis Date: **2/18/2010** SeqNo: **1162696**

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-34022** SampType: **LCS** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **2/18/2010** RunNo: **75874**
Client ID: **LCSW** Batch ID: **34022** TestNo: **SM2540C** Analysis Date: **2/18/2010** SeqNo: **1162698**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	937.000	10	1000	0	93.7	80	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
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *05-Mar-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-57-050-perched
Lab Order:	N003774	**Collection Date:**	2/17/2010 8:30:00 AM
Project:	PG&E Topock	**Matrix:**	GROUND WATER
Lab ID:	N003774-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: **IC1_100219A**	QC Batch: **R75892**				PrepDate:		Analyst: **QBM**
Hexavalent Chromium	86	0.15	1.0		µg/L	5	2/19/2010 01:41 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 - Las Vegas

Print Date: *05-Mar-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-58-065-Perched
Lab Order:	N003774	**Collection Date:**	2/17/2010 9:00:00 AM
Project:	PG&E Topock	**Matrix:**	GROUND WATER
Lab ID:	N003774-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: **IC1_100219A**	QC Batch: **R75892**				PrepDate:		Analyst: **QBM**
Hexavalent Chromium	ND	0.030	0.20		µg/L	1	2/19/2010 02:09 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		

CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W

Sample ID: **MB-R75892** SampType: **MBLK** TestCode: **218.6_W** Units: **µg/L** Prep Date: RunNo: **75892**
Client ID: **PBW** Batch ID: **R75892** TestNo: **EPA 218.6** Analysis Date: **2/19/2010** SeqNo: **1163035**

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-R75892** SampType: **LCS** TestCode: **218.6_W** Units: **µg/L** Prep Date: RunNo: **75892**
Client ID: **LCSW** Batch ID: **R75892** TestNo: **EPA 218.6** Analysis Date: **2/19/2010** SeqNo: **1163036**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.974	0.20	5.000	0	99.5	90	110				

Sample ID: **N003774-001BMS** SampType: **MS** TestCode: **218.6_W** Units: **µg/L** Prep Date: RunNo: **75892**
Client ID: **ZZZZZZ** Batch ID: **R75892** TestNo: **EPA 218.6** Analysis Date: **2/19/2010** SeqNo: **1163040**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	110.740	1.0	25.00	85.71	100	90	110				

Sample ID: **N003774-001BMSD** SampType: **MSD** TestCode: **218.6_W** Units: **µg/L** Prep Date: RunNo: **75892**
Client ID: **ZZZZZZ** Batch ID: **R75892** TestNo: **EPA 218.6** Analysis Date: **2/19/2010** SeqNo: **1163041**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	111.075	1.0	25.00	85.71	101	90	110	110.7	0.302	20	

Sample ID: **N003774-002BMS** SampType: **MS** TestCode: **218.6_W** Units: **µg/L** Prep Date: RunNo: **75892**
Client ID: **ZZZZZZ** Batch ID: **R75892** TestNo: **EPA 218.6** Analysis Date: **2/19/2010** SeqNo: **1163043**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.027	0.20	1.000	0	103	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: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W

Sample ID: **N003774-002BDUP** SampType: **DUP** TestCode: **218.6_W** Units: **µg/L** Prep Date: RunNo: **75892**
Client ID: **ZZZZZZ** Batch ID: **R75892** TestNo: **EPA 218.6** Analysis Date: **2/19/2010** SeqNo: **1163044**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20						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		

ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *05-Mar-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-57-050-perched
Lab Order:	N003774	**Collection Date:**	2/17/2010 8:30:00 AM
Project:	PG&E Topock	**Matrix:**	GROUND WATER
Lab ID:	N003774-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100218A**	QC Batch: **R75894**				PrepDate:		Analyst: **QBM**
Chloride	350	22	50		mg/L	100	2/18/2010 12:59 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100218A**	QC Batch: **R75894**				PrepDate:		Analyst: **QBM**
Nitrogen, Nitrate (As N)	3.8	0.097	1.0		mg/L	2	2/18/2010 02:06 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100218A**	QC Batch: **R75894**				PrepDate:		Analyst: **QBM**
Sulfate	220	5.2	20		mg/L	20	2/18/2010 01:52 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 - Las Vegas

Print Date: *05-Mar-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-58-065-Perched
Lab Order:	N003774	**Collection Date:**	2/17/2010 9:00:00 AM
Project:	PG&E Topock	**Matrix:**	GROUND WATER
Lab ID:	N003774-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100218A** QC Batch: **R75894**					PrepDate:		Analyst: **QBM**
Chloride	45	2.2	5.0		mg/L	10	2/18/2010 12:06 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100218A** QC Batch: **R75894**					PrepDate:		Analyst: **QBM**
Nitrogen, Nitrate (As N)	ND	0.048	0.50		mg/L	1	2/18/2010 12:38 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100218A** QC Batch: **R75894**					PrepDate:		Analyst: **QBM**
Sulfate	97	2.6	10		mg/L	10	2/18/2010 12:06 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		

CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **MB-R75894_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **PBW** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163051**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **LCS-R75894_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **LCSW** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163052**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.359	0.50	2.500	0	94.4	85	115				

Sample ID: **N003774-002ADUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **ZZZZZZ** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163054**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	43.810	5.0						44.64	1.88	20	

Sample ID: **N003774-001AMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **ZZZZZZ** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163056**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	611.700	50	250.0	345.5	106	75	125				

Sample ID: **N003774-001AMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **ZZZZZZ** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163057**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	613.800	50	250.0	345.5	107	75	125	611.7	0.343	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: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_NO3PGE

Sample ID: **MB-R75894_NO3** SampType: **MBLK** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **PBW** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163064**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	ND	0.50									

Sample ID: **LCS-R75894_NO3** SampType: **LCS** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **LCSW** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163065**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.358	0.50	2.500	0	94.3	85	115				

Sample ID: **N003774-002ADUP** SampType: **DUP** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **ZZZZZZ** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163067**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	0.103	0.50						0.1030	0	20	

Sample ID: **N003774-001AMS** SampType: **MS** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **ZZZZZZ** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163071**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	8.684	1.0	5.000	3.750	98.7	75	125				

Sample ID: **N003774-001AMSD** SampType: **MSD** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **ZZZZZZ** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163072**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	8.604	1.0	5.000	3.750	97.1	75	125	8.684	0.925	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: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R75894_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **PBW** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	1.0									

Sample ID: **LCS-R75894_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **LCSW** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163078**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.595	1.0	5.000	0	91.9	85	115				

Sample ID: **N003774-002ADUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **ZZZZZZ** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163080**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	96.540	10						97.33	0.815	20	

Sample ID: **N003774-001AMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **ZZZZZZ** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163081**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	675.100	100	500.0	218.7	91.3	75	125				

Sample ID: **N003774-001AMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **75894**
Client ID: **ZZZZZZ** Batch ID: **R75894** TestNo: **EPA 300.0** Analysis Date: **2/18/2010** SeqNo: **1163082**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	677.700	100	500.0	218.7	91.8	75	125	675.1	0.384	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 - Las Vegas

Print Date: *05-Mar-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-57-050-perched
Lab Order:	N003774	**Collection Date:**	2/17/2010 8:30:00 AM
Project:	PG&E Topock	**Matrix:**	GROUND WATER
Lab ID:	N003774-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_100223A**	QC Batch: **34023**				PrepDate:	**2/19/2010**	Analyst: **NS**
Chromium	88	0.15	1.0		µg/L	1	2/23/2010 10:41 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 - Las Vegas

Print Date: *05-Mar-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-58-065-Perched
Lab Order:	N003774	**Collection Date:**	2/17/2010 9:00:00 AM
Project:	PG&E Topock	**Matrix:**	GROUND WATER
Lab ID:	N003774-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_100223A**	QC Batch: **34023**				PrepDate:	**2/19/2010**	Analyst: **NS**
Chromium	8.0	0.15	1.0		µg/L	1	2/23/2010 10:46 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		

CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-34023** SampType: **MBLK** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **2/19/2010** RunNo: **75883**
Client ID: **PBW** Batch ID: **34023** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2010** SeqNo: **1162829**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.186	1.0									

Sample ID: **LCS-34023** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **2/19/2010** RunNo: **75883**
Client ID: **LCSW** Batch ID: **34023** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2010** SeqNo: **1162830**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	955.199	1.0	1000	0	95.5	85	115				

Sample ID: **N003774-001C-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **2/19/2010** RunNo: **75883**
Client ID: **ZZZZZZ** Batch ID: **34023** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2010** SeqNo: **1162834**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1037.288	5.0	1000	87.52	95.0	75	125				

Sample ID: **N003774-001C-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **2/19/2010** RunNo: **75883**
Client ID: **ZZZZZZ** Batch ID: **34023** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2010** SeqNo: **1162835**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1037.484	5.0	1000	87.52	95.0	75	125	1037	0.0189	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 - Las Vegas

Print Date: *05-Mar-10*

CLIENT: CH2M HILL
Lab Order: N003774
Project: PG&E Topock
Lab ID: N003774-003

Client Sample ID: MW-57-050-Perched
Collection Date: 2/16/2010 1:10:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
				EPA 8260B			
RunID: **MS1_100218A**	QC Batch:	**D10VW019**			PrepDate:		Analyst: **QBM**
1,1,1,2-Tetrachloroethane	ND	0.14	1.0		µg/L	1	2/18/2010 05:44 PM
1,1,1-Trichloroethane	ND	0.085	1.0		µg/L	1	2/18/2010 05:44 PM
1,1,2,2-Tetrachloroethane	ND	0.12	1.0		µg/L	1	2/18/2010 05:44 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	2/18/2010 05:44 PM
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	2/18/2010 05:44 PM
1,1-Dichloroethene	ND	0.068	1.0		µg/L	1	2/18/2010 05:44 PM
1,1-Dichloropropene	ND	0.14	1.0		µg/L	1	2/18/2010 05:44 PM
1,2,3-Trichlorobenzene	ND	0.13	1.0		µg/L	1	2/18/2010 05:44 PM
1,2,3-Trichloropropane	ND	0.14	1.0		µg/L	1	2/18/2010 05:44 PM
1,2,4-Trichlorobenzene	ND	0.16	1.0		µg/L	1	2/18/2010 05:44 PM
1,2,4-Trimethylbenzene	ND	0.071	1.0		µg/L	1	2/18/2010 05:44 PM
1,2-Dibromo-3-chloropropane	ND	0.18	2.0		µg/L	1	2/18/2010 05:44 PM
1,2-Dibromoethane	ND	0.16	1.0		µg/L	1	2/18/2010 05:44 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/18/2010 05:44 PM
1,2-Dichloroethane	ND	0.13	1.0		µg/L	1	2/18/2010 05:44 PM
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	2/18/2010 05:44 PM
1,3,5-Trimethylbenzene	ND	0.066	1.0		µg/L	1	2/18/2010 05:44 PM
1,3-Dichlorobenzene	ND	0.12	1.0		µg/L	1	2/18/2010 05:44 PM
1,3-Dichloropropane	ND	0.19	1.0		µg/L	1	2/18/2010 05:44 PM
1,4-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/18/2010 05:44 PM
2,2-Dichloropropane	ND	0.076	1.0		µg/L	1	2/18/2010 05:44 PM
2-Butanone	ND	3.0	10		µg/L	1	2/18/2010 05:44 PM
2-Chlorotoluene	ND	0.11	1.0		µg/L	1	2/18/2010 05:44 PM
4-Chlorotoluene	ND	0.12	1.0		µg/L	1	2/18/2010 05:44 PM
4-Isopropyltoluene	ND	0.062	1.0		µg/L	1	2/18/2010 05:44 PM
4-Methyl-2-pentanone	ND	1.5	10		µg/L	1	2/18/2010 05:44 PM
Acetone	ND	5.1	10		µg/L	1	2/18/2010 05:44 PM
Acrolein	ND	8.1	20		µg/L	1	2/18/2010 05:44 PM
Acrylonitrile	ND	1.8	20		µg/L	1	2/18/2010 05:44 PM
Benzene	ND	0.15	1.0		µg/L	1	2/18/2010 05:44 PM
Bromobenzene	ND	0.16	1.0		µg/L	1	2/18/2010 05:44 PM
Bromochloromethane	ND	0.13	1.0		µg/L	1	2/18/2010 05:44 PM
Bromodichloromethane	ND	0.12	1.0		µg/L	1	2/18/2010 05:44 PM
Bromoform	ND	0.097	1.0		µg/L	1	2/18/2010 05:44 PM
Bromomethane	ND	0.15	1.0		µg/L	1	2/18/2010 05:44 PM
Carbon disulfide	ND	0.092	1.0		µg/L	1	2/18/2010 05:44 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 - Las Vegas

Print Date: *05-Mar-10*

CLIENT: CH2M HILL
Lab Order: N003774
Project: PG&E Topock
Lab ID: N003774-003

Client Sample ID: MW-57-050-Perched
Collection Date: 2/16/2010 1:10:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_100218A**	QC Batch: **D10VW019**				PrepDate:		Analyst: **QBM**
Carbon tetrachloride	ND	0.089	1.0		µg/L	1	2/18/2010 05:44 PM
Chlorobenzene	ND	0.18	1.0		µg/L	1	2/18/2010 05:44 PM
Chloroethane	ND	0.18	1.0		µg/L	1	2/18/2010 05:44 PM
Chloroform	ND	0.10	1.0		µg/L	1	2/18/2010 05:44 PM
Chloromethane	ND	0.13	1.0		µg/L	1	2/18/2010 05:44 PM
cis-1,2-Dichloroethene	ND	0.099	1.0		µg/L	1	2/18/2010 05:44 PM
cis-1,3-Dichloropropene	ND	0.13	1.0		µg/L	1	2/18/2010 05:44 PM
Dibromochloromethane	ND	0.079	1.0		µg/L	1	2/18/2010 05:44 PM
Dibromomethane	ND	0.22	1.0		µg/L	1	2/18/2010 05:44 PM
Dichlorodifluoromethane	ND	0.21	1.0		µg/L	1	2/18/2010 05:44 PM
Ethylbenzene	ND	0.11	1.0		µg/L	1	2/18/2010 05:44 PM
Freon-113	ND	0.12	1.0		µg/L	1	2/18/2010 05:44 PM
Hexachlorobutadiene	ND	0.12	1.0		µg/L	1	2/18/2010 05:44 PM
Isopropylbenzene	ND	0.088	1.0		µg/L	1	2/18/2010 05:44 PM
m,p-Xylene	ND	0.26	1.0		µg/L	1	2/18/2010 05:44 PM
Methylene chloride	ND	0.16	5.0		µg/L	1	2/18/2010 05:44 PM
MTBE	ND	0.16	1.0		µg/L	1	2/18/2010 05:44 PM
n-Butylbenzene	ND	0.066	1.0		µg/L	1	2/18/2010 05:44 PM
n-Propylbenzene	ND	0.082	1.0		µg/L	1	2/18/2010 05:44 PM
Naphthalene	ND	0.087	1.0		µg/L	1	2/18/2010 05:44 PM
o-Xylene	ND	0.13	1.0		µg/L	1	2/18/2010 05:44 PM
sec-Butylbenzene	ND	0.073	1.0		µg/L	1	2/18/2010 05:44 PM
Styrene	ND	0.057	1.0		µg/L	1	2/18/2010 05:44 PM
tert-Butylbenzene	ND	0.086	1.0		µg/L	1	2/18/2010 05:44 PM
Tetrachloroethene	ND	0.14	1.0		µg/L	1	2/18/2010 05:44 PM
Toluene	ND	0.27	2.5		µg/L	1	2/18/2010 05:44 PM
trans-1,2-Dichloroethene	ND	0.17	1.0		µg/L	1	2/18/2010 05:44 PM
trans-1,3-Dichloropropene	ND	0.18	1.0		µg/L	1	2/18/2010 05:44 PM
Trichloroethene	ND	0.16	1.0		µg/L	1	2/18/2010 05:44 PM
Trichlorofluoromethane	ND	0.11	1.0		µg/L	1	2/18/2010 05:44 PM
Vinyl chloride	ND	0.14	1.0		µg/L	1	2/18/2010 05:44 PM
Xylenes, Total	ND	1.5	2.0		µg/L	1	2/18/2010 05:44 PM
Surr: 1,2-Dichloroethane-d4	96.2	0	72-119		%REC	1	2/18/2010 05:44 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	2/18/2010 05:44 PM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	2/18/2010 05:44 PM
Surr: Toluene-d8	108	0	81-120		%REC	1	2/18/2010 05:44 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 - Las Vegas

Print Date: *05-Mar-10*

CLIENT: CH2M HILL
Lab Order: N003774
Project: PG&E Topock
Lab ID: N003774-004

Client Sample ID: MW-58-065-Perched
Collection Date: 2/16/2010 1:30:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
				EPA 8260B			
RunID: **MS1_100218A**	QC Batch:	**D10VW019**			PrepDate:		Analyst: **QBM**
1,1,1,2-Tetrachloroethane	ND	0.14	1.0		µg/L	1	2/18/2010 06:08 PM
1,1,1-Trichloroethane	ND	0.085	1.0		µg/L	1	2/18/2010 06:08 PM
1,1,2,2-Tetrachloroethane	ND	0.12	1.0		µg/L	1	2/18/2010 06:08 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	2/18/2010 06:08 PM
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	2/18/2010 06:08 PM
1,1-Dichloroethene	ND	0.068	1.0		µg/L	1	2/18/2010 06:08 PM
1,1-Dichloropropene	ND	0.14	1.0		µg/L	1	2/18/2010 06:08 PM
1,2,3-Trichlorobenzene	ND	0.13	1.0		µg/L	1	2/18/2010 06:08 PM
1,2,3-Trichloropropane	ND	0.14	1.0		µg/L	1	2/18/2010 06:08 PM
1,2,4-Trichlorobenzene	ND	0.16	1.0		µg/L	1	2/18/2010 06:08 PM
1,2,4-Trimethylbenzene	ND	0.071	1.0		µg/L	1	2/18/2010 06:08 PM
1,2-Dibromo-3-chloropropane	ND	0.18	2.0		µg/L	1	2/18/2010 06:08 PM
1,2-Dibromoethane	ND	0.16	1.0		µg/L	1	2/18/2010 06:08 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/18/2010 06:08 PM
1,2-Dichloroethane	ND	0.13	1.0		µg/L	1	2/18/2010 06:08 PM
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	2/18/2010 06:08 PM
1,3,5-Trimethylbenzene	ND	0.066	1.0		µg/L	1	2/18/2010 06:08 PM
1,3-Dichlorobenzene	ND	0.12	1.0		µg/L	1	2/18/2010 06:08 PM
1,3-Dichloropropane	ND	0.19	1.0		µg/L	1	2/18/2010 06:08 PM
1,4-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/18/2010 06:08 PM
2,2-Dichloropropane	ND	0.076	1.0		µg/L	1	2/18/2010 06:08 PM
2-Butanone	ND	3.0	10		µg/L	1	2/18/2010 06:08 PM
2-Chlorotoluene	ND	0.11	1.0		µg/L	1	2/18/2010 06:08 PM
4-Chlorotoluene	ND	0.12	1.0		µg/L	1	2/18/2010 06:08 PM
4-Isopropyltoluene	ND	0.062	1.0		µg/L	1	2/18/2010 06:08 PM
4-Methyl-2-pentanone	ND	1.5	10		µg/L	1	2/18/2010 06:08 PM
Acetone	ND	5.1	10		µg/L	1	2/18/2010 06:08 PM
Acrolein	ND	8.1	20		µg/L	1	2/18/2010 06:08 PM
Acrylonitrile	ND	1.8	20		µg/L	1	2/18/2010 06:08 PM
Benzene	ND	0.15	1.0		µg/L	1	2/18/2010 06:08 PM
Bromobenzene	ND	0.16	1.0		µg/L	1	2/18/2010 06:08 PM
Bromochloromethane	ND	0.13	1.0		µg/L	1	2/18/2010 06:08 PM
Bromodichloromethane	ND	0.12	1.0		µg/L	1	2/18/2010 06:08 PM
Bromoform	ND	0.097	1.0		µg/L	1	2/18/2010 06:08 PM
Bromomethane	ND	0.15	1.0		µg/L	1	2/18/2010 06:08 PM
Carbon disulfide	ND	0.092	1.0		µg/L	1	2/18/2010 06:08 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 - Las Vegas

Print Date: *05-Mar-10*

CLIENT: CH2M HILL
Lab Order: N003774
Project: PG&E Topock
Lab ID: N003774-004

Client Sample ID: MW-58-065-Perched
Collection Date: 2/16/2010 1:30:00 PM
Matrix: GROUND WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS							
			EPA 8260B				
RunID: **MS1_100218A**	QC Batch: **D10VW019**				PrepDate:		Analyst: **QBM**
Carbon tetrachloride	ND	0.089	1.0		µg/L	1	2/18/2010 06:08 PM
Chlorobenzene	ND	0.18	1.0		µg/L	1	2/18/2010 06:08 PM
Chloroethane	ND	0.18	1.0		µg/L	1	2/18/2010 06:08 PM
Chloroform	ND	0.10	1.0		µg/L	1	2/18/2010 06:08 PM
Chloromethane	ND	0.13	1.0		µg/L	1	2/18/2010 06:08 PM
cis-1,2-Dichloroethene	ND	0.099	1.0		µg/L	1	2/18/2010 06:08 PM
cis-1,3-Dichloropropene	ND	0.13	1.0		µg/L	1	2/18/2010 06:08 PM
Dibromochloromethane	ND	0.079	1.0		µg/L	1	2/18/2010 06:08 PM
Dibromomethane	ND	0.22	1.0		µg/L	1	2/18/2010 06:08 PM
Dichlorodifluoromethane	ND	0.21	1.0		µg/L	1	2/18/2010 06:08 PM
Ethylbenzene	ND	0.11	1.0		µg/L	1	2/18/2010 06:08 PM
Freon-113	ND	0.12	1.0		µg/L	1	2/18/2010 06:08 PM
Hexachlorobutadiene	ND	0.12	1.0		µg/L	1	2/18/2010 06:08 PM
Isopropylbenzene	ND	0.088	1.0		µg/L	1	2/18/2010 06:08 PM
m,p-Xylene	ND	0.26	1.0		µg/L	1	2/18/2010 06:08 PM
Methylene chloride	ND	0.16	5.0		µg/L	1	2/18/2010 06:08 PM
MTBE	ND	0.16	1.0		µg/L	1	2/18/2010 06:08 PM
n-Butylbenzene	ND	0.066	1.0		µg/L	1	2/18/2010 06:08 PM
n-Propylbenzene	ND	0.082	1.0		µg/L	1	2/18/2010 06:08 PM
Naphthalene	ND	0.087	1.0		µg/L	1	2/18/2010 06:08 PM
o-Xylene	ND	0.13	1.0		µg/L	1	2/18/2010 06:08 PM
sec-Butylbenzene	ND	0.073	1.0		µg/L	1	2/18/2010 06:08 PM
Styrene	ND	0.057	1.0		µg/L	1	2/18/2010 06:08 PM
tert-Butylbenzene	ND	0.086	1.0		µg/L	1	2/18/2010 06:08 PM
Tetrachloroethene	ND	0.14	1.0		µg/L	1	2/18/2010 06:08 PM
Toluene	ND	0.27	2.5		µg/L	1	2/18/2010 06:08 PM
trans-1,2-Dichloroethene	ND	0.17	1.0		µg/L	1	2/18/2010 06:08 PM
trans-1,3-Dichloropropene	ND	0.18	1.0		µg/L	1	2/18/2010 06:08 PM
Trichloroethene	ND	0.16	1.0		µg/L	1	2/18/2010 06:08 PM
Trichlorofluoromethane	ND	0.11	1.0		µg/L	1	2/18/2010 06:08 PM
Vinyl chloride	ND	0.14	1.0		µg/L	1	2/18/2010 06:08 PM
Xylenes, Total	ND	1.5	2.0		µg/L	1	2/18/2010 06:08 PM
Surr: 1,2-Dichloroethane-d4	97.6	0	72-119		%REC	1	2/18/2010 06:08 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	2/18/2010 06:08 PM
Surr: Dibromofluoromethane	102	0	85-115		%REC	1	2/18/2010 06:08 PM
Surr: Toluene-d8	107	0	81-120		%REC	1	2/18/2010 06:08 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

CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D100218LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **75857**
Client ID: **LCSW** Batch ID: **D10VW019** TestNo: **EPA 8260B** Analysis Date: **2/18/2010** SeqNo: **1162810**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.860	1.0	25.00	0	83.4	81	129				
1,1,1-Trichloroethane	22.160	1.0	25.00	0	88.6	67	132				
1,1,2,2-Tetrachloroethane	26.700	1.0	25.00	0	107	63	128				
1,1,2-Trichloroethane	24.490	1.0	25.00	0	98.0	75	125				
1,1-Dichloroethane	26.120	1.0	25.00	0	104	69	133				
1,1-Dichloroethene	26.420	1.0	25.00	0	106	68	130				
1,1-Dichloropropene	23.110	1.0	25.00	0	92.4	73	132				
1,2,3-Trichlorobenzene	27.240	1.0	25.00	0	109	67	137				
1,2,3-Trichloropropane	26.280	1.0	25.00	0	105	73	124				
1,2,4-Trichlorobenzene	28.010	1.0	25.00	0	112	66	134				
1,2,4-Trimethylbenzene	28.340	1.0	25.00	0	113	74	132				
1,2-Dibromo-3-chloropropane	21.640	2.0	25.00	0	86.6	50	132				
1,2-Dibromoethane	25.850	1.0	25.00	0	103	80	121				
1,2-Dichlorobenzene	26.000	1.0	25.00	0	104	71	122				
1,2-Dichloroethane	26.600	1.0	25.00	0	106	69	132				
1,2-Dichloropropane	26.950	1.0	25.00	0	108	75	125				
1,3,5-Trimethylbenzene	28.160	1.0	25.00	0	113	74	131				
1,3-Dichlorobenzene	25.470	1.0	25.00	0	102	75	124				
1,3-Dichloropropane	26.870	1.0	25.00	0	107	73	126				
1,4-Dichlorobenzene	25.160	1.0	25.00	0	101	74	123				
2,2-Dichloropropane	22.340	1.0	25.00	0	89.4	69	137				
2-Butanone	311.590	10	250.0	0	125	49	136				
2-Chlorotoluene	26.550	1.0	25.00	0	106	73	126				
4-Chlorotoluene	27.300	1.0	25.00	0	109	74	128				
4-Isopropyltoluene	28.620	1.0	25.00	0	114	73	130				
4-Methyl-2-pentanone	295.030	10	250.0	0	118	58	134				
Acetone	315.540	10	250.0	0	126	40	135				
Acrolein	269.030	20	250.0	0	108	75	125				
Acrylonitrile	274.050	20	250.0	0	110	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

Advanced Technology Laboratories
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D100218LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **75857**
Client ID: **LCSW** Batch ID: **D10VW019** TestNo: **EPA 8260B** Analysis Date: **2/18/2010** SeqNo: **1162810**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	26.630	1.0	25.00	0	107	81	122				
Bromobenzene	25.840	1.0	25.00	0	103	76	124				
Bromochloromethane	26.210	1.0	25.00	0	105	65	129				
Bromodichloromethane	27.290	1.0	25.00	0	109	76	121				
Bromoform	20.000	1.0	25.00	0	80.0	69	128				
Bromomethane	22.850	1.0	25.00	0	91.4	53	141				
Carbon disulfide	26.580	1.0	25.00	0	106	75	125				
Carbon tetrachloride	21.190	1.0	25.00	0	84.8	66	138				
Chlorobenzene	25.020	1.0	25.00	0	100	81	122				
Chloroethane	29.960	1.0	25.00	0	120	58	133				
Chloroform	26.540	1.0	25.00	0	106	69	128				
Chloromethane	21.100	1.0	25.00	0	84.4	56	131				
cis-1,2-Dichloroethene	25.710	1.0	25.00	0	103	72	126				
cis-1,3-Dichloropropene	21.400	1.0	25.00	0	85.6	69	131				
Dibromochloromethane	21.150	1.0	25.00	0	84.6	66	133				
Dibromomethane	25.820	1.0	25.00	0	103	76	125				
Dichlorodifluoromethane	23.440	1.0	25.00	0	93.8	53	153				
Ethylbenzene	25.690	1.0	25.00	0	103	73	127				
Freon-113	28.690	1.0	25.00	0	115	75	125				
Hexachlorobutadiene	26.870	1.0	25.00	0	107	67	131				
Isopropylbenzene	26.740	1.0	25.00	0	107	75	127				
m,p-Xylene	52.790	1.0	50.00	0	106	76	128				
Methylene chloride	23.910	5.0	25.00	0	95.6	63	137				
MTBE	24.290	1.0	25.00	0	97.2	65	123				
n-Butylbenzene	29.610	1.0	25.00	0	118	69	137				
n-Propylbenzene	28.250	1.0	25.00	0	113	72	129				
Naphthalene	30.420	1.0	25.00	0	122	54	138				
o-Xylene	26.730	1.0	25.00	0	107	80	121				
sec-Butylbenzene	27.750	1.0	25.00	0	111	72	127				
Styrene	28.220	1.0	25.00	0	113	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
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D100218LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **75857**
Client ID: **LCSW** Batch ID: **D10VW019** TestNo: **EPA 8260B** Analysis Date: **2/18/2010** SeqNo: **1162810**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
tert-Butylbenzene	27.360	1.0	25.00	0	109	70	129				
Tetrachloroethene	26.310	1.0	25.00	0	105	66	128				
Toluene	23.700	2.5	25.00	0	94.8	77	122				
trans-1,2-Dichloroethene	27.120	1.0	25.00	0	108	63	137				
trans-1,3-Dichloropropene	21.730	1.0	25.00	0	86.9	59	135				
Trichloroethene	26.400	1.0	25.00	0	106	70	127				
Trichlorofluoromethane	26.360	1.0	25.00	0	105	57	129				
Vinyl chloride	24.030	1.0	25.00	0	96.1	50	134				
Xylenes, Total	79.520	2.0	75.00	0	106	75	125				
Surr: 1,2-Dichloroethane-d4	27.170		25.00		109	72	119				
Surr: 4-Bromofluorobenzene	26.150		25.00		105	76	119				
Surr: Dibromofluoromethane	26.410		25.00		106	85	115				
Surr: Toluene-d8	25.140		25.00		101	81	120				

