Andy Saberi 1045 Airport Boulevard South San Francisco, CA 94080

#### RECEIVED

Mr. Jerry Wickham Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 9:25 am, Oct 04, 2012 Alameda County Environmental Health

#### Re: Groundwater Monitoring and Remediation Report 1230 14<sup>th</sup> Street, Oakland, California

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



September 25, 2012

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 – First Half 2012 Former Shell Service Station 1230 14<sup>th</sup> 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 – First Half 2012*. The report describes implementation of the approved pilot study for enhanced site remediation using a bio-organic catalyst (BOC). In response to your September 10, 2012 letter, this report presents groundwater monitoring data from the September 1, 2012 event performed to help demonstrate control of any hydrocarbon migration initiated by desorption affects of BOC.

Based on pilot test monitoring results, Pangea recommends expansion of BOC usage in general accordance with the Workplan but with slight modification described herein. Pangea respectfully requests quick agency approval of BOC expansion to allow more aggressive remediation during the end of the dry season, and to better use limited UST Cleanup funding this fiscal year. 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 – First 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)

#### PANGEA Environmental Services, Inc.



#### GROUNDWATER MONITORING AND REMEDIATION REPORT -FIRST HALF 2012

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

#### September 25, 2012

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:



Morgan Gillies Project Manager BAR CIUL

Bob Clark-Riddell, P.E. Principal Engineer

#### PANGEA Environmental Services, Inc.

1710 Franklin Street, Suite 200, Oakland, CA 94612 Telephone 510.836.3700 Facsimile 510.836.3709 www.pangeaenv.com

#### 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. Current groundwater analytical results and elevation data are shown on Figure 2. Current and historical data are summarized on Table 1. Site remediation data are summarized on Tables 2 and 3.

The report also describes implementation of the approved pilot study for enhanced site remediation using a bioorganic catalyst (BOC). In response to your September 10, 2012 letter, this report presents groundwater monitoring data from the September 1, 2012 event performed to help demonstrate control of any hydrocarbon migration initiated by the desorption affects of 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

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. This report documents pilot testing procedures and monitoring results.

#### **GROUNDWATER MONITORING AND SAMPLING**

Routine groundwater monitoring for the first half 2012 was performed on June 30, 2012. Additional monitoring for evaluation of BOC pilot testing was performed on September 1, 2012. For the routine monitoring, eleven site wells were sampled according to the approved groundwater monitoring program shown on Table A in Appendix A. For the pilot test monitoring, seven key wells were sampled according to monitoring program on Table B 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. However, the remediation system was not shutdown until completion of depth to water measurements to help 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 using disposable bailers, an electric submersible pump, check valve with tubing, a clean PVC bailer, or a peristaltic pump. 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-2, MW-3, MW-4, MW-5R, MW-6, MW-7, VW/MW-2, VW/MW-4, AS-1, DP-1 and DP-5 in accordance with the approved groundwater monitoring program (Table A, Appendix A). For the BOC pilot study, groundwater samples were collected from site wells DP-1, DP-2, DP-4, DP-5, MW-1, MW-5R and MW-6 (Table B, Appendix A). 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. 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 June 30, 2012, groundwater appears to converge around the former USTs location, as shown on Figure 2. The inferred groundwater flow direction is different than previous monitoring events and suggests hydraulic capture within the hydrocarbon source area by the DPE system. Depth-to-water and groundwater elevation data are presented in Table 1. The groundwater elevation measurement from well AS-1 was not used for contouring due to an anomalous result.

#### Hydrocarbon Distribution in Groundwater during Routine Monitoring

No SPH was observed in any of the site wells. During the routine monitoring on June 30, 2012, the maximum TPHg (4,600  $\mu$ g/L) and benzene (640  $\mu$ g/L) concentrations were detected in wells DP-5 and VW/MW-4, respectively. Groundwater analytical data are summarized on Table 1 and on Figure 2. The estimated distribution of TPHg and benzene in groundwater from routine monitoring in June 2012 is shown on Figures 3 and 4, respectively.

In general, hydrocarbon concentrations in site wells on June 30, 2012 have decreased compared to the preceding monitoring event of December 2011. For example, significant decreases were observed in key well DP-1, where benzene decreased from  $4,400 \mu g/L$  to  $66 \mu g/L$ , and where TPHg decreased from  $41,000 \mu g/L$  to

2,800  $\mu$ g/L. Additionally, TPHg concentrations in source area well MW-5R decreased from 9,900  $\mu$ g/L to 3,400  $\mu$ g/L, while benzene concentrations decreased from 1,100  $\mu$ g/L to 300  $\mu$ g/L. These results suggest that the dual-phase extraction (DPE) and air sparging (AS) remediation system is cleaning up the site. However, TPHg concentrations in well VW/MW-4 increased (compared to the December 2011 results) from 460  $\mu$ g/L to 3,400  $\mu$ g/L, while benzene increased from 24  $\mu$ g/L to 640  $\mu$ g/L. The concentration increase in VW/MW-4 is presumably due to the shallower water table (about 11 ft depth and about 1.5 ft shallower than the December event), as concentrations in this well have been historically highest near this depth to water. This result suggests that additional remediation is merited to target the smear zone near this well. Future monitoring will evaluate if BOC addition in well VW/MW-4 will improve conditions near this well.

#### Fuel Oxygenate Distribution in Groundwater during Routine Monitoring

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  $\mu$ g/L, except for a concentration of 20  $\mu$ g/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.

#### Hydrocarbon Distribution in Groundwater during BOC Pilot Testing

Results of monitoring for BOC pilot testing is described in the remediation section below.

#### **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.

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 September 20, 2012, the DPE system operated for a total of approximately 97 days. Based on laboratory analytical and performance data, Pangea estimates that soil vapor removal rates during this reporting period peaked near 45.5 lbs/day TPHg and 0.66 lbs/day benzene (January 24, 2012). As of September 20, 2012, the vapor-phase portion of the DPE system removed a total of approximately 1,037 lbs TPHg and 17.7 lbs benzene. As of September 20, 2012, the groundwater portion of the DPE system has removed a total of approximately 2.1 lbs TPHg and 0.1 lbs benzene. As also mentioned below, no significant hydrocarbon removal was observed during monitoring of the vapor-phase and aqueous-phase of the DPE influent streams following the addition of BOC in site wells.

As of September 20, 2012, the AS system operated for a total of approximately 77 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 SITE REMEDIATION PILOT TEST

In July 2012, Pangea commenced the pilot study of bio-organic catalyst (BOC) addition to enhance hydrocarbon desorption and capture by the DPE/AS system. The BOC addition is also designed to expedite hydrocarbon biodegradation in conjunction with the hydrocarbon 'stripping' and groundwater oxygenation provided by the AS system. The BOC addition was performed in accordance with Pangea's *Workplan for Enhanced Site Remediation* (Workplan) dated March 6, 2012, and the agency approval letter of April 17, 2012.

#### **BOC Addition and Initial Observations**

On July 5 and 18, 2012, Pangea injected 2 gallons of BOC followed by 10 gallons of clean water into well VW/MW-4 and 1 gal BOC into each of wells AS-2 and AS-4. To help ensure BOC capture, DPE was performed on nearby source area remediation wells DP-1, DP-2, DP-4 and DP-5. After the July 5 injection event, no visible indication of BOC was observed in remediation system influent water during brief daily monitoring. After the July 18 injection event, visual evidence of BOC (bubbles) was first observed in remediation system influent water on July 20 (and was not observed on July 19). This observation suggests that the remediation system was able to capture added BOC.

The DPE system operated almost continuously during July 2012 to help optimize BOC capture. Following the July 5, 2012 addition of BOC, groundwater samples were collected on July 6 and July 10 from the influent groundwater (before the first carbon vessel) and analyzed for petroleum hydrocarbons. As shown on Table 3, no significant increase in hydrocarbon concentrations was observed in the influent DPE water after BOC use. Similarly, as shown on Table 2, no significant increase in hydrocarbon concentrations the influent soil vapor to the DPE system following the addition of BOC in site wells.

Dissolved oxygen (DO) concentrations in most site wells (DP-1, DP-2, DP-4, MW-1, MW-2, MW-3, MW-4, MW-5R, MW-6, MW-7 and VW/MW-2) have increased compared to historic DO concentrations. As shown on Table 1, DO concentrations in key wells DP-1 and MW-5R increased from 0.83 mg/L (December 2011) to 2.09 mg/L (September 2012), and 0.32 mg/L (December 2011) to 1.94 mg/L (September 2012), respectively. This data suggests that the AS system is effectively oxygenating site groundwater to help enhance natural attenuation of site contaminants.

#### **Monthly Monitoring**

To evaluate potential hydrocarbon migration after BOC addition, Pangea conducted groundwater sampling from select site wells DP-1, DP-2, DP-4, DP-5, MW-1, MW-5R and MW-6 on September 1, 2012. Before well purging, the dissolved oxygen (DO) concentration was measured in each well. Prior to sampling, three casing volumes of groundwater were removed from wells MW-1, MW-5R and MW-6. For active dual-phase

extraction wells DP-1, DP-2, DP-4 and DP-5, grab groundwater samples were collected from each well via a disposable bailer and no well purging. 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.

The estimated distribution of TPHg and benzene in groundwater from the BOC monitoring event on September 1, 2012, is shown on Figures 5 and 6, respectively. Groundwater analytical data are summarized on Table 1.

Groundwater monitoring results for downgradient wells MW-1 and MW-6 during the September 1, 2012 sampling event were similar to the previous monitoring event on June 30, 2012 (prior to BOC injection). This included very low hydrocarbon concentrations detected in well MW-1 and no hydrocarbons detected in well MW-6. This data suggests that BOC injection has *not* caused downgradient migration of hydrocarbons. Additionally, hydrocarbon concentrations in wells DP-2, DP-4 and MW-5R decreased significantly compared to previous routine monitoring results. The observed hydrocarbon concentration increase in wells DP-1 and DP-5 could be due to hydrocarbon desorption caused by the BOC and the resulting capture by DPE. Additional monitoring will help determine if the concentration increase could be the result of groundwater fluctuation or ongoing site remediation efforts.

No vapor-phase hydrocarbon concentrations have been observed in vapor monitoring point VMP-1, located immediately adjacent the nearby residence. VMP-1 was sampled for laboratory analysis using a Summa canister on December 23, 2011, and a Tedlar bag on February 28, 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 February 28, 2012 sampling event is presented in Appendix C.

#### **FUTURE SITE ACTIVITIES**

#### **Continued DPE/AS Remediation**

Following the recent replacement of the DPE unit, continuous operation of DPE/AS resumed on June 15, 2012. 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. Pangea plans to continue routine operation and maintenance of the DPE/AS system. Frequent site visits are planned to optimize DPE operation, especially following BOC addition. Due to budget limitations with the Cleanup Fund, Pangea plans to submit a budget change order to allow longer site remediation. Depending on the amount of the approved

budget, the DPE/AS remediation system may be turned off for the winter rainy season with potential resumed operation in the spring 2013.

#### **Proposed Expansion of BOC Addition**

Based on visual observation of BOC capture by the DPE system and the lack of downgradient hydrocarbon migration during the pilot study, Pangea proposes to expand BOC injection at this site. Pangea respectfully requests quick agency approval of BOC expansion to allow more aggressive remediation during the end of the dry season, and to better use limited UST Cleanup funding this fiscal year.

Pangea would continue to add BOC to the three pilot test wells: upgradient well VW/MW-4, upgradient well AS-4, and source area well AS-2. BOC addition would be expanded to upgradient well DP-4 and source area wells DP-1 and DP-5. A combination of BOC and water would be added to these wells. Following BOC addition to a given DP well, DPE in that well will be discontinued for 24 to 48 hours to allow desorption of hydrocarbons before resumed DPE. During this BOC activation time DPE will continue in downgradient wells DP-2 and any other DP well not used for BOC (except more distant DPE-3). Due to proximity to the downgradient property line and guard well MW-6, Pangea recommends delaying BOC addition to previously proposed expansion well DP-2 until later (if necessary).

#### **Future Groundwater Monitoring**

Groundwater monitoring is important for evaluating the effectiveness of dual-phase extraction and air sparging, and the implementation of the bio-organic catalyst (BOC) technology proposed in Pangea's *Workplan for Enhanced Site Remediation* dated March 6, 2012 and approved by the ACEH letter dated April 17, 2012. As detailed in the BOC workplan, Pangea will perform *monthly* groundwater sampling of seven select wells during BOC addition. Pangea will also sample well VW/MW-4 monthly to evaluate BOC effects on this key impacted site well. The revised groundwater monitoring program during active remediation and BOC use for the remainder of 2012 is shown on Table B in Appendix A (sampling of 8 wells). As shown on the schedule below, no monthly sampling is planned for October 2012 to await ACEH approval to resume BOC use at the site, with monthly sampling resumed for November and December 2012.

Groundwater monitoring in 2013 will depend on remedial effectiveness, the BOC implementation schedule, and available budget from the Cleanup Fund. At a minimum, Pangea anticipates performing quarterly groundwater monitoring of the eight key impacted/observation wells in March and June 2013 (Table B, Appendix A). If BOC implementation continues in 2013, monthly monitoring would be performed on these same eight wells. During the sampling event in the  $2^{nd}$  quarter (June) 2013, groundwater sampling is planned from *all* site wells to evaluate site conditions, as performed in June 2012.

#### Monitoring of BOC Use

In addition to the monthly groundwater sampling for hydrocarbons, Pangea plans to perform the following monitoring to further evaluate effects of BOC use at the site, consistent with the approved Workplan:

- Visual observation for BOC in influent groundwater of the DPE system on a daily basis for up to three days following each BOC addition.
- Periodic sampling of influent groundwater of the DPE system (before and shortly after BOC addition) to evaluate hydrocarbon recovery rate changes. The post-BOC injection samples will be collected approximately 48 hours after BOC addition or upon visual indication of BOC in the extracted groundwater.
- Analysis of select groundwater samples (from DPE influent and select monitoring wells) for non-ionic foaming agents using Standard Method SM5540BD (cobalt thiocyanate active substances [CTAS]) and for 2-propanol by EPA Method 8260 (significant compound in initial BOC product).
- Measurement of DO and ORP in key wells during monitoring sampling.
- Periodic monitoring of soil vapor concentrations in vapor monitoring point VMP-1.

#### **Planned Remediation and Monitoring Schedule**

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

- September 2012 Continue DPE/AS
- Oct & Nov 2012 Expand BOC Use with Agency Approval
- Nov & Dec 2012 Monthly Groundwater Monitoring of BOC Addition for 8 Key Wells
- December 2012 Possible Seasonal Shutdown of DPE/AS (if Rains Start and Limited Budget)
- March 2013 Quarterly Monitoring of 8 Key Wells
- Spring 2013 Anticipated Resumption of Site Remediation/BOC (if Merited and Available Budget)
- June 2013 Groundwater Monitoring of All Site Wells (Annual Event)
- July 2014 Resumed Site Remediation with New Fiscal Year Budget (if Necessary)

Groundwater Monitoring and Remediation Report – First Half 2012 1230 14<sup>th</sup> Street Oakland, California September 25, 2012

#### **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.

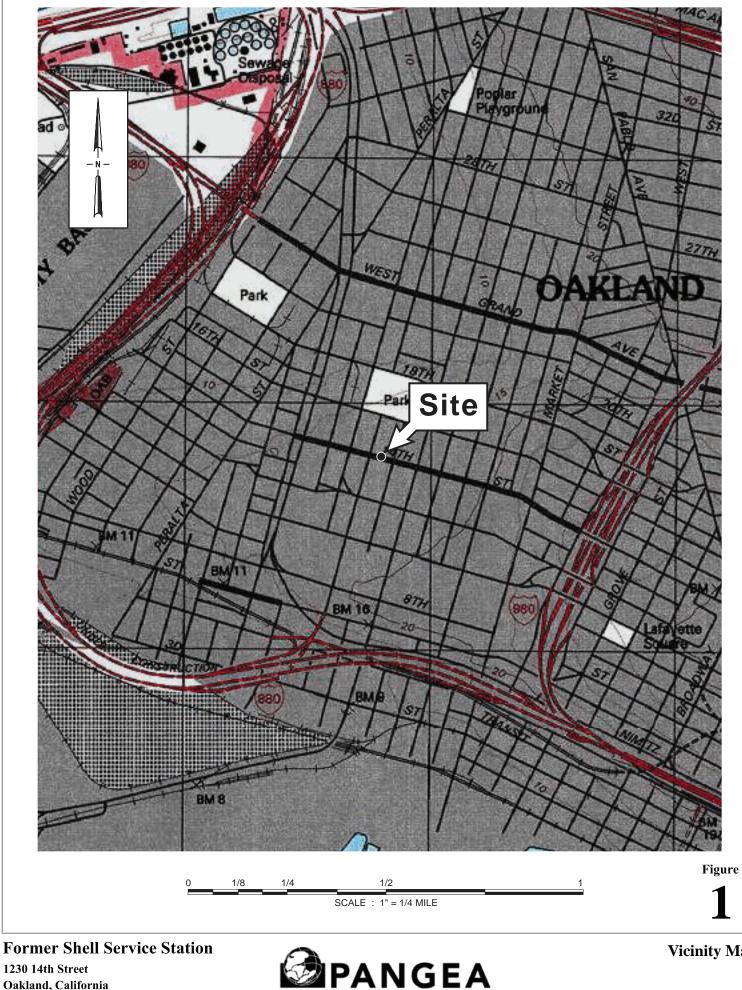
#### **ATTACHMENTS**

- Figure 1 Vicinity Map
- Figure 2 Groundwater Elevation and Hydrocarbon Concentration Map
- Figure 3 TPHg Distribution in Groundwater June 30, 2012
- Figure 4 Benzene Distribution in Groundwater June 30, 2012
- Figure 5 TPHg Distribution in Groundwater September 1, 2012
- Figure 6 Benzene Distribution in Groundwater September 1, 2012
- Figure 7 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

