Andy Saberi
1045 Airport Boulevard
South San Francisco, CA 94080

RECEIVED
By Alameda County Environmental Health at 3:27 pm, Mar 06, 2013

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Groundwater Monitoring and Remediation Report**
1230 14th Street, Oakland, California
ACEH Case No. 433

Dear Mr. Wickham:

I, Mr. Andy Saberi, have retained Pangea Environmental Services, Inc. (Pangea) as an environmental consultant for the project referenced above. Pangea is submitting the attached *Groundwater Monitoring and Remediation Report* on my behalf.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached report are true and correct to the best of my knowledge.

If you have any questions, please call me at (650) 588-3088.

Sincerely,

Andy Saberi

February 27, 2013

VIA ALAMEDA COUNTY FTP SITE

Mr. Jerry Wickham
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Groundwater Monitoring and Remediation Report – Second Half 2012**
Former Shell Service Station
1230 14th Street
Oakland, California
Fuel Leak Case No. RO0000433

Dear Mr. Wickham:

On behalf of property owner Andy Saberi, Pangea Environmental Services, Inc has prepared this *Groundwater Monitoring and Remediation Report – Second Half 2012*. The report describes continued implementation of the approved enhanced site remediation using a bio-organic catalyst (BOC). This report presents data from the third and fourth quarter monitoring events of 2012.

Based on seasonally high water levels limiting remedial effectiveness and low removal rates, Pangea has temporarily discontinued DPE/AS remediation. The DPE/AS system will be restarted in the spring when water levels have decreased to check for possible rebounding removal rates and contaminant concentrations. Due to budget limitations with the Cleanup Fund, a budget change order has been submitted to allow for site remediation rebound testing.

If you have any questions, please contact me at (510) 435-8664 or email briddell@pangeaenv.com.

Sincerely,
Pangea Environmental Services, Inc.

Bob Clark-Riddell, P.E.
Principal Engineer

Attachment: *Groundwater Monitoring and Remediation Report – Second Half 2012*

cc: Andy Saberi, 1045 Airport Blvd., South San Francisco, California 94080
Denis Brown, Shell Oil Products US, 20945 S. Wilmington Avenue, Carson, CA 90810-1039
SWRCB Geotracker (electronic copy)

GROUNDWATER MONITORING AND REMEDIATION REPORT – SECOND HALF 2012

Former Shell Service Station
1230 14th Street
Oakland, California
Fuel Leak Case No. RO0000433

February 27, 2013

Prepared for:

Andy Saberi
1045 Airport Boulevard
South San Francisco, California 94080

Prepared by:

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, California 94612

Written by:

REGISTERED PROFESSIONAL ENGINEER
ROBERT G. CLARK-RIDDELL
No. C 049629
Exp. 9/30/2014
CIVIL
STATE OF CALIFORNIA

Morgan Gillies
Project Manager

Bob Clark-Riddell, P.E.
Principal Engineer

INTRODUCTION

On behalf of Andy Saberi, Pangea Environmental Services, Inc. (Pangea) conducted groundwater monitoring and sampling, and remediation system maintenance and sampling at the subject site (Figure 1). The purpose of the monitoring and sampling is to evaluate dissolved contaminant concentrations and groundwater flow direction. The purpose of the remediation is to remove residual petroleum hydrocarbon from site soil and groundwater. Third and fourth quarter groundwater analytical results and elevation data are shown on Figures 2 and 3, respectively. Current and historical data are summarized on Table 1. Site remediation data are summarized on Tables 2 and 3.

This report presents data groundwater monitoring results from the third and fourth quarter monitoring events of 2012. The report also describes continued implementation of the approved enhanced site remediation using a bio-organic catalyst (BOC).

SITE BACKGROUND

The former Shell-branded service station is located at the northeast corner of 14th Street and Union Street in Oakland, California (Figure 1). Currently, an abandoned one-story station building and a pump-island canopy occupy the site, and much of the property is paved except for the former UST excavation. Land use in the surrounding area is currently residential to the north, south, and east, and is commercial/industrial to the west and southwest. The site topography is essentially flat.

Site History

According to prior reports, the current site building was constructed in 1958 and gas station operations at the site reportedly began in 1958 and ceased in 1993. Petroleum hydrocarbons were first discovered in site soil near the underground storage tanks (USTs) during the completion of three borings at the site in February 1991. Four gasoline USTs and one waste oil storage tank were removed from the site on August 24, 1993. The current property owner, Mr. Andy Saberi, purchased the property in the mid 1980s.

Previous Environmental Work

Previous environmental work has included site assessment, a sensitive receptor evaluation/well survey, risk evaluation, two rounds of feasibility testing (in 2000 and 2006), and several remedial actions. Remedial action included injection of oxygen releasing compound (ORC) into site wells in 1997, groundwater extraction (GWE) and dual-phase extraction (DPE) from 2002 to 2004 (performed with mobile equipment for approximately 11 separate days removing 6.0 lbs aqueous phase and 5.6 lbs vapor phase hydrocarbons), and

hydrogen peroxide injection into site wells in 2003. Groundwater monitoring has been performed at the site since 1996.

In January 2008, Pangea submitted a *Draft Corrective Action Plan and Pilot Test Work Plan* (Draft CAP/Test Workplan) as required by Alameda County Environmental Health (ACEH). In June 2008, with ACEH approval, Pangea installed new remediation test wells, repaired damaged remediation wells, and destroyed one remediation well, as detailed in the *Well Installation and Destruction Report* dated October 6, 2008. In early July 2008, Pangea conducted the approved pilot testing using the newly installed remediation test wells to determine whether SVE or DPE would most effectively remove contaminants and capture hydrocarbon vapors resulting from air sparging. In the *SVE/DPE Pilot Test Report* dated October 7, 2008, Pangea recommended DPE/AS as the most effective remedial approach for the site. In a letter dated October 29, 2008, ACEH approved implementation of DPE/AS remediation at the site. On June 15, 2009, the California UST Cleanup Fund completed a 5-year review of the claim and recommended implementation of site remediation. DPE remediation system operation started in April 2011 and AS system operation commenced in October 2011.

To enhance DPE/AS remedial effectiveness, Pangea began pilot testing bio-organic catalyst (BOC) injection in select site wells. The pilot testing was performed as detailed in the *Workplan for Enhanced Site Remediation* dated March 6, 2012, and as approved by the ACEH in a letter dated April 17, 2012. In a letter dated September 10, 2012, ACEH rescinded their BOC pilot test approval due to concerns about offsite migration of site contaminants. On September 25, 2012, Pangea submitted the *Groundwater Monitoring and Remediation Report – First Half 2012*, which described Pangea's efforts to demonstrate control of any hydrocarbon migration initiated by desorption affects of BOC. Continued implementation of enhanced site remediation using BOC was approved by ACEH in a letter dated October 8, 2012.

GROUNDWATER MONITORING AND SAMPLING

Routine groundwater monitoring for the third quarter 2012 was performed on September 30, 2012. Re-sampling of well MW-6 occurred on October 30, 2012 due to anomalous analytical results. Monitoring for evaluation of enhanced site remediation using BOC was performed in conjunction with fourth quarter groundwater monitoring performed on December 14, 2012. For the routine quarterly monitoring events, six site wells were sampled according to the approved groundwater monitoring program shown on Table A in Appendix A. For the BOC monitoring, four additional wells were sampled according to monitoring program on Table A in Appendix A. Site monitoring wells were gauged for depth-to-water and inspected for separate-phase hydrocarbons (SPH) prior to collection of groundwater samples. Well caps were removed from all monitoring wells and technicians allowed at least 15 minutes for water level equilibration before measuring depth to water. The remediation system was shutdown just before measuring depth to water to evaluate the groundwater capture area for the system.

Before well purging, the dissolved oxygen (DO) concentration was measured in each well. DO was measured by lowering a downwell sensor to the approximate middle of the water column and allowing the reading to stabilize during gentle height adjustment. Prior to sample collection, approximately three casing volumes of water were purged from each monitoring well using disposable bailers, an electric submersible pump, check valve with tubing, a clean PVC bailer, or a peristaltic pump. Remediation wells DP-1 through DP-5 were *not* purged prior to sample collection since the remediation system was operating on these wells prior to sampling. During well purging, field technicians measured pH, temperature and conductivity. A groundwater sample was collected from each well with a disposable bailer, and decanted into the appropriate containers supplied by the analytical laboratory. Groundwater samples were labeled, placed in protective plastic bags, and stored on crushed ice at or below 4°C. All samples were transported under chain-of-custody to the State-certified analytical laboratory. Purge water was pumped through the remediation system. Groundwater monitoring field data sheets, including purge volumes and field parameter measurements, are presented in Appendix B.

MONITORING RESULTS

Current and historical groundwater elevation data and analytical results are described below and summarized on Figure 2 and Table 1. For routine monitoring, groundwater samples were collected from wells MW-1, MW-5R, MW-6, MW-7, VW/MW-2 and VW/MW-4 in accordance with the approved groundwater monitoring program. For the BOC monitoring, groundwater samples were collected from site wells DP-1, DP-2, DP-4, and DP-5 (Table A, Appendix A). Monthly BOC sampling was not performed in November. Samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8015Cm/8021B. Additionally during fourth quarter monitoring, select samples were analyzed for residual BOC compounds as cobalt thiocyanante active substances/non-ionic surfactants (CTAS) by EPA Method 5540D and 2-propanol (IPA) by EPA Method 8260B. Samples were analyzed by McCampbell Analytical, Inc., of Pittsburg, California, a State-certified laboratory. The laboratory analytical report is included in Appendix C.

Groundwater Flow Direction

Based on depth-to-water data collected on September 30, 2012, groundwater appears to converge just north of the former UST excavation, as shown on Figure 2. Similarly, groundwater appears to converge around DPE well DP-5 based on depth-to-water data collected December 14, 2012, Figure 3. These inferred groundwater flow directions are different than previous monitoring events and suggest hydraulic capture within the hydrocarbon impact area by the DPE system. Depth-to-water and groundwater elevation data are presented in Table 1. The groundwater elevation measurement from well DP-2 was not used for either contour map due to an anomalously high elevation.

Hydrocarbon Distribution in Groundwater

No SPH was observed in any of the site wells. During monitoring on September 30, 2012, the maximum TPHg (4,100 µg/L) and benzene (1,000 µg/L) concentrations were detected in well VW/MW-4, respectively. Analytical data from well MW-6 on September 30 appeared anomalous based on the high concentrations of TPHg (2,900 µg/L) and benzene (25 µg/L) reported. Upon review of these results, well MW-6 was re-sampled on October 30, 2012. TPHg was not-detected above laboratory reporting limits and benzene was detected at a concentration of 1.1 µg/L; these results are within historic ranges for this well.

During monitoring on December 14, 2012, the maximum TPHg (4,100 µg/L) and benzene (360 µg/L) were detected in well MW-5R, respectively. Groundwater analytical data are summarized on Table 1 and on Figures 2 and 3. The estimated distribution of TPHg and benzene in groundwater from September 2012 monitoring is shown on Figures 4 and 5, respectively, while December 2012 results are shown on Figures 6 and 7.

Fuel Oxygenate Distribution in Groundwater

MTBE was not detected in any site wells this event. Historically, MTBE has been detected only sporadically in site wells. Since 2003, detected MTBE concentrations have been below the Maximum Contaminant Level (MCL) for drinking water of 13 µg/L, except for a concentration of 20 µg/L detected in well MW-5 in February 2008. This MTBE result could be a false positive result; EPA Method 8260 was not used to confirm the MTBE detected by EPA Method 8021B. MTBE is not a primary constituent of concern at this site due to limited and sporadic (and potentially false) MTBE detections. MTBE concentrations are shown in Table 1 and on Figure 2.

REMEDIATION SUMMARY

Dual Phase Extraction/Air Sparging System

The dual phase extraction (DPE) remediation system simultaneously extracts groundwater and soil vapor from site remediation wells. The remediation system layout is shown on Figure 7. The DPE system installed at the site consists of a 250 cfm electric catalytic oxidizer equipped with a 7.5 hp positive-displacement blower. To maximize groundwater depression, a “stinger” (vacuum tube inserted below the water table) is used to both depress the water table and extract soil vapor in each of the remediation wells (DP-1 through DP-5). Extracted vapors are routed through an air/water separator and then treated by the electric catalytic oxidizer. The treated vapor is discharged to the atmosphere in accordance with Bay Area Air Quality Management District (BAAQMD) requirements. Groundwater captured within the air/water separator is pumped through two 1,000-lb canisters of granular activated carbon plumbed in series. The treated groundwater is discharged into the sewer in accordance with East Bay Municipal Utility District’s (EBMUD) requirements.

The air sparging (AS) system consists of a 5-hp piston air compressor for injecting air into sparge wells AS-1 through AS-5. Air flow to the sparge wells is controlled by timer-activated solenoid valves and individual well flow meters. The air sparging system is enclosed within a small shed to help reduce noise from the compressor.

The DPE/AS system is monitored in accordance with air permit requirements of the *Permit to Operate* issued by the Bay Area Air Quality Management District (BAAQMD) and groundwater discharge requirements of the *Wastewater Discharge Permit* issued by East Bay Municipal Utility District.

Operation and Performance

The DPE remediation system was started up on April 27, 2011 but only operated for approximately three weeks in April/May 2011 and two weeks in December 2011 due to equipment issues and budget limitations from the UST Cleanup Fund. The AS system also only operated intermittently due to equipment malfunction. Following recent repair of the DPE/AS equipment, continuous operation of DPE/AS resumed on February 23, 2012. On March 16, 2012 the DPE/AS system was shutdown due to the DPE unit overheating.

On June 15, 2012, continuous operation of the DPE/AS system resumed with a new DPE unit. Current DPE is focused on wells DP-1, DP-2, DP-4 and DP-5 to optimize hydrocarbon removal, to capture vapors created by air sparging, and to capture hydrocarbon desorption caused by injected BOC. Due to noise concerns, the air compressor is cycled intermittently between 9 am and 9 pm.

Operation and performance data for the vapor-phase and aqueous-phase portions of the DPE system are summarized on Tables 2 and 3, respectively. Tables 2 and 3 present system operation time, extraction flow rates, influent TPHg and benzene concentrations, and contaminant removal rates and cumulative mass removal. Air sparge system data is summarized on Table 4.

As of December 31, 2012, the DPE system operated for a total of approximately 163 days. Based on laboratory analytical and performance data, Pangea estimates that soil vapor removal rates during this reporting period peaked near 8.1 lbs/day TPHg and 0.04 lbs/day benzene (October 18, 2012). As of December 31, 2012, the vapor-phase portion of the DPE system removed a total of approximately 1,534 lbs TPHg and 17.5 lbs benzene. The cumulative vapor-phase removal totals for TPHg and benzene were updated for this report due to a formula error in prior reports. As of December 31, 2012, the groundwater portion of the DPE system has removed a total of approximately 2.6 lbs TPHg and 0.1 lbs benzene.

As of December 31, 2012, the AS system operated for a total of approximately 138 days. The focus of the air sparging system has been on wells AS-1, AS-2 and AS-4, located near the primary hydrocarbon source area in the middle of the site. As shown on Table 4, the flow rate to each well is typically approximately 2 cfm.

Enhanced DPE Using Bio-Organic Catalyst (BOC)

The ACEH approved BOC use to enhance DPE effectiveness on April 17, 2012 and BOC use commenced in July 2012. To enhance DPE system effectiveness, Pangea has used a bio-organic catalyst (BOC) designed to help desorb and breakdown petroleum hydrocarbons to improve product recovery efforts and accelerate biodegradation of petroleum hydrocarbons. BOC is a highly concentrated liquid "NONTOX™-TPH Eliminator." BOC has been used effectively on open water spills of petroleum crude oil and is enjoying increasing use for subsurface hydrocarbon remediation applications. BOC is often introduced into existing wells using water flushing and/or air sparging for added BOC distribution and increased dissolved oxygen supply. Petroleum hydrocarbons are decomposed, eventually degrading to carbon dioxide and water as end products. BOC is non-toxic, 100% biodegradable, and safe to human, animals and plant life. BOC is mostly water, proteins, and enzymes derived from plant and mineral sources (primarily yeast). BOC works in concert with indigenous bacteria. BOC behaves similar to a surfactant and forms small bubbles when agitated by air injection (or shaking of product within a jar or treatment cell). BOC is relatively inexpensive and is considered 'green' remedial technology.

Current and prior BOC use at this site is summarized below on Table A. BOC addition to site wells was performed on July 5, July 18, October 15 and November 5. BOC has been added to wells AS-2, AS-4, DP-4, DP-5 and VW/MW-4. To increase BOC distribution into the subsurface, BOC has been added to site wells followed by treated groundwater in an approximate ratio of 1:5 or 1:10 (BOC/water). The BOC/water mixture is allowed to equilibrate within the site subsurface for a few days before resumption of DPE to extract desorbed hydrocarbons. Upon resumption of DPE, system influent data is obtained to facilitate evaluation of BOC enhancement of DPE remediation. Additional notes about BOC use are included on Table 2 (DPE *vapor*-phase performance data) and Table 3 (DPE *aqueous*-phase performance data).

Table A – Cumulative BOC Addition Volume in Site Wells

Well	BOC Volume (gal)	Water Volume (gal)
AS-2	6.5	40
AS-4	6.5	40
DP-4	2	10
DP-5	2	10
VW/MW-4	8	40
Total	25 gallons	140 gallons

Evaluation of DPE and BOC Effectiveness

System performance and groundwater monitoring data indicates that BOC injection may have slightly increased aqueous and vapor phase removal rates. Pangea offers the following evaluation of DPE/BOC effectiveness.

- The hydrocarbon and benzene plume appears to be shrinking as illustrated by Figures 4, 5, 6, and 7. The benzene concentration in well VW/MW-4 decreased from 1,000 µg/L to 33 µg/L between the third and fourth quarter monitoring events. For well DP-1, the benzene concentration decreased from 360 µg/L to <0.5 µg/L, while TPHg concentrations decreased from 7,300 µg/L to <50 µg/L between third and fourth quarter monitoring events. While these concentration reductions could be due to remedial activities, these reductions could be due to seasonal water level changes between monitoring events. Historical data indicates that contaminant concentrations are highest when groundwater levels are seasonally low, and conversely, contaminant concentrations are lowest when groundwater levels are seasonally high.

- The hydrocarbon concentration rebound in groundwater in select wells may be a temporary result of hydrocarbon desorption provided by BOC use or could be a natural fluctuation. For example, benzene concentrations increased from 110 µg/L to 360 µg/L in MW-5R. The 110 µg/L benzene concentration in MW-5R was a historic low, so some rebound is not surprising, especially given the water table change.

- BOC injection apparently increased *vapor*-phase hydrocarbon removal achieved by DPE (Table 2). Following the October 15 injection of BOC, TPHg removal rates increased from 3.8 lbs/day to 8.1 lbs/day and benzene removal rates increased from 0.03 lbs/day to 0.04 lbs/day. This increase is based on system vapor influent samples collected on October 18 (about 72 hours after BOC injection) and approximately 24 hours after commencing DPE from wells DP-4 and DP-5.

- BOC injection increased *aqueous*-phase hydrocarbon removal achieved by DPE (Table 3). Following the October 15 BOC injection, influent concentrations to the water treatment system increased as follows: from 1.0 µg/L to 4.2 µg/L benzene (4 fold increase) and 230 µg/L to 2,300 µg/L TPHg (10 fold increase). This increase is based on system water influent samples collected on October 17 (about 48 hours after BOC injection) and a few hours commencing DPE from wells DP-4 and DP-5.

- Future groundwater monitoring will help determine if recent contaminant reductions are due to seasonal water level fluctuation or remedial effectiveness.

Hydrocarbon and BOC Capture Monitoring

To evaluate potential hydrocarbon migration after BOC addition, Pangea conducted groundwater sampling from select site wells DP-1, DP-2, DP-4, and DP-5 on December 14, 2012 in conjunction with the fourth

quarter monitoring event. Before well sampling, the dissolved oxygen (DO) concentration was measured in each well. For active dual-phase extraction wells DP-1, DP-2, DP-4 and DP-5, grab groundwater samples were collected from each well using a disposable bailer. Samples were analyzed for TPHg, BTEX and MTBE by EPA Method 8015Cm/8021B. Field data sheets are included in Appendix B. Laboratory analytical data is summarized on Table 1 and the laboratory analytical report is included in Appendix C.

Groundwater monitoring results for downgradient wells MW-1 and MW-6 during the fourth quarter sampling event were similar to the previous monitoring event on June 30, 2012 (prior to BOC injection). This included very low to non-detect hydrocarbon concentrations in well MW-1 and no detectable hydrocarbons in well MW-6. This data suggests that BOC injection has *not* caused downgradient migration of hydrocarbons. Additionally, hydrocarbon concentrations in wells DP-1 DP-2, DP-4 and DP-5 decreased significantly compared to previous monitoring results.

To analyze for residual BOC in site groundwater, Pangea had a sample of BOC analyzed for ethanol, methanol, 2-propanol and CTAS/non-ionic surfactants for baseline data. The BOC sample contained ethanol (250,000 µg/L), 2-propanol (940,000 µg/L), and CTAS (56,000,000 µg/L). To evaluate BOC migration in the subsurface, Pangea analyzed the October 30 sample from downgradient well MW-6 for ethanol, methanol, 2-propanol and CTAS, but no detectable concentrations were found. Additionally, Pangea analyzed the December 14 samples from wells MW-1, MW-5R, MW-6, VW/MW-4 and DP-5 for CTAS. Only well VW/MW-4 contained a detectable amount of CTAS/non-ionic surfactants at a concentration of 1,800 µg/L (this 1,800 µg/L represents only 0.032% of the injected BOC solution, which was diluted approximately 10% prior to injection). December 14 samples from wells MW-6 and DP-5 were also analyzed for 2-propanol, but no detectable concentrations were found. The detected concentration of CTAS/non-ionic surfactants in well VW/MW-4 demonstrates that residual BOC may still be present in groundwater beneath the site, but at a very low concentration. The lack of a detectable CTAS/non-ionic surfactant concentration in well DP-5, while VW/MW-4 contained a low concentration, is likely due to DPE extraction on well DP-5. This indicates that the DPE system appears to be effectively capturing injected BOC through the subsurface.

Soil Gas Monitoring

No vapor-phase hydrocarbon concentrations have been observed in vapor monitoring point VMP-1, located along the northern property boundary. VMP-1 was sampled for laboratory analysis using a Summa canister on December 23, 2011, and a Tedlar bag on February 28, 2012, and December 31, 2012. A vapor sample from VMP-1 was also analyzed using a Horiba organic vapor analyzer on February 23, 2012. No hydrocarbons have been detected in any of the samples collected from VMP-1. The laboratory report for the December 31, 2012 sampling event is presented in Appendix C.

FUTURE SITE ACTIVITIES

Future Groundwater Monitoring

Pending available budget from the Cleanup Fund, Pangea anticipates performing quarterly groundwater monitoring of the seven key impacted/observation wells in March 2013 (Table B, Appendix A). If BOC implementation continues in 2013, for cost control monthly monitoring would be performed only on select wells (DP-2, MW-1 and MW-6) based on demonstrated BOC capture. During the sampling event scheduled for June 2013 (2nd quarter), groundwater sampling is planned from *all* site wells to evaluate site conditions.

Enhanced DPE/AS Remediation

Based on seasonally high water levels limiting remedial effectiveness and low removal rates, Pangea has temporarily discontinued DPE/AS remediation. The DPE/AS system will be restarted in the spring when water levels have decreased to check for possible rebounding removal rates and contaminant concentrations. Due to budget limitations with the Cleanup Fund, a budget change order has been submitted to allow for site remediation rebound testing. BOC use will be discontinued while the DPE/AS system is not operating.

Planned Remediation and Monitoring Schedule

Pangea plans the following schedule for continued enhanced remediation (DPE/AS/BOC) and associated groundwater monitoring:

- February 2013 - Seasonal Shutdown of DPE/AS and Discontinued BOC
- March 2013 – Quarterly Monitoring of 8 Key Wells
- April/May 2013 – Remediation Rebound Test (if Merited and Available Budget)
- June 2013 – Groundwater Monitoring of All Site Wells (Annual Event)
- July 2013 – Cyclical Remediation in New Fiscal Year (if Merited)

Electronic Reporting

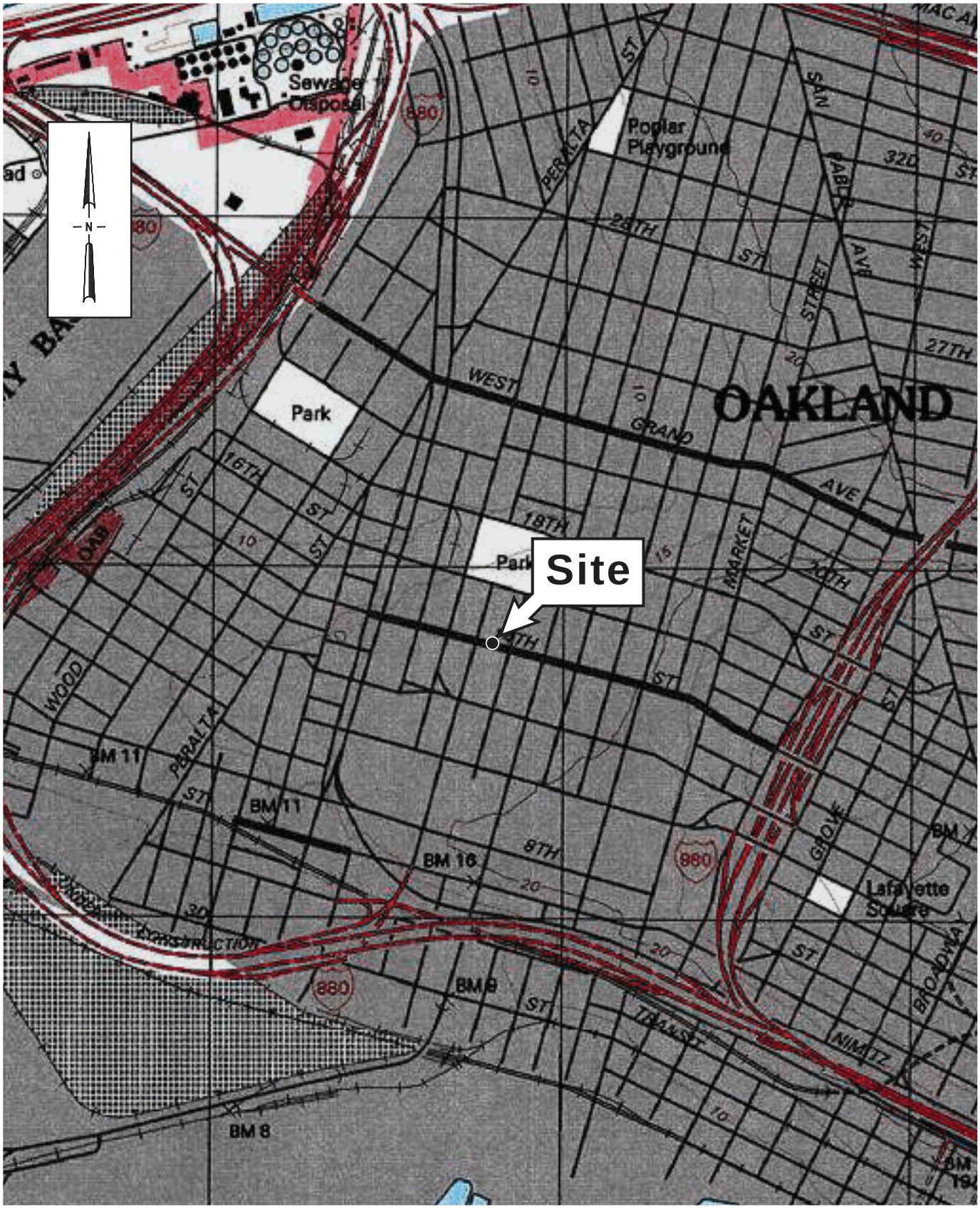
This report will be uploaded to the Alameda County FTP site. The report, laboratory data, and other applicable information will also be uploaded to the State Water Resource Control Board's Geotracker database. As requested, report hard copies will no longer be provided to the local agencies.