Sample ID: **N003774-003AMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **75857**
Client ID: **ZZZZZZ** Batch ID: **D10VW019** TestNo: **EPA 8260B** Analysis Date: **2/18/2010** SeqNo: **1162811**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.700	1.0	25.00	0	82.8	81	129				
1,1,1-Trichloroethane	21.040	1.0	25.00	0	84.2	67	132				
1,1,2,2-Tetrachloroethane	21.740	1.0	25.00	0	87.0	63	128				
1,1,2-Trichloroethane	21.340	1.0	25.00	0	85.4	75	125				
1,1-Dichloroethane	25.290	1.0	25.00	0	101	69	133				
1,1-Dichloroethene	25.980	1.0	25.00	0	104	68	130				
1,1-Dichloropropene	23.410	1.0	25.00	0	93.6	73	132				
1,2,3-Trichlorobenzene	25.620	1.0	25.00	0	102	67	137				
1,2,3-Trichloropropane	21.320	1.0	25.00	0	85.3	73	124				
1,2,4-Trichlorobenzene	27.370	1.0	25.00	0	109	66	134				
1,2,4-Trimethylbenzene	27.110	1.0	25.00	0	108	74	132				
1,2-Dibromo-3-chloropropane	16.450	2.0	25.00	0	65.8	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
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N003774-003AMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **75857**
Client ID: **ZZZZZZ** Batch ID: **D10VW019** TestNo: **EPA 8260B** Analysis Date: **2/18/2010** SeqNo: **1162811**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	21.000	1.0	25.00	0	84.0	80	121				
1,2-Dichlorobenzene	24.960	1.0	25.00	0	99.8	71	122				
1,2-Dichloroethane	23.510	1.0	25.00	0	94.0	69	132				
1,2-Dichloropropane	25.180	1.0	25.00	0	101	75	125				
1,3,5-Trimethylbenzene	27.790	1.0	25.00	0	111	74	131				
1,3-Dichlorobenzene	25.640	1.0	25.00	0	103	75	124				
1,3-Dichloropropane	22.890	1.0	25.00	0	91.6	73	126				
1,4-Dichlorobenzene	24.930	1.0	25.00	0	99.7	74	123				
2,2-Dichloropropane	22.160	1.0	25.00	0	88.6	69	137				
2-Butanone	111.820	10	250.0	0	44.7	49	136				S
2-Chlorotoluene	27.180	1.0	25.00	0	109	73	126				
4-Chlorotoluene	27.300	1.0	25.00	0	109	74	128				
4-Isopropyltoluene	29.400	1.0	25.00	0	118	73	130				
4-Methyl-2-pentanone	204.470	10	250.0	0	81.8	58	134				
Acetone	77.170	10	250.0	0	30.9	40	135				S
Acrolein	195.000	20	250.0	0	78.0	75	125				
Acrylonitrile	197.650	20	250.0	0	79.1	75	125				
Benzene	26.170	1.0	25.00	0	105	81	122				
Bromobenzene	24.790	1.0	25.00	0	99.2	76	124				
Bromochloromethane	22.770	1.0	25.00	0	91.1	65	129				
Bromodichloromethane	25.280	1.0	25.00	0	101	76	121				
Bromoform	16.660	1.0	25.00	0	66.6	69	128				S
Bromomethane	23.480	1.0	25.00	0	93.9	53	141				
Carbon disulfide	24.790	1.0	25.00	0	99.2	75	125				
Carbon tetrachloride	21.680	1.0	25.00	0	86.7	66	138				
Chlorobenzene	25.140	1.0	25.00	0	101	81	122				
Chloroethane	30.200	1.0	25.00	0	121	58	133				
Chloroform	25.430	1.0	25.00	0	102	69	128				
Chloromethane	21.850	1.0	25.00	0	87.4	56	131				
cis-1,2-Dichloroethene	24.550	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
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N003774-003AMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **75857**
Client ID: **ZZZZZZ** Batch ID: **D10VW019** TestNo: **EPA 8260B** Analysis Date: **2/18/2010** SeqNo: **1162811**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,3-Dichloropropene	19.990	1.0	25.00	0	80.0	69	131				
Dibromochloromethane	18.600	1.0	25.00	0	74.4	66	133				
Dibromomethane	21.850	1.0	25.00	0	87.4	76	125				
Dichlorodifluoromethane	24.950	1.0	25.00	0	99.8	53	153				
Ethylbenzene	26.100	1.0	25.00	0	104	73	127				
Freon-113	27.720	1.0	25.00	0	111	75	125				
Hexachlorobutadiene	28.020	1.0	25.00	0	112	67	131				
Isopropylbenzene	29.330	1.0	25.00	0	117	75	127				
m,p-Xylene	53.670	1.0	50.00	0	107	76	128				
Methylene chloride	22.320	5.0	25.00	0	89.3	63	137				
MTBE	19.750	1.0	25.00	0	79.0	65	123				
n-Butylbenzene	31.130	1.0	25.00	0	125	69	137				
n-Propylbenzene	29.190	1.0	25.00	0	117	72	129				
Naphthalene	24.540	1.0	25.00	0	98.2	54	138				
o-Xylene	26.880	1.0	25.00	0	108	80	121				
sec-Butylbenzene	28.800	1.0	25.00	0	115	72	127				
Styrene	24.590	1.0	25.00	0	98.4	65	134				
tert-Butylbenzene	28.460	1.0	25.00	0	114	70	129				
Tetrachloroethene	27.390	1.0	25.00	0	110	66	128				
Toluene	24.030	2.5	25.00	0	96.1	77	122				
trans-1,2-Dichloroethene	26.580	1.0	25.00	0	106	63	137				
trans-1,3-Dichloropropene	19.030	1.0	25.00	0	76.1	59	135				
Trichloroethene	26.360	1.0	25.00	0	105	70	127				
Trichlorofluoromethane	25.840	1.0	25.00	0	103	57	129				
Vinyl chloride	24.780	1.0	25.00	0	99.1	50	134				
Xylenes, Total	80.550	2.0	75.00	0	107	75	125				
Surr: 1,2-Dichloroethane-d4	22.960		25.00		91.8	72	119				
Surr: 4-Bromofluorobenzene	25.700		25.00		103	76	119				
Surr: Dibromofluoromethane	24.790		25.00		99.2	85	115				
Surr: Toluene-d8	25.250		25.00		101	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

Advanced Technology Laboratories
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N003774-003AMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **75857**
Client ID: **ZZZZZZ** Batch ID: **D10VW019** TestNo: **EPA 8260B** Analysis Date: **2/18/2010** SeqNo: **1162812**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	21.430	1.0	25.00	0	85.7	81	129	20.70	3.47	20	
1,1,1-Trichloroethane	21.860	1.0	25.00	0	87.4	67	132	21.04	3.82	20	
1,1,2,2-Tetrachloroethane	22.460	1.0	25.00	0	89.8	63	128	21.74	3.26	20	
1,1,2-Trichloroethane	21.360	1.0	25.00	0	85.4	75	125	21.34	0.0937	20	
1,1-Dichloroethane	25.690	1.0	25.00	0	103	69	133	25.29	1.57	20	
1,1-Dichloroethene	26.230	1.0	25.00	0	105	68	130	25.98	0.958	20	
1,1-Dichloropropene	23.090	1.0	25.00	0	92.4	73	132	23.41	1.38	20	
1,2,3-Trichlorobenzene	25.770	1.0	25.00	0	103	67	137	25.62	0.584	20	
1,2,3-Trichloropropane	22.910	1.0	25.00	0	91.6	73	124	21.32	7.19	20	
1,2,4-Trichlorobenzene	26.990	1.0	25.00	0	108	66	134	27.37	1.40	20	
1,2,4-Trimethylbenzene	28.200	1.0	25.00	0	113	74	132	27.11	3.94	20	
1,2-Dibromo-3-chloropropane	17.760	2.0	25.00	0	71.0	50	132	16.45	7.66	20	
1,2-Dibromoethane	21.580	1.0	25.00	0	86.3	80	121	21.00	2.72	20	
1,2-Dichlorobenzene	25.700	1.0	25.00	0	103	71	122	24.96	2.92	20	
1,2-Dichloroethane	24.000	1.0	25.00	0	96.0	69	132	23.51	2.06	20	
1,2-Dichloropropane	25.620	1.0	25.00	0	102	75	125	25.18	1.73	20	
1,3,5-Trimethylbenzene	28.770	1.0	25.00	0	115	74	131	27.79	3.47	20	
1,3-Dichlorobenzene	26.070	1.0	25.00	0	104	75	124	25.64	1.66	20	
1,3-Dichloropropane	23.840	1.0	25.00	0	95.4	73	126	22.89	4.07	20	
1,4-Dichlorobenzene	25.260	1.0	25.00	0	101	74	123	24.93	1.32	20	
2,2-Dichloropropane	21.830	1.0	25.00	0	87.3	69	137	22.16	1.50	20	
2-Butanone	112.750	10	250.0	0	45.1	49	136	111.8	0.828	20	S
2-Chlorotoluene	27.610	1.0	25.00	0	110	73	126	27.18	1.57	20	
4-Chlorotoluene	27.860	1.0	25.00	0	111	74	128	27.30	2.03	20	
4-Isopropyltoluene	29.740	1.0	25.00	0	119	73	130	29.40	1.15	20	
4-Methyl-2-pentanone	210.700	10	250.0	0	84.3	58	134	204.5	3.00	20	
Acetone	80.070	10	250.0	0	32.0	40	135	77.17	3.69	20	S
Acrolein	198.460	20	250.0	0	79.4	75	125	195.0	1.76	20	
Acrylonitrile	205.600	20	250.0	0	82.2	75	125	197.6	3.94	20	
Benzene	26.260	1.0	25.00	0	105	81	122	26.17	0.343	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
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N003774-003AMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **75857**
Client ID: **ZZZZZZ** Batch ID: **D10VW019** TestNo: **EPA 8260B** Analysis Date: **2/18/2010** SeqNo: **1162812**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromobenzene	25.650	1.0	25.00	0	103	76	124	24.79	3.41	20	
Bromochloromethane	23.410	1.0	25.00	0	93.6	65	129	22.77	2.77	20	
Bromodichloromethane	25.080	1.0	25.00	0	100	76	121	25.28	0.794	20	
Bromoform	17.400	1.0	25.00	0	69.6	69	128	16.66	4.35	20	
Bromomethane	24.120	1.0	25.00	0	96.5	53	141	23.48	2.69	20	
Carbon disulfide	25.770	1.0	25.00	0	103	75	125	24.79	3.88	20	
Carbon tetrachloride	22.080	1.0	25.00	0	88.3	66	138	21.68	1.83	20	
Chlorobenzene	25.020	1.0	25.00	0	100	81	122	25.14	0.478	20	
Chloroethane	29.650	1.0	25.00	0	119	58	133	30.20	1.84	20	
Chloroform	26.010	1.0	25.00	0	104	69	128	25.43	2.26	20	
Chloromethane	21.650	1.0	25.00	0	86.6	56	131	21.85	0.920	20	
cis-1,2-Dichloroethene	24.940	1.0	25.00	0	99.8	72	126	24.55	1.58	20	
cis-1,3-Dichloropropene	20.320	1.0	25.00	0	81.3	69	131	19.99	1.64	20	
Dibromochloromethane	19.400	1.0	25.00	0	77.6	66	133	18.60	4.21	20	
Dibromomethane	22.290	1.0	25.00	0	89.2	76	125	21.85	1.99	20	
Dichlorodifluoromethane	24.020	1.0	25.00	0	96.1	53	153	24.95	3.80	20	
Ethylbenzene	26.370	1.0	25.00	0	105	73	127	26.10	1.03	20	
Freon-113	28.710	1.0	25.00	0	115	75	125	27.72	3.51	20	
Hexachlorobutadiene	27.800	1.0	25.00	0	111	67	131	28.02	0.788	20	
Isopropylbenzene	28.510	1.0	25.00	0	114	75	127	29.33	2.84	20	
m,p-Xylene	54.260	1.0	50.00	0	109	76	128	53.67	1.09	20	
Methylene chloride	22.860	5.0	25.00	0	91.4	63	137	22.32	2.39	20	
MTBE	20.420	1.0	25.00	0	81.7	65	123	19.75	3.34	20	
n-Butylbenzene	30.750	1.0	25.00	0	123	69	137	31.13	1.23	20	
n-Propylbenzene	29.250	1.0	25.00	0	117	72	129	29.19	0.205	20	
Naphthalene	24.560	1.0	25.00	0	98.2	54	138	24.54	0.0815	20	
o-Xylene	27.190	1.0	25.00	0	109	80	121	26.88	1.15	20	
sec-Butylbenzene	28.990	1.0	25.00	0	116	72	127	28.80	0.658	20	
Styrene	25.580	1.0	25.00	0	102	65	134	24.59	3.95	20	
tert-Butylbenzene	28.980	1.0	25.00	0	116	70	129	28.46	1.81	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
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N003774-003AMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **75857**
Client ID: **ZZZZZZ** Batch ID: **D10VW019** TestNo: **EPA 8260B** Analysis Date: **2/18/2010** SeqNo: **1162812**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethene	27.260	1.0	25.00	0	109	66	128	27.39	0.476	20	
Toluene	23.750	2.5	25.00	0	95.0	77	122	24.03	1.17	20	
trans-1,2-Dichloroethene	27.240	1.0	25.00	0	109	63	137	26.58	2.45	20	
trans-1,3-Dichloropropene	19.420	1.0	25.00	0	77.7	59	135	19.03	2.03	20	
Trichloroethene	26.310	1.0	25.00	0	105	70	127	26.36	0.190	20	
Trichlorofluoromethane	26.240	1.0	25.00	0	105	57	129	25.84	1.54	20	
Vinyl chloride	24.370	1.0	25.00	0	97.5	50	134	24.78	1.67	20	
Xylenes, Total	81.450	2.0	75.00	0	109	75	125	80.55	1.11	20	
Surr: 1,2-Dichloroethane-d4	24.080		25.00		96.3	72	119		0		
Surr: 4-Bromofluorobenzene	26.450		25.00		106	76	119		0		
Surr: Dibromofluoromethane	24.700		25.00		98.8	85	115		0		
Surr: Toluene-d8	25.280		25.00		101	81	120		0		

Sample ID: **D100218MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **75857**
Client ID: **PBW** Batch ID: **D10VW019** TestNo: **EPA 8260B** Analysis Date: **2/18/2010** SeqNo: **1162813**

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

Advanced Technology Laboratories
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CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D100218MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **75857**
Client ID: **PBW** Batch ID: **D10VW019** TestNo: **EPA 8260B** Analysis Date: **2/18/2010** SeqNo: **1162813**

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		

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CLIENT: CH2M HILL
Work Order: N003774
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D100218MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **75857**
Client ID: **PBW** Batch ID: **D10VW019** TestNo: **EPA 8260B** Analysis Date: **2/18/2010** SeqNo: **1162813**

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	26.300		25.00		105	72	119				
Surr: 4-Bromofluorobenzene	26.040		25.00		104	76	119				
Surr: Dibromofluoromethane	25.680		25.00		103	85	115				
Surr: Toluene-d8	27.040		25.00		108	81	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		

CHAIN OF CUSTODY RECORD

COC Number

TURNAROUND TIME Special

DATE 2-17-10 PAGE 1 OF 1

COMPANY CH2M Hill

PROJECT NAME PG&E Topock

PHONE (530) 229-3303 FAX (530) 339-3303

ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612

P.O. NUMBER 390778.MP.002Em04 TEAM 1

SAMPLERS (SIGNATURE

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Contact Shawn Duffy/CH2M for instructions	VOCs - HCl	NUMBER OF CONTAINERS	COMMENTS
MW-57-050-perched	2-17-10	0830	groundwater	X		1	
MW-58-065-perched	"	0900	"	X		1	
MW-57-050-perched	2-16-10	1310	"		X	2	
MW-58-065-perched	"	1330	"		X	2	

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Collom	CH2M Hill	2-17-10
Signature (Received)	MARLON CARPIN	ATL	2/17/10 @ 0921
Signature (Relinquished)			
Signature (Received)			
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ 31°C °F w/ ICE

CUSTODY SEALED YES ☐ NO ☑

SPECIAL REQUIREMENTS:

Marlon Cartin

From: Shawn.Duffy@CH2M.com
Sent: Wednesday, February 17, 2010 11:29 AM
To: Marlon Cartin; Glen S. Gesmundo
Cc: Erlene.Contreras@CH2M.com; Tuesdai.Powers@CH2M.com; Priya.Kumar@CH2M.com
Subject: MW-57 and MW-58 samples

Hi Marlon,

Due to limited volume these two wells were purged dry on Monday and then the samples were collected Tuesday and Wednesday (all available water bailed each day). The VOC (SW8260B) samples were collected directly into pre-preserved vials (HCL) on Tuesday. Please follow the PG&E QAPP and report the standard list for SW8260B. The remaining sample (water bailed on Tuesday and Wednesday) from each well was collected into a single composited sample for each well and sent to the lab. Please filter and preserve as needed to analyze for chromium (lab filtered SW6010/6020/E200.7/200.8), hexavalent chromium (lab filtered E218.6), anions (Cl, SO4, and NO3 by E300.0), and total dissolved solids (SM2540C). Please use a 10day TAT.

Advanced Technology Laboratories - Las Vegas

WORK ORDER Summary

17-Feb-10

WorkOrder: N003774

Client ID: CH2M HILL-OAKLAND

Project: PG&E Topock

QC Level: Level IV

Date Received: 2/17/2010

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N003774-001A	MW-57-050-perched	2/17/2010 8:30:00 AM	2/23/2010	Ground Water	SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			2/23/2010			Total Dissolved Solids Prep	☐	☐	☐	WW
			2/23/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N003774-001B			2/23/2010		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N003774-001C			2/23/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2010		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
N003774-002A	MW-58-065-Perched	2/17/2010 9:00:00 AM	2/23/2010		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			2/23/2010			Total Dissolved Solids Prep	☐	☐	☐	WW
			2/23/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N003774-002B			2/23/2010		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N003774-002C			2/23/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2010		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
N003774-003A	MW-57-050-Perched	2/16/2010 1:10:00 PM	2/23/2010		EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	WV
N003774-004A	MW-58-065-Perched	2/16/2010 1:30:00 PM	2/23/2010		EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☐	WV
N003774-005A	Folder		2/23/2010		Folder	Folder	☐	☐	☐	LAB

Advanced Technology Laboratories - Las Vegas

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 (562) 989-4045.

Sample Receipt Checklist

Client Name: **CH2M HILL-OAKLAND** Date Time Received: **2/17/2010 1:48:36 PM**

Work Order Number: **N003774** Received by: **MBC**

Cooler Temp (Deg C): 3.1

Checklist completed by: Signature 2/17/10 Date Reviewed by: Initials 2/22/10 Date

Carrier name: ATL

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact 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. Container/Temp Blank temperature within acceptance 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 ☑

Comments: Samples were filtered in the lab.

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS

Samples were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for SM 2320B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Alkalinity, Carbonate as CaCO3 possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 300.0:

Dilution was necessary for Nitrate and Bromide due to high concentration of Chloride and Sulfate in the sample.

Analytical Comments for EPA 6010B:

Matrix Spike Duplicate (MSD) is outside recovery criteria for Sodium and Calcium possibly due to high concentration of Sodium and Calcium in the sample. Dilution test and post digestion spike were performed and were within acceptable limit. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Advanced Technology Laboratories

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Advanced Technology Laboratories - Las Vega

Date: *08-Apr-10*

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N003844
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N003844-001A	MW-23-060-165	Water	3/8/2010 4:07:00 PM	3/10/2010	4/8/2010
N003844-002A	MW-23-080-165	Water	3/8/2010 5:40:00 PM	3/10/2010	4/8/2010
N003844-003A	MW-44-070-165	Water	3/8/2010 1:36:00 PM	3/10/2010	4/8/2010
N003844-003B	MW-44-070-165	Water	3/8/2010 1:36:00 PM	3/10/2010	4/8/2010
N003844-004A	MW-44-115-165	Water	3/8/2010 2:36:00 PM	3/10/2010	4/8/2010
N003844-005A	MW-44-125-165	Water	3/8/2010 4:47:00 PM	3/10/2010	4/8/2010
N003844-006A	MW-99-165	Water	3/8/2010 12:21:00 PM	3/10/2010	4/8/2010
N003844-007A	MW-27-085-165	Water	3/9/2010 9:27:00 AM	3/10/2010	4/8/2010
N003844-007B	MW-27-085-165	Water	3/9/2010 9:27:00 AM	3/10/2010	4/8/2010
N003844-008A	MW-28-025-165	Water	3/9/2010 12:01:00 PM	3/10/2010	4/8/2010
N003844-008B	MW-28-025-165	Water	3/9/2010 12:01:00 PM	3/10/2010	4/8/2010
N003844-009A	MW-28-090-165	Water	3/9/2010 1:04:00 PM	3/10/2010	4/8/2010
N003844-009B	MW-28-090-165	Water	3/9/2010 1:04:00 PM	3/10/2010	4/8/2010
N003844-010A	MW-32-035-165	Water	3/9/2010 2:13:00 PM	3/10/2010	4/8/2010
N003844-010B	MW-32-035-165	Water	3/9/2010 2:13:00 PM	3/10/2010	4/8/2010
N003844-011A	MW-36-100-165	Water	3/9/2010 3:49:00 PM	3/10/2010	4/8/2010
N003844-011B	MW-36-100-165	Water	3/9/2010 3:49:00 PM	3/10/2010	4/8/2010
N003844-012A	MW-42-055-165	Water	3/9/2010 10:17:00 AM	3/10/2010	4/8/2010
N003844-012B	MW-42-055-165	Water	3/9/2010 10:17:00 AM	3/10/2010	4/8/2010
N003844-013A	MW-42-065-165	Water	3/9/2010 10:56:00 AM	3/10/2010	4/8/2010
N003844-013B	MW-42-065-165	Water	3/9/2010 10:56:00 AM	3/10/2010	4/8/2010
N003844-014A	MW-34-080-165	Water	3/10/2010 2:40:00 PM	3/10/2010	4/8/2010
N003844-014B	MW-34-080-165	Water	3/10/2010 2:40:00 PM	3/10/2010	4/8/2010
N003844-014C	MW-34-080-165	Water	3/10/2010 2:40:00 PM	3/10/2010	4/8/2010
N003844-014D	MW-34-080-165	Water	3/10/2010 2:40:00 PM	3/10/2010	4/8/2010
N003844-014E	MW-34-080-165	Water	3/10/2010 2:40:00 PM	3/10/2010	4/8/2010
N003844-015A	MW-101-165	Water	3/9/2010 12:15:00 PM	3/10/2010	4/8/2010
N003844-015B	MW-101-165	Water	3/9/2010 12:15:00 PM	3/10/2010	4/8/2010
N003844-016A	MW-57-185-165	Water	3/9/2010 5:00:00 PM	3/10/2010	4/8/2010

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CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N003844
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N003844-016B	MW-57-185-165	Water	3/9/2010 5:00:00 PM	3/10/2010	4/8/2010
N003844-017A	MW-63-065-165	Water	3/9/2010 2:25:00 PM	3/10/2010	4/8/2010
N003844-017B	MW-63-065-165	Water	3/9/2010 2:25:00 PM	3/10/2010	4/8/2010

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ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-23-060-165
Lab Order:	N003844	**Collection Date:**	3/8/2010 4:07:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313E**	QC Batch: **R76206**				PrepDate:		Analyst: **QBM**
Specific Conductance	10000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-23-080-165
Lab Order:	N003844	**Collection Date:**	3/8/2010 5:40:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313E**	QC Batch: **R76206**				PrepDate:		Analyst: **QBM**
Specific Conductance	16000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-44-070-165
Lab Order:	N003844	**Collection Date:**	3/8/2010 1:36:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313E**	QC Batch: **R76206**				PrepDate:		Analyst: **QBM**
Specific Conductance	3000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-44-115-165
Lab Order:	N003844	**Collection Date:**	3/8/2010 2:36:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313E**	QC Batch: **R76206**				PrepDate:		Analyst: **QBM**
Specific Conductance	12000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-44-125-165
Lab Order:	N003844	**Collection Date:**	3/8/2010 4:47:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313E**	QC Batch: **R76206**				PrepDate:		Analyst: **QBM**
Specific Conductance	13000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:	B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-99-165
Lab Order:	N003844	**Collection Date:**	3/8/2010 12:21:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313E**	QC Batch: **R76206**				PrepDate:		Analyst: **QBM**
Specific Conductance	13000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-27-085-165
Lab Order:	N003844	**Collection Date:**	3/9/2010 9:27:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313E**	QC Batch: **R76206**				PrepDate:		Analyst: **QBM**
Specific Conductance	14000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

ANALYTICAL RESULTS

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-28-025-165
Lab Order:	N003844	**Collection Date:**	3/9/2010 12:01:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313E**	QC Batch: **R76206**				PrepDate:		Analyst: **QBM**
Specific Conductance	1200	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-28-090-165
Lab Order:	N003844	**Collection Date:**	3/9/2010 1:04:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313E**	QC Batch: **R76206**				PrepDate:		Analyst: **QBM**
Specific Conductance	7600	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-32-035-165
Lab Order:	N003844	**Collection Date:**	3/9/2010 2:13:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313E**	QC Batch: **R76206**				PrepDate:		Analyst: **QBM**
Specific Conductance	19000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-36-100-165
Lab Order:	N003844	**Collection Date:**	3/9/2010 3:49:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313B**	QC Batch: **R76207**				PrepDate:		Analyst: **QBM**
Specific Conductance	12000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-42-055-165
Lab Order:	N003844	**Collection Date:**	3/9/2010 10:17:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313B**	QC Batch: **R76207**				PrepDate:		Analyst: **QBM**
Specific Conductance	10000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

ANALYTICAL RESULTS

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-42-065-165
Lab Order:	N003844	**Collection Date:**	3/9/2010 10:56:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313B**	QC Batch: **R76207**				PrepDate:		Analyst: **QBM**
Specific Conductance	13000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-34-080-165
Lab Order:	N003844	**Collection Date:**	3/10/2010 2:40:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313B**	QC Batch: **R76207**				PrepDate:		Analyst: **QBM**
Specific Conductance	8100	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-101-165
Lab Order:	N003844	**Collection Date:**	3/9/2010 12:15:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: WETCHEM_100313B	QC Batch: R76207				PrepDate:		Analyst: QBM
Specific Conductance	7200	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-57-185-165
Lab Order:	N003844	**Collection Date:**	3/9/2010 5:00:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-016		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313B**	QC Batch: **R76207**				PrepDate:		Analyst: **QBM**
Specific Conductance	17000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-63-065-165
Lab Order:	N003844	**Collection Date:**	3/9/2010 2:25:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-017		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100313B**	QC Batch: **R76207**				PrepDate:		Analyst: **QBM**
Specific Conductance	7200	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N003844
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_W

Sample ID: **N003844-001AMS** SampType: **MS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76206**
Client ID: **ZZZZZZ** Batch ID: **R76206** TestNo: **EPA 120.1** Analysis Date: **3/13/2010** SeqNo: **1170981**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	20180.000	0.20	9969	10450	97.6	75	125				

Sample ID: **N003844-001AMSD** SampType: **MSD** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76206**
Client ID: **ZZZZZZ** Batch ID: **R76206** TestNo: **EPA 120.1** Analysis Date: **3/13/2010** SeqNo: **1170982**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	20160.000	0.20	9969	10450	97.4	75	125	20180	0.0992	10	

Sample ID: **N003844-002ADUP** SampType: **DUP** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76206**
Client ID: **ZZZZZZ** Batch ID: **R76206** TestNo: **EPA 120.1** Analysis Date: **3/13/2010** SeqNo: **1170984**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	16350.000	0.10						16340	0.0612	10	

Sample ID: **LCS-76206** SampType: **LCS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76206**
Client ID: **LCSW** Batch ID: **R76206** TestNo: **EPA 120.1** Analysis Date: **3/13/2010** SeqNo: **1170994**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	9810.000	0.10	9969	0	98.4	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: N003844
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_W

Sample ID: **LCS-R76207** SampType: **LCS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76207**
Client ID: **LCSW** Batch ID: **R76207** TestNo: **EPA 120.1** Analysis Date: **3/13/2010** SeqNo: **1170995**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	9920.000	0.10	9969	0	99.5	85	115				

Sample ID: **N003844-011ADUP** SampType: **DUP** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76207**
Client ID: **ZZZZZZ** Batch ID: **R76207** TestNo: **EPA 120.1** Analysis Date: **3/13/2010** SeqNo: **1170997**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	11610.000	0.10						11560	0.432	10	

Sample ID: **N003844-017AMS** SampType: **MS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76207**
Client ID: **ZZZZZZ** Batch ID: **R76207** TestNo: **EPA 120.1** Analysis Date: **3/13/2010** SeqNo: **1171004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	17460.000	0.20	9969	7250	102	75	125				

Sample ID: **N003844-017AMSD** SampType: **MSD** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76207**
Client ID: **ZZZZZZ** Batch ID: **R76207** TestNo: **EPA 120.1** Analysis Date: **3/13/2010** SeqNo: **1171005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	17520.000	0.20	9969	7250	103	75	125	17460	0.343	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		

ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-34-080-165
Lab Order:	N003844	**Collection Date:**	3/10/2010 2:40:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
				SM2540C			
RunID: **WETCHEM_100312B**	QC Batch: **34269**				PrepDate:	**3/12/2010**	Analyst: **QBM**
Total Dissolved Solids (Residue, Filterable)	4900	50	50		mg/L	1	3/12/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N003844
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID: **MB-34269** SampType: **MBLK** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **3/12/2010** RunNo: **76169**
Client ID: **PBW** Batch ID: **34269** TestNo: **SM2540C** Analysis Date: **3/12/2010** SeqNo: **1170025**

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-34269** SampType: **LCS** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **3/12/2010** RunNo: **76169**
Client ID: **LCSW** Batch ID: **34269** TestNo: **SM2540C** Analysis Date: **3/12/2010** SeqNo: **1170026**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	971.000	10	1000	0	97.1	80	120				

Sample ID: **N003844-014ADUP** SampType: **DUP** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **3/12/2010** RunNo: **76169**
Client ID: **ZZZZZZ** Batch ID: **34269** TestNo: **SM2540C** Analysis Date: **3/12/2010** SeqNo: **1170035**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4935.000	50						4935	0	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

Advanced Technology Laboratories - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-34-080-165
Lab Order:	N003844	**Collection Date:**	3/10/2010 2:40:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **WETCHEM_100316B**	QC Batch: **R76041**				PrepDate:		Analyst: **QBM**
Alkalinity, Bicarbonate (As CaCO3)	240	1.9	5.0		mg/L	1	3/16/2010
Alkalinity, Carbonate (As CaCO3)	ND	1.9	5.0		mg/L	1	3/16/2010
Alkalinity, Hydroxide (As CaCO3)	ND	1.9	5.0		mg/L	1	3/16/2010
Alkalinity, Total (As CaCO3)	240	1.9	5.0		mg/L	1	3/16/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N003844
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID: **LCS-R76041** SampType: **LCS** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **76041**
Client ID: **LCSW** Batch ID: **R76041** TestNo: **SM 2320 B** Analysis Date: **3/16/2010** SeqNo: **1166122**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Carbonate (As CaCO3)	89.320	5.0	100.0	0	89.3	80	120				
Alkalinity, Total (As CaCO3)	100.971	5.0	100.0	0	101	80	120				

Sample ID: **LCSD-R76041** SampType: **LCSD** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **76041**
Client ID: **LCSS02** Batch ID: **R76041** TestNo: **SM 2320 B** Analysis Date: **3/16/2010** SeqNo: **1166123**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Carbonate (As CaCO3)	87.379	5.0	100.0	0	87.4	80	120	89.32	2.20	20	
Alkalinity, Total (As CaCO3)	100.971	5.0	100.0	0	101	80	120	101.0	0	20	