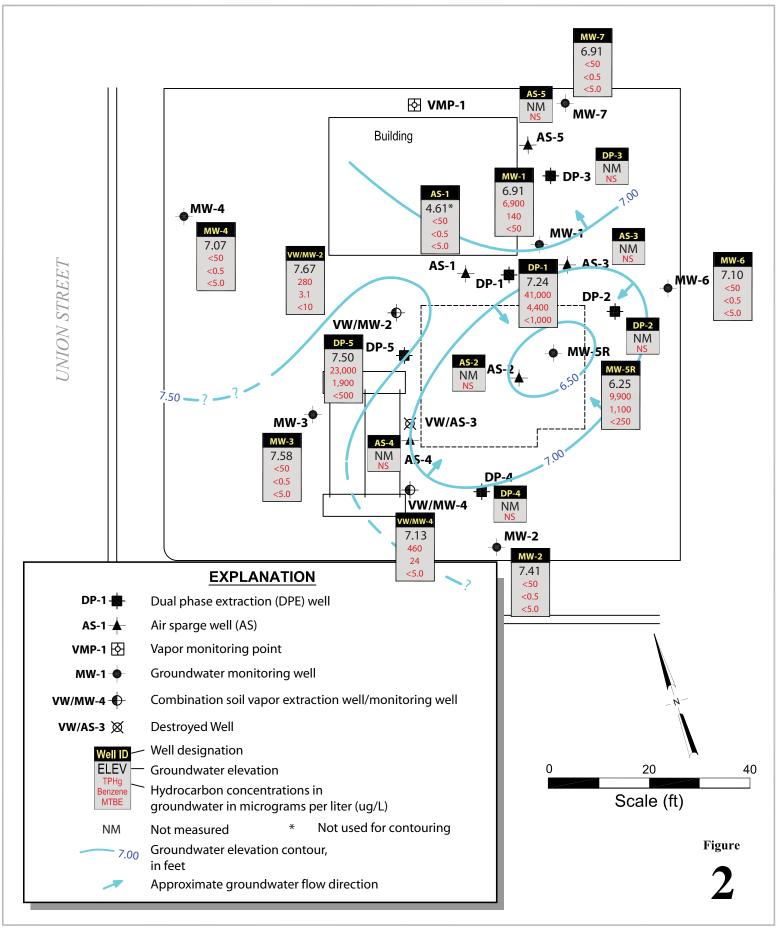
Appendix A – Groundwater Monitoring Program

Appendix B – Groundwater Monitoring Field Data Sheets

Appendix C – Laboratory Analytical Reports



1230 14th Street Oakland, California Vicinity Map

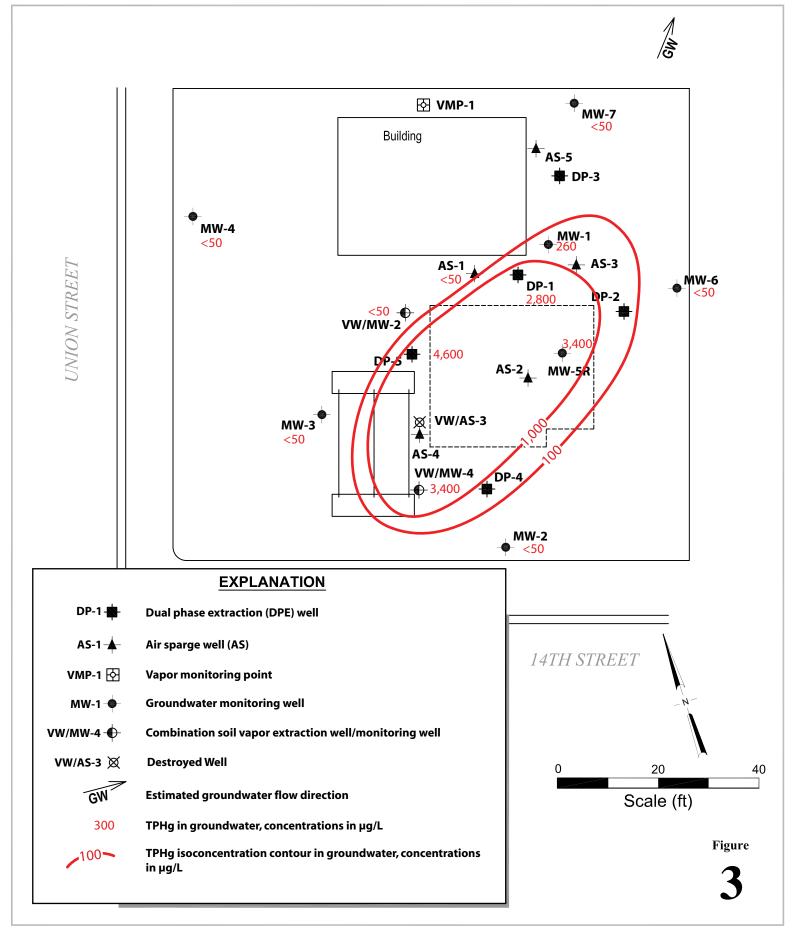


#### **Former Shell Service Station**

1230 14th Street Oakland, California



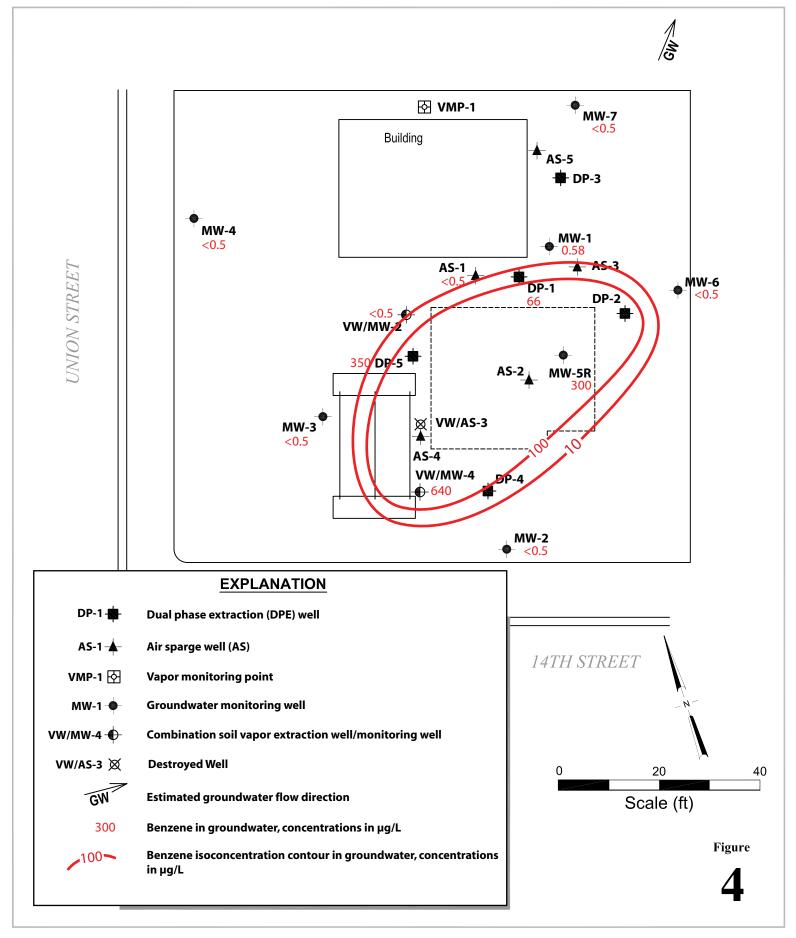
Groundwater Elevation Contour and Hydrocarbon Concentration Map June 30, 2012



Former Shell Service Station 1230 14th Street Oakland, California



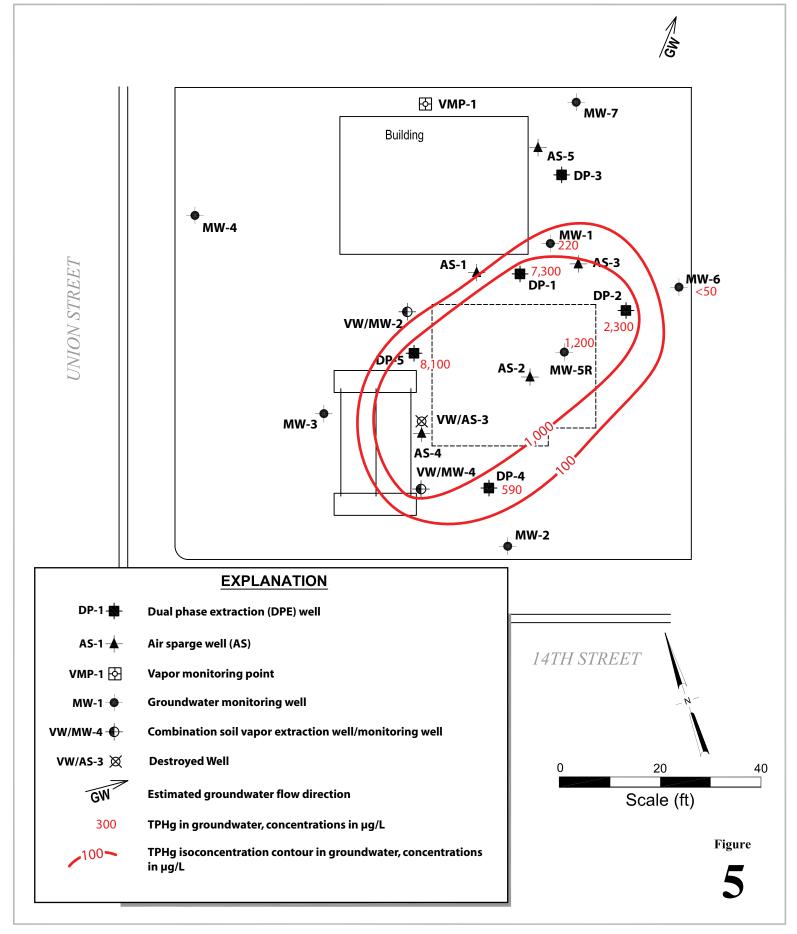
**TPHg Distribution in Groundwater** June 30, 2012



Former Shell Service Station 1230 14th Street Oakland, California



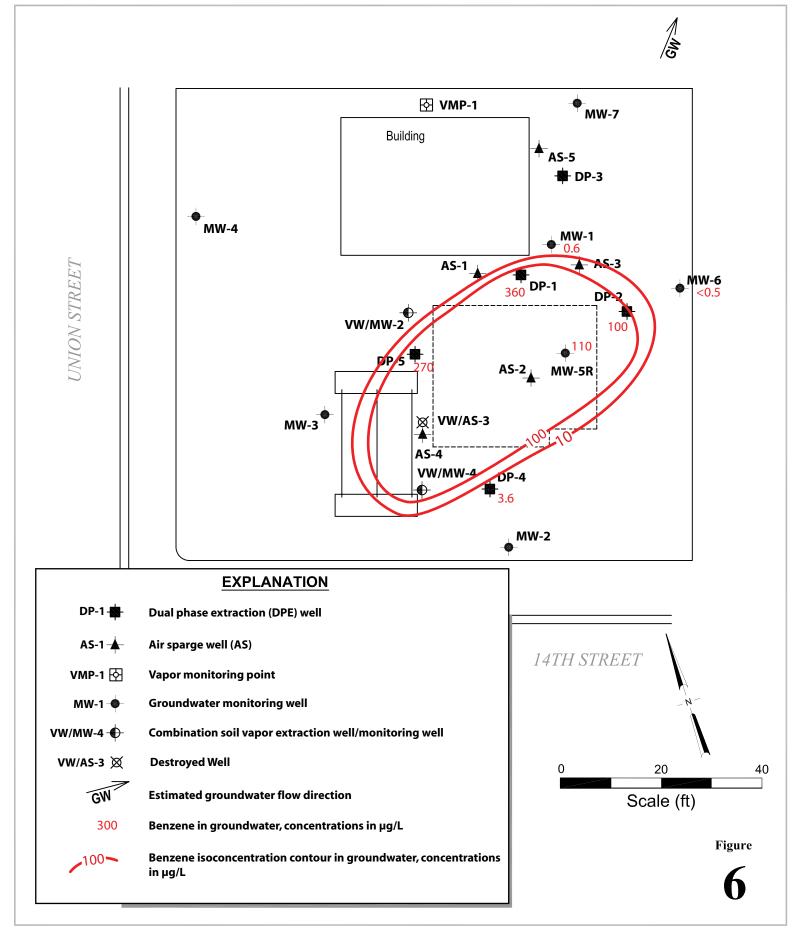
Benzene Distribution in Groundwater June 30, 2012



Former Shell Service Station 1230 14th Street Oakland, California



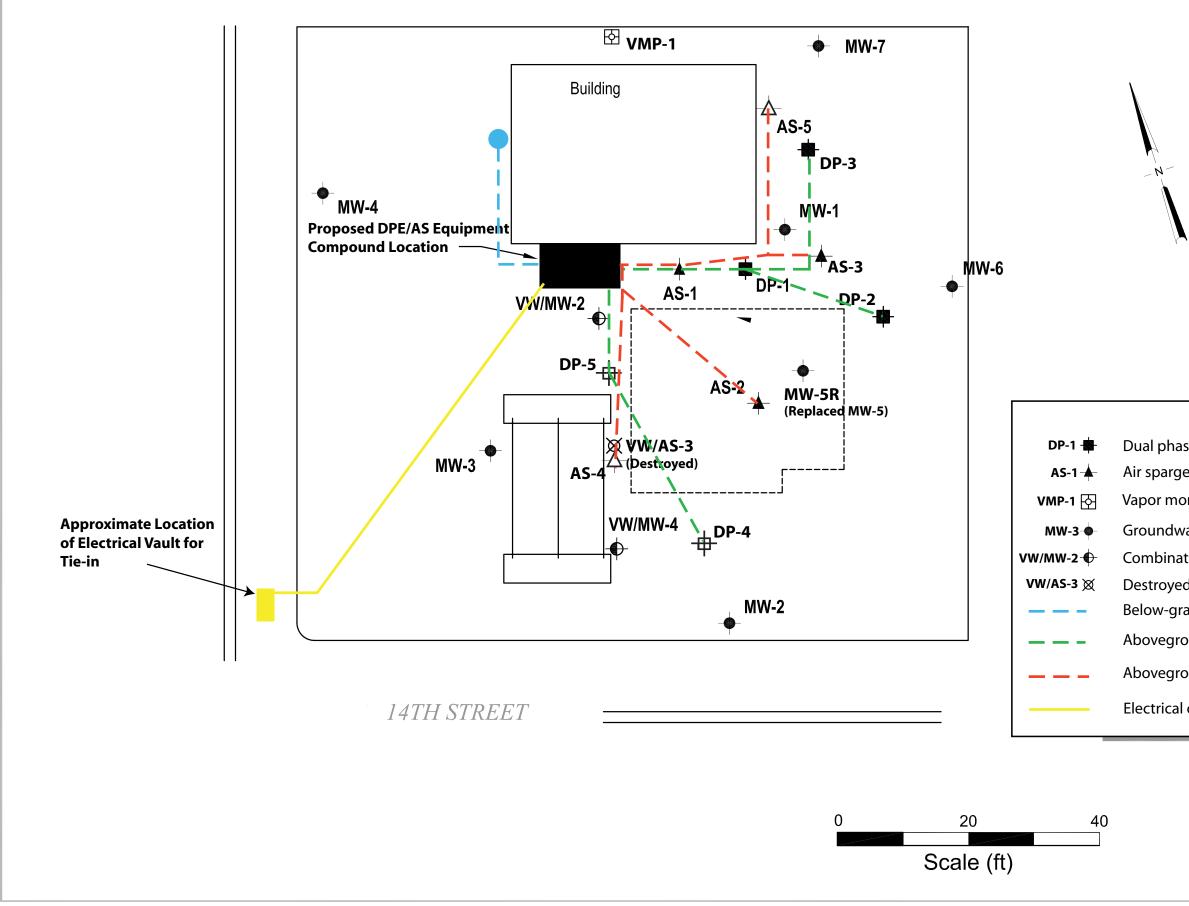
**TPHg Distribution in Groundwater** September 1, 2012



Former Shell Service Station 1230 14th Street

Oakland, California

Benzene Distribution in Groundwater September 1, 2012



### **Former Shell Service Station**



1230 14th Street Oakland, California

### **EXPLANATION**

- Dual phase extraction (DPE) well
- Air sparge (AS) well
- Vapor monitoring point
- Groundwater monitoring well
- Combination soil vapor extraction well/monitoring well
- **Destroyed Well**
- Below-grade sewer piping
- Aboveground DPE piping
- Aboveground AS piping
- Electrical conduit