ATTACHMENTS

Figure 1 – Vicinity Map
Figure 2 – Groundwater Elevation and Hydrocarbon Concentration Map (September 30, 2012)
Figure 3 – Groundwater Elevation and Hydrocarbon Concentration Map (December 14, 2012)
Figure 4 - TPHg Distribution in Groundwater September 30, 2012
Figure 5 – TPHg Distribution in Groundwater December 14, 2012
Figure 6 – Benzene Distribution in Groundwater September 30, 2012
Figure 7 – Benzene Distribution in Groundwater December 14, 2012
Figure 8 – Remediation System Layout

Table 1 – Groundwater Elevation and Analytical Data
Table 2 – SVE Performance Data
Table 3 – GWE Performance Data
Table 4 – AS Performance Data

Appendix A – Groundwater Monitoring Program
Appendix B – Groundwater Monitoring Field Data Sheets
Appendix C – Laboratory Analytical Reports



0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Figure 1

Former Shell Service Station
1230 14th Street
Oakland, California

PANGEA

Vicinity Map

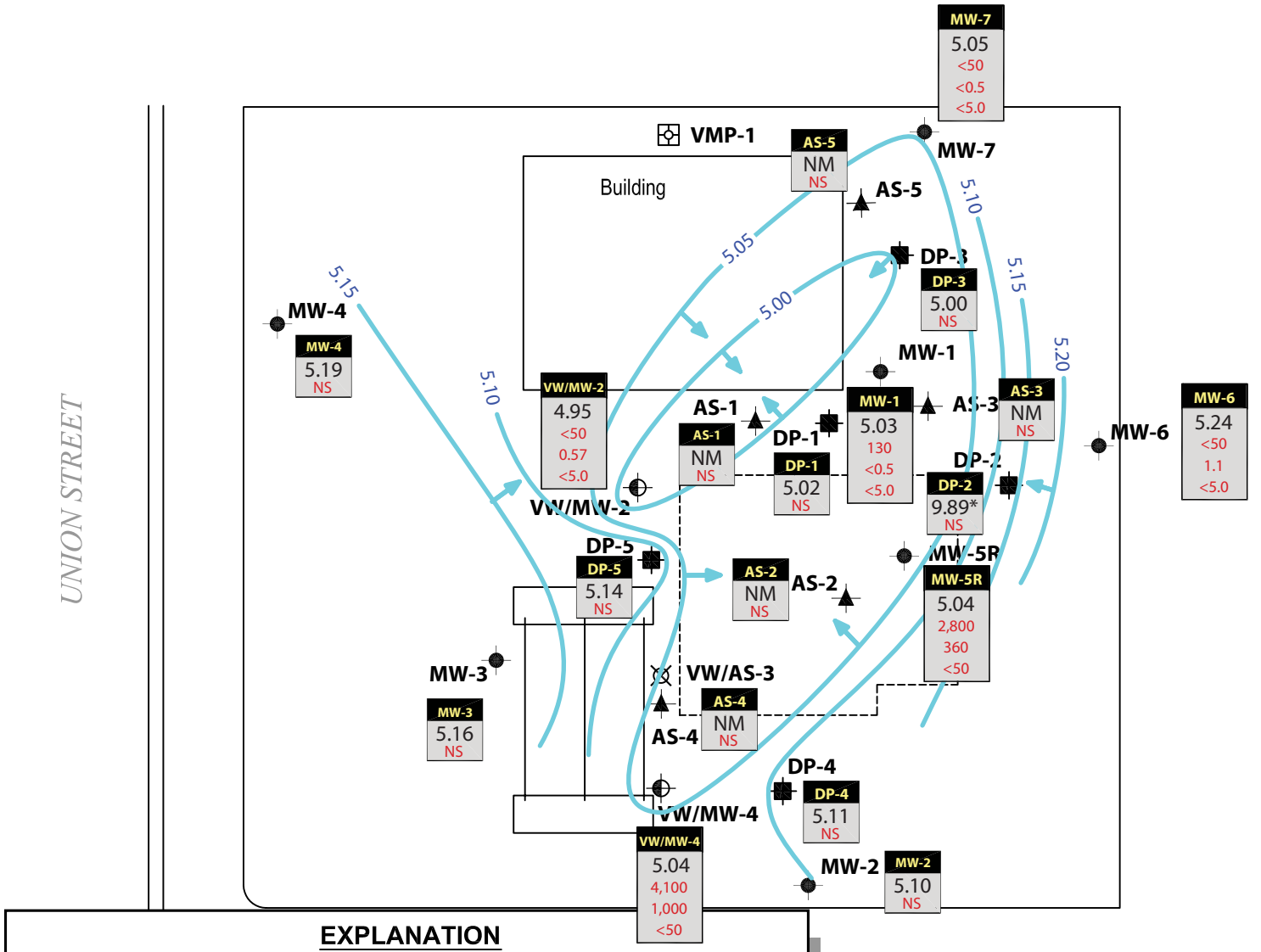
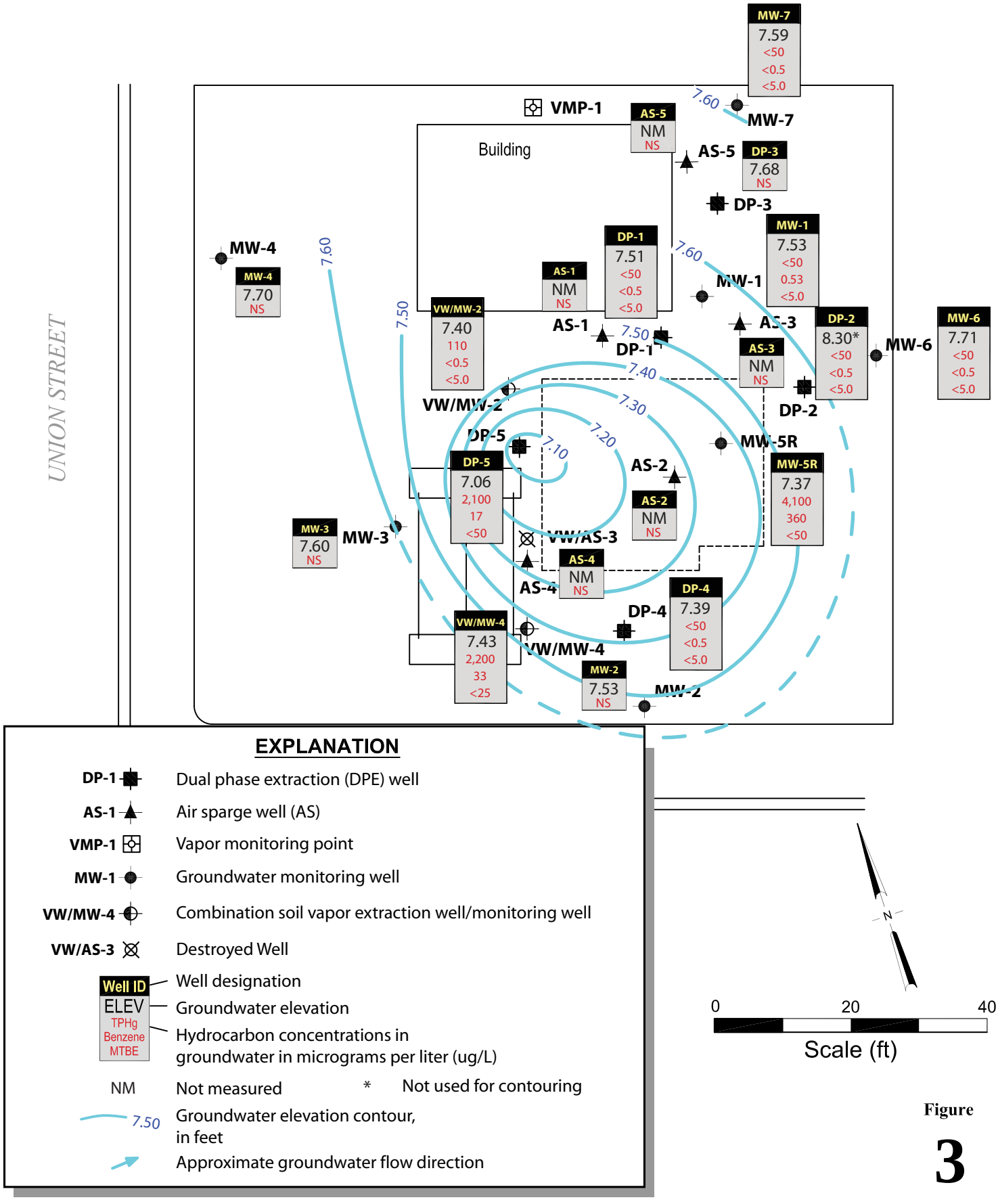


Figure 2

Former Shell Service Station
1230 14th Street
Oakland, California

PANGEA

Groundwater Elevation Contour and Hydrocarbon Concentration Map
September 30, 2012



EXPLANATION

- DP-1 — Dual phase extraction (DPE) well
- AS-1 — Air sparge well (AS)
- VMP-1 — Vapor monitoring point
- MW-1 — Groundwater monitoring well
- VW/MW-4 — Combination soil vapor extraction well/monitoring well
- VW/AS-3 — Destroyed Well
- Well ID / ELEV / TPHg / Benzene / MTBE — Well designation; Groundwater elevation; Hydrocarbon concentrations in groundwater in micrograms per liter (ug/L)
- NM — Not measured
- * — Not used for contouring
- 7.50 — Groundwater elevation contour, in feet
- Approximate groundwater flow direction

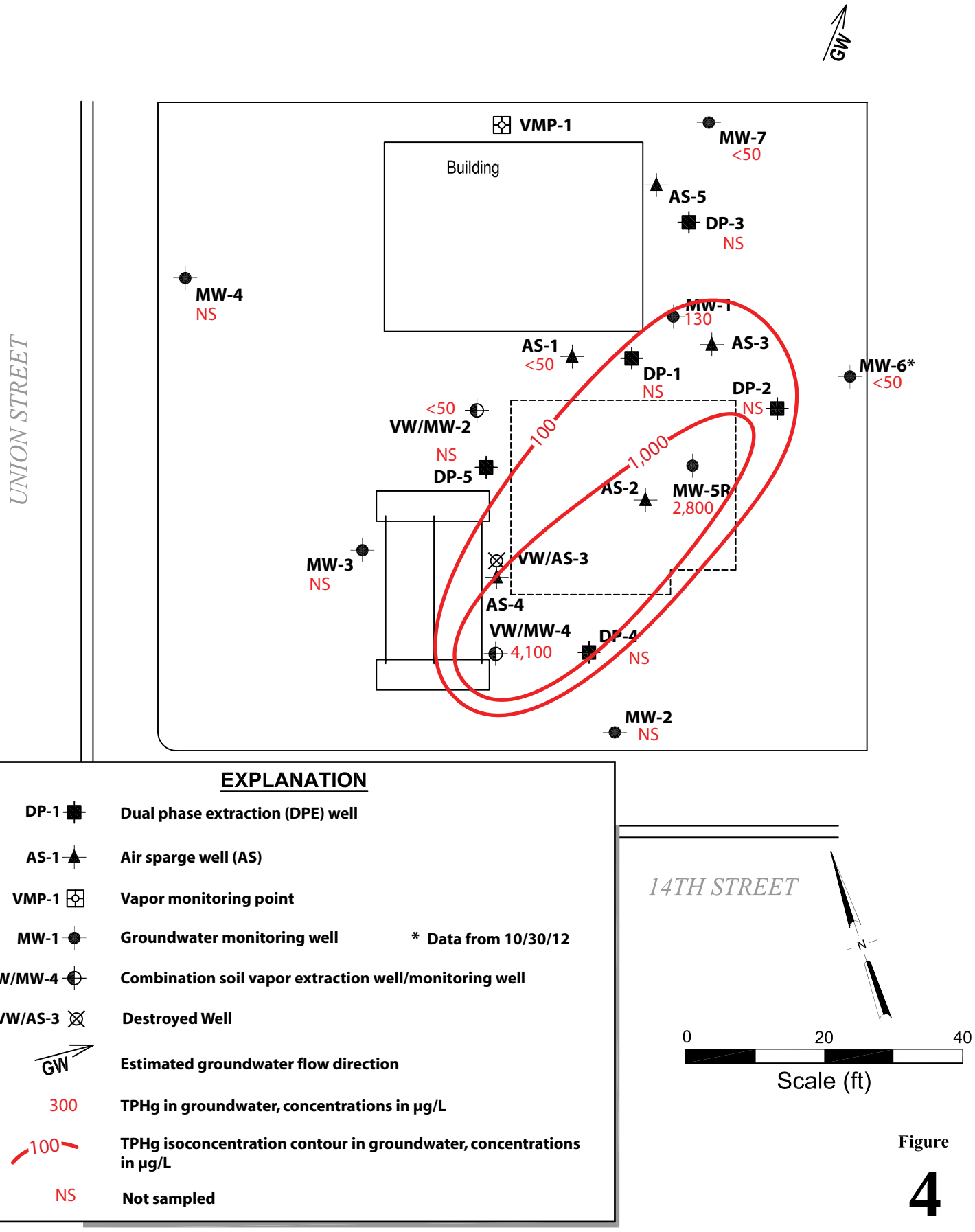
Figure

3

Former Shell Service Station
1230 14th Street
Oakland, California

PANGEA

Groundwater Elevation Contour and Hydrocarbon Concentration Map
December 14, 2012



EXPLANATION

DP-1	Dual phase extraction (DPE) well
AS-1	Air sparge well (AS)
VMP-1	Vapor monitoring point
MW-1	Groundwater monitoring well
VW/MW-4	Combination soil vapor extraction well/monitoring well
VW/AS-3	Destroyed Well
GW	Estimated groundwater flow direction
300	TPHg in groundwater, concentrations in µg/L
100	TPHg isoconcentration contour in groundwater, concentrations in µg/L
NS	Not sampled

* Data from 10/30/12

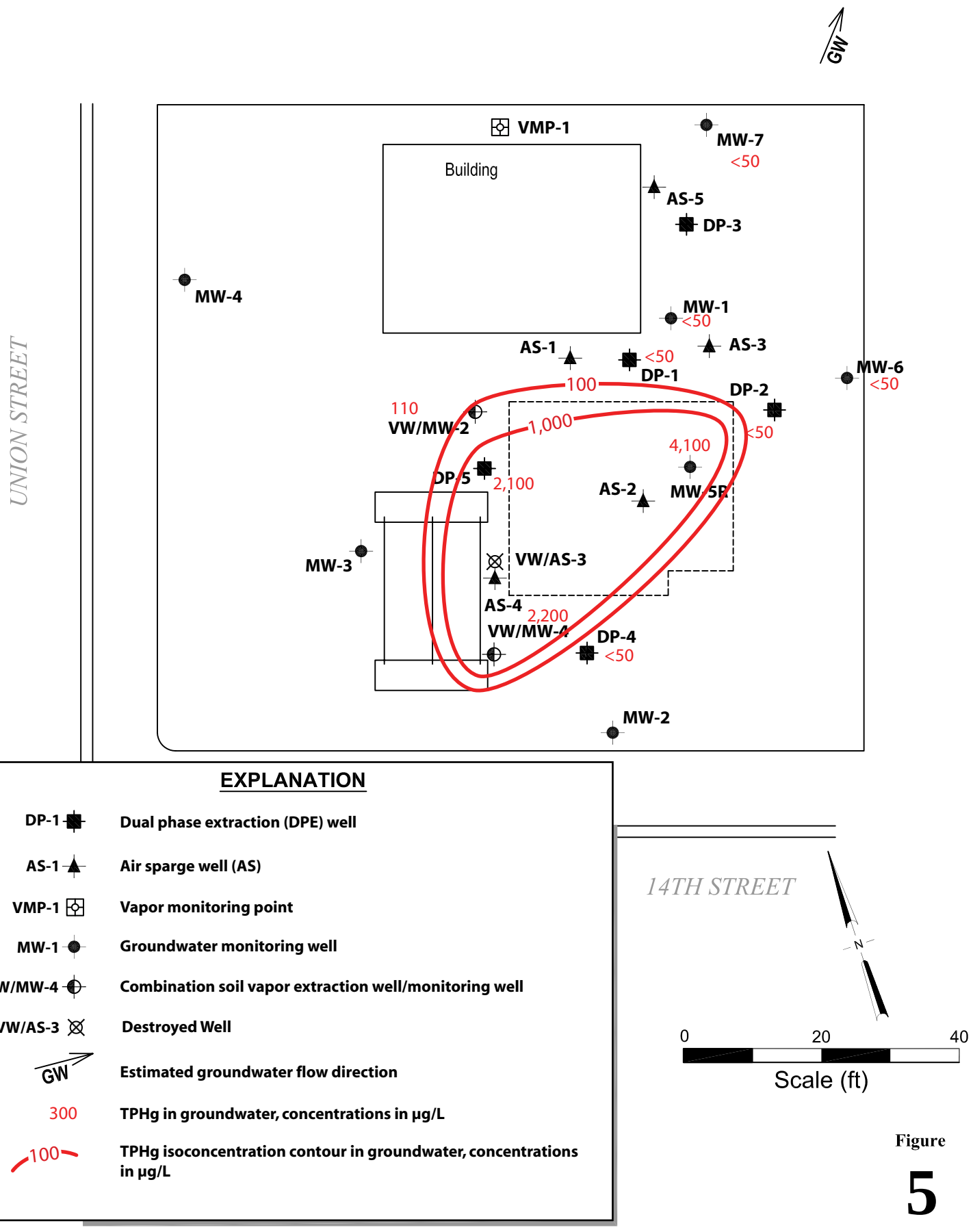
Figure

4

Former Shell Service Station
1230 14th Street
Oakland, California

PANGEA

TPHg Distribution in Groundwater
September 30, 2012



EXPLANATION

DP-1	Dual phase extraction (DPE) well
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VMP-1	Vapor monitoring point
MW-1	Groundwater monitoring well
VW/MW-4	Combination soil vapor extraction well/monitoring well
VW/AS-3	Destroyed Well
GW	Estimated groundwater flow direction
300	TPHg in groundwater, concentrations in µg/L
100	TPHg isoconcentration contour in groundwater, concentrations in µg/L

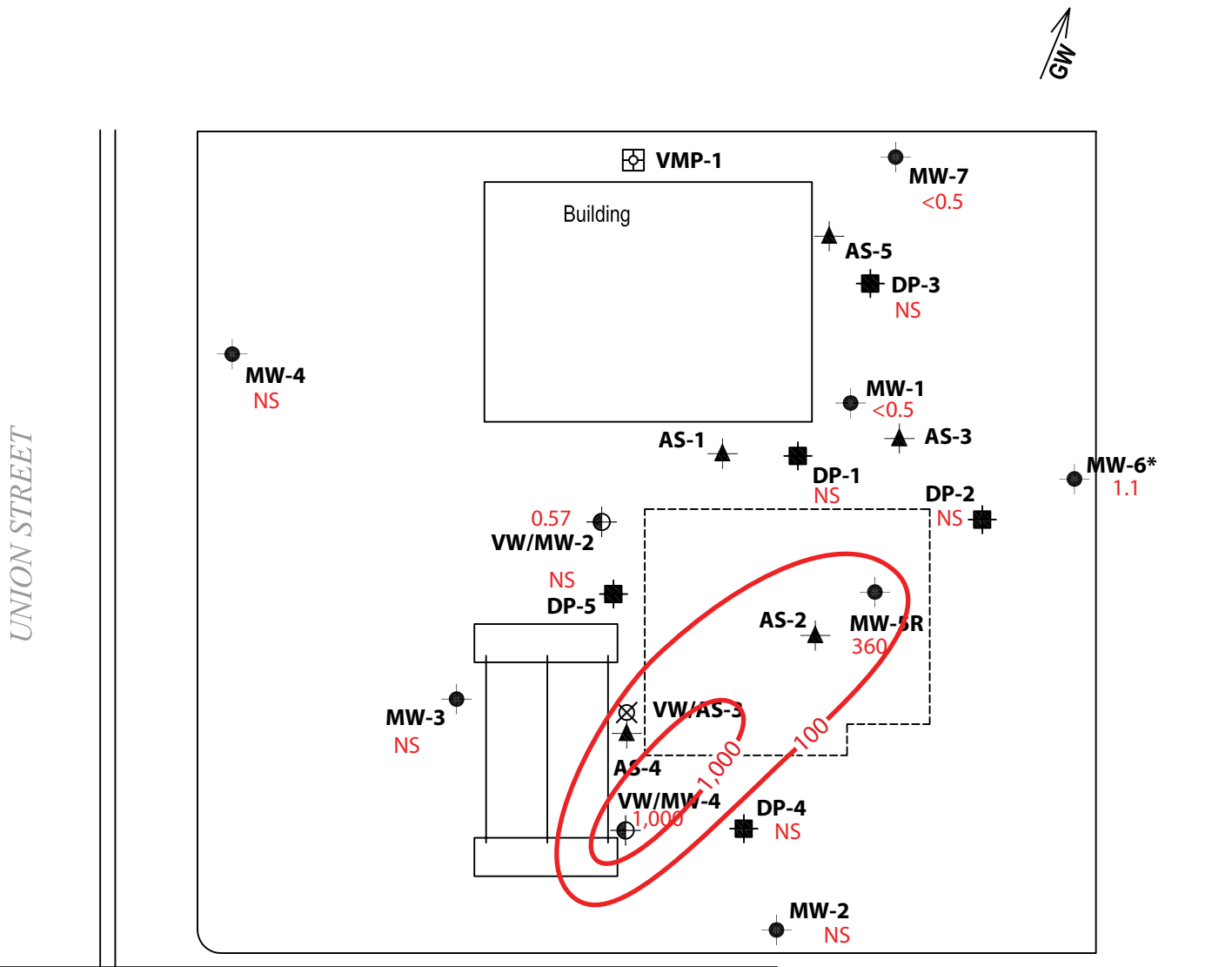
Figure

5

Former Shell Service Station
1230 14th Street
Oakland, California

PANGEA

TPHg Distribution in Groundwater
December 14, 2012



EXPLANATION

DP-1	Dual phase extraction (DPE) well
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VW/MW-4	Combination soil vapor extraction well/monitoring well
VW/AS-3	Destroyed Well
GW	Estimated groundwater flow direction
300	Benzene in groundwater, concentrations in µg/L
100	Benzene isoconcentration contour in groundwater, concentrations in µg/L
NS	Not Sampled

* Data from 10/30/12

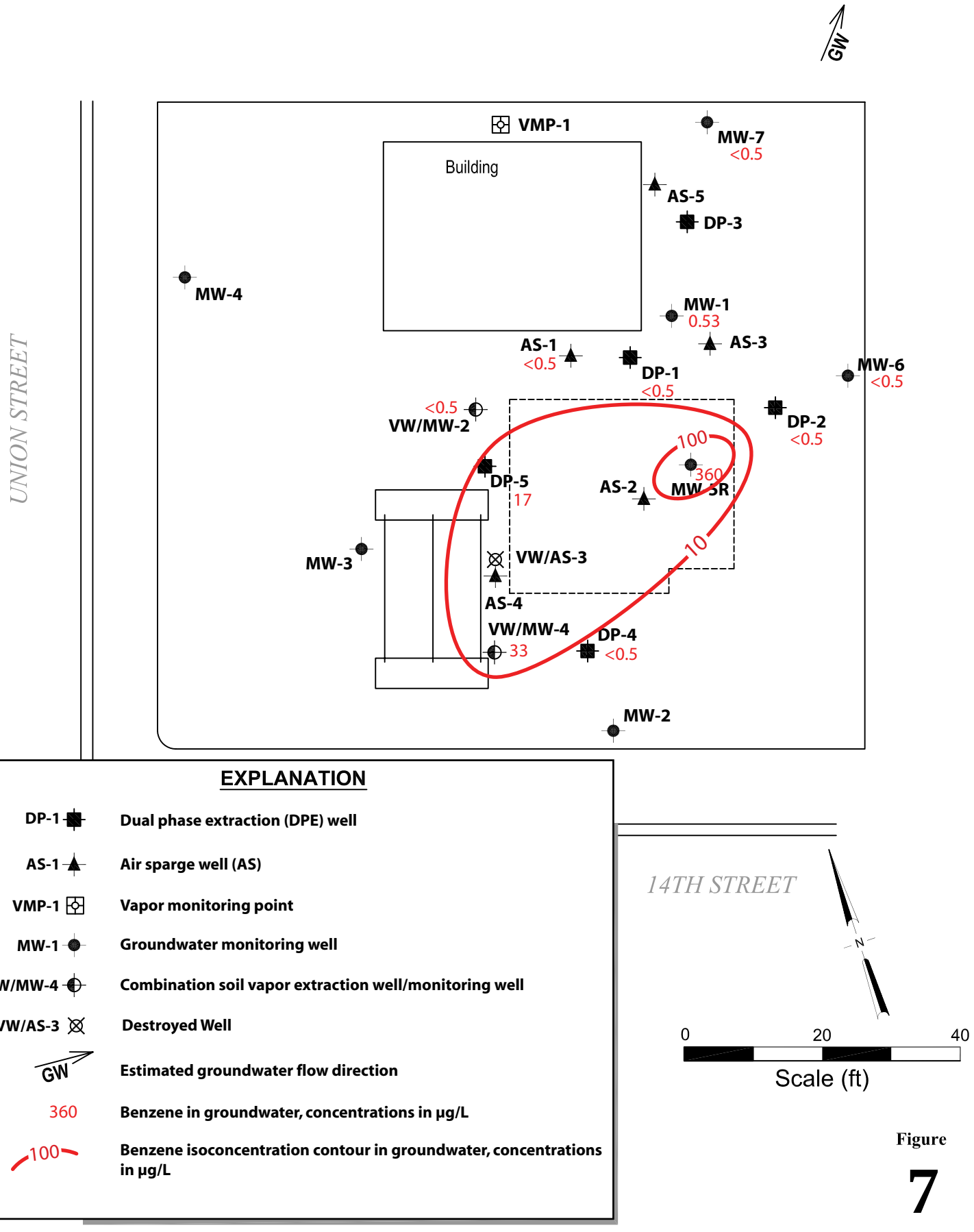
Figure

6

Former Shell Service Station
1230 14th Street
Oakland, California

PANGEA

Benzene Distribution in Groundwater
September 30, 2012



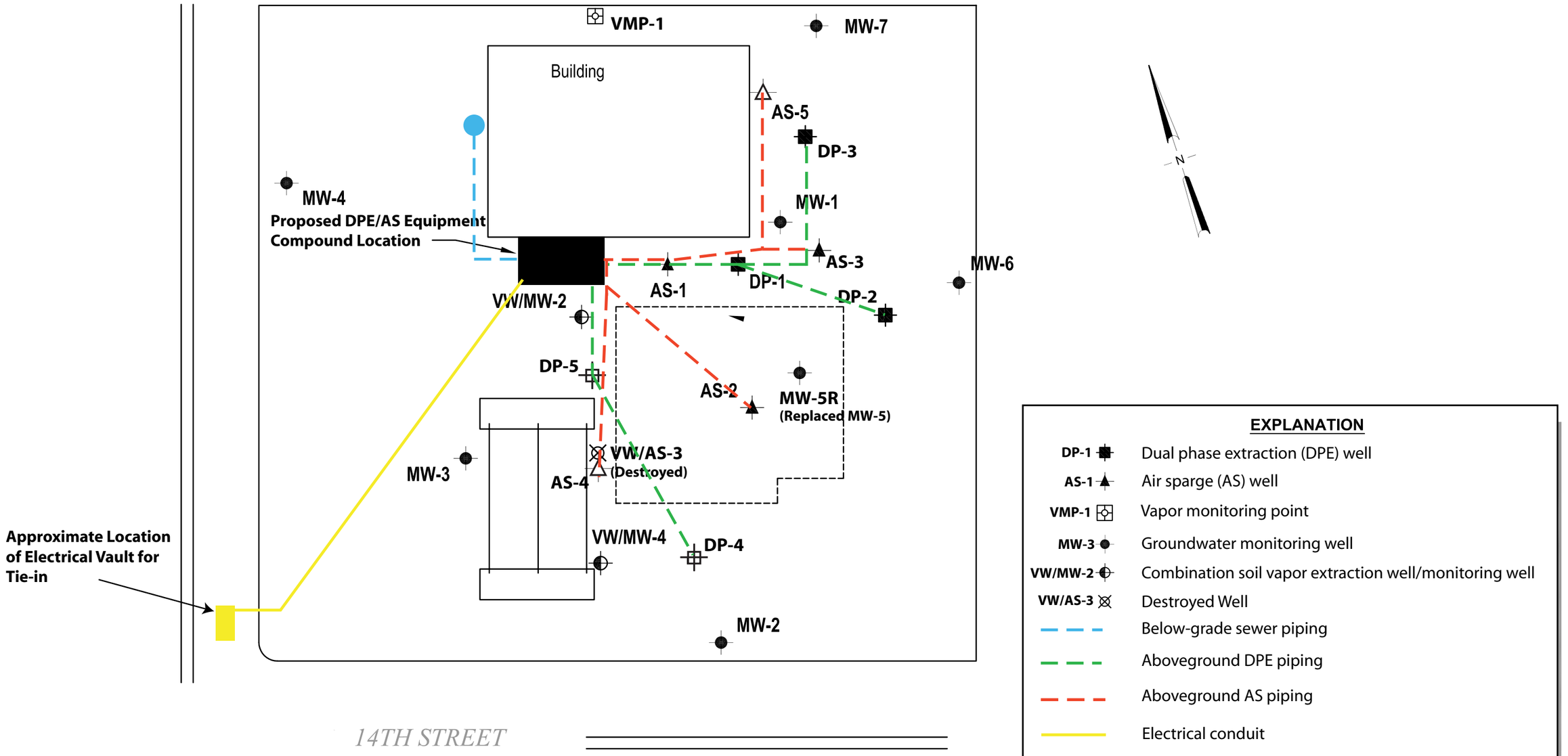
Figure

7

Former Shell Service Station
1230 14th Street
Oakland, California

PANGEA

Benzene Distribution in Groundwater
December 14, 2012



FIGURE

8

Former Shell Service Station
1230 14th Street
Oakland, California

PANGEA

Remediation System Layout

Table 1. Groundwater Elevation and Analytical Data - Saberi, 1230 14th Street, Oakland, CA

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
REMEDIATION WELLS										
AS-1	07/02/08	12.08	--	28,000	390	350	620	2,500	<500	--
	08/18/08	13.05	--	1,500	12	6.1	6.7	91	<17	1.94/2.41
	11/20/08	13.69	--	640	2.4	2.7	1.0	8.5	<5.0	2.51/2.91
	02/18/09	12.09	--	270	1.1	2.2	<0.5	<0.5	<5.0	2.94/2.99
	05/26/09	11.40	--	250	1.7	0.70	<0.5	3.5	<5.0	3.01/2.94
	11/23/09	13.38	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.94/2.65
	05/26/10	10.97	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.6/2.78
	12/30/10					Well Inaccessible				
19.69	05/23/11					Well Inaccessible				
	12/27/11	14.02	5.67	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.69/0.75
	06/30/12	24.29	-4.60	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
AS-2	07/02/08	11.98	--	9,600	380	620	170	1,000	<50	--
19.22										
AS-3	07/02/08	12.42	--	2,800	340	7.2	20	37	<50	--
19.5										
AS-4	04/16/10	8.82	---	31,000	1,300	330	400	6,600	<500	--
18.93										
AS-5	04/16/10	10.03	---	120	2.5	1.3	1.2	17	<5.0	--
19.99										
DP-1	07/03/08	12.43	--	34,000	5,100	1,800	1,300	4,900	<350	--
18.49	12/27/11	13.03	5.46	41,000	4,400	1,200	780	4,600	<1,000	0.83/0.91
	06/30/12	11.25	7.24	2,800	66	41	43	420	<50	0.08
	09/01/12	13.63	4.86	7,300	360	180	68	1,700	<250	2.09
	09/30/12	**13.47**	**5.02**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	12/14/12	**10.98**	**7.51**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**1.4**
DP-2	07/03/08	12.92	--	15,000	2,800	300	560	1,600	<150	--
19.04	12/27/11	13.57	5.47	9,100	820	46	320	790	<80	0.60/0.58
	09/01/12	13.83	5.21	2,300	100	17	61	440	<50	1.17
	09/30/12	**9.15**	**9.89**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	12/14/12	**10.74**	**8.30**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**0.86**
DP-3	07/02/08	13.21	--	14,000	4,400	100	720	150	<350	--
19.35	12/27/11	13.92	5.43	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.59/0.66
	09/30/12	**14.35**	**5.00**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	12/14/12	**11.67**	**7.68**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
DP-4	04/16/10	8.95	--	4,700	300	45	260	570	<100	--
18.21	12/27/11	12.57	5.64	4,500	430	48	67	150	<300	0.79/0.80
	09/01/12	12.26	5.95	590	3.6	15	2.6	140	<5.0	1.21
	09/30/12	**13.10**	**5.11**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	12/14/12	**10.82**	**7.39**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**0.95**
DP-5	04/16/10	9.11	--	19,000	810	1,900	680	3,100	<350	--
18.36	12/27/11	12.78	5.58	2,300	1900	1,700	960	3,000	<500	0.66/0.63
	06/30/12	10.85	7.51	4,600	350	240	83	470	<50	0.14
	09/01/12	13.51	4.85	8,100	270	910	180	1,700	<50	0.29
	09/30/12	**13.22**	**5.14**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	12/14/12	**11.30**	**7.06**	**2,100**	**17**	**42**	**25**	**340**	**<50**	**0.61**
GROUNDWATER AND/OR REMEDIATION WELLS										
MW-1	03/25/96	9.53	9.05	37,000	7,400	1,500	720	3,300	<500	--
18.58	06/21/96	10.72	7.86	35,000	9,900	460	340	3,500	890	--
	09/26/96	12.88	5.70	19,000	8,200	510	780	790	<250	--
	12/19/96	12.59	5.99	27,000	120	1,200	1,400	2,800	<100	--
	12/19/96	12.59	5.99	32,000	12,000	1,300	1,600	3,100	830	--
	03/25/97	11.10	7.48	39,000	13,000	1,600	840	3,100	730	1.2
	06/26/97	12.42	6.16	--	--	--	--	--	--	'--
	09/26/97	13.31	5.27	--	--	--	--	--	--	0.8
	12/05/97	12.65	5.93	--	--	--	--	--	--	0.3
	02/19/98	6.46	12.12	16,000	5,500	450	500	800	<500	2.4

Table 1. Groundwater Elevation and Analytical Data - Saberi, 1230 14th Street, Oakland, CA