Sample ID: **MB-R76041** SampType: **MBLK** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **76041**
Client ID: **PBW** Batch ID: **R76041** TestNo: **SM 2320 B** Analysis Date: **3/16/2010** SeqNo: **1166124**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	1.942	5.0									
Alkalinity, Carbonate (As CaCO3)	ND	5.0									
Alkalinity, Hydroxide (As CaCO3)	ND	5.0									
Alkalinity, Total (As CaCO3)	1.942	5.0									

Sample ID: **N003844-014C-MS** SampType: **MS** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **76041**
Client ID: **ZZZZZZ** Batch ID: **R76041** TestNo: **SM 2320 B** Analysis Date: **3/16/2010** SeqNo: **1166127**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Carbonate (As CaCO3)	66.019	5.0	100.0	0	66.0	80	120				S
Alkalinity, Total (As CaCO3)	333.010	5.0	100.0	236.9	96.1	80	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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CLIENT: CH2M HILL
Work Order: N003844
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID: **N003844-014C-MSD** SampType: **MSD** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **76041**
Client ID: **ZZZZZZ** Batch ID: **R76041** TestNo: **SM 2320 B** Analysis Date: **3/16/2010** SeqNo: **1166128**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Carbonate (As CaCO3)	64.078	5.0	100.0	0	64.1	80	120	66.02	2.99	20	S
Alkalinity, Total (As CaCO3)	332.039	5.0	100.0	236.9	95.1	80	120	333.0	0.292	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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-34-080-165
Lab Order:	N003844	**Collection Date:**	3/10/2010 2:40:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100311B**	QC Batch: **R76341**				PrepDate:		Analyst: **QBM**
Bromide	ND	0.060	1.0		mg/L	2	3/11/2010 01:05 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100311B**	QC Batch: **R76341**				PrepDate:		Analyst: **QBM**
Chloride	2100	110	250		mg/L	500	3/11/2010 11:04 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100311B**	QC Batch: **R76341**				PrepDate:		Analyst: **QBM**
Nitrogen, Nitrate (As N)	ND	0.097	1.0		mg/L	2	3/11/2010 01:05 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100311B**	QC Batch: **R76341**				PrepDate:		Analyst: **QBM**
Sulfate	660	13	50		mg/L	50	3/11/2010 12:01 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		

CLIENT: CH2M HILL
Work Order: N003844
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_BRPGE

Sample ID: **MB-R76341_BR** SampType: **MBLK** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **PBW** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174494**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Sample ID: **LCS-R76341_BR** SampType: **LCS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **LCSW** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174495**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	2.453	0.50	2.500	0	98.1	85	115				

Sample ID: **N003844-014BDUP** SampType: **DUP** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **ZZZZZZ** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174499**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	0.392	1.0						0.3780	0	20	

Sample ID: **N003844-014BMS** SampType: **MS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **ZZZZZZ** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	26.560	5.0	25.00	0.3780	105	75	125				

Sample ID: **N003844-014BMSD** SampType: **MSD** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **ZZZZZZ** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174501**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	26.520	5.0	25.00	0.3780	105	75	125	26.56	0.151	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: N003844
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **MB-R76341_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **PBW** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174506**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **LCS-R76341_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **LCSW** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174507**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.382	0.50	2.500	0	95.3	85	115				

Sample ID: **N003844-014BDUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **ZZZZZZ** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174509**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2044.000	250						2057	0.634	20	

Sample ID: **N003844-014BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **ZZZZZZ** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174510**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3374.500	250	1250	2057	105	75	125				

Sample ID: **N003844-014BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **ZZZZZZ** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174511**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3353.000	250	1250	2057	104	75	125	3374	0.639	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: N003844
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_NO3PGE

Sample ID: **MB-R76341_NO3** SampType: **MBLK** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **PBW** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174518**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	ND	0.50									

Sample ID: **LCS-R76341_NO3** SampType: **LCS** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **LCSW** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174519**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.440	0.50	2.500	0	97.6	85	115				

Sample ID: **N003844-014BDUP** SampType: **DUP** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **ZZZZZZ** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174523**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	ND	1.0						0	0	20	

Sample ID: **N003844-014BMS** SampType: **MS** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **ZZZZZZ** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	24.480	5.0	25.00	0	97.9	75	125				

Sample ID: **N003844-014BMSD** SampType: **MSD** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **ZZZZZZ** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174525**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	24.380	5.0	25.00	0	97.5	75	125	24.48	0.409	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: N003844
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R76341_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **PBW** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174530**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	1.0									

Sample ID: **LCS-R76341_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **LCSW** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174531**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.736	1.0	5.000	0	94.7	85	115				

Sample ID: **N003844-014BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **ZZZZZZ** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174532**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3211.500	500	2500	664.2	102	75	125				

Sample ID: **N003844-014BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **ZZZZZZ** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174533**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3010.000	500	2500	664.2	93.8	75	125	3212	6.48	20	

Sample ID: **N003844-014BDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **76341**
Client ID: **ZZZZZZ** Batch ID: **R76341** TestNo: **EPA 300.0** Analysis Date: **3/11/2010** SeqNo: **1174535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	669.500	50						664.2	0.802	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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-34-080-165
Lab Order:	N003844	**Collection Date:**	3/10/2010 2:40:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003844-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_100318C**	QC Batch: **34115**				PrepDate:	**3/12/2010**	Analyst: **NS**
Boron	930	14	100		µg/L	1	3/18/2010 08:54 PM
Calcium	220000	72	500		µg/L	1	3/18/2010 08:54 PM
Iron	42	7.0	20		µg/L	1	3/18/2010 08:54 PM
Magnesium	41000	18	100		µg/L	1	3/18/2010 08:54 PM
Manganese	25	0.96	10		µg/L	1	3/18/2010 08:54 PM
Potassium	28000	540	5000		µg/L	10	3/22/2010 03:16 PM
Sodium	1400000	13000	250000		µg/L	500	3/22/2010 03:06 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		

CLIENT: CH2M HILL
Work Order: N003844
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-34115** SampType: **MBLK** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/12/2010** RunNo: **76053**
Client ID: **PBW** Batch ID: **34115** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/18/2010** SeqNo: **1166446**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	ND	100									
Calcium	ND	500									
Iron	ND	20									
Magnesium	ND	100									
Manganese	ND	10									

Sample ID: **LCS-34115** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/12/2010** RunNo: **76053**
Client ID: **LCSW** Batch ID: **34115** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/18/2010** SeqNo: **1166447**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	9480.572	100	10000	0	94.8	85	115				
Calcium	19384.854	500	20000	0	96.9	85	115				
Iron	18793.781	20	20000	0	94.0	85	115				
Magnesium	19129.044	100	20000	0	95.6	85	115				
Manganese	17174.103	10	20000	0	85.9	85	115				

Sample ID: **N003844-014E-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/12/2010** RunNo: **76053**
Client ID: **ZZZZZZ** Batch ID: **34115** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/18/2010** SeqNo: **1166450**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	10541.273	500	10000	932.6	96.1	75	125				
Calcium	244112.627	2500	20000	223200	104	75	125				
Iron	18732.361	100	20000	41.54	93.5	75	125				
Magnesium	62048.721	500	20000	40770	106	75	125				
Manganese	18103.595	50	20000	25.12	90.4	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: N003844
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: N003844-014E-MSD	SampType: MSD	TestCode: 6010_WDPG	Units: µg/L	Prep Date: 3/12/2010	RunNo: 76053
Client ID: ZZZZZZ	Batch ID: 34115	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 3/18/2010	SeqNo: 1166451

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	10654.478	500	10000	932.6	97.2	75	125	10540	1.07	20	
Calcium	248944.275	2500	20000	223200	129	75	125	244100	1.96	20	S
Iron	18817.435	100	20000	41.54	93.9	75	125	18730	0.453	20	
Magnesium	63221.320	500	20000	40770	112	75	125	62050	1.87	20	
Manganese	18007.711	50	20000	25.12	89.9	75	125	18100	0.531	20	

Sample ID: MB-34115	SampType: MBLK	TestCode: 6010_WDPG	Units: µg/L	Prep Date: 3/12/2010	RunNo: 76089
Client ID: PBW	Batch ID: 34115	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 3/22/2010	SeqNo: 1167719

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: LCS2-34115	SampType: LCS	TestCode: 6010_WDPG	Units: µg/L	Prep Date: 3/12/2010	RunNo: 76089
Client ID: LCSW	Batch ID: 34115	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 3/22/2010	SeqNo: 1167720

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	14482.714	2500	15000	0	96.6	85	115				
Sodium	14413.901	2500	15000	0	96.1	85	115				

Sample ID: N003844-014E-MS2	SampType: MS	TestCode: 6010_WDPG	Units: µg/L	Prep Date: 3/12/2010	RunNo: 76089
Client ID: ZZZZZZ	Batch ID: 34115	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 3/22/2010	SeqNo: 1167725

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	2068404.995	500000	500000	1442000	125	75	125				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		

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CLIENT: CH2M HILL
Work Order: N003844
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N003844-014E-MSD** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/12/2010** RunNo: **76089**
Client ID: **ZZZZZZ** Batch ID: **34115** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167726**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	2078867.460	500000	500000	1442000	127	75	125				S

Sample ID: **N003844-014E-MS2** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/12/2010** RunNo: **76089**
Client ID: **ZZZZZZ** Batch ID: **34115** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167843**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	526651.114	500000	500000	27720	99.8	75	125				

Sample ID: **N003844-014E-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/12/2010** RunNo: **76089**
Client ID: **ZZZZZZ** Batch ID: **34115** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167844**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	516315.368	500000	500000	27720	97.7	75	125	526700	1.98	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		

ATL

CH2MHILL

CHAIN OF CUSTODY RECORD

3/10/2010 3:18:00 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.GM.04
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-FLOODPLAIN-165
Turnaround Time 10 Days
Shipping Date: 3/10/2010
COC Number: 4

Container:	500 ml Poly	1 Liter Poly
Preservatives:	HNO3	4°C
Filtered:	NA	NA
Holding Time:	7	28

	DATE	TIME	Matrix	Arsenic (6020)	Specific Conductance (E120.1)		Number of Containers	COMMENTS
MW-23-060-165	3/8/2010	16:07	Water		X		1	
MW-23-080-165	3/8/2010	17:40	Water		X		1	
MW-44-070-165	3/8/2010	13:36	Water	X	X		2	
MW-44-115-165	3/8/2010	14:36	Water		X		1	
MW-44-125-165	3/8/2010	16:47	Water		X		1	
MW-99-165	3/8/2010	12:21	Water		X		1	
MW-27-085-165	3/9/2010	9:27	Water	X	X		~~1~~	2 BEC
MW-28-025-165	3/9/2010	12:01	Water	X	X		2	
MW-28-090-165	3/9/2010	13:04	Water	X	X		2	
MW-32-035-165	3/9/2010	14:13	Water	X	X		~~1~~	2 BEC
MW-36-100-165	3/9/2010	15:49	Water	X	X		2	
MW-42-055-165	3/9/2010	10:17	Water	X	X		2	
MW-42-065-165	3/9/2010	10:56	Water	X	X		2	
						TOTAL NUMBER OF CONTAINERS	~~19~~	21 BEC

	Signatures	Date/Time
Approved by		3-10-10
Sampled by		1620
Relinquished by		3-10-10
Received by	Kristen Everett	1620
Relinquished by	Kristen Everett	3-10-10/1854
Received by	MARION CARTER	3/10/10 1854

Shipping Details
Method of Shipment: FedEx
On Ice: (yes) / no 1.8, 2.2
Airbill No:
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN: Sample Custody

Special Instructions:

Report Copy to
Shawn Duffy
(530) 229-3303

40

ATL

CH2MHILL

CHAIN OF CUSTODY RECORD

3/10/2010 3:39:42 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.GM.04
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-165-Q1
Turnaround Time 10 Days
Shipping Date: 3/10/2010
COC Number: 6

Container:	500 ml Poly	250 ml Poly	1 Liter Poly	1L Poly	1 Liter Poly	1 Liter Poly	500 ml Poly	1 Liter Poly
Preservatives:	HNO3	HNO3, 4°C	4°C	4°C	4°C	4°C	HNO3	4°C
Filtered:	NA	Field	NA	NA	NA	NA	NA	NA
Holding Time:	7	180	28	7	2	28	7	28
	Arsenic (6020)	Metals (6010BFF) Field Filtered Ca,Mg,K,Na,B,Fe,Mn	Specific Conductance (E120.1)	TDS (SM2540C)	Anions (E300.0) Bromide,Chloride,Sulfate,Nitrate	Alkalinity (SM2320B)	Arsenic (6020)	Specific Conductance (E120.1)

	DATE	TIME	Matrix	Arsenic (6020)	Metals (6010BFF) Field Filtered Ca,Mg,K,Na,B,Fe,Mn	Specific Conductance (E120.1)	TDS (SM2540C)	Anions (E300.0) Bromide,Chloride,Sulfate,Nitrate	Alkalinity (SM2320B)	Arsenic (6020)	Specific Conductance (E120.1)	Number of Containers	COMMENTS
MW-34-080-165	3/10/2010	14:40	Water	X	X	X	X	X	X	X	X	5	
MW-101-165	3-9-10	1215	"	X							X	~~5~~	2 BEC
MW-57-185-165	3-9-10	1700	"	X							X	2	
MW-63-065-165	3-9-10	1425	"	X							X	2	
										TOTAL NUMBER OF CONTAINERS		11	

	Signatures	Date/Time
Approved by		3-10-10
Sampled by		1620
Relinquished by		
Received by	Kristin Everett	3-10-10/1620
Relinquished by	Kristin Everett	3-10-10/1854
Received by	MARCUS CARTER	3/10/10 1854

Shipping Details
Method of Shipment: FedEx
On Ice: (yes) / no 1.8, 2.2
Airbill No:
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN:
Sample Custody

Special Instructions:
March 8-17, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

Advanced Technology Laboratories - Las Vegas

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 (562) 989-4045.

Sample Receipt Checklist

Client Name: **CH2M HILL-OAKLAND** Date Time Received: **3/10/2010 7:15:01 PM**

Work Order Number: **N003844** Received by: **MBC**

Cooler Temp (Deg C): 1.8, 1.2

Checklist completed by: Signature / Date 3/10/10 Reviewed by: Initials WS / Date 3/12/10

Carrier name: ATL

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact 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. Container/Temp Blank temperature within acceptance 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 ☐

Comments:

Advanced Technology Laboratories - Las Vegas

WORK ORDER Summary

11-Mar-10

WorkOrder: N003844

Client ID: CH2M HILL-OAKLAND

Project: PG&E Topock

QC Level: Level IV

Date Received: 3/10/2010

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N003844-001A	MW-23-060-165	3/8/2010 4:07:00 PM	3/16/2010	Water	EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-002A	MW-23-080-165	3/8/2010 5:40:00 PM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-003A	MW-44-070-165	3/8/2010 1:36:00 PM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-003B			3/16/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	✓			WW
			3/16/2010		EPA 6020	ICP-MS METALS	✓			WW
N003844-004A	MW-44-115-165	3/8/2010 2:36:00 PM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-005A	MW-44-125-165	3/8/2010 4:47:00 PM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-006A	MW-99-165	3/8/2010 12:21:00 PM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-007A	MW-27-085-165	3/9/2010 9:27:00 AM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-007B			3/16/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	✓			WW
			3/16/2010		EPA 6020	ICP-MS METALS	✓			WW
N003844-008A	MW-28-025-165	3/9/2010 12:01:00 PM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-008B			3/16/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	✓			WW
			3/16/2010		EPA 6020	ICP-MS METALS	✓			WW
N003844-009A	MW-28-090-165	3/9/2010 1:04:00 PM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-009B			3/16/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	✓			WW
			3/16/2010		EPA 6020	ICP-MS METALS	✓			WW
N003844-010A	MW-32-035-165	3/9/2010 2:13:00 PM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-010B			3/16/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	✓			WW
			3/16/2010		EPA 6020	ICP-MS METALS	✓			WW
N003844-011A	MW-36-100-165	3/9/2010 3:49:00 PM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-011B			3/16/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	✓			WW

Advanced Technology Laboratories - Las Vegas

WORK ORDER Summary

11-Mar-10

WorkOrder: N003844

Client ID: CH2M HILL-OAKLAND

Project: PG&E Topock

QC Level: Level IV

Date Received: 3/10/2010

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N003844-011B	MW-36-100-165	3/9/2010 3:49:00 PM	3/16/2010	Water	EPA 6020	ICP-MS METALS	✓			WW
N003844-012A	MW-42-055-165	3/9/2010 10:17:00 AM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-012B			3/16/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	✓			WW
			3/16/2010		EPA 6020	ICP-MS METALS	✓			WW
N003844-013A	MW-42-065-165	3/9/2010 10:56:00 AM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-013B			3/16/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	✓			WW
			3/16/2010		EPA 6020	ICP-MS METALS	✓			WW
N003844-014A	MW-34-080-165	3/10/2010 2:40:00 PM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
			3/16/2010		SM2540C	TOTAL FILTERABLE RESIDUE				WW
			3/16/2010			Total Dissolved Solids Prep				WW
N003844-014B			3/16/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY				WW
			3/16/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY				WW
			3/16/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY				WW
			3/16/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY				WW
N003844-014C			3/16/2010		SM 2320 B	ALKALINITY, SPECIATED				WW
N003844-014D			3/16/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA				WW
			3/16/2010		EPA 6020	ICP-MS METALS				WW
N003844-014E			3/16/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA				WW
			3/16/2010		EPA 6010B	DISSOLVED METALS BY ICP				WW
N003844-015A	MW-101-165	3/9/2010 12:15:00 PM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003844-015B			3/16/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	✓			WW
			3/16/2010		EPA 6020	ICP-MS METALS	✓			WW

Advanced Technology Laboratories - Las Vegas

WORK ORDER Summary

11-Mar-10

WorkOrder: N003844

Client ID: CH2M HILL-OAKLAND

Project: PG&E Topock

QC Level: Level IV

Date Received: 3/10/2010

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N003844-016A	MW-57-185-165	3/9/2010 5:00:00 PM	3/16/2010	Water	EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
N003844-016B			3/16/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☑	☐	☐	WW
			3/16/2010		EPA 6020	ICP-MS METALS	☑	☐	☐	WW
N003844-017A	MW-63-065-165	3/9/2010 2:25:00 PM	3/16/2010		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
N003844-017B			3/16/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☑	☐	☐	WW
			3/16/2010		EPA 6020	ICP-MS METALS	☑	☐	☐	WW
N003844-018A	FOLDER		3/16/2010		Folder	Folder	☐	☐	☐	LAB

April 15, 2010

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.: N003860

RE: PG&E Topock

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on March 12, 2010 by Advanced Technology Laboratories - Las Vegas . 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,

Jose Tenorio Jr.
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and 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
Lab Order: N003860

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS

Samples were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 6010B:

Matrix Spike Duplicate (MSD) is outside recovery criteria for Sodium possibly due to high concentration of Sodium in the sample. Dilution test and post digestion spike were performed and were within acceptable limit. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020:

Dilution was necessary for sample N003860-025 due to matrix. Selenium was having a low negative results at DF=1 and 2.

Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories - Las Vega

Date: *15-Apr-10*

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N003860
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N003860-001A	MW-21-165	Water	3/10/2010 11:10:00 AM	3/12/2010	4/15/2010
N003860-002A	MW-34-100-165	Water	3/10/2010 3:31:00 PM	3/12/2010	4/15/2010
N003860-003A	MW-47-115-165	Water	3/10/2010 3:46:00 PM	3/12/2010	4/15/2010
N003860-004A	MW-52D-165	Water	3/10/2010 10:36:00 AM	3/12/2010	4/15/2010
N003860-005A	MW-52M-165	Water	3/10/2010 9:30:00 AM	3/12/2010	4/15/2010
N003860-006A	MW-52S-165	Water	3/10/2010 9:23:00 AM	3/12/2010	4/15/2010
N003860-007A	MW-53D-165	Water	3/10/2010 12:40:00 PM	3/12/2010	4/15/2010
N003860-008A	MW-53M-165	Water	3/10/2010 11:46:00 AM	3/12/2010	4/15/2010
N003860-009A	MW-93-165	Water	3/10/2010 11:48:00 AM	3/12/2010	4/15/2010
N003860-010A	MW-10-165	Water	3/11/2010 1:51:00 PM	3/12/2010	4/15/2010
N003860-010B	MW-10-165	Water	3/11/2010 1:51:00 PM	3/12/2010	4/15/2010
N003860-011A	MW-29-165	Water	3/11/2010 9:17:00 AM	3/12/2010	4/15/2010
N003860-012A	MW-33-040-165	Water	3/11/2010 1:31:00 PM	3/12/2010	4/15/2010
N003860-013A	MW-33-150-165	Water	3/11/2010 2:21:00 PM	3/12/2010	4/15/2010
N003860-014A	MW-33-210-165	Water	3/11/2010 3:18:00 PM	3/12/2010	4/15/2010
N003860-015A	MW-41D-165	Water	3/11/2010 10:43:00 AM	3/12/2010	4/15/2010
N003860-016A	MW-46-175-165	Water	3/11/2010 11:02:00 AM	3/12/2010	4/15/2010
N003860-017A	MW-46-205-165	Water	3/11/2010 12:03:00 PM	3/12/2010	4/15/2010
N003860-018A	MW-62-110-165	Water	3/11/2010 2:47:00 PM	3/12/2010	4/15/2010
N003860-018B	MW-62-110-165	Water	3/11/2010 2:47:00 PM	3/12/2010	4/15/2010
N003860-019A	MW-62-190-165	Water	3/11/2010 2:58:00 PM	3/12/2010	4/15/2010
N003860-019B	MW-62-190-165	Water	3/11/2010 2:58:00 PM	3/12/2010	4/15/2010
N003860-020A	MW-64-150-165	Water	3/11/2010 3:37:00 PM	3/12/2010	4/15/2010
N003860-020B	MW-64-150-165	Water	3/11/2010 3:37:00 PM	3/12/2010	4/15/2010
N003860-021A	MW-64-205-165	Water	3/11/2010 3:48:00 PM	3/12/2010	4/15/2010
N003860-021B	MW-64-205-165	Water	3/11/2010 3:48:00 PM	3/12/2010	4/15/2010
N003860-022A	MW-64-260-165	Water	3/11/2010 4:02:00 PM	3/12/2010	4/15/2010
N003860-022B	MW-64-260-165	Water	3/11/2010 4:02:00 PM	3/12/2010	4/15/2010
N003860-023A	MW-96-165	Water	3/11/2010 9:55:00 AM	3/12/2010	4/15/2010

Advanced Technology Laboratories
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N003860
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N003860-024A	MW-17-165	Water	3/12/2010 9:58:00 AM	3/12/2010	4/15/2010
N003860-024B	MW-17-165	Water	3/12/2010 9:58:00 AM	3/12/2010	4/15/2010
N003860-025A	MW-22-165	Water	3/12/2010 10:22:00 AM	3/12/2010	4/15/2010
N003860-025B	MW-22-165	Water	3/12/2010 10:22:00 AM	3/12/2010	4/15/2010
N003860-026A	MW-24BR-165	Water	3/12/2010 8:27:00 AM	3/12/2010	4/15/2010
N003860-027A	MW-33-090-165	Water	3/12/2010 9:16:00 AM	3/12/2010	4/15/2010
N003860-028A	MW-36-090-165	Water	3/12/2010 12:07:00 PM	3/12/2010	4/15/2010
N003860-029A	MW-50-095-165	Water	3/12/2010 12:07:00 PM	3/12/2010	4/15/2010

Advanced Technology Laboratories
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ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-21-165
Lab Order:	N003860	**Collection Date:**	3/10/2010 11:10:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315B**	QC Batch: **R76212**				PrepDate:		Analyst: **admin**
Specific Conductance	10000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:	B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-34-100-165
Lab Order:	N003860	**Collection Date:**	3/10/2010 3:31:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315B**	QC Batch: **R76212**				PrepDate:		Analyst: **admin**
Specific Conductance	17000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:	B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-47-115-165
Lab Order:	N003860	**Collection Date:**	3/10/2010 3:46:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315B**	QC Batch: **R76212**				PrepDate:		Analyst: **admin**
Specific Conductance	13000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-52D-165
Lab Order:	N003860	**Collection Date:**	3/10/2010 10:36:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315B**	QC Batch: **R76212**				PrepDate:		Analyst: **admin**
Specific Conductance	20000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

ANALYTICAL RESULTS

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-52M-165
Lab Order:	N003860	**Collection Date:**	3/10/2010 9:30:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315B**	QC Batch: **R76212**				PrepDate:		Analyst: **admin**
Specific Conductance	16000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-52S-165
Lab Order:	N003860	**Collection Date:**	3/10/2010 9:23:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315B**	QC Batch: **R76212**				PrepDate:		Analyst: **admin**
Specific Conductance	11000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-53D-165
Lab Order:	N003860	**Collection Date:**	3/10/2010 12:40:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315E**	QC Batch: **R76215**				PrepDate:		Analyst: **QBM**
Specific Conductance	31000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-53M-165
Lab Order:	N003860	**Collection Date:**	3/10/2010 11:46:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315B**	QC Batch: **R76212**				PrepDate:		Analyst: **admin**
Specific Conductance	18000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:				
	B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-93-165
Lab Order:	N003860	**Collection Date:**	3/10/2010 11:48:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315B**	QC Batch: **R76212**				PrepDate:		Analyst: **admin**
Specific Conductance	17000	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-10-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 1:51:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-010		

Analyses	Result	MDL	PQL	Qual	Uuits	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315B**	QC Batch: **R76212**				PrepDate:		Analyst: **admin**
Specific Conductance	1900	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:	B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-29-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 9:17:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315B**	QC Batch: **R76212**				PrepDate:		Analyst: **admin**
Specific Conductance	3300	0.10	0.10		µmhos/cm	1	3/13/2010

Qualifiers:				
	B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-33-040-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 1:31:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315C**	QC Batch: **R76213**				PrepDate:		Analyst: **QBM**
Specific Conductance	6500	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-33-150-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 2:21:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315C**	QC Batch: **R76213**				PrepDate:		Analyst: **QBM**
Specific Conductance	16000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-33-210-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 3:18:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315C**	QC Batch: **R76213**				PrepDate:		Analyst: **QBM**
Specific Conductance	18000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-41D-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 10:43:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315C**	QC Batch: **R76213**				PrepDate:		Analyst: **QBM**
Specific Conductance	19000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-46-175-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 11:02:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-016		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315C**	QC Batch: **R76213**				PrepDate:		Analyst: **QBM**
Specific Conductance	17000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-46-205-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 12:03:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-017		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315C**	QC Batch: **R76213**				PrepDate:		Analyst: **QBM**
Specific Conductance	19000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-62-110-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 2:47:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-018		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315C**	QC Batch: **R76213**				PrepDate:		Analyst: **QBM**
Specific Conductance	8800	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-62-190-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 2:58:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-019		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315C**	QC Batch: **R76213**				PrepDate:		Analyst: **QBM**
Specific Conductance	17000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-64-150-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 3:37:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-020		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315C**	QC Batch: **R76213**				PrepDate:		Analyst: **QBM**
Specific Conductance	11000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-64-205-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 3:48:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-021		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315C**	QC Batch: **R76213**				PrepDate:		Analyst: **QBM**
Specific Conductance	15000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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

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Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-64-260-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 4:02:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-022		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315D**	QC Batch: **R76214**				PrepDate:		Analyst: **QBM**
Specific Conductance	15000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-96-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 9:55:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-023		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315D**	QC Batch: **R76214**				PrepDate:		Analyst: **QBM**
Specific Conductance	16000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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: *26-May-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-17-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 9:58:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-024		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315D**	QC Batch: **R76214**				PrepDate:		Analyst: **QBM**
Specific Conductance	1600	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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

Advanced Technology Laboratories - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-22-165
Lab Order:	N003860	**Collection Date:**	3/12/2010 10:22:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-025		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315E**	QC Batch: **R76215**				PrepDate:		Analyst: **QBM**
Specific Conductance	36000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-24BR-165
Lab Order:	N003860	**Collection Date:**	3/12/2010 8:27:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-026		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315D**	QC Batch: **R76214**				PrepDate:		Analyst: **QBM**
Specific Conductance	14000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-33-090-165
Lab Order:	N003860	**Collection Date:**	3/12/2010 9:16:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-027		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315D**	QC Batch: **R76214**				PrepDate:		Analyst: **QBM**
Specific Conductance	10000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-36-090-165
Lab Order:	N003860	**Collection Date:**	3/12/2010 12:07:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-028		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315D**	QC Batch: **R76214**				PrepDate:		Analyst: **QBM**
Specific Conductance	1500	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-50-095-165
Lab Order:	N003860	**Collection Date:**	3/12/2010 12:07:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-029		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100315D**	QC Batch: **R76214**				PrepDate:		Analyst: **QBM**
Specific Conductance	5000	0.10	0.10		µmhos/cm	1	3/15/2010

Qualifiers:	B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_W

Sample ID: **LCS-R76212** SampType: **LCS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76212**
Client ID: **LCSW** Batch ID: **R76212** TestNo: **EPA 120.1** Analysis Date: **3/13/2010** SeqNo: **1171035**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1434.000	0.10	1412	0	102	85	115				

Sample ID: **N003860-010AMS** SampType: **MS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76212**
Client ID: **ZZZZZZ** Batch ID: **R76212** TestNo: **EPA 120.1** Analysis Date: **3/13/2010** SeqNo: **1171045**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	3360.000	0.20	1412	1880	105	75	125				

Sample ID: **N003860-010AMSD** SampType: **MSD** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76212**
Client ID: **ZZZZZZ** Batch ID: **R76212** TestNo: **EPA 120.1** Analysis Date: **3/13/2010** SeqNo: **1171046**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	3362.000	0.20	1412	1880	105	75	125	3360	0.0595	10	

Sample ID: **N003860-001ADUP** SampType: **DUP** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76212**
Client ID: **ZZZZZZ** Batch ID: **R76212** TestNo: **EPA 120.1** Analysis Date: **3/13/2010** SeqNo: **1171049**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	10050.000	0.10						10010	0.399	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: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_W

Sample ID: **N003860-012ADUP** SampType: **DUP** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76213**
Client ID: **ZZZZZZ** Batch ID: **R76213** TestNo: **EPA 120.1** Analysis Date: **3/15/2010** SeqNo: **1171051**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	6520.000	0.10						6470	0.770	10	

Sample ID: **N003860-020BMS** SampType: **MS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76213**
Client ID: **ZZZZZZ** Batch ID: **R76213** TestNo: **EPA 120.1** Analysis Date: **3/15/2010** SeqNo: **1171060**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	20280.000	0.20	9969	10580	97.3	75	125				

Sample ID: **N003860-020BMSD** SampType: **MSD** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76213**
Client ID: **ZZZZZZ** Batch ID: **R76213** TestNo: **EPA 120.1** Analysis Date: **3/15/2010** SeqNo: **1171061**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	20400.000	0.20	9969	10580	98.5	75	125	20280	0.590	10	

Sample ID: **LCS-76213** SampType: **LCS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76213**
Client ID: **LCSW** Batch ID: **R76213** TestNo: **EPA 120.1** Analysis Date: **3/15/2010** SeqNo: **1171063**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	9940.000	0.10	9969	0	99.7	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: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_W