FIGURE



### **Remediation System Layout**

Well ID	Date Measured	DTW (feet)	GWE (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen
			(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
			(MDL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(IIIg/L)
MEDIATIO	ON 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	10.97		~50		ell Inaccessi		<0.5	<5.0	2.0/2.70
19.69	05/23/11					ell Inaccessi				
19.09	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	14.02 24.29	- <b>4.60</b>	< <b>50</b>	<0.5 < <b>0.5</b>	<0.5 < <b>0.5</b>	<0.5 < <b>0.5</b>	<0.5 < <b>0.5</b>	< <b>5.0</b>	
	00/30/12	24.29	-4.00	<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
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
17.07	09/01/12	13.83	5.21	2,300	100	17	61	<b>440</b>	< <b>50</b>	1.17
	07/01/12	15.05	5.21	2,500	100	17	01	0	<b>\</b> 50	1.17
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
DP-4	04/16/10	8.95		4,700	300	45	260	570	<100	
<b>DI -4</b> 18.21	12/27/11	12.57	5.64	4,700	430	43	67	150	<100 <300	 0.79/0.80
10.21	09/01/12	12.37 12.26	5.95	4,500 <b>590</b>	<b>3.6</b>	48 15	2.6	130 140	< <b>5.0</b>	1.21
	07/01/12	12.20	5.75	570	5.0	15	2.0	140	<5.0	1,21
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
	TER AND/OR									
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
		6.62	11.96							1.2

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

	Date	DTW	GWE			- 1				Dissolved
Well ID	Measured	(feet)	(feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Oxygen
			(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
MW-1 cont'd)	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	1,500	(<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	(<10)	1.45/2.1
	01/04/05	9.39	9.19	120	23	1.6	2.0	3.5	(<25)	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	<0.50 400	<0.30 6.1	<5.0	<0.50 10	(<0.30)	0.84/0.66
	10/28/05	12.44	6.14	8,300	5,500	190	< <u>5.0</u>	470	(<25)	0.2/0.2
	01/17/06	8.61	0.14 9.97	8,300 <50	2.2	190	1.4	470	(<2.5)	5.8/5.3
	02/23/06	9.60	9.97 8.98			2.22	1.4	4.8 4.50	(<0.30)	
	02/23/08				18.1 1.80					
		7.65	10.93			< 0.500	<0.500	1.82		
	04/21/06	6.35 7.28	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

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

Well ID	Date Measured	DTW (feet)	GWE (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen
			(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
W-1 cont'd)	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
	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
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 <50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	09/26/97	12.56	5.34	<50 <50	< 0.50	<0.50	<0.50	<0.50	<2.5	1.1
	09/26/97	12.56	5.34	<50 <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 <50	<0.50	<0.50	<0.50	<0.50	<2.5	2.7
	06/08/98	5.58	12.29	<50 <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		<0.500	<0.500				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	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	1.1/0.9
	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		<0.50	<0.50	<0.50	<0.50		2.5
	04/17/02	8.04 9.61	9.20 8.29	<50	< 0.50	<0.50	< 0.50	<0.50	(<5.0)	3.5/5.2
	07/18/02	11.09	6.81	<50	<0.50	<0.50	<0.50	<0.50		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	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	1.7
	03/13/03	9.60	8.30							1.7
	04/23/03	9.00 9.48	8.30 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 <50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.5/0.3
	06/13/03	10.28	7.62	<50 <50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.6/0.9
	07/14/03	10.23	7.02	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.5/.09
	09/29/03	11.58	6.32	<50 <50	<0.50	<0.50 <0.50	<0.50	<1.0	(<0.50)	1.9/1.3
	10/29/03	11.58	6.14	<50 <50	<0.50 <0.50	<0.50 <0.50	<0.50	<1.0	(<0.50)	4.3/0.5
	01/05/04	9.36	8.54	<50 <50	<0.50	<0.50 <0.50	<0.50	<1.0	(<0.50)	4.3/0.3
	01/03/04 04/01/04	9.30 8.77	8.34 9.13	<50 <50	<0.30 <0.50	<0.30 <0.50	<0.30 <0.50	<1.0 <1.0	(<0.50)	4.0/0.3
	07/02/04	8.77 11.04	9.13 6.86	<50	<0.30 <0.50	<0.30 <0.50	<0.30 <0.50	<1.0 <1.0	(<0.50)	4.0/0.3 0.4/0.3
	07/02/04 11/03/04	11.04	6.86 6.19	<50 <50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<1.0 <1.0	(<0.50)	0.4/0.3 6.4/1.40
	01/04/05	8.68	9.22	<50 <50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<1.0 <1.0	(0.54) (0.62)	6.4/1.40 4.41/2.88
	01/04/05	8.68 7.13	9.22 10.77	<50 <50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<1.0 <0.50	(0.62)	4.41/2.88 0.71/0.23
	04/13/05	10.30	7.60	<50 <50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <1.0	(1.7) (2.3)	0.71/0.23

W-11 ID	Date	DTW	GWE		D	<b>Τ</b> -1	Edually	Valaraa	MTDE	Dissolved
Well ID	Measured	(feet)	(feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Oxygen
	01/17/06	9.01	(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
AW-2 cont'd)	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 04/21/06	7.70 5.83	10.20 12.07							
	04/21/00	6.34	11.56	<50.0	<0.500	<0.500	<0.500	<0.500		0.52/0.18
	03/01/08	0.34 10.71	7.19		<0.300 <0.500			<0.300 <0.500	(4.33)	
	08/30/08	10.71	6.87	<50.0	<0.300	<0.500	<0.500	<0.300	(1.98)	0.51/1.04
	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	11.02	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	<0.50 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	<0.71	<1.0 <1.0	<1.0	<1.0	(1.7)	0.5/0.2
	12/06/07	12.39	5.51	<50 K	<0.90 0.97	<0.5	0.56	1.5	(0.99)	
	02/25/08	9.15	8.75	<50 <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
	08/18/08	11.02	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
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

Well ID	Date Measured	DTW (feet)	GWE (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen
			(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
MW-3 cont'd)	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	0.40 10.95	7.23	<50.0	<0.500	<0.500	< 0.500	< 0.500	<0.500(<0.500)	0.08/0.42 3.53/3.14
	09/29/06	11.40	6.78	<50.0	<0.300	<0.300	<0.500	<0.300		
	11/03/06								<0.500(<0.500)	 7.0/6.8
		11.91	6.27	<50.0	<0.500	<0.500	<0.500	<0.500	· · · ·	
	01/30/07	11.55	6.63	<50	<0.50	<0.50	<0.50	<1.0	<0.50(<0.50)	1.45/1.10
	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
<b>MW-4</b>	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	<50.0	<0.500	<0.500	<0.500	<0.500		3.0
	10/17/00	12.05	5.96 6.05	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	5.5/1.2
			0.00							

Table 1. Groundwater Elevation and Analytical Data - Saberi, 1230 14th Street, Oakland, CA
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Well ID	Date Measured	DTW (feet)	GWE (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen
			(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
IW-4 cont'd)	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 <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 <50	<0.50 <0.50	<0.50	<0.50	<1.0	(<0.50)	0.8/0.6
	11/03/04	11.10	6.16	<50 <50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<1.0	(<0.50)	1.3/2.84
	01/04/05	9.06	8.95	<50	<0.30 <0.50	<0.50	<0.50 <0.50	<1.0 <1.0	(<0.50)	7.12/6.37
	01/04/03	9.00 6.84	8.95 11.17	<50 <50	<0.50 <0.50	<0.30 <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	<0.30 <0.50	<0.50 <0.50	<0.30 <1.0	(<0.50)	1.87/3.75
	10/28/05	11.75	6.26	<50	<0.50 <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	<0.50	(<0.50)	6.4/6.2
	03/09/06	6.55	11.46		<0.50	<0.50	<0.50	<0.50		
	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 09/29/06	10.82	7.19 6.72	<50.0	< 0.500	< 0.500	< 0.500	< 0.500	(<0.50)	4.31/4.35
		11.29								
	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
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

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

Well ID	Date Measured	DTW (feet)	GWE (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen
			(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
IW-5 cont'd)	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	3,880 4,840	1,320	705	2,430	(<0.300)	0.47/3.64
	09/29/06	11.32	6.66	28,200 94,900	4,840	1,320 2,960	1,810	2,430 5,310 i	(7.20)	
	10/13/06	12.01	6.46	48,200	7,710	1,360	1,010	3,460	(5.64)	
	11/03/06	12.01	6.16	48,200 50,600	11,300	1,300	1,250	3,400 3,840	(<0.500)	0.60/4.10
	12/26/06	11.58	6.89	32,000	11,000	780	1,200	2,800	(<0.300)	
	01/11/07	11.58	6.86	35,000	11,000	1,100	1,200	2,800 3,100		
									(<50)	
	01/30/07	11.95	6.52 7.52	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,1	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)	
	08/16/07	12.36	6.11	43,000 k,1	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 dr	illed out and	replaced with M	W-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
	10/00/01	10.10								
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

Table 1. Groundwater Elevation and Ana	lytical Data - Saberi, 1230 14th Street, Oakland, CA
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Well ID	Date Measured	DTW (feet)	GWE (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen
			(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
W-6 cont'd)	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	12.32	6.46	934	3.14	<0.500	<0.500	< 0.500	(<0.500)	
	11/03/06	12.30	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	<0.500	<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	12.12	6.40	310	1.5	<0.50	<0.50	<1.0	(<0.50)	1.47/0.81
	03/01/07	12.44	0.40 7.87	360	3.6	<0.50	<0.50	<1.0 0.87	(<0.50)	
	04/26/07	11.18	7.66	210 k	0.72	<1.0	<1.0			
	06/01/07	11.18	7.00	640 k	3.1	<1.0 <1.0	<1.0	<1.0 0.27 m	(<1.0)	0.69/0.50
	06/21/07	12.22	6.62	390 k	3.1	<1.0 <1.0	<1.0	0.27 m 0.17 m	(<1.0) (<1.0)	
	07/03/07	12.22	6.62	390 k		<1.0 <1.0	<1.0 0.36 m	0.17 m 1.2		
	07/03/07 08/16/07	12.22	6.02 6.10	400 k,l	3.0	<1.0 <1.0	<1.0	<1.0	(<1.0)	
					2.8				(<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
	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
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)	

Table 1 Groundwater Elevation and Anal	ytical Data - Saberi, 1230 14th Street, Oakland, CA
Table 1. Groundwater Elevation and Anal	ylical Dala - Saberi, 1230 14th Street, Oakianu, CA

Well ID	Date Measured	DTW (feet)	GWE (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen
			(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
MW-7 cont'd)	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	<0.500 150	13.3	<0.300 5.78	<0.300 53.0	(<0.500)	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	2,420 5,980	549	0.540	0.680	11.7	(0.930)	
	11/03/06	13.73	5.47	3,190	501	< 0.540	<0.500	5.38	(0.560)	2.2/1.4
	12/26/06	12.51	6.69	4,600	570	< 0.50	<0.500 44	2.1	(<0.50)	
	01/11/07	12.51	6.65	4,000 3,900	490	<2.5	44	<5.0	(<0.50)	
	01/30/07	12.33	6.31	2,500	380	<2.5	40	<5.0 <5.0	(<2.5)	1.37/0.90
	03/01/07	11.45	7.75	2,500 2,600	350	<2.5	35	3.5		1.37/0.90
	03/01/07 04/26/07	11.43	7.73	2,800 2,300 k	290	<2.3 <5.0	33 31	5.5 1.3 m	(<2.5) (<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
	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
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

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

Well ID	Date Measured	DTW (feet)	GWE (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen
			(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
W/MW-2 cont'd)	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
	03/07/00	9.65	8.65							3.7/4.1
	04/17/00	9.05		<50.0	 <0.500	 <0.500	 <0.500	 <0.500	<2.50	5.7/4.1
	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	12,000 190 b	< 0.50	< 0.50	<0.50	<1.0	(<0.50)	2.8/1.8
	04/01/04	9.24	9.06	410	<0.50 1.4	<0.50 0.54	1.6	1.0	(<0.50)	1.7/0.1
	07/02/04	11.33	6.97	5,500	440	370	1.0	410	(<0.50)	0.5/0.4
	07/02/04 11/03/04	12.14	6.16	3,300 3,800	260	210		600	(<2.5)	0.3/0.4
							150			
	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)	
	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	10.40	7.79	5,700 k	220	140	170	420	(<2.0)	
	04/20/07	11.00	7.30	3,700 k 4,300 k	150	140	170 140	420 380	(<2.0)	0.36/0.23
		11.00	6.52	4,300 k 9,000 k	540	500	350	380 870	(<2.0) (1.8 m)	
		11/0	0	2,000 K	540	500	330	0/0	(1.0 111)	
	06/21/07 07/03/07	11.64	6.66	4,500 k	230	160	160	440	(<5.0)	

Well ID	Date Measured	DTW (feet)	GWE (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen
			(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
W/MW-2 cont'd)	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
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						~23.0	5.0
	10/17/00	12.18	6.11	8,360	2,060	391	468	1,170	 147	0.7/0.8
	01/09/01	12.03	5.72							0.7/0.8
	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							1.0/1.4
	12/06/01	11.42	7.12	7,700	750	 90	300	350	(<25)	2.5/1.9
	01/23/02	8.89	9.25						(<23)	0.4
	01/23/02 04/17/02	8.89 9.89	9.23 8.25	4,800	 760	27	240	150	(<25)	0.4 4.7/5.1
	04/17/02 07/18/02	9.89 11.37	8.2 <i>3</i> 6.77	4,800					(<23)	4.7/3.1 0.6
	07/18/02 11/11/02	11.37 12.41	5.73	 14,000	2,800	 480	 700	 1,300	(<100)	0.6
	01/16/03	9.17	3.73 8.97							0.3/0.3
										0.8
	03/13/03	9.85 9.74	8.29 8.40		 710					
	04/23/03	9.74	8.40	2,400	710	28 25	160 170	100	(<50)	0.2/0.05
	05/13/03	9.70 10.55	8.44	3,300	720	35	170	160 700	(<50) (<250)	0.2/0.2
	06/13/03	10.55	7.59	8,200	1,700	220	460	790 540	(<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
	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

Table 1 Groundwater Elevation and Anal	lytical Data - Saberi, 1230 14th Street, Oakland, CA
Table 1. Groundwater Lievation and Ana	iyiical Data - Sabell, 1230 14th Street, Cakland, CA

Well ID	Date Measured	DTW (feet)	GWE (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen
			(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
W/MW-4 cont'd)	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	11.17	6.96	830	4 <i>3</i> 86	1.0	41	3.9	(1.40)	
	01/30/07	11.13	6.61	2,100	450	1.8	41 99	3.9 46	(3.0)	1.13/0.91
	03/01/07	10.00	8.14	700	4.8	< 0.50	1.8	40 0.77	(<0.50)	
	04/26/07	10.00	7.88	930 k	4.8 84	5.2	21	9.5	(<0.50)	
	04/20/07	10.20	7.34	2,000 k	340	5.2 7.6	58	9.5 17.6	(<1.0) (1.7 m)	0.46/0.42
	06/01/07	11.32	6.82	2,000 k 1,400 k	340 360	7.0 9.7	58 46	26.1	(1.7 III) (2.2)	0.40/0.42
	07/03/07	11.32	6.75	1,400 k 2,700 k	650	9.7 24	40 91	65	(<2.0)	
	07/03/07 08/16/07					24 8.8	32			0.3/0.1
	12/06/07	11.87	6.27 5.74	1,400 k	240 480	8.8 16	32 39	42.3 29	(<5.0)	
	02/25/08	12.40 9.39	5.74 8.75	3,600	480	<0.5		29 0.50	(3.5) <5.0	 4.61
				56	22		<0.5			
	05/26/08	11.27	6.87	650 2 700	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
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
	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 7.52							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							
	03/07/00	1.00	11.20							

Table 1 Groundwater Elevation and Anal	utical Data Sabari 1220 14th Streat Oakland CA
Table 1. Gloundwaler Elevation and Anal	lytical Data - Saberi, 1230 14th Street, Oakland, CA

Well ID	Date Measured	DTW (feet)	GWE (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen
		(1001)	(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)
VW/AS-1 cont'd)	04/18/00		(IVISE) 	20,800	6,550	1,220	2,270	1,720	<250	(iiig/L) 
	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							
	04/07/03	10.40	8.20 8.32	 9,500	 4,100	200	 1,400	200		 1.2/0.4
		10.28	8.32 8.34						(<250) (<250)	0.5/2.0
	05/13/03 06/13/03	10.26	8.34 7.45	9,700 9,300	2,300 2,300	110 77	1,100 820	140 <100	(<250) (<500)	0.5/2.0
			6.98				620			1.8/1.9
	07/15/03	11.62		5,500	2,000	230		360	(20)	
	09/29/03	12.48	6.12	9,600	2,300	100	1,200	670 270	(<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 0.72	8.87	20,600	3,820	305	259	435	(3.31 h)	
	07/11/06 08/30/06	9.73 11.60	8.87 7.00	9,130 164,000	6,200 3,190	108 6,240	232 3,780	254 17,900	(<0.500) (<10.0)	0.4
	08/30/00	11.00	6.63	130,000	6,160	6,240 6,370 i	2,910	17,900 11,600 i	(<10.0) (<25.0)	
	10/13/06	12.18	6.42	144,000	6,320	5,710	2,910	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 8.76	180,000	9,500 3,500	5,000 1,200	4,100	16,000	(<17)	
	02/25/08 05/26/08	9.84 11.88	8.76 6.72	47,000 82,000	3,500 8,100	1,200 3,000	1,500 3,100	4,400 12,000	<350 <500	2.39 1.65/1.05
	05/26/08 06/27/08	11.00	0.72	82,000			3,100 and replaced with		<000	1.03/1.03

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

Well ID	Date Measured	DTW (feet)	GWE (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen	
			(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)	
W/AS-2	03/09/06	6.95									
W/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	
	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	2 110			 141			2.0/2.4	
	04/18/00			3,110	871	<5.00	141	56.8	78.2		
	09/21/00	11.65	6.52	 7 730	2 700				<250(42-1)	2.5 1.6/1.0	
	10/17/00 01/09/01	12.13 12.51	6.04 5.66	7,730	2,700	<50.0	542	344	<250(42.1)	1.6/1.0 2.2	
	01/09/01 04/27/01	12.51	5.66 7.97	14,000	 3,900	62	 690	 560	(46)	2.2	
	04/27/01 07/03/01	10.20	6.62		5,900				(40)	2.8/1.0	
	12/06/01	11.33	0.02 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	9.24 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 ј	2.34 j	13.5 ј	(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	

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

Well ID	Date Measured	DTW (feet)	GWE (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved Oxygen	
			(MSL)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)	
(VW/AS-3 cont'd)	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 D	estroyed				

Notes:

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

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.