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
(MW-1 cont'd)	06/08/98	6.62	11.96	--	--	--	--	--	--	1.2
	08/25/98	11.83	6.75	--	--	--	--	--	--	2.8
	12/28/98	12.01	6.57	--	--	--	--	--	--	2.6
	03/26/99	9.15	9.43	--	--	--	--	--	--	2.2
	06/30/99	11.22	7.36	--	--	--	--	--	--	3.8
	09/30/99	11.89	6.69	--	--	--	--	--	--	3.0
	12/27/99	13.55	5.03	34,800	8,660	953	956	2,770	<1,000	2.4/2.1
	01/21/00	13.42	5.16	40,600	14,700	1,850	1,210	3,670	<500	2.8
	03/07/00	8.11	10.47	--	--	--	--	--	--	0.4
	04/17/00	9.78	8.80	--	--	--	--	--	--	3.0/3.4
	04/18/00	--	--	18,300	8,060	543	528	872	<50.0	--
	09/21/00	13.11	5.47	--	--	--	--	--	--	5.2
	10/17/00	12.61	5.97	15,800	6,720	435	587	887	351(<66.7)	1.2/0.8
	01/09/01	12.94	5.64	--	--	--	--	--	--	0.3
	04/27/01	10.73	7.85	1,400	650	28	58	48	(<10)	1.8/2.1
	07/03/01	12.00	6.58	--	--	--	--	--	--	1.8
	12/06/01	10.53	8.05	4,500	1,500	85	160	210	(<50)	2.5/2.9
	01/23/02	9.33	9.25	--	--	--	--	--	--	0.1
	04/17/02	10.49	8.09	230	12	<0.50	4.6	2.5	(<5.0)	6.3/5.3
	07/18/02	11.98	6.60	--	--	--	--	--	--	1.2
	11/11/02	13.00	5.58	12,000	2,600	240	470	640	(-8.5)	0.2/0.2
	01/16/03	9.68	8.90	--	--	--	--	--	--	4.4
	03/13/03	10.45	8.13	820	340	2.7	<2.0	3.2	(<20)	2.8/0.9
	04/23/03	10.32	8.26	900	550	19	49	49	(<50)	0.9/0.1
	05/13/03	10.28	8.30	740	510	18	43	46	(<50)	0.1/0.2
	06/13/03	11.16	7.42	<5,000	1,500	82	180	250	(<500)	0.3/0.8
	07/14/03	11.66	6.92	5,300	3,400	160	340	420	(<20)	0.6/0.3
	09/29/03	12.44	6.14	10,000	5,700	400	670	1,000	(<50)	0.6/0.7
	10/29/03	12.63	5.95	19,000	6,600	560	820	1,300	(26)	0.6/0.4
	01/05/04	10.17	8.41	380	140	7.1	6.2	16	(<1.0)	5.0/0.8
	04/01/04	9.57	9.01	79	0.59	<0.50	<0.50	<1.0	(<0.50)	4.6/1.2
	07/02/04	11.81	6.77	4,100	2,100	33	110	81	(<10)	0.6/0.5
	11/03/04	12.53	6.05	8,000	3,800	150	480	460	(<25)	1.45/2.1
	01/04/05	9.39	9.19	120	23	1.6	2.0	3.5	(<0.50)	4.21/2.82
	04/13/05	7.63	10.95	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	2.44/2.77
	07/13/05	10.85	7.73	930 e	400	6.1	<5.0	10	(<5.0)	0.84/0.66
	10/28/05	12.44	6.14	8,300	5,500	190	590	470	(<25)	0.2/0.2
	01/17/06	8.61	9.97	<50	2.2	1.1	1.4	4.8	(<0.50)	5.8/5.3
	02/23/06	9.60	8.98	--	18.1	2.22	1.89	4.50	--	--
	03/09/06	7.65	10.93	--	1.80	<0.500	<0.500	1.82	--	--
	04/21/06	6.35	12.23	<50.0	1.54	1.03	4.20	5.82	(<0.500)	--
	05/01/06	7.38	11.20	268	41.3	4.62	3.83	26.1	(<0.500)	0.27/0.36
	06/23/06	10.09	8.49	3,990	362	13.1	12.4	71.5	(<0.500)	--
	07/11/06	10.09	8.49	6,190	3,740	52.0	67.8	982	(<0.500)	--
	08/30/06	11.55	7.03	29,200	7,380	596	443	1,680	(4.45)	0.39/0.52
	09/29/06	11.97	6.61	76,100	9,300	859 i	1,290	2,820 i	(<5.00)	--
	10/13/06	12.08	6.50	49,500	7,580	770	1,030	2,860	(2.75)	--
	11/03/06	12.47	6.11	42,600	8,450	592	869	1,970	(2.69)	2.60/1.15
	12/26/06	11.80	6.78	19,000	4,600	360	640	1,300	(<5.0)	--
	01/11/07	11.84	6.74	23,000	6,000	320	780	1,100	(<25)	--
	01/30/07	12.18	6.40	3,700	890	74	170	220	(<25)	1.18/0.76
	03/01/07	10.74	7.84	2,600	670	32	41	180	(<10)	--
	04/26/07	10.90	7.68	12,000 k,l	2,800	220	400	560	(<20)	--
	06/01/07	11.49	7.09	15,000 k	3,900	380	670	1,010	(1.8)	0.31/0.43
	06/21/07	12.07	6.51	13,000 k	3,800	400	620	1,060	(<50)	--
	07/03/07	12.00	6.58	21,000 k	6,100	510	960	1,760	(<50)	--
	08/16/07	12.55	6.03	20,000 k	5,800	460	1,100	1,730	(<50)	0.3/0.2
	12/06/07	13.00	5.58	53,000	9,400	560	1,400	3,000	(<25)	--
	02/25/08	9.91	8.67	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.74
	05/26/08	11.90	6.68	9,300	2,200	67	140	130	<250	1.96/1.13
	08/18/08	12.82	5.76	15,000	3,300	110	380	430	<250	0.97/0.77
	11/20/08	13.46	5.12	18,000	4,700	190	770	910	<100	1.04/1.27
	02/18/09	11.77	6.81	2,200	54	8.7	45	76	<10	1.21/1.40
	05/26/09	11.18	7.40	750	31	7.1	3.5	23	<5.0	0.90/1.21
	11/23/09	13.15	5.43	6,300	2,100	53	170	180	<250	1.12/1.85
	05/26/10	10.74	7.84	550	96	6.2	3.1	14	<10	0.86/1.13

Table 1. Groundwater Elevation and Analytical Data - Saberi, 1230 14th Street, Oakland, CA

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
(MW-1 cont'd)	12/30/10	10.53	8.05	280	40	4.6	2.8	17	<5.0	0.88/1.07
	05/23/11	10.21	8.37	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.68
	12/27/11	13.15	5.43	6,900	140	51	54	370	<50	1.03/1.13
	06/30/12	11.67	6.91	260	0.58	0.99	3.4	13	<5.0	6.18
	09/01/12	13.56	5.02	220	0.60	1.0	7.8	13	<5.0	4.22
	09/30/12	**13.55**	**5.03**	**130**	**<0.5**	**0.61**	**2.9**	**1.4**	**<5.0**	**2.97/3.09**
	12/14/12	**11.05**	**7.53**	**<50**	**0.53**	**<0.5**	**0.55**	**1.0**	**<5.0**	**1.98/2.15**
MW-2	03/25/96	8.19	9.71	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
17.90	06/21/96	9.94	7.96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	09/26/96	12.15	5.75	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	12/19/96	11.70	6.20	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	03/25/97	9.25	8.65	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
	06/26/97	11.36	6.54	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	09/26/97	12.56	5.34	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.1
	09/26/97	12.56	5.34	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.1
	12/05/97	11.15	6.75	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.7
	02/19/98	5.61	12.29	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.7
	06/08/98	5.58	12.32	<50	<0.30	<0.30	<0.30	<0.60	<10	3.2
	08/25/98	10.67	7.23	--	--	--	--	--	--	1.7
	12/28/98	11.65	6.25	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	0.4/0.8
	03/26/99	8.60	9.30	--	--	--	--	--	--	0.7
	06/30/99	10.30	7.60	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	2.3
	09/30/99	10.77	7.13	--	--	--	--	--	--	1.9
	12/27/99	12.21	5.69	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	0.7/0.7
	03/07/00	7.13	10.77	--	--	--	--	--	--	1.1
	04/17/00	8.35	9.55	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	1.8/1.8
	09/21/00	11.76	6.14	--	--	--	--	--	--	2.1
	10/17/00	11.80	6.10	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.9/0.6
	01/09/01	12.14	5.76	--	--	--	--	--	--	0.7
	04/27/01	9.85	8.05	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	1.1/0.9
	07/03/01	11.20	6.70	--	--	--	--	--	--	1.2
	12/06/01	10.77	7.13	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	3.9/2.1
	01/23/02	8.64	9.26	--	--	--	--	--	--	2.5
	04/17/02	9.61	8.29	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	3.5/5.2
	07/18/02	11.09	6.81	--	--	--	--	--	--	1.4
	11/11/02	12.16	5.74	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	0.2/0.3
	01/16/03	8.92	8.98	--	--	--	--	--	--	1.7
	03/13/03	9.60	8.30	--	--	--	--	--	--	1.1
	04/23/03	9.48	8.42	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.4/0.2
	05/13/03	9.45	8.45	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.5/0.3
	06/13/03	10.28	7.62	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.6/0.9
	07/14/03	10.67	7.23	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.5/.09
	09/29/03	11.58	6.32	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.9/1.3
	10/29/03	11.76	6.14	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	4.3/0.5
	01/05/04	9.36	8.54	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.2/0.8
	04/01/04	8.77	9.13	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	4.0/0.3
	07/02/04	11.04	6.86	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.4/0.3
	11/03/04	11.71	6.19	<50	<0.50	<0.50	<0.50	<1.0	(0.54)	6.4/1.40
	01/04/05	8.68	9.22	<50	<0.50	<0.50	<0.50	<1.0	(0.62)	4.41/2.88
	04/13/05	7.13	10.77	<50	<0.50	<0.50	<0.50	<0.50	(1.7)	0.71/0.23
	07/13/05	10.30	7.60	<50	<0.50	<0.50	<0.50	<1.0	(2.3)	0.90/0.33
	10/28/05	11.61	6.29	<50	<0.50	<0.50	<0.50	<1.0	(4.2)	0.4/0.1
	01/17/06	8.21	9.69	<50	<0.50	<0.50	<0.50	<0.50	(5.0)	0.8/0.2
	03/09/06	7.70	10.20	--	--	--	--	--	--	--
	04/21/06	5.83	12.07	--	--	--	--	--	--	--
	05/01/06	6.34	11.56	<50.0	<0.500	<0.500	<0.500	<0.500	(4.33)	0.52/0.18
	08/30/06	10.71	7.19	<50.0	<0.500	<0.500	<0.500	<0.500	(1.98)	0.51/1.04
	09/29/06	11.03	6.87	--	--	--	--	--	--	--
	11/03/06	11.62	6.28	<50.0	<0.500	<0.500	<0.500	<0.500	(3.08)	0.44/0.40
	01/30/07	11.30	6.60	<50	<0.50	<0.50	<0.50	<1.0	(2.9)	0.92/0.63
	06/01/07	10.52	7.38	<50 k	0.71	<1.0	0.20 m	0.39 m	(1.7)	0.71/0.56
	08/16/07	11.60	6.30	<50 k	<0.50	<1.0	<1.0	<1.0	(1.3)	0.5/0.2
	12/06/07	12.39	5.51	<50	0.97	<0.5	0.56	1.5	(0.99)	--
	02/25/08	9.15	8.75	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.82
	05/26/08	11.02	6.88	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.86/1.32

Table 1. Groundwater Elevation and Analytical Data - Saberi, 1230 14th Street, Oakland, CA

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
(MW-2 cont'd)	08/18/08	11.97	5.93	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.45/1.12
	11/20/08	12.64	5.26	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.10/1.16
	02/18/09	11.14	6.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.98/1.11
	05/26/09	10.31	7.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.03/1.49
	11/23/09	12.32	5.58	--	--	--	--	--	--	--
	05/26/10	9.92	7.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.99/1.43
	12/30/10	9.80	8.10	--	--	--	--	--	--	--
	05/23/11	9.37	8.53	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.48
	12/27/11	12.31	5.59	--	--	--	--	--	--	--
	06/30/12	10.49	7.41	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.46
	09/30/12	**12.80**	**5.10**	**--**	**--**	--	--	--	--	--
	12/14/12	**10.37**	**7.53**	**--**	**--**	--	--	--	--	--
MW-3	03/25/96	8.47	9.71	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
18.18	06/21/96	10.40	7.78	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	09/26/96	12.45	5.73	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	12/19/96	12.14	6.04	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	03/25/97	9.54	8.64	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.2
	06/26/97	11.66	6.52	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.6
	09/26/97	12.85	5.33	<50	<0.50	<050	<0.50	<0.50	<2.5	1.1
	12/05/97	11.44	6.74	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.6
	02/19/98	6.78	11.40	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.6
	06/08/98	6.82	11.36	<50	<0.30	<0.30	<0.30	<0.60	<10	3.8
	06/08/98	6.82	11.36	<50	<0.30	<0.30	<0.30	<0.60	<10	3.8
	08/25/98	11.09	7.09	--	--	--	--	--	--	1.2
	12/28/98	11.84	6.34	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	0.9/0.6
	03/26/99	8.57	9.61	--	--	--	--	--	--	0.8
	06/30/99	10.61	7.57	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	4.8
	09/30/99	11.53	6.65	--	--	--	--	--	--	1.4
	12/27/99	12.35	5.83	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	1.4/2.5
	03/07/00	7.36	10.82	--	--	--	--	--	--	5.8
	04/17/00	8.39	9.79	<50.0	<0.500	<0.500	<0.500	<0.500	19.3	6.5/5.1
	09/21/00	12.01	6.17	--	--	--	--	--	--	3.0
	10/17/00	12.10	6.08	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	2.0/1.0
	01/09/01	12.43	5.75	--	--	--	--	--	--	1.9
	04/27/01	10.10	8.08	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	2.3/2.4
	07/03/01	11.45	6.73	--	--	--	--	--	--	1.4
	12/06/01	11.07	7.11	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	2.8/3.9
	01/23/02	8.89	9.29	--	--	--	--	--	--	3.1
	04/17/02	9.92	8.26	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	3.7/3.2
	07/18/02	11.42	6.76	--	--	--	--	--	--	1.6
	11/11/02	12.44	5.74	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	0.3/0.4
	01/16/03	9.25	8.93	--	--	--	--	--	--	2.1
	03/13/03	9.84	8.34	--	--	--	--	--	--	1.2
	04/23/03	9.71	8.47	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.7/0.2
	05/13/03	9.70	8.48	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.6/0.2
	06/13/03	10.58	7.60	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.4/1.3
	07/14/03	10.98	7.20	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.4/.03
	09/29/03	11.84	6.34	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.4/1.1
	10/29/03	12.05	6.13	58 b	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.8/0.4
	01/05/04	9.70	8.48	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.3/0.7
	04/01/04	9.03	9.15	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.2/0.6
	07/02/04	11.15	7.03	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.7/0.5
	11/03/04	11.98	6.20	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.65/2.75
	01/04/05	8.98	9.20	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	3.21/1.87
	04/13/05	7.22	10.96	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	4.92/5.28
	07/13/05	10.30	7.88	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.30/0.40
	10/28/05	11.81	6.37	<50 f	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.8/0.2
	01/17/06	8.17	10.01	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	3.1/2.0
	03/09/06	6.45	11.73	--	--	--	--	--	--	--
	04/21/06	5.96	12.22	--	--	--	--	--	--	--
	05/01/06	6.40	11.78	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500(<0.500)	0.68/0.42
	08/30/06	10.95	7.23	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500(<0.500)	3.53/3.14
	09/29/06	11.40	6.78	--	--	--	--	--	--	--
	11/03/06	11.91	6.27	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500(<0.500)	7.0/6.8
	01/30/07	11.55	6.63	<50	<0.50	<0.50	<0.50	<1.0	<0.50(<0.50)	1.45/1.10

Table 1. Groundwater Elevation and Analytical Data - Saberi, 1230 14th Street, Oakland, CA

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
(MW-3 cont'd)	06/01/07	10.86	7.32	<50 k	0.34 m	<1.0	<1.0	<1.0	<1.0(<1.0)	0.62/0.56
	08/16/07	11.87	6.31	<50 k	<0.50	<1.0	<1.0	<1.0	<1.0(<1.0)	0.2/0.2
	12/06/07	14.43	3.75	<50	1.8	1.0	0.90	4.4	(<0.5)	--
	02/25/08	9.37	8.81	<50	<0.5	<0.5	<0.5	<0.5	<5.0	4.91
	05/26/08	11.31	6.87	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.79/2.01
	08/18/08	12.28	5.90	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.57/1.52
	11/20/08	12.84	5.34	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.24/1.68
	02/18/09	11.45	6.73	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.16/1.38
	05/26/09	10.62	7.56	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.21/1.40
	11/23/09	12.59	5.59	--	--	--	--	--	--	--
	05/26/10	10.17	8.01	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.29/1.38
	12/30/10	10.08	8.10	--	--	--	--	--	--	--
	05/23/11	9.63	8.55	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.52
	12/27/11	12.58	5.60	--	--	--	--	--	--	--
	06/30/12	10.60	7.58	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.53
	09/30/12	**13.02**	**5.16**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	12/14/12	**10.58**	**7.60**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-4	03/25/96	9.20	8.81	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
18.01	06/21/96	10.25	7.76	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	09/26/96	12.29	5.72	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	12/19/96	12.47	5.54	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	03/25/97	9.44	8.57	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
	06/26/97	11.57	6.44	<50	<0.50	<0.50	<0.50	<0.50	<2.5	6.2
	06/26/97	11.57	6.44	<50	<0.50	<0.50	<0.50	<0.50	<2.5	6.2
	09/26/97	12.75	5.26	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.1
	12/05/97	11.37	6.64	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.0
	12/05/97	11.37	6.64	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.0
	02/19/98	5.59	12.42	<50	<0.50	<0.50	<0.50	<0.50	<2.5	6.5
	06/08/98	5.65	12.36	<50	<0.30	<0.30	<0.30	<0.60	<10	2.6
	08/25/98	10.98	7.03	--	--	--	--	--	--	2.4
	12/28/98	11.83	6.18	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	1.3/1.2
	03/26/99	8.40	9.61	--	--	--	--	--	--	1.9
	06/30/99	10.53	7.48	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	7.6
	09/30/99	11.03	6.98	--	--	--	--	--	--	2.6
	12/27/99	12.53	5.48	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	1.9/0.8
	03/07/00	7.00	11.01	--	--	--	--	--	--	6.5
	04/17/00	8.57	9.44	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	5.1/5.1
	09/21/00	12.05	5.96	--	--	--	--	--	--	3.0
	10/17/00	11.96	6.05	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	5.5/1.2
	01/09/01	12.33	5.68	--	--	--	--	--	--	2.1
	04/27/01	9.96	8.05	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	5.3/3.8
	07/03/01	11.35	6.66	--	--	--	--	--	--	4.5
	12/06/01	10.99	7.02	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	10.23/6.5
	01/23/02	8.80	9.21	--	--	--	--	--	--	8.8
	04/17/02	9.75	8.26	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	7.0/5.1
	07/18/02	11.32	6.69	--	--	--	--	--	--	5.3
	11/11/02	12.36	5.65	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	3.6/2.0
	01/16/03	10.33	7.68	--	--	--	--	--	--	6.5
	03/13/03	10.06	7.95	--	--	--	--	--	--	6.5
	04/23/03	9.57	8.44	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	5.1/5.7
	05/13/03	9.55	8.46	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	2.0/2.5
	06/13/03	10.50	7.51	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	5.0/5.6
	07/14/03	10.86	7.15	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	3.9/4.2
	09/29/03	11.74	6.27	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.6/1.4
	10/29/03	11.95	6.06	58 b	<0.50	<0.50	<0.50	<1.0	(<0.50)	2.4/1.0
	01/05/04	10.35	7.66	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	7.4/7.5
	04/01/04	8.81	9.20	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	6.0/6.4
	07/02/04	11.10	6.91	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.8/0.6
	11/03/04	11.85	6.16	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.3/2.84
	01/04/05	9.06	8.95	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	7.12/6.37
	04/13/05	6.84	11.17	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	5.81/5.66
	07/13/05	10.20	7.81	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.87/3.75
	10/28/05	11.75	6.26	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.4/0.8
	01/17/06	8.00	10.01	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	6.4/6.2
	03/09/06	6.55	11.46	--	--	--	--	--	--	--

Table 1. Groundwater Elevation and Analytical Data - Saberi, 1230 14th Street, Oakland, CA

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
(MW-4 cont'd)	04/21/06	5.45	12.56	--	--	--	--	--	--	--
	05/01/06	6.14	11.87	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.50)	1.09/0.72
	08/30/06	10.82	7.19	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.50)	4.31/4.35
	09/29/06	11.29	6.72	--	--	--	--	--	--	--
	11/03/06	11.81	6.20	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.50)	3.30/2.40
	01/30/07	11.45	6.56	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.67/0.94
	06/01/07	10.72	7.29	67 k	<0.50	<1.0	<1.0	<1.0	(<1.0)	0.93/0.81
	08/16/07	11.81	6.20	<50 k	<0.50	<1.0	<1.0	<1.0	(<1.0)	0.5/1.3
	12/06/07	12.34	5.67	<50	<0.5	<0.5	<0.5	<0.5	(<0.5)	--
	02/25/08	9.03	8.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0	6.84
	05/26/08	11.23	6.78	<50	<0.5	<0.5	<0.5	<0.5	<5.0	6.59/5.22
	08/18/08	12.20	5.81	<50	<0.5	<0.5	<0.5	<0.5	<5.0	7.99/2.89
	11/20/08	12.83	5.18	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.51/3.18
	02/18/09	11.23	6.78	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.90/3.15
	05/26/09	10.47	7.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.78/2.85
	11/23/09	12.51	5.50	--	--	--	--	--	--	--
	05/26/10	10.05	7.96	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.49/2.12
	12/30/10	10.11	7.90	--	--	--	--	--	--	--
	05/23/11	9.49	8.52	<50	<0.5	<0.5	<0.5	<0.5	<5.0	4.13
	12/27/11	12.48	5.53	--	--	--	--	--	--	--
	06/30/12	10.94	7.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	4.01
	09/30/12	**12.82**	**5.19**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	12/14/12	**10.31**	**7.70**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-5	12/03/01	11.86	6.61	--	--	--	--	--	--	--
18.47	12/06/01	11.40	7.07	31,000	3,000	2,000	1,100	3,000	(<50)	3.1/3.2
	01/23/02	9.24	9.23	--	--	--	--	--	--	0.9
	04/17/02	10.35	8.12	33,000	3,800	2,400	1,300	4,400	(<200)	5.3/3.8
	07/18/02	11.82	6.65	--	--	--	--	--	--	0.8
	11/11/02	12.86	5.61	100,000	7,100	12,000	3,000	17,000	(5.10)	1.2/1.4
	01/16/03	9.57	8.90	--	--	--	--	--	--	0.0
	03/13/03	10.30	8.17	33,000	2,800	2,200	980	4,600	(<100)	0.5/0.3
	04/07/03	10.29	8.18	--	--	--	--	--	--	--
	04/23/03	10.15	8.32	33,000	2,900	3,100	960	5,800	(<250)	0.1/0.1
	05/13/03	10.12	8.35	30,000	2,600	1,500	850	4,500	(<250)	0.4/0.3
	06/13/03	11.00	7.47	33,000	3,400	2,300	1,000	4,400	(<500)	0.3/0.3
	07/14/03	11.39	7.08	41,000	5,100	3,500	1,400	5,100	(<50)	0.5/0.5
	09/29/03	12.24	6.23	59,000	6,600	4,200	1,500	6,500	(<50)	0.6/0.5
	10/29/03	12.45	6.02	45,000	6,800	3,500	1,500	6,400	(21)	0.5/0.3
	01/05/04	9.97	8.50	26,000	4,900	1,700	1,100	3,300	(<50)	0.9/1.2
	04/01/04	9.43	9.04	29,000	5,300	2,700	880	2,900	(<50)	0.3/1.0
	07/02/04	11.62	6.85	19,000	5,300	740	1,100	1,400	(<50)	0.4/0.5
	11/03/04	12.26	6.21	31,000	7,500	2,300	1,400	4,400	(<50)	2.5/1.9
	01/04/05	9.13	9.34	18,000	3,500	1,200	730	2,300	(<25)	0.44/1.64
	04/13/05	7.60	10.87	7,000	100	460	180	880	(<1.0)	0.17/0.45
	07/13/05	10.63	7.84	9,400	2,400	840	440	1,100	(<13)	0.13/0.27
	10/28/05	12.14	6.33	28,000	16,000	2,900	1,400	3,100	(<50)	0.3/1.3
	01/17/06	8.52	9.95	6,700	1,200	720	400	1,500	(1.3)	0.6/2.6
	02/23/06	9.22	9.25	--	4,630	1,470	709	2,310	--	--
	03/09/06	7.15	11.32	--	474	90.3	63.3	169	--	--
	04/21/06	5.82	12.65	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	05/01/06	7.23	11.24	779	6.77	41.1	20.0	130	(<0.500)	0.39/1.52
	06/23/06	10.06	8.41	22,600	2,830	557	469	1,210	(<0.500)	--
	07/11/06	10.06	8.41	31,100	3,880	2,080	857	3,700	(<0.500)	--
	08/30/06	11.32	7.15	28,200	4,840	1,320	705	2,430	(5.35)	0.47/3.64
	09/29/06	11.81	6.66	94,900	10,100	2,960	1,810	5,310 i	(7.20)	--
	10/13/06	12.01	6.46	48,200	7,710	1,360	1,250	3,460	(5.64)	--
	11/03/06	12.31	6.16	50,600	11,300	1,730	1,250	3,840	(<0.500)	0.60/4.10
	12/26/06	11.58	6.89	32,000	11,000	780	1,200	2,800	(<10)	--
	01/11/07	11.61	6.86	35,000	11,000	1,100	1,200	3,100	(<50)	--
	01/30/07	11.95	6.52	27,000	9,800	610	860	2,400	(<50)	0.87/0.62
	03/01/07	10.95	7.52	23,000	9,400	640	1,200	3,100	(<50)	--
	04/26/07	10.69	7.78	48,000 k,l	14,000	1,300	1,600	3,600	(<100)	--
	06/01/07	11.25	7.22	54,000 k	15,000	2,800	2,200	6,100	(<100)	0.44/0.87
	06/21/07	11.96	6.51	32,000 k	12,000	1,200	1,400	2,780	(<100)	--
	07/03/07	11.81	6.66	41,000 k	15,000	1,800	1,900	4,050	(<100)	--

Table 1. Groundwater Elevation and Analytical Data - Saberi, 1230 14th Street, Oakland, CA

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
(MW-5 cont'd)	08/16/07	12.36	6.11	43,000 k,l	13,000	2,000	2,000	4,150	(<100)	0.6/0.1
	12/06/07	12.81	5.66	37,000	7,900	640	1,100	1,500	(<17)	--
	02/25/08	9.75	8.72	3,000	640	9.7	52	77	20	2.19
	05/26/08	11.69	6.78	39,000	9,600	1,100	1,400	2,400	<250	1.10/1.52
	06/27/08				MW-5 drilled out and replaced with MW-5R					
MW-5R	07/02/08	11.91	--	22,000	4,100	710	750	2,300	<250	--
	08/18/08	12.59	--	27,000	3,100	340	780	2,100	<100	0.57/3.23
	11/20/08	13.24	--	23,000	5,200	470	1,200	1,500	<250	0.83/2.50
	02/18/09	11.58	--	32,000	4,500	610	990	1,400	<500	1.04/2.11
	05/26/09	10.92	--	15,000	3,500	520	680	1,500	<200	0.85/1.05
	11/23/09	12.92	--	15,000	3,200	350	560	940	<250	0.98/2.30
	05/26/10	10.51	--	15,000	3,400	310	460	1,300	<350	0.88/0.95
	12/30/10	10.35	--	11,000	3,400	190	360	620	<250	0.89/1.02
18.40	05/23/11	9.98	8.42	7,000	1,000	49	320	190	<150	0.03
	12/27/11	12.92	5.48	9,900	1,100	160	480	740	<250	0.32/0.47
	06/30/12	12.15	6.25	3,400	300	53	120	150	<25	2.30
	09/01/12	13.64	4.76	1,200	110	20	51	120	<10	1.94
	09/30/12	**13.36**	**5.04**	**2,800**	**360**	**32**	**140**	**52**	**<50**	**1.29/1.60**
	12/14/12	**11.03**	**7.37**	**4,100**	**360**	**120**	**150**	**390**	**<50**	**2.11/2.51**
MW-6	12/03/01	12.19	6.65	--	--	--	--	--	--	--
18.84	12/06/01	11.70	7.14	76	5.7	3.8	1.4	7.0	(<5.0)	6.3/6.1
	01/23/02	9.57	9.27	--	--	--	--	--	--	8.7
	04/17/02	10.73	8.11	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	9.8/9.1
	07/18/02	12.27	6.57	--	--	--	--	--	--	1.7
	11/11/02	13.24	5.60	580	55	<0.50	<0.50	2.8	(<5.0)	0.3/0.6
	01/16/03	9.89	8.95	--	--	--	--	--	--	6.4
	03/13/03	10.66	8.18	--	--	--	--	--	--	5.5
	04/23/03	10.57	8.27	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	3.7/4.4
	05/13/03	10.56	8.28	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	3.5/3.0
	06/13/03	11.48	7.36	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	2.7/3.1
	07/14/03	11.83	7.01	230 b	3.4	<0.50	<0.50	<1.0	(<0.50)	1.8/1.3
	09/29/03	12.70	6.14	910 b	46	<2.5	<2.5	<5.0	(<2.5)	1.1/1.0
	10/29/03	12.91	5.93	830	38	0.53	<0.50	3.3	(0.60)	1.2/0.9
	01/05/04	10.35	8.49	93	0.92	<0.50	<0.50	<1.0	(<0.50)	6.2/4.3
	04/01/04	9.80	9.04	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	3.5/3.4
	07/02/04	12.09	6.75	370	3.0	<0.50	<0.50	<1.0	(<0.50)	0.6/1.0
	11/03/04	12.84	6.00	540	22	0.73	<0.50	1.5	(0.82)	2.28/0.84
	01/04/05	9.55	9.29	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	6.71/5.16
	04/13/05	7.89	10.95	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	2.99/2.87
	07/13/05	11.13	7.71	170	6.2	1.1	<0.50	<1.0	(0.71)	0.10/1.32
	10/28/05	12.74	6.10	490	22	<0.50	<0.50	<1.0	(<0.50)	0.6/0.3
	01/17/06	8.80	10.04	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	5.3/4.9
	02/23/06	9.54	9.30	--	<0.500	<0.500	<0.500	<0.500	--	--
	03/09/06	7.25	11.59	--	<0.500	<0.500	<0.500	<0.500	--	--
	04/21/06	6.34	12.50	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	05/01/06	7.32	11.52	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	0.72/0.63
	06/23/06	10.12	8.72	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	07/11/06	10.12	8.72	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	08/30/06	11.79	7.05	<50.0	3.32	<0.500	<0.500	<0.500	(<0.500)	0.80/0.86
	09/29/06	12.32	6.52	<50.0	1.59	<0.500	<0.500	<0.500	(<0.500)	--
	10/13/06	12.38	6.46	934	3.14	<0.500	<0.500	<0.500	(<0.500)	--
	11/03/06	12.77	6.07	112	10.6	<0.500	<0.500	<0.500	(<0.500)	3.80/1.10
	12/26/06	12.05	6.79	690	62	<0.50	<0.50	4.5	(<0.50)	--
	01/11/07	12.12	6.72	660	11	<0.50	<0.50	2.3	(<0.50)	--
	01/30/07	12.44	6.40	310	1.5	<0.50	<0.50	<1.0	(<0.50)	1.47/0.81
	03/01/07	10.97	7.87	360	3.6	<0.50	<0.50	0.87	(<0.50)	--
	04/26/07	11.18	7.66	210 k	0.72	<1.0	<1.0	<1.0	(<1.0)	--
	06/01/07	11.72	7.12	640 k	3.1	<1.0	<1.0	0.27 m	(<1.0)	0.69/0.50
	06/21/07	12.22	6.62	390 k	3.0	<1.0	<1.0	0.17 m	(<1.0)	--
	07/03/07	12.22	6.62	360 k	3.0	<1.0	0.36 m	1.2	(<1.0)	--
	08/16/07	12.74	6.10	400 k,l	2.8	<1.0	<1.0	<1.0	(<1.0)	0.4/0.1
	12/06/07	13.24	5.60	130	<0.5	1.6	<0.5	<0.5	(<0.5)	--
	02/25/08	10.26	8.58	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.81
	05/26/08	12.20	6.64	<50	1.1	0.88	<0.5	<0.5	<5.0	6.77/6.59

Table 1. Groundwater Elevation and Analytical Data - Saberi, 1230 14th Street, Oakland, CA