Sample ID: **LCS-R76214** SampType: **LCS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76214**
Client ID: **LCSW** Batch ID: **R76214** TestNo: **EPA 120.1** Analysis Date: **3/15/2010** SeqNo: **1171064**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1424.000	0.10	1412	0	101	85	115				

Sample ID: **N003860-024ADUP** SampType: **DUP** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76214**
Client ID: **ZZZZZZ** Batch ID: **R76214** TestNo: **EPA 120.1** Analysis Date: **3/15/2010** SeqNo: **1171068**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1631.000	0.10						1620	0.677	10	

Sample ID: **N003860-028AMS** SampType: **MS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76214**
Client ID: **ZZZZZZ** Batch ID: **R76214** TestNo: **EPA 120.1** Analysis Date: **3/15/2010** SeqNo: **1171072**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	2952.000	0.20	1412	1517	102	75	125				

Sample ID: **N003860-028AMSD** SampType: **MSD** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76214**
Client ID: **ZZZZZZ** Batch ID: **R76214** TestNo: **EPA 120.1** Analysis Date: **3/15/2010** SeqNo: **1171073**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	2938.000	0.20	1412	1517	101	75	125	2952	0.475	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: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_W

Sample ID: **LCS-R76215** SampType: **LCS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76215**
Client ID: **LCSW** Batch ID: **R76215** TestNo: **EPA 120.1** Analysis Date: **3/15/2010** SeqNo: **1171075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	99100.000	0.10	99810	0	99.3	85	115				

Sample ID: **N003860-007ADUP** SampType: **DUP** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76215**
Client ID: **ZZZZZZ** Batch ID: **R76215** TestNo: **EPA 120.1** Analysis Date: **3/15/2010** SeqNo: **1171077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	31300.000	0.10						31100	0.641	10	

Sample ID: **N003860-025AMS** SampType: **MS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76215**
Client ID: **ZZZZZZ** Batch ID: **R76215** TestNo: **EPA 120.1** Analysis Date: **3/15/2010** SeqNo: **1171079**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	140200.000	0.20	99810	35900	104	75	125				

Sample ID: **N003860-025AMSD** SampType: **MSD** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76215**
Client ID: **ZZZZZZ** Batch ID: **R76215** TestNo: **EPA 120.1** Analysis Date: **3/15/2010** SeqNo: **1171080**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	140600.000	0.20	99810	35900	105	75	125	140200	0.285	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

ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *15-Apr-10*

CLIENT: CH2M HILL
Lab Order: N003860
Project: PG&E Topock
Lab ID: N003860-010

Client Sample ID: MW-10-165
Collection Date: 3/11/2010 1:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A		**EPA 6010B**				
RunID: **ICP1_100320E**	QC Batch: **34170**				PrepDate:	**3/18/2010**	Analyst: **NS**
Aluminum	ND	22	50		µg/L	1	3/20/2010 06:21 PM
Antimony	ND	2.7	10		µg/L	1	3/20/2010 06:21 PM
Barium	28	0.25	3.0		µg/L	1	3/20/2010 06:21 PM
Beryllium	ND	0.58	1.0		µg/L	1	3/20/2010 06:21 PM
Cadmium	ND	0.23	3.0		µg/L	1	3/20/2010 06:21 PM
Calcium	32000	72	500		µg/L	1	3/20/2010 06:21 PM
Chromium	3000	0.15	1.0		µg/L	1	3/20/2010 06:21 PM
Cobalt	ND	0.25	3.0		µg/L	1	3/20/2010 06:21 PM
Copper	ND	2.6	5.0		µg/L	1	3/20/2010 06:21 PM
Iron	20	7.0	20		µg/L	1	3/20/2010 06:21 PM
Lead	ND	1.6	10		µg/L	1	3/20/2010 06:21 PM
Magnesium	3900	18	100		µg/L	1	3/20/2010 06:21 PM
Manganese	ND	0.96	10		µg/L	1	3/22/2010 11:40 AM
Molybdenum	220	1.0	5.0		µg/L	1	3/20/2010 06:21 PM
Nickel	ND	0.95	5.0		µg/L	1	3/20/2010 06:21 PM
Potassium	10000	270	2500		µg/L	5	3/22/2010 05:00 PM
Silver	ND	0.84	3.0		µg/L	1	3/20/2010 06:21 PM
Sodium	380000	6600	120000		µg/L	250	3/22/2010 04:25 PM
Vanadium	40	0.45	3.0		µg/L	1	3/20/2010 06:21 PM
Zinc	27	2.1	10		µg/L	1	3/20/2010 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		

Advanced Technology Laboratories - Las Vegas

ANALYTICAL RESULTS

Print Date: *26-May-10*

CLIENT: CH2M HILL
Lab Order: N003860
Project: PG&E Topock
Lab ID: N003860-024

Client Sample ID: MW-17-165
Collection Date: 3/11/2010 9:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_100320E**	QC Batch: **34170**				PrepDate:	**3/18/2010**	Analyst: **NS**
Aluminum	ND	22	50		µg/L	1	3/20/2010 06:06 PM
Antimony	ND	2.7	10		µg/L	1	3/20/2010 06:06 PM
Barium	21	0.25	3.0		µg/L	1	3/20/2010 06:06 PM
Beryllium	ND	0.58	1.0		µg/L	1	3/20/2010 06:06 PM
Cadmium	ND	0.23	3.0		µg/L	1	3/20/2010 06:06 PM
Calcium	81000	72	500		µg/L	1	3/20/2010 06:06 PM
Chromium	16	0.15	1.0		µg/L	1	3/20/2010 06:06 PM
Cobalt	ND	0.25	3.0		µg/L	1	3/20/2010 06:06 PM
Copper	ND	2.6	5.0		µg/L	1	3/20/2010 06:06 PM
Iron	42	7.0	20		µg/L	1	3/20/2010 06:06 PM
Lead	ND	1.6	10		µg/L	1	3/20/2010 06:06 PM
Magnesium	9900	18	100		µg/L	1	3/20/2010 06:06 PM
Manganese	ND	0.96	10		µg/L	1	3/22/2010 11:33 AM
Molybdenum	23	1.0	5.0		µg/L	1	3/20/2010 06:06 PM
Nickel	ND	0.95	5.0		µg/L	1	3/20/2010 06:06 PM
Potassium	9500	540	5000		µg/L	10	3/22/2010 04:08 PM
Silver	ND	0.84	3.0		µg/L	1	3/20/2010 06:06 PM
Sodium	240000	1700	25000		µg/L	50	3/22/2010 04:04 PM
Vanadium	5.3	0.45	3.0		µg/L	1	3/20/2010 06:06 PM
Zinc	25	2.1	10		µg/L	1	3/20/2010 06:06 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

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ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *15-Apr-10*

CLIENT: CH2M HILL
Lab Order: N003860
Project: PG&E Topock
Lab ID: N003860-025

Client Sample ID: MW-22-165
Collection Date: 3/12/2010 10:22:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A		**EPA 6010B**				
RunID: **ICP1_100320E**	QC Batch: **34170**				PrepDate: **3/18/2010**		Analyst: **NS**
Aluminum	ND	22	50		µg/L	1	3/20/2010 06:13 PM
Antimony	ND	2.7	10		µg/L	1	3/20/2010 06:13 PM
Barium	130	0.25	3.0		µg/L	1	3/20/2010 06:13 PM
Beryllium	ND	0.58	1.0		µg/L	1	3/20/2010 06:13 PM
Cadmium	ND	0.23	3.0		µg/L	1	3/20/2010 06:13 PM
Calcium	1300000	72	500		µg/L	1	3/20/2010 06:13 PM
Chromium	ND	0.15	1.0		µg/L	1	3/20/2010 06:13 PM
Cobalt	ND	0.25	3.0		µg/L	1	3/20/2010 06:13 PM
Copper	ND	2.6	5.0		µg/L	1	3/20/2010 06:13 PM
Iron	12000	7.0	20		µg/L	1	3/20/2010 06:13 PM
Lead	ND	1.6	10		µg/L	1	3/20/2010 06:13 PM
Magnesium	210000	18	100		µg/L	1	3/20/2010 06:13 PM
Manganese	4400	1.9	20		µg/L	2	3/22/2010 12:03 PM
Molybdenum	7.0	1.0	5.0		µg/L	1	3/20/2010 06:13 PM
Nickel	ND	0.95	5.0		µg/L	1	3/20/2010 06:13 PM
Potassium	57000	1400	12000		µg/L	25	3/22/2010 04:19 PM
Silver	ND	0.84	3.0		µg/L	1	3/20/2010 06:13 PM
Sodium	6000000	53000	1000000		µg/L	2000	3/22/2010 04:56 PM
Vanadium	ND	0.45	3.0		µg/L	1	3/20/2010 06:13 PM
Zinc	18	2.1	10		µg/L	1	3/20/2010 06:13 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		

CLIENT: CH2M HILL
Work Order: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-34170** SampType: **MBLK** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **PBW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167309**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	50									
Antimony	ND	10									
Barium	ND	3.0									
Beryllium	ND	1.0									
Cadmium	ND	3.0									
Calcium	79.991	500									
Chromium	ND	1.0									
Cobalt	ND	3.0									
Copper	ND	5.0									
Iron	ND	20									
Lead	ND	10									
Magnesium	ND	100									
Molybdenum	ND	5.0									
Nickel	ND	5.0									
Silver	ND	3.0									
Vanadium	ND	3.0									
Zinc	ND	10									

Sample ID: **LCS-34170** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **LCSW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167310**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	18417.971	50	20000	0	92.1	85	115				
Antimony	897.864	10	1000	0	89.8	85	115				
Barium	921.778	3.0	1000	0	92.2	85	115				
Beryllium	891.919	1.0	1000	0	89.2	85	115				
Cadmium	892.903	3.0	1000	0	89.3	85	115				
Calcium	18979.398	500	20000	0	94.9	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: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **LCS-34170** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **LCSW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167310**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	918.123	1.0	1000	0	91.8	85	115				
Cobalt	901.593	3.0	1000	0	90.2	85	115				
Copper	929.610	5.0	1000	0	93.0	85	115				
Iron	18015.112	20	20000	0	90.1	85	115				
Lead	892.856	10	1000	0	89.3	85	115				
Magnesium	17740.117	100	20000	0	88.7	85	115				
Molybdenum	900.758	5.0	1000	0	90.1	85	115				
Nickel	897.342	5.0	1000	0	89.7	85	115				
Silver	906.512	3.0	1000	0	90.7	85	115				
Vanadium	914.194	3.0	1000	0	91.4	85	115				
Zinc	891.008	10	1000	0	89.1	85	115				

Sample ID: **N003860-024B-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	19035.445	250	20000	36.22	95.0	75	125				
Antimony	2270.762	50	2500	0	90.8	75	125				
Barium	2371.328	15	2500	20.54	94.0	75	125				
Beryllium	2290.394	5.0	2500	0	91.6	75	125				
Cadmium	2250.324	15	2500	0	90.0	75	125				
Calcium	101563.350	2500	20000	81310	101	75	125				
Chromium	2330.309	5.0	2500	15.97	92.6	75	125				
Cobalt	2299.925	15	2500	0	92.0	75	125				
Copper	2341.863	25	2500	0	93.7	75	125				
Iron	18928.145	100	20000	42.40	94.4	75	125				
Lead	2241.560	50	2500	0	89.7	75	125				
Magnesium	28972.830	500	20000	9946	95.1	75	125				
Molybdenum	2350.114	25	2500	22.51	93.1	75	125				
Nickel	2280.291	25	2500	0	91.2	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: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N003860-024B-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	2263.675	15	2500	0	90.5	75	125				
Vanadium	2348.289	15	2500	5.273	93.7	75	125				
Zinc	2262.288	50	2500	24.89	89.5	75	125				

Sample ID: **N003860-024B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	18868.937	250	20000	36.22	94.2	75	125	19040	0.879	20	
Antimony	2235.561	50	2500	0	89.4	75	125	2271	1.56	20	
Barium	2353.018	15	2500	20.54	93.3	75	125	2371	0.775	20	
Beryllium	2268.831	5.0	2500	0	90.8	75	125	2290	0.946	20	
Cadmium	2236.096	15	2500	0	89.4	75	125	2250	0.634	20	
Calcium	98988.778	2500	20000	81310	88.4	75	125	101600	2.57	20	
Chromium	2304.689	5.0	2500	15.97	91.5	75	125	2330	1.11	20	
Cobalt	2284.636	15	2500	0	91.4	75	125	2300	0.667	20	
Copper	2317.464	25	2500	0	92.7	75	125	2342	1.05	20	
Iron	18772.012	100	20000	42.40	93.6	75	125	18930	0.828	20	
Lead	2200.902	50	2500	0	88.0	75	125	2242	1.83	20	
Magnesium	28745.887	500	20000	9946	94.0	75	125	28970	0.786	20	
Molybdenum	2305.431	25	2500	22.51	91.3	75	125	2350	1.92	20	
Nickel	2262.162	25	2500	0	90.5	75	125	2280	0.798	20	
Silver	2239.978	15	2500	0	89.6	75	125	2264	1.05	20	
Vanadium	2325.294	15	2500	5.273	92.8	75	125	2348	0.984	20	
Zinc	2245.791	50	2500	24.89	88.8	75	125	2262	0.732	20	

Sample ID: **MB-34170** SampType: **MBLK** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **PBW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167594**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-34170** SampType: **MBLK** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **PBW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167594**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	10									

Sample ID: **LCS-34170** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **LCSW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167595**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18384.756	10	20000	0	91.9	85	115				

Sample ID: **N003860-024B-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167601**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18469.337	50	20000	0	92.3	75	125				

Sample ID: **N003860-024B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167602**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18244.250	50	20000	0	91.2	75	125	18470	1.23	20	

Sample ID: **MB-34170** SampType: **MBLK** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76090**
Client ID: **PBW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167747**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	500									
Sodium	ND	500									

Qualifiers:

B	Analyte detected in 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
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **LCS2-34170** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76090**
Client ID: **LCSW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167748**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	14361.148	2500	15000	0	95.7	85	115				
Sodium	14403.292	2500	15000	0	96.0	85	115				

Sample ID: **N003860-024B-MS2** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76090**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167764**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	893369.054	500000	500000	236700	131	75	125				S

Sample ID: **N003860-024B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76090**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167765**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	644424.531	500000	500000	236700	81.5	75	125	893400	32.4	20	R

Sample ID: **N003860-024B-MS2** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76090**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167847**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	592432.004	500000	500000	9465	117	75	125				

Sample ID: **N003860-024B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76090**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167848**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	425492.841	500000	500000	9465	83.2	75	125	592400	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		

ANALYTICAL RESULTS

Advaneed Technology Laboratories - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-10-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 1:51:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP-MS METALS							
	EPA 3010A			**EPA 6020**			
RunID: **ICP4_100318A**	QC Batch: **34141**				PrepDate:	**3/15/2010**	Analyst: **JT**
Selenium	6.8	0.29	0.50		µg/L	1	3/18/2010
Thallium	ND	0.015	0.50		µg/L	1	3/18/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-17-165
Lab Order:	N003860	**Collection Date:**	3/12/2010 9:58:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-024		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP-MS METALS							
	EPA 3010A			**EPA 6020**			
RunID: **ICP4_100318A**	QC Batch: **34141**				PrepDate:	**3/15/2010**	Analyst: **JT**
Selenium	15	0.29	0.50		µg/L	1	3/18/2010
Thallium	ND	0.015	0.50		µg/L	1	3/18/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-22-165
Lab Order:	N003860	**Collection Date:**	3/12/2010 10:22:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-025		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP-MS METALS							
	EPA 3010A			**EPA 6020**			
RunID: **ICP4_100318A**	QC Batch: **34141**				PrepDate:	**3/15/2010**	Analyst: **JT**
Selenium	ND	2.9	5.0		µg/L	10	3/18/2010
Thallium	ND	0.015	0.50		µg/L	1	3/18/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **MB-34141** SampType: **MBLK** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **3/15/2010** RunNo: **76448**
Client ID: **PBW** Batch ID: **34141** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/18/2010** SeqNo: **1176970**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	0.50									
Thallium	ND	0.50									

Sample ID: **LCS-34141** SampType: **LCS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **3/15/2010** RunNo: **76448**
Client ID: **LCSW** Batch ID: **34141** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/18/2010** SeqNo: **1176971**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	13.014	0.50	12.50	0	104	85	115				
Thallium	12.624	0.50	12.50	0	101	85	115				

Sample ID: **N003860-010B-MS** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **3/15/2010** RunNo: **76448**
Client ID: **ZZZZZZ** Batch ID: **34141** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/18/2010** SeqNo: **1176972**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	60.698	1.0	50.00	6.845	108	70	130	60.70	0	0	
Thallium	43.258	1.0	50.00	0.04750	86.4	70	130	43.26	0	0	

Sample ID: **N003860-010B-MSD** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **3/15/2010** RunNo: **76448**
Client ID: **ZZZZZZ** Batch ID: **34141** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/18/2010** SeqNo: **1176973**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	58.955	1.0	50.00	6.845	104	70	130				
Thallium	43.533	1.0	50.00	0.04750	87.0	70	130				

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *15-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-10-165
Lab Order:	N003860	**Collection Date:**	3/11/2010 1:51:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7470			**EPA 7470A**				
RunID: **AA1_100317D**	QC Batch: **34135**				PrepDate:	**3/15/2010**	Analyst: **JT**
Mercury	ND	0.049	0.20		µg/L	1	3/17/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 7470_W_DISSPGE

Sample ID: LCS-34135	SampType: LCS	TestCode: 7470_W_DIS	Units: µg/L	Prep Date: 3/15/2010	RunNo: 76039
Client ID: LCSW	Batch ID: 34135	TestNo: EPA 7470A	EPA 7470	Analysis Date: 3/17/2010	SeqNo: 1166078

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.610	0.20	10.00	0	106	85	115				

Sample ID: MB-34135	SampType: MBLK	TestCode: 7470_W_DIS	Units: µg/L	Prep Date: 3/15/2010	RunNo: 76039
Client ID: PBW	Batch ID: 34135	TestNo: EPA 7470A	EPA 7470	Analysis Date: 3/17/2010	SeqNo: 1166079

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID: N003860-010B-MS	SampType: MS	TestCode: 7470_W_DIS	Units: µg/L	Prep Date: 3/15/2010	RunNo: 76039
Client ID: ZZZZZZ	Batch ID: 34135	TestNo: EPA 7470A	EPA 7470	Analysis Date: 3/17/2010	SeqNo: 1166084

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	20.997	0.20	20.00	0	105	75	125				

Sample ID: N003860-010B-MSD	SampType: MSD	TestCode: 7470_W_DIS	Units: µg/L	Prep Date: 3/15/2010	RunNo: 76039
Client ID: ZZZZZZ	Batch ID: 34135	TestNo: EPA 7470A	EPA 7470	Analysis Date: 3/17/2010	SeqNo: 1166085

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	21.045	0.20	20.00	0	105	75	125	21.00	0.227	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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CH2MHILL

CHAIN OF CUSTODY RECORD

3/12/2010 2:21:53 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.GM.04
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-165-Q1
Turnaround Time 10 Days
Shipping Date: 3/12/2010
COC Number: 10

				Metals (6010BFF) Field Filtered Title 22,Ca,Mg,Na,Fe,Mn	Metals (7470ADisField) Field Filtered	Specific Conductance (E120.1)	TOC (SM5310C) Field Filtered		Number of Containers	COMMENTS
			Container:	250 ml Poly	250 ml Poly	1 Liter Poly	3 x 40 ml VOA			
			Preservatives:	HNO3, 4°C	HNO3, 4°C	4°C	H3PO4, 4°C			
			Filtered:	Field	Field	NA	Field			
			Holding Time:	180	180	28	0			
	DATE	TIME	Matrix							
MW-21-165	3/10/2010	11:10	Water			X			1	
MW-34-100-165	3/10/2010	15:31	Water			X			1	
MW-47-115-165	3/10/2010	15:46	Water			X			1	
MW-52D-165	3/10/2010	10:36	Water			X			1	
MW-52M-165	3/10/2010	9:30	Water			X			1	
MW-52S-165	3/10/2010	9:23	Water			X			1	
MW-53D-165	3/10/2010	12:40	Water			X			1	
MW-53M-165	3/10/2010	11:46	Water			X			1	
MW-93-165	3/10/2010	11:48	Water			X			1	
MW-10-165	3/11/2010	13:51	Water	X	X	X			~~1~~ 2	
MW-29-165	3/11/2010	9:17	Water			X			1	
MW-33-040-165	3/11/2010	13:31	Water			X			1	
MW-33-150-165	3/11/2010	14:21	Water			X			1	
MW-33-210-165	3/11/2010	15:18	Water			X			1	
MW-41D-165	3/11/2010	10:43	Water			X			1	

	Signatures	Date/Time
Approved by		3-12-10
Sampled by		1430
Relinquished by		
Received by	Kristyn Everett	3-12-10/1430
Relinquished by	Kristyn Everett	3-12-10/1650
Received by	MBCARTN	3/12/10/1651

Shipping Details

Method of Shipment: FedEx
On Ice: yes / no 4.2, 4.5
Airbill No:
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN:

Sample Custody

Special Instructions:

March 8-17, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

N003860

CH2MHILL CHAIN OF CUSTODY RECORD 3/12/2010 2:21:53 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.GM.04
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-165-Q1
Turnaround Time 10 Days
Shipping Date: 3/12/2010
COC Number: 10

				Metals (6010BFF) Field Filtered Title 22,Ca,Mg,Na,Fe,Mn	Metals (7470A(DisField)) Field Filtered	Specific Conductance (E120.1)	TOC (SM5310C) Field Filtered		Number of Containers	COMMENTS
Container				250 ml Poly	250 ml Poly	1 Liter Poly	3 x 40 ml VOA			
Preservatives				HNO3, 4°C	HNO3 4°C	4°C	H3PO4, 4°C			
Filtered				Field	Field	NA	Field			
Holding Time				180	180	28	0			
	DATE	TIME	Matrix							
MW-46-175-165	3/11/2010	11:02	Water			X		N003860-16	1	
MW-46-205-165	3/11/2010	12:03	Water			X		-17	1	
MW-62-110-165	3/11/2010	14:47	Water				X	-18	2	1
MW-62-110-165	3/11/2010	14:47	Water			X			2	
MW-62-190-165	3/11/2010	14:58	Water				X	-19	2	1
MW-62-190-165	3/11/2010	14:58	Water			X			2	
MW-64-150-165	3/11/2010	15:37	Water				X	-20	2	1
MW-64-150-165	3/11/2010	15:37	Water			X			2	
MW-64-205-165	3/11/2010	16:48	Water				X	-21	2	1
MW-64-205-165	3/11/2010	16:48	Water			X			2	
MW-64-260-165	3/11/2010	16:02	Water				X	-22	2	1
MW-64-260-165	3/11/2010	16:02	Water			X			2	
MW-98-165	3/11/2010	9:55	Water			X		-23	1	
~~MW-16-165~~	~~3/12/2010~~	~~11:04~~	~~Water~~			~~X~~	BEC		~~1~~	
MW-17-165	3/11/10 ~~[illegible]~~	9:58	Water	X		X		-24	1	

Signatures		Date/Time
Approved by	SPD 3/11/10	
Sampled by	[illegible]	3-12-10 1430
Relinquished by	[illegible]	
Received by	Kristyn Everett	3-12-10/1430
Relinquished by	Kristyn Everett	3-12-10/1650
Received by	MARTIN [illegible]	

Shipping Details
Method of Shipment: FedEx
On Ice: (yes) / no 1.2, 4.5
Airbill No:
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN: Sample Custody

Special Instructions:
March 8-17, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

Revision 1, 5/26/2010

CH2MHILL

CHAIN OF CUSTODY RECORD

3/12/2010 2:21:54 PM

Project Name PG&E Topock
Location Topock
Project Number 390378.MP.02.GM.04
Project Manager Jay Piper
Sample Manager Shawn Duffy

Task Order
Project 2010-GMP-165-Q1
Turnaround Time 10 Days
Shipping Date: 3/12/2010
COC Number: 10

				Metals (6010BFF) Field Filtered Title 22,Ca,Mg,Na,Fe,Mn	Metals (7470ADisField) Field Filtered	Specific Conductance (E120.1)	TOC (SM5310C) Field Filtered		Number of Containers	COMMENTS
Container:				250 ml Poly	250 ml Poly	1 Liter Poly	3 x 40 ml VOA			
Preservatives:				HNO3, 4°C	HNO3, 4°C	4°C	H3PO4, 4°C			
Filtered:				Field	Field	NA	Field			
Holding Time:				180	180	28	0			
	DATE	TIME	Matrix							
MW-22-165	3/12/2010	10:22	Water	X	X	X			~~3~~ 2	2 BEC
MW-24BR-165	3/12/2010	8:27	Water			X			1	
MW-33-090-165	3/12/2010	9:16	Water			X			1	
MW-36-090-165	3/12/2010	12:07	Water			X			1	
MW-50-095-165	3/12/2010	12:07	Water			X			1	
								TOTAL NUMBER OF CONTAINERS	47	

	Signatures	Date/Time
Approved by		3-12-10
Sampled by		1430
Relinquished by		
Received by	Kristopher Everett	3-12-10 / 1430
Relinquished by	Kristopher Everett	3-12-10 / 1650
Received by	MCCARTIN	3/12/10 / 1651

Shipping Details
Method of Shipment: FedEx
On Ice: (yes) / no 4.2, 4.5
Airbill No:
Lab Name: ADVANCED TECHNOLOGY LABORATO
Lab Phone: (702) 307-2659

ATTN:
Sample Custody

Special Instructions:
March 8-17, 2010

Report Copy to
Shawn Duffy
(530) 229-3303

Advanced Technology Laboratories - Las Vegas

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 (562) 989-4045.

Sample Receipt Checklist

Client Name: **CH2M HILL-OAKLAND** Date Time Received: **3/12/2010 6:27:29 PM**

Work Order Number: **N003860** Received by: **MBC**

Cooler Temp (Deg C): 4.2, 4.5

Checklist completed by: Signature 3/12/10 Date Reviewed by: Initials 3/21/10 Date

Carrier name: ATL

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact 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. Container/Temp Blank temperature within acceptance 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 ☐

Comments: No Sample received for TOC. Transfer sample to VOA with HCl.

CLIENT CORRESPONDENCE LOG

DATE: 4/15/2010 5:44:23 PM

Client Name: -CH2M HILL-OAKLAND

ATL Workorder No.: N00386

DATE	CONTACT	CALL IN/OUT	ISSUE / PROBLEM	COMMENTS/CORRECTIVE ACTION	INITIAL
4/15/2010 5:42:45	S. Duffy	IN	Arsenic analysis were put on hold by Shawn Duffy.	As were logged-in as Hold	marlonc

Advanced Technology Laboratories - Las Vegas

Date: *06-Apr-10*

CLIENT: CH2M HILL
Work Order: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N003860-024BDT** SampType: **DT** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **76073**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167311**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	21.663	15						20.54	5.34	10	
Calcium	82034.738	2500						81310	0.894	10	
Chromium	16.892	5.0						15.97	5.62	10	
Iron	111.477	100						42.40	89.8	10	R
Magnesium	10344.664	500						9946	3.93	10	
Molybdenum	22.812	25						22.51	0	10	

Sample ID **N003860-024BDT** SampType: **DT** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **76085**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167596**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	50						0	0	10	

Sample ID **N003860-024BDT** SampType: **DT** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76090**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167750**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	217768.751	120000						236700	8.34	10	

MS/MSD of Fe and Post Digestion Spike are within acceptance criteria

KS
4/7/10

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 - Las Vegas

Date: *06-Apr-10*

CLIENT: CH2M HILL
Work Order: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N003860-024BPS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **76073**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167322**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	93084.757	250	100000	36.22	93.0	75	125				
Antimony	4585.917	50	5000	0	91.7	75	125				
Barium	4707.296	15	5000	20.54	93.7	75	125				
Beryllium	4612.772	5.0	5000	0	92.3	75	125				
Cadmium	4479.920	15	5000	0	89.6	75	125				
Calcium	175188.774	2500	100000	81310	93.9	75	125				
Chromium	4648.603	5.0	5000	15.97	92.7	75	125				
Cobalt	4537.341	15	5000	0	90.7	75	125				
Copper	4690.560	25	5000	0	93.8	75	125				
Iron	90622.217	100	100000	42.40	90.6	75	125				
Lead	4482.767	50	5000	0	89.7	75	125				
Magnesium	100148.393	500	100000	9946	90.2	75	125				
Molybdenum	4629.301	25	5000	22.51	92.1	75	125				
Nickel	4511.530	25	5000	0	90.2	75	125				
Silver	4565.375	15	5000	0	91.3	75	125				
Vanadium	4683.030	15	5000	5.273	93.6	75	125				
Zinc	4491.779	50	5000	24.89	89.3	75	125				

Sample ID **N003860-024BPS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **76073**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167323**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	37105.335	100	40000	36.22	92.7	75	125				
Antimony	1825.566	20	2000	0	91.3	75	125				
Barium	1876.870	6.0	2000	20.54	92.8	75	125				
Beryllium	1822.390	2.0	2000	0	91.1	75	125				
Cadmium	1766.660	6.0	2000	0	88.3	75	125				
Calcium	118882.473	1000	40000	81310	93.9	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: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	N003860-024BPS	SampType: PS	TestCode: 6010_WDPG	Units: µg/L	Prep Date:	RunNo: 76073
Client ID:	ZZZZZZ	Batch ID: 34170	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 3/20/2010	SeqNo: 1167323

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1851.928	2.0	2000	15.97	91.8	75	125				
Cobalt	1798.471	6.0	2000	0	89.9	75	125				
Copper	1879.344	10	2000	0	94.0	75	125				
Iron	35753.870	40	40000	42.40	89.3	75	125				
Lead	1764.239	20	2000	0	88.2	75	125				
Magnesium	45380.833	200	40000	9946	88.6	75	125				
Molybdenum	1866.282	10	2000	22.51	92.2	75	125				
Nickel	1785.059	10	2000	0	89.3	75	125				
Silver	1823.274	6.0	2000	0	91.2	75	125				
Vanadium	1876.507	6.0	2000	5.273	93.6	75	125				
Zinc	1809.751	20	2000	24.89	89.2	75	125				

Sample ID	N003860-024BPS	SampType: PS	TestCode: 6010_WDPG	Units: µg/L	Prep Date:	RunNo: 76085
Client ID:	ZZZZZZ	Batch ID: 34170	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 3/22/2010	SeqNo: 1167606

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	87415.749	50	100000	0	87.4	75	125				

Sample ID	N003860-024BPS	SampType: PS	TestCode: 6010_WDPG	Units: µg/L	Prep Date:	RunNo: 76085
Client ID:	ZZZZZZ	Batch ID: 34170	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 3/22/2010	SeqNo: 1167607

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	34728.559	20	40000	0	86.8	75	125				

Sample ID	N003860-024BPS	SampType: PS	TestCode: 6010_WDPG	Units: µg/L	Prep Date:	RunNo: 76090
Client ID:	ZZZZZZ	Batch ID: 34170	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 3/22/2010	SeqNo: 1167766

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	3116707.051	500000	3000000	236700	96.0	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		

CLIENT: CH2M HILL
Work Order: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	N003860-024BPS	SampType:	PS	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	76090
Client ID:	ZZZZZZ	Batch ID:	34170	TestNo:	EPA 6010B	EPA 3010A		Analysis Date:	3/22/2010	SeqNo:	1167767

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	167121.812	25000	150000	9465	105	75	125				

Sample ID	N003860-024BPS	SampType:	PS	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	76090
Client ID:	ZZZZZZ	Batch ID:	34170	TestNo:	EPA 6010B	EPA 3010A		Analysis Date:	3/22/2010	SeqNo:	1167849

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	2918639.634	500000	3000000	9465	97.0	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		

Advanced Technology Laboratories - Las Vegas

Date: *15-Apr-10*

CLIENT: CH2M HILL
Work Order: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID **N003860-010B-PS** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **76448**
Client ID: **ZZZZZZ** Batch ID: **34141** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/18/2010** SeqNo: **1176974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	41.505	2.0	25.00	13.04	114	90	110				S
Selenium	32.425	1.0	25.00	6.845	102	90	110				
Thallium	22.350	1.0	25.00	0.04750	89.2	90	110				S

Sample ID **N003860-024B-PS** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **76448**
Client ID: **ZZZZZZ** Batch ID: **34141** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/18/2010** SeqNo: **1176985**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	15.630	2.0	12.50	1.794	111	90	110				S
Selenium	27.030	1.0	12.50	15.09	95.5	90	110				
Thallium	11.000	1.0	12.50	0.02000	87.8	90	110				S

Sample ID **N003860-025B-PS** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **76448**
Client ID: **ZZZZZZ** Batch ID: **34141** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/18/2010** SeqNo: **1176989**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	28.813	2.5	31.25	13.73	48.3	90	110				S
Thallium	21.363	2.5	31.25	0	68.4	90	110				S

Sample ID **N003860-025B-PS** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **76448**
Client ID: **ZZZZZZ** Batch ID: **34141** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/18/2010** SeqNo: **1176990**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	9.475	5.0	10.00	0	94.8	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

CLIENT: CH2M HILL
Work Order: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID	N003860-025B-PS	SampType:	PS	TestCode:	6020_DIS	Units:	µg/L	Prep Date:		RunNo:	76448
Client ID:	ZZZZZZ	Batch ID:	34141	TestNo:	EPA 6020	EPA 3010A		Analysis Date:	3/18/2010	SeqNo:	1176991

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	61.038	5.0	62.50	0	97.7	90	110				

Sample ID	N003860-010B-DT	SampType:	DT	TestCode:	6020_DIS	Units:	µg/L	Prep Date:		RunNo:	76448
Client ID:	ZZZZZZ	Batch ID:	34141	TestNo:	EPA 6020	EPA 3010A		Analysis Date:	3/18/2010	SeqNo:	1177004

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.013	5.0						13.04	8.22	10	
Selenium	5.406	2.5						6.845	23.5	10	R
Thallium	ND	2.5						0.04750	0	10	

* DT & PS WERE OUT OF RECOVERY CRITERIA, HOWEVER THE LCS, MS & MSD ARE WITHIN CRITERIA.