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

able 2. SVE (DPE) Performance Data - 1230 14th Street, Oakland, CA							Air Sparge	Removal				Emission Reporting												
Date	Wells	Oxidizer Hr Meter Reading	Totall		System Vapor Flow	App Vac	Sample		Influent Benzene Lab Data	OVA	Aır Sparge	SVE TPHg Removal Rate	SVE Benzene Removal Rate	SVE TPH	Cumulative SVE Benz Removal	Effluent OVA Reading	Effic	Effluent TPHg Lab	Effluent Benzene Lab	<b>TPHg</b> Abate Effic	Benzene Abate Effic	Benzene Emission Rate	Cumulative Vapor Flow	,
Dure	ens	(hours)				("Hg)		(ppmv)	(ppmv)	(ppmv)	(status)		(lbs/day)	(lbs)	(lbs)	(ppmv)		(ppmv)	(ppmv)	(%)	(%)	(lbs/day)	(cf)	$\vdash$
04/27/11	DP-1,2,4,5	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	Startu
05/05/11	DP-1,2,4,5			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	
05/16/11	DP-1,2,4,5			11.2	107	4		20	1.0		Off	0.7	0.03	14.3	0.67								2,784,996	
)5/24/11	DP-1,2,4,5				107	4		20	1.0	12	Off	0.7	0.03	16.4	0.77	4	66.7						3,266,496	
07/13/11	DP-1,2,4,5	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. F
09/06/11	DP-1,2,4,5	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. T
10/24/11	DP-1,2,4,5	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. 7
11/23/11	DP-1,2,4,5	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. I
11/28/11	DP-1,2,4,5	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. T
11/29/11	DP-1,2,4,5	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. F
12/01/11	DP-1,2,4,5	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. N
12/14/11	DP-1,2,4,5	5 11653.4	38.5	12.9	64	5		200	5.0	203	Test	4.1	0.09	140.7	2.94	11	94.6						4,919,264	On. <
01/05/12	DP-1,2,4,5	5 11659.2	38.7	0.2	93	6		600	13.0	695	Test	17.8	0.35	145.0	6.56	56	91.9						4,951,485	Off. 7
01/23/12	DP-1,2,4,5	5 11659.8	38.7	0.0	93	9		700	13.0	726	Test	20.9	0.35	145.5	3.04	58	92.0						4,954,842	Off. F
01/24/12	DP-1,2,4,5	5 11680.0	39.6	0.8	95	8	INF-V	1,500	24.0	2290	Test	45.5	0.66	183.8	7.13	230	90.0	180	2.8	88.0	88.3	0.077	5,069,522	On. C
02/08/12	DP-1,2,4,5	5 11683.0	39.7	0.1	95	8		1,500	24.0		Test	45.5	0.66	189.5	3.67								5,086,553	Cat C
02/15/12	DP-1,2,4,5	5 11690.0	40.0	0.3	118	5	INF-V	180	2.1	156	Off	6.8	0.07	191.5	7.16	10	93.6	< 7.0 ·	< 0.077	> 96.1	> 96.3	< 0.003	5,136,113	Test
02/23/12	DP-1,2,4,5	5 11705.0	40.6	0.6	131	11	INF-V	860	8.5	749	On	36.1	0.32	214.1	3.97	6	99.2	7.9	< 0.077	99.1	> 99.1	< 0.003	5,254,013	Resta
02/27/12	DP-1,2,4,5	5 11741.0	42.1	1.5	131	5	INF-V	73	0.8		On	3.1	0.03	218.7	7.23								5,536,973	Off. I
02/28/12	DP-1,2,4,5	5 11765.6	43.1	1.0	188	5		130	5.0	142	On	7.9	0.27	226.8	4.66								5,815,052	On. I
02/29/12	DP-1,2,4,5	5 11777.0	43.6	0.5	188	5		130	5.0		Off	7.9	0.27	230.5	7.64								5,943,917	Off. I
03/01/12	DP-1,2,4,5	5 11800.7	44.6	1.0	141	8	INF-V	450	7.7	350	On	20.4	0.32	250.6	5.13	3	99.1						6,144,419	On. I
03/02/12	DP-1,2,4,5	5 11825.7	45.6	1.0	132	10		400	7.7	422	On	16.9	0.30	268.2	8.24								6,342,419	On.
03/04/12	DP-1,2,4,5	5 11880.0	47.9	2.3	132	9		400	7.7	422	On	16.9	0.30	306.6	6.10								6,772,475	On.
03/09/12	DP-1,2,4,5	5 11994.3	52.7	4.8	146	8		700	12.0	740	On	32.8	0.51	462.9	11.83	6	99.2						7,775,115	On.
03/13/12	DP-1,2,4,5	5 12087.7	56.6	3.9	141	8	INF-V	990	11.0	545	On	44.7	0.45	636.7	10.00	5	99.1						8,563,037	On.
03/16/12	DP-1,2,4,5	5 12159.0	59.5	3.0	141	8		990	11.0		On	44.7	0.45	769.4	14.92	5							9,164,524	On. S
06/15/12	DP-1,2,5	14701.4	59.5	0.0	229	10		240	3.0	245	Off	17.6	0.20	688.4	13.19	2	99.2						8,552,065	Start
06/19/12	DP-1,2,5	14740.9	61.1	1.6	165	10		500	4.4	498	On	26.4	0.21	731.9	10.96	3	99.4						8,942,404	Off. F
06/20/12	DP-1,2,4,5	5 14760.6	62.0	0.8	160	10	INF-V	450	4.4	337	On	23.1	0.20	745.4	11.10	5	98.5	< 7 -	< 0.077	> 98.4	> 98.3	< 0.004	8,740,948	On.
07/03/12	DP-1,2,4,5	5 14823.5	64.6	2.6	164	10		350	4.0	372	On	18.4	0.19	795.3	15.88	2	99.5						9,561,340	Off 7
07/05/12	DP-1,2,4,5	5 14873.9	66.7	2.1	152	10		180	2.0	184	On	8.8	0.09	786.8	13.83	0	100.0						9,200,596	On. I
07/06/12	DP-1,2,4,5	5 14891.3	67.4	0.7	170	10		190	2.0	195	On	10.4	0.10	824.6	11.58	12	93.8						9,738,820	On.
07/10/12	DP-1,2,4,5	5 14992.1	71.6	4.2	168	10		160	2.0	173	On	8.6	0.10	829.3	12.05	7	96.0						10,216,660	On.
07/11/12	DP-1,2,4,5	5 15014.1	72.5	0.9	161	10		160	2.0	165	On	8.3	0.09	866.9	16.63	6	96.4						9,951,736	On.
07/17/12	DP-1,2,4,5	5 15075.7	75.1	2.6	168	10		180	2.0	186	On	9.7	0.10	863.1	14.65	5	97.3						10,839,067	Off. 7
07/19/12	DP-1,2,4,5	5 15088.9	75.6	0.5	168	9		160	2.0		On	8.6	0.10	893.9	12.39								10,085,108	Off. I
07/20/12	DP-1,2,4,5	5 15109.2	76.5	0.8	168	9		160	2.0		On	8.6	0.10	875.2	12.52								11,044,178	On.
07/21/12	DP-1,2,4,5	5 15124.0	77.1	0.6	168	9		160	2.0		On	8.6	0.10	906.5	17.08								10,234,648	Off. I
08/03/12	DP-1,2,4,5	5 15365.7	87.2	10.1	168	9		160	2.0		On	8.6	0.10	967.6	15.84								13,486,315	Off. 7
08/07/12	DP-1,2,4,5	5 15398.7	88.6	1.4	133	10		160	2.0	159	On	6.8	0.08	984.6	13.39	5	96.9						10,497,592	Off. I
08/31/12	DP-1,2,4,5	5 15556.9	95.1	6.6	155	11		140	1.0	140	On	7.0	0.05	1023.1	13.37	4	97.1						14,957,575	Off. F
09/20/12	DP-1,2,4,5	5 15595.1	96.7	1.6	111	10		180	1.0	187	On	6.4	0.03	1037.0	17.71	4	97.9						10,752,004	Off. F

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

Notes

artup Test

Shutdown due to high EFF-V conc in lab report. Restart, check cat cell, send for repair. Test with air sparging and HVOCs. Off at departure. Test new cat cell. Heat exchgr issue. Off at departure. Install repaired heat exch and repaired cat cell. Test for lead in influent with sparging. Meets permit. Restart to test. Meets permit. Left on for testing. Meets permit. Left on for testing. <97% dest so turn off. Test another unit 12/21/11: similar. Test with dilution air for oxygen. Off at departure. Restart to test with dilution and prep for lab test. . Collect lab. Off at departure. t Cell Testing st destruction efficiency with new cat cell. start DPE/AS. DPE/AS units repaired. High Enclosure Temp. Restart. Limit AS to AS-2, AS-4. Monitor influence. Restaft DPE/AS Increased vacuum to 8" Hg.

artup of new SVE unit.

Restart

f 7/1 for QM. Restart n. Inject Nontox in VW/MW-4, AS-2, AS-4.

Turn off AS. Inject Nontox in VW/MW-4,AS-2,AS-4 on 7/18; restart. Restart.

Restart. Transfer pump not working. Coordinate repair. Restart later 8/3. Restart. Restart. Restart.

# Pangea

Table 2. SVE (DPE) Performance Data - 1230 14th Street, Oakland, CA					Air Sparge			Removal	l						Emissi	on Reporti	ng					
										SVE	SVE											
		Oxidizer	System		Lab	Influent	Influent	Influent	Aır	TPHg	Benzene	Cumulativ	Cumulative	Effluent A	bate Et	fluent	Effluent	TPHg	Benzene	Benzene	Cumulative	
		Hr Meter TotalInterva	Vapor	App	Sample	TPHg	Benzene	OVA	Sparge	Removal	Removal	SVE TPH	SVE Benz	OVA E	ffic T	PHg	Benzene	Abate	Abate	Emission	Vapor	
Date	Wells	Reading Time Time	Flow	Vac	ID	Lab	Lab Data	Reading		Rate	Rate	Removal	Removal	Reading O	VA	Lab	Lab	Effic	Effic	Rate	Flow	
		(hours) (days) (days)	(cfm)	("Hg)		(ppmv)	(ppmv)	(ppmv)	(status)	(lbs/day)	(lbs/day)	(lbs)	(lbs)	(ppmv) (	%) (p	pmv)	(ppmv)	(%)	(%)	(lbs/day)	(cf)	

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<sup>3</sup>) x molecular weight (86 lb/lb-mole for TPH-Gas hexane) x 1440 min/day x 1/1,000,000.

Notes

		Totalizer	Interval	Interval	Average	TPHg	Benzene	MTBE	TPHg	Benzene	MTBE	
Well ID	Date	Reading <sup>1</sup>	Flow Volume	Duration	Flow Rate	Concentration	Concentration	Concentration	Removed	Removed	Removed	
		(gallons)	(gallons)	(days)	(gpm)	(ug/L)	(ug/L)	(ug/L)	(Lbs)	(Lbs)	(Lbs)	
System	04/27/11	2,090	0	0		960	120	ND (<5.0)	0.000	0.000	0.000	Starup wat
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. Shutdov
	07/13/11	101,686	0	50	0.00				0.000	0.000	0.000	Off. Restar
	09/06/11	102,753	1,067	55	0.01				0.009	0.001	0.000	Off. Restar
	10/24/11	102,753	0	48	0.00				0.000	0.000	0.000	Off. Restar
	11/22/11	103,480	727	29	0.02				0.006	0.001	0.000	Off. Restar
	11/23/11	103,593	113	1	0.08				0.001	0.000	0.000	Off. Restar
	11/28/11	104,011	418	5	0.06				0.003	0.000	0.000	Off. Restar
	11/29/11	104,105	94	1	0.07				0.001	0.000	0.000	Off. Restar
	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. Restar
	01/05/12	108,203	496	22	0.02				0.001	0.000	0.000	Off. Restar
	01/23/12	108,303	100	18	0.00				0.000	0.000	0.000	Off. Restar
	01/24/12	112,516	4,213	1	2.93				0.011	0.000	0.000	Off. Restar
	02/23/12	113,710	1,194	30	0.03				0.003	0.000	0.000	Off. Restar
	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. Restar
	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. Shutdo
	06/15/12	167,592	7,488	94	0.06				0.131	0.004	0.000	Startup of
	06/19/12	169,669	2,077	4	0.36				0.036	0.001	0.000	Off. Restar
	06/20/12	172,212	2,543	1	1.77				0.044	0.001	0.000	Off. Restar
	07/03/12	179,966	7,754	13	0.41				0.135	0.005	0.000	Off 7/1 for
	07/06/12	188,780	8,814	3	2.04	1,000	26	ND (<5.0)	0.073	0.002	0.000	On.
	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. Leave
	07/19/12	209,077	1,791	2	0.62				0.013	0.000	0.000	Off. Resta
	07/20/12	211,310	2,233	1	1.55				0.013	0.000	0.000	On.
	07/21/12	212,880	1,570	1	1.09				0.017	0.000	0.000	Off. Resta
	07/21/12 08/03/12	256,581	43,701	13	2.33				0.327	0.000	0.000	Off. Resta
	08/03/12	258,157	1,577	4	0.27				0.012	0.000	0.000	Off. Resta
	08/07/12	238,137	25,891	4 24	0.27				0.012	0.000	0.000	Off. Resta
	08/31/12	284,048 286,963	2,915	24 20	0.75				0.194	0.003	0.000	Off. Resta
	09/20/12	280,903	2,915	20	0.10							=
									2.110	0.137	0.000	Total Cun
System	04/27/11					ND (<50)	ND (<0.5)	ND (<5.0)				Startup wa
Effluent	12/14/11					ND (<50)	ND (<0.5)	ND (<5.0)				Surrup wa
Linutht	07/10/12					ND (<50)	ND (<0.5)	ND (<5.0)				

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

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

#### Comments

vater sampling of influent (3/7/11) down due to high EFF-V conc. tart, check cat cell. Send for repair. tart, off at departure. tart, install new cat cell. Off at departure. tart. tart. tart. tart. tart. tart, off at departure. tart. tart, off at departure. tart. tart. tdown 3/16 due to overheating - SVE unit replaced. of new SVE unit. tart. tart. for QM. Restart. ve off. Restart 7/18. start. start. start. start. start. tart. umulative Removal (Lbs)

water sampling of effluent (3/7/11)

# Pangea

		Totalizer	Interval	Interval	Average	TPHg	Benzene	MTBE	TPHg	Benzene	MTBE
Well ID	Date	Reading <sup>1</sup>	Flow Volume	Duration	Flow Rate	Concentration	Concentration	Concentration	Removed	Removed	Removed
		(gallons)	(gallons)	(days)	(gpm)	(ug/L)	(ug/L)	(ug/L)	(Lbs)	(Lbs)	(Lbs)

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

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  $(<\!\!0.5)$ 

### Comments

# Pangea

		0			А	S-1	1	AS-2	A	S-3	A	S-4	A	S-5	
Date	Sparge Wells	Compressor Hr Meter Reading <sup>1</sup> (hours)		Interval Time (days)	Flow Rate (scfm)	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
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	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 u
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,
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	2.4	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	I		2.0	15			Off. Restart.

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. 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.

off at departure.
unit replaced.
2, AS-4.