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)	
(MW-6 cont'd)	08/18/08	13.10	5.74	160	11	2.4	<0.5	0.57	<5.0	1.13/3.35	
	11/20/08	13.73	5.11	120	1.1	1.7	<0.5	0.68	<5.0	0.98/2.11	
	02/18/09	11.95	6.89	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.70/1.92	
	05/26/09	11.46	7.38	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.72/1.65	
	11/23/09	13.42	5.42	220	1.3	2.6	<0.5	1.0	<15	0.91/1.51	
	05/26/10	11.04	7.80	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.82/1.49	
	12/30/10	10.83	8.01	150	0.73	2.4	<0.5	<0.5	<5.0	1.02/2.19	
	05/23/11	10.50	8.34	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.93	
	12/27/11	13.42	5.42	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.58/0.64	
	06/30/12	11.74	7.10	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.47	
	09/01/12	13.52	5.32	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.50	
	09/30/12	**13.60**	**5.24**	**--**	**--**	**--**	**--**	**--**	**--**	**1.73/1.98**	see note n
	10/30/12	**13.48**	**5.36**	**<50**	**1.1**	**<0.5**	**<0.5**	**3.5**	**<5.0**	**2.04/3.24**	
	12/14/12	**11.13**	**7.71**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**1.29/1.90**	
MW-7	12/03/01	12.66	6.54	--	--	--	--	--	--	--	
19.20	12/06/01	12.20	7.00	1,800	390	<2.0	6.2	<2.0	(<20)	3.9/3.8	
	01/23/02	10.00	9.20	--	--	--	--	--	--	9.4	
	04/17/02	11.21	7.99	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	8.8/7.3	
	07/18/02	12.69	6.51	--	--	--	--	--	--	0.8	
	11/11/02	13.69	5.51	3,000	190	<0.50	<0.50	4.3	(5.2)	0.4/0.8	
	01/16/03	10.36	8.84	--	--	--	--	--	--	7.9	
	03/13/03	11.16	8.04	--	--	--	--	--	--	5.2	
	04/23/03	11.02	8.18	250	48	<0.50	<0.50	<1.0	(<5.0)	3.2/1.3	
	05/13/03	11.00	8.20	1,700	550	<2.5	<2.5	<5.0	(<25)	2.0/1.5	
	06/13/03	11.90	7.30	1,500 b	470	<2.5	<2.5	<5.0	(<25)	1.8/1.6	
	07/14/03	12.29	6.91	1300 b	1,200	<10	<10	<20	(<10)	0.4/0.2	
	09/29/03	13.12	6.08	5,200	1,200	<10	<10	<20	(<10)	0.9/0.9	
	10/29/03	13.34	5.86	4,800	1,100	<5.0	<5.0	<10	(8.9)	0.4/0.3	
	01/05/04	10.85	8.35	53	6.7	<0.50	<0.50	<1.0	(<0.50)	1.4/2.3	
	04/01/04	10.28	8.92	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	5.5/6.2	
	07/02/04	12.48	6.72	8,100 d	3,400	<25	<25	<50	(<25)	0.8/0.8	
	11/03/04	13.25	5.95	3,700	1,200	<5.0	<5.0	<10	(<5.0)	1.9/0.8	
	01/04/05	10.02	9.18	<50	2.0	<0.50	<0.50	<1.0	(<0.50)	6.31/5.71	
	04/13/05	8.46	10.74	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	5.87/5.89	
	07/13/05	11.57	7.63	1,100	380	9.2	<2.5	37	(<2.5)	0.30/0.33	
	10/28/05	13.15	6.05	5,100	2,900	<13	<13	<25	(<13)	0.6/0.9	
	01/17/06	9.30	9.90	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	6.4/7.4	
	02/23/06	10.03	9.17	--	<0.500	<0.500	<0.500	<0.500	--	--	
	03/09/06	7.70	11.50	--	<0.500	<0.500	<0.500	<0.500	--	--	
	04/21/06	6.66	12.54	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--	
	05/01/06	7.72	11.48	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	0.67/0.98	
	06/23/06	10.55	8.65	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--	
	07/11/06	10.55	8.65	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--	
	08/30/06	12.35	6.85	1,520	150	13.3	5.78	53.0	(0.640)	0.52/0.79	
	09/29/06	12.66	6.54	2,420	384	1.80	<0.500	5.44	(0.850)	--	
	10/13/06	12.85	6.35	5,980	549	0.540	0.680	11.7	(0.930)	--	
	11/03/06	13.73	5.47	3,190	501	<0.500	<0.500	5.38	(0.560)	2.2/1.4	
	12/26/06	12.51	6.69	4,600	570	<0.50	44	2.1	(<0.50)	--	
	01/11/07	12.55	6.65	3,900	490	<2.5	46	<5.0	(<2.5)	--	
	01/30/07	12.89	6.31	2,500	380	<2.5	40	<5.0	(<2.5)	1.37/0.90	
	03/01/07	11.45	7.75	2,600	350	<2.5	35	3.5	(<2.5)	--	
	04/26/07	11.62	7.58	2,300 k	290	<5.0	31	1.3 m	(<5.0)	--	
	06/01/07	12.23	6.97	4,400 k	350	<2.0	19	<2.0	(1.1 m)	0.04/0.71	
	06/21/07	12.67	6.53	2,600 k	260	<2.0	12	<2.0	(1.4 m)	--	
	07/03/07	12.76	6.44	1,700 k	170	<1.0	7.7	0.86 m	(<1.0)	--	
	08/16/07	13.20	6.00	1,900 k	44	<1.0	<1.0	<1.0	(<1.0)	0.5/1.1	
	12/06/07	13.73	5.47	510	21	3.1	5.8	14	(1.2)	--	
	02/25/08	10.65	8.55	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.11	
	05/26/08	12.62	6.58	600	190	2.3	<0.5	<0.5	<35	1.31/3.52	
	08/18/08	13.52	5.68	540	71	2.7	<0.5	0.85	<25	1.12/4.75	
	11/20/08	14.14	5.06	160	2.2	1.3	<0.5	<0.5	<10	1.46/2.90	
	02/18/09	12.48	6.72	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.08/2.70	
	05/26/09	11.90	7.30	<50	2.8	0.60	<0.5	<0.5	<5.0	1.02/1.77	
	11/23/09	13.85	5.35	230	3.8	3.5	<0.5	<0.5	<30	1.08/2.14	
	05/26/10	11.46	7.74	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.88/1.61	

Table 1. Groundwater Elevation and Analytical Data - Saberi, 1230 14th Street, Oakland, CA

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
(MW-7 cont'd)	12/30/10	11.18	8.02	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.91/1.7
	05/23/11	8.98	10.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.91
	12/27/11	13.84	5.36	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.81/2.02
	06/30/12	12.29	6.91	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.92
	09/30/12	**14.15**	**5.05**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**2.46/2.70**
	12/14/12	**11.61**	**7.59**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**1.90/2.25**
VW/MW-2	03/25/96	9.04	9.26	13,000	900	920	180	1,500	<250	--
18.30	06/21/96	10.48	7.82	27,000	4,100	1,100	1,400	3,200	700	--
	09/26/96	12.52	5.78	27,000	5,300	1,900	980	2,200	<500	--
	09/26/96	12.52	5.78	29,000	5,800	2,200	1,100	2,500	<250	--
	12/19/96	12.42	5.88	50,000	6,200	5,100	1,700	5,600	590	--
	03/25/97	9.83	8.47	210	5.6	<0.50	0.52	<0.50	14	2.0
	03/25/97	9.83	8.47	250	1.7	0.58	0.51	<0.50	4.7	2.0
	06/26/97	12.43	5.87	--	--	--	--	--	--	'--
	09/26/97	12.98	5.32	--	--	--	--	--	--	0.9
	12/05/97	12.20	6.10	--	--	--	--	--	--	0.4
	02/19/98	5.83	12.47	<50	1.5	<0.50	<0.50	0.71	<2.5	3.6
	06/08/98	5.80	12.50	--	--	--	--	--	--	1.0
	08/25/98	11.72	6.58	--	--	--	--	--	--	4.8
	12/28/98	11.69	6.61	--	--	--	--	--	--	2.7
	03/26/99	8.75	9.55	--	--	--	--	--	--	2.8
	06/30/99	10.72	7.58	--	--	--	--	--	--	4.7
	09/30/99	12.24	6.06	--	--	--	--	--	--	4.9
	12/27/99	13.92	4.38	13,500	1,330	1,310	490	1,400	<250	2.1/1.9
	01/21/00	13.26	5.04	12,100	2,200	1,080	429	1,120	<250	2.8
	03/07/00	7.87	10.43	--	--	--	--	--	--	3.7
	04/17/00	9.65	8.65	--	--	--	--	--	--	3.7/4.1
	04/18/00	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--
	09/21/00	12.75	5.55	--	--	--	--	--	--	6.2
	10/17/00	12.21	6.09	4,070	763	589	214	501	<50.0	0.8/0.7
	01/09/01	12.51	5.79	--	--	--	--	--	--	0.7
	04/27/01	10.21	8.09	80	5.7	<0.50	2.7	4.9	(<0.50)	2.3/2.8
	07/03/01	11.60	6.70	--	--	--	--	--	--	0.6
	12/06/01	11.15	7.15	160	1.7	1.0	1.8	4.6	(<5.0)	3.7/2.3
	01/23/02	9.07	9.23	--	--	--	--	--	--	0.5
	04/17/02	10.11	8.19	<50	2.1	<0.50	<0.50	<0.50	(<5.0)	4.9/4.4
	07/18/02	11.61	6.69	--	--	--	--	--	--	0.9
	11/11/02	12.63	5.67	15,000	1,300	1,300	680	1,800	(<5.0)	0.2/0.2
	01/16/03	9.35	8.95	--	--	--	--	--	--	0.4
	03/13/03	10.09	8.21	--	--	--	--	--	--	0.8
	04/07/03	10.09	8.21	--	--	--	--	--	--	--
	04/23/03	9.95	8.35	1,100	76	29	45	66	(<5.0)	0.8/0.3
	05/13/03	9.90	8.40	1,200	38	16	16	24	(<5.0)	0.2/0.2
	06/13/03	10.80	7.50	9,600	1,300	1,100	440	890	(<250)	0.2/0.5
	07/14/03	11.20	7.10	11,000	1,300	1,800	430	1,500	(<5.0)	0.5/0.5
	09/29/03	12.05	6.25	12,000	860	980	410	1,100	(<10)	0.4/0.4
	10/29/03	12.29	6.01	12,000	1,100	940	530	1,200	(<10)	0.7/0.3
	01/05/04	9.82	8.48	190 b	<0.50	<0.50	<0.50	<1.0	(<0.50)	2.8/1.8
	04/01/04	9.24	9.06	410	1.4	0.54	1.6	1.0	(<0.50)	1.7/0.1
	07/02/04	11.33	6.97	5,500	440	370	170	410	(<2.5)	0.5/0.4
	11/03/04	12.14	6.16	3,800	260	210	150	600	(<2.5)	0.9/1.4
	01/04/05	9.03	9.27	280	5.8	20	7.8	26	(<0.50)	1.66/2.66
	04/13/05	7.38	10.92	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	0.79/0.58
	07/13/05	10.45	7.85	350	19	9.3	9.8	14	(<0.50)	0.10/0.08
	10/28/05	11.98	6.32	3,400	440	350	150	320	(<2.5)	0.4/0.1
	01/17/06	8.34	9.96	700	3.1	5.1	7.7	66	(<0.50)	2.7/1.6
	02/23/06	9.42	8.88	--	97.9	17.2	40.0	80.6	--	--
	03/09/06	7.35	10.95	--	<0.500	29.2	57.8	486	--	--
	04/21/06	5.99	12.31	<50.0	<0.500	0.960	<0.500	2.71	(<0.500)	--
	05/01/06	7.25	11.05	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	0.43/0.10
	06/23/06	10.05	8.25	3,150	35.6	9.24	20.7	113	(<0.500)	--
	07/11/06	10.05	8.25	9,270	413	78.2	91.5	341	(2.40)	--
	08/30/06	11.12	7.18	4,900	135	45.5	73.3	180	(2.40)	0.37/0.62
	09/29/06	11.61	6.69	12,300	243	142	290	634	(2.50)	--
	10/13/06	12.01	6.29	19,300	292	169	384	1,080	(1.84)	--

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(VW/MW-2 cont'd)	11/03/06	12.12	6.18	9,300	655	233	366	729	(4.15)	2.0/1.05
	12/26/06	11.41	6.89	2,600	61	50	74	250	(<0.50)	--
	01/11/07	11.45	6.85	5,200	160	190	170	570	(<0.50)	--
	01/30/07	12.21	6.09	2,200	160	20	84	200	(<2.5)	1.37/0.79
	03/01/07	10.40	7.90	520	0.50	0.53	3.3	15	(<0.50)	--
	04/26/07	10.51	7.79	5,700 k	220	140	170	420	(<2.0)	--
	06/01/07	11.00	7.30	4,300 k	150	150	140	380	(<2.0)	0.36/0.23
	06/21/07	11.78	6.52	9,000 k	540	500	350	870	(1.8 m)	--
	07/03/07	11.64	6.66	4,500 k	230	160	160	440	(<5.0)	--
	08/16/07	12.12	6.18	8,800 k	550	520	430	1,020	(<5.0)	0.3/0.1
	12/06/07	12.43	5.87	2,600	110	84	64	180	(2.4)	--
	02/25/08	9.55	8.75	620	100	4.1	4.9	2.0	<5.0	2.48
	05/26/08	11.53	6.77	7,200	350	200	220	510	<100	1.52/0.99
	08/18/08	12.45	5.85	7,000	420	160	180	460	<100	0.70/0.67
	11/20/08	13.09	5.21	3,400	86	84	75	230	<50	0.93/1.47
	02/18/09	11.35	6.95	1,400	3.5	16	7.2	28	<15	0.77/1.18
	05/26/09	10.76	7.54	1,000	9.5	26	17	56	<5.0	0.84/1.19
	11/23/09	12.77	5.53	270	2.7	5.0	1.5	3.5	<5.0	0.81/2.49
	05/26/10	10.36	7.94	490	3.5	12	4.3	23	<5.0	0.69/0.94
	12/30/10	10.11	8.19	180	0.75	4.0	1.2	4.8	<5.0	0.79/1.02
	05/23/11	9.83	8.47	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.68
	12/27/11	12.78	5.52	280	3.1	6.2	1.5	1.4	<10	0.72/0.77
	06/30/12	10.63	7.67	<50	<0.5	0.54	<0.5	3.1	<5.0	4.41
	09/30/12	**13.35**	**4.95**	**<50**	**0.57**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**2.02/1.90**
	12/14/12	**10.90**	**7.40**	**110**	**<0.5**	**2.1**	**<0.5**	**0.96**	**<5.0**	**1.48/1.72**
VW/MW-4	03/25/96	8.45	9.69	83,000	6,500	7,000	2,000	11,000	<250	--
18.14	03/25/96	8.45	9.69	84,000	6,400	7,000	2,100	12,000	<250	--
	06/21/96	10.38	7.76	110,000	14,000	15,000	3,700	17,000	1,700	--
	06/21/96	10.38	7.76	100,000	12,000	12,000	2,900	13,000	<1,000	--
	09/26/96	12.43	5.71	52,000	13,000	2,700	2,100	3,200	<500	--
	12/19/96	11.87	6.27	75,000	15,000	6,600	3,000	7,600	<1,250	--
	03/25/97	9.60	8.54	56,000	4,700	1,500	2,500	6,300	580	2.4
	06/26/97	12.36	5.78	--	--	--	--	--	--	--
	09/26/97	12.82	5.32	--	--	--	--	--	--	0.4
	12/05/97	12.15	5.99	--	--	--	--	--	--	0.3
	02/19/98	5.85	12.29	4,100	320	40	44	520	<50	1.8
	02/19/98	5.85	12.29	4,300	340	44	47	540	<50	1.8
	06/08/98	5.87	12.27	--	--	--	--	--	--	1.8
	08/25/98	10.96	7.18	--	--	--	--	--	--	2.5
	12/28/98	11.28	6.86	--	--	--	--	--	--	0.9
	03/26/99	8.45	9.69	--	--	--	--	--	--	1.9
	06/30/99	9.70	8.44	--	--	--	--	--	--	3.6
	09/30/99	11.78	6.36	--	--	--	--	--	--	2.6
	12/27/99	12.63	5.51	33,900	3,740	2,000	1,130	5,090	587	0.4/0.2
	01/21/00	13.07	5.07	13,900	1,560	568	227	1,990	<500(21.0a)	1.0
	03/07/00	7.82	10.32	--	--	--	--	--	--	0.9
	04/17/00	9.18	8.96	--	--	--	--	--	--	1.4/1.9
	04/18/00	--	--	757	103	8.59	30.8	84.2	<25.0	--
	09/21/00	12.18	5.96	--	--	--	--	--	--	5.0
	10/17/00	12.03	6.11	8,360	2,060	391	468	1,170	147	0.7/0.8
	01/09/01	12.42	5.72	--	--	--	--	--	--	0.9
	04/27/01	10.13	8.01	7,100	2,300	50	460	250	(<10)	1.0/1.4
	07/03/01	11.42	6.72	--	--	--	--	--	--	1.2
	12/06/01	11.02	7.12	7,700	750	90	300	350	(<25)	2.5/1.9
	01/23/02	8.89	9.25	--	--	--	--	--	--	0.4
	04/17/02	9.89	8.25	4,800	760	27	240	150	(<25)	4.7/5.1
	07/18/02	11.37	6.77	--	--	--	--	--	--	0.6
	11/11/02	12.41	5.73	14,000	2,800	480	700	1,300	(<100)	0.3/0.3
	01/16/03	9.17	8.97	--	--	--	--	--	--	0.8
	03/13/03	9.85	8.29	--	--	--	--	--	--	1.1
	04/23/03	9.74	8.40	2,400	710	28	160	100	(<50)	0.2/0.05
	05/13/03	9.70	8.44	3,300	720	35	170	160	(<50)	0.2/0.2
	06/13/03	10.55	7.59	8,200	1,700	220	460	790	(<250)	0.3/0.3
	07/14/03	10.90	7.24	3,700	900	190	220	540	(<10)	0.5/0.4
	09/29/03	11.83	6.31	7,500	1,800	300	390	860	(<20)	0.5/0.6

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(VW/MW-4 cont'd)	10/29/03	12.03	6.11	10,000	2,600	400	510	1,200	(<13)	0.5/0.4	
	01/05/04	9.60	8.54	1,000	70	12	30	56	(<1.0)	1.7/1.2	
	04/01/04	9.00	9.14	1,000	64	7.0	22	18	(<1.0)	0.6/0.1	
	07/02/04	11.00	7.14	5,600	1,500	57	380	180	(<10)	0.4/0.4	
	11/03/04	11.85	6.29	9,400	2,400	210	560	890	(<10)	1.5/2.1	
	01/04/05	8.89	9.25	110	12	<0.50	2.3	<1.0	(<0.50)	2.40/1.05	
	04/13/05	7.25	10.89	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	1.55/0.52	
	07/13/05	10.20	7.94	1,300	520	5.1	100	17	(<2.5)	0.08/0.08	
	10/28/05	11.84	6.30	2,500	830	44	170	140	(5.4)	0.6/0.2	
	01/17/06	8.05	10.09	<50	<0.50	<0.50	0.56	<0.50	(<0.50)	2.7/0.6	
	02/23/06	8.77	9.37	--	1.42	0.930	0.580	<0.500	--	--	
	03/09/06	6.75	11.39	--	<0.500	<0.500	<0.500	0.680	--	--	
	04/21/06	5.69	12.45	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--	
	05/01/06	6.65	11.49	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	0.51/0.37	
	06/23/06	9.22	8.92	920	8.69	1.32	5.63	9.68	(<0.500)	--	
	07/11/06	9.22	8.92	<50.0	109	<0.500	3.91	<0.500	(<0.500)	--	
	08/30/06	10.87	7.27	2,360	331	12.8	65.4	29.3	(2.64)	0.24/0.56	
	09/29/06	11.40	6.74	5,920	327	23.2 i	146	112 i	(2.63)	--	
	10/13/06	11.53	6.61	6,560	299	16.6	134	90.4	(3.58)	--	
	11/03/06	11.87	6.27	3,530	212	9.14	87.8	52.8	(5.11)	2.60/4.0	
	12/26/06	11.17	6.97	960	43	1.0	17	2.7	(<0.50)	--	
	01/11/07	11.18	6.96	830	86	1.8	41	3.9	(1.40)	--	
	01/30/07	11.53	6.61	2,100	450	15	99	46	(3.0)	1.13/0.91	
	03/01/07	10.00	8.14	700	4.8	<0.50	1.8	0.77	(<0.50)	--	
	04/26/07	10.26	7.88	930 k	84	5.2	21	9.5	(<1.0)	--	
	06/01/07	10.80	7.34	2,000 k	340	7.6	58	17.6	(1.7 m)	0.46/0.42	
	06/21/07	11.32	6.82	1,400 k	360	9.7	46	26.1	(2.2)	--	
	07/03/07	11.39	6.75	2,700 k	650	24	91	65	(<2.0)	--	
	08/16/07	11.87	6.27	1,400 k	240	8.8	32	42.3	(<5.0)	0.3/0.1	
	12/06/07	12.40	5.74	3,600	480	16	39	29	(3.5)	--	
	02/25/08	9.39	8.75	56	22	<0.5	<0.5	0.50	<5.0	4.61	
	05/26/08	11.27	6.87	650	76	7.9	4.9	<0.5	<5.0	0.95/0.96	
	08/18/08	12.23	5.91	2,700	540	28	28	71	<25	0.78/0.79	
	11/20/08	12.87	5.27	2,000	390	19	13	49	<50	1.17/0.95	
	02/18/09	11.29	6.85	850	17	11	3.6	25	<15	0.82/1.02	
	05/26/09	10.55	7.59	540	16	11	1.3	1.1	<10	0.81/1.06	
	11/23/09	12.55	5.59	1,200	200	12	3.5	12	<5.0	0.84/1.66	
	05/26/10	10.15	7.99	410	26	6.3	2.3	3.7	<5.0	0.77/0.84	
	12/30/10	9.96	8.18	520	14	8.7	2.3	2.4	<5.0	0.8/1.26	
	05/23/11	9.91	8.23	150	33	2.2	3.4	2.1	<5.0	0.50	
	12/27/11	12.57	5.57	460	24	4.0	0.99	<0.5	<5.0	0.61	
	06/30/12	11.01	7.13	3,400	640	42	39	190	<50	1.29	
	09/30/12	**13.10**	**5.04**	**4,100**	**1,000**	**39**	**130**	**250**	**<50**	**1.06/1.24**	
	12/14/12	**10.71**	**7.43**	**2,200**	**33**	**23**	**0.62**	**190**	**<25**	**0.75/1.02**	see note o
VW/AS-1	03/25/96	8.98	9.62	--	--	--	--	--	--	--	
18.60	06/21/96	10.95	7.65	--	--	--	--	--	--	--	
	09/26/96	12.98	5.62	--	--	--	--	--	--	--	
	12/19/96	12.67	5.93	--	--	--	--	--	--	--	
	03/25/97	10.12	8.48	--	--	--	--	--	--	--	
	06/26/97	12.34	6.26	--	--	--	--	--	--	--	
	09/26/97	13.40	5.20	--	--	--	--	--	--	--	
	12/05/97	11.96	6.64	--	--	--	--	--	--	5.2	
	02/19/98	6.22	12.38	--	--	--	--	--	--	1.3	
	06/08/98	6.20	12.40	--	--	--	--	--	--	1.0	

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(VW/AS-1 cont'd)	08/25/98	11.59	7.01	--	--	--	--	--	--	1.6
	12/28/98	11.74	6.86	--	--	--	--	--	--	1.3
	03/26/99	9.20	9.40	--	--	--	--	--	--	1.3
	06/30/99	11.08	7.52	--	--	--	--	--	--	2.1
	09/30/99	11.94	6.66	--	--	--	--	--	--	1.9
	12/27/99	11.01	7.59	8,940	2,000	95.7	1,200	570	606	1.6/1.8
	03/07/00	7.35	11.25	--	--	--	--	--	--	--
	04/17/00	9.08	9.52	--	--	--	--	--	--	1.9/2.0
	04/18/00	--	--	20,800	6,550	1,220	2,270	1,720	<250	--
	09/21/00	11.98	6.62	--	--	--	--	--	--	2.1
	10/17/00	12.62	5.98	38,400	7,240	5,980	1,960	5,730	534(72.4)	2.5/1.0
	01/09/01	13.03	5.57	--	--	--	--	--	--	1.9
	04/27/01	10.71	7.89	34,000	8,000	2,100	2,500	2,000	(<25)	2.9/2.1
	07/03/01	12.03	6.57	--	--	--	--	--	--	2.0
	12/06/01	11.63	6.97	6,000	990	35	820	59	(<25)	1.2/0.8
	01/23/02	9.34	9.26	--	--	--	--	--	--	0.9
	04/17/02	10.41	8.19	12,000	2,900	57	1,400	98	(<200)	3.3/2.9
	07/18/02	12.13	6.47	--	--	--	--	--	--	0.3
	11/11/02	13.15	5.45	2,200	340	7.3	250	24	(<20)	1.2/1.3
	01/16/03	9.73	8.87	--	--	--	--	--	--	2.3
	03/13/03	10.45	8.15	11,000	2,500	55	1,800	170	(<100)	2.1/1.9
	04/07/03	10.40	8.20	--	--	--	--	--	--	--
	04/23/03	10.28	8.32	9,500	4,100	200	1,400	200	(<250)	1.2/0.4
	05/13/03	10.26	8.34	9,700	2,300	110	1,100	140	(<250)	0.5/2.0
	06/13/03	11.15	7.45	9,300	2,300	77	820	<100	(<500)	1.0/0.5
	07/15/03	11.62	6.98	5,500	2,000	230	620	360	(20)	1.8/1.9
	09/29/03	12.48	6.12	9,600	2,300	100	1,200	670	(<20)	2.3/3.6
	10/29/03	12.73	5.87	10,000	2,000	39	1,000	370	(16)	3.3/3.6
	01/05/04	10.25	8.35	2,000	710	18	410	18	(13)	3.0/2.8
	04/01/04	9.60	9.00	27,000	9,100	1,200	2,200	1,400	(<50)	1.0/1.4
	07/02/04	11.80	6.80	18,000	6,500	170	1,200	1,200	(<50)	3.2/0.8
	11/03/04	12.56	6.04	4,500	1,700	23	280	55	(9.8)	1.7/1.9
	01/04/05	9.50	9.10	7,500	2,500	74	540	110	(<13)	1.19/0.53
	04/13/05	7.84	10.76	34,000	6,600	290	930	2,100	(<15)	1.60/1.88
	07/13/05	10.90	7.70	--	--	--	--	--	--	--
	07/22/05	10.96	7.64	8,200	5,900	86	340	320	(<25)	1.7/1.0
	10/28/05	12.30	6.30	2,100	1,300	18	63	21	(<5.0)	0.5/1.6
	01/17/06	8.65	9.95	6,200 g	2,900	190	400	600	(4.70)	1.4/1.0
	02/23/06	9.33	9.27	--	3,080	222	414	778	--	--
	03/09/06	7.40	11.20	--	1,350	88.5	128	164	--	--
	04/21/06	6.44	12.16	18,200	4,460	167	419	717	(2.79)	--
	05/01/06	7.22	11.38	19,700	5,300	261	664	1,050	(<0.500)	0.71/1.23
	06/23/06	9.73	8.87	20,600	3,820	305	259	435	(3.31 h)	--
	07/11/06	9.73	8.87	9,130	6,200	108	232	254	(<0.500)	--
	08/30/06	11.60	7.00	164,000	3,190	6,240	3,780	17,900	(<10.0)	0.4
	09/29/06	11.97	6.63	130,000	6,160	6,370 i	2,910	11,600 i	(<25.0)	--
	10/13/06	12.18	6.42	144,000	6,320	5,710	2,930	13,100	(1.03)	--
	11/03/06	12.21	6.39	112,000	8,290	5,670	2,760	12,100	(<0.500)	0.80
	12/26/06	11.74	6.86	94,000	6,900	5,100	3,100	13,000	(<50)	--
	01/11/07	11.83	6.77	73,000	6,600	5,500	3,000	12,000	(<50)	--
	01/30/07	12.12	6.48	54,000	6,800	4,500	2,200	8,800	(<50)	1.16/1.16
	03/01/07	10.71	7.89	52,000	6,300	3,700	3,400	12,000	(<50)	--
	04/26/07	10.84	7.76	72,000 k	7,200	4,500	3,000	10,900	(<50)	--
	06/01/07	11.40	7.20	70,000 k	7,600	4,900	3,200	12,100	(<50)	0.60/1.09
	06/21/07	11.92	6.68	59,000 k	7,300	3,700	3,200	12,100	(<50)	--
	07/03/07	11.98	6.62	70,000 k	8,800	4,700	3,500	13,500	(<50)	--
	08/16/07	12.53	6.07	67,000 k	9,000	5,500	3,900	14,200	(<50)	0.2/0.1
	12/06/07	12.97	5.63	180,000	9,500	5,000	4,100	16,000	(<17)	--
	02/25/08	9.84	8.76	47,000	3,500	1,200	1,500	4,400	<350	2.39
	05/26/08	11.88	6.72	82,000	8,100	3,000	3,100	12,000	<500	1.65/1.05
	06/27/08				VW/AS-1 drilled out and replaced with AS-1					

Table 1. Groundwater Elevation and Analytical Data - Saberi, 1230 14th Street, Oakland, CA

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
VW/AS-2	03/09/06	6.95	--	--	--	--	--	--	--	--
VW/AS-3	03/25/96	8.50	9.67	--	--	--	--	--	--	--
18.17	06/21/96	10.42	7.75	--	--	--	--	--	--	--
	09/26/96	12.49	5.68	--	--	--	--	--	--	--
	12/19/96	12.28	5.89	--	--	--	--	--	--	--
	03/25/97	9.61	8.56	--	--	--	--	--	--	--
	06/26/97	11.80	6.37	--	--	--	--	--	--	--
	09/26/97	12.89	5.28	--	--	--	--	--	--	--
	12/05/97	11.38	6.79	--	--	--	--	--	--	1.8
	02/19/98	6.24	11.93	--	--	--	--	--	--	1.3
	06/08/98	6.25	11.92	--	--	--	--	--	--	1.2
	08/25/98	11.43	6.74	--	--	--	--	--	--	1.3
	12/28/98	11.63	6.54	--	--	--	--	--	--	1.7
(VW/AS-3 cont'd)	03/26/99	8.92	9.25	--	--	--	--	--	--	1.5
	06/30/99	10.71	7.46	--	--	--	--	--	--	2.5
	09/30/99	11.78	6.39	--	--	--	--	--	--	1.5
	12/27/99	12.57	5.60	488	47.9	2.60	16.9	8.50	35.4	1.5/2.1
	03/07/00	4.82	13.35	--	--	--	--	--	--	--
	04/17/00	8.69	9.48	--	--	--	--	--	--	2.0/2.4
	04/18/00	--	--	3,110	871	<5.00	141	56.8	78.2	--
	09/21/00	11.65	6.52	--	--	--	--	--	--	2.5
	10/17/00	12.13	6.04	7,730	2,700	<50.0	542	344	<250(42.1)	1.6/1.0
	01/09/01	12.51	5.66	--	--	--	--	--	--	2.2
	04/27/01	10.20	7.97	14,000	3,900	62	690	560	(46)	2.8/1.6
	07/03/01	11.55	6.62	--	--	--	--	--	--	2.6
	12/06/01	11.10	7.07	5,000	1,200	19	380	320	(<50)	0.9/1.1
	01/23/02	8.93	9.24	--	--	--	--	--	--	1.1
	04/17/02	10.00	8.17	17,000	5,000	<25	1,100	390	(<250)	3.2/3.2
	07/18/02	11.49	6.68	--	--	--	--	--	--	0.4
	11/11/02	12.43	5.74	1,700	290	1.5	150	2.8	(<10)	1.0/1.1
	01/16/03	9.32	8.85	--	--	--	--	--	--	4.7
	03/13/03	9.88	8.29	--	--	--	--	--	--	2.7
	04/23/03	9.85	8.32	150	47	0.67	8.5	3.2	(<5.0)	2.1/0.7
	05/13/03	9.81	8.36	440	35	<0.50	1.7	<1.0	(<5.0)	1.4/1.8
	06/13/03	10.77	7.40	580	71	<2.5	40	<5.0	(<25)	1.1/0.6
	07/14/03	11.12	7.05	1,100	120	4.9	63	9.3	(16)	2.0/2.2
	09/29/03	12.02	6.15	160	54	2.2	6.9	8.7	(1.1)	4.1/1.6
	10/29/03	12.25	5.92	350	16	<0.50	1.1	<1.0	(6.3)	3.2/1.6
	01/05/04	9.74	8.43	2,700	870	39	130	250	(5.5)	3.6/2.8
	04/01/04	9.06	9.11	1,300	240	4.1	36	45	(12.0)	1.1/1.0
	07/02/04	11.29	6.88	610	59	<1.0	3.6	<2.0	(10.0)	2.0/2.2
	11/03/04	12.02	6.15	200	<0.50	<0.50	<0.50	<1.0	(10.0)	2.1/2.3
	01/04/05	8.99	9.18	2,500	730	42	36	190	(<10)	1.72/1.36
	04/13/05	7.25	10.92	<50	1.6	<0.50	<0.50	<0.50	(0.61)	2.85/3.04
	07/13/05	10.30	7.87	--	--	--	--	--	--	--
	07/22/05	10.51	7.66	160	36	0.65	<0.50	2.5	(2.60)	1.4/1.3
	10/28/05	11.93	6.24	100	<0.50	<0.50	<0.50	<1.0	(1.70)	1.6/0.9
	01/17/06	8.25	9.92	1,400	510	29	16	47	(5.40)	1.9/0.8
	04/21/06	6.06	12.11	--	--	--	--	--	--	--
	05/01/06	6.83	11.34	1,350	74.4	<0.500	12.5	0.520	(3.30)	1.35/0.78
	08/30/06	11.00	7.17	940	77.7	2.67	2.94	5.57	(3.45)	0.80/0.98
	09/29/06	11.30	6.87	--	--	--	--	--	--	--
	11/03/06	12.29	5.88	346 j	83.6 j	5.17 j	2.34 j	13.5 j	(3.47 j)	1.10/0.80
	01/30/07	12.59	5.58	130	13	0.64	<0.50	7.2	(3.4)	0.76/0.64
	06/01/07	10.82	7.35	2,200 k	650	13	3.2 m	143	(7.8)	1.21/0.93
	08/16/07	11.95	6.22	1,000 k	200	4.0	1.1	47.7	(3.3)	0.8/0.2
	12/06/07	12.43	5.74	<50	<0.5	<0.5	<0.5	<0.5	(<0.5)	--
	02/25/08	9.40	8.77	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.14
	05/26/08	11.20	6.97	1,800	260	6.0	4.3	35	<17	0.86/4.39
	6/26/2008					Well Destroyed				

Notes:

a = Sample was analyzed outside of the EPA recommended holding time.