JA 4/15/10

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		

April 22, 2010

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.: N003860

RE: PG&E Topock

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on March 12, 2010 by Advanced Technology Laboratories - Las Vegas . 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,

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
Lab Order: N003860

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS

Samples were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Sample was analyzed past the method holding time.

Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *22-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-22-165
Lab Order:	N003860	**Collection Date:**	3/12/2010 10:22:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003860-025		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7470			**EPA 7470A**				
RunID: **AA1_100421A**	QC Batch: **34427**				PrepDate:	**4/21/2010**	Analyst: **JT**
Mercury	ND	0.049	0.20	H	µg/L	1	4/21/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 7470_W_DISSPGE

Sample ID: **LCS-34135** SampType: **LCS** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **3/15/2010** RunNo: **76039**
Client ID: **LCSW** Batch ID: **34135** TestNo: **EPA 7470A** **EPA 7470** Analysis Date: **3/17/2010** SeqNo: **1166078**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.610	0.20	10.00	0	106	85	115				

Sample ID: **MB-34135** SampType: **MBLK** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **3/15/2010** RunNo: **76039**
Client ID: **PBW** Batch ID: **34135** TestNo: **EPA 7470A** **EPA 7470** Analysis Date: **3/17/2010** SeqNo: **1166079**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID: **N003860-010B-MS** SampType: **MS** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **3/15/2010** RunNo: **76039**
Client ID: **ZZZZZZ** Batch ID: **34135** TestNo: **EPA 7470A** **EPA 7470** Analysis Date: **3/17/2010** SeqNo: **1166084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	20.997	0.20	20.00	0	105	75	125				

Sample ID: **N003860-010B-MSD** SampType: **MSD** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **3/15/2010** RunNo: **76039**
Client ID: **ZZZZZZ** Batch ID: **34135** TestNo: **EPA 7470A** **EPA 7470** Analysis Date: **3/17/2010** SeqNo: **1166085**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	21.045	0.20	20.00	0	105	75	125	21.00	0.227	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		

Advanced Technology Laboratories
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N003860
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 7470_W_DISSPGE

Sample ID: **LCS-34427** SampType: **LCS** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **4/21/2010** RunNo: **76488**
Client ID: **LCSW** Batch ID: **34427** TestNo: **EPA 7470A** **EPA 7470** Analysis Date: **4/21/2010** SeqNo: **1177838**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.378	0.20	10.00	0	104	85	115				

Sample ID: **MB-34427** SampType: **MBLK** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **4/21/2010** RunNo: **76488**
Client ID: **PBW** Batch ID: **34427** TestNo: **EPA 7470A** **EPA 7470** Analysis Date: **4/21/2010** SeqNo: **1177839**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID: **N003860-025B-MS** SampType: **MS** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **4/21/2010** RunNo: **76488**
Client ID: **ZZZZZZ** Batch ID: **34427** TestNo: **EPA 7470A** **EPA 7470** Analysis Date: **4/21/2010** SeqNo: **1177841**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	18.235	0.20	20.00	0	91.2	75	125				H

Sample ID: **N003860-025B-MSD** SampType: **MSD** TestCode: **7470_W_DIS** Units: **µg/L** Prep Date: **4/21/2010** RunNo: **76488**
Client ID: **ZZZZZZ** Batch ID: **34427** TestNo: **EPA 7470A** **EPA 7470** Analysis Date: **4/21/2010** SeqNo: **1177842**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	18.258	0.20	20.00	0	91.3	75	125	18.24	0.125	20	H

Qualifiers:

B	Analyte detected in 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		

Marlon Cartin

From: Shawn.Duffy@CH2M.com
Sent: Monday, April 19, 2010 3:26 PM
To: Marlon Cartin; Erlene.Contreras@CH2M.com; Glen S. Gesmundo
Subject: RE: Topock GMP N003860 issues

Hi Marlon,

Yes please analyze even though it is outside holding time.

From: Marlon Cartin [mailto:marlon@atl-labs.com]
Sent: Monday, April 19, 2010 2:38 PM
To: Contreras, Erlene/RDD; Glen S. Gesmundo
Cc: Duffy, Shawn/RDD
Subject: RE: Topock GMP N003860 issues

Hi Erlene!

I check it and it was not logged in the system. I will duble check the data if I have a communication on that sample and I'll get back to you as soon as possble.

Thanks,

Marlon

-----Original Message-----
From: Erlene.Contreras@CH2M.com [mailto:Erlene.Contreras@CH2M.com]
Sent: Monday, April 19, 2010 2:15 PM
To: Glen S. Gesmundo
Cc: Marlon Cartin; Shawn.Duffy@CH2M.com
Subject: RE: Topock GMP N003860 issues
Importance: High

One more issue,
I am missing the Mercury analysis for MW-22-165 which is requested on the COC. Can you check on this?

N003860		
SDG	NativeID	LabSampleID
N003860	MW-22-165	N003860-025B

Thanks,
Erlene

From: Contreras, Erlene/RDD
Sent: Monday, April 19, 2010 1:57 PM
To: 'Glen S. Gesmundo'
Cc: 'Marlon Cartin'
Subject: Topock GMP N003860 issues
Importance: High

Hi Marlon or Glen,

In SDG N003860, there is some Arsenic data reported by SW6020, but in the log-in it was stated to

not report Arsenic. The hard copy appears OK. Please remove from edata.

Also, SW6020s do not have the Extraction Method as FLDFLT per the COC. Please update.

Thanks,
Erlene

Erlene Contreras
Data Base Specialist
CH2M Hill
2525 Airpark Drive
Redding, CA 96001-2443
Phone 530-229-3247
Fax 530-339-3247
econtrer@ch2m.com

March 24, 2010

Marlon Cartin
Advanced Technology Laboratory-Las Vegas
3151 W Post Rd.
Las Vegas, NV 89118

TEL: (702) 307-2659
FAX: (702) 307-2691

ELAP No.: 1838
NELAP No.: 02107CA
NEVADA.: CA-401
CSDLAC No.: 10196

Workorder No.: 110753

RE:

Attention: Marlon Cartin

Enclosed are the results for sample(s) received on March 16, 2010 by Advanced Technology Laboratories . 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 (562)989-4045 if I can be of further assistance to your company.

Sincerely,

for Eddie F. Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

CASE NARRATIVE

Sample Receiving/General Comments

1. All sample containers were received intact with proper chain of custody documentation.
2. Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.
3. Sample preservation was verified upon receipt of samples, if applicable.
4. All samples were analyzed within method holding times.

Analytical Comments for SM 5310B

1. Samples 110753-001A, 110753-003A and 110753-005A, dilution was necessary due to sample matrix.

Advanced Technology Laboratories *3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040*

Advanced Technology Laboratories

Date: *24-Mar-10*

CLIENT: Advanced Technology Laboratory-Las Vega
Project:
Lab Order: 110753
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
110753-001A	N003860-018A / MW-62-110-165	Water	3/11/2010 2:47:00 PM	3/16/2010	3/24/2010
110753-002A	N003860-019A / MW-62-190-165	Water	3/11/2010 2:58:00 PM	3/16/2010	3/24/2010
110753-003A	N003860-020A / MW-64-150-165	Water	3/11/2010 3:37:00 PM	3/16/2010	3/24/2010
110753-004A	N003860-021A / MW-64-205-165	Water	3/11/2010 3:48:00 PM	3/16/2010	3/24/2010
110753-005A	N003860-022A / MW-64-260-165	Water	3/11/2010 4:02:00 PM	3/16/2010	3/24/2010

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ANALYTICAL RESULTS

Print Date: *24-Mar-10*

CLIENT: Advanced Technology Laboratory-Las Vega
Lab Order: 110753
Project:
Lab ID: 110753-001A

Client Sample ID: N003860-018A / MW-62-110-165
Collection Date: 3/11/2010 2:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON							
			SM5310B				
RunID: **TOC1_100324A**	QC Batch: **R119403**				PrepDate:		Analyst: **JSD**
Organic Carbon, Total	13	0.11	0.60		mg/L	2	3/24/2010 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		

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *24-Mar-10*

CLIENT: Advanced Technology Laboratory-Las Vega
Lab Order: 110753
Project:
Lab ID: 110753-003A

Client Sample ID: N003860-020A / MW-64-150-165
Collection Date: 3/11/2010 3:37:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON							
			SM5310B				
RunID: **TOC1_100324A**	QC Batch: **R119403**				PrepDate:		Analyst: **JSD**
Organic Carbon, Total	2.0	0.11	0.60		mg/L	2	3/24/2010 10:03 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

ANALYTICAL RESULTS

Print Date: *24-Mar-10*

CLIENT: Advanced Technology Laboratory-Las Vega
Lab Order: 110753
Project:
Lab ID: 110753-005A

Client Sample ID: N003860-022A / MW-64-260-165
Collection Date: 3/11/2010 4:02:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON							
			SM5310B				
RunID: **TOC1_100324A**	QC Batch: **R119403**				PrepDate:		Analyst: **JSD**
Organic Carbon, Total	8.4	0.11	0.60		mg/L	2	3/24/2010 10:18 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

Date: *24-Mar-10*

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 110753
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: R119403

Sample ID: **MB-R119403** SampType: **MBLK** TestCode: **415_5310BP** Units: **mg/L** Prep Date: RunNo: **119403**
Client ID: **PBW** Batch ID: **R119403** TestNo: **SM5310B** Analysis Date: **3/24/2010** SeqNo: **1902121**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	ND	0.30									

Sample ID: **LCS-R119403** SampType: **LCS** TestCode: **415_5310BP** Units: **mg/L** Prep Date: RunNo: **119403**
Client ID: **LCSW** Batch ID: **R119403** TestNo: **SM5310B** Analysis Date: **3/24/2010** SeqNo: **1902122**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	4.867	0.30	5.000	0	97.3	85	115				

Sample ID: **MB-MS** SampType: **MS** TestCode: **415_5310BP** Units: **mg/L** Prep Date: RunNo: **119403**
Client ID: **ZZZZZZ** Batch ID: **R119403** TestNo: **SM5310B** Analysis Date: **3/24/2010** SeqNo: **1902123**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	4.853	0.30	5.000	0	97.1	75	125				

Sample ID: **MB-MSD** SampType: **MSD** TestCode: **415_5310BP** Units: **mg/L** Prep Date: RunNo: **119403**
Client ID: **ZZZZZZ** Batch ID: **R119403** TestNo: **SM5310B** Analysis Date: **3/24/2010** SeqNo: **1902124**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	4.753	0.30	5.000	0	95.1	75	125	4.853	2.08	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

ANALYTICAL RESULTS

Print Date: *24-Mar-10*

CLIENT: Advanced Technology Laboratory-Las Vega
Client Sample ID: N003860-019A / MW-62-190-165
Lab Order: 110753
Collection Date: 3/11/2010 2:58:00 PM
Project:
Matrix: WATER
Lab ID: 110753-002A

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON							
			SM5310B				
RunID: **TOC1_100319A**	QC Batch: **R119325**				PrepDate:		Analyst: **JSD**
Organic Carbon, Total	8.5	0.054	0.30		mg/L	1	3/19/2010 11:24 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

ANALYTICAL RESULTS

Print Date: *24-Mar-10*

CLIENT:	Advanced Technology Laboratory-Las Vega	**Client Sample ID:**	N003860-021A / MW-64-205-165
Lab Order:	110753	**Collection Date:**	3/11/2010 3:48:00 PM
Project:		**Matrix:**	WATER
Lab ID:	110753-004A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON							
			SM5310B				
RunID: **TOC1_100319A**	QC Batch: **R119325**				PrepDate:		Analyst: **JSD**
Organic Carbon, Total	3.7	0.054	0.30		mg/L	1	3/19/2010 11:55 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

Date: *24-Mar-10*

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 110753
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: R119325

Sample ID: **MB-R119325** SampType: **MBLK** TestCode: **415_5310BP** Units: **mg/L** Prep Date: RunNo: **119325**
Client ID: **PBW** Batch ID: **R119325** TestNo: **SM5310B** Analysis Date: **3/19/2010** SeqNo: **1900528**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	0.059	0.30									

Sample ID: **LCS-R119325** SampType: **LCS** TestCode: **415_5310BP** Units: **mg/L** Prep Date: RunNo: **119325**
Client ID: **LCSW** Batch ID: **R119325** TestNo: **SM5310B** Analysis Date: **3/19/2010** SeqNo: **1900529**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	5.018	0.30	5.000	0.05933	99.2	85	115				

Sample ID: **MB-MS** SampType: **MS** TestCode: **415_5310BP** Units: **mg/L** Prep Date: RunNo: **119325**
Client ID: **ZZZZZZ** Batch ID: **R119325** TestNo: **SM5310B** Analysis Date: **3/19/2010** SeqNo: **1900530**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	5.226	0.30	5.000	0.05933	103	75	125				

Sample ID: **MB-MSD** SampType: **MSD** TestCode: **415_5310BP** Units: **mg/L** Prep Date: RunNo: **119325**
Client ID: **ZZZZZZ** Batch ID: **R119325** TestNo: **SM5310B** Analysis Date: **3/19/2010** SeqNo: **1900531**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	5.260	0.30	5.000	0.05933	104	75	125	5.226	0.648	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		

Advanced Technology Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
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TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California

TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler: Barry Collom

13-Mar-10

	Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests: SM 5310B		
110253-001	N003860-018A / MW-62-110-165	Water	3/11/2010 2:47:00 PM	VOA	1		
2	N003860-019A / MW-62-190-165	Water	3/11/2010 2:58:00 PM	VOA	1		
3	N003860-020A / MW-64-150-165	Water	3/11/2010 3:37:00 PM	VOA	1		
4	N003860-021A / MW-64-205-165	Water	3/11/2010 4:48:00 PM	VOA	1		
5	N003860-022A / MW-64-260-165	Water	3/11/2010 4:02:00 PM	VOA	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N003860 Please fax results by: Normal TAT

CH2M HILL SAMPLE.

		Date/Time			Date/Time
Relinquished by:		3/15/10	**Received by:**		3/16/10 8:35
Relinquished by:			**Received by:**		

Advanced Technology Laboratories

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 (562) 989-4045.

Sample Receipt Checklist

Client Name: ATL-LV

Date Time Received: 3/16/2010 8:35:00 AM

Work Order Number: 110753

Received by: **MP**

Cooler Temp (Deg C): 3.6

Checklist completed by: Signature _____ Date 3/16/10

Reviewed by: Initials _____ Date 3/16/10

Carrier name: ontrac

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact 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. Container/Temp Blank temperature within acceptance 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 ☑

Comments:

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N003879

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS

Samples were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 300.0:

Dilution was necessary for Nitrate and Bromide due to high concentration of Chloride and Sulfate in the sample.

Analytical Comments for SM 2320B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Alkalinity, Bicarbonate as CaCO3 possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6010B:

Matrix Spike Duplicate (MSD) is outside recovery criteria for Sodium possibly due to high concentration of Sodium in the sample. Dilution test and post digestion spike were performed and were within acceptable limit. The associated Laboratory Control Sample (LCS) recovery was acceptable.

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Advanced Technology Laboratories - Las Vega

Date: *08-Apr-10*

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N003879
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N003879-001A	PGE-07BR-165	Water	3/16/2010 1:18:00 PM	3/16/2010	4/8/2010
N003879-001B	PGE-07BR-165	Water	3/16/2010 1:18:00 PM	3/16/2010	4/8/2010
N003879-001C	PGE-07BR-165	Water	3/16/2010 1:18:00 PM	3/16/2010	4/8/2010

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ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	PGE-07BR-165
Lab Order:	N003879	**Collection Date:**	3/16/2010 1:18:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003879-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_100320E**	QC Batch: **34170**				PrepDate:	**3/18/2010**	Analyst: **NS**
Boron	1500	14	100		µg/L	1	3/20/2010 06:27 PM
Calcium	380000	72	500		µg/L	1	3/20/2010 06:27 PM
Iron	23000	7.0	20		µg/L	1	3/20/2010 06:27 PM
Magnesium	8800	18	100		µg/L	1	3/20/2010 06:27 PM
Manganese	2400	0.96	10		µg/L	1	3/22/2010 11:44 AM
Potassium	51000	5400	50000		µg/L	100	3/22/2010 04:42 PM
Sodium	3900000	53000	1000000		µg/L	2000	3/22/2010 05:06 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		

CLIENT: CH2M HILL
Work Order: N003879
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-34170** SampType: **MBLK** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **PBW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167309**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	69.563	100									
Calcium	79.991	500									
Iron	ND	20									
Magnesium	ND	100									

Sample ID: **LCS-34170** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **LCSW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167310**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	8932.906	100	10000	0	89.3	85	115				
Calcium	18979.398	500	20000	0	94.9	85	115				
Iron	18015.112	20	20000	0	90.1	85	115				
Magnesium	17740.117	100	20000	0	88.7	85	115				

Sample ID: **N003860-024B-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	9209.096	500	10000	265.5	89.4	75	125				
Calcium	101563.350	2500	20000	81310	101	75	125				
Iron	18928.145	100	20000	42.40	94.4	75	125				
Magnesium	28972.830	500	20000	9946	95.1	75	125				

Sample ID: **N003860-024B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	9175.206	500	10000	265.5	89.1	75	125	9209	0.369	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: N003879
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N003860-024B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	98988.778	2500	20000	81310	88.4	75	125	101600	2.57	20	
Iron	18772.012	100	20000	42.40	93.6	75	125	18930	0.828	20	
Magnesium	28745.887	500	20000	9946	94.0	75	125	28970	0.786	20	

Sample ID: **MB-34170** SampType: **MBLK** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **PBW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167594**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	10									

Sample ID: **LCS-34170** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **LCSW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167595**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18384.756	10	20000	0	91.9	85	115				

Sample ID: **N003860-024B-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167601**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18469.337	50	20000	0	92.3	75	125				

Sample ID: **N003860-024B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167602**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18244.250	50	20000	0	91.2	75	125	18470	1.23	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		

Advanced Technology Laboratories
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CLIENT: CH2M HILL
Work Order: N003879
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: MB-34170	SampType: MBLK	TestCode: 6010_WDPG	Units: µg/L	Prep Date: 3/18/2010	RunNo: 76090
Client ID: PBW	Batch ID: 34170	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 3/22/2010	SeqNo: 1167747

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: LCS2-34170	SampType: LCS	TestCode: 6010_WDPG	Units: µg/L	Prep Date: 3/18/2010	RunNo: 76090
Client ID: LCSW	Batch ID: 34170	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 3/22/2010	SeqNo: 1167748

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	14361.148	2500	15000	0	95.7	85	115				
Sodium	14403.292	2500	15000	0	96.0	85	115				

Sample ID: N003860-024B-MS2	SampType: MS	TestCode: 6010_WDPG	Units: µg/L	Prep Date: 3/18/2010	RunNo: 76090
Client ID: ZZZZZZ	Batch ID: 34170	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 3/22/2010	SeqNo: 1167764

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	893369.054	500000	500000	236700	131	75	125				S

Sample ID: N003860-024B-MSD	SampType: MSD	TestCode: 6010_WDPG	Units: µg/L	Prep Date: 3/18/2010	RunNo: 76090
Client ID: ZZZZZZ	Batch ID: 34170	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 3/22/2010	SeqNo: 1167765

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	644424.531	500000	500000	236700	81.5	75	125	893400	32.4	20	R

Sample ID: N003860-024B-MS2	SampType: MS	TestCode: 6010_WDPG	Units: µg/L	Prep Date: 3/18/2010	RunNo: 76090
Client ID: ZZZZZZ	Batch ID: 34170	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 3/22/2010	SeqNo: 1167847

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	592432.004	500000	500000	9465	117	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: N003879
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N003860-024B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76090**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167848**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	425492.841	500000	500000	9465	83.2	75	125	592400	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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ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	PGE-07BR-165
Lab Order:	N003879	**Collection Date:**	3/16/2010 1:18:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003879-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100317A**	QC Batch: **R76355**				PrepDate:		Analyst: **QBM**
Bromide	ND	0.30	5.0		mg/L	10	3/17/2010 12:50 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100317A**	QC Batch: **R76355**				PrepDate:		Analyst: **QBM**
Chloride	5900	430	1000		mg/L	2000	3/17/2010 11:25 AM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100317A**	QC Batch: **R76355**				PrepDate:		Analyst: **QBM**
Nitrogen, Nitrate (As N)	ND	0.48	5.0		mg/L	10	3/17/2010 12:50 PM
ANIONS BY ION CHROMATOGRAPHY							
				EPA 300.0			
RunID: **IC2_100317A**	QC Batch: **R76355**				PrepDate:		Analyst: **QBM**
Sulfate	650	26	100		mg/L	100	3/17/2010 11:46 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		

CLIENT: CH2M HILL
Work Order: N003879
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_BRPGE

Sample ID: **MB-R76355_BR** SampType: **MBLK** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **76355**
Client ID: **PBW** Batch ID: **R76355** TestNo: **EPA 300.0** Analysis Date: **3/17/2010** SeqNo: **1174785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Sample ID: **LCS-R76355_BR** SampType: **LCS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **76355**
Client ID: **LCSW** Batch ID: **R76355** TestNo: **EPA 300.0** Analysis Date: **3/17/2010** SeqNo: **1174786**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	2.428	0.50	2.500	0	97.1	85	115				

Sample ID: **N003879-001BMS** SampType: **MS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **76355**
Client ID: **ZZZZZZ** Batch ID: **R76355** TestNo: **EPA 300.0** Analysis Date: **3/17/2010** SeqNo: **1174791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	46.660	10	50.00	0	93.3	75	125				

Sample ID: **N003879-001BMSD** SampType: **MSD** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **76355**
Client ID: **ZZZZZZ** Batch ID: **R76355** TestNo: **EPA 300.0** Analysis Date: **3/17/2010** SeqNo: **1174792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	47.220	10	50.00	0	94.4	75	125	46.66	1.19	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: N003879
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: MB-R76355_CL	SampType: MBLK	TestCode: 300_W_CLPG	Units: mg/L	Prep Date:	RunNo: 76355
Client ID: PBW	Batch ID: R76355	TestNo: EPA 300.0		Analysis Date: 3/17/2010	SeqNo: 1174797

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: LCS-R76355_CL	SampType: LCS	TestCode: 300_W_CLPG	Units: mg/L	Prep Date:	RunNo: 76355
Client ID: LCSW	Batch ID: R76355	TestNo: EPA 300.0		Analysis Date: 3/17/2010	SeqNo: 1174798

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.400	0.50	2.500	0	96.0	85	115				

Sample ID: N003879-001BMS	SampType: MS	TestCode: 300_W_CLPG	Units: mg/L	Prep Date:	RunNo: 76355
Client ID: ZZZZZZ	Batch ID: R76355	TestNo: EPA 300.0		Analysis Date: 3/17/2010	SeqNo: 1174801

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	11022.000	1000	5000	5924	102	75	125				

Sample ID: N003879-001BMSD	SampType: MSD	TestCode: 300_W_CLPG	Units: mg/L	Prep Date:	RunNo: 76355
Client ID: ZZZZZZ	Batch ID: R76355	TestNo: EPA 300.0		Analysis Date: 3/17/2010	SeqNo: 1174802

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	11024.000	1000	5000	5924	102	75	125	11020	0.0181	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: N003879
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_NO3PGE

Sample ID: **MB-R76355_NO3** SampType: **MBLK** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **76355**
Client ID: **PBW** Batch ID: **R76355** TestNo: **EPA 300.0** Analysis Date: **3/17/2010** SeqNo: **1174809**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	ND	0.50									

Sample ID: **LCS-R76355_NO3** SampType: **LCS** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **76355**
Client ID: **LCSW** Batch ID: **R76355** TestNo: **EPA 300.0** Analysis Date: **3/17/2010** SeqNo: **1174810**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.415	0.50	2.500	0	96.6	85	115				

Sample ID: **N003879-001BMS** SampType: **MS** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **76355**
Client ID: **ZZZZZZ** Batch ID: **R76355** TestNo: **EPA 300.0** Analysis Date: **3/17/2010** SeqNo: **1174815**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	47.200	10	50.00	1.030	92.3	75	125				

Sample ID: **N003879-001BMSD** SampType: **MSD** TestCode: **300_W_NO3P** Units: **mg/L** Prep Date: RunNo: **76355**
Client ID: **ZZZZZZ** Batch ID: **R76355** TestNo: **EPA 300.0** Analysis Date: **3/17/2010** SeqNo: **1174816**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	47.560	10	50.00	1.030	93.1	75	125	47.20	0.760	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: N003879
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R76355_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **76355**
Client ID: **PBW** Batch ID: **R76355** TestNo: **EPA 300.0** Analysis Date: **3/17/2010** SeqNo: **1174821**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	1.0									

Sample ID: **LCS-R76355_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **76355**
Client ID: **LCSW** Batch ID: **R76355** TestNo: **EPA 300.0** Analysis Date: **3/17/2010** SeqNo: **1174822**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.697	1.0	5.000	0	93.9	85	115				

Sample ID: **N003879-001BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **76355**
Client ID: **ZZZZZZ** Batch ID: **R76355** TestNo: **EPA 300.0** Analysis Date: **3/17/2010** SeqNo: **1174825**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	9988.000	2000	10000	650.7	93.4	75	125				

Sample ID: **N003879-001BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **76355**
Client ID: **ZZZZZZ** Batch ID: **R76355** TestNo: **EPA 300.0** Analysis Date: **3/17/2010** SeqNo: **1174826**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	10012.000	2000	10000	650.7	93.6	75	125	9988	0.240	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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT: CH2M HILL
Lab Order: N003879
Project: PG&E Topock
Lab ID: N003879-001

Client Sample ID: PGE-07BR-165
Collection Date: 3/16/2010 1:18:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **WETCHEM_100322A**	QC Batch: **R76321**				PrepDate:		Analyst: **QBM**
Alkalinity, Bicarbonate (As CaCO3)	6.8	1.9	5.0		mg/L	1	3/22/2010
Alkalinity, Carbonate (As CaCO3)	ND	1.9	5.0		mg/L	1	3/22/2010
Alkalinity, Hydroxide (As CaCO3)	ND	1.9	5.0		mg/L	1	3/22/2010
Alkalinity, Total (As CaCO3)	6.8	1.9	5.0		mg/L	1	3/22/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N003879
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID: **LCS-1** SampType: **LCS** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **76321**
Client ID: **LCSW** Batch ID: **R76321** TestNo: **SM 2320 B** Analysis Date: **3/22/2010** SeqNo: **1174003**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	100.195	5.0	100.0	0	100	80	120				
Alkalinity, Total (As CaCO3)	100.195	5.0	100.0	0	100	80	120				

Sample ID: **LCSD-1** SampType: **LCSD** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **76321**
Client ID: **LCSS02** Batch ID: **R76321** TestNo: **SM 2320 B** Analysis Date: **3/22/2010** SeqNo: **1174004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	100.195	5.0	100.0	0	100	80	120	100.2	0	20	
Alkalinity, Total (As CaCO3)	100.195	5.0	100.0	0	100	80	120	100.2	0	20	

Sample ID: **MB-1** SampType: **MBLK** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **76321**
Client ID: **PBW** Batch ID: **R76321** TestNo: **SM 2320 B** Analysis Date: **3/22/2010** SeqNo: **1174005**

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: **N003879-001C-MS** SampType: **MS** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **76321**
Client ID: **ZZZZZZ** Batch ID: **R76321** TestNo: **SM 2320 B** Analysis Date: **3/22/2010** SeqNo: **1174008**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	76.848	5.0	100.0	6.809	70.0	80	120				S
Alkalinity, Total (As CaCO3)	92.412	5.0	100.0	6.809	85.6	80	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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CLIENT: CH2M HILL
Work Order: N003879
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID: **N003879-001C-MSD** SampType: **MSD** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **76321**
Client ID: **ZZZZZZ** Batch ID: **R76321** TestNo: **SM 2320 B** Analysis Date: **3/22/2010** SeqNo: **1174009**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	72.957	5.0	100.0	6.809	66.1	80	120	76.85	5.19	20	S
Alkalinity, Total (As CaCO3)	92.412	5.0	100.0	6.809	85.6	80	120	92.41	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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CHAIN OF CUSTODY RECORD

[2010-GMP-165-Q1]

COC Number
Turnaround Time 10 Days
Date 3-16-10 Page 1 OF 1

COMPANY E2
PROJECT PG&E Topock
ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612
PHONE (530) 229-3303 FAX (530) 339-3303
P.O. NUM 390378.MP.02.GM.04 TEAM 1
SAMPLERS (SIGNATURE

Container:	500 ml Poly	250 ml Poly	250 ml Poly	250 ml Poly	1 Liter Poly	1 Liter Poly	1 Liter Poly	3 x 40 ml VOA
Preservatives:	HNO3	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	H3PO4, 4°C
Filtered:	NA	Field	Field	Field	NA	NA	NA	Field
Holding Time:	7	180	180	180	28	2	28	0
	Arsenic (6020)	Metals (6010BFF) Field Filtered Ca,Mg,K,Na,B,Fe,Mn	Metals (6010BFF) Field Filtered Title 22,Ca,Mg,Na,Fe,Mn	Metals (7470ADisField) Field Filtered	Specific Conductance (E120.1)	Anions (E300.0) Bromide,Chloride,Sulfate,Nitrate	Alkalinity (SM2320B)	TOC (SM5310C) Field Filtered

SAMPLE I.D.	DATE	TIME	Matrix	Arsenic (6020)	Metals (6010BFF) Field Filtered Ca,Mg,K,Na,B,Fe,Mn	Metals (6010BFF) Field Filtered Title 22,Ca,Mg,Na,Fe,Mn	Metals (7470ADisField) Field Filtered	Specific Conductance (E120.1)	Anions (E300.0) Bromide,Chloride,Sulfate,Nitrate	Alkalinity (SM2320B)	TOC (SM5310C) Field Filtered	Number of Containers	COMMENTS
PGE-07BR-165	3-16-10	1318	Water		X				X	X		3	

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Collom	CH2M Hill	3-16-10 1530
Signature (Received) Kristopher Everett	Kris Everett	ATL	3-16-10 1530
Signature (Relinquished) Kristopher Everett	Kris Everett	ATL	3-16-10 17:45
Signature (Received)	MARION CARTIN	ATL	3/16/10 1745
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ 2.7°C °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

Advanced Technology Laboratories - Las Vegas

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 (562) 989-4045.