## **APPENDIX A**

Groundwater Monitoring Program

### Table A - Semi-Annual Groundwater Monitoring Program

-			· ·			
Well ID	Well Type	Screened Interval (ft bgs)	Interval Well Location for Monitoring		Gauge Frequency	Sample Frequency <sup>1</sup>
Monitoring We	lls					
MW-1	Mon	7-22	Downgradient	2	2nd, 4th	2nd, 4th
MW-2	Mon	7.5-22.5	S Upgradient	2	2nd, 4th	2nd
MW-3	Mon	7-21.5	W Upgradient	2	2nd, 4th	2nd
MW-4	Mon	7-22	NW Crossgradient	2	2nd, 4th	2nd
MW-5R	Mon	5-20	Source	4	2nd, 4th	2nd, 4th
MW-6	Mon	5-20	E Downgradient	4	2nd, 4th	2nd, 4th
MW-7	Mon	5-20	NE Downgradient	4	2nd, 4th	2nd, 4th
VMP-1	Vapor Monitoring	4.25-4.75	N Boundary (Downgradient)	1/2		
Remediation/N	Ionitoring Wells	•				
AS-1	Mon/Air Sparging	22-25	N Source	1	2nd, 4th	2nd, 4th
AS-2	Air Sparging	22-25		1		
AS-3	Air Sparging	22-25		1		
AS-4	Air Sparging	22-25		1		
AS-5	Air Sparging	21.5-25		1		
VW/MW-2	Mon/Vapor Extraction	6-22	W Crossgradient	2	2nd, 4th	2nd, 4th
VW/MW-4	Mon/Vapor Extraction	5-20	SW Downgradient	2	2nd, 4th	2nd, 4th
DP-1	Dual Phase Extraction (Rem)	8-20		4	2nd	2nd
DP-2	Dual Phase Extraction (Rem)	8-20		4		
DP-3	Dual Phase Extraction (Rem)	8-20		4		
DP-4	Dual Phase Extraction (Rem)	8-20		4		
DP-5	Dual Phase Extraction (Rem)	8-20		4	2nd	2nd

### 1230 14th Street, Oakland, CA

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.

2nd, 4th = Semi Annually during second and fourth quarter, typically May and November

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: 2012 with BOC Workplan

			, ,			
Well ID	Well Type	Screened Interval (ft bgs)	Well Location for Monitoring	Casing Diam. (in)	Gauge Frequency	Sample Frequency <sup>1</sup>
Monitoring We	ells	•				
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 <sup>2</sup> )
MW-6	Mon	5-20	E Downgradient	4	2nd, 3rd, 4th	2nd, 3rd, 4th (and Nov/Dec <sup>2</sup> )
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 <sup>2</sup> )
Remediation/M	Ionitoring 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 <sup>2</sup> )
DP-1	Dual Phase Extraction (Rem)	8-20		4	2nd, 3rd, 4th	2nd (and Nov/Dec <sup>2</sup> )
DP-2	Dual Phase Extraction (Rem)	8-20		4	2nd, 3rd, 4th	2nd (and Nov/Dec <sup>2</sup> )
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 <sup>2</sup> )
DP-5	Dual Phase Extraction (Rem)	8-20		4	2nd, 3rd, 4th	2nd (and Nov/Dec <sup>2</sup> )

1230 14th Street, Oakland, CA

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.

## **APPENDIX B**

Groundwater Monitoring Field Data Sheets



Page 1 of 2

Designat			vven Gal	Iging Data			
	ask #:1150			Project Name	e: Saberi - 1	230 14th S	t.
		akland, CA	4	1		Date: 6/30	/12
Name: Sa	anjiv Gill	1		Signature:	NS		
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
MN-1	2	08:51			11.67	21.32	TOC
MU-2	2	08:39			10.49	22.02	
MN-3	2	08:35			10.6D	18.65	
MU-4	2	08:30			10.94	19.81	
MU-5R	4	09:12			12.15	22.60	
72 <b>6-6</b> MIN-7	4	08:45			11.74	19.70	
MIN-7	4	09:05			12.29	19.81	
S-1	1	08:57			24.29	26.00	
12-m2-2	2	09:25			10.63	21.89	
N-M24	2	09:20			11.01	18.23	
DP-1	Ц	09:40			11.25	22.49	X
comments:							
E	xtractio	n system	his - 1	4823410	syst	en on up	ion arrival (s

Well Gauging Data Sheet

Air space he = 001140

at 10:00 "



Page 2 of 2

			vven Gat	iging Data d	Sheel		
Project.Ta	ask #:1150	.001		Project Name	: Saberi - 1	230 14th St	
1230 14th	n Street, O	akland, CA	A		0.	Date: 6/30/	(12
Name: Sa	anjiv Gill			Signature:	X		
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-5	4	09:45			10.85	20.04	TOC

Well Gauging Data Shoot

Comments:



MONITORING F	ELD DATA	SHEET	-1						
Project.Task #: 1150.001		Project N	lame: Sal	beri - 1230	) 14th St.				
Address: 1230 14th Street, C	aklane, CA								
Date: 6/30/12		Weather	Clo	vdv					
Well Diameter: 2"		Volume/ft. $\frac{1" = 0.04}{2" = 0.16} \frac{3" = 0.37}{4" = 0.65} \frac{6" = 1.47}{radius^{2} * 0.163}$							
Total Depth (TD):	21.32	Depth to	Product:						
Depth to Water (DTW):	11.67	Product <sup>-</sup>	Thickness	:					
Water Column Height:	9.65	1 Casing	Volume:	1.54		gallons			
Reference Point: TOC		<u>3</u> Ca	sing Volur	nes: Z	1.62	gallons			
Purging Device Disposable E	Bailer, 3" PVC	Bailer, P	arastaltic	Pump, W	hal Pump				
Sampling Device: Disposable	NAME AND ADDRESS OF TAXABLE ADDRESS								
Time Temp© pH 15:00 20.2 7.42	Cond (µs) 790	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW			
15:05 19.9 7.38	771				3.0				
15:10 19.8 7.36	767				4.5				
Comments: YSI 550A DO meter		pre purge D	0 = 6.18	mg/l					
;		post purge	DO =	mg/l					
Sample ID: Mルー		Sample Time: 15:15							
Laboratory: McCampbell Ana		1 .							

Signature:

Containers/Preservative: VOA/HCI

Analyzed for: TPHg,BTEX, MTBE

Sampler Name: Sanjiv Gill



Desiget Task the 1150,001	~							
Project.Task #: 1150.001 Project Name: Saberi - 1230 14th	Project Name: Saberi - 1230 14th St.							
Address: 1230 14th Street, Oaklane, CA								
Date: 6/30/12 Weather: Cloudy								
Date: 6/30/12         Weather:         Cloudy           Well Diameter:         2"         Volume/ft.         1" = 0.04         3" = 0.37         6" = 1.4	7 0.163							
Total Depth (TD): 22.02 Depth to Product:								
Depth to Water (DTW): 10.49 Product Thickness:								
Water Column Height: 11.53 1 Casing Volume: 1.84	gallons							
Reference Point: TOC <u>3</u> Casing Volumes: 5.52	gallons							
Purging Device Disposable Bailer, 3" PVC Bailer, Parastaltic Pump, Whal Pu	mp							
Sampling Device: Disposable Bailer								
Time         Temp ©         pH         Cond (μs)         NTU         DO(mg/L)         ORP (mV)         Vol(gal	) DTW							
12:00 19.5 6.90 629 20								
12:05 19.5 695 610 4.0								
12:10 19.7 6.97 612 5.5								
Comments: YSI 550A DO meter pre purge DO = $3.1/6$ mg/l								
; post purge DO = mg/l								

Sample ID: MLJ-2	Sample Time: 12:15							
Laboratory: McCampbell Analytical, INC.	Sample Date: 6/30/12							
Containers/Preservative: VOA/HCI	Containers/Preservative: VOA/HCI							
Analyzed for: TPHg,BTEX, MTBE								
Sampler Name: Sanjiv Gill	Signature:							
	4							



MONITORING FIELD DATA				Well ID: MH-3				3
Project.Task #: 1150.001				Project Name: Saberi - 1230 14th St.				
Address:	1230 14t	h Street,	Oaklane, CA					
Date: 6/3	30/12			Weather	: Cl	oudy		
Well Diar	neter:	2"		Volume/ft.	1" = 0.04 2" = 0.16	3" = 0.37 4" = 0.65	6'' = 1.47 radius <sup>2</sup> * 0	.163
Total De	oth (TD):	1	8.65		Product:		<u> </u>	
Depth to	Water (D	TW): 1	0.00	Product	Thickness	5		
	olumn Hei		8.05	1 Casing	y Volume:	1.2	8	gallons
Referenc	e Point: T	OC			sing Volur			gallons
Purging [	Device: Di	sposable	Bailer, 3" PVC					o
	Device: I	Disposabl						
Time	Temp ©	pН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:30	19.6	7.24	792				1.5	
11:35	19.9	7.22	770				3.0	
11:40	20.0	7.21	768				4.0	
Comments:	YSI 550A E	00 meter		pre purge D	00 = 2.53	mg/l		
;				post purge	DO =	mg/l		

Sample ID: MN-3	Sample Time: 11:45
Laboratory: McCampbell Analytical, INC.	Sample Date: 6/30/12
Containers/Preservative: VOA/HCI	
Analyzed for: TPHg,BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:



MONITORING FIELD DATA				SHEE	Т	Well ID	: M2-	4
Project.7	Fask #: 11	50.001	Project Name: Saberi - 1230 14th St.					
Address	: 1230 141	th Street, (	Daklane, CA					
Date: 6/3	30/12			Weather	: Clou	dy		
Well Dia	meter:	2	()	Volume/ft.	411 0.04	3" = 0.37 4" = 0.65	6" = 1.47 radius <sup>2</sup> * 0.	.163
Total De	pth (TD):		18.81	Depth to	Product:			
Depth to	Water (D	TW):	10.94	Product	Thickness	5		
Water Co	olumn Hei	ght:	8.87	1 Casing	g Volume:	1.41		gallons
Referenc	ce Point: 7	TOC		<u>3</u> Ca	sing Volur	nes: Lj	23	gallons
Purging I	Device.	isposable	Bailer, 3" PVC	Bailer, F	Parastaltic	Pump, W	hal Pump	)
		Disposable						
Time	Temp ©	рН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:05	19.4	7.33	490				1.5	
11:08	19.9	7.38	494				3.0	
11:10	20.0	7.37	490				4.0	
				anonen en al de la des anne en de com a conserve de para			1.1.1.1	
				Anna ann an Anna ann an Anna ann an An				
					4			
Comments:	YSI 550A E	00 meter		pre purge [		mg/l		
;			and the state of the	post purge	DO = '	mg/l		

Sample ID: MU-4	Sample Time: # /1:15							
Laboratory: McCampbell Analytical, INC.	Sample Date: 6/30/12							
Containers/Preservative: VOA/HCI	Containers/Preservative: VOA/HCI							
Analyzed for: TPHg,BTEX, MTBE	10							
Sampler Name: Sanjiv Gill	Signature:							



	MONITO	ORING F	FIELD DATA	SHEET	Г	Well ID	: MW-	5R
Project.T	ask #: 11	50.001		Project Name: Saberi - 1230 14th St.				
Address:	1230 14t	h Street,	Oaklane, CA					
				Weather	: Clou	dy		
Well Diar	meter:	LJ	(/	Volume/ft.	1" = 0.04 2" = 0.16	3" = 0.37 4" = 0.65	6'' = 1.47 radius <sup>2</sup> * 0.	163
Total Dep	pth (TD):		22.60	Depth to	Product:			
Depth to	Water (D	TW):	12.15	Product	Thickness	:		
Water Co	olumn Hei	ght:	10.45	1 Casing	Volume:	te	6 6 7	9 gallons
Referenc	e Point:-T	QC		<u>3</u> Ca	sing Volur	nes:	20.37	gallons
Purging [	Device. Di	sposable	Bailer) 3" PVC	Bailer, F	Parastaltic	Pump, W	hal Pump	D
	Device: I	Disposabl						
Time	Temp ©	рН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
15:30	20.2	7.29	1016				7.0	
15:35	20.2	7.31	1048				14.0	
15:40	20.2	7.31	1051	and the second second second second			20.0	
Comments:	: YSI 550A [	00 meter		pre purge [	0=2.30	mg/l		
;				post purge	DO =	mg/l		

Sample ID: MU-5R	Sample Time: 15:45
Laboratory: McCampbell Analytical, INC.	Sample Date: 6/30/17
Containers/Preservative: VOA/HCI	
Analyzed for: TPHg,BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:



MONITORING FIELD DATA				SHEE	Г	Well ID	: Mu	-6
Project.Task #: 1150.001				Project Name: Saberi - 1230 14th St.				
Address	: 1230 14t	h Street,	Oaklane, CA					
Date: 6/3	30/12			Weather	r: Clu	udy		
Well Dia	meter:	4"		Volume/ft.	1" = 0.04 2" = 0.16	3" = 0.37	6'' = 1.47 radius <sup>2</sup> * 0.	.163
Total De	pth (TD):	1	9.70		Product:			
Depth to	Water (D		11.74		Thickness	:		
Water Co	olumn Hei	ght:	7.96	1 Casing	g Volume:	5.	17	gallons
Reference	ce Point; I	00			ising Volur		5.51	gallons
	(3"		Bailer, 3" PVC					
	g Device: I							
Time	Temp ©	рН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:30	19.9	7.36	443				5.0	
12:40	20.1	7.42	448				10.0	
12:50	20.2	7.44	441				15.5	
						-		
Comments	YSI 550A E	00 meter		pre purge [	00 = 1.47	mg/l		
;				post purge		mg/l		

Sample ID: MN-6	Sample Time: 12:55
Laboratory: McCampbell Analytical, INC.	Sample Date: 6/30/12
Containers/Preservative: VOA/HCI	
Analyzed for: TPHg,BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:



MONITORING FIELD DATA				SHEE	Г	Well ID	: MU-	7
Project.T	「ask #: 11	50.001		Project Name: Saberi - 1230 14th St.				
Address	: 1230 141	th Street,	Oaklane, CA					
Date: 6/3	30/12			Weather	: Clou	dy		
Well Dia	meter:	Ł	-1 ( )	Volume/ft.	1" = 0.04 2" = 0.16	3" = 0.37 4" = 0.65	6'' = 1.47 radius <sup>2</sup> * 0.	163
Total De	pth (TD):		19.81		Product:			
			12.29	Product	Thickness	:		
	olumn Hei		7.52	1 Casing	y Volume:	4.88		gallons
Reference	ce Point: ]	00			sing Volur		.64	gallons
Purging I	Device: Di	isposable	Bailer, 3" PVC					)
Sampling	g Device:	Disposabl	e Bailer					
Time	Temp ©	pН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
13:10	20.	7.12	806				5.0	
13:15	19.9	7.15	829				10.01	
13:20	19.9	7.17	813				14.5	
Comments	: YSI 550A [	DO meter		pre purge [	DO = 2.92	l _mg/l		
;				post purge		mg/l		

Sample ID: MU-7	Sample Time:	13:25
Laboratory: McCampbell Analytical, INC.	Sample Date:	6/30/12
Containers/Preservative: VOA/HCI		
Analyzed for: TPHg,BTEX, MTBE		
Sampler Name: Sanjiv Gill	Signature:	K



## MONITORING FIELD DATA SHEET

Well ID: AS-1

The second secon					Contraction in the second second second second	1		
Project.T	Task #: 11	50.001		Project 1	Name: Sal	beri - 123	0 14th St	
Address	: 1230 141	h Street,	Oaklane, CA					
Date: 6/3	30/12			Weather	: Clin	dy		
Well Dia	meter:	, , , , , , , , , , , , , , , , , , , ,		Volume/ft.	$\frac{1'' = 0.04}{2'' = 0.16}$	3" = 0.37 4" = 0.65	6'' = 1.47 radius <sup>2</sup> * 0	.163
Total De	pth (TD):				Product:			
			24.29	Product	Thickness	3:		
	olumn Hei			1 Casing	Volume:	0.0	6	gallons
Reference	ce Point: T	-OC			sing Volur			gallons
Purging I	Device: Qi	sposable	Bailer, 3" PVC					
	g Device: I							
Time	Temp ©	рН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
13:40	20.1	7.21	755				0.1	
13:41	20.1	7.20	759				0.2	
13:42	20.1	7.24	756				0.3	
Comments:	: YSI 550A E	00 meter		pre purge [	)0 =	mg/l n	o Do o	er Musan
;				post purge	D0 = 🖛	mg/l	,	

Sample ID: AS-1	Sample Time: 13;45					
Laboratory: McCampbell Analytical, INC.	Sample Date: 6/30/12					
Containers/Preservative: VOA/HCI						
Analyzed for: TPHg,BTEX, MTBE						
Sampler Name: Sanjiv Gill	Signature:					



	MONIT	ORING F	IELD DATA	A SHEET Well ID: VW-MW-2			12-2	
Project.7	ask #: 11	50.001		Project Name: Saberi - 1230 14th St.				
Address	: 1230 14	th Street,	Oaklane, CA					
Date: 6/3	30/12			Weather	$\sim clo$	indy		
Well Dia	meter:	2'	1	Volume/ft.	$\frac{1'' = 0.04}{2'' = 0.16}$	3" = 0.37 4" = 0.65	6'' = 1.47 radius <sup>2</sup> * 0.	163
Total De	pth (TD):		21.89		Product:			
		TW):		1	Thickness	:		
	olumn He		11.26		g Volume:			gallons
	ce Point: <sup>-</sup>				sing Volur		5.40	gallons
	-		Bailer, 3" PV					
		Disposabl						
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
14:30	19.9	7.31	592				1.5	
14:35		7.28	599				3.0	
14:40	20.1	7.29	604				5.0	
Comments	: YSI 550A	DO meter		pre purae l	DO = 4.41	l		
,				post purge		mg/l		
areaan and ministration and an added								