Table 1. Groundwater Elevation and Analytical Data - Saberi, 1230 14th Street, Oakland, CA

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)

b = Hydrocarbon reported does not match the pattern of the laboratory's standard.

c = Top of casing change due to maintenance.

d = Sample contains discrete peak in addition to gasoline.

e = Quantity of unknown hydrocarbon(s) in sample based on gasoline.

f = The concentration reported reflects individual or discrete unidentified peaks not matching a typical fuel pattern.

g = The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.

h = Secondary ion abundances were outside method requirements. Identification based on a'--lytical judgement.

i = Analyte was detected in the associated Method Blank.

j = pH>2

k = Analyzed by EPA Method 8015B (M).

l = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

m = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

n = MW-6 sample analysis from 9/30/12 not listed due to anomalous results; re-sampled 10/30/12 to confirm anomalous results and concentrations from 10/30 are represenative.

o = CTAS/Non-ionic Surfactants by EPA Method 5540D detected at 1,800 µg/L (BOC).

Site surveyed November 1, 2001 by Virgil Chavez Land Surveying of Vallejo, CA.

Site remediation wells surveyed March 21, 2011 by Virgil Chavez Land Surveying of Vallejo, CA.

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015C.

Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method 8260B from April 27, 2001 through August 16, 2007. Concentrations prior to April 27, 2001 and after August 16, 2007 by EPA Method 8021B.

MTBE = Methyl tert-butyl ether by EPA Method 8021B, concentrations in parentheses by EPA Method 8260B

-- = Not applicable

ug/L = micrograms per liter (Parts per billion)

mg/L = milligrams per liter (Parts per million)

MSL = Mean sea level

ft. = Feet

<n = Below detection limit

(D) = Duplicate sample

n/n = Pre-purge/Post-purge Dissolved Oxygen Readings

BOC = Bio-Organic Catalyst

Pangea

Table 2. SVE (DPE) Performance Data - 1230 14th Street, Oakland, CA

Date	Wells	Oxidizer Hr Meter Reading (hours)	Total Time (days)	Interval Time (days)	System Vapor Flow (cfm)	App Vac ("Hg)	Lab Sample ID	Influent TPHg Lab (ppmv)	Influent Benzene Lab Data (ppmv)	Influent OVA Reading (ppmv)	Air Sparge (status)	SVE TPHg Removal Rate (lbs/day)	SVE Benzene Removal Rate (lbs/day)	Cumulative SVE TPHg Removal (lbs)	Cumulative SVE Benz Removal (lbs)	Effluent OVA Reading (ppmv)	Abate Effic **OVA** (%)	Effluent TPHg Lab (ppmv)	Effluent Benzene Lab (ppmv)	**TPHg** Abate Effic (%)	Benzene Abate Effic (%)	Benzene Emission Rate (lbs/day)	Cumulative Vapor Flow (cf)	Notes
04/27/11	DP-1,2,4,5	10730.2	0.0	0.0	107	9	---	32	2.0	34	Off	1.1	0.06	0.0	0	6	**82.4**	---	---	---	---	---	0	Startup Test
05/05/11	DP-1,2,4,5	10895.3	6.9	6.9	107	7	INF-V	**28**	**1.5**	23	Off	1.0	0.05	6.6	0.32	11	**52.2**	**22**	**1.0**	**21.4**	**33.3**	**0.031**	1,059,942	On
05/16/11	DP-1,2,4,5	11164.0	18.1	11.2	107	4	---	20	1.0	---	Off	0.7	0.03	14.3	0.67	---	---	---	---	---	---	---	2,784,996	On
05/24/11	DP-1,2,4,5	11239.0	21.2	3.1	107	4	---	20	1.0	12	Off	0.7	0.03	16.4	0.77	4	**66.7**	---	---	---	---	---	3,266,496	On. **Shutdown** due to high EFF-V conc in lab report.
07/13/11	DP-1,2,4,5	11241.4	21.3	0.1	107	7	---	20	1.0	31	Off	0.7	0.03	16.5	0.77	15	**51.6**	---	---	---	---	---	3,281,904	Off. Restart, **check cat cell, send for repair**.
09/06/11	DP-1,2,4,5	11250.6	21.7	0.4	55	5	---	400	10.0	451	Test	7.1	0.16	19.2	0.83	336	**25.5**	---	---	---	---	---	3,312,385	Off. Test with air sparging and HVOCs. Off at departure.
10/24/11	DP-1,2,4,5	11251.7	21.7	0.0	79	7	---	1,800	20.0	1906	Test	45.8	0.46	21.3	0.85	905	**52.5**	---	---	---	---	---	3,317,621	Off. Test new cat cell. Heat exchgr issue. Off at departure.
11/23/11	DP-1,2,4,5	11261.3	22.1	0.4	43	5	---	3,500	40.0	3670	Test	47.9	0.50	40.5	1.05	156	**95.7**	---	---	---	---	---	3,342,170	Off. **Install repaired heat exch and repaired cat cell.**
11/28/11	DP-1,2,4,5	11287.4	23.2	1.1	76	8	---	600	13.0	693	Test	14.6	0.29	56.4	1.36	3	**99.6**	---	---	---	---	---	3,461,186	Off. Test for lead in influent with sparging.**Meets permit.**
11/29/11	DP-1,2,4,5	11295.3	23.5	0.3	151	6	---	600	13.0	693	Test	29.1	0.57	66.0	1.55	19	**97.3**	---	---	---	---	---	3,532,760	Off. Restart to test. **Meets permit. Left on for testing.**
12/01/11	DP-1,2,4,5	11342.8	25.5	2.0	68	6	---	500	10.0	548	Test	10.9	0.20	87.5	1.94	16	**97.1**	---	---	---	---	---	3,726,560	On. **Meets permit. Left on for testing.**
12/14/11	DP-1,2,4,5	11653.4	38.5	12.9	64	5	---	200	5.0	203	Test	4.1	0.09	140.7	3.15	11	**94.6**	---	---	---	---	---	4,919,264	On. **<97% dest so turn off.** Test another unit 12/21/11: similar.
01/05/12	DP-1,2,4,5	11659.2	38.7	0.2	93	6	---	600	13.0	695	Test	17.8	0.35	145.0	3.23	56	**91.9**	---	---	---	---	---	4,951,485	Off. Test with dilution air for oxygen. Off at departure.
01/23/12	DP-1,2,4,5	11659.8	38.7	0.0	93	9	---	700	13.0	726	Test	20.9	0.35	145.5	3.24	58	**92.0**	---	---	---	---	---	4,954,842	Off. Restart to test with dilution and prep for lab test.
01/24/12	DP-1,2,4,5	11680.0	39.6	0.8	95	8	INF-V	**1,500**	**24.0**	2290	Test	45.5	0.66	183.8	3.80	230	**90.0**	**180**	**2.8**	**88.0**	**88.3**	**0.077**	5,069,522	On. Collect lab. Off at departure.
02/08/12	DP-1,2,4,5	11683.0	39.7	0.1	95	8	---	1,500	24.0	---	Test	45.5	0.66	189.5	3.88	---	---	---	---	---	---	---	5,086,553	Cat Cell Testing
02/15/12	DP-1,2,4,5	11690.0	40.0	0.3	118	5	INF-V	**180**	**2.1**	156	Off	6.8	0.07	191.5	3.90	10	**93.6**	**< 7.0**	**< 0.077**	**> 96.1**	**> 96.3**	**< 0.003**	5,136,113	Test destruction efficiency with new cat cell.
02/23/12	DP-1,2,4,5	11705.0	40.6	0.6	131	11	INF-V	**860**	**8.5**	749	On	36.1	0.32	214.1	4.10	6	**99.2**	**7.9**	**< 0.077**	**99.1**	**> 99.1**	**< 0.003**	5,254,013	**Restart DPE/AS. DPE/AS units repaired.**
02/27/12	DP-1,2,4,5	11741.0	42.1	1.5	131	5	INF-V	**73**	**0.8**	---	On	3.1	0.03	218.7	4.15	---	---	---	---	---	---	---	5,536,973	Off. High Enclosure Temp. Restart.
02/28/12	DP-1,2,4,5	11765.6	43.1	1.0	188	5	---	130	5.0	142	On	7.9	0.27	226.8	4.43	---	---	---	---	---	---	---	5,815,052	On. **Limit AS to AS-2, AS-4**. Monitor influence.
02/29/12	DP-1,2,4,5	11777.0	43.6	0.5	188	5	---	130	5.0	---	Off	7.9	0.27	230.5	4.56	---	---	---	---	---	---	---	5,943,917	Off. Restaft DPE/AS
03/01/12	DP-1,2,4,5	11800.7	44.6	1.0	141	8	INF-V	**450**	**7.7**	350	On	20.4	0.32	250.6	4.88	3	**99.1**	---	---	---	---	---	6,144,419	On. Increased vacuum to 8" Hg.
03/02/12	DP-1,2,4,5	11825.7	45.6	1.0	132	10	---	400	7.7	422	On	16.9	0.30	268.2	5.18	---	---	---	---	---	---	---	6,342,419	On.
03/04/12	DP-1,2,4,5	11880.0	47.9	2.3	132	9	---	400	7.7	422	On	16.9	0.30	306.6	5.85	---	---	---	---	---	---	---	6,772,475	On.
03/09/12	DP-1,2,4,5	11994.3	52.7	4.8	146	8	---	700	12.0	740	On	32.8	0.51	462.9	8.28	6	**99.2**	---	---	---	---	---	7,775,115	On.
03/13/12	DP-1,2,4,5	12087.7	56.6	3.9	141	8	INF-V	**990**	**11.0**	545	On	44.7	0.45	636.7	10.04	5	**99.1**	---	---	---	---	---	8,563,037	On.
03/16/12	DP-1,2,4,5	12159.0	59.5	3.0	141	8	---	990	11.0	---	On	44.7	0.45	769.4	11.37	5	---	---	---	---	---	---	9,164,524	On. Shutdown due to element meltdown - SVE unit replaced.
06/15/12	DP-1,2,5	14701.4	59.5	0.0	229	10	---	240	3.0	245	Off	17.6	0.20	821.1	11.96	2	**99.2**	---	---	---	---	---	9,153,551	**Startup of new SVE unit.**
06/19/12	DP-1,2,5	14740.9	61.1	1.6	165	10	---	500	4.4	498	On	26.4	0.21	864.6	12.31	3	**99.4**	---	---	---	---	---	9,543,890	Off. Restart
06/20/12	DP-1,2,4,5	14760.6	62.0	0.8	160	10	INF-V	**450**	**4.4**	337	On	23.1	0.20	883.5	12.47	5	**98.5**	**< 7**	**< 0.077**	**> 98.4**	**> 98.3**	**< 0.004**	9,732,774	On.
07/03/12	DP-1,2,4,5	14823.5	64.6	2.6	164	10	---	350	4.0	372	On	18.4	0.19	931.8	12.97	2	**99.5**	---	---	---	---	---	10,351,710	Off 7/1 for QM. Restart
07/05/12	DP-1,2,4,5	14873.9	66.7	2.1	152	10	---	180	2.0	184	On	8.8	0.09	950.2	13.16	0	**100.0**	---	---	---	---	---	10,811,358	On. Inject Nontox in VW/MW-4, AS-2, AS-4.
07/06/12	DP-1,2,4,5	14891.3	67.4	0.7	170	10	---	190	2.0	195	On	10.4	0.10	957.7	13.23	12	**93.8**	---	---	---	---	---	10,988,838	On.
07/10/12	DP-1,2,4,5	14992.1	71.6	4.2	168	10	---	160	2.0	173	On	8.6	0.10	994.0	13.64	7	**96.0**	---	---	---	---	---	12,004,902	On.
07/11/12	DP-1,2,4,5	15014.1	72.5	0.9	161	10	---	160	2.0	165	On	8.3	0.09	1001.6	13.73	6	**96.4**	---	---	---	---	---	12,217,818	On.
07/17/12	DP-1,2,4,5	15075.7	75.1	2.6	168	10	---	180	2.0	186	On	9.7	0.10	1026.5	13.98	5	**97.3**	---	---	---	---	---	12,840,224	Off. Turn off AS. Inject Nontox in VW/MW-4,AS-2,AS-4 on 7/18; restart.
07/19/12	DP-1,2,4,5	15088.9	75.6	0.5	168	9	---	160	2.0	---	On	8.6	0.10	1031.3	14.03	---	---	---	---	---	---	---	12,973,597	Off. Restart.
07/20/12	DP-1,2,4,5	15109.2	76.5	0.8	168	9	---	160	2.0	---	On	8.6	0.10	1038.6	14.12	---	---	---	---	---	---	---	13,178,708	On.
07/21/12	DP-1,2,4,5	15124.0	77.1	0.6	168	9	---	160	2.0	---	On	8.6	0.10	1043.9	14.18	---	---	---	---	---	---	---	13,328,248	Off. Restart.
08/03/12	DP-1,2,4,5	15365.7	87.2	10.1	168	9	---	160	2.0	---	On	8.6	0.10	1131.0	15.16	---	---	---	---	---	---	---	15,770,384	Off. Transfer pump not working. Coordinate repair. Restart later 8/3.
08/07/12	DP-1,2,4,5	15398.7	88.6	1.4	133	10	---	160	2.0	159	On	6.8	0.08	1140.3	15.27	5	**96.9**	---	---	---	---	---	16,033,328	Off. Restart.
08/31/12	DP-1,2,4,5	15556.9	95.1	6.6	155	11	---	140	1.0	140	On	7.0	0.05	1186.2	15.57	4	**97.1**	---	---	---	---	---	17,504,588	Off. Restart.
09/20/12	DP-1,2,4,5	15595.1	96.7	1.6	111	10	---	180	1.0	187	On	6.4	0.03	1196.4	15.62	4	**97.9**	---	---	---	---	---	17,759,000	Off. Restart.
10/03/12	DP-1,2,4,5	15832.0	106.6	9.9	100	10	---	120	1.0	126	Off	3.8	0.03	1234.4	15.91	10	**92.1**	---	---	---	---	---	19,180,400	Off. Restart. Inject Nontox VW/MW-4, AS-2, AS-4, DP-4 & DP-5 on 10/15.
10/18/12	DP-1,2,4,5	16143.0	119.6	13.0	110	13	INF-V	**230**	**1.1**	144	On	8.1	0.04	1339.6	16.36	12	**91.7**	---	---	---	---	---	21,233,000	On.
11/05/12	DP-1,2,4,5	16581.0	137.8	18.3	110	11	---	200	1.1	---	On	7.1	0.04	1468.4	17.00	---	---	---	---	---	---	---	24,123,800	Off. Inject Nontox in VW/MW-4, AS-2, AS-4, DP-4 and DP-5. Restart.
11/13/12	DP-1,2,4,5	16724.2	143.8	6.0	109	13	---	150	1.1	160	On	5.2	0.03	1499.7	17.21	12	**92.5**	---	---	---	---	---	25,060,328	Off. Restart.
11/26/12	DP-1,2,4,5	16776.0	145.9	2.2	116	13	INF-V	**70**	**0.48**	49	Off	2.6	0.02	1505.4	17.25	2	**95.9**	---	---	---	---	---	25,420,856	Off. Restart.
12/31/12	DP-1,2,4,5	17190.0	163.2	17.3	115	13	---	45	0.4	47	On	1.7	0.01	1534.0	17.48	3	**93.6**	---	---	---	---	---	28,277,456	Off. Restart.

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Table 2. SVE (DPE) Performance Data - 1230 14th Street, Oakland, CA

Date	Wells	Oxidizer Hr Meter Reading (hours)	Total Time (days)	Interval Time (days)	System Vapor Flow (cfm)	App Vac ("Hg)	Lab Sample ID	Influent TPHg Lab (ppmv)	Influent Benzene Lab Data (ppmv)	Influent OVA Reading (ppmv)	Air Sparge (status)	SVE TPHg Removal Rate (lbs/day)	SVE Benzene Removal Rate (lbs/day)	Cumulative SVE TPHg Removal (lbs)	Cumulative SVE Benz Removal (lbs)	Effluent OVA Reading (ppmv)	Abate Effic **OVA** (%)	Effluent TPHg Lab (ppmv)	Effluent Benzene Lab (ppmv)	**TPHg** Abate Effic (%)	Benzene Abate Effic (%)	Benzene Emission Rate (lbs/day)	Cumulative Vapor Flow (cf)	Notes
												Removal				Emission Reporting								

Notes:
ALL = Wells DP-1, DP-2, DP-3, DP-4 and DP-5.
NA = not analyzed; NM = not measured; --- = not available
System data estimated when specific data not available.
cfm = actual cubic feet (cf) per minute based on anemometer readings (from vacuum side of vacuum pump during SVE).
ppmv = parts per million on volume to volume basis. Actual lab data shown in **bold.** Lab data estimated for dates without lab data to allow mass removal calculation.
lbs = Pounds
"Hg = Inches of mercury vacuum
SVE = Soil Vapor Extraction
OVA = Organic Vapor Analyzer (Horiba Model MEXA 324JU)
TPHg and Benzene Removal Rates = For dates where no laboratory analytical data was collected, the lab data is estimated based on prior lab data and OVA readings to calculate period and cumulative mass removal.
Hydrocarbon Removal/Emission Rate = Rate based on Bay Area Air Quality Management District's Manual of Procedures for Soil Vapor Extraction dated July 17, 1991.
Rate = lab concentration (ppmv) x system flowrate (scfm) x (1lb-mole/386 ft^3) x molecular weight (86 lb/lb-mole for TPH-Gas hexane) x 1440 min/day x 1/1,000,000.

Table 3. GWE (DPE) System Performance Summary - 1230 14th Street, Oakland, California

Well ID	Date	Totalizer Reading[1] (gallons)	Interval Flow Volume (gallons)	Interval Duration (days)	Average Flow Rate (gpm)	**TPHg** Concentration (ug/L)	**Benzene** Concentration (ug/L)	**MTBE** Concentration (ug/L)	TPHg Removed (Lbs)	Benzene Removed (Lbs)	MTBE Removed (Lbs)	Comments
System	04/27/11	2,090	0	0	--	**960**	**120**	**ND (<5.0)**	0.000	0.000	0.000	Starup water sampling of influent (3/7/11)
Influent	05/05/11	62,822	60,732	8	5.27	---	---	---	0.485	0.061	0.000	On.
	05/16/11	100,689	37,867	11	2.39	---	---	---	0.302	0.038	0.000	On.
	05/24/11	101,686	997	8	0.09	---	---	---	0.008	0.001	0.000	On. Shutdown due to high EFF-V conc.
	07/13/11	101,686	0	50	0.00	---	---	---	0.000	0.000	0.000	Off. Restart, check cat cell. Send for repair.
	09/06/11	102,753	1,067	55	0.01	---	---	---	0.009	0.001	0.000	Off. Restart, off at departure.
	10/24/11	102,753	0	48	0.00	---	---	---	0.000	0.000	0.000	Off. Restart, install new cat cell. Off at departure.
	11/22/11	103,480	727	29	0.02	---	---	---	0.006	0.001	0.000	Off. Restart.
	11/23/11	103,593	113	1	0.08	---	---	---	0.001	0.000	0.000	Off. Restart.
	11/28/11	104,011	418	5	0.06	---	---	---	0.003	0.000	0.000	Off. Restart.
	11/29/11	104,105	94	1	0.07	---	---	---	0.001	0.000	0.000	Off. Restart.
	12/01/11	105,995	1,890	2	0.66	---	---	---	0.015	0.002	0.000	On.
	12/14/11	107,707	1,712	13	0.09	**320**	**8.9**	**ND (<5.0)**	0.005	0.000	0.000	Off. Restart.
	01/05/12	108,203	496	22	0.02	---	---	---	0.001	0.000	0.000	Off. Restart, off at departure.
	01/23/12	108,303	100	18	0.00	---	---	---	0.000	0.000	0.000	Off. Restart.
	01/24/12	112,516	4,213	1	2.93	---	---	---	0.011	0.000	0.000	Off. Restart, off at departure.
	02/23/12	113,710	1,194	30	0.03	---	---	---	0.003	0.000	0.000	Off. Restart.
	02/28/12	118,833	5,123	5	0.71	---	---	---	0.014	0.000	0.000	On.
	02/29/12	119,300	467	1	0.32	---	---	---	0.001	0.000	0.000	Off. Restart.
	03/01/12	119,956	656	1	0.46	---	---	---	0.002	0.000	0.000	On.
	03/02/12	123,447	3,491	1	2.42	---	---	---	0.009	0.000	0.000	On.
	03/09/12	146,799	23,353	7	2.32	---	---	---	0.062	0.002	0.000	On.
	03/13/12	160,104	13,305	4	2.31	**2,100**	**70**	**ND (<5.0)**	0.232	0.008	0.000	On. Shutdown 3/16 due to overheating - SVE unit replaced.
	06/15/12	167,592	7,488	94	0.06	---	---	---	0.131	0.004	0.000	Startup of new SVE unit.
	06/19/12	169,669	2,077	4	0.36	---	---	---	0.036	0.001	0.000	Off. Restart.
	06/20/12	172,212	2,543	1	1.77	---	---	---	0.044	0.001	0.000	Off. Restart.
	07/03/12	179,966	7,754	13	0.41	---	---	---	0.135	0.005	0.000	Off 7/1 for QM. Restart.
	07/06/12	188,780	8,814	3	2.04	**1,000**	**26**	**ND (<5.0)**	0.073	0.002	0.000	On. Inject BOC 7/5.
	07/10/12	193,738	4,958	4	0.86	**900**	**16**	**ND (<5.0)**	0.037	0.001	0.000	On.
	07/17/12	207,286	13,548	7	1.34	---	---	---	0.101	0.002	0.000	Off. Inject BOC, leave off. Restart 7/18.
	07/19/12	209,077	1,791	2	0.62	---	---	---	0.013	0.000	0.000	Off. Restart.
	07/20/12	211,310	2,233	1	1.55	---	---	---	0.017	0.000	0.000	On.
	07/21/12	212,880	1,570	1	1.09	---	---	---	0.012	0.000	0.000	Off. Restart.
	08/03/12	256,581	43,701	13	2.33	---	---	---	0.327	0.006	0.000	Off. Restart.
	08/07/12	258,157	1,577	4	0.27	---	---	---	0.012	0.000	0.000	Off. Restart.
	08/31/12	284,048	25,891	24	0.75	---	---	---	0.194	0.003	0.000	Off. Restart.
	09/20/12	286,963	2,915	20	0.10	---	---	---	0.022	0.000	0.000	Off. Restart.
	10/03/12	304,780	17,817	13	0.95	---	---	---	0.133	0.002	0.000	Off. Restart.
	10/15/12	331,065	26,285	12	1.52	**230**	**1.0**	**ND (<5.0)**	0.050	0.000	0.000	On. Inject BOC.
	10/17/12	331,675	610	2	0.21	**2,000**	**4.2**	**ND (<5.0)**	0.010	0.000	0.000	On.
	10/18/12	333,335	1,660	1	1.15	**130**	**ND (<0.5)**	**ND (<5.0)**	0.002	0.000	0.000	On.
	10/19/12	334,580	1,245	1	0.86	**130**	**ND (<0.5)**	**ND (<5.0)**	0.001	0.000	0.000	On.
	11/05/12	348,740	14,160	17	0.58	---	---	---	0.015	0.000	0.000	On. Close DP-4 & DP-5 and Inject BOC.
	11/12/12	352,220	3,480	7	0.35	**330**	**2.5**	**ND (<5.0)**	0.010	0.000	0.000	On. Open DP-4 & DP-5.
	11/13/12	352,520	300	1	0.21	---	---	---	0.001	0.000	0.000	Off. Restart.
	11/26/12	354,560	2,040	13	0.11	---	---	---	0.006	0.000	0.000	Off. Restart.
	12/31/12	382,940	28,380	35	0.56	---	---	---	0.078	0.001	0.000	Off. Restart.
									2.632	**0.144**	**0.000**	**Total Cumulative Removal (Lbs)**
System	04/27/11	---	---	---	---	**ND (<50)**	**ND (<0.5)**	**ND (<5.0)**	---	---	---	Startup water sampling of effluent (3/7/11)
Effluent	12/14/11	---	---	---	---	**ND (<50)**	**ND (<0.5)**	**ND (<5.0)**	---	---	---	
	07/10/12	---	---	---	---	**ND (<50)**	**ND (<0.5)**	**ND (<5.0)**	---	---	---	
	10/30/12	---	---	---	---	**ND (<50)**	**ND (<0.5)**	**ND (<5.0)**	---	---	---	

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Table 3. GWE (DPE) System Performance Summary - 1230 14th Street, Oakland, California

Well ID	Date	Totalizer Reading[1] (gallons)	Interval Flow Volume (gallons)	Interval Duration (days)	Average Flow Rate (gpm)	**TPHg** Concentration (ug/L)	**Benzene** Concentration (ug/L)	**MTBE** Concentration (ug/L)	TPHg Removed (Lbs)	Benzene Removed (Lbs)	MTBE Removed (Lbs)	Comments

Discharge Limits (ug/L):	***5***	***5***	***5***	***5***
	Benzene	***Toluene***	***Ethylbenzene***	***Total Xylenes***

ABBREVIATIONS AND NOTES:

1 = Initial totalizer reading was 2,090.

gpm = Gallons per minute

TPHd = Total Petroleum Hydrocarbon as Diesel analyzed by EPA Method 8015B with silica gel cleanup

TPHg = Total Petroleum Hydrocarbon as Gasoline analyzed by EPA Method 8015B

Benzene analyzed by EPA Method 8021B

MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8021 Cm

Toulene, Ethylbenzene and Total Xylenes analyzed by EPA Method 8015B

-- = not measured/not available

* Estimated contaminant mass calculated by multiplying average concentration detected during period (Table 1) by volume of extracted groundwater. Uses most recent lab data.