Sample Receipt Checklist

Client Name: **CH2M HILL-OAKLAND**

Date Time Received: **3/16/2010 6:04:47 PM**

Work Order Number: **N003879**

Received by: **MBC**

Cooler Temp (Deg C): 2.7

Checklist completed by: Signature _____ Date 3/19/10

Reviewed by: Initials CJ Date 3/20/10

Carrier name: ATL

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact 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. Container/Temp Blank temperature within acceptance 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 ☐

Comments:

Advanced Technology Laboratories - Las Vegas

WORK ORDER Summary

16-Mar-10

WorkOrder: N003879

Client ID: CH2M HILL-OAKLAND

Project: PG&E Topock

QC Level: Level IV

Date Received: 3/16/2010

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N003879-001A	PGE-07BR-165	3/16/2010 1:18:00 PM	3/22/2010	Water	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/22/2010		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
N003879-001B			3/22/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/22/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/22/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/22/2010		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N003879-001C			3/22/2010		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
N003879-002A	Folder		3/22/2010		Folder	Folder	☐	☐	☐	LAB

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N003892

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS

Samples were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

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Advanced Technology Laboratories - Las Vega

Date: *19-Apr-10*

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N003892
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N003892-001A	TW-01-165	Water	3/15/2010 5:28:00 PM	3/17/2010	4/19/2010
N003892-002A	MW-31-60-165	Water	3/16/2010 8:30:00 AM	3/17/2010	4/19/2010
N003892-003A	MW-16-165	Water	3/16/2010 10:11:00 AM	3/17/2010	4/19/2010
N003892-003B	MW-16-165	Water	3/16/2010 10:11:00 AM	3/17/2010	4/19/2010
N003892-004A	MW-35-060-165	Water	3/16/2010 11:01:00 AM	3/17/2010	4/19/2010
N003892-005A	MW-97-165	Water	3/16/2010 9:23:00 AM	3/17/2010	4/19/2010
N003892-006A	MW-35-135-165	Water	3/16/2010 11:47:00 AM	3/17/2010	4/19/2010
N003892-007A	MW-47-055-165	Water	3/16/2010 12:43:00 PM	3/17/2010	4/19/2010
N003892-008A	MW-57-070-165	Water	3/16/2010 3:16:00 PM	3/17/2010	4/19/2010
N003892-009A	MW-62-065-165	Water	3/16/2010 5:22:00 PM	3/17/2010	4/19/2010
N003892-010A	MW-61-110-165	Water	3/17/2010 8:47:00 AM	3/17/2010	4/19/2010
N003892-011A	MW-60-125-165	Water	3/17/2010 11:15:00 AM	3/17/2010	4/19/2010
N003892-012A	MW-20-070-165	Water	3/17/2010 12:10:00 PM	3/17/2010	4/19/2010
N003892-013A	MW-26-165	Water	3/17/2010 12:57:00 PM	3/17/2010	4/19/2010
N003892-014A	MW-51-165	Water	3/17/2010 2:05:00 PM	3/17/2010	4/19/2010

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ANALYTICAL RESULTS

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Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	TW-01-165
Lab Order:	N003892	**Collection Date:**	3/15/2010 5:28:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319B**	QC Batch: **R76217**				PrepDate:		Analyst: **QBM**
Specific Conductance	7100	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-31-60-165
Lab Order:	N003892	**Collection Date:**	3/16/2010 8:30:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319B**	QC Batch: **R76217**				PrepDate:		Analyst: **QBM**
Specific Conductance	3100	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:	B	Analyte detected in 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 - Las Vegas

Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-16-165
Lab Order:	N003892	**Collection Date:**	3/16/2010 10:11:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319B**	QC Batch: **R76217**				PrepDate:		Analyst: **QBM**
Specific Conductance	1200	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-35-060-165
Lab Order:	N003892	**Collection Date:**	3/16/2010 11:01:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319B**	QC Batch: **R76217**				PrepDate:		Analyst: **QBM**
Specific Conductance	6600	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:	B	Analyte detected in 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

Advanced Technology Laboratories - Las Vegas

Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-97-165
Lab Order:	N003892	**Collection Date:**	3/16/2010 9:23:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319B**	QC Batch: **R76217**				PrepDate:		Analyst: **QBM**
Specific Conductance	6500	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:	B	Analyte detected in 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 - Las Vegas

Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-35-135-165
Lab Order:	N003892	**Collection Date:**	3/16/2010 11:47:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319B**	QC Batch: **R76217**				PrepDate:		Analyst: **QBM**
Specific Conductance	9900	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-47-055-165
Lab Order:	N003892	**Collection Date:**	3/16/2010 12:43:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319B**	QC Batch: **R76217**				PrepDate:		Analyst: **QBM**
Specific Conductance	4000	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:	B	Analyte detected in 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-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-57-070-165
Lab Order:	N003892	**Collection Date:**	3/16/2010 3:16:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319B**	QC Batch: **R76217**				PrepDate:		Analyst: **QBM**
Specific Conductance	1200	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-62-065-165
Lab Order:	N003892	**Collection Date:**	3/16/2010 5:22:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319B**	QC Batch: **R76217**				PrepDate:		Analyst: **QBM**
Specific Conductance	6000	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:	B	Analyte detected in 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 - Las Vegas

Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-61-110-165
Lab Order:	N003892	**Collection Date:**	3/17/2010 8:47:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319B**	QC Batch: **R76217**				PrepDate:		Analyst: **QBM**
Specific Conductance	15000	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:	B	Analyte detected in 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 - Las Vegas

Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-60-125-165
Lab Order:	N003892	**Collection Date:**	3/17/2010 11:15:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319C**	QC Batch: **R76218**				PrepDate:		Analyst: **QBM**
Specific Conductance	8800	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:	B	Analyte detected in 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 - Las Vegas

Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-20-070-165
Lab Order:	N003892	**Collection Date:**	3/17/2010 12:10:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319C**	QC Batch: **R76218**				PrepDate:		Analyst: **QBM**
Specific Conductance	3200	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *26-May-10*

CLIENT: CH2M HILL
Lab Order: N003892
Project: PG&E Topock
Lab ID: N003892-013

Client Sample ID: MW-26-165
Collection Date: 3/16/2010 12:57:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319C**	QC Batch: **R76218**				PrepDate:		Analyst: **QBM**
Specific Conductance	4000	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-51-165
Lab Order:	N003892	**Collection Date:**	3/17/2010 2:05:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319C**	QC Batch: **R76218**				PrepDate:		Analyst: **QBM**
Specific Conductance	11000	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N003892
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_W

Sample ID: **LCS-R76217** SampType: **LCS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76217**
Client ID: **LCSW** Batch ID: **R76217** TestNo: **EPA 120.1** Analysis Date: **3/19/2010** SeqNo: **1171104**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1445.000	0.10	1412	0	102	85	115				

Sample ID: **N003892-002AMS** SampType: **MS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76217**
Client ID: **ZZZZZZ** Batch ID: **R76217** TestNo: **EPA 120.1** Analysis Date: **3/19/2010** SeqNo: **1171108**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	4600.000	0.20	1412	3120	105	75	125				

Sample ID: **N003892-002AMSD** SampType: **MSD** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76217**
Client ID: **ZZZZZZ** Batch ID: **R76217** TestNo: **EPA 120.1** Analysis Date: **3/19/2010** SeqNo: **1171109**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	4620.000	0.20	1412	3120	106	75	125	4600	0.434	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: N003892
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_W

Sample ID: LCS-R76218	SampType: LCS	TestCode: 120.1_W	Units: µmhos/cm	Prep Date:	RunNo: 76218
Client ID: LCSW	Batch ID: R76218	TestNo: EPA 120.1		Analysis Date: 3/19/2010	SeqNo: 1171118

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	10000.000	0.10	9969	0	100	85	115				

Sample ID: N003898-003AMS	SampType: MS	TestCode: 120.1_W	Units: µmhos/cm	Prep Date:	RunNo: 76218
Client ID: ZZZZZZ	Batch ID: R76218	TestNo: EPA 120.1		Analysis Date: 3/19/2010	SeqNo: 1171127

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	30660.000	0.20	9969	19090	116	75	125				

Sample ID: N003898-003AMSD	SampType: MSD	TestCode: 120.1_W	Units: µmhos/cm	Prep Date:	RunNo: 76218
Client ID: ZZZZZZ	Batch ID: R76218	TestNo: EPA 120.1		Analysis Date: 3/19/2010	SeqNo: 1171128

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	30580.000	0.20	9969	19090	115	75	125	30660	0.261	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 - Las Vegas

ANALYTICAL RESULTS

Print Date: *19-Apr-10*

CLIENT: CH2M HILL
Lab Order: N003892
Project: PG&E Topock
Lab ID: N003892-003

Client Sample ID: MW-16-165
Collection Date: 3/16/2010 10:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **ICP1_100320E**	QC Batch: **34170**				PrepDate:	**3/18/2010**	Analyst: **NS**
Aluminum	ND	22	50		µg/L	1	3/20/2010 06:35 PM
Antimony	ND	2.7	10		µg/L	1	3/20/2010 06:35 PM
Barium	27	0.25	3.0		µg/L	1	3/20/2010 06:35 PM
Beryllium	ND	0.58	1.0		µg/L	1	3/20/2010 06:35 PM
Boron	300	14	100		µg/L	1	3/20/2010 06:35 PM
Cadmium	ND	0.23	3.0		µg/L	1	3/20/2010 06:35 PM
Calcium	28000	72	500		µg/L	1	3/20/2010 06:35 PM
Cobalt	ND	0.25	3.0		µg/L	1	3/20/2010 06:35 PM
Copper	ND	2.6	5.0		µg/L	1	3/20/2010 06:35 PM
Iron	ND	7.0	20		µg/L	1	3/20/2010 06:35 PM
Lead	ND	1.6	10		µg/L	1	3/20/2010 06:35 PM
Magnesium	4700	18	100		µg/L	1	3/20/2010 06:35 PM
Manganese	ND	0.96	10		µg/L	1	3/22/2010 11:47 AM
Molybdenum	13	1.0	5.0		µg/L	1	3/20/2010 06:35 PM
Nickel	ND	0.95	5.0		µg/L	1	3/20/2010 06:35 PM
Silver	ND	0.84	3.0		µg/L	1	3/20/2010 06:35 PM
Vanadium	30	0.45	3.0		µg/L	1	3/20/2010 06:35 PM
Zinc	ND	2.1	10		µg/L	1	3/20/2010 06:35 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		

CLIENT: CH2M HILL
Work Order: N003892
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-34170** SampType: **MBLK** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **PBW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167309**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	50									
Antimony	ND	10									
Barium	ND	3.0									
Beryllium	ND	1.0									
Boron	69.563	100									
Cadmium	ND	3.0									
Calcium	79.991	500									
Cobalt	ND	3.0									
Copper	ND	5.0									
Iron	ND	20									
Lead	ND	10									
Magnesium	ND	100									
Molybdenum	ND	5.0									
Nickel	ND	5.0									
Silver	ND	3.0									
Vanadium	ND	3.0									
Zinc	ND	10									

Sample ID: **LCS-34170** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **LCSW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167310**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	18417.971	50	20000	0	92.1	85	115				
Antimony	897.864	10	1000	0	89.8	85	115				
Barium	921.778	3.0	1000	0	92.2	85	115				
Beryllium	891.919	1.0	1000	0	89.2	85	115				
Boron	8932.906	100	10000	0	89.3	85	115				
Cadmium	892.903	3.0	1000	0	89.3	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: N003892
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **LCS-34170** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **LCSW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167310**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	18979.398	500	20000	0	94.9	85	115				
Cobalt	901.593	3.0	1000	0	90.2	85	115				
Copper	929.610	5.0	1000	0	93.0	85	115				
Iron	18015.112	20	20000	0	90.1	85	115				
Lead	892.856	10	1000	0	89.3	85	115				
Magnesium	17740.117	100	20000	0	88.7	85	115				
Molybdenum	900.758	5.0	1000	0	90.1	85	115				
Nickel	897.342	5.0	1000	0	89.7	85	115				
Silver	906.512	3.0	1000	0	90.7	85	115				
Vanadium	914.194	3.0	1000	0	91.4	85	115				
Zinc	891.008	10	1000	0	89.1	85	115				

Sample ID: **N003860-024B-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	19035.445	250	20000	36.22	95.0	75	125				
Antimony	2270.762	50	2500	0	90.8	75	125				
Barium	2371.328	15	2500	20.54	94.0	75	125				
Beryllium	2290.394	5.0	2500	0	91.6	75	125				
Boron	9209.096	500	10000	265.5	89.4	75	125				
Cadmium	2250.324	15	2500	0	90.0	75	125				
Calcium	101563.350	2500	20000	81310	101	75	125				
Cobalt	2299.925	15	2500	0	92.0	75	125				
Copper	2341.863	25	2500	0	93.7	75	125				
Iron	18928.145	100	20000	42.40	94.4	75	125				
Lead	2241.560	50	2500	0	89.7	75	125				
Magnesium	28972.830	500	20000	9946	95.1	75	125				
Molybdenum	2350.114	25	2500	22.51	93.1	75	125				
Nickel	2280.291	25	2500	0	91.2	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: N003892
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N003860-024B-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	2263.675	15	2500	0	90.5	75	125				
Vanadium	2348.289	15	2500	5.273	93.7	75	125				
Zinc	2262.288	50	2500	24.89	89.5	75	125				

Sample ID: **N003860-024B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76073**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/20/2010** SeqNo: **1167318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	18868.937	250	20000	36.22	94.2	75	125	19040	0.879	20	
Antimony	2235.561	50	2500	0	89.4	75	125	2271	1.56	20	
Barium	2353.018	15	2500	20.54	93.3	75	125	2371	0.775	20	
Beryllium	2268.831	5.0	2500	0	90.8	75	125	2290	0.946	20	
Boron	9175.206	500	10000	265.5	89.1	75	125	9209	0.369	20	
Cadmium	2236.096	15	2500	0	89.4	75	125	2250	0.634	20	
Calcium	98988.778	2500	20000	81310	88.4	75	125	101600	2.57	20	
Cobalt	2284.636	15	2500	0	91.4	75	125	2300	0.667	20	
Copper	2317.464	25	2500	0	92.7	75	125	2342	1.05	20	
Iron	18772.012	100	20000	42.40	93.6	75	125	18930	0.828	20	
Lead	2200.902	50	2500	0	88.0	75	125	2242	1.83	20	
Magnesium	28745.887	500	20000	9946	94.0	75	125	28970	0.786	20	
Molybdenum	2305.431	25	2500	22.51	91.3	75	125	2350	1.92	20	
Nickel	2262.162	25	2500	0	90.5	75	125	2280	0.798	20	
Silver	2239.978	15	2500	0	89.6	75	125	2264	1.05	20	
Vanadium	2325.294	15	2500	5.273	92.8	75	125	2348	0.984	20	
Zinc	2245.791	50	2500	24.89	88.8	75	125	2262	0.732	20	

Sample ID: **MB-34170** SampType: **MBLK** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **PBW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167594**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in 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: N003892
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-34170** SampType: **MBLK** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **PBW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167594**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	10									

Sample ID: **LCS-34170** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **LCSW** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167595**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18384.756	10	20000	0	91.9	85	115				

Sample ID: **N003860-024B-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167601**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18469.337	50	20000	0	92.3	75	125				

Sample ID: **N003860-024B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/18/2010** RunNo: **76085**
Client ID: **ZZZZZZ** Batch ID: **34170** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/22/2010** SeqNo: **1167602**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18244.250	50	20000	0	91.2	75	125	18470	1.23	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 - Las Vegas

Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-16-165
Lab Order:	N003892	**Collection Date:**	3/16/2010 10:11:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP-MS METALS							
	EPA 3010A			**EPA 6020**			
RunID: **ICP4_100416A**	QC Batch: **34407**				PrepDate:	**4/15/2010**	Analyst: **JT**
Selenium	3.2	0.29	0.50		µg/L	1	4/16/2010
Thallium	ND	0.015	0.50		µg/L	1	4/16/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N003892
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N003892-003B-MS** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **4/15/2010** RunNo: **76455**
Client ID: **ZZZZZZ** Batch ID: **34407** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **4/16/2010** SeqNo: **1177193**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	26.830	1.0	25.00	3.243	94.4	70	130				
Thallium	21.218	1.0	25.00	0.05625	84.6	70	130				

Sample ID: **N003892-003B-MSD** SampType: **MSD** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **4/15/2010** RunNo: **76455**
Client ID: **ZZZZZZ** Batch ID: **34407** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **4/16/2010** SeqNo: **1177194**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	28.208	1.0	25.00	3.243	99.9	70	130	26.83	5.01	20	
Thallium	22.618	1.0	25.00	0.05625	90.2	70	130	21.22	6.39	20	

Sample ID: **MB-34407** SampType: **MBLK** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **4/15/2010** RunNo: **76455**
Client ID: **PBW** Batch ID: **34407** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **4/16/2010** SeqNo: **1177195**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	0.366	0.50									
Thallium	0.044	0.50									

Sample ID: **LCS-34407** SampType: **LCS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **4/15/2010** RunNo: **76455**
Client ID: **LCSW** Batch ID: **34407** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **4/16/2010** SeqNo: **1177196**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	12.284	0.50	12.50	0	98.3	85	115				
Thallium	11.718	0.50	12.50	0	93.7	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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ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *19-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-16-165
Lab Order:	N003892	**Collection Date:**	3/16/2010 10:11:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003892-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 7470			**EPA 7470A**				
RunID: **AA1_100329C**	QC Batch: **34250**				PrepDate:	**3/26/2010**	Analyst: **JT**
Mercury	ND	0.049	0.20		µg/L	1	3/29/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N003892
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 7470_W_DISSPGE

Sample ID:	LCS-34250	SampType:	LCS	TestCode:	7470_W_DIS	Units:	µg/L	Prep Date:	3/26/2010	RunNo:	76249
Client ID:	LCSW	Batch ID:	34250	TestNo:	EPA 7470A	EPA 7470		Analysis Date:	3/29/2010	SeqNo:	1171943

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.270	0.20	10.00	0	103	85	115				

Sample ID:	MB-34250	SampType:	MBLK	TestCode:	7470_W_DIS	Units:	µg/L	Prep Date:	3/26/2010	RunNo:	76249
Client ID:	PBW	Batch ID:	34250	TestNo:	EPA 7470A	EPA 7470		Analysis Date:	3/29/2010	SeqNo:	1171945

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID:	N003892-003B-MS	SampType:	MS	TestCode:	7470_W_DIS	Units:	µg/L	Prep Date:	3/26/2010	RunNo:	76249
Client ID:	ZZZZZZ	Batch ID:	34250	TestNo:	EPA 7470A	EPA 7470		Analysis Date:	3/29/2010	SeqNo:	1171950

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	23.324	0.20	20.00	0	117	75	125				

Sample ID:	N003892-003B-MSD	SampType:	MSD	TestCode:	7470_W_DIS	Units:	µg/L	Prep Date:	3/26/2010	RunNo:	76249
Client ID:	ZZZZZZ	Batch ID:	34250	TestNo:	EPA 7470A	EPA 7470		Analysis Date:	3/29/2010	SeqNo:	1171951

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	22.770	0.20	20.00	0	114	75	125	23.32	2.41	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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ATL #3

Advanced Technology Laboratories
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CHAIN OF CUSTODY RECORD

[2010-GMP-165-Q1]

COC Number

Turnaround Time 10 Days

Date 3-17-10 Page 1 OF 2

COMPANY E2

PROJECT PG&E Topock

ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612

PHONE (530) 229-3303 FAX (530) 339-3303

P.O. NUM 390378.MP.02.GM.04 TEAM 1

SAMPLERS (SIGNATURE

Container:	500 ml Poly	250 ml Poly	250 ml Poly	250 ml Poly	1 Liter Poly	1 Liter Poly	1 Liter Poly	3 x 40 ml VOA	1 500 poly
Preservatives:	HNO3	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	H3PO4, 4°C	HNO3
Filtered:	NA	Field	Field	Field	NA	NA	NA	Field	field
Holding Time:	7	180	180	180	28	2	28	0	180
	Arsenic (6020)	Metals (6010BFF) Field Filtered Ca,Mg,K,Na,B,Fe,Mn	Metals (6010BFF) Field Filtered Title 22,Ca,Mg,Na,Fe,Mn	Metals (7470ADisField) Field Filtered	Specific Conductance (E120.1)	Anions (E300.0) Bromide,Chloride,Sulfate,Nitrate	Alkalinity (SM2320B)	TOC (SM5310C) Field Filtered	Metals 6010BFF Background study suite

SAMPLE I.D.	DATE	TIME	Matrix	Arsenic (6020)	Metals (6010BFF) Field Filtered Ca,Mg,K,Na,B,Fe,Mn	Metals (6010BFF) Field Filtered Title 22,Ca,Mg,Na,Fe,Mn	Metals (7470ADisField) Field Filtered	Specific Conductance (E120.1)	Anions (E300.0) Bromide,Chloride,Sulfate,Nitrate	Alkalinity (SM2320B)	TOC (SM5310C) Field Filtered	Metals 6010BFF Background study suite	Number of Containers	COMMENTS
TW-01-165	3-15-10	1728	Water					X					1	
MW-31-60-165	3-16-10	0830						X					1	
MW-16-165		1011						X				X	2	
MW-35-060-165		1101						X					1	
MW-97-165		0923						X					1	
MW-35-135-165		1147						X					1	
MW-47-055-165		1243						X					1	
MW-57-070-165		1516						X					1	
MW-62-065-165		1722						X					1	

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Collom	CH2M Hill	3-17-10 1510
Signature (Received) Kristy Everett	Kris Everett	ATL	3-17-10 1510
Signature (Relinquished) Kristy Everett	Kris Everett	ATL	3-17-10 1745
Signature (Received)	MARLON CANTIN	ATL	3/17/10 @ 1746
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

ATL # 3

Advanced Technology Laboratories
3151 W.Post Road, Las Vegas, NV 89118
(702) 307-2659 FAX: (702) 307-2691

CHAIN OF CUSTODY RECORD

[2010-GMP-165-Q1]

COC Number N003892
Turnaround Time 10 Days
Date 3-17-10 Page 2 OF 2

COMPANY E2
PROJECT PG&E Topock
ADDRESS 155 Grand Ave Ste 1000, Oakland, CA 94612
PHONE (530) 229-3303 FAX (530) 339-3303
P.O. NUM 390378.MP.02.GM.04 TEAM 1
SAMPLERS (SIGNATURE)

Container	500 ml Poly	250 ml Poly	250 ml Poly	250 ml Poly	1 Liter Poly	1 Liter Poly	1 Liter Poly	3 x 40 ml VOA
Preservatives	HNO3	HNO3 4°C	HNO3 4°C	HNO3 4°C	4°C	4°C	4°C	H3PO4 4°C
Filtered	NA	Field	Field	Field	NA	NA	NA	Field
Holding Time	7	180	180	180	28	2	28	0
	Arsenic (6020)	Metals (6010BFF) Field Filtered Ca,Mg,K,Na,B,Fe,Mn	Metals (6010BFF) Field Filtered Title 22 Ca Mg Na Fe Mn	Metals (7470A/Cr6 Field) Field Filtered	Specific Conductance (E120.1)	Anions (E300.0) Bromide,Chloride,Sulfate,Nitrate,Nitrite	Alkalinity (SM2320B)	TOC (SM5310C) Field Filtered

SAMPLE I.D.	DATE	TIME	Matrix	Number of Containers	COMMENTS
MW-61-110-165	3-17-10	0847	Water	1	
MW-60-125-165		1115		1	
MW-70-070-165		1210		1	
MW-26-165		1257		1	
MW-51-165		1405		1	

Note: the sampling date for MW-26-165 is 3/16/10. SPD 5/26/10

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Collom	CH2M Hill	3-17-10 1510
Signature (Received)	Kris Everett	ATL	3-17-10 1510
Signature (Relinquished)	Kris Everett	ATL	3-17-10 1745
Signature (Received)	MARLON CARPIN	ATL	3/17/10 2174L
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

Revision 1, 5/26/2010

ATL # 3

Advanced Technology Laboratories
3151 W.Post Road, Las Vegas, NV 89118
(702) 307-2659 FAX: (702) 307-2691

CHAIN OF CUSTODY RECORD

[2010-GMP-165-Q1]

COC Number
Turnaround Time 10 Days
Date 3-17-10 Page 2 OF 2

COMPANY E2
PROJECT PG&E Topock
ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612
PHONE (530) 229-3303 FAX (530) 339-3303
P.O. NUM 390378.MP.02.GM.04 TEAM 1
SAMPLERS (SIGNATURE

Container:	500 ml Poly	250 ml Poly	250 ml Poly	250 ml Poly	1 Liter Poly	1 Liter Poly	1 Liter Poly	3 x 40 ml VOA
Preservatives:	HNO3	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	H3PO4, 4°C
Filtered:	NA	Field	Field	Field	NA	NA	NA	Field
Holding Time:	7	180	180	180	28	2	28	0
	Arsenic (6020)	Metals (6010BFF) Field Filtered Ca,Mg,K,Na,B,Fe,Mn	Metals (6010BFF) Field Filtered Title 22,Ca,Mg,Na,Fe,Mn	Metals (7470ADisField) Field Filtered	Specific Conductance (E120.1)	Anions (E300.0) Bromide,Chloride,Sulfate,Nitrate	Alkalinity (SM2320B)	TOC (SM5310C) Field Filtered

SAMPLE I.D.	DATE	TIME	Matrix	Arsenic (6020)	Metals (6010BFF) Field Filtered Ca,Mg,K,Na,B,Fe,Mn	Metals (6010BFF) Field Filtered Title 22,Ca,Mg,Na,Fe,Mn	Metals (7470ADisField) Field Filtered	Specific Conductance (E120.1)	Anions (E300.0) Bromide,Chloride,Sulfate,Nitrate	Alkalinity (SM2320B)	TOC (SM5310C) Field Filtered	Number of Containers	COMMENTS
MW-61-110-165	3-17-10	0847	water					X				1	
MW-60-125-165		1115						X				1	
MW-20-070-165		1210						X				1	
MW-26-165		1257						X				1	
MW-51-165		1405						X				1	

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Collom	CH2M Hill	3-17-10 1510
Signature (Received) Kristy Everett	Kris Everett	ATL	3-17-10 1510
Signature (Relinquished) Kristy Everett	Kris Everett	ATL	3-17-10 1745
Signature (Received)	MARLON CARTIN	ATL	3/17/10 @1746
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

Advanced Technology Laboratories - Las Vegas

WORK ORDER Summary

17-Mar-10

WorkOrder: N003892

Client ID: CH2M HILL-OAKLAND

Project: PG&E Topock

QC Level: Level IV

Date Received: 3/17/2010

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N003892-001A	TW-01-165	3/15/2010 5:28:00 PM	3/23/2010	Water	EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-002A	MW-31-60-165	3/16/2010 8:30:00 AM	3/23/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-003A	MW-16-165	3/16/2010 10:11:00 AM	3/23/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-003B			3/23/2010		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA				WW
			3/23/2010		EPA 6010B	DISSOLVED METALS BY ICP				WW
			3/23/2010		EPA 7470	DISSOLVED MERCURY PREP				WW
			3/23/2010		EPA 7470A	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE				WW
N003892-004A	MW-35-060-165	3/16/2010 11:01:00 AM	3/23/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-005A	MW-97-165	3/16/2010 9:23:00 AM	3/23/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-006A	MW-35-135-165	3/16/2010 11:47:00 AM	3/23/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-007A	MW-47-055-165	3/16/2010 12:43:00 PM	3/23/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-008A	MW-57-070-165	3/16/2010 3:16:00 PM	3/23/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-009A	MW-62-065-165	3/16/2010 5:22:00 PM	3/23/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-010A	MW-61-110-165	3/17/2010 8:47:00 AM	3/23/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-011A	MW-60-125-165	3/17/2010 11:15:00 AM	3/23/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-012A	MW-20-070-165	3/17/2010 12:10:00 PM	3/23/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-013A	MW-26-165	3/17/2010 12:57:00 PM	3/23/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-014A	MW-51-165	3/17/2010 2:05:00 PM	3/23/2010		EPA 120.1	SPECIFIC CONDUCTANCE				WW
N003892-015A	FOLDER		3/23/2010		Folder	Folder				LAB

Advanced Technology Laboratories - Las Vegas

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 (562) 989-4045.

Sample Receipt Checklist

Client Name: **CH2M HILL-OAKLAND** Date Time Received: **3/17/2010 6:37:06 PM**

Work Order Number: **N003892** Received by: **MBC**

Cooler Temp (Deg C): 4.8

Checklist completed by: Signature 3/17/10 Date Reviewed by: Initials Date

Carrier name: ATL

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact 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. Container/Temp Blank temperature within acceptance 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 ☑

Comments:

Marlon Cartin

From: Shawn.Duffy@CH2M.com
Sent: Wednesday, March 17, 2010 7:19 PM
To: Marlon Cartin
Subject: RE: Sample Receiving Items N003892

Hi Marlon,

You should have received two samples (MW-16-165 and MW-17-165) for background Study metals List. I see that MW-16-165 is on the COC you got today, MW-17-165 may have the wrong list requested. As with all the samples this event please do not include As.