Sample ID: Vレ/Mレー2	Sample Time: 14;45
Laboratory: McCampbell Analytical, INC.	Sample Date: 6/30/17
Containers/Preservative: VOA/HCI	
Analyzed for: TPHg,BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature:



	MONIT	ORING F	IELD DATA	A SHEET Well ID: VU- MU-L				MN-4
Project.T	ask #: 11	50.001		Project Name: Saberi - 1230 14th St.				
Address:	1230 14t	h Street, d	Oaklane, CA					
Date: 6/3	80/12			Weather	: clou	ndy		
Well Diar	neter:	2"		Volume/ft.	1" = 0.04 2" = 0.16	3" = 0.37 4" = 0.65	6'' = 1.47 radius <sup>2</sup> * 0.	163
Total De	oth (TD):		18.23		Product:			
Depth to	Water (D	TW):	11.01	Product	Thickness	:		
Water Column Height: 7.22				1 Casing	Volume:	1.15		gallons
Reference Point: TOC				Ca	sing Volur	nes: 3	.45	gallons
Purging [	Device:	isposable	Bailer, 3" PVC	Bailer, F	Parastaltic	Pump, W	hal Pump	<b>)</b>
Sampling	Device:	Disposabl	e Bailer					
Time	Temp ©	рН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
14:00	20.2	7.11	735				1.0	
14:05	20.2	7.19	737				2.0	
14:10	20.0	7.25	743				3.5	
Comments	YSI 550A I	DO meter			00 = 1.29	mg/l		
,				post purge	DO =	mg/l		

Sample ID: VN/MD-4	Sample Time:	14:15
Laboratory: McCampbell Analytical, INC.	Sample Date:	6/30/12
Containers/Preservative: VOA/HCI		
Analyzed for: TPHg,BTEX, MTBE		1
Sampler Name: Sanjiv Gill	Signature:	1e



MONITORING FIELD DATA	SHEET	Well ID: DP-	١	
Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.			
Address: 1230 14th Street, Oaklane, CA				
Date: 6/30/12	Weather: Clov	.d.X		
Well Diameter: 4 '	Volume/ft. $\frac{1" = 0.04}{2" = 0.16}$	3" = 0.37 $6" = 1.474" = 0.65$ radius <sup>2</sup> * 0.7	163	
Total Depth (TD):	Depth to Product:	1		
Depth to Water (DTW): 11.25	Product Thickness	5.		
Water Column Height:	1 Casing Volume:		gallons	
Reference Point: TOC	Casing Volu	mes:	gallons	
Purging Device: Disposable Bailer, 3" PV				
Sampling Device: Disposable Bailer				
Time Temp © pH Cond (µs)	NTU DO(mg/L)	ORP (mV) Vol(gal)	DTW	
	e			
No purg				
Comments: YSI 550A DO meter	pre purge DO = ().()?	ς mg/l		
; ;	post purge DO =	mg/l		

Sample ID: DP-1	Sample Time: 15:55					
Laboratory: McCampbell Analytical, INC.	Sample Date: 6/30/12					
Containers/Preservative: VOA/HCI						
Analyzed for: TPHg,BTEX, MTBE	0					
Sampler Name: Sanjiv Gill	Signature:					



	MONIT	ORING	FIELD DATA	SHEE	Т	Well ID	: DP-	- 5
Project.	Task #: 11	50.001		Project Name: Saberi - 1230 14th St.				
Address	: 1230 14	th Street,	Oaklane, CA					
Date: 6/3	Date: 6/30/12				r: Clu	udy		
Well Dia	meter:	4 <sup>//</sup>	1	Volume/ft.	$\frac{1'' = 0.04}{2'' = 0.16}$	3" = 0.37 4" = 0.65	6" = 1.47 radius <sup>2</sup> * 0	.163
Total De	pth (TD):		20.04	Depth to	Product:			
Depth to	Water (D	TW):	10.85	Product	Thickness	:		
Water Co	olumn He	ight:		1 Casing	g Volume:	~	<u> </u>	gallons
Reference	ce Point: -	ГОС		Ca	sing Volur	nes:		gallons
Purging I	Device: D	isposable	Bailer, 3" PVC	Bailer, F	Parastaltic	Pump, W	/hal Pum	p
		Disposabl						
Time	Temp ©	рН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
			NO Pur	<u>je</u>				
Comments: YSI 550A DO meter pre purge DO = $O.1 L$ mg/l								
;			1	post purge	DO =	mg/l		
		~						

Sample ID: DP-5	Sample Time: 16:00					
Laboratory: McCampbell Analytical, INC.	Sample Date: 6/30/12					
Containers/Preservative: VOA/HCI						
Analyzed for: TPHg,BTEX, MTBE						
Sampler Name: Sanjiv Gill	Signature:					



Page <u>1</u> of <u>1</u>

ENVIRONMEN	TAL SERVICES. I	NC.	Well Gau	iging Data	Sheet		Page <u>1</u> of <u>1</u>
Project.Ta	ask #:1150	.001		Project Name	: Saberi - 1	Contraction and reaction of the second sector rests of the second sector and	
1230 14tł	n Street, O	akland, CA	4			Date 9/	1/12
Name: Sa	anjiv Gill	F		Signature:	<u>J</u>		
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
MN-1	2"	09:20			13.56	21.32	TOC
MN-5R		09:25			13.64	22.60	
ML-6	4″ 9°15	09:15			13.52	19.70	
DP-1	<b>2</b> 4''	09:45			13.63		
DP-2	4″	09:35			13,83		
DP-4	4"	09:30			12.26		
DP-5	4″	09:40			13.51		4
comments				a an			



	MONIT	ORING I	FIEL		SHEE	Г	Well ID	: MU-	-1
Project.	Task #: 11	150.001			Project Name: Saberi - 1230 14th St.				
Address	: 1230 14	th Street,	Oak	land, CA					
Date: 0		nanan manan ma Manan manan mana	and a first of a start of a start of a		Weather	: O	londy		anna an the name of a solution of the constant
Well Dia	******	2	l'		Volume/ft.	11"-0.04		6'' = 1.47 radius <sup>2</sup> * 0.	162
	1996-1998 (* 1996-1996) 1996 - De State State (* 1996) 1996 - De State (* 1996)	L		21.70	Death	and a market state our non-state and one substate	14 = 0.65	Tradius U.	103
	pth (TD):			21.32	1	Product:			
Depth to	Water (D	TW):		13.56	Product	Thickness	3:	endennen statsaffert av brune vær der der som	
Water C	olumn He	ight:		7.76	1 Casing	Volume:	1-24		gallons
Referen	ce Point: -	ТОС			<u>3</u> Ca	sing Volur	nes:	3172	gallons
Purging	Device:	isposable	Bail	er, 3" PVC	C Bailer, F	Parastaltic	Pump, N	/hal Pump	0
Samplin	a Device:	Disposabl	le Ba	ailer					
Time	Temp ©	pH		Cond (µs)	NTU	DO(mg/L)	ORP (mV)	for the second	DTW
10:45	20.6	7.49	7	36				1.5	
10:50	20.4	7.52	7	78				3.0	
10:55	20.3	7.54	7	74				4.0	
				1977 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 -					
				**************************************					
Commente	. VOLEEDA I								
. Comments	: YSI 550A I	DO meter			pre purge L post purge	00 = 4.22	_mg/l mg/l		
1	****	and a second second as a second s		and a second	post purge	20-	1119/1		
								**************************************	

Sample ID: MH-1	Sample Time: 11:00
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/1/10
Containers/Preservative: VOA/HCI	
Analyzed for: TPHg,BTEX, MTBE	<i></i>
Sampler Name: Sanjiv Gill	Signature:



	MONIT	ORING F	FIELD DATA	SHEE	Г	Well ID	: MU-5	R
Project.	Гask #: 11	50.001		Project Name: Saberi - 1230 14th St.				
Address	: 1230 141	h Street,	Oakland, CA					_
Date: C				Weather	clou	dr		
Well Dia	An	1	4 !!	Volume/ft.	1" = 0.04	3" = 0.37	6'' = 1.47 radius <sup>2</sup> * 0.	163
Total De	pth (TD):		22.60	Depth to	Product:	der ogen mænen senter groppen mæner pær		
Depth to	Water (D	TW):	13.64	Product	Thickness	5		
Water C	olumn Hei	ght:	8.96	1 Casing	g Volume:	5.82		gallons
Reference	ce Point: 1	TOC		<u>3</u> Ca	ising Volur	nes: J	7.46	gallons
Purging	Device: D	isposable	Bailer, E"PVC	Bailen F	Parastaltic	Pump, W	hal Pump	)
Sampling	g Device:	Disposabl						
Time	Temp ©	pН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:15	20.9	7.21	1050				6.0	
11:20	20.7	7.20	1092				12.0	
11:25	20.7	7.18	1965				17.0	
Comments	: YSI 550A [	DO meter		pre purge I	00 = /.94	mg/l		
;				post purge	DO =	mg/l		

Sample ID:	MH-SR	a de calatica de la composicionem nas	Sample Time:	11:30					
Laboratory:	McCampbell Analytica	, INC.	Sample Date:	9/1/12	-				
Containers/F	Preservative: VOA/HCI								
Analyzed for	Analyzed for: TPHg,BTEX, MTBE								
Sampler Nai	me: Sanjiv Gill		Signature:	K _					
			/						



MONITORING FIEL	SHEET	<b>M</b>	Well ID	: MH-6	2	
Project.Task #: 1150.001	Project Name: Saberi - 1230 14th St.					
Address: 1230 14th Street, Oakl	and, CA					
Date: 9/1/12		Weather	cloue	ly.		
Well Diameter: 4 '		Volume/ft.	1" = 0.04 2" = 0.16	3" = 0.37 4" = 0.65	6'' = 1.47 radius <sup>2</sup> * 0	.163
	1.70		Product:	den angen og en sen en se ser en sen en se ser en s		
Depth to Water (DTW):	•	Product	Thickness	;		
Water Column Height:	6.18	1 Casing	Volume:	4.0	)	gallons
Reference Point: TOC		<u>3</u> Ca	sing Volur	nes: l'a	2.03	gallons
Purging Device: Disposable Baile	er 3" PVC	C Bailer, Parastaltic Pump, Whal Pump				
Sampling Device: Disposable Ba						
Time Temp © pH C	ond (µs)	NTU	DO(mg/L)	ORP (mV)	the second s	DTW
10:15 20.1 7.40 51	9				4	
10:20 20.6 7.43 53	31				8	
10:25 20.7 7.45 5:	<b>3</b> 3				12	
Comments: YSI 550A DO meter						
; ;		post purge	DO =	mg/l		ger part for a field gap and a field of the part of th

Sample ID: MU-6	Sample Time: 10:30
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/1/12
Containers/Preservative: VOA/HCI	
Analyzed for: TPHg,BTEX, MTBE	2
Sampler Name: Sanjiv Gill	Signature:



MONITORING FIELD DATA				A SHEE	Г	Well ID	: DP-1	
Project.T	ask #: 11	50.001		Project N	Project Name: Saberi - 1230 14th St.			
Address:	1230 14t	h Street,	Oakland CA					
Date: 9	11/12			Weather	1" = 0.04	× la		
Well Diar		4	11	Volume/ft.	1" = 0.04 2" = 0.16	3" = 0.37 4" = 0.65	6" = 1.47 radius <sup>2</sup> * 0.1	163
Total Dep	oth (TD):			Depth to	Product:			
Depth to	Water (D	TW):	13.63	Product	Thickness	3:		
Water Co	olumn Hei	ght:		1 Casing	y Volume:			gallons
Referenc	e Point: T	-OC		Ca	sing Volu	nes:		gallons
Purging [	Device. D	isposable	Bailer, 3" PV	'C Bailer, F	C Bailer, Parastaltic Pump, Whal Pump			
		Disposabl						
Time	Temp ©	pН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
	S. A	5 5 5 0	le pro proc	- = 0				
	54	1		2				
			anna an chuir ann ann ann an tha ann ann ann ann ann ann ann ann ann a					
					l			
						l		
Comments:	YSI 550A [	JO meter		pre purge DO = $2.09$ mg/l post purge DO = mg/l				
) 	an waa mada ka ka ya ka	navora izotoj stata Arresto na dol na por		post puige	00-	mg/l	la na antigan antiga antiga yang kata di an da seba	anoni magamberna lafan bina era (Masekin

Sample ID: DP~1	Sample Time: 12:25
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/1/12
Containers/Preservative: VOA/HCI	
Analyzed for: TPHg,BTEX, MTBE	<i>Л</i> _
Sampler Name: Sanjiv Gill	Signature:



	MONITO	RING F	IELD DATA	SHEET		Well ID:	DP-	2
Project.T	ask #: 11	50.001		Project Name: Saberi - 1230 14th St.				
Address:	1230 14t	h Street, (	Daklan <b>d</b> , CA					
Date: 9		und zu gener für fordet in versionen an den eine die einfahren für einfahren die einfahren die einfahren die ein		Weather	Clau	y	•	
Well Diar		L <sub>1</sub> ''		Volume/ft.	1" = 0.04 2" = 0.16	y 3" = 0.37 4" = 0.65	6" = 1.47 radius <sup>2</sup> * 0.	163
Total Dep	oth (TD):			Depth to	Product:	nga tikata wanga kung canagin yang mangangan	n an	
Depth to	Water (D	TW):	3.83	Product <sup>-</sup>	Thickness			
Water Co	olumn Hei	ght:		1 Casing	Volume:			gallons
Reference	e Point: T	.OC		Ca	sing Volur	nes:		gailons
Purging [	Device: Di	sposable	Bailer, 3" PVC	C Bailer, Parastaltic Pump, Whal Pump				
Sampling	Device: [	Disposable	e Bailer					
Time	Temp ©	pН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
		1 50 0	le Nop	6				
	3			2				
								a she persona ay article a tarka
			ang na salah aya na galam na sana at nagan na mila ing					
							an a	
			n an the state of th					
Comments	: YSI 550A [	DO meter		pre purge [	DO = J.17	mg/l		
;		Charles and a second		post purge	Provident Sound and Contract and Andrease and And	mg/l		

Sample ID: D-2	Sample Time: 12:10
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/1/12
Containers/Preservative: VOA/HCI	
Analyzed for: TPHg,BTEX, MTBE	1
Sampler Name: Sanjiv Gill	Signature:



	MONITO	DRING F	IELD DATA	SHEE	г	Well ID	: DP-	4
Project.T	ask #: 115	50.001	Project Name: Saberi - 1230 14th St.					
Address:	1230 14th	n Street, (	Oakland, CA					
Date: 9	/1 /12			Weather		nd y		
Well Diar	neter:	4″		Volume/ft.	$\frac{1'' = 0.04}{2'' = 0.16}$	3" = 0.37 4" = 0.65	6" = 1.47 radius <sup>2</sup> * 0.	163
Total Dep	oth (TD):				Product:	de norma da poeta da un tese, es a morta do que a		
	Water (DT	ΓW):	1a.26	Product	Thickness	5.		
Water Co	olumn Heig	ght:		1 Casing	g Volume:			gallons
Referenc	e Point: T	oc		Ca	sing Volur	nes:		gallons
Purging [	Device: Dis	sposable	Bailer, 3" PVC	Bailer, F	Parastaltic	Pump, W	hal Pump	)
	Device: D							
Time	Temp ©	рН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
		grab	sample					
				an an ann an tha ann an Arainn Bhinh a tha ann ann an Arainn Arainn Ann an Arainn Arainn an Arainn Arainn Arainn Arainn Arainn an Arainn Arainn Arainn Arainn Arainn Arainn Arainn				
Comments:	YSI 550A D	O meter		pre purge [	00 = 1.21	mg/l	1	]
•				post purge	DO =	mg/l		

Sample ID: DP-4	Sample Time: 11:55
Laboratory: McCampbell Analytical, INC.	Sample Date: 9/1/12
Containers/Preservative: VOA/HCI	
Analyzed for: TPHg,BTEX, MTBE	1.
Sampler Name: Sanjiv Gill	Signature:



	MONITO	DRING F	IELD DATA	SHEET	Г	Well ID	: DP-S	-
Project.Task #: 1150.001				Project N	Name: Sal	oeri - 1230	) 14th St.	
Address	1230 14t	h Street,	Oakland, CA					
Date: 0	11/12			Weather	: cla	Ny		
Well Diar	neter:	4'	1	Volume/ft.	1" = 0.04 2" = 0.16		6" = 1.47 radius <sup>2</sup> * 0.1	63
Total De	oth (TD):				Product:			
Depth to	Water (D	TW):	13.51	Product	Thickness	S:		
Water Co	olumn Heig	ght:		1 Casing	Volume:			gallons
Referenc	e Point: T	OC		Ca	sing Volur	nes:		gallons
Purging [	Device: Di	sposable	Bailer, 3" PVC	Bailer, F	arastaltic	Pump, W	hal Pump	
Sampling	Device: [	Disposabl						
Time	Temp ©	pН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
GO	nb sample	Nopu	rsR					
0	r		0	anto a part for any sport any sport and				
				1				
				antal di Brennanco di sun april da di Zana Ama				
Comments:	YSI 550A D	0 meter		pre purge E post purge	00 = 0.29	mg/l mg/l		
1				post purge	50-	mgn		

Sample ID:	DP-5	Sample Time:	12:15
Laboratory:	McCampbell Analytical, INC.	Sample Date:	9/1/12
Containers/I	Preservative: VOA/HCI		
Analyzed for	: TPHg,BTEX, MTBE		1.
Sampler Na	me: Sanjiv Gill	Signature:	
		V	6

## 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.	Client Project ID: #1150.001; Saberi-1230 14th St	Date Sampled:	06/30/12
1710 Franklin Street, Ste. 200		Date Received:	07/03/12
1710 Frankin Subot, Sto. 200	Client Contact: Tina De La Fuente	Date Reported:	07/11/12
Oakland, CA 94612	Client P.O.:	Date Completed: (	07/11/12

#### WorkOrder: 1207041

July 11, 2012

Dear Tina:

Enclosed within are:

- 1) The results of the 12 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.