**Unless noted Toulene, Ethylbenzene and Total Xylenes non-detect (<0.5)

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Table 4. Air Sparge Performance Data - 1230 14th Street, Oakland, CA

Date	Sparge Wells	Compressor Hr Meter Reading[1] (hours)	Total Time[1] (days)	Interval Time (days)	AS-1 Flow Rate (scfm)	AS-1 Injection Pressure (PSI)	AS-2 Flow Rate (scfm)	AS-2 Injection Pressure (PSI)	AS-3 Flow Rate (scfm)	AS-3 Injection Pressure (PSI)	AS-4 Flow Rate (scfm)	AS-4 Injection Pressure (PSI)	AS-5 Flow Rate (scfm)	AS-5 Injection Pressure (PSI)	Notes
04/27/11	---	---	0.0	0.0	---	---	---	---	---	---	---	---	---	---	Startup Test of DPE System
05/05/11	---	---	0.0	0.0	---	---	---	---	---	---	---	---	---	---	Off
05/16/11	---	---	0.0	0.0	---	---	---	---	---	---	---	---	---	---	Off
05/24/11	---	---	0.0	0.0	---	---	---	---	---	---	---	---	---	---	Off.
07/13/11	---	---	0.0	0.0	---	---	---	---	---	---	---	---	---	---	Off.
09/06/11	AS-1,3,4,5	---	0.1	0.1	---	---	---	---	---	---	---	---	---	---	Off. Compressor on for test with sparging. Off at departure.
10/24/11	AS-1,3,4,5	---	0.2	0.1	1.8	9	---	---	2.0	8	1.6	10	1.0	10	Off. Test.
11/23/11	AS-1,3,4	---	0.3	0.1	2.5	8	---	---	2.5	6	2.6	10	---	---	Off. Test
11/28/11	AS-1,3,4	---	0.4	0.1	NM	NM	---	---	NM	NM	NM	NM	---	---	Off. Test for lead in influent with sparging.
11/29/11	AS-1,3,4	---	0.5	0.1	2.0	NM	---	---	2.0	NM	2.0	NM	---	---	Off. Restart. DPE/AS left on for testing.
12/01/11	AS-1,3,4	---	2.0	1.5	2.0	NM	---	---	2.0	NM	2.0	NM	---	---	On. Meets permit. Left on for testing.
12/14/11	AS-1,3,4	---	3.0	1.0	2.0	NM	---	---	2.0	NM	2.0	NM	---	---	Off. Restart. <97% dest so turn off.
01/05/12	AS-1,3,4	---	4.0	1.0	2.0	NM	---	---	2.0	NM	2.0	NM	---	---	Off. Restart. Shutdown.
01/23/12	AS-1,3,4	---	4.5	0.5	2.0	NM	---	---	2.0	NM	2.0	NM	---	---	Off. Restart.
01/24/12	ALL	---	5.5	1.0	1.8	NM	1.8	NM	1.8	NM	1.8	NM	1.8	NM	On. Turned Off.
02/15/12	AS-1, 2, 3,4	---	6.0	0.5	3.0	NM	3.0	NM	3.0	NM	3.0	NM	---	---	Off. Restart.
02/22/12	AS-1, 2, 3,4	---	6.0	0.0	3.0	NM	3.0	NM	3.0	NM	3.0	NM	---	---	Off. Replace capacitors. Restart
02/23/12	AS-2,4	---	7.0	1.0	---	---	3.0	NM	---	---	3.0	NM	---	---	On.
02/24/12	AS-2,4	---	8.0	1.0	---	---	3.0	NM	---	---	3.0	NM	---	---	On.
02/28/12	AS-2,4	---	12.0	4.0	---	---	3.0	13	---	---	3.0	9	---	---	On.
02/29/12	AS-2,4	2.0	13.0	1.0	---	---	3.0	13	---	---	3.0	9	---	---	On.
03/01/12	AS-2,4	3.3	13.3	0.3	---	---	3.0	13	---	---	3.0	12	---	---	On.
03/02/12	AS-2,4	7.0	14.3	0.9	---	---	3.0	12	---	---	3.0	12	---	---	On.
03/09/12	AS-2,4	34.7	21.2	6.9	---	---	3.4	7	---	---	3.0	14	---	---	On.
03/13/12	AS-2,4	51.4	25.4	4.2	---	---	3.0	5	---	---	3.0	13	---	---	On.
03/16/12	AS-2,4	62.0	28.0	2.7	---	---	3.0	5	---	---	3.0	13	---	---	On. Shut down - SVE unit overheated - SVE unit replaced.
06/15/12	AS-1,2,4	62.2	28.1	0.1	1.8	14	1.8	13	---	---	1.8	11	---	---	Start up new SVE unit. Restart AS
06/19/12	AS-2,4	72.4	30.6	2.6	---	---	1.8	13	---	---	1.8	11	---	---	Off. Restart.
06/20/12	AS-2,4	74.8	31.2	0.6	---	---	2.0	4	---	---	2.0	10	---	---	On.
07/03/12	AS-2,4	114.5	41.1	9.9	---	---	2.0	4	---	---	2.0	10	---	---	Off 7/1 for QM. Restart
07/05/12	AS-1,2,4	125.1	43.8	2.7	2.5	5	2.2	8	---	---	2.0	10	---	---	On. Inject Nontox VW/MW-4, AS-2, AS-4.
07/06/12	AS-1,2,4	127.0	44.3	0.5	2.4	10	2.2	13	---	---	2.0	22	---	---	On.
07/10/12	AS-1,2,4	147.6	48.5	4.3	2.0	7	2.0	5	---	---	2.0	11	---	---	On.
07/11/12	AS-1,2,4	151.4	49.3	0.8	2.0	14	2.0	9	---	---	2.0	15	---	---	On.
07/18/12	AS-1,2,4	169.2	53.8	4.5	2.0	14	2.0	9	---	---	2.0	15	---	---	Off. Restart. Inject Nontox VW/MW-4, AS-2, AS-4.
07/19/12	AS-1,2,4	172.0	54.5	0.7	2.0	11	2.0	7	---	---	2.0	11	---	---	On.
08/03/12	AS-1,2,4	229.5	66.5	12.0	2.0	11	2.0	7	---	---	2.0	11	---	---	Off. Restart.
08/07/12	AS-1,2,4	245.0	69.7	3.2	2.4	10	2.2	10	---	---	1.8	22	---	---	Off. Restart.
08/31/12	AS-1,2,4	276.3	76.2	6.5	2.0	9	2.2	8	---	---	2.0	18	---	---	Off. Restart.
09/20/12	AS-1,2,4	282.0	77.4	1.2	1.8	8	2.0	6	---	---	2.0	18	---	---	Off. Restart.
10/03/12	AS-1,2,4	321.4	85.6	8.2	2.0	12	2.0	10	---	---	2.0	18	---	---	Off. Restart. Inject Nontox VW/MW-4, AS-2, AS-4, DP-4, DP-5 on 10/15.
10/18/12	AS-1,2,4	383.3	98.5	12.9	2.0	8	2.0	6	---	---	2.0	27	---	---	On.
11/13/12	AS-1,2,3,4	684.2	123.6	25.1	1.0	10	1.0	2	1.0	9	1.0	18	---	---	On.

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Table 4. Air Sparge Performance Data - 1230 14th Street, Oakland, CA

Date	Sparge Wells	Compressor Hr Meter Reading[1] (hours)	Total Time[1] (days)	Interval Time (days)	AS-1 Flow Rate (scfm)	AS-1 Injection Pressure (PSI)	AS-2 Flow Rate (scfm)	AS-2 Injection Pressure (PSI)	AS-3 Flow Rate (scfm)	AS-3 Injection Pressure (PSI)	AS-4 Flow Rate (scfm)	AS-4 Injection Pressure (PSI)	AS-5 Flow Rate (scfm)	AS-5 Injection Pressure (PSI)	Notes
11/26/12	AS-1,2,3,4	687.7	124.3	0.7	2.0	11	2.0	11	2.0	12	2.0	18	---	---	Off. Restart
12/31/12	AS-1,2,3,4	755.4	138.4	14.1	2.0	11	2.0	11	2.0	12	2.0	18	---	---	Off.

Notes:

1 = Compressor hour meter records run time of compressor when filling air tank: does not record air injection into wells when compressor idle. Actual sparging time exceeds hour meter reading by a factor of 5 to 6 (except for 10/18/12 to 11/13/12 interval when compressor hours were multiplied by a factor of 2). Hours before 2/29/12 estimated.

ALL = Wells AS-1, AS-2, AS-3, AS-4 and AS-5.

scfm = standard cubic feet per minute based on in-line visi-float air meter.

PSI = pounds per square inch

NA = not analyzed; NM = not measured; --- = not available

System data estimated when specific data not available.

APPENDIX A

Groundwater Monitoring Program

Table A - Quarterly Groundwater Monitoring Program: 2012 with BOC Workplan

1230 14th Street, Oakland, CA

Well ID	Well Type	Screened Interval (ft bgs)	Well Location for Monitoring	Casing Diam. (in)	Gauge Frequency	Sample Frequency[1]
Monitoring Wells						
MW-1	Mon	7-22	Downgradient	2	2nd, 3rd, 4th	2nd, 3rd, 4th (and Nov/Dec[2])
MW-2	Mon	7.5-22.5	S Upgradient	2	2nd, 3rd, 4th	2nd (June)
MW-3	Mon	7-21.5	W Upgradient	2	2nd, 3rd, 4th	2nd (June)
MW-4	Mon	7-22	NW Crossgradient	2	2nd, 3rd, 4th	2nd (June)
MW-5R	Mon	5-20	Source	4	2nd, 3rd, 4th	2nd, 3rd, 4th (and Nov/Dec[2])
MW-6	Mon	5-20	E Downgradient	4	2nd, 3rd, 4th	2nd, 3rd, 4th (and Nov/Dec[2])
MW-7	Mon	5-20	NE Downgradient	4	2nd, 3rd, 4th	2nd, 3rd, 4th
VMP-1	Vapor Monitoring	4.25-4.75	N Boundary (Downgradient)	1/2	--	2nd (and Nov/Dec[2])
Remediation/Monitoring Wells						
AS-1	Mon/Air Sparging	22-25	N Source	1	2nd (June)	2nd (June)
AS-2	Air Sparging	22-25	--	1	2nd (June)	2nd (June)
AS-3	Air Sparging	22-25	--	1	2nd (June)	2nd (June)
AS-4	Air Sparging	22-25	--	1	2nd (June)	2nd (June)
AS-5	Air Sparging	21.5-25	--	1	2nd (June)	2nd (June)
VW/MW-2	Mon/Vapor Extraction	6-22	W Crossgradient	2	2nd, 3rd, 4th	2nd, 3rd, 4th
VW/MW-4	Mon/Vapor Extraction	5-20	SW Downgradient	2	2nd, 3rd, 4th	2nd, 3rd, 4th (and Nov/Dec[2])
DP-1	Dual Phase Extraction (Rem)	8-20	--	4	2nd, 3rd, 4th	2nd (and Nov/Dec[2])
DP-2	Dual Phase Extraction (Rem)	8-20	--	4	2nd, 3rd, 4th	2nd (and Nov/Dec[2])
DP-3	Dual Phase Extraction (Rem)	8-20	--	4	2nd, 3rd, 4th	2nd (June)
DP-4	Dual Phase Extraction (Rem)	8-20	--	4	2nd, 3rd, 4th	2nd (and Nov/Dec[2])
DP-5	Dual Phase Extraction (Rem)	8-20	--	4	2nd, 3rd, 4th	2nd (and Nov/Dec[2])

Notes and Abbreviations:

1= Sample Analytes: Total Petroleum Hydrocarbons as Gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8015Cm/8021B.

2=Monthly Sampling in Nov/Dec 2012 for Enhanced Site Remediation evaluation (if approved by ACEH). Grab sample DP wells.

2nd, 3rd, 4th = Quarterly during second, third and fourth quarter. Propose June, September and December for 2012.

2nd = Annually during second quarter, typically May

Mon = Groundwater Monitoring Well

Rem= Remediation Well

VW = Vapor Extraction Well

VMP= Vapor Monitoring Well

DP = Dual Phase Extraction

N, S, W, E = Cardinal directions North, South, West, East and other directions (e.g., Northeast = NE)

-- = Not applicable, gauged or sampled.

Table B - Quarterly Groundwater Monitoring Program: 2013

1230 14th Street, Oakland, CA

Well ID	Well Type	Screened Interval (ft bgs)	Well Location for Monitoring	Casing Diam. (in)	Gauge Frequency	Sample Frequency[1]
Monitoring Wells						
MW-1	Mon	7-22	Downgradient	2	Q	Q
MW-2	Mon	7.5-22.5	S Upgradient	2	Q	2nd
MW-3	Mon	7-21.5	W Upgradient	2	Q	2nd
MW-4	Mon	7-22	NW Crossgradient	2	Q	2nd
MW-5R	Mon	5-20	Source	4	Q	Q
MW-6	Mon	5-20	E Downgradient	4	Q	Q
MW-7	Mon	5-20	NE Downgradient	4	Q	Q
VMP-1	Vapor Monitoring	4.25-4.75	N Boundary (Downgradient)	1/2	--	2nd
Remediation/Monitoring Wells						
AS-1	Mon/Air Sparging	22-25	N Source	1	2nd	2nd
AS-2	Air Sparging	22-25	--	1	2nd	2nd
AS-3	Air Sparging	22-25	--	1	2nd	2nd
AS-4	Air Sparging	22-25	--	1	2nd	2nd
AS-5	Air Sparging	21.5-25	--	1	2nd	2nd
VW/MW-2	Mon/Vapor Extraction	6-22	W Crossgradient	2	Q	2nd
VW/MW-4	Mon/Vapor Extraction	5-20	SW Downgradient	2	Q	Q
DP-1	Dual Phase Extraction (Rem)	8-20	--	4	Q	Q
DP-2	Dual Phase Extraction (Rem)	8-20	--	4	2nd	2nd
DP-3	Dual Phase Extraction (Rem)	8-20	--	4	2nd	2nd
DP-4	Dual Phase Extraction (Rem)	8-20	--	4	2nd	2nd
DP-5	Dual Phase Extraction (Rem)	8-20	--	4	Q	Q

Notes and Abbreviations:

1= Sample Analytes: Total Petroleum Hydrocarbons as Gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8015Cm/8021B.

Q = Quarterly, typically March, June, September, December

3rd = Annually during third quarter, typically June

Mon = Groundwater Monitoring Well

Rem= Remediation Well

VW = Vapor Extraction Well

VMP= Vapor Monitoring Well

DP = Dual Phase Extraction

N, S, W, E = Cardinal directions North, South, West, East and other directions (e.g., Northeast = NE)

-- = Not applicable, gauged or sampled.

APPENDIX B

Groundwater Monitoring Field Data Sheets

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Well Gauging Data Sheet

Project.Task #:1150.001				Project Name: Saberi - 1230 14th St.			
1230 14th Street, Oakland, CA						Date 9/30/12	
Name: Sanjiv Gill				Signature:			
Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point
MW-1	2"	08:35			13.55	21.32	TOC
MW-2	2"	08:13			12.80	22.02	
MW-3	2"	08:10			13.02	18.65	
MW-4	2"	08:05			12.82	19.80	
MW-5R	4"	08:40			13.36	22.60	
MW-6	4"	08:17			13.60	19.70	
MW-7	4"	08:21			14.15	19.81	
VW/MW-2	2"	08:30			13.35	21.90	
VW/MW-4	2"	08:25			13.10	18.23	
DP-1	4"	08:48			13.47	—	
DP-2	4"	08:44			9.15	—	

Comments:

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Well Gauging Data Sheet

Project.Task #:1150.001				Project Name: Saberi - 1230 14th St.			
1230 14th Street, Oakland, CA						Date 9/30/12	
Name: Sanjiv Gill				Signature:			
Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point
DP-3	4"	08:52			14.35	—	TOC
DP-4	4"	08:56			13.10	—	|
DP-5	4"	09:00			13.22	—	X

Comments:

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MONITORING FIELD DATA SHEET

Well ID: MW-1

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 9/30/12	Weather: Sunny
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 21.32	Depth to Product:
Depth to Water (DTW): 13.55	Product Thickness:
Water Column Height: 7.77	1 Casing Volume: 1.24 gallons
Reference Point: TOC	3 Casing Volumes: 3.72 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Parastaltic Pump, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:40	18.7	7.08	720			-47	1.5	
11:45	18.7	7.19	735			-40	3.0	
11:50	18.8	7.21	739			-34	4.0	

Comments: YSI 550A DO meter
pre purge DO = 2.97 mg/l
post purge DO = 3.09 mg/l
very turbid, silty

Sample ID: MW-1	Sample Time: 11:55
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/30/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg, BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-5R

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 9/30/12	Weather: Sunny
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 22.60	Depth to Product:
Depth to Water (DTW): 13.36	Product Thickness:
Water Column Height: 9.24	1 Casing Volume: 6.00 gallons
Reference Point: TOC	3 Casing Volumes: 18.00 gallons
Purging Device: Disposable Bailer, (3" PVC Bailer), Parastaltic Pump, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:15	19.7	7.20	852			-70	6.0	
12:25	19.9	7.22	849			-73	12.0	
12:35	20.5	7.21	860			-81	18.0	

Comments: YSI 550A DO meter

pre purge DO = 1.29 mg/l

post purge DO = 1.60 mg/l

turbid

Sample ID: MW-5R	Sample Time: 12:40
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/30/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg,BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-6

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 9/30/12	Weather: Sunny
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 19.70	Depth to Product:
Depth to Water (DTW): 13.60	Product Thickness:
Water Column Height: 6.10	1 Casing Volume: 3.96 gallons
Reference Point: TOC	3 Casing Volumes: 11.88 gallons
Purging Device: 3" Disposable Bailer ~~2" Bailer~~, Parastaltic Pump, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
09:10	17.9	6.90	1270			59	4	
09:15	17.9	6.94	1261			57	8	
09:20	17.9	6.96	1265			64	12	

Comments: YSI 550A DO meter

pre purge DO = 1.73 mg/l

post purge DO = 1.98 mg/l

turbid

Sample ID: MW-6	Sample Time: 09:25
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/30/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg, BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-7

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 9/30/12	Weather: Sunny
Well Diameter: 4"	Volume/ft. 1" = 0.04, 2" = 0.16, 3" = 0.37, 4" = 0.65, 6" = 1.47, radius^2 * 0.163
Total Depth (TD): 19.81	Depth to Product:
Depth to Water (DTW): 14.15	Product Thickness:
Water Column Height: 5.66	1 Casing Volume: 3.67 gallons
Reference Point: TOC	3 Casing Volumes: 11.01 gallons
Purging Device: 3" Disposable Bailer, 3" PVC Bailer, Parastaltic Pump, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
09:45	17.6	7.21	820			15	3.5	
09:55	17.9	7.28	814			16	7.0	
10.05	17.9	7.23	829			19	11.0	

Comments: YSI 550A DO meter

pre purge DO = 2.46 mg/l

post purge DO = 2.70 mg/l

turbid

Sample ID: MW-7	Sample Time: 10:10
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/30/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg,BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:

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MONITORING FIELD DATA SHEET

Well ID: VW/MW-2

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 9/30/12	Weather: Sunny
Well Diameter: 2"	Volume/ft. 1" = 0.04, 2" = 0.16, 3" = 0.37, 4" = 0.65, 6" = 1.47, radius^2 * 0.163
Total Depth (TD): 21.90	Depth to Product:
Depth to Water (DTW): 13.35	Product Thickness:
Water Column Height: 8.55	1 Casing Volume: 1.36 gallons
Reference Point: TOC	3 Casing Volumes: 4.08 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Parastaltic Pump, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
10:30	19.2	6.94	629			44	1.5	
10:35	18.9	6.99	622			41	3.0	
10:40	19.0	7.06	630			37	4.0	

Comments: YSI 550A DO meter

pre purge DO = 2.02 mg/l

post purge DO = 1.90 mg/l

very low bld, silty

Sample ID: VW/MW-2	Sample Time: 10:45
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/30/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg, BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:

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MONITORING FIELD DATA SHEET

Well ID: VW/MW-4

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 9/30/12	Weather: Sunny
Well Diameter: 2"	Volume/ft. 1" = 0.04, 2" = 0.16, 3" = 0.37, 4" = 0.65, 6" = 1.47, radius² * 0.163
Total Depth (TD): 18.23	Depth to Product:
Depth to Water (DTW): 13.10	Product Thickness:
Water Column Height: 5.13	1 Casing Volume: 0.82 gallons
Reference Point: TOC	3 Casing Volumes: 2.46 gallons

Purging Device: Disposable Bailer (circled), 3" PVC Bailer, Parastaltic Pump, Whal Pump

Sampling Device: Disposable Bailer

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:05	19.8	7.11	880			-72	1.0	
11:10	19.9	7.15	910			-76	2.0	
11:15	19.9	7.18	914			-80	2.5	

Comments: YSI 550A DO meter — pre purge DO = 1.06 mg/l

very turbid, silty — post purge DO = 1.24 mg/l

suds, soapy, R_x HCl

Sample ID: VW/MW-4	Sample Time: 11:20
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/30/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg,BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature: [signature]

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686-4

MONITORING FIELD DATA SHEET

Well ID: MW-6

Project.Task #: 1150.001	Project Name:Saberi 1230 14th Street
Address: 1230 14th Street Oakland, CA	
Date: 10/30/12	Weather : OVERCAST
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius² * 0.163
Total Depth (TD): 19.6	Depth to Product:
Depth to Water (DTW): 13.48	Product Thickness:
Water Column Height: 6.12	1 Casing Volume: 3.97 gallons
Reference Point:	___ Casing Volumes: gallons
Purging Device: Disposable Bailer	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
1234	18.78	6.11	1334	N/A	2.04	94.6	.5	
1240	18.42	6.10	1329	N/A	2.51	162	4	
1246	18.5	6.4	1332	N/A	3.3	98.0	8	
1251	18.54	6.41	1315	N/A	3.20	45.0	12	
						~~51.5~~		
1256	18.54	6.43	1316	N/A	3.24	51.5	12.5	15.45

Comments:

Sample ID: MW-6	Sample Time: 1256, DTW
Laboratory: McCampbell	Sample Date:
Containers/Preservative: 3 HCl Voas	5 VOA (1) 1l PLASTIC
Analyzed for: TPHg and BTEX by EPA Method 8015Cm/8021; MTBE by EPA Method 8260B	
Sampler Name:	Signature:

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Well Gauging Data Sheet

Project.Task #: 1150.001				Project Name: Saberi - 1230 14th St.				
1230 14th Street, Oakland, CA							Date 12/14/12	
Name: Sanjiv Gill				Signature:				
	Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point
S	MW-1	2	08:35			11.05	21.32	TOC
S	MW-2	2	08:08			10.37	22.02	
S	MW-3	2	08:03			10.58	18.65	
S	MW-4	2	08:00			10.31	19.80	
S	MW-5R	4	08:40			11.03	22.60	
S	MW-6	4	08:14			11.13	19.70	
S	MW-7	4	08:20			11.61	19.81	
S	VW/MW-2	2	08:25			10.90	21.90	
S	VW/MW-4	2	08:30			10.71	18.23	
S	DP-1	4	08:49			10.98	—	
S	DP-2	4	08:46			10.74	—	

Comments:

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Well Gauging Data Sheet

Project.Task #:1150.001				Project Name: Saberi - 1230 14th St.				
1230 14th Street, Oakland, CA							Date 12/14/12	
Name: Sanjiv Gill				Signature:				
	Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point
a	DP-3	4	08:43			11.67	—	TOC
s	DP-4	4	08:54			10.82	—	
s	DP-5	4	08:57			11.30	—	

Comments:

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MONITORING FIELD DATA SHEET

Well ID: MW-1

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 12/14/12	Weather: Cloudy
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 3" = 0.37 | 6" = 1.47 | 2" = 0.16 | 4" = 0.65 | radius^2 * 0.163
Total Depth (TD): 21.32	Depth to Product:
Depth to Water (DTW): 11.05	Product Thickness:
Water Column Height: 10.27	1 Casing Volume: 1.64 gallons
Reference Point: TOC	3 Casing Volumes: 4.92 gallons

Purging Device: (Disposable Bailer) 3" PVC Bailer, Parastaltic Pump, Whal Pump

Sampling Device: Disposable Bailer

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:50	16.6	7.20	692				1.5	
11:53	16.9	7.16	715				3.0	
11:56	17.1	7.12	724				5.0	

Comments: YSI 550A DO meter

pre purge DO = 1.98 mg/l

post purge DO = 2.15 mg/l

turbid

Sample ID: MW-1	Sample Time: 12:00
Laboratory: McCampbell Analytical, INC.	Sample Date: 12/14/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg, BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES INC.

MONITORING FIELD DATA SHEET

Well ID: MW-5R

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 12/14/12	Weather: Cloudy
Well Diameter: 4"	Volume/ft. 1" = 0.04, 2" = 0.16, 3" = 0.37, 4" = 0.65, 6" = 1.47, radius² * 0.163
Total Depth (TD): 22.60	Depth to Product:
Depth to Water (DTW): 11.03	Product Thickness:
Water Column Height: 11.57	1 Casing Volume: 7.52 gallons
Reference Point: TOC	3 Casing Volumes: 22.56 gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Parastaltic Pump, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:15	17.9	7.27	870				7.5	
12:20	18.1	7.23	867				15.0	
12:25	18.1	7.22	865				22.5	

Comments: YSI 550A DO meter

pre purge DO = 2.11 mg/l

post purge DO = 2.51 mg/l

turbid

Sample ID: MW-5R	Sample Time: 12:28
Laboratory: McCampbell Analytical, INC.	Sample Date: 12/14/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg, BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES INC.

MONITORING FIELD DATA SHEET

Well ID: MW-6

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 12/14/12	Weather: cloudy
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 3" = 0.37 | 6" = 1.47 | 2" = 0.16 | 4" = 0.65 | radius² * 0.163
Total Depth (TD): 19.70	Depth to Product:
Depth to Water (DTW): 11.13	Product Thickness:
Water Column Height: 8.57	1 Casing Volume: 5.57 gallons
Reference Point: TOC	3 Casing Volumes: 16.71 gallons

Purging Device: Disposable Bailer, (3" PVC Bailer), Parastaltic Pump, Whal Pump

Sampling Device: Disposable Bailer

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
10:05	17.3	6.87	1240				5.5	
10:10	17.1	6.94	1269				11.0	
10:15	17.0	6.92	1263				17.0	

Comments: YSI 550A DO meter

pre purge DO = 1.29 mg/l

post purge DO = 1.90 mg/l

turbid

Sample ID: MW-6	Sample Time: 10:20
Laboratory: McCampbell Analytical, INC.	Sample Date: 12/14/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg, BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES INC.

MONITORING FIELD DATA SHEET

Well ID: MW-7

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 12/14/12	Weather: Cloudy
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | (radius)² * 0.163
Total Depth (TD): 19.81	Depth to Product:
Depth to Water (DTW): 11.61	Product Thickness:
Water Column Height: 8.20	1 Casing Volume: 5.33 gallons
Reference Point: TOC	3 Casing Volumes: 15.99 gallons

Purging Device: Disposable Bailer, (3" PVC Bailer), Parastaltic Pump, Whal Pump

Sampling Device: Disposable Bailer

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
10:35	17.1	7.25	833				5.5	
10:40	17.1	7.23	831				11.0	
10:45	17.1	7.23	828				16.0	

Comments: YSI 550A DO meter

pre purge DO = 1.90 mg/l

post purge DO = 2.25 mg/l

turbid

Sample ID: MW-7	Sample Time: 10:50
Laboratory: McCampbell Analytical, INC.	Sample Date: 12/14/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg, BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES INC.

MONITORING FIELD DATA SHEET

Well ID: VW/MW-2

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 12/14/12	Weather: Cloudy
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | (radius)^2 * 0.163
Total Depth (TD): 21.90	Depth to Product:
Depth to Water (DTW): 10.90	Product Thickness:
Water Column Height: 11.00	1 Casing Volume: 1.76 gallons
Reference Point: TOC	3 Casing Volumes: 5.28 gallons
Purging Device: (Disposable Bailer), 3" PVC Bailer, Parastaltic Pump, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:05	18.6	6.89	636				2.0	
11:08	18.9	6.92	641				4.0	
11:10	19.1	6.94	645				5.0	

Comments: YSI 550A DO meter

pre purge DO = 1.48 mg/l

post purge DO = 1.72 mg/l

very turbid

Sample ID: VW/MW-2	Sample Time: 11:13
Laboratory: McCampbell Analytical, INC.	Sample Date: 12/14/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg, BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES INC.

MONITORING FIELD DATA SHEET

Well ID: VW/MW-4

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 12/14/12	Weather: Cloudy
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | (radius)² * 0.163
Total Depth (TD): 18.23	Depth to Product:
Depth to Water (DTW): 10.71	Product Thickness:
Water Column Height: 7.52	1 Casing Volume: 1.20 gallons
Reference Point: TOC	3 Casing Volumes: 3.60 gallons
Purging Device: (Disposable Bailer), 3" PVC Bailer, Parastaltic Pump, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:25	18.2	7.09	871				1.5	
11:27	18.4	7.13	879				2.5	
11:30	18.5	7.15	880				3.0	

Comments: YSI 550A DO meter — pre purge DO = 0.75 mg/l

post purge DO = 1.02 mg/l

soapy suds, HCl Rx H_2O

Sample ID: VW/MW-4	Sample Time: 11:33
Laboratory: McCampbell Analytical, INC.	Sample Date: 12/14/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg, BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:

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ENVIRONMENTAL SERVICES INC.

MONITORING FIELD DATA SHEET

Well ID: DP-1

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street. Oaklane. CA	
Date: 12/14/12	Weather: Cloudy
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | (radius)² * 0.163
Total Depth (TD): ———	Depth to Product:
Depth to Water (DTW): 10.98	Product Thickness.
Water Column Height:	1 Casing Volume: gallons
Reference Point: TOC	___ Casing Volumes: gallons
Purging Device: Disposable Bailer. 3" PVC Bailer. Parastaltic Pump. Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
	No purge							

Comments: YSI 550A DO meter

pre purge DO = 1.40 mg/l

post purge DO = mg/l

Sample ID: DP-1	Sample Time: 12:35
Laboratory: McCampbell Analytical. INC.	Sample Date: 12/14/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg.BTEX. MTBE	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES INC.

MONITORING FIELD DATA SHEET

Well ID: DP-2

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street. Oaklane. CA	
Date: 12/14/12	Weather: Cloudy
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 3" = 0.37 | 6" = 1.47 | 2" = 0.16 | 4" = 0.65 | (radius^2 * 0.163
Total Depth (TD): ———	Depth to Product:
Depth to Water (DTW): 10.74	Product Thickness:
Water Column Height:	1 Casing Volume: gallons
Reference Point: TOC	___ Casing Volumes: gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Parastaltic Pump, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
	NO Purge							

Comments: YSI 550A DO meter — pre purge DO = 0.86 mg/l

post purge DO = mg/l

Sample ID: DP-2	Sample Time: 12:40
Laboratory: McCampbell Analytical. INC.	Sample Date: 12/14/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg.BTEX. MTBE	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES INC.

MONITORING FIELD DATA SHEET

Well ID: DP-4

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 12/14/12	Weather: Cloudy
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): ——	Depth to Product:
Depth to Water (DTW): 10.82	Product Thickness:
Water Column Height:	1 Casing Volume: gallons
Reference Point: TOC	___ Casing Volumes: gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Parastaltic Pump, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
	No purge							

Comments: YSI 550A DO meter — pre purge DO = 0.95 mg/l

post purge DO = mg/l

Sample ID: DP-4	Sample Time: 12:45
Laboratory: McCampbell Analytical, INC.	Sample Date: 12/14/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg, BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES INC.

MONITORING FIELD DATA SHEET

Well ID: DP-5

Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.
Address: 1230 14th Street, Oaklane, CA	
Date: 12/14/12	Weather: Cloudy
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | (radius)^2 * 0.163
Total Depth (TD): ———	Depth to Product:
Depth to Water (DTW): 11.30	Product Thickness:
Water Column Height:	1 Casing Volume: gallons
Reference Point: TOC	___ Casing Volumes: gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Parastaltic Pump, Whal Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
	No purge							

Comments: YSI 550A DO meter — pre purge DO = 0.61 mg/l

post purge DO = mg/l

Sample ID: DP-5	Sample Time: 12:50
Laboratory: McCampbell Analytical, INC.	Sample Date: 12/14/12
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg, BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:

APPENDIX C

Laboratory Analytical Report

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001 232; Saberi-1230 14th St.	Date Sampled: 09/30/12
		Date Received: 10/01/12
	Client Contact: Tina De La Fuente	Date Reported: 10/08/12
	Client P.O.:	Date Completed: 10/05/12

WorkOrder: 1210022

October 08, 2012

Dear Tina:

Enclosed within are:

1) The results of the **6** analyzed samples from your project: **#1150.001 232; Saberi-1230 14th St.,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1210022

McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

GeoTracker EDF ☒ PDF ☒ Excel ☐ Write On (DW) ☐

☐ Check if sample is effluent and "J" flag is required

Report To: Tina de la fuente Bill To: [redacted] Pangea

Company: Pangea Environmental Services
1700 Franklin Street, Ste. A
Oakland, CA E-Mail: tdelafuente@pangeaenv.com

Tele: ([redacted] 510-836-3702 Fax: (510) 836-3709

Project #: 1150.001 232 Project Name: Saberi - 1230 14th St.

Project Location: 1230 14th St., Oakland, CA

Sampler Signature: Muskan Environmental Sampling

	SAMPLE ID	LOCATION/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED ICE	HCL	HNO_3	Other
+	MW-1		9/30/12	11:55	3	VOA	X					X	X		
+	MW-5R			12:40											
+	MW-6			09:25											
+	MW-7			10:10											
+5	VW/MW-2			10:45											
+2	VW/MW-4			11:20	X	X	X					X	X		

Analysis Request

BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 8260 (HVOCs)	MTBE / BTEX ONLY (EPA 602 / 8021)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515.3 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.8 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)
X															

Other: | Comments: Filter Samples for Metals analysis: Yes / No

Relinquished By:	Date:	Time:	Received By:
	10-1	11:15	
Relinquished By:	Date:	Time:	Received By:
	10-1-12	5:13pm	Gabriella Walker 10/01/12 5:13pm
Relinquished By:	Date:	Time:	Received By:

ICE/t 1.6°C
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1210022 **ClientCode: PEO**

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Tina De La Fuente
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: tdelafuente@pangeaenv.com
cc:
PO:
ProjectNo: #1150.001 232; Saberi-1230 14th St.