Background study metals: Al, Sb, ~~As~~, Ba, Be, B, Ca, Cd, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Th, V, Zn.

From: Marlon Cartin [mailto:marlon@atl-labs.com]
Sent: Wednesday, March 17, 2010 7:08 PM
To: Duffy, Shawn/RDD
Subject: Sample Receiving Items N003892

Hi Shawn!

Attached is the sample receiving items for the water sample of Topock that we picked-up today.

Thanks,

Marlon Cartin

Advanced Technology Laboratories, Inc.
www.atl-labs.com
Tel: (702) 307-2659 ext. 410
Fax: (702) 307-2691

Advanced Technology Laboratories, Inc. is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is certified by the State of California, ELAP and NELAP and State of Nevada. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates. *Advanced Technology Labs - Your Partner for Quality Environmental Testing*

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CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N003898

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Sample container 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

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories - Las Vegas

Date: *08-Apr-10*

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N003898
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N003898-001A	MW-59-100-165	Water	3/17/2010 3:23:00 PM	3/18/2010	4/8/2010
N003898-002A	MW-20-100-165	Water	3/17/2010 4:20:00 PM	3/18/2010	4/8/2010
N003898-003A	MW-50-200-165	Water	3/17/2010 5:13:00 PM	3/18/2010	4/8/2010
N003898-004A	MW-20-130-165	Water	3/18/2010 9:20:00 AM	3/18/2010	4/8/2010
N003898-005A	MW-19-165	Water	3/18/2010 10:28:00 AM	3/18/2010	4/8/2010

Advanced Technology Laboratories

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ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-59-100-165
Lab Order:	N003898	**Collection Date:**	3/17/2010 3:23:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003898-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319C**	QC Batch: **R76218**				PrepDate:		Analyst: **QBM**
Specific Conductance	12000	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-20-100-165
Lab Order:	N003898	**Collection Date:**	3/17/2010 4:20:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003898-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319C**	QC Batch: **R76218**				PrepDate:		Analyst: **QBM**
Specific Conductance	3300	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-50-200-165
Lab Order:	N003898	**Collection Date:**	3/17/2010 5:13:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003898-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319C**	QC Batch: **R76218**				PrepDate:		Analyst: **QBM**
Specific Conductance	19000	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-20-130-165
Lab Order:	N003898	**Collection Date:**	3/18/2010 9:20:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003898-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319C**	QC Batch: **R76218**				PrepDate:		Analyst: **QBM**
Specific Conductance	12000	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

Print Date: *08-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-19-165
Lab Order:	N003898	**Collection Date:**	3/18/2010 10:28:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N003898-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100319C**	QC Batch: **R76218**				PrepDate:		Analyst: **QBM**
Specific Conductance	2400	0.10	0.10		µmhos/cm	1	3/19/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N003898
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_W

Sample ID: **LCS-R76218** SampType: **LCS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76218**
Client ID: **LCSW** Batch ID: **R76218** TestNo: **EPA 120.1** Analysis Date: **3/19/2010** SeqNo: **1171118**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	10000.000	0.10	9969	0	100	85	115				

Sample ID: **N003898-003AMS** SampType: **MS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76218**
Client ID: **ZZZZZZ** Batch ID: **R76218** TestNo: **EPA 120.1** Analysis Date: **3/19/2010** SeqNo: **1171127**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	30660.000	0.20	9969	19090	116	75	125				

Sample ID: **N003898-003AMSD** SampType: **MSD** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76218**
Client ID: **ZZZZZZ** Batch ID: **R76218** TestNo: **EPA 120.1** Analysis Date: **3/19/2010** SeqNo: **1171128**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	30580.000	0.20	9969	19090	115	75	125	30660	0.261	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
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

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(702) 307-2659 FAX: (702) 307-2691

CHAIN OF CUSTODY RECORD

[2010-GMP-165-Q1]

COC Number
Turnaround Time 10 Days
Date 3-18-10 Page 1 OF 1

COMPANY E2
PROJECT PG&E Topock
ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612
PHONE (530) 229-3303 FAX (530) 339-3303
P.O. NUM 390378.MP.02.GM.04 TEAM 1
SAMPLERS (SIGNATURE

Container:	500 ml Poly	250 ml Poly	250 ml Poly	250 ml Poly	1 Liter Poly	1 Liter Poly	1 Liter Poly	3 x 40 ml VOA
Preservatives:	HNO3	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	H3PO4, 4°C
Filtered:	NA	Field	Field	Field	NA	NA	NA	Field
Holding Time:	7	180	180	180	28	2	28	0
	Arsenic (6020)	Metals (6010BFF) Field Filtered Ca,Mg,K,Na,B,Fe,Mn	Metals (6010BFF) Field Filtered Title 22,Ca,Mo,Na,Fe,Mn	Metals (7470ADisField) Field Filtered	Specific Conductance (E120.1)	Anions (E300.0) Bromide,Chloride,Sulfate,Nitrate	Alkalinity (SM2320B)	TOC (SM5310C) Field Filtered

SAMPLE I.D.	DATE	TIME	Matrix	Number of Containers	COMMENTS
MW-59-100-165	3-17-10	1523	Water	1	
MW-20-100-165		1620		1	
MW-50-200-165		1713		1	
MW-20-130-165	3-18-10	0920		1	
MW-19-165		1028		1	

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Collom	CH2M Hill	3-18-10 1450
Signature (Received)	Kris Everett	ATL	3-18-10 1450
Signature (Relinquished)	Kris Everett	ATL	3-18-10 17:50
Signature (Received)	MARLON CAPTIN	ATL	3/18/10 @ 1751
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ 3.1°C °F

CUSTODY SEALED YES ☐ NO ☑

SPECIAL REQUIREMENTS:

Advanced Technology Laboratories - Las Vegas

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 (562) 989-4045.

Sample Receipt Checklist

Client Name: **CH2M HILL-OAKLAND**

Date Time Received: **3/18/2010 8:43:29 PM**

Work Order Number: **N003898**

Received by: **MBC**

Cooler Temp (Deg C): 3.1

Checklist completed by: Signature _____ Date 3/18/10

Reviewed by: Initials _____ Date 3/21/10

Carrier name: ATL

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact 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. Container/Temp Blank temperature within acceptance 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 ☑

Comments:

Advanced Technology Laboratories - Las Vegas

WORK ORDER Summary

19-Mar-10

WorkOrder: N003898

Client ID: CH2M HILL-OAKLAND

Project: PG&E Topock

QC Level: Level IV

Date Received: 3/18/2010

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N003898-001A	MW-59-100-165	3/17/2010 3:23:00 PM	3/24/2010	Water	EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
N003898-002A	MW-20-100-165	3/17/2010 4:20:00 PM	3/24/2010		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
N003898-003A	MW-50-200-165	3/17/2010 5:13:00 PM	3/24/2010		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
N003898-004A	MW-20-130-165	3/18/2010 9:20:00 AM	3/24/2010		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
N003898-005A	MW-19-165	3/18/2010 10:28:00 AM	3/24/2010		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
N003898-006A	FOLDER		3/24/2010		Folder	Folder	☐	☐	☐	LAB

CASE NARRATIVE

Sample Receiving/General Comments

1. All sample containers were received intact with proper chain of custody documentation.
2. Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.
3. Sample preservation was verified upon receipt of samples, if applicable.
4. All samples were analyzed within method holding times.

Advanced Technology Laboratories *3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040*

Advanced Technology Laboratories

Date: *06-Apr-10*

CLIENT: Advanced Technology Laboratory-Las Vega
Project:
Lab Order: 110979
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
110979-001A	N003958-001D / MW-58BR-165	Water	3/25/2010 4:45:00 PM	3/30/2010	4/6/2010

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *06-Apr-10*

CLIENT:	Advanced Technology Laboratory-Las Vega	**Client Sample ID:**	N003958-001D / MW-58BR-165
Lab Order:	110979	**Collection Date:**	3/25/2010 4:45:00 PM
Project:		**Matrix:**	WATER
Lab ID:	110979-001A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON							
			SM5310B				
RunID: **TOC1_100330B**	QC Batch: **R119701**				PrepDate:		Analyst: **JSD**
Organic Carbon, Total	2.1	0.054	0.30		mg/L	1	3/30/2010 11:07 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
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *06-Apr-10*

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 110979
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: R119701

Sample ID: **MB-R119701** SampType: **MBLK** TestCode: **415_5310BP** Units: **mg/L** Prep Date: RunNo: **119701**
Client ID: **PBW** Batch ID: **R119701** TestNo: **SM5310B** Analysis Date: **3/30/2010** SeqNo: **1907983**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	ND	0.30									

Sample ID: **LCS-R119701** SampType: **LCS** TestCode: **415_5310BP** Units: **mg/L** Prep Date: RunNo: **119701**
Client ID: **LCSW** Batch ID: **R119701** TestNo: **SM5310B** Analysis Date: **3/30/2010** SeqNo: **1907984**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	4.968	0.30	5.000	0	99.4	85	115				

Sample ID: **110979-001A-MS** SampType: **MS** TestCode: **415_5310BP** Units: **mg/L** Prep Date: RunNo: **119701**
Client ID: **N003958-001D / MW** Batch ID: **R119701** TestNo: **SM5310B** Analysis Date: **3/30/2010** SeqNo: **1907986**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	7.553	0.30	5.000	2.068	110	75	125				

Sample ID: **110979-001A-MSD** SampType: **MSD** TestCode: **415_5310BP** Units: **mg/L** Prep Date: RunNo: **119701**
Client ID: **N003958-001D / MW** Batch ID: **R119701** TestNo: **SM5310B** Analysis Date: **3/30/2010** SeqNo: **1907987**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	7.262	0.30	5.000	2.068	104	75	125	7.553	3.93	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		

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:
Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California

TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler: Barry Collom

29-Mar-10

	Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests: SM 5310B		
11979-001	N003958-001D / MW-58BR-165	Water	3/25/2010 4:45:00 PM	VOA	1		

General Comments: Please email sample receipt acknowledgement to the PM.
Please use PO#:N003958 Please fax results by: Normal TAT. CH2MHILL sample.

		Date/Time			Date/Time
Relinquished by:		3/29/10	**Received by:**		3/30/10 8:35
Relinquished by:			**Received by:**		

Contrac 20

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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 (562) 989-4045.

Sample Receipt Checklist

Client Name: ATL-LV

Date Time Received: 3/30/2010 8:35:00 AM

Work Order Number: 110979

Received by: **MP**

Cooler Temp (Deg C): 3.0

Checklist completed by: [signature] 3/30/10 (Signature / Date)

Reviewed by: [initials] 3/30/10 (Initials / Date)

Carrier name: ontrac

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact 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. Container/Temp Blank temperature within acceptance 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 ☑

Comments:

April 20, 2010

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.: N004007

RE: PG&E Topock

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on April 08, 2010 by Advanced Technology Laboratories - Las Vegas . 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.
Jose Tenorio Jr.
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and 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
Lab Order: N004007

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 - Las Vega

Date: *20-Apr-10*

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N004007
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N004007-001A	MW-12-165	Water	4/6/2010 12:05:00 PM	4/8/2010	4/20/2010
N004007-001B	MW-12-165	Water	4/6/2010 12:05:00 PM	4/8/2010	4/20/2010
N004007-001C	MW-12-165	Water	4/6/2010 12:05:00 PM	4/8/2010	4/20/2010
N004007-002A	MW-90-165	Water	4/6/2010 1:05:00 PM	4/8/2010	4/20/2010
N004007-002B	MW-90-165	Water	4/6/2010 1:05:00 PM	4/8/2010	4/20/2010
N004007-002C	MW-90-165	Water	4/6/2010 1:05:00 PM	4/8/2010	4/20/2010
N004007-003A	MW-48-165	Water	4/8/2010 8:17:00 AM	4/8/2010	4/20/2010

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Advanced Technology Laboratories - Las Vegas

ANALYTICAL RESULTS

Print Date: *20-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-12-165
Lab Order:	N004007	**Collection Date:**	4/6/2010 12:05:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N004007-001C		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE						
				EPA 120.1		
RunID: WETCHEM_100409B	QC Batch: R76440			PrepDate:		Analyst: **CEI**
Specific Conductance	6700	0.10		µmhos/cm	1	4/9/2010

Qualifiers:	B	Analyte detected in 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 - Las Vegas

ANALYTICAL RESULTS

Print Date: *20-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-90-165
Lab Order:	N004007	**Collection Date:**	4/6/2010 1:05:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N004007-002C		

Analyses	Result	PQL	Qual	Uuits	DF	Date Analyzed
SPECIFIC CONDUCTANCE						
				EPA 120.1		
RunID: WETCHEM_100409B	QC Batch: R76440			PrepDate:		Analyst: **CEI**
Specific Conductance	6700	0.10		µmhos/cm	1	4/9/2010

Qualifiers:	B	Analyte detected in 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 - Las Vegas

ANALYTICAL RESULTS

Print Date: *20-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-48-165
Lab Order:	N004007	**Collection Date:**	4/8/2010 8:17:00 AM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N004007-003A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE						
				EPA 120.1		
RunID: WETCHEM_100409B	QC Batch: R76440			PrepDate:		Analyst: **CEI**
Specific Conductance	18000	0.10		µmhos/cm	1	4/9/2010

Qualifiers:				
	B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N004007
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_W

Sample ID: **LCS-R76440** SampType: **LCS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76440**
Client ID: **LCSW** Batch ID: **R76440** TestNo: **EPA 120.1** Analysis Date: **4/9/2010** SeqNo: **1176862**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	9550.000	0.10	9969	0	95.8	85	115				

Sample ID: **N004007-001CMS** SampType: **MS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76440**
Client ID: **ZZZZZZ** Batch ID: **R76440** TestNo: **EPA 120.1** Analysis Date: **4/9/2010** SeqNo: **1176865**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	16860.000	0.20	9969	6700	102	75	125				

Sample ID: **N004007-001CMSD** SampType: **MSD** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76440**
Client ID: **ZZZZZZ** Batch ID: **R76440** TestNo: **EPA 120.1** Analysis Date: **4/9/2010** SeqNo: **1176866**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	16840.000	0.20	9969	6700	102	75	125	16860	0.119	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 - Las Vegas

ANALYTICAL RESULTS

Print Date: *20-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-12-165
Lab Order:	N004007	**Collection Date:**	4/6/2010 12:05:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N004007-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
	EPA 3010A			**EPA 6010B**		
RunID: ICP1_100415A	QC Batch: 34408			PrepDate:	4/14/2010	Analyst: **NS**
Antimony	ND	10		µg/L	1	4/15/2010 11:33 AM
Barium	44	3.0		µg/L	1	4/15/2010 11:33 AM
Beryllium	ND	1.0		µg/L	1	4/15/2010 11:33 AM
Cadmium	ND	3.0		µg/L	1	4/15/2010 11:33 AM
Chromium	2000	1.0		µg/L	1	4/15/2010 11:33 AM
Cobalt	ND	3.0		µg/L	1	4/15/2010 11:33 AM
Copper	6.1	5.0		µg/L	1	4/15/2010 11:33 AM
Lead	ND	10		µg/L	1	4/15/2010 11:33 AM
Molybdenum	21	5.0		µg/L	1	4/15/2010 11:33 AM
Nickel	ND	5.0		µg/L	1	4/15/2010 11:33 AM
Silver	ND	3.0		µg/L	1	4/15/2010 11:33 AM
Vanadium	14	3.0		µg/L	1	4/15/2010 11:33 AM
Zinc	20	10		µg/L	1	4/15/2010 11:33 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 - Las Vegas

ANALYTICAL RESULTS

Print Date: *20-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-90-165
Lab Order:	N004007	**Collection Date:**	4/6/2010 1:05:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N004007-002A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
	EPA 3010A			**EPA 6010B**		
RunID: ICP1_100415A	QC Batch: 34408				PrepDate: 4/14/2010	Analyst: **NS**
Antimony	ND	10		µg/L	1	4/15/2010 11:39 AM
Barium	42	3.0		µg/L	1	4/15/2010 11:39 AM
Beryllium	ND	1.0		µg/L	1	4/15/2010 11:39 AM
Cadmium	ND	3.0		µg/L	1	4/15/2010 11:39 AM
Chromium	1900	1.0		µg/L	1	4/15/2010 11:39 AM
Cobalt	ND	3.0		µg/L	1	4/15/2010 11:39 AM
Copper	17	5.0		µg/L	1	4/15/2010 11:39 AM
Lead	ND	10		µg/L	1	4/15/2010 11:39 AM
Molybdenum	19	5.0		µg/L	1	4/15/2010 11:39 AM
Nickel	ND	5.0		µg/L	1	4/15/2010 11:39 AM
Silver	ND	3.0		µg/L	1	4/15/2010 11:39 AM
Vanadium	14	3.0		µg/L	1	4/15/2010 11:39 AM
Zinc	18	10		µg/L	1	4/15/2010 11:39 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		

CLIENT: CH2M HILL
Work Order: N004007
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-34408** SampType: **MBLK** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **4/14/2010** RunNo: **76453**
Client ID: **PBW** Batch ID: **34408** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **4/15/2010** SeqNo: **1177145**

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	0.095	3.0									
Chromium	ND	1.0									
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-34408** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **4/14/2010** RunNo: **76453**
Client ID: **LCSW** Batch ID: **34408** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **4/15/2010** SeqNo: **1177146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	941.919	10	1000	0	94.2	85	115				
Barium	942.673	3.0	1000	0	94.3	85	115				
Beryllium	940.301	1.0	1000	0	94.0	85	115				
Cadmium	942.319	3.0	1000	0	94.2	85	115				
Chromium	947.932	1.0	1000	0	94.8	85	115				
Cobalt	941.478	3.0	1000	0	94.1	85	115				
Copper	953.903	5.0	1000	0	95.4	85	115				
Lead	946.078	10	1000	0	94.6	85	115				
Molybdenum	942.328	5.0	1000	0	94.2	85	115				
Nickel	938.443	5.0	1000	0	93.8	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: N004007
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **LCS-34408** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **4/14/2010** RunNo: **76453**
Client ID: **LCSW** Batch ID: **34408** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **4/15/2010** SeqNo: **1177146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	906.419	3.0	1000	0	90.6	85	115				
Vanadium	948.681	3.0	1000	0	94.9	85	115				
Zinc	947.522	10	1000	0	94.8	85	115				

Sample ID: **N004007-001A-MS** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **4/14/2010** RunNo: **76453**
Client ID: **ZZZZZZ** Batch ID: **34408** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **4/15/2010** SeqNo: **1177150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2358.695	50	2500	9.366	94.0	75	125				
Barium	2360.090	15	2500	43.52	92.7	75	125				
Beryllium	2320.624	5.0	2500	0	92.8	75	125				
Cadmium	2348.101	15	2500	0	93.9	75	125				
Chromium	4262.692	5.0	2500	1980	91.3	75	125				
Cobalt	2319.673	15	2500	0	92.8	75	125				
Copper	2382.372	25	2500	6.129	95.0	75	125				
Lead	2287.619	50	2500	1.343	91.5	75	125				
Molybdenum	2367.151	25	2500	20.78	93.9	75	125				
Nickel	2302.712	25	2500	3.097	92.0	75	125				
Silver	2280.846	15	2500	0	91.2	75	125				
Vanadium	2345.737	15	2500	14.23	93.3	75	125				
Zinc	2396.245	50	2500	19.65	95.1	75	125				

Sample ID: **N004007-001A-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **4/14/2010** RunNo: **76453**
Client ID: **ZZZZZZ** Batch ID: **34408** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **4/15/2010** SeqNo: **1177151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2307.060	50	2500	9.366	91.9	75	125	2359	2.21	20	
Barium	2318.180	15	2500	43.52	91.0	75	125	2360	1.79	20	
Beryllium	2276.061	5.0	2500	0	91.0	75	125	2321	1.94	20	
Cadmium	2312.310	15	2500	0	92.5	75	125	2348	1.54	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		

CLIENT: CH2M HILL
Work Order: N004007
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N004007-001A-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **4/14/2010** RunNo: **76453**
Client ID: **ZZZZZZ** Batch ID: **34408** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **4/15/2010** SeqNo: **1177151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	4201.734	5.0	2500	1980	88.9	75	125	4263	1.44	20	
Cobalt	2277.551	15	2500	0	91.1	75	125	2320	1.83	20	
Copper	2339.279	25	2500	6.129	93.3	75	125	2382	1.83	20	
Lead	2241.204	50	2500	1.343	89.6	75	125	2288	2.05	20	
Molybdenum	2321.070	25	2500	20.78	92.0	75	125	2367	1.97	20	
Nickel	2266.835	25	2500	3.097	90.5	75	125	2303	1.57	20	
Silver	2243.694	15	2500	0	89.7	75	125	2281	1.64	20	
Vanadium	2307.241	15	2500	14.23	91.7	75	125	2346	1.65	20	
Zinc	2358.211	50	2500	19.65	93.5	75	125	2396	1.60	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		

Advanced Technology Laboratories
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories - Las Vegas

ANALYTICAL RESULTS

Print Date: *20-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-12-165
Lab Order:	N004007	**Collection Date:**	4/6/2010 12:05:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N004007-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP-MS METALS						
	EPA 3010A			**EPA 6020**		
RunID: ICP4_100413A	QC Batch: 34399			PrepDate:	4/12/2010	Analyst: JT
Arsenic	63	5.0		µg/L	5	4/13/2010
Selenium	10	2.5		µg/L	5	4/13/2010
Thallium	ND	0.50		µg/L	1	4/13/2010

Qualifiers:

B	Analyte detected in 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 - Las Vegas

ANALYTICAL RESULTS

Print Date: *20-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-90-165
Lab Order:	N004007	**Collection Date:**	4/6/2010 1:05:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N004007-002A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP-MS METALS						
	EPA 3010A			**EPA 6020**		
RunID: ICP4_100413A	QC Batch: 34399			PrepDate:	4/12/2010	Analyst: **JT**
Arsenic	63	5.0		µg/L	5	4/13/2010
Selenium	8.7	2.5		µg/L	5	4/13/2010
Thallium	ND	0.50		µg/L	1	4/13/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N004007
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N004018-003A-MS** SampType: **MS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **4/12/2010** RunNo: **76414**
Client ID: **ZZZZZZ** Batch ID: **34399** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **4/13/2010** SeqNo: **1176811**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	25.803	2.0	25.00	0	103	70	130				
Selenium	25.793	1.0	25.00	0.6412	101	70	130				
Thallium	23.655	1.0	25.00	0	94.6	70	130				

Sample ID: **N004018-003A-MSD** SampType: **MSD** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **4/12/2010** RunNo: **76414**
Client ID: **ZZZZZZ** Batch ID: **34399** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **4/13/2010** SeqNo: **1176812**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	25.913	2.0	25.00	0	104	70	130	25.80	0.425	20	
Selenium	26.015	1.0	25.00	0.6412	101	70	130	25.79	0.859	20	
Thallium	23.428	1.0	25.00	0	93.7	70	130	23.66	0.966	20	

Sample ID: **MB-34399** SampType: **MBLK** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **4/12/2010** RunNo: **76414**
Client ID: **PBW** Batch ID: **34399** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **4/13/2010** SeqNo: **1176830**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0									
Selenium	0.323	0.50									
Thallium	0.031	0.50									

Sample ID: **LCS-34399** SampType: **LCS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: **4/12/2010** RunNo: **76414**
Client ID: **LCSW** Batch ID: **34399** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **4/13/2010** SeqNo: **1176831**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.536	1.0	12.50	0	100	85	115				
Selenium	12.571	0.50	12.50	0	101	85	115				
Thallium	11.741	0.50	12.50	0	93.9	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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ANALYTICAL RESULTS

Print Date: *20-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-12-165
Lab Order:	N004007	**Collection Date:**	4/6/2010 12:05:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N004007-001B		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE						
EPA 7470				**EPA 7470A**		
RunID: AA1_100419A	QC Batch: 34414			PrepDate:	4/15/2010	Analyst: JT
Mercury	ND	0.20		µg/L	1	4/19/2010

Qualifiers:				
	B	Analyte detected in 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: *20-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	MW-90-165
Lab Order:	N004007	**Collection Date:**	4/6/2010 1:05:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N004007-002B		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE						
EPA 7470			**EPA 7470A**			
RunID: AA1_100419A	QC Batch: 34414			PrepDate:	4/15/2010	Analyst: **JT**
Mercury	ND	0.20		µg/L	1	4/19/2010

Qualifiers:				
	B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N004007
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 7470_W_DISSPGE

Sample ID: LCS-34414	SampType: LCS	TestCode: 7470_W_DIS	Units: µg/L	Prep Date: 4/15/2010	RunNo: 76466
Client ID: LCSW	Batch ID: 34414	TestNo: EPA 7470A	EPA 7470	Analysis Date: 4/19/2010	SeqNo: 1177381

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.579	0.20	10.00	0	95.8	85	115				

Sample ID: MB-34414	SampType: MBLK	TestCode: 7470_W_DIS	Units: µg/L	Prep Date: 4/15/2010	RunNo: 76466
Client ID: PBW	Batch ID: 34414	TestNo: EPA 7470A	EPA 7470	Analysis Date: 4/19/2010	SeqNo: 1177383

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID: N004007-002B-MS	SampType: MS	TestCode: 7470_W_DIS	Units: µg/L	Prep Date: 4/15/2010	RunNo: 76466
Client ID: ZZZZZZ	Batch ID: 34414	TestNo: EPA 7470A	EPA 7470	Analysis Date: 4/19/2010	SeqNo: 1177388

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	21.024	0.20	20.00	0	105	75	125				

Sample ID: N004007-002B-MSD	SampType: MSD	TestCode: 7470_W_DIS	Units: µg/L	Prep Date: 4/15/2010	RunNo: 76466
Client ID: ZZZZZZ	Batch ID: 34414	TestNo: EPA 7470A	EPA 7470	Analysis Date: 4/19/2010	SeqNo: 1177389

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	21.350	0.20	20.00	0	107	75	125	21.02	1.54	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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GMP ATL

CHAIN OF CUSTODY RECORD

COC Number

TURNAROUND TIME 7 days

DATE 4-8-10 PAGE 1 OF 1

COMPANY CH2M Hill

PROJECT NAME PG&E Topock

PHONE (530) 229-3303 FAX (530) 339-3303

ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612

P.O. NUMBER 390378.MP.02.GM.03 TEAM 1

SAMPLERS (SIGNATURE

SAMPLE I.D.	DATE	TIME	DESCRIPTION	E120.1 specific cond	SW 7470 Hg dis metals - field	SW 6010 BFE - field - filter 22	NUMBER OF CONTAINERS	COMMENTS
MW-12-165	4-6-10	1205	Water	X	X	X	3	
MW-90-165	"	1305	"	X	X	X	3	
MW-48-165	4-8-10	0817	"	X			1	

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Colburn	CH2M Hill	4-8-10 1510
Signature (Received) Kristofer Everett	Kris Everett	ATL	4-8-10 15:10
Signature (Relinquished) Kristofer Everett	Kris Everett	ATL	4-8-10 17:40
Signature (Received)	MARION CARTIN	ATL	4/8/10 @1741
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ 2.6°C °F

CUSTODY SEALED YES ☐ NO ☑

SPECIAL REQUIREMENTS:

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Advanced Technology Laboratories - Las Vegas

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 (562) 989-4045.

Sample Receipt Checklist

Client Name: **CH2M HILL-OAKLAND** Date Time Received: **4/8/2010 5:51:44 PM**

Work Order Number: **N004007** Received by: **MBC**

Cooler Temp (Deg C): 2.6

Checklist completed by: Kristyn Everett (Signature) 4-8-10 (Date) Reviewed by: (Initials) 4/13/10 (Date)

Carrier name:

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact 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. Container/Temp Blank temperature within acceptance 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 ☐

Comments: pH < 2

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~~30~~

Advanced Technology Laboratories - Las Vegas

Date: *19-Apr-10*

CLIENT: CH2M HILL
Work Order: N004007
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N004007-001ADT** SampType: **DT** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **76453**
Client ID: **ZZZZZZ** Batch ID: **34408** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **4/15/2010** SeqNo: **1177147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	45.204	15						43.52	3.79	10	
Chromium	2036.576	5.0						1980	2.84	10	
Vanadium	15.044	15						14.23	5.58	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 - Las Vegas

Date: *19-Apr-10*

CLIENT: CH2M HILL
Work Order: N004007
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N004007-001APS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **76453**
Client ID: **ZZZZZZ** Batch ID: **34408** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **4/15/2010** SeqNo: **1177152**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	4804.441	50	5000	9.366	95.9	75	125				
Barium	4767.307	15	5000	43.52	94.5	75	125				
Beryllium	4771.082	5.0	5000	0	95.4	75	125				
Cadmium	4748.008	15	5000	0	95.0	75	125				
Chromium	6714.502	5.0	5000	1980	94.7	75	125				
Cobalt	4706.525	15	5000	0	94.1	75	125				
Copper	4831.089	25	5000	6.129	96.5	75	125				
Lead	4610.867	50	5000	1.343	92.2	75	125				
Molybdenum	4742.060	25	5000	20.78	94.4	75	125				
Nickel	4668.460	25	5000	3.097	93.3	75	125				
Silver	4729.193	15	5000	0	94.6	75	125				
Vanadium	4794.112	15	5000	14.23	95.6	75	125				
Zinc	4833.958	50	5000	19.65	96.3	75	125				

Sample ID: **N004007-001APS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **76453**
Client ID: **ZZZZZZ** Batch ID: **34408** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **4/15/2010** SeqNo: **1177153**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1964.087	20	2000	9.366	97.7	75	125				
Barium	1933.607	6.0	2000	43.52	94.5	75	125				
Beryllium	1917.586	2.0	2000	0	95.9	75	125				
Cadmium	1897.849	6.0	2000	0	94.9	75	125				
Chromium	3854.668	2.0	2000	1980	93.8	75	125				
Cobalt	1874.980	6.0	2000	0	93.7	75	125				
Copper	1955.694	10	2000	6.129	97.5	75	125				
Lead	1847.884	20	2000	1.343	92.3	75	125				
Molybdenum	1929.953	10	2000	20.78	95.5	75	125				
Nickel	1861.467	10	2000	3.097	92.9	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: N004007
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N004007-001APS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **76453**
Client ID: **ZZZZZZ** Batch ID: **34408** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **4/15/2010** SeqNo: **1177153**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	1918.646	6.0	2000	0	95.9	75	125				
Vanadium	1928.456	6.0	2000	14.23	95.7	75	125				
Zinc	1937.727	20	2000	19.65	95.9	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

Advanced Technology Laboratories - Las Vegas

Date: *14-Apr-10*

CLIENT: CH2M HILL
Work Order: N004007
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID: **N004018-002A-DT** SampType: **DT** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **76414**
Client ID: **ZZZZZZ** Batch ID: **34399** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **4/13/2010** SeqNo: **1176814**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.763	5.0						1.849	0	10	

Sample ID: **N004018-002A-PS** SampType: **PS** TestCode: **6020_DIS** Units: **µg/L** Prep Date: RunNo: **76414**
Client ID: **ZZZZZZ** Batch ID: **34399** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **4/13/2010** SeqNo: **1176815**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	14.470	2.0	12.50	1.849	101	90	110				
Selenium	12.885	1.0	12.50	0.6825	97.6	90	110				
Thallium	11.493	1.0	12.50	0	91.9	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

April 23, 2010

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.: N004029

RE: PG&E Topock

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on April 16, 2010 by Advanced Technology Laboratories - Las Vegas . 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 and the case narrative are an integral part of this analytical report and 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
Lab Order: N004029

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Sample was 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.