Derest Tex TT	osite: <u>www.mc</u> ephone: (877	r .	D D	ш.т.	. (	5		-		-				+					A	nal	1		ck i	f sa						id ".		ag is	V) 🖵 required Comments
Company: Po Tele: 510-936 Project #: 115 Project Location: Sampler Signatur SAMPLE ID	110 From 2 Kland, 3702 0.001 1230 12	Klin CA	F F P P	Ste Ste ax: rojec klan	Scr 20 il: + d 5/10- t Nan	101 101 83 ne: C/-	cafi 56-3 Sab	S Jer S TRI	IX	F	ME	THO	OD VED	TDU Cas (607 / 8071	+ 1700 /	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Hydre	X 502.2 / 601 / 8010 / 8021 (HVOCs)	E / BTEX ONLY (EPA 602 / 8021)	505/ 608 / 8081 (CI Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	507 / 8141 (NP Pesticides)	515/ 8151 (Acidic CI Herbicides)	524.2 / 624 / 8260 (VOCs)	1 525.2 / 625 / 8270 (SVOCs)	x 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	RCRA 8 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)	sample for DISSOLVED metals analysis			** Indicate here if these samples are potentially dangerous to handle:
				#	<u> </u>		Soil	AIL	5 d	5 5	HCI		ð		TPF	Tots	Tot	EPA	TIM	EPA	EPA	EPA	EPA	EPA	EPA	EPA	CAL	RCI	Lea	Filter		_	
M12-1-		6/30/12		3	VOA	X	-	+	+	-12	XΪŤ	-	+	1		-	-	-	-	-		_	-	-				-	-	-			
MN-2 -			12:15	+		$\mathbb{H}$	-	+	-	+	$\left  \right $	+	+			-	-	-	-	-		-				-	-		-	-	-		
MW-3-			11:45	-	++	$\mathbb{H}$	-	+	-		$\left  \right $	+	+			-	+	+	-	-		-		-			-			-			
MW-4 -			11:15			$\mathbb{H}$	-	+	+	+	$\left  \right $		+	+			+	-	-				-	-					-	-	-		
MW-5R			15:45	+	++	$\mathbb{H}$		+	-	+		-	+	+		-	-	+		-		-								-			
M2-6- M2-7				-		$\mathbb{H}$		+	+	+	H	+	+	-	-	+-	+	-	-								-		-				
/ AS-1-			13:25			$^{++}$		+	-	+	111	+	-	+		-	-		-														
VU-MU-2-			14:45	1		H				t	11		1	1	11-		1	1		1-		-											
VU-MU-4			14:15	$\square$		Ħ		-		t		I	+	$^{+}$	1	-	T	-	1	-			-										
TD-1-		×	15:55	×	×	X					11	t	1		X		1																
**MAI clients MUST gloved, open air, samp allowing us to work sa	de handling by	MAI staff.	emicals kn Non-disclo Time:	sure i	be proncurs a	in im	in the	eir s ate S	subm \$250	itteo suro	d san char;	aple ge a	es in ind t	he c	lient ICE/t	is sub	ject 1	to ful	l legs	se im il liat	medi bility	ate h for h	arm arm	or so suffe	riou red.	s fut Tha	ink y	ou f	or ye	dang our u ENTS	unders	nt as stand	a result of brief ing and for

AND A	McCAMPBELL ANALYTICAL, INC.													CI	IA	IN	0	FC	CU	ST	01	ŊΥ	R	E	<b>CO</b>	RD	1292012				
			LOW PAS											TU	JRM	A	RO	UN	DI	ΓIM	E		4		ι,	1		4		Ļ	
	Vebsite: <u>www.mo</u>					mcca	mpt	ell.	com								2000000			con	-			SH				48 H		72	
	elephone: (877	) 252-92	62		Fax	: (92	5) 25	52-9	269					Ge	oT	rac	ker	EL	F	N	PI	)F	10	Ex	cel		1	Vri	te	<b>Jn</b> (1	)W)
							_						_							4	the second se	_		mp	e is	effl	uen	t an			is required
Report To: T	na dela	Fuen	te B	ill To	): 1	Far	AP	a					-	_		-		-	Ana	alysi	s Re	que	st			-		_	0	ther	Comments
Company:	Pangea E 1710 Fran Oakland 50.001	Klin CA	St.	tal Ste E-Ma	: 20 il: + (	SEI	ce.	Lei	de	Bpo	unger	aen	łow	MTBE		E/B&F)				ongeners	0					(	(		lysis		** Indicate here if these samples are
Tele: 510-9 Project #: //	6-3702		F	ax:	5/10-	- 83	6-3	370	29	120	11.3	ths		8015)/		2230	-	(5	(17	Drs / C		(8			-	/ 6020	/ 6020		ls ana		potentially dangerous to
Project #: 11 Project Locatio	20.001	th s		L	A	r n	ab	er	1-1-	SO	IN		7	90 +		199	418.	VOC	190	roch		icide			NAS	010	010		neta		handle:
Sampler Signat	11: 1230 12	E.	/		1 10	CF-	1			H	2			8021		Se (1	) SHO	H	0.04	V-V	(s)	lerb	8	CS)	s/p	8/6	8/6	020	ED		
Sampler Signat	The Thiske		viranm	late	+	pm	MAT	8		15	IETI	HOI	5	(602/		rea	arbe	8021	P.LTA		tricid	CIF	V0	SVO	PAH	200	200	0/0	ILVI		1
		SAMI	PLING		50		MAT	RI	x		ESE			1.00	-	8	droc	101	1	1.10	Pes	sidic	090	220 (	10 (	0.7 /	0.7/	/ 601	ISS		
SAMPLE ID	LOCATION/ Field Point Name	Date	Time	Containers	Type Containers				e .			3		& TPH as G	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbous (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	MIBE / BIEA UNLY (EFA 0027 0021) EDA ERECOR / 8081 //1 Duritoideal	EFA 2027 000 / 0004 [CI FEBRUARS] EPA 608 / 8082 PCP*4 ONLY: Araclars / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic CI Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	RCRA 8 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)	sample for DISSOLVED metals analysis		
	, unite	Duit	, mic	# Con	Type (	Water	Soil	AIL	Other	ICE	HCL	HNO <sub>3</sub>	Other	BTEX & TPH	TPH as	Total Pe	Total Po	EPA 50	MIBE	EPA 60	EPA 50	EPA 51	EPA 52	EPA 52	EPA 83	CAMT	RCRA	Lead (2	Filter sa		
DP-5-		6/20/17	16:00	3	VOA	X		1		X	X			X																	1. A.
DE		U SAL C	16/00	1	1VUH	4	-	1	1	1	1						-			-	-					-					
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**MAI clients MU gloved, open air, s allowing us to wor	ample handling by	ngerous ch MAI staff.	emicals kn Non-discle	iown t osure i	o be pi incurs	resent an im	in th medi	eir s ate S	ubmi 8250 s	tted	samj narge	ples c and	in co d the	clier	itrati it is s	ons t ubje	hat n ct to l	nay c full le	ause i cgal li	imme iabili	diate ty for	harr	n or : n suf	seriou fered	us fut . Th	ture ank	healt you f	th en for ye	dang our u	ermen inderst	as a result of brief, anding and for
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C		7/3/12	11:04	1	U.	V	ns	301	De-	t.							DITI		T	-											
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## McCampbell Analytical, Inc.



1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

(925) 252-9262				WorkOr	der: 1207041	Clie	ntCode: PEO		
	WaterTrax	WriteOn	✓ EDF	Excel	EQuIS	🖌 Email	HardCop	y ThirdParty	☐ J-flag
Report to:				Bil	I to:		R	equested TAT:	5 days
Tina De La Fuente	Email:	tdelafuente@par	ngeaenv.com		Bob Clark-Rid	dell			
Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	cc: PO: ProjectNo:	#1150.001; Sabe	eri-1230 14th St		Pangea Enviro 1710 Franklin Oakland, CA 9	Street, Ste. 2	00 <i>L</i>	Date Received: Date Printed:	07/03/2012 07/03/2012
(510) 836-3700 FAX: (510) 836-3709	-						_		0110012012

				Ī	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	
1207041-001	MW-1	Water	6/30/2012 15:15		А	А											
1207041-002	MW-2	Water	6/30/2012 12:15		А												
1207041-003	MW-3	Water	6/30/2012 11:45		А	-											
1207041-004	MW-4	Water	6/30/2012 11:15		А	-											
1207041-005	MW-5R	Water	6/30/2012 15:45		А	-											
1207041-006	MW-6	Water	6/30/2012 12:55		А												
1207041-007	MW-7	Water	6/30/2012 13:25		А												
1207041-008	AS-1	Water	6/30/2012 13:45		А	-											
1207041-009	VW-MW-2	Water	6/30/2012 14:45		А	-											
1207041-010	VW-MW-4	Water	6/30/2012 14:15		А	-											
1207041-011	DP-1	Water	6/30/2012 15:55		А												
1207041-012	DP-5	Water	6/30/2012 16:00		А												

#### Test Legend:

1	G-MBTEX_W
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PREDF REPORT	]
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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.



### Sample Receipt Checklist

Client Name:	ient Name: Pangea Environmental Svcs., Inc.				Date a	and Time Received:	7/3/2012 2:10:26 PM
Project Name:	#1150.001; Sabe	eri-1230 14th St			LogIn	Reviewed by:	Melissa Valles
WorkOrder N°:	1207041	Matrix: Water			Carrie	r: <u>Client Drop-In</u>	
		Cha	in of Cu	<u>istody (C</u>	OC) Informat	tion	
Chain of custody	present?		Yes	✓	No		
Chain of custody	signed when relind	quished and received?	Yes	✓	No		
Chain of custody	agrees with sampl	le labels?	Yes	✓	No		
Sample IDs note	d by Client on COC	??	Yes	✓	No		
Date and Time o	f collection noted b	y Client on COC?	Yes	✓	No 🗌		
Sampler's name	noted on COC?		Yes	✓	No 🗌		
			Sample	Receipt	Information		
Custody seals in	tact on shipping co	ntainer/cooler?	Yes		No 🗌		NA 🗹
Shipping contain	er/cooler in good c	ondition?	Yes	✓	No 🗌		
Samples in prope	er containers/bottle	s?	Yes	✓	No 🗌		
Sample containe	rs intact?		Yes	✓	No 🗌		
Sufficient sample	e volume for indicat	ted test?	Yes	✓	No 🗌		
		Sample Pres	servatio	n and Ho	old Time (HT)	Information	
All samples rece	ived within holding	time?	Yes	✓	No		
Container/Temp	Blank temperature		Coole	er Temp:	4.3°C		
Water - VOA vial	ls have zero heads	pace / no bubbles?	Yes	✓	No 🗌	No VOA vials submi	itted
Sample labels ch	necked for correct p	preservation?	Yes	✓	No 🗌		
Metal - pH accep	otable upon receipt	(pH<2)?	Yes		No 🗌		NA 🗹
Samples Receive	ed on Ice?		Yes	✓	No 🗌		
		(Ісе Тур	be: WE	TICE )	)		

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

Comments:

\_\_\_\_\_

	McCamp "W	bell A Then Qualit		<u>II, Inc.</u>		oll Free Telepho	Pass Road, Pittsburg ne: (877) 252-9262 pbell.com / E-mail: 1	Fax: (925) 252	-9269						
Pangea	Environmental Svc	s., Inc.		Project ID:	#1150.001;	Saberi-	Date Sample	ed: 06/30	0/12						
1710 Er	anklin Street, Ste. 2	200	1230 1	4th St			Date Receive	ed: 07/02	3/12						
171011	alikilli Sueet, Ste. 2	200	Client	Contact: Tir	na De La Fu	ente	Date Extract	ed: 07/0	: 07/06/12-07/11/12						
Oakland	l, CA 94612		Client	P.O.:		Date Analyzed: 07/06/12-07/11/12									
Extraction r	Gas nethod: SW5030B	oline Ran	ge (C6-C12)	•		<b>as Gasoli</b> 5W8021B/8015	ne with BTEX	X and MT		rk Order: 1207041					
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments				
001A	MW-1	w	260	ND	0.58	0.99	3.4	13	1	101	d1,b1				
002A	MW-2	W	ND	ND	ND	ND	ND	ND	1	100					
003A	MW-3	w	ND	ND	ND	ND	ND	ND	1	93	b1				
004A	MW-4	w	ND	ND	ND	ND	ND	ND	1	90	b1				
005A	MW-5R	W	3400	ND<25	300	53	120	150	5	107	d1				
006A	MW-6	w	ND	ND	ND	ND	ND	ND	1	87					
007A	MW-7	w	ND	ND	ND	ND	ND	ND	1	88					
008A	AS-1	w	ND	ND	ND	ND	ND	ND	1	91					
009A	VW-MW-2	W	ND	ND	ND	0.54	ND	3.1	1	90	b1				
010A	VW-MW-4	W	3400	ND<50	640	42	39	190	10	101	d1				
011A	DP-1	W	2800	ND<50	66	41	43	420	10	94	d1				
012A	DP-5	W	4600	ND<50	350	240	83	470	10	100	d1				
-	ng Limit for DF =1;	W	50	5.0	0.5	0.5	0.5	0.5		 μg/I					
	ans not detected at or	S	1.0	0.05	0.005	0.005	0.005	0.005		mg/k					

\* 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.

0.005

0.005

0.005

0.005

mg/Kg

# 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:

0.05

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

S

1.0

d1) weakly modified or unmodified gasoline is significant

Angela Rydelius, Lab Manager

above the reporting limit



## QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water	QC Matrix:	Water			BatchID	: 68845	WorkOrder: 1207041				
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked Sam	ple ID:	1207014-001A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS		
TPH(btex) <sup>£</sup>	ND	60	108	101	7.08	110	70 - 130	20	70 - 130		
MTBE	ND	10	103	104	0.661	101	70 - 130	20	70 - 130		
Benzene	ND	10	100	106	6.02	104	70 - 130	20	70 - 130		
Toluene	ND	10	99.4	106	6.84	104	70 - 130	20	70 - 130		
Ethylbenzene	ND	10	98.7	102	3.50	104	70 - 130	20	70 - 130		
Xylenes	ND	30	93.9	98.7	5.02	100	70 - 130	20	70 - 130		
% SS:	105	10	100	98	2.45	100	70 - 130	20	70 - 130		
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with t	he following	g exception	ns:				

			BATCH 68845 SI	<u>UMMARY</u>			
Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1207041-001A	06/30/12 3:15 PM	07/06/12	07/06/12 2:27 PM	1207041-004A	06/30/12 11:15 AM	07/06/12	07/06/12 3:29 PM
1207041-005A	06/30/12 3:45 PM	07/11/12	07/11/12 2:12 PM	1207041-006A	06/30/12 12:55 PM	07/06/12	07/06/12 5:49 PM
1207041-007A	06/30/12 1:25 PM	07/06/12	07/06/12 6:21 PM	1207041-008A	06/30/12 1:45 PM	07/06/12	07/06/12 10:00 PM
1207041-009A	06/30/12 2:45 PM	07/09/12	07/09/12 4:39 PM	1207041-010A	06/30/12 2:15 PM	07/06/12	07/06/12 8:31 PM
1207041-011A	06/30/12 3:55 PM	07/06/12	07/06/12 9:30 PM	1207041-012A	06/30/12 4:00 PM	07/06/12	07/06/12 10:29 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.

₩\_\_\_QA/QC Officer



## QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water	QC Matrix:	Water			BatchID	: 68886	WorkOrder: 1207041				
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked Sam	ple ID:	1207036-004A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS		
TPH(btex) <sup>£</sup>	ND	60	83.9	85.7	2.15	94.4	70 - 130	20	70 - 130		
MTBE	ND	10	90	88.7	1.44	98.2	70 - 130	20	70 - 130		
Benzene	ND	10	84.4	81	4.04	88.1	70 - 130	20	70 - 130		
Toluene	ND	10	86.5	82.2	5.03	88.6	70 - 130	20	70 - 130		
Ethylbenzene	ND	10	86.1	82.3	4.52	89.9	70 - 130	20	70 - 130		
Xylenes	ND	30	88.6	85	4.07	93	70 - 130	20	70 - 130		
%SS:	96	10	95	91	4.24	91	70 - 130	20	70 - 130		
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with t	he following	g exceptio	ns:	·			

				<u>BATCH 68886 SI</u>	JMMARY			
	Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
ſ	1207041-002A	06/30/12 12:15 PM	07/06/12	07/06/12 8:41 AM	1207041-003A	06/30/12 11:45 AM	07/07/12	07/07/12 4:52 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



McCampbell Analytical, Inc. "When Quality Counts"

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; Saberi-1230 14th Street	Date Sampled:	09/01/12
1710 Franklin Street, Ste. 200		Date Received:	09/04/12
	Client Contact: Tina De La Fuente	Date Reported:	09/10/12
Oakland, CA 94612	Client P.O.:	Date Completed:	09/06/12

#### WorkOrder: 1209009

September 10, 2012

Dear Tina:

Enclosed within are:

- 1) The results of the 7 analyzed samples from your project: #1150.001; Saberi-1230 14th Street,
- 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.