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **10/01/2012**
Date Printed: **10/01/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1210022-001	MW-1	Water	9/30/2012 11:55	☐	A	A										
1210022-002	MW-5R	Water	9/30/2012 12:40	☐	A											
1210022-003	MW-6	Water	9/30/2012 9:25	☐	A											
1210022-004	MW-7	Water	9/30/2012 10:10	☐	A											
1210022-005	VW/MW-2	Water	9/30/2012 10:45	☐	A											
1210022-006	VW/MW-4	Water	9/30/2012 11:20	☐	A											

Test Legend:

1	G-MBTEX_W	2	PREDF REPORT	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Gabrielle Walker

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **10/1/2012 6:05:45 PM**

Project Name: **#1150.001 232; Saberi-1230 14th St.**
LogIn Reviewed by: Gabrielle Walker

WorkOrder N°: **1210022** Matrix: Water
Carrier: David Valles (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 1.6°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Comments:

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001 232; Saberi-1230 14th St.	Date Sampled: 09/30/12
		Date Received: 10/01/12
1710 Franklin Street, Ste. 200	Client Contact: Tina De La Fuente	Date Extracted: 10/03/12-10/04/12
Oakland, CA 94612	Client P.O.:	Date Analyzed: 10/03/12-10/04/12

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1210022

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	MW-1	W	130	ND	ND	0.61	2.9	1.4	1	95	d7
002A	MW-5R	W	2800	ND<50	360	32	140	52	10	122	d1
003A	MW-6	W	2900	ND<50	25	25	200	560	10	104	d1
004A	MW-7	W	ND	ND	ND	ND	ND	ND	1	105	
005A	VW/MW-2	W	ND	ND	0.57	ND	ND	ND	1	90	b1
006A	VW/MW-4	W	4100	ND<50	1000	39	130	250	10	116	d1,b1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference. %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
b1) aqueous sample that contains greater than ~1 vol. % sediment
d1) weakly modified or unmodified gasoline is significant
d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 71279 | WorkOrder: 1210022

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1210022-004A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	99.4	111	11.0	98.4	70 - 130	20	80 - 120
MTBE	ND	10	97.4	103	5.12	99.8	70 - 130	20	80 - 120
Benzene	ND	10	90.4	102	12.5	95.7	70 - 130	20	80 - 120
Toluene	ND	10	92.5	101	9.19	96.5	70 - 130	20	80 - 120
Ethylbenzene	ND	10	95.2	106	10.8	98.4	70 - 130	20	80 - 120
Xylenes	ND	30	101	110	9.38	102	70 - 130	20	80 - 120
%SS:	105	10	87	90	3.08	92	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 71279 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210022-001A	09/30/12 11:55 AM	10/03/12	10/03/12 4:22 AM	1210022-004A	09/30/12 10:10 AM	10/04/12	10/04/12 4:43 AM
1210022-005A	09/30/12 10:45 AM	10/03/12	10/03/12 5:22 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

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QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 71317 | WorkOrder: 1210022

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1210075-005A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	93.7	86.6	7.91	99.7	70 - 130	20	80 - 120
MTBE	ND	10	91.6	88.7	3.09	101	70 - 130	20	80 - 120
Benzene	ND	10	93.5	89.9	3.97	95.7	70 - 130	20	80 - 120
Toluene	ND	10	91.3	87.1	4.61	95.9	70 - 130	20	80 - 120
Ethylbenzene	ND	10	93.3	88.9	4.71	97.6	70 - 130	20	80 - 120
Xylenes	ND	30	93.7	89.7	4.42	98.2	70 - 130	20	80 - 120
%SS:	105	10	99	102	2.43	97	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 71317 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210022-002A	09/30/12 12:40 PM	10/04/12	10/04/12 3:13 AM	1210022-003A	09/30/12 9:25 AM	10/04/12	10/04/12 5:43 AM
1210022-006A	09/30/12 11:20 AM	10/04/12	10/04/12 6:12 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

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Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th St	Date Sampled: 10/30/12
		Date Received: 10/31/12
	Client Contact: Morgan Gillies	Date Reported: 11/05/12
	Client P.O.:	Date Completed: 11/05/12

WorkOrder: 1210991

November 06, 2012

Dear Morgan:

Enclosed within are:

1) The results of the **4** analyzed samples from your project: **#1150.001; 1230 14th St,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1210991

RUSH

McCAMPBELL ANALYTICAL, INC.

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Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Morgan Gillies Bill To: Pangea
Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200, Oakland, CA 94612
E-Mail: mgillies@pangeaenv.com
Tele: (510) 836-3702 Fax: (510) 836-3709
Project #: 1150.001 Project Name: 1230 14th St
Project Location: 1230 14th St., Oakland
Sampler Signature: [signature]

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED ICE	HCL	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	5 Oxygenates (8260)	TPH-Diesel	MeOH, EtOH & IPA (8260)	CTAS (non-ionic surfactants)	Comments: Filter Samples for Metals analysis: Yes / No
MW-6	MW-6	10/30/12	1256	7	V/P	X					X	X			X			X	X	9/m btex 24hr / CTAS 72hr per email
EFF-W	EFF	↓	1318	5	V	↓					↓	↓			X		X			
MID-W	MID	↓	1321	↓	↓	↓					↓	↓			X		X			
INF-W	INF	↓	1328	↓	↓	↓					↓	↓			X		X			

Cancelled per T. dLF 10/31/12

Relinquished By:	Date:	Time:	Received By:
[signature]	10/31/12	1209	[signature]
[signature]	10/31/12	1245	[signature]

ICE/t° 4.2
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB ___
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB ___

PRESERVATION ✓ VOAS O&G METALS pH<2 OTHER

COMMENTS:

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1210991 **ClientCode: PEO**

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Morgan Gillies
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: mgillies@pangeaenv.com,tdelafuente@pa
cc:
PO:
ProjectNo: #1150.001; 1230 14th St

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **10/31/2012**
Date Printed: **11/01/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1210991-001	MW-6	Water	10/30/2012 12:56	☐	B	C	A	A								
1210991-002	EFF-W	Water	10/30/2012 13:18	☐			A									
1210991-003	MID-W	Water	10/30/2012 13:21	☐			A									
1210991-004	INF-W	Water	10/30/2012 13:28	☐			A									

Test Legend:

1	8260VOC_W	2	CTAS_W	3	G-MBTEX_W	4	PREDF REPORT	5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments: For 001 G/MBTEX 24hr and CTAS 72hr

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **10/31/2012 1:06:35 PM**

Project Name: **#1150.001; 1230 14th St**
LogIn Reviewed by: Maria Venegas

WorkOrder N°: **1210991** Matrix: Water
Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 4.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Comments:

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th St	Date Sampled: 10/30/12
		Date Received: 10/31/12
	Client Contact: Morgan Gillies	Date Extracted: 11/01/12
	Client P.O.:	Date Analyzed: 11/01/12

Volatile Organics by P&T and GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1210991

Lab ID	1210991-001B				Reporting Limit for DF =1		
Client ID	MW-6						
Matrix	W						
DF	1				S	W	
Compound	**Concentration**				ug/kg	µg/L	
Ethanol	ND				NA	50	
Methanol	ND				NA	500	
2-Propanol	ND				NA	50	
Surrogate Recoveries (%)							
%SS1:	91						
%SS2:	107						
%SS3:	102						
Comments							

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.

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Angela Rydelius, Lab Manager

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th St	Date Sampled: 10/30/12
		Date Received: 10/31/12
	Client Contact: Morgan Gillies	Date Extracted: 10/31/12
	Client P.O.:	Date Analyzed: 11/01/12

CTAS (Cobalt Thiocyanate Active Subtances)/Non-ionic Surfactants

Analytical Method: SM5540D Work Order: 1210991

Lab ID	Client ID	Matrix	CTAS	DF	Comments
1210991-001C	MW-6	W	ND	1	

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	0.1 mg/L	
	S	NA	

*water samples are reported in mg/L.

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Angela Rydelius, Lab Manager

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Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; 1230 14th St	Date Sampled: 10/30/12
		Date Received: 10/31/12
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 10/31/12
Oakland, CA 94612	Client P.O.:	Date Analyzed: 10/31/12

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1210991

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	MW-6	W	ND	ND	1.1	ND	ND	3.5	1	87	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference. %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

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Angela Rydelius, Lab Manager

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Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; 1230 14th St	Date Sampled: 10/30/12
		Date Received: 10/31/12
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 10/31/12-11/01/12
Oakland, CA 94612	Client P.O.:	Date Analyzed: 10/31/12-11/01/12

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1210991

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
002A	EFF-W	W	ND	ND	ND	ND	ND	ND	1	92	
003A	MID-W	W	ND	ND	ND	ND	ND	1.1	1	93	
004A	INF-W	W	55	ND	ND	0.61	ND	7.3	1	99	d2

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference. %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
d2) heavier gasoline range compounds are significant (aged gasoline?)

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Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 72128 | WorkOrder: 1210991

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1210991-001B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	10	100	99.6	0.723	107	70 - 130	20	70 - 130
Benzene	1.0	10	81.5	82	0.619	96.7	70 - 130	20	70 - 130
t-Butyl alcohol (TBA)	ND	40	113	110	2.52	115	70 - 130	20	70 - 130
Chlorobenzene	ND	10	82.7	82.9	0.218	97.4	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	94	93.9	0.0661	105	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	104	99.1	5.13	109	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	86.9	86.7	0.245	108	70 - 130	20	70 - 130
Diisopropyl ether (DIPE)	ND	10	93.3	93.9	0.568	103	70 - 130	20	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	100	100	0	107	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	103	102	0.861	109	70 - 130	20	70 - 130
Toluene	ND	10	78	77.8	0.224	93.5	70 - 130	20	70 - 130
Trichloroethene	ND	10	87.5	85.9	1.88	102	70 - 130	20	70 - 130
%SS1:	91	25	88	87	0.894	86	70 - 130	20	70 - 130
%SS2:	107	25	105	106	1.17	110	70 - 130	20	70 - 130
%SS3:	102	2.5	101	103	2.37	100	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72128 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210991-001B	10/30/12 12:56 PM	11/01/12	11/01/12 11:58 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SM5540D

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 72096 | WorkOrder: 1210991

EPA Method: SM5540D **Extraction: SM5540D** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
CTAS	N/A	1	N/A	N/A	N/A	88.8	N/A	N/A	85 - 115

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72096 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210991-001C	10/30/12 12:56 PM	10/31/12	11/01/12 1:49 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 72124 | WorkOrder: 1210991

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1210984-001M**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	107	107	0	101	70 - 130	20	80 - 120
MTBE	ND	10	79.7	85.9	7.14	96.4	70 - 130	20	80 - 120
Benzene	ND	10	98.4	101	2.79	110	70 - 130	20	80 - 120
Toluene	ND	10	102	100	1.26	114	70 - 130	20	80 - 120
Ethylbenzene	ND	10	101	103	1.64	109	70 - 130	20	80 - 120
Xylenes	ND	30	105	106	0.714	112	70 - 130	20	80 - 120
%SS:	87	10	93	95	1.83	107	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72124 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210991-001A	10/30/12 12:56 PM	10/31/12	10/31/12 4:38 PM	1210991-002A	10/30/12 1:18 PM	10/31/12	10/31/12 5:08 PM
1210991-003A	10/30/12 1:21 PM	11/01/12	11/01/12 5:51 PM	1210991-004A	10/30/12 1:28 PM	10/31/12	10/31/12 6:08 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

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QA/QC Officer

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Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001 223; Soberi- 1230 14th St.	Date Sampled: 12/14/12
		Date Received: 12/14/12
	Client Contact: Tina De La Fuente	Date Reported: 12/21/12
	Client P.O.:	Date Completed: 12/20/12

WorkOrder: 1212406

December 21, 2012

Dear Tina:

Enclosed within are:

1) The results of the **10** analyzed samples from your project: **#1150.001 223; Soberi- 1230 14th St.,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

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121406

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY ☒

GeoTracker EDF ☒ PDF ☒ EDD ☐ Write On (DW) ☐ EQuIS ☐ 10 DAY ☐

Effluent Sample Requiring "J" flag ☐ UST Clean Up Fund Project ☐: Claim #_____

Report To: Tina de la Fuente Bill To: Pangea
Company: Pangea Environmental Services
1710 Franklin St., Ste 200
Oakland, CA
E-Mail: tdelafuente@pangeaenv.com
Tele: (510) 836-3702 Fax: (510) 836-3709
Project #: 1150.001.233 Project Name: Saberi - 1230 14th St.
Project Location: 1230 14th St., Oakland, CA Purchase Order#
Sampler Signature: Muskan Environmental Sampling

SAMPLE ID	Location/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	MATRIX: Ground Water	Waste Water	Drinking Water	Sea \ Water	Soil	Air	Sludge	Other	METHOD PRESERVED: HCL	HNO_3	Other
MW-1		12/14/12	12:00	4	X								X		
MW-5R			12:28	4											
MW-6			10:20	6											
MW-7			10:50	3											
VW/MW-2			11:13	3											
VW/MW-4			11:33	4											
DP-1			12:35	3											
DP-2			12:40	3											
DP-4			12:45	3											
DP-5			12:50	6											

Analysis Request

BTEX & TPH as Gas (8021/ 8015 or 8260) / MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	MTBE / BTEX ONLY (EPA 8260/ 8021)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Metals (200.7 / 200.8 / 6010 / 6020)	Filter sample for DISSOLVED metals analysis				
X																CTAS by SM5540BD	2-Propanol by 8260		
X																X	X		
X																X	X		
																X			
X																X	X		

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

Relinquished By:	Date:	Time:	Received By:
	12/14/12	1355	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 6.6
GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

COMMENTS:

VOAS O&G METALS OTHER HAZARDOUS:
PRESERVATION_____ pH<2_____

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1212406 **ClientCode: PEO**

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Tina De La Fuente
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: tdelafuente@pangeaenv.com
cc:
PO:
ProjectNo: #1150.001 223; Soberi- 1230 14th St.

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **12/14/2012**
Date Printed: **12/17/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1212406-001	MW-1	Water	12/14/2012 12:00	☐		B	A	A								
1212406-002	MW-5R	Water	12/14/2012 12:28	☐		B	A									
1212406-003	MW-6	Water	12/14/2012 10:20	☐	C	B	A									
1212406-004	MW-7	Water	12/14/2012 10:50	☐			A									
1212406-005	VW / MW-2	Water	12/14/2012 11:13	☐			A									
1212406-006	VW / MW-4	Water	12/14/2012 11:33	☐		B	A									
1212406-007	DP-1	Water	12/14/2012 12:35	☐			A									
1212406-008	DP-2	Water	12/14/2012 12:40	☐			A									
1212406-009	DP-4	Water	12/14/2012 12:45	☐			A									
1212406-010	DP-5	Water	12/14/2012 12:50	☐	C	B	A									

Test Legend:

1	8260VOC_W	2	CTAS_W	3	G-MBTEX_W	4	PREDF REPORT	5	
6		7		8		9		10	
11		12							

Prepared by: Rosa Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **12/14/2012 4:10:09 PM**

Project Name: **#1150.001 223; Soberi- 1230 14th St.**
LogIn Reviewed by: Rosa Venegas

WorkOrder N°: **1212406** Matrix: Water
Carrier: Client Drop-In

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 6.6°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Comments:

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Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001 223; Soberi- 1230 14th St.	Date Sampled: 12/14/12
		Date Received: 12/14/12
1710 Franklin Street, Ste. 200	Client Contact: Tina De La Fuente	Date Extracted 12/19/12
Oakland, CA 94612	Client P.O.:	Date Analyzed 12/19/12

Volatile Organics by P&T and GC/MS*

Extraction method: SW5030B Analytical methods: SW8260B Work Order: 1212406

Lab ID	Client ID	Matrix	2-Propanol	DF	% SS	Comments
003C	MW-6	W	ND	1	92	
010C	DP-5	W	ND	1	85	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.

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Angela Rydelius, Lab Manager

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Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001 223; Soberi- 1230 14th St.	Date Sampled: 12/14/12
		Date Received: 12/14/12
1710 Franklin Street, Ste. 200	Client Contact: Tina De La Fuente	Date Extracted: 12/14/12
Oakland, CA 94612	Client P.O.:	Date Analyzed: 12/17/12

CTAS (Cobalt Thiocyanate Active Subtances)/Non-ionic Surfactants

Analytical Method: SM5540D | Work Order: 1212406

Lab ID	Client ID	Matrix	CTAS	DF	Comments
1212406-001B	MW-1	W	ND	1	b1
1212406-002B	MW-5R	W	ND	1	
1212406-003B	MW-6	W	ND	1	
1212406-006B	VW / MW-4	W	1.8	1	b1
1212406-010B	DP-5	W	ND	1	

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	0.1 mg/L	
	S	NA	

*water samples are reported in mg/L.

b1) aqueous sample that contains greater than ~1 vol. % sediment

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Angela Rydelius, Lab Manager

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Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001 223; Soberi- 1230 14th St.	Date Sampled: 12/14/12
		Date Received: 12/14/12
1710 Franklin Street, Ste. 200	Client Contact: Tina De La Fuente	Date Extracted: 12/15/12-12/19/12
Oakland, CA 94612	Client P.O.:	Date Analyzed: 12/15/12-12/19/12

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1212406

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	MW-1	W	ND	ND	0.53	ND	0.55	1.0	1	100	b1
002A	MW-5R	W	4100	ND<50	360	120	150	390	10	115	d1
003A	MW-6	W	ND	ND	ND	ND	ND	ND	1	108	
004A	MW-7	W	ND	ND	ND	ND	ND	ND	1	107	
005A	VW / MW-2	W	110	ND	ND	2.1	ND	0.96	1	116	d9,b1
006A	VW / MW-4	W	2200	ND<25	33	23	0.62	190	1	---#	d1,b1
007A	DP-1	W	ND	ND	ND	ND	ND	ND	1	103	
008A	DP-2	W	ND	ND	ND	ND	ND	ND	1	103	
009A	DP-4	W	ND	ND	ND	ND	ND	ND	1	104	
010A	DP-5	W	2100	ND<50	17	42	25	340	10	108	d1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference. %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
b1) aqueous sample that contains greater than ~1 vol. % sediment
d1) weakly modified or unmodified gasoline is significant
d9) no recognizable pattern

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 73336 | WorkOrder: 1212406

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1212406-003A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	109	108	0.318	107	70 - 130	20	80 - 120
MTBE	ND	10	91.9	95.6	3.97	90.3	70 - 130	20	80 - 120
Benzene	ND	10	102	105	2.05	104	70 - 130	20	80 - 120
Toluene	ND	10	105	106	1.17	105	70 - 130	20	80 - 120
Ethylbenzene	ND	10	105	106	0.627	105	70 - 130	20	80 - 120
Xylenes	ND	30	105	106	0.713	105	70 - 130	20	80 - 120
%SS:	108	10	100	100	0	101	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 73336 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212406-001A	12/14/12 12:00 PM	12/17/12	12/17/12 9:19 PM	1212406-002A	12/14/12 12:28 PM	12/17/12	12/17/12 10:48 PM
1212406-003A	12/14/12 10:20 AM	12/15/12	12/15/12 3:12 PM	1212406-004A	12/14/12 10:50 AM	12/15/12	12/15/12 6:46 PM
1212406-005A	12/14/12 11:13 AM	12/17/12	12/17/12 9:49 PM	1212406-006A	12/14/12 11:33 AM	12/19/12	12/19/12 2:48 AM
1212406-007A	12/14/12 12:35 PM	12/15/12	12/15/12 8:15 PM	1212406-008A	12/14/12 12:40 PM	12/15/12	12/15/12 9:45 PM
1212406-009A	12/14/12 12:45 PM	12/15/12	12/15/12 10:14 PM	1212406-010A	12/14/12 12:50 PM	12/17/12	12/17/12 11:48 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

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QA/QC Officer

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 73452 | WorkOrder: 1212406

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1212495-002B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	10	76	79.4	4.35	90.9	70 - 130	20	70 - 130
Benzene	ND	10	83.4	82.7	0.903	91.8	70 - 130	20	70 - 130
t-Butyl alcohol (TBA)	ND	40	77.5	85.5	9.85	90.6	70 - 130	20	70 - 130
Chlorobenzene	ND	10	85.7	86.2	0.648	96.6	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	86.2	91.9	6.41	110	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	78.1	80.1	2.51	90.6	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	97.5	96.5	0.991	104	70 - 130	20	70 - 130
Diisopropyl ether (DIPE)	ND	10	77.5	77.9	0.541	89.8	70 - 130	20	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	80.4	82.6	2.77	95	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	81.2	82.1	1.01	94.8	70 - 130	20	70 - 130
Toluene	ND	10	83.3	82.6	0.778	94.9	70 - 130	20	70 - 130
Trichloroethene	ND	10	88.9	89.3	0.423	98	70 - 130	20	70 - 130
%SS1:	95	25	99	98	0.574	99	70 - 130	20	70 - 130
%SS2:	96	25	95	95	0	98	70 - 130	20	70 - 130
%SS3:	82	2.5	79	84	6.03	89	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 73452 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212406-003C	12/14/12 10:20 AM	12/19/12	12/19/12 9:54 PM	1212406-010C	12/14/12 12:50 PM	12/19/12	12/19/12 10:34 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SM5540D

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 73290 | WorkOrder: 1212406

EPA Method: SM5540D **Extraction: SM5540D** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
CTAS	N/A	1	N/A	N/A	N/A	86.8	N/A	N/A	85 - 115

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 73290 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212406-001B	12/14/12 12:00 PM	12/14/12	12/17/12 9:34 AM	1212406-002B	12/14/12 12:28 PM	12/14/12	12/17/12 9:40 AM
1212406-003B	12/14/12 10:20 AM	12/14/12	12/17/12 9:46 AM	1212406-006B	12/14/12 11:33 AM	12/14/12	12/17/12 9:52 AM
1212406-010B	12/14/12 12:50 PM	12/14/12	12/17/12 9:58 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID:	Date Sampled: 08/31/12
		Date Received: 09/04/12
	Client Contact: Tina De La Fuente	Date Reported: 09/11/12
	Client P.O.:	Date Completed: 09/11/12

WorkOrder: 1209019

January 08, 2013

Dear Tina:

Enclosed within are:

1) The results of the **1** analyzed sample from your project: **,**
2) QC data for the above sample, and
3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

120919

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) (No) Write On (DW) No

Report To: Tina de la Fuente	Bill To: Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612	
	E-Mail: tdelafuente@pangeaenv.com
Tele: (510) 836-3700	Fax: (510) 836-3709
Project #: [redacted]	Project Name: [redacted]
Project Location: [redacted]	
Sampler Signature:	

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED ICE	HCL	HNO_3	Other	TPHg (8015Cm)	BTEX/MTBE (8260B)	7 Oxygenates (8260B)	CTAS - NON-Ionic Surfactants	HHC - Alcohol, methanol, ethanol, isopropanol by 8260	Other	Comments
+1 BOC		8/31/12	1415	2	poly Amber					X	X							X	X		Filter Samples for Metals analysis: Yes / No

Relinquished By:	Date: 9/4/12	Time: 1521	Received By:
Relinquished By:	Date: 9/4/12	Time: 1500	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 4.8 COMMENTS:
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB

VOAS O&G METALS OTHER
PRESERVATION pH<2

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1209019 **ClientCode: PEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Tina De La Fuente
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: tdelafuente@pangeaenv.com
cc:
PO:
ProjectNo:

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **09/04/2012**
Date Printed: **01/08/2013**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12
1209019-001	BOC	Water	8/31/2012 14:15	☐	B	A										

Test Legend:

1	8260VOC_W	2	CTAS_W	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Zoraida Cortez

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.** Date and Time Received: **9/4/2012 5:13:12 PM**

Project Name: LogIn Reviewed by: Zoraida Cortez

WorkOrder N°: **1209019** Matrix: Water Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☐	No ☑	
Container/Temp Blank temperature	Cooler Temp: 4.8°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Comments: CTAS received out of hold time.

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID:	Date Sampled: 08/31/12
		Date Received: 09/04/12
	Client Contact: Tina De La Fuente	Date Extracted: 09/11/12
	Client P.O.:	Date Analyzed: 09/11/12

Volatile Organics by P&T and GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1209019

					Reporting Limit for DF =1	
Lab ID	1209019-001B					
Client ID	BOC					
Matrix	W					
DF	100				S	W
Compound	**Concentration**				ug/kg	µg/L
Ethanol	250,000				NA	50
Methanol	ND<50,000				NA	500
2-Propanol	940,000				NA	50
Surrogate Recoveries (%)						
%SS1:	108					
%SS2:	102					
Comments	b1					

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.

b1) aqueous sample that contains greater than ~1 vol. % sediment

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Pangea Environmental Svcs., Inc.	Client Project ID:	Date Sampled: 08/31/12
		Date Received: 09/04/12
1710 Franklin Street, Ste. 200	Client Contact: Tina De La Fuente	Date Extracted: 09/05/12
Oakland, CA 94612	Client P.O.:	Date Analyzed: 09/06/12

CTAS (Cobalt Thiocyanate Active Subtances)/Non-ionic Surfactants

Analytical Method: SM5540D | Work Order: 1209019

Lab ID	Client ID	Matrix	CTAS	DF	Comments
1209019-001A	BOC	W	56,000	1	b1

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	0.1 mg/L	
	S	NA	

*water samples are reported in mg/L.

b1) aqueous sample that contains greater than ~1 vol. % sediment

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 70641 | WorkOrder: 1209019

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1209192-001B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	10	97.6	92.4	5.44	100	70 - 130	20	70 - 130
Benzene	ND	10	91	88.4	2.81	98.1	70 - 130	20	76 - 106
t-Butyl alcohol (TBA)	ND	40	89.1	96.1	7.47	90.8	70 - 130	20	70 - 130
Chlorobenzene	ND	10	88.4	86.4	2.32	96.5	70 - 130	20	79 - 105
1,2-Dibromoethane (EDB)	ND	10	96.8	95.7	1.07	101	70 - 130	20	76 - 116
1,2-Dichloroethane (1,2-DCA)	ND	10	91.3	89.5	1.91	97.3	70 - 130	20	69 - 111
1,1-Dichloroethene	ND	10	90.6	87	3.98	98.4	70 - 130	20	70 - 104
Diisopropyl ether (DIPE)	ND	10	92.1	89.4	2.93	99.2	70 - 130	20	79 - 111
Ethyl tert-butyl ether (ETBE)	ND	10	93.7	91.6	2.26	101	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	91.5	89.5	2.04	98.6	70 - 130	20	70 - 130
Toluene	ND	10	86.6	83.3	3.88	95.7	70 - 130	20	70 - 130
Trichloroethene	ND	10	92	91.1	1.01	100	70 - 130	20	70 - 130
%SS1:	106	25	109	108	0.504	108	70 - 130	20	70 - 130
%SS2:	100	25	101	99	1.87	101	70 - 130	20	70 - 130
%SS3:	107	2.5	106	106	0	101	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 70641 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1209019-001B	08/31/12 2:15 PM	09/11/12	09/11/12 1:33 PM	1209019-001B	08/31/12 2:15 PM	09/11/12	09/11/12 2:51 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
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QC SUMMARY REPORT FOR SM5540D

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 70422 | WorkOrder: 1209019

EPA Method: SM5540D **Extraction: SM5540D** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
CTAS	N/A	1	N/A	N/A	N/A	95.2	N/A	N/A	85 - 115

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 70422 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1209019-001A	08/31/12 2:15 PM	09/05/12	09/06/12 2:49 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th St.	Date Sampled: 10/15/12
		Date Received: 10/16/12
	Client Contact: Morgan Gillies	Date Reported: 10/22/12
	Client P.O.:	Date Completed: 10/19/12

WorkOrder: 1210459

October 22, 2012

Dear Morgan:

Enclosed within are:

1) The results of the **2** analyzed samples from your project: **#1150.001; 1230 14th St.,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

12.10459

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565
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CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Morgan Gillies	Bill To: Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612 Spaceton	
	E-Mail: ~~mgillies~~@pangeaenv.com
Tele: (510) 836-3702	Fax: (510) 836-3709
Project #: 1150.001	Project Name: 1230 14th St
Project Location: 1230 14th St., Oakland	
Sampler Signature:	

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	Analysis Request: 5 Oxygenates (8260)	Other	Comments
✓ Influent		10/5/12	1135	5	VOA	X					X	X			X	X		
+ Inf 1, 2		↓	1344	↓	↓	↓					↓	↓			↓	↓		

Relinquished By:	Date: 10/5/12	Time: 1408	Received By:
Relinquished By:	Date: 10/8/12	Time: 1400	Received By: 10/16/12 1400
Relinquished By:	Date:	Time:	Received By:

ICE/t° 32
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB

COMMENTS:

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1210459 **ClientCode: PEO**

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Morgan Gillies
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: mgillies@pangeaenv.com
cc:
PO:
ProjectNo: #1150.001; 1230 14th St.

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **10/16/2012**
Date Printed: **10/16/2012**

					Requested Tests (See legend below)											
Lab ID	**Client ID**	**Matrix**	**Collection Date**	**Hold**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1210459-001	Influent	Water	10/15/2012 11:35	☐	B	A	A									
1210459-002	Inf 1,2	Water	10/15/2012 13:44	☐	B	A										

Test Legend:

1	5-OXYS_W	2	G-MBTEX_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12							

Prepared by: Gabrielle Walker

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **10/16/2012 3:03:03 PM**

Project Name: **#1150.001; 1230 14th St.**
LogIn Reviewed by: Gabrielle Walker

WorkOrder N°: **1210459** Matrix: Water
Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 3.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Comments:

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th St. Client Contact: Morgan Gillies Client P.O.:	Date Sampled: 10/15/12 Date Received: 10/16/12 Date Extracted: 10/17/12-10/18/12 Date Analyzed: 10/17/12-10/18/12

Oxygenated Volatile Organics by P&T and GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1210459

Lab ID	1210459-001B	1210459-002B			Reporting Limit for DF =1	
Client ID	Influent	Inf 1,2				
Matrix	W	W				
DF	1	1			S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND			NA	0.5
t-Butyl alcohol (TBA)	ND	ND			NA	2.0
Diisopropyl ether (DIPE)	ND	ND			NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND			NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND			NA	0.5
Surrogate Recoveries (%)						
%SS1:	100	100				
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; 1230 14th St.	Date Sampled: 10/15/12
		Date Received: 10/16/12
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 10/18/12
Oakland, CA 94612	Client P.O.:	Date Analyzed: 10/18/12

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1210459

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	Influent	W	230	ND	1.0	5.5	0.95	49	1	102	d2
002A	Inf 1,2	W	110	ND	ND	ND	ND	4.1	1	101	d2

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference. %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
d2) heavier gasoline range compounds are significant (aged gasoline?)

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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http://www.mccampbell.com / E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 71713 | WorkOrder: 1210459

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1210369-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	10	102	99	2.80	108	70 - 130	20	70 - 130
t-Butyl alcohol (TBA)	ND	40	88.6	92.2	4.07	99.4	70 - 130	20	70 - 130
Diisopropyl ether (DIPE)	ND	10	96.4	96.5	0.113	107	70 - 130	20	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	87.5	96.9	10.3	110	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	90	89.8	0.185	101	70 - 130	20	70 - 130
%SS1:	92	25	89	101	12.7	100	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 71713 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210459-001B	10/15/12 11:35 AM	10/17/12	10/17/12 9:51 PM	1210459-002B	10/15/12 1:44 PM	10/18/12	10/18/12 2:03 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 71741 | WorkOrder: 1210459

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1210519-001B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	99.6	108	7.85	97.9	70 - 130	20	80 - 120
MTBE	ND	10	93.2	105	12.1	85.6	70 - 130	20	80 - 120
Benzene	ND	10	99.2	106	6.52	95.8	70 - 130	20	80 - 120
Toluene	ND	10	100	108	7.65	93.7	70 - 130	20	80 - 120
Ethylbenzene	ND	10	101	109	7.31	97.2	70 - 130	20	80 - 120
Xylenes	ND	30	100	109	7.78	97.5	70 - 130	20	80 - 120
%SS:	106	10	104	102	1.90	102	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 71741 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210459-001A	10/15/12 11:35 AM	10/18/12	10/18/12 6:52 PM	1210459-002A	10/15/12 1:44 PM	10/18/12	10/18/12 7:53 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

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Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th St	Date Sampled: 10/17/12
		Date Received: 10/17/12
	Client Contact: Morgan Gillies	Date Reported: 10/22/12
	Client P.O.:	Date Completed: 10/22/12

WorkOrder: 1210526

October 22, 2012

Dear Morgan:

Enclosed within are:

1) The results of the **2** analyzed samples from your project: **#1150.001; 1230 14th St,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1210526

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Morgan Gillies Bill To: Pangea

Company: Pangea Environmental Services, Inc.