Sample was analyzed within method holding time.

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Advanced Technology Laboratories - Las Vega

Date: *23-Apr-10*

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N004029
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N004029-001A	PGE-08-165	Water	4/8/2010 5:50:00 PM	4/16/2010	4/23/2010
N004029-001B	PGE-08-165	Water	4/8/2010 5:50:00 PM	4/16/2010	4/23/2010

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ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas

Print Date: *23-Apr-10*

CLIENT:	CH2M HILL	**Client Sample ID:**	PGE-08-165
Lab Order:	N004029	**Collection Date:**	4/8/2010 5:50:00 PM
Project:	PG&E Topock	**Matrix:**	WATER
Lab ID:	N004029-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
				EPA 120.1			
RunID: **WETCHEM_100416A**	QC Batch: **R76456**				PrepDate:		Analyst: **CEI**
Specific Conductance	17000	0.10	0.10		µmhos/cm	1	4/16/2010

Qualifiers:

B	Analyte detected in 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		

CLIENT: CH2M HILL
Work Order: N004029
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_W

Sample ID: **LCS-R76456** SampType: **LCS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76456**
Client ID: **LCSW** Batch ID: **R76456** TestNo: **EPA 120.1** Analysis Date: **4/16/2010** SeqNo: **1177231**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	1388.000	0.10	1412	0	98.3	85	115				

Sample ID: **N004029-001A-MS** SampType: **MS** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76456**
Client ID: **ZZZZZZ** Batch ID: **R76456** TestNo: **EPA 120.1** Analysis Date: **4/16/2010** SeqNo: **1177235**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	27600.000	0.20	9969	17480	102	75	125				

Sample ID: **N004029-001A-MSD** SampType: **MSD** TestCode: **120.1_W** Units: **µmhos/cm** Prep Date: RunNo: **76456**
Client ID: **ZZZZZZ** Batch ID: **R76456** TestNo: **EPA 120.1** Analysis Date: **4/16/2010** SeqNo: **1177236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	27420.000	0.20	9969	17480	99.7	75	125	27600	0.654	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
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories
3151 W.Post Road, Las Vegas, NV 89118
(702) 307-2659 FAX: (702) 307-2691

CHAIN OF CUSTODY RECORD

2010-GMP-165

COC Number

TURNAROUND TIME 7 days

DATE 04/16/10 PAGE 1 OF 1

COMPANY: CH2M HILL

PROJECT NAME: PG&E Topock

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

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

P.O. NUMBER: 936259

SAMPLERS (~~SIGNATURE~~): Barry Collom

SAMPLE I.D.	DATE	TIME	DESCRIPTION	E120.1 (Conductivity)	Hold for Possible Additional Analysis													NUMBER OF CONTAINERS	COMMENTS
PGE-08-165	04/08/10	1750	Water	X	X													3	
																		3	TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished) R.G. Andersen	R.G. Andersen	CH2M Hill	4/16-10 1300
Signature (Received) Kristopher Everett	Kris Everett	ATL	4/16/10 13:00
Signature (Relinquished) Kristopher Everett	Kris Everett	AT2	4/16/10 15:40
Signature (Received) [illegible]	[illegible]	AT2	4/16/10
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☑ 2.8° WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

Advanced Technology Laboratories - Las Vegas

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 (562) 989-4045.

Sample Receipt Checklist

Client Name: **CH2M HILL-OAKLAND**

Date Time Received: **4/16/2010 3:49:01 PM**

Work Order Number: **N004029**

Received by: **MBC**

Cooler Temp (Deg C): 2.8

Checklist completed by: Signature _____ Date 4/16/10

Reviewed by: Initials _____ Date 4/19/10

Carrier name: ATL

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact 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. Container/Temp Blank temperature within acceptance 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 ☐

Comments:

Appendix B
Other Groundwater Monitoring Results

Table B-1
Arsenic Results in Monitoring Wells, April 2009 through April 2010
First Quarter 2010 Interim Measures Performance Monitoring and Site-Wide
Groundwater and Surface Water Monitoring Report
PG&E Topock Compressor Station, Needles, California

Well ID	Sample Date		Dissolved Arsenic (µg/L)
Bedrock Wells			
MW-23-060	21-Jul-09		25.0
MW-23-080	21-Jul-09		24.0
MW-57-070	21-Jul-09		5.0
MW-57-185	20-Jul-09		30.0
MW-58-115	16-Dec-09		18.0 J
MW-58-205	16-Dec-09		41.0 J
MW-58BR [1]	25-Mar-10		13.0
MW-60-125	21-Jul-09		11.0
MW-61-110	21-Jul-09		22.0
MW-62-065	22-Jul-09		6.5
MW-62-110	16-Dec-09		32.0 J
	11-Mar-10		10.3
MW-62-190	16-Dec-09		40.0 J
	11-Mar-10		9.4
MW-63-065	15-Apr-09		5.2
	20-Jul-09		6.7
	20-Jul-09	FD	6.6
MW-64-150	16-Dec-09		26.0 J
	11-Mar-10		12.5
MW-64-205	16-Dec-09		26.0 J
	11-Mar-10		8.5
MW-64-260	16-Dec-09		33.0 J
	11-Mar-10		2.9
Fluvial Wells			
MW-9	09-Jun-09		3.7
	09-Jun-09	FD	3.8
MW-22	29-Apr-09		6.6
	29-Sep-09		28.0
	10-Dec-09		ND (10)
	12-Mar-10		12.1
MW-27-60	08-Dec-09		8.3
MW-27-85	08-Dec-09		14.0
	09-Mar-10		1.4
MW-28-25	24-Sep-09		2.4
	09-Mar-10		2.0

Table B-1
Arsenic Results in Monitoring Wells, April 2009 through April 2010
First Quarter 2010 Interim Measures Performance Monitoring and Site-Wide
Groundwater and Surface Water Monitoring Report
PG&E Topock Compressor Station, Needles, California

Well ID	Sample Date		Dissolved Arsenic (µg/L)
MW-28-90	24-Sep-09		7.6
	09-Dec-09		7.7
	09-Mar-10		2.1
MW-29	24-Sep-09		19.0
	11-Mar-10		35.0
MW-30-30	24-Sep-09		19.0
MW-30-50	24-Sep-09		9.2
MW-32-20	22-Sep-09		65.0
MW-32-35	22-Sep-09		53.0
	09-Mar-10		24.4
MW-33-40	24-Sep-09		19.0
	09-Dec-09		20.0
	11-Mar-10		17.7
MW-34-55	30-Sep-09		2.8
MW-34-80	30-Sep-09		7.3
	09-Dec-09		7.3
	10-Mar-10		1.3
MW-34-100	30-Sep-09		14.0
	30-Sep-09	FD	15.0
	09-Dec-09		16.0
	09-Dec-09	FD	16.0
	10-Mar-10		1.7
	10-Mar-10	FD	1.4
MW-36-20	23-Sep-09		3.3
MW-36-40	30-Sep-09		7.7
MW-36-50	30-Sep-09		4.2
MW-36-70	22-Sep-09		10.0
MW-36-90	23-Sep-09		16.0
	12-Mar-10		16.4
MW-36-100	23-Sep-09		14.0
	09-Mar-10		4.5
MW-39-40	01-Oct-09		15.0
MW-39-50	01-Oct-09		7.8
MW-42-30	23-Sep-09		6.5
MW-42-55	23-Sep-09		19.0
	08-Dec-09		22.0

Table B-1
Arsenic Results in Monitoring Wells, April 2009 through April 2010
First Quarter 2010 Interim Measures Performance Monitoring and Site-Wide
Groundwater and Surface Water Monitoring Report
PG&E Topock Compressor Station, Needles, California

Well ID	Sample Date	Dissolved Arsenic (µg/L)
MW-42-55	09-Mar-10	11.8
MW-42-65	23-Sep-09	14.0
	08-Dec-09	14.0
	09-Mar-10	2.1
MW-43-25	01-Oct-09	20.0
MW-43-75	01-Oct-09	17.0
MW-43-90	01-Oct-09	25.0
MW-44-70	21-Sep-09	4.2
	07-Dec-09	4.2
	08-Mar-10	3.0
MW-45-095a	29-Sep-09	10.0
MW-52D	29-Sep-09	23.0
	10-Dec-09	27.0
	10-Mar-10	3.5
MW-52M	29-Sep-09	17.0
	10-Dec-09	21.0
	10-Mar-10	1.4
MW-52S	29-Sep-09	9.7
	10-Dec-09	12.0
	10-Mar-10	ND (1.0)
MW-53D	29-Sep-09	23.0
	10-Dec-09	32.0
	10-Mar-10	2.7
MW-53M	29-Sep-09	18.0
	10-Dec-09	25.0
	10-Mar-10	ND (1.0)
MW-59-100	22-Jul-09	18.0
	22-Jul-09 FD	17.0

NOTES:

µg/L = micrograms per liter
FD = field duplicate
J = concentration or RL estimated by laboratory or data validation
[1] This sample collected from a borehole.

Table B-2

Analytical Results for Perched Wells MW-57-50 and MW-58-65, February 2010
First Quarter 2010 Interim Measures Performance Monitoring and Site-Wide
Groundwater and Surface Water Monitoring Report
PG&E Topock Compressor Station, Needles, California

Analyte	Method	Units	MW-57-050	MW-58-065
			2/17/2010	
Anions				
Chloride	300	mg/L	350	45.0
Nitrate	300	mg/L	3.80	ND (0.5)
Sulfate	300	mg/L	220	97.0
Field Parameters				
pH	FIELD		7.40	8.00
Specific conductance	FIELD	µS/cm	1,900	737
General Chemistry				
Deuterium	CF-IRMS	0/00	-64.8	-77.8
Oxygen 18	CF-IRMS	0/00	-8.61	-10.1
Total dissolved solids	SM2540C	mg/L	1,100	370
Metals				
Chromium, dissolved	6010B	µg/L	88.0	8.0
Chromium, Hexavalent	218.6	µg/L	86.0	ND (0.2)
Volatile Organic Compounds				
1,1,1,2-Tetrachloroethane	8260	µg/L	ND (1.0)	ND (1.0)
1,1,1-Trichloroethane	8260	µg/L	ND (1.0)	ND (1.0)
1,1,2,2-Tetrachloroethane	8260	µg/L	ND (1.0)	ND (1.0)
1,1,2-Trichloroethane	8260	µg/L	ND (1.0)	ND (1.0)
1,1,2-Trichlorotrifluoroethane (Freon 113)	8260	µg/L	ND (1.0)	ND (1.0)
1,1-Dichloroethane	8260	µg/L	ND (1.0)	ND (1.0)
1,1-Dichloroethene	8260	µg/L	ND (1.0)	ND (1.0)
1,1-Dichloropropene	8260	µg/L	ND (1.0)	ND (1.0)
1,2,3-Trichlorobenzene	8260	µg/L	ND (1.0)	ND (1.0)
1,2,3-Trichloropropane	8260	µg/L	ND (1.0)	ND (1.0)
1,2,4-Trichlorobenzene	8260	µg/L	ND (1.0)	ND (1.0)
1,2,4-Trimethylbenzene	8260	µg/L	ND (1.0)	ND (1.0)
1,2-Dibromo-3-chloropropane	8260	µg/L	ND (2.0)	ND (2.0)
1,2-Dibromoethane	8260	µg/L	ND (1.0)	ND (1.0)
1,2-Dichlorobenzene	8260	µg/L	ND (1.0)	ND (1.0)
1,2-Dichloroethane	8260	µg/L	ND (1.0)	ND (1.0)
1,2-Dichloropropane	8260	µg/L	ND (1.0)	ND (1.0)
1,3,5-Trimethylbenzene	8260	µg/L	ND (1.0)	ND (1.0)
1,3-Dichlorobenzene	8260	µg/L	ND (1.0)	ND (1.0)
1,3-Dichloropropane	8260	µg/L	ND (1.0)	ND (1.0)
1,4-Dichlorobenzene	8260	µg/L	ND (1.0)	ND (1.0)

Table B-2
Analytical Results for Perched Wells MW-57-50 and MW-58-65, February 2010
First Quarter 2010 Interim Measures Performance Monitoring and Site-Wide
Groundwater and Surface Water Monitoring Report
PG&E Topock Compressor Station, Needles, California

Analyte	Method	Units	MW-57-050	MW-58-065
			2/17/2010	
Volatile Organic Compounds				
2,2-Dichloropropane	8260	µg/L	ND (1.0)	ND (1.0)
2-Chlorotoluene	8260	µg/L	ND (1.0)	ND (1.0)
4-Isopropyltoluene	8260	µg/L	ND (1.0)	ND (1.0)
Acetone	8260	µg/L	ND (10) J	ND (10)
Acrolein	8260	µg/L	ND (20)	ND (20)
Acrylonitrile	8260	µg/L	ND (20)	ND (20)
Benzene	8260	µg/L	ND (1.0)	ND (1.0)
Bromobenzene	8260	µg/L	ND (1.0)	ND (1.0)
Bromochloromethane	8260	µg/L	ND (1.0)	ND (1.0)
Bromodichloromethane	8260	µg/L	ND (1.0)	ND (1.0)
Bromoform	8260	µg/L	ND (1.0) J	ND (1.0)
Bromomethane	8260	µg/L	ND (1.0)	ND (1.0)
Carbon disulfide	8260	µg/L	ND (1.0)	ND (1.0)
Carbon tetrachloride	8260	µg/L	ND (1.0)	ND (1.0)
Chloro benzene	8260	µg/L	ND (1.0)	ND (1.0)
Chloroethane	8260	µg/L	ND (1.0)	ND (1.0)
Chloroform	8260	µg/L	ND (1.0)	ND (1.0)
Chloromethane	8260	µg/L	ND (1.0)	ND (1.0)
cis-1,2-Dichloro ethene	8260	µg/L	ND (1.0)	ND (1.0)
cis-1,3-Dichloropropene	8260	µg/L	ND (1.0)	ND (1.0)
Dibromochloromethane	8260	µg/L	ND (1.0)	ND (1.0)
Dibromomethane	8260	µg/L	ND (1.0)	ND (1.0)
Dichlorodifluoromethane	8260	µg/L	ND (1.0)	ND (1.0)
Ethylbenzene	8260	µg/L	ND (1.0)	ND (1.0)
Hexachlorobutadiene	8260	µg/L	ND (1.0)	ND (1.0)
Isopropylbenzene	8260	µg/L	ND (1.0)	ND (1.0)
m+p-Xylenes	8260	µg/L	ND (1.0)	ND (1.0)
Methyl ethyl ketone	8260	µg/L	ND (10) J	ND (10)
Methyl isobutyl ketone	8260	µg/L	ND (10)	ND (10)
Methyl tert-butyl ether (MTBE)	8260	µg/L	ND (1.0)	ND (1.0)
Methylene chloride	8260	µg/L	ND (5.0)	ND (5.0)
Naphthalene	8260	µg/L	ND (1.0)	ND (1.0)
N-Butylbenzene	8260	µg/L	ND (1.0)	ND (1.0)
N-Propylbenzene	8260	µg/L	ND (1.0)	ND (1.0)
o-Xylene	8260	µg/L	ND (1.0)	ND (1.0)

Table B-2

Analytical Results for Perched Wells MW-57-50 and MW-58-65, February 2010
First Quarter 2010 Interim Measures Performance Monitoring and Site-Wide
Groundwater and Surface Water Monitoring Report
PG&E Topock Compressor Station, Needles, California

Analyte	Method	Units	MW-57-050	MW-58-065
			2/17/2010	
Volatile Organic Compounds				
p-Chlorotoluene	8260	µg/L	ND (1.0)	ND (1.0)
sec-Butylbenzene	8260	µg/L	ND (1.0)	ND (1.0)
Styrene	8260	µg/L	ND (1.0)	ND (1.0)
tert-Butylbenzene	8260	µg/L	ND (1.0)	ND (1.0)
Tetrachloroethene	8260	µg/L	ND (1.0)	ND (1.0)
Toluene	8260	µg/L	ND (2.5)	ND (2.5)
trans-1,2-Dichloroethene	8260	µg/L	ND (1.0)	ND (1.0)
trans-1,3-Dichloropropene	8260	µg/L	ND (1.0)	ND (1.0)
Trichloroethene	8260	µg/L	ND (1.0)	ND (1.0)
Trichlorofluoromethane (Freon 11)	8260	µg/L	ND (1.0)	ND (1.0)
Vinyl chloride	8260	µg/L	ND (1.0)	ND (1.0)
Xylenes, total	8260	µg/L	ND (2.0)	ND (2.0)

NOTES:

ND	not detected at listed reporting limit
ug/L	micrograms per liter
mg/L	milligrams per liter
0/00	differences from global standards in ppt
µS/cm	microsiemens per centimeter
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 though April 2010
First Quarter 2010 Interim Measures 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
MW-20-100	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
	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

Table C-1

Chemical Performance Monitoring Analytical Results, March 2005 though April 2010
First Quarter 2010 Interim Measures 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-20-100	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
MW-20-130	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
	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
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

Table C-1

Chemical Performance Monitoring Analytical Results, March 2005 though April 2010
First Quarter 2010 Interim Measures 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-25	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
	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
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
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)

Table C-1

Chemical Performance Monitoring Analytical Results, March 2005 though April 2010
First Quarter 2010 Interim Measures 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-27-20	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)
	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	---
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	---
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
	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	---
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

Table C-1

Chemical Performance Monitoring Analytical Results, March 2005 though April 2010
First Quarter 2010 Interim Measures 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-30-50	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	---
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
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	---

Table C-1

Chemical Performance Monitoring Analytical Results, March 2005 though April 2010
First Quarter 2010 Interim Measures 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-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
	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
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
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
	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

Table C-1

Chemical Performance Monitoring Analytical Results, March 2005 though April 2010
First Quarter 2010 Interim Measures 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-34-80	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
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
	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

Table C-1

Chemical Performance Monitoring Analytical Results, March 2005 though April 2010
First Quarter 2010 Interim Measures 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-34-100	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)	---	---	---	---	---	---
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)
	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)

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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-28	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)
	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)

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
R = result exceeded analytical criteria for precision and accuracy; should not be used for project decisionmaking
--- = data not collected or available

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-33 CLUSTER
FIRST QUARTER 2010 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-34 CLUSTER
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
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FIGURE C-3
HEXAVALENT CHROMIUM
IN MW-36 CLUSTER
FIRST QUARTER 2010 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-4
HEXAVALENT CHROMIUM
IN MW-39 CLUSTER
FIRST QUARTER 2010 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-5
HEXAVALENT CHROMIUM
IN MW-44 CLUSTER
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
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FIGURE C-6
HEXAVALENT CHROMIUM
IN MW-28 and MW-46 CLUSTER
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
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FIGURE C-7
HEXAVALENT CHROMIUM
IN MW-47 CLUSTER AND TW-04
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
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FIGURE C-8
HEXAVALENT CHROMIUM
IN MW-10, MW-12, AND MW-13
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
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FIGURE C-9
HEXAVALENT CHROMIUM
IN MW-14, MW-18, AND MW-19
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
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FIGURE C-10
HEXAVALENT CHROMIUM
IN MW-20, MW-23, AND MW-25 CLUSTERS
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
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FIGURE C-11
HEXAVALENT CHROMIUM
IN MW-26, MW-31, AND MW-35 CLUSTERS
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
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FIGURE C-12
HEXAVALENT CHROMIUM
IN MW-37 AND MW-40 CLUSTERS
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
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FIGURE C-13
HEXAVALENT CHROMIUM
IN MW-50 AND MW-51 CLUSTERS
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
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FIGURE C-14
HEXAVALENT CHROMIUM
IN MW-57, MW-58 and MW-59 CLUSTERS
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
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FIGURE C-15
HEXAVALENT CHROMIUM
IN MW-60-125, MW-61-110 AND THE MW-62 CLUSTER
FIRST QUARTER 2010 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-16
HEXAVALENT CHROMIUM
IN MW-63-065 AND THE MW-64 CLUSTER
FIRST QUARTER 2010 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 D
Interim Measure Extraction System
Operations Log, February through April 2010

APPENDIX D

Extraction System Operations Log for February through April 2010, PG&E Topock Interim Measures Performance Monitoring Program

During First Quarter 2010 (February through April), extraction wells TW-3D and PE-1 operated at a target pump rate of at 135 gallons per minute (gpm), excluding periods of planned and unplanned downtime. Extraction wells TW-2D and TW-2S were not operated during First Quarter 2010. The operational run time for the Interim Measure groundwater extraction system (combined or individual pumping) was approximately 92.1 percent during First Quarter 2010.

The Interim Measure Number 3 (IM-3) facility treated approximately 15,839,781 gallons of extracted groundwater during First Quarter 2010. The IM-3 facility also treated approximately 7,330 gallons of water generated from the groundwater monitoring program and 73,700 gallons of water from IM-3 injection well development. Three 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 7.9 percent of downtime during First Quarter 2010) 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 February 2010

- **February 1, 2010 (planned):** The extraction well system was offline from 5:14 p.m. to 6:10 p.m. for microfilter maintenance. Extraction system downtime was 56 minutes.
- **February 4, 2010 (planned):** The extraction well system was offline from 12:26 p.m. to 1:10 p.m. for microfilter maintenance. Extraction system downtime was 44 minutes.
- **February 5, 2010 (planned):** The extraction well system was offline from 2:22 p.m. to 3:02 p.m. for microfilter maintenance. Extraction system downtime was 40 minutes.
- **February 9, 2010 (planned):** The extraction well system was offline from 8:08 a.m. to 3:30 p.m. while the plant was shut down for injection line repair and cleaning of chemical loop. Extraction system downtime was 7 hours and 22 minutes.
- **February 10, 2010 (planned):** The extraction well system was offline from 8:18 a.m. to 8:20 a.m., 8:44 a.m. to 8:46 a.m., 8:52 a.m. to 9:10 a.m., 9:12 a.m. to 9:16 a.m., and 10:32 a.m. to 10:34 a.m. for testing of the pipeline leak detection alarm system. Extraction system downtime 28 minutes.

- **February 11, 2010 (planned):** The extraction well system was offline from 12:16 p.m. to 3:50 p.m. for microfilter maintenance. Extraction system downtime was 3 hours and 34 minutes.
- **February 15, 2010 (planned):** The extraction well system was offline from 1:38 a.m. to 2:18 a.m., and 10:22 a.m. to 3:44 p.m. for microfilter maintenance. Extraction system downtime was 6 hours and 2 minutes.
- **February 17, 2010 (planned):** The extraction well system was offline from 12:26 p.m. to 1:58 p.m. for microfilter maintenance. Extraction system downtime was 1 hour and 32 minutes.
- **February 18, 2010 (unplanned):** The extraction well system was offline from 12:14 p.m. to 12:42 p.m., 12:50 p.m. to 12:56 p.m., and 8:34 p.m. to 8:42 p.m., due to failure of level sensor in T-100. Extraction system downtime was 42 minutes.
- **February 18, 2010 (planned):** The extraction well system was offline from 2:10 p.m. to 2:26 p.m. for microfilter maintenance. Extraction system downtime was 16 minutes.
- **February 22, 2010 (unplanned):** The extraction well system was offline from 8:34 a.m. to 10:20 a.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 1 hour and 46 minutes.
- **February 22, 2010 (planned):** The extraction well system was offline from 2:44 p.m. to 6:14 p.m. for microfilter maintenance. Extraction system downtime was 3 hours and 30 minutes.

D.2 March 2010

- **March 1, 2010 (unplanned):** The extraction well system was offline from 10:04 a.m. to 12:26 p.m. due to air compressor failure. Extraction system downtime was 2 hours and 22 minutes.
- **March 2, 2010 (unplanned):** The extraction well system was offline from 12:40 a.m. to 1:42 a.m. and 2:10 a.m. to 6:32 a.m. due to microfilter failure. Extraction system downtime was 5 hours and 24 minutes.
- **March 5, 2010 (planned):** The extraction well system was offline from 11:16 a.m. to 1:32 p.m. and 5:18 p.m. to 6:38 p.m. for microfilter maintenance. Extraction system downtime was 3 hours and 36 minutes.
- **March 10, 2010 (planned):** The extraction well system was offline from 10:42 a.m. to 10:44 a.m., 1:08 p.m. to 1:12 p.m., and 1:30 p.m. to 1:34 p.m. for testing of the pipeline leak detection alarm system. Extraction system downtime was 10 minutes.
- **March 12, 2010 (unplanned):** The extraction well system was offline from 9:40 p.m. to 9:42p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime 2 minutes.

- **March 13, 2010 (planned):** The extraction well system was offline from 6:26 p.m. to 9:24 p.m. for microfilter maintenance. Extraction system downtime was 2 hours and 58 minutes.
- **March 17, 2010 (planned):** The extraction well system was offline from 9:30 p.m. to 10:48 p.m. for a shutdown to generator power training exercise for new employees. Extraction system downtime was 1 hour and 18 minutes.
- **March 18, 2010 (unplanned):** The extraction well system was offline from 1:12 a.m. to 1:22 a.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 10 minutes.
- **March 24, 2010 (planned):** The extraction well system was offline from 9:58 a.m. to 12:28 p.m. for loop reactor maintenance. Extraction system downtime was 2 hours and 30 minutes.
- **March 30, 2010 (planned):** The extraction well system was offline from 7:36 a.m. to 5:50 p.m. and 6:20 p.m. to 7:16 p.m. for planned monthly maintenance. Extraction system downtime was 11 hours and 10 minutes.
- **March 31, 2010 (planned):** The extraction well system was offline from 5:30 p.m. to 10:46 p.m. for microfilter maintenance. Extraction system downtime was 5 hours and 16 minutes.

D.3 April 2010

- **April 5, 2010 (unplanned):** The extraction well system was offline from 1:50 p.m. to 3:52 p.m. due to high water level in T-100. Extraction system downtime was 2 hours and 2 minutes.
- **April 6 - 7, 2010 (unplanned):** The extraction well system was offline from 10:56 a.m. to 12:08 a.m. on April 7 due to high water level in T-100. Extraction system downtime was 1 hour and 12 minutes.
- **April 7, 2010 (planned):** The extraction well system was offline from 8:08 a.m. to 11:24 a.m. for loop reactor maintenance. Extraction system downtime was 3 hours and 16 minutes.
- **April 7, 2010 (unplanned):** The extraction well system was offline from 1:14 p.m. to 1:16 p.m., 1:20 p.m. to 1:22 p.m. 1:30 p.m. to 1:52 p.m., and 2:08 p.m. to 2:10 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime 28 minutes.
- **April 9, 2010 (unplanned):** The extraction well system was offline from 1:26 p.m. to 1:28 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 2 minutes.
- **April 15, 2010 (planned):** The extraction well system was offline from 4:40 a.m. to 5:00 a.m. for plant maintenance. Extraction system downtime was 20 minutes.

- **April 19-22, 2010 (planned):** The extraction well system was offline from 1:14 p.m. on April 19 to 7:26 p.m. on April 22, from 7:46 p.m. on April 22 to 2:11 p.m. on April 23, and from 3:37 p.m. on April 23 to 5:31 p.m. on April 23 for annual plant outage. Extraction system downtime was 4 days 2 hours and 31 minutes.
- **April 28, 2010 (planned):** The extraction well system was offline from 3:41 p.m. to 5:53 p.m. to replace polymer pump and permeate rinse valve on RO. Extraction system downtime was 2 hours and 12 minutes.
- **April 29, 2010 (unplanned):** The extraction well system was offline from 8:38 p.m. to 8:42 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 4 minutes.

Appendix E
Hydraulic Data for Interim Measures Reporting Period

Notes:
Data subject to review.
MW-26 data unavailable February 1, 2010 to April 6, 2010 due to transducer failure.

FIGURE E-1A
MW-22, MW-25, AND MW-26 HYDROGRAPHS
FIRST QUARTER 2010 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:
Data subject to review.

MW-20-070 data unavailable March 17 to March 30, 2010 due to transducer failure.
MW-20-130 data unavailable February 2 to March 30, 2010 due to transducer failure.

FIGURE E-1B
MW-20 CLUSTER HYDROGRAPHS
FIRST QUARTER 2010 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:
Data subject to review.

FIGURE E-1C
MW-27 CLUSTER HYDROGRAPHS
FIRST QUARTER 2010 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:
Data subject to review.

FIGURE E-1D
MW-28 CLUSTER HYDROGRAPHS
FIRST QUARTER 2010 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 E-1E
MW-30-50 HYDROGRAPH
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

Notes:
Data subject to review.

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FIGURE E-1F

MW-31 CLUSTER HYDROGRAPHS

FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

Notes:
Data subject to review.

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Notes:
Data subject to review.
MW-32-035 data unavailable from February 1 to April 1, 2010 due to transducer failure.

FIGURE E-1G
MW-32 HYDROGRAPH
FIRST QUARTER 2010 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:
Data subject to review.

FIGURE E-1H
MW-33 CLUSTER HYDROGRAPHS
FIRST QUARTER 2010 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:
Data subject to review.

FIGURE E-1I
MW-34 CLUSTER HYDROGRAPHS
FIRST QUARTER 2010 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:
Data subject to review.

FIGURE E-1J
MW-35 CLUSTER HYDROGRAPHS
FIRST QUARTER 2010 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:
Data subject to review.

FIGURE E-1K
MW-36 CLUSTER HYDROGRAPHS
FIRST QUARTER 2010 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:
Data subject to review.

FIGURE E-1L
MW-39 CLUSTER HYDROGRAPHS
FIRST QUARTER 2010 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:
Data subject to review.

FIGURE E-1M
MW-42 CLUSTER HYDROGRAPHS
FIRST QUARTER 2010 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:
Data subject to review.

FIGURE E-1N
MW-43 CLUSTER HYDROGRAPHS
FIRST QUARTER 2010 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:
Data subject to review.

FIGURE E-1O
MW-44 CLUSTER HYDROGRAPHS
FIRST QUARTER 2010 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 E-1P
MW-46 HYDROGRAPH

FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

Notes:
Data subject to review.

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FIGURE E-1Q

MW-47 CLUSTER HYDROGRAPHS

FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

Notes:
Data subject to review.

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FIGURE E-1R
MW-49 HYDROGRAPH
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

Notes:
Data subject to review.

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Notes:
Data subject to review.

FIGURE E-1S
MW-50HYDROGRAPH
FIRST QUARTER 2010 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 E-1T

MW-26 & MW-51 HYDROGRAPHS

FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

Notes:
Data subject to review.

Note:
Data subject to review.

FIGURE E-1U
INSITU PILOT STUDY WELL HYDROGRAPHS
FIRST QUARTER 2010 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:
Data subject to review.

FIGURE E-1W
MW-45-95a HYDROGRAPH
FIRST QUARTER 2010 INTERIM MEASURES PERFORMANCE MONITORING
AND SITE-WIDE GROUNDWATER AND SURFACE WATER MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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