1710 Franklin Street, Suite 200, Oakland, CA 94612 Spolstan

E-Mail: ~~mgillies~~@pangeaenv.com

Tele: (510) 836-3702 Fax: (510) 836-3709

Project #: 1150.001 Project Name: 1230 14th St

Project Location: 1230 14th St., Oakland

Sampler Signature:

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	Analysis Request: 5 Oxygenates (8260)	Other	Comments
+ INF-1,2	INF	10/10/12	0818	3	✓	X					X	X			X	X		Filter Samples for Metals analysis: Yes / No
+ Influent	INF	↓	0920	3	↓	X					X	X			X	X		

Relinquished By:	Date:	Time:	Received By:
Scott Polstan	10/17/12	1340	
Relinquished By:	Date:	Time:	Received By:
	10/17/12	1430	Gabriela Valadez 1430 10/17/12
Relinquished By:	Date:	Time:	Received By:

ICE/t° 3.3°C COMMENTS:
GOOD CONDITION ✓
HEAD SPACE ABSENT NO
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1210526 **ClientCode: PEO**

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Morgan Gillies
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: mgillies@pangeaenv.com,tdelafuente@pa
cc: spocston@pangeaenv.com
PO:
ProjectNo: #1150.001; 1230 14th St

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **10/17/2012**
Date Printed: **10/23/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1210526-001	Inf-1,2	Water	10/17/2012 8:10	☐	B	A	A									
1210526-002	Influent	Water	10/17/2012 9:20	☐	B	A										

Test Legend:

1	5-OXYS_W	2	G-MBTEX_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12							

Prepared by: Gabrielle Walker

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **10/17/2012 8:54:55 PM**

Project Name: **#1150.001; 1230 14th St**
LogIn Reviewed by: Gabrielle Walker

WorkOrder N°: **1210526** Matrix: Water
Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 3.3°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☑	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Comments:

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th St	Date Sampled: 10/17/12
		Date Received: 10/17/12
	Client Contact: Morgan Gillies	Date Extracted: 10/19/12
	Client P.O.:	Date Analyzed: 10/19/12

Oxygenated Volatile Organics by P&T and GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1210526

Lab ID	1210526-001B	1210526-002B			Reporting Limit for DF =1	
Client ID	Inf-1,2	Influent				
Matrix	W	W				
DF	1	2			S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND<1.0			NA	0.5
t-Butyl alcohol (TBA)	ND	5.1			NA	2.0
Diisopropyl ether (DIPE)	ND	ND<1.0			NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND<1.0			NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND<1.0			NA	0.5
Surrogate Recoveries (%)						
%SS1:	111	110				
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; 1230 14th St	Date Sampled: 10/17/12
		Date Received: 10/17/12
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 10/19/12
Oakland, CA 94612	Client P.O.:	Date Analyzed: 10/19/12

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1210526

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	Inf-1,2	W	300	ND	0.55	ND	1.3	57	1	105	d2
002A	Influent	W	2000	ND	4.2	36	12	290	1	---#	d2,d9

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference. %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
d2) heavier gasoline range compounds are significant (aged gasoline?)
d9) no recognizable pattern

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Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 71758 | WorkOrder: 1210526

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1210519-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	10	85.6	89	3.90	103	70 - 130	20	70 - 130
t-Butyl alcohol (TBA)	ND	40	94.4	91.3	3.29	102	70 - 130	20	70 - 130
Diisopropyl ether (DIPE)	ND	10	85.2	90.6	6.11	110	70 - 130	20	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	87.2	90.9	4.11	107	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	89.7	91.6	2.17	107	70 - 130	20	70 - 130
%SS1:	111	25	107	105	2.08	108	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 71758 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210526-001B	10/17/12 8:10 AM	10/19/12	10/19/12 1:38 AM	1210526-002B	10/17/12 9:20 AM	10/19/12	10/19/12 5:23 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 71741 | WorkOrder: 1210526

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1210519-001B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	99.6	108	7.85	97.9	70 - 130	20	80 - 120
MTBE	ND	10	93.2	105	12.1	85.6	70 - 130	20	80 - 120
Benzene	ND	10	99.2	106	6.52	95.8	70 - 130	20	80 - 120
Toluene	ND	10	100	108	7.65	93.7	70 - 130	20	80 - 120
Ethylbenzene	ND	10	101	109	7.31	97.2	70 - 130	20	80 - 120
Xylenes	ND	30	100	109	7.78	97.5	70 - 130	20	80 - 120
%SS:	106	10	104	102	1.90	102	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 71741 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210526-001A	10/17/12 8:10 AM	10/19/12	10/19/12 7:20 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 71787 | WorkOrder: 1210526

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1210593-012B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND<400	60	NR	NR	NR	107	N/A	N/A	80 - 120
MTBE	ND<50	10	NR	NR	NR	88.2	N/A	N/A	80 - 120
Benzene	ND<5	10	NR	NR	NR	102	N/A	N/A	80 - 120
Toluene	10	10	NR	NR	NR	108	N/A	N/A	80 - 120
Ethylbenzene	14	10	NR	NR	NR	105	N/A	N/A	80 - 120
Xylenes	44	30	NR	NR	NR	108	N/A	N/A	80 - 120
%SS:	93	10	NR	NR	NR	92	N/A	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 71787 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210526-002A	10/17/12 9:20 AM	10/19/12	10/19/12 9:08 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th Street	Date Sampled: 10/18/12
		Date Received: 10/18/12
	Client Contact: Morgan Gillies	Date Reported: 10/23/12
	Client P.O.:	Date Completed: 10/19/12

WorkOrder: 1210548

October 25, 2012

Dear Morgan:

Enclosed within are:

1) The results of the **1** analyzed sample from your project: **#1150.001; 1230 14th Street,**
2) QC data for the above sample, and
3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

1210548

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Morgan Gillies	**Bill To:** Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612 Spolstead	
	E-Mail: ~~mgillies~~@pangeaenv.com
Tele: (510) 836-3702	Fax: (510) 836-3709
Project #: 1150.001	Project Name: 1230 14th St
Project Location: 1230 14th St., Oakland	
Sampler Signature:	

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	Analysis Request: 5 Oxygenates (8260)	Other	Comments
Effluent	Effluent	10/12/12	0951	1	~~Vial~~			X						X	X	X		
					Bag			1										

Filter Samples for Metals analysis: Yes / No

Relinquished By:	Date:	Time:	Received By:
	10/12/12	1333	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° _____ COMMENTS:
GOOD CONDITION _____
HEAD SPACE ABSENT _____
DECHLORINATED IN LAB _____
APPROPRIATE CONTAINERS _____
PRESERVED IN LAB _____

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1210548 **ClientCode: PEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Morgan Gillies
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: mgillies@pangeaenv.com,tdelafuente@pa
cc: spolston@pangeaenv.com
PO:
ProjectNo: #1150.001; 1230 14th Street

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **10/18/2012**
Date Printed: **10/18/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1210548-001	Influent	Air	10/18/2012 9:51	☐	A	A										

Test Legend:

1	5-OXYS_A	2	G-MBTEX_AIR	3		4		5	
6		7		8		9		10	
11		12							

The following SampID: 001A contains testgroup.

Prepared by: Zoraida Cortez

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **10/18/2012 1:43:55 PM**

Project Name: **#1150.001; 1230 14th Street**
LogIn Reviewed by: Zoraida Cortez

WorkOrder N°: **1210548** Matrix: Air
Carrier: Client Drop-In

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☐	No ☑

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp:		NA ☑
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☐	No ☑	

** NOTE: If the "No" box is checked, see comments below.*

Comments:

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th Street	Date Sampled: 10/18/12
		Date Received: 10/18/12
	Client Contact: Morgan Gillies	Date Extracted: 10/18/12
	Client P.O.:	Date Analyzed: 10/18/12

Oxygenated Volatile Organics by P&T and GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1210548

Lab ID	1210548-001A				Reporting Limit for DF =1	
Client ID	Influent					
Matrix	A					
DF	1				S	A
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND				NA	0.25
t-Butyl alcohol (TBA)	ND				NA	2.5
Diisopropyl ether (DIPE)	ND				NA	0.25
Ethyl tert-butyl ether (ETBE)	ND				NA	0.25
Methyl-t-butyl ether (MTBE)	ND				NA	0.25
Surrogate Recoveries (%)						
%SS1:	94					
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th Street	Date Sampled: 10/18/12
		Date Received: 10/18/12
	Client Contact: Morgan Gillies	Date Extracted: 10/18/12
	Client P.O.:	Date Analyzed: 10/18/12

Oxygenated Volatile Organics by GC/MS (µl/L)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1210548

Lab ID	1210548-001A				Reporting Limit for DF =1	
Client ID	Influent					
Matrix	A					
DF	1				S	A
Compound	**Concentration**				ug/kg	uL/L
tert-Amyl methyl ether (TAME)	ND				NA	0.059
t-Butyl alcohol (TBA)	ND				NA	0.81
Diisopropyl ether (DIPE)	ND				NA	0.059
Ethyl tert-butyl ether (ETBE)	ND				NA	0.059
Methyl-t-butyl ether (MTBE)	ND				NA	0.068
Surrogate Recoveries (%)						
%SS1:	94					
Comments						

* vapor samples are reported in µL/L, water samples in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

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Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; 1230 14th Street	Date Sampled: 10/18/12
		Date Received: 10/18/12
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 10/19/12
Oakland, CA 94612	Client P.O.:	Date Analyzed: 10/19/12

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1210548

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	Influent	A	820	ND<5.0	3.7	17	1.0	35	2	---#	d1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	25	2.5	0.25	0.25	0.25	0.25	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
d1) weakly modified or unmodified gasoline is significant

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th Street	Date Sampled: 10/18/12
		Date Received: 10/18/12
	Client Contact: Morgan Gillies	Date Extracted: 10/19/12
	Client P.O.:	Date Analyzed: 10/19/12

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with MTBE and BTEX in ppmv*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1210548

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	Influent	A	230	ND<1.4	1.1	4.5	0.23	7.9	2	---#	d1

ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* vapor samples are reported in µL/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L, water samples and all TCLP & SPLP extracts are reported in µg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
d1) weakly modified or unmodified gasoline is significant

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Air | QC Matrix: Water | BatchID: 71843 | WorkOrder: 1210548

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	N/A	10	N/A	N/A	N/A	103	N/A	N/A	70 - 130
t-Butyl alcohol (TBA)	N/A	40	N/A	N/A	N/A	93.4	N/A	N/A	70 - 130
Diisopropyl ether (DIPE)	N/A	10	N/A	N/A	N/A	99	N/A	N/A	70 - 130
Ethyl tert-butyl ether (ETBE)	N/A	10	N/A	N/A	N/A	105	N/A	N/A	70 - 130
Methyl-t-butyl ether (MTBE)	N/A	10	N/A	N/A	N/A	102	N/A	N/A	70 - 130
%SS1:	N/A	25	N/A	N/A	N/A	110	N/A	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 71843 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210548-001A	10/18/12 9:51 AM	10/18/12	10/18/12 3:21 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air | QC Matrix: Water | BatchID: 71741 | WorkOrder: 1210548

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1210519-001B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	99.6	108	7.85	97.9	70 - 130	20	80 - 120
MTBE	ND	10	93.2	105	12.1	85.6	70 - 130	20	80 - 120
Benzene	ND	10	99.2	106	6.52	95.8	70 - 130	20	80 - 120
Toluene	ND	10	100	108	7.65	93.7	70 - 130	20	80 - 120
Ethylbenzene	ND	10	101	109	7.31	97.2	70 - 130	20	80 - 120
Xylenes	ND	30	100	109	7.78	97.5	70 - 130	20	80 - 120
%SS:	106	10	104	102	1.90	102	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 71741 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210548-001A	10/18/12 9:51 AM	10/19/12	10/19/12 4:51 AM	1210548-001A	10/18/12 9:51 AM	10/19/12	10/19/12 4:51 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th St.	Date Sampled: 10/18/12-10/19/12
		Date Received: 10/19/12
	Client Contact: Morgan Gillies	Date Reported: 10/25/12
	Client P.O.:	Date Completed: 11/19/12

WorkOrder: 1210631

November 19, 2012

Dear Morgan:

Enclosed within are:

1) The results of the **3** analyzed samples from your project: **#1150.001; 1230 14th St.,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1210631

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Morgan Gillies	Bill To: Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612 sploston	
E-Mail: ~~mgillies~~@pangeaenv.com	
Tele: (510) 836-3702	Fax: (510) 836-3709
Project #: 1150.001	Project Name: 1230 14th St
Project Location: 1230 14th St., Oakland	
Sampler Signature:	

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	Analysis Request: 5 Oxygenates (8260)	Other	Comments
✓ INF-W	INF	10/18/12	1601	3	V	X					X	X			X	X		Filter Samples for Metals analysis: Yes / No
✓ INF-W	INF	10/19/12	1111	3	V	X					X	X			X	X		

Relinquished By:	Date: 10/19/12	Time: 1438	Received By:
Relinquished By:	Date: 10/19/12	Time: 1545	Received By: Gabriella Walker 10/19/12 1545
Relinquished By:	Date:	Time:	Received By:

ICE/t° 2°C COMMENTS:
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1210631 **ClientCode: PEO**

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Morgan Gillies
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: mgillies@pangeaenv.com,tdelafuente@pa
cc: spolston@pangeaenv.com
PO:
ProjectNo: #1150.001; 1230 14th St.

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **10/19/2012**
Date Printed: **11/01/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1210631-001	Inf-W (10/18)	Water	10/18/2012 16:01	☐			A	A								
1210631-001	Inf-W (10/19)	Water	10/19/2012 11:11	☐		B										
1210631-002	Inf-W (10/18)	Water	10/18/2012 16:01	☐	A											
1210631-003	Inf-W (10/19)	Water	10/19/2012 11:11	☐			A									

Test Legend:

1	5-OXYS_W	2	8260B_W	3	G-MBTEX_W	4	PREDF REPORT	5	
6		7		8		9		10	
11		12							

Prepared by: Gabrielle Walker

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **10/19/2012 7:12:47 PM**

Project Name: **#1150.001; 1230 14th St.**
LogIn Reviewed by: Gabrielle Walker

WorkOrder N°: **1210631** Matrix: Water
Carrier: Benjamin Yslas (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 0.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Comments:

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th St. Client Contact: Morgan Gillies Client P.O.:	Date Sampled: 10/18/12-10/19/12 Date Received: 10/19/12 Date Extracted: 10/24/12-11/01/12 Date Analyzed: 10/24/12-11/01/12

Oxygenated Volatile Organics by P&T and GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1210631

Lab ID	1210631-001B	1210631-002A			Reporting Limit for DF =1	
Client ID	Inf-W (10/19)	Inf-W (10/18)				
Matrix	W	W				
DF	1	1			S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND			NA	0.5
t-Butyl alcohol (TBA)	ND	5.3			NA	2.0
Diisopropyl ether (DIPE)	ND	ND			NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND			NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND			NA	0.5
Surrogate Recoveries (%)						
%SS1:	115	89				
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; 1230 14th St.	Date Sampled: 10/18/12-10/19/12
		Date Received: 10/19/12
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 10/22/12-11/01/12
Oakland, CA 94612	Client P.O.:	Date Analyzed: 10/22/12-11/01/12

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1210631

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	Inf-W (10/18)	W	130	ND	ND	ND	ND	3.1	1	90	d2
003A	Inf-W (10/19)	W	130	ND	ND	1.8	ND	18	1	94	d2

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference. %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
d2) heavier gasoline range compounds are significant (aged gasoline?)

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 71892 | WorkOrder: 1210631

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1210704-005A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	10	101	98.2	2.51	98.1	70 - 130	20	70 - 130
t-Butyl alcohol (TBA)	ND	40	116	111	4.34	109	70 - 130	20	70 - 130
Diisopropyl ether (DIPE)	ND	10	93.3	93.2	0.0900	93.9	70 - 130	20	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	102	102	0	103	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	106	106	0	106	70 - 130	20	70 - 130
%SS1:	111	25	112	114	1.03	118	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 71892 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210631-001B	10/19/12 11:11 AM	10/24/12	10/24/12 2:56 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 72128 | WorkOrder: 1210631

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1210991-001B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	10	100	99.6	0.723	107	70 - 130	20	70 - 130
t-Butyl alcohol (TBA)	ND	40	113	110	2.52	115	70 - 130	20	70 - 130
Diisopropyl ether (DIPE)	ND	10	93.3	93.9	0.568	103	70 - 130	20	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	100	100	0	107	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	103	102	0.861	109	70 - 130	20	70 - 130
%SS1:	91	25	88	87	0.894	86	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72128 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210631-002A	10/18/12 4:01 PM	11/01/12	11/01/12 12:38 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 71847 | WorkOrder: 1210631

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1210600-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	111	109	2.08	104	70 - 130	20	80 - 120
MTBE	ND	10	88.3	86.5	2.08	97.7	70 - 130	20	80 - 120
Benzene	ND	10	107	103	4.42	116	70 - 130	20	80 - 120
Toluene	ND	10	107	103	4.15	117	70 - 130	20	80 - 120
Ethylbenzene	ND	10	109	105	3.95	117	70 - 130	20	80 - 120
Xylenes	ND	30	111	107	4.07	113	70 - 130	20	80 - 120
%SS:	90	10	95	95	0	102	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 71847 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210631-001A	10/18/12 4:01 PM	10/22/12	10/22/12 7:03 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 72138 | WorkOrder: 1210631

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1210A07-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	107	100	6.68	103	70 - 130	20	80 - 120
MTBE	ND	10	94.1	92	2.21	105	70 - 130	20	80 - 120
Benzene	ND	10	105	101	4.15	119	70 - 130	20	80 - 120
Toluene	ND	10	106	102	4.03	118	70 - 130	20	80 - 120
Ethylbenzene	ND	10	107	102	4.81	116	70 - 130	20	80 - 120
Xylenes	ND	30	111	105	5.05	118	70 - 130	20	80 - 120
%SS:	89	10	96	98	1.87	107	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72138 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210631-003A	10/19/12 11:11 AM	11/01/12	11/01/12 1:19 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

DHS ELAP Certification 1644

QA/QC Officer

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Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; Saberi 1230 14th St.	Date Sampled: 11/12/12
		Date Received: 11/12/12
	Client Contact: Morgan Gillies	Date Reported: 11/15/12
	Client P.O.:	Date Completed: 11/14/12

WorkOrder: 1211329

November 15, 2012

Dear Morgan:

Enclosed within are:

1) The results of the **2** analyzed samples from your project: **#1150.001; Saberi 1230 14th St.,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1211329

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY
EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Morgan Gillies	Bill To: Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612	E-Mail: mgillies@pangeaenv.com
Tele: (510) 836-3702	Fax: (510) 836-3709
Project #: 1150.001	Project Name: Saberi 1230 14th St.
Project Location: 1230 14th Street, Oakland CA	
Sampler Signature:	

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED ICE	HCL	HNO_3	Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	Other	Comments
(+) INF-1,2	INF-W	11/12/12	0802	3	V	X					X	X			X		
+ INF-W	INF-W	↓	0951	↓	↓	↓					↓	↓			X		

Filter Samples for Metals analysis: Yes / No

Relinquished By:	Date: 11/12/12	Time: 1313	Received By:
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 13°C ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

PRESERVATION	VOAS	O&G	METALS	OTHER
	✓		pH<2	

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1211329 **ClientCode: PEO**

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Morgan Gillies
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: mgillies@pangeaenv.com,tdelafuente@pa
cc:
PO:
ProjectNo: #1150.001; Saberi 1230 14th St.

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **11/12/2012**
Date Printed: **11/12/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1211329-001	INF-1,2	Water	11/12/2012 8:02	☐	A	A										
1211329-002	INF-W	Water	11/12/2012 9:51	☐	A											

Test Legend:

1	G-MBTEX_W	2	PREDF REPORT	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **11/12/2012 1:21:27 PM**

Project Name: **#1150.001; Saberi 1230 14th St.**
LogIn Reviewed by: Melissa Valles

WorkOrder N°: **1211329** Matrix: Water
Carrier: Client Drop-In

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☐	No ☑

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 13.8°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Comments:

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; Saberi 1230 14th St.	Date Sampled: 11/12/12
		Date Received: 11/12/12
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 11/13/12
Oakland, CA 94612	Client P.O.:	Date Analyzed: 11/13/12

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1211329

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-1,2	W	410	ND	1.4	ND	1.9	59	1	101	d1
002A	INF-W	W	330	ND	2.5	6.4	0.88	37	1	104	d2

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference. %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
d1) weakly modified or unmodified gasoline is significant
d2) heavier gasoline range compounds are significant (aged gasoline?)

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 72432 | WorkOrder: 1211329

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1211329-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	64	60	NR	NR	NR	103	N/A	N/A	80 - 120
MTBE	ND	10	NR	NR	NR	90.8	N/A	N/A	80 - 120
Benzene	1.4	10	NR	NR	NR	98.6	N/A	N/A	80 - 120
Toluene	ND	10	NR	NR	NR	100	N/A	N/A	80 - 120
Ethylbenzene	1.9	10	NR	NR	NR	91.1	N/A	N/A	80 - 120
Xylenes	59	30	NR	NR	NR	89.4	N/A	N/A	80 - 120
%SS:	101	10	NR	NR	NR	102	N/A	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72432 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1211329-001A	11/12/12 8:02 AM	11/13/12	11/13/12 9:12 PM	1211329-002A	11/12/12 9:51 AM	11/13/12	11/13/12 11:39 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

DHS ELAP Certification 1644

QA/QC Officer

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"When Quality Counts"

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; Saberi 1230 14th St.	Date Sampled: 11/26/12
		Date Received: 11/26/12
	Client Contact: Morgan Gillies	Date Reported: 11/28/12
	Client P.O.:	Date Completed: 11/27/12

WorkOrder: 1211664

November 30, 2012

Dear Morgan:

Enclosed within are:

1) The results of the **1** analyzed sample from your project: **#1150.001; Saberi 1230 14th St.,**
2) QC data for the above sample, and
3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

PEO

12116064

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Morgan Gillies	Bill To: Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612	E-Mail: mgillies@pangeaenv.com
Tele: (510) 836-3702	Fax: (510) 836-3709
Project #: 1150.001	Project Name: Saberi 1230 14th St.
Project Location: 1230 14th Street, Oakland CA	
Sampler Signature:	

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED ICE	HCL	HNO_3	Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	Other	Comments
INF-V	INF-V	11/26/12	1047	1	Bag			X						X	X		Filter Samples for Metals analysis: Yes / No

Relinquished By:	Date: 11/26/12	Time: 1317	Received By:
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° n/a
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1211664 **ClientCode: PEO**

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Morgan Gillies
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: mgillies@pangeaenv.com; tdelafuente@pa
cc:
PO:
ProjectNo: #1150.001; Saberi 1230 14th St.

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **11/26/2012**
Date Printed: **11/26/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1211664-001	INF-V	Air	11/26/2012 10:47	☐	A	A										

Test Legend:

1	G-MBTEX_AIR	2	PREDF REPORT	3		4		5	
6		7		8		9		10	
11		12							

The following SampID: 001A contains testgroup.

Prepared by: Jena Alfaro

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **11/26/2012 1:53:48 PM**

Project Name: **#1150.001; Saberi 1230 14th St.**
LogIn Reviewed by: Jena Alfaro

WorkOrder N°: **1211664** Matrix: Air
Carrier: Client Drop-In

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp:		NA ☑
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☐	No ☑	

** NOTE: If the "No" box is checked, see comments below.*

Comments:

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Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; Saberi 1230 14th St.	Date Sampled: 11/26/12
		Date Received: 11/26/12
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 11/27/12
Oakland, CA 94612	Client P.O.:	Date Analyzed: 11/27/12

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1211664

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-V	A	250	ND	1.5	3.6	0.41	5.8	1	---#	d1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	25	2.5	0.25	0.25	0.25	0.25	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
d1) weakly modified or unmodified gasoline is significant

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; Saberi 1230 14th St.	Date Sampled: 11/26/12
		Date Received: 11/26/12
	Client Contact: Morgan Gillies	Date Extracted: 11/27/12
	Client P.O.:	Date Analyzed: 11/27/12

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with MTBE and BTEX in ppmv*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1211664

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-V	A	70	ND	0.48	0.95	0.093	1.3	1	---#	d1

ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* vapor samples are reported in µL/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L, water samples and all TCLP & SPLP extracts are reported in µg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
d1) weakly modified or unmodified gasoline is significant

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air | QC Matrix: Water | BatchID: 72706 | WorkOrder: 1211664

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1211645-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	109	108	0.202	102	70 - 130	20	80 - 120
MTBE	ND	10	93.1	95.5	2.56	99	70 - 130	20	80 - 120
Benzene	ND	10	103	105	1.98	108	70 - 130	20	80 - 120
Toluene	ND	10	103	104	0.855	112	70 - 130	20	80 - 120
Ethylbenzene	ND	10	104	102	2.02	108	70 - 130	20	80 - 120
Xylenes	ND	30	108	104	4.02	105	70 - 130	20	80 - 120
%SS:	88	10	87	92	5.85	94	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72706 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1211664-001A	11/26/12 10:47 AM	11/27/12	11/27/12 4:17 AM	1211664-001A	11/26/12 10:47 AM	11/27/12	11/27/12 4:17 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; Saberi 1230 14th St.	Date Sampled: 12/31/12
		Date Received: 01/02/13
	Client Contact: Morgan Gillies	Date Reported: 01/09/13
	Client P.O.:	Date Completed: 01/09/13

WorkOrder: 1301021

January 09, 2013

Dear Morgan:

Enclosed within are:

1) The results of the **2** analyzed samples from your project: **#1150.001; Saberi 1230 14th St.,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1301021

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY
EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Morgan Gillies	Bill To: Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612	E-Mail: mgillies@pangeaenv.com
Tele: (510) 836-3702	Fax: (510) 836-3709
Project #: 1150.001	Project Name: Saberi 1230 14th St.
Project Location: 1230 14th Street, Oakland CA	
Sampler Signature:	

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	Analysis Request: CTAS	Analysis Request: 2 Propanol	Other	Comments
VMP-1		12/31/12	0820	1	Bag			X						X	X				
INF-W		↓	1141	4	V/P	X					X					X	X		

	Date:	Time:	Received By:
Relinquished By:	12/31/12	1145	
Relinquished By:	1/2/13	1595	
Relinquished By:	Date:	Time:	Received By:

ICE/t° 3.8
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

VOAS O&G METALS OTHER
PRESERVATION pH<2

Filter Samples for Metals analysis: Yes / No

Id changed per email 1/3/13

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1301021 **ClientCode: PEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Morgan Gillies
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: mgillies@pangeaenv.com; tdelafuente@pa
cc:
PO:
ProjectNo: #1150.001; Saberi 1230 14th St.

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **01/02/2013**
Date Printed: **01/03/2013**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1301021-001	VMP-1	Air	12/31/2012 8:20	☐			A									
1301021-002	INF-W	Water	12/31/2012 11:41	☐	B	A										

Test Legend:

1	8260VOC_W	2	CTAS_W	3	G-MBTEX_AIR	4		5	
6		7		8		9		10	
11		12							

The following SampID: 001A contains testgroup.

Prepared by: Jena Alfaro

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **1/2/2013 8:13:01 PM**

Project Name: **#1150.001; Saberi 1230 14th St.**
LogIn Reviewed by: Jena Alfaro

WorkOrder N°: **1301021** Matrix: Air/Water
Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☐	No ☑

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 5.8°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Comments:

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; Saberi 1230 14th St.	Date Sampled: 12/31/12
		Date Received: 01/02/13
	Client Contact: Morgan Gillies	Date Extracted 01/04/13
	Client P.O.:	Date Analyzed 01/04/13

2-Propanol by P&T and GC/MS*

Extraction method: SW5030B | Analytical methods: SW8260B | Work Order: 1301021

Lab ID	Client ID	Matrix	2-Propanol	DF	% SS	Comments
002B	INF-W	W	ND	1	91	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.

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Angela Rydelius, Lab Manager

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; Saberi 1230 14th St.	Date Sampled: 12/31/12
1710 Franklin Street, Ste. 200		Date Received: 01/02/13
	Client Contact: Morgan Gillies	Date Extracted: 01/03/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 01/03/13

CTAS (Cobalt Thiocyanate Active Subtances)/Non-ionic Surfactants

Analytical Method: SM5540D — Work Order: 1301021

Lab ID	Client ID	Matrix	CTAS	DF	Comments
1301021-002A	INF-W	W	ND<0.20	1	a7

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	0.1 mg/L	
	S	NA	

*water samples are reported in mg/L.

a7) reporting limit raised due to limited sample amount

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; Saberi 1230 14th St.	Date Sampled: 12/31/12
		Date Received: 01/02/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 01/03/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 01/03/13

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1301021

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	VMP-1	A	ND	ND	ND	ND	ND	ND	1	90	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	25	2.5	0.25	0.25	0.25	0.25	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

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Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; Saberi 1230 14th St.	Date Sampled: 12/31/12
		Date Received: 01/02/13
	Client Contact: Morgan Gillies	Date Extracted: 01/03/13
	Client P.O.:	Date Analyzed: 01/03/13

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with MTBE and BTEX in ppmv*

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1301021

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	VMP-1	A	ND	ND	ND	ND	ND	ND	1	90	

ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* vapor samples are reported in µL/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L, water samples and all TCLP & SPLP extracts are reported in µg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 73752 | WorkOrder: 1301021

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1301051-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	10	94.1	92.2	2.03	103	70 - 130	20	70 - 130
Benzene	ND	10	93.7	94	0.342	101	70 - 130	20	70 - 130
t-Butyl alcohol (TBA)	ND	40	69.1, F1	64.6, F1	6.29	75.3	70 - 130	20	70 - 130
Chlorobenzene	ND	10	92.5	93	0.506	99	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	106	100	5.26	112	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	89.2	88.5	0.810	95.8	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	101	101	0	108	70 - 130	20	70 - 130
Diisopropyl ether (DIPE)	ND	10	96.4	96.5	0.146	106	70 - 130	20	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	95.5	94.3	1.23	106	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	99.4	96.6	2.88	109	70 - 130	20	70 - 130
Toluene	ND	10	89.1	90.6	1.65	98.7	70 - 130	20	70 - 130
Trichloroethene	ND	10	93.7	93.8	0.180	99.7	70 - 130	20	70 - 130
%SS1:	113	25	113	112	0.378	112	70 - 130	20	70 - 130
%SS2:	107	25	98	99	1.10	99	70 - 130	20	70 - 130
%SS3:	90	2.5	103	105	1.21	104	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

F1 = MS/MSD recovery was out of acceptance criteria; LCS validated the prep batch.

BATCH 73752 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1301021-002B	12/31/12 11:41 AM	01/04/13	01/04/13 5:21 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

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QC SUMMARY REPORT FOR SM5540D

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 73690 | WorkOrder: 1301021

EPA Method: SM5540D **Extraction: SM5540D** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
CTAS	N/A	1	N/A	N/A	N/A	97	N/A	N/A	85 - 115

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 73690 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1301021-002A	12/31/12 11:41 AM	01/03/13	01/03/13 5:49 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air | QC Matrix: Water | BatchID: 73692 | WorkOrder: 1301021

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1212707-003A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	95.5	112	16.1	113	70 - 130	20	70 - 130
MTBE	ND	10	80.7	92.8	13.3	105	70 - 130	20	70 - 130
Benzene	ND	10	89.1	105	16.1	112	70 - 130	20	70 - 130
Toluene	ND	10	88.9	104	15.4	112	70 - 130	20	70 - 130
Ethylbenzene	ND	10	93.7	109	15.3	113	70 - 130	20	70 - 130
Xylenes	ND	30	96.6	111	13.7	115	70 - 130	20	70 - 130
%SS:	93	10	93	93	0	98	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 73692 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1301021-001A	12/31/12 8:20 AM	01/03/13	01/03/13 4:24 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QA/QC Officer