	AcCar 1534 Willow www.mccam Telephone:	Pass Ro pbell.co	d. / Pittsb om / mc 52-9262 /	urg, ( iin@m 'Fax:	Ca, 94 100ar (925)	4565 mpb 252	-170 ell.c -926	1 om	IC					CUF Geo'			οι	JNE	) T	IM Q	E PD	F	RUS Ø	Ex	۲ 24 دcel	HR	h V	48 I Vri	ite (	72 H <b>)n (D</b>	IR 5 DAY W) C
	a de la Fu		10	Bill To	o: Po	inge	26								_	_	_	A	nal	ysis	Req	ues	t			_			Ot	her	Comments
Company: Para Tele: (510) 83 Project #: 115 Project Location: Sampler Signatur	1230 1	A A uth s	street	E-Mai Fax: ( Projec	200 il: 44 (51K ct Nar	1) 2 me:	Salar G	-371 4	09	IN IS	ns!	tree	F		Total Petroleum Oil & Grease (1664/ 5529 E/B&F)	bons (418.1)	21 (HVOCs)	A 60278021)	sticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	cides)	Herbicides)	)Cs)	ÓCs)	Hs / PNAs)	0.8 / 6010 / 6020)	0.8 / 6010 / 6020)	6010 / 6020)	sample for DISSOLVED metals analysis		**Indicate here if these samples are potentially dangerous to handle:
		SAM	PLING		Su		MAT	rki)	X		ÈTH ESER	OD VED	IS (602		& Gr	drocan	10/80	N (EI	(CLP	NO \$.5	Pestic	idie C	60 (VC	70 (SV	A) 01	17/20	7720	6010	SSOL		
SAMPLE ID	LOCATION/ Field Point Name	Date	Time	# Containers	Type Containers	Water	Soil	Air Sludge	Other	ICE	HCL	Other	BTEN & TPH as Ga	TPH as Diesel (8015)	Total Petroleum Oil	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	MTBE / BTEN ONLY (EPA 602 /	EPA 505/ 608 / 8081 (CI Pesticides)	EPA 608 / 8082 PCB	EPA 507 / 8141 (NP Pesticides)	EPA \$15 / \$151 (Acidic CI Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVÓCs)	EPA 8270 SIM / 8310 (PAHs / PN/	CAM 17 Metals (200.77/200.87/60107/6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.77/200.87)	Filter sample for DIS		
MH-1.	\$	9/1/12	00:11	3	VOA	X				X	Ŷ	-	X																	-	
MW-5R-			11:30		1			-		1			I																		
MN-6.			10:30																											•	
DP-1.			12:25																												
DP-2.			12:10																												
DP-4.			11:55																												
DP.5		k	12:15	1	*	×				1	ĸ		1																		
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**MAI clients MUST gloved, open air, samp allowing us to work sa	ole handling by M	igerous ch MAI staff.	emicals kn Non-discle	own to sure in	be pre icurs a	esent n imr	in the nedia	ir sul te \$25	bmitt 50 su	ed sa rehar	mple rge at	s in c nd the	once e clie	ntrati nt is s	ions subje	that i	may full	cause legal	e imn liabi	nedia lity f	ite ha or ha	trm c trm s	or ser suffer	rious red.	futu Thai	re ho ak yo	calth ou foi	end: r you	anger ir und	ment a: lerstan	s a result of brief ding and for
Relinquished B	/	Date:	Time:	Rece	ived B	2	1	n	1	1				E/f°	X	1	ION		1		_					(	COM	ME	NTS:		
Relinquished By:	11	\$/1/12 Date:	1:04 Time:	Dag	1/12	n	/	Va	l	~			HE	ADS	PAC	CE A	BSE	NT	6	/											
Jans Was	the	4/4/12	Time: 2.40	Rece	ived is	11	in	/	71	-	-		AP	PRO	PRL	ATE	CON	TAI		s	V	/									
Relinquished By:		Date:	Time:	Rece	ived B	y:	n c		0		0		PR	ESEI	RVE	D IN	LAI	B	-/	-											
													DD	ESEI	23.7 6	1103		AS	0&		MET pH<2		5 0	THI	ER						Page 2

# McCampbell Analytical, Inc.



1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

Pittsburg, CA 94565-1701 (925) 252-9262				WorkO	order: 1209009	Clie	ntCode: PEO		
	WaterTrax	WriteOn	✓ EDF	Excel	EQuIS	🖌 Email	HardCop	y ThirdParty	☐ J-flag
Report to:				В	sill to:		R	equested TAT:	5 days
Tina De La Fuente	Email: 1	tdelafuente@par	ngeaenv.com		Bob Clark-Rid	dell			
Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	cc: PO: ProjectNo: ;	#1150.001; Sabe	eri-1230 14th Stree	et	Pangea Enviro 1710 Franklin Oakland, CA S	Street, Ste. 2	00 D	ate Received: ate Printed:	09/04/2012 09/04/2012
(510) 836-3700 FAX: (510) 836-3709									

								Re	questec	Tests (	(See leg	end bel	ow)			
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1209009-001	MW-1	Water	9/1/2012 11:00		А	А										
1209009-002	MW-5R	Water	9/1/2012 11:30		А											
1209009-003	MW-6	Water	9/1/2012 10:30		А											
1209009-004	DP-1	Water	9/1/2012 12:25		А											
1209009-005	DP-2	Water	9/1/2012 12:10		А											
1209009-006	DP-4	Water	9/1/2012 11:55		А											
1209009-007	DP-5	Water	9/1/2012 12:15		А											

#### Test Legend:

1	G-MBTEX_W
6	
11	

2	PREDF REPORT	
7		
12		

3	
8	

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9	

5	
10	

Prepared by: Maria 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.



# Sample Receipt Checklist

Client Name:	Pangea Envir	onmental Svcs., Inc.			Date a	and Time Received:	9/4/2012 2:	49:06 PM
Project Name:	#1150.001; S	aberi-1230 14th Street			LogIn	Reviewed by:		Maria Venegas
WorkOrder N°:	1209009	Matrix: Water			Carrie	er: David Valles (N	<u>IAI Courier)</u>	
		<u>Cha</u>	in of Cu	istody (C	OC) Informa	tion		
Chain of custody	present?		Yes	✓	No			
Chain of custody	signed when re	elinquished and received?	Yes	✓	No 🗌			
Chain of custody	agrees with sa	mple labels?	Yes	✓	No 🗌			
Sample IDs note	d by Client on 0	000?	Yes	✓	No			
Date and Time o	f collection note	ed by Client on COC?	Yes	✓	No			
Sampler's name	noted on COC	?	Yes	✓	No			
			Sample	Receipt	Information			
Custody seals in	tact on shipping	g container/cooler?	Yes		No 🗌		NA 🗹	
Shipping contain	er/cooler in goo	od condition?	Yes	✓	No 🗌			
Samples in prop	er containers/bo	ottles?	Yes	✓	No 🗌			
Sample containe	ers intact?		Yes	✓	No 🗌			
Sufficient sample	e volume for ind	licated test?	Yes	✓	No 🗌			
		Sample Pres	ervatio	n and Ho	old Time (HT)	Information		
All samples rece	ived within hold	ing time?	Yes	✓	No 🗌			
Container/Temp	Blank temperat	ure	Coole	r Temp:	2.4°C		NA	
Water - VOA via	ls have zero he	adspace / no bubbles?	Yes	✓	No 🗌	No VOA vials submi	tted	
Sample labels ch	necked for corre	ect preservation?	Yes	✓	No			
Metal - pH accep	otable upon rece	eipt (pH<2)?	Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No 🗌			
		(Ісе Тур	e: WE	T ICE )	)			
* NOTE: If the "N	lo" box is checl	ked, see comments below.						

Comments:

\_\_\_\_\_

\_\_\_\_\_

			nalyticc ty Counts''	al, Inc.		oll Free Telepho	Pass Road, Pittsburg ne: (877) 252-9262 pbell.com / E-mail: 1	/ Fax: (925) 252	-9269						
Pangea	a Environmental Svc	es., Inc.		Project ID: 4th Street	#1150.001;	Saberi-	Date Sample	ed: 09/0	1/12						
1710 F	Franklin Street, Ste. 2	200	12301	-ui Succi			Date Receiv	eceived: 09/04/12							
				Contact: Tir	na De La Fu	ente	Date Extract		5/12-09						
Oaklar	nd, CA 94612		Client				Date Analyz		5/12-09	/07/12					
Extraction	Gasen method: SW5030B	oline Ran	ne with BTE2	X and MTI		rk Order:	1209009								
Lab ID	Client ID	Matrix	Ethylbenzene	Xylenes	DF	% SS	Comments								
001A	<b>MW-1</b>	W	220	ND	0.60	1.0	7.8	13	1	95	d1,b1				
002A	MW-5R	W	1200	ND<10	110	20	51	120	2	120	d1				
003A	MW-6	W	ND	ND	ND	ND	ND	ND	1	87					
004A	DP-1	W	7300	ND<250	360	180	68	1700	50	88	d1				
005A	DP-2	W	2300	ND<50	100	17	61	440	10	96	d1				
006A	DP-4	W	590	ND	3.6	15	2.6	140	1	106	d1				
007A	DP-5	w	8100	ND<50	270	910	180	1700	10	110	d1				
				_											

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

\_\_\_\_\_Angela Rydelius, Lab Manager



## **QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Water	QC Matrix:	Water			BatchID	: 70501	WorkOrder: 1209009					
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked Sarr	ple ID:	1209009-003A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	Criteria (%)				
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS			
TPH(btex) <sup>£</sup>	ND	60	96.3	97.2	0.917	106	70 - 130	20	70 - 130			
MTBE	ND	10	103	106	2.57	101	70 - 130	20	70 - 130			
Benzene	ND	10	99.5	98.8	0.740	106	70 - 130	20	70 - 130			
Toluene	ND	10	103	101	1.76	108	70 - 130	20	70 - 130			
Ethylbenzene	ND	10	105	103	1.48	109	70 - 130	20	70 - 130			
Xylenes	ND	30	111	109	1.62	113	70 - 130	20	70 - 130			
%SS:	87	10	82	79	4.29	91	70 - 130	20	70 - 130			
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with th	he following	exception	ns:					

	BATCH 70501 SUMMARY														
Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed								
1209009-001A	09/01/12 11:00 AM	09/05/12	09/05/12 5:23 PM	1209009-002A	09/01/12 11:30 AM	09/07/12	09/07/12 1:11 AM								
1209009-003A	09/01/12 10:30 AM	09/05/12	09/05/12 6:54 PM	1209009-004A	09/01/12 12:25 PM	09/05/12	09/05/12 8:23 PM								
1209009-005A	09/01/12 12:10 PM	09/07/12	09/07/12 7:09 AM	1209009-006A	09/01/12 11:55 AM	09/05/12	09/05/12 7:24 PM								
1209009-007A	09/01/12 12:15 PM	09/07/12	09/07/12 4:29 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.

忧 \_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.	Client Project ID: #1150.001; 1230 14th St	Date Sampled: 01/24/12
1710 Franklin Street, Ste. 200		Date Received: 01/24/12
1710 Frankin Subot, Sto. 200	Client Contact: Morgan Gillies	Date Reported: 01/30/12
Oakland, CA 94612	Client P.O.:	Date Completed: 01/25/12

#### WorkOrder: 1201648

January 30, 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.

1.201648

Web	McCAMPBELL ANALYTICAL, INC.         1534 Willow Pass Road         Pittsburg, CA 94565         Website: www.mccampbell.com         Telephone: (925) 252-9262         Fax: (925) 252-9269         Bill To: Pangea													N A		DUI	ND	TI	MI	3	F		н	24 1		48			72 H		5 DAY	1		
Report To: Morg	an Gillies		E	Sill To	o: Pa	ngea	1												Α	naly	sis	Req	ues	t						Ot	ıer	C	ommen	ts
Company: Pange	a Environme	ental Ser	vices, In	c.																									Т			IN	ilter	
1710 Franklin Str	eet, Suite 200	0, Oakla	and, CA	94612	2									ΞE																			amples	
		E-Mail: mgillies@pangeaenv.com								MTB																			r Meta	s				
Tele: (510) 836-3	702				(510)									8015)/MTBE							ì												alysis:	
Project #: 1150.0		Project Name: 1230 14th St								+ 80																		Y	es / No					
<b>Project Location:</b>	1230 14th St	t., Oakland								020																								
Sampler Signatur	e: Star	The	~											(602/8020														-	+	+	-	-		-
		SAMI	PLING		ers		MAT	RIX	(			HOD RVE		Gas (6																				
SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Sludge	Other					BTEX & TPH as (																				
EFE-V	EFF	1-24-42	1010	1	Tedla		-	/			-		+	X			+	+			+			-		-	-	+	+	+	+	+		-
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INF-V	INF	1-24-12	1020	1	leawy		-17	+		-	-	-	4	X				-		-	-	-		-		-	-	-	+	+	+	+		_
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2.2														PR	ESE	RVAT	TION					pH<		S. 88										

#### McCampbell Analytical, Inc. 1534 Willow Pass Rd Pittsburg, CA 94565-1701



Page 1 of 1

(925) 252-9262				WorkOr	der: 1201648	Clier	ntCode: PEO		
	WaterTrax	WriteOn	EDF	Excel	Fax	✓ Email	HardCopy		J-flag
Report to:				Bill	to:		Re	equested TAT:	5 days
Morgan Gillies	Email: n	ngillies@pangea	env.com		Bob Clark-Rid	ddell			
Pangea Environmental Svcs., Inc.	CC:				Pangea Envir	ronmental Svcs	s., Inc.		
1710 Franklin Street, Ste. 200	PO:				1710 Franklir	Street, Ste. 20	$D_0 D_0$	ate Received:	01/24/2012
Oakland, CA 94612	ProjectNo: #	#1150.001; 1230	14th St		Oakland, CA	94612	De	ate Printed:	01/24/2012
(510) 836-3700 FAX: (510) 836-3709									

					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
						1	-	-	1	T	1	1	1	1		
1201648-001	EFF-V	Air	1/24/2012 10:10		Α	Α										
1201648-002	INF-V	Air	1/24/2012 10:20		А											

#### Test Legend:

1	G-MBTEX_AIR
6	
11	

2	PREDF REPORT
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12	

3	
8	

4	
9	

5	
10	

The following SampIDs: 001A, 002A contain testgroup.

#### Prepared by: Ana 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.



# Sample Receipt Checklist

Client Name: Pangea Environmental Svcs., Inc.					Date a	and Time Received:	1/24/2012 5	:57:14 PM
Project Name:	#1150.001; 1230 14	Ith St			Check	list completed and re	eviewed by:	Ana Venegas
WorkOrder N°:	1201648	Matrix: <u>Air</u>			Carrie	r: <u>Benjamin Ysla</u> :	s (MAI Courier	с)
		Cha	<u>iin of Cւ</u>	istody (COC	) Informat	tion		
Chain of custody	present?		Yes	✓	No			
Chain of custody	signed when relinquis	shed and received?	Yes	✓	No 🗌			
Chain of custody	agrees with sample la	abels?	Yes	✓	No 🗌			
Sample IDs note	d by Client on COC?		Yes	✓	No 🗌			
Date and Time of	f collection noted by C	Client on COC?	Yes	✓	No 🗌			
Sampler's name	noted on COC?		Yes	✓	No			
			<u>Sample</u>	Receipt Inf	ormation			
Custody seals int	tact on shipping conta	iner/cooler?	Yes		No 🗌		NA 🗹	
Shipping contain	er/cooler in good cond	dition?	Yes	✓	No 🗌			
Samples in prope	er containers/bottles?		Yes	✓	No 🗌			
Sample containe	rs intact?		Yes	✓	No			
Sufficient sample	e volume for indicated	test?	Yes	✓	No 🗌			
		Sample Pres	servatio	n and Hold 1	Гіте (HT)	Information		
All samples recei	ived within holding tim	ne?	Yes	✓	No 🗌			
Container/Temp	Blank temperature		Coole	er Temp:			NA 🗹	
Water - VOA vial	s have zero headspac	ce / no bubbles?	Yes		No 🗌	No VOA vials submi	itted 🗹	
Sample labels ch	necked for correct pres	servation?	Yes	$\checkmark$	No 🗌			
Metal - pH acceptable upon receipt (pH<2)?			Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?		Yes		No 🖌			

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

Comments:

\_\_\_\_\_

\_\_\_\_\_

	McCam		oll Free Telepho	Pass Road, Pittsburg ne: (877) 252-9262 pbell.com / E-mail:	/ Fax: (925) 252	-9269					
Pangea Environmental Svcs., Inc.				ient Project ID:	Date Sampled: 01/24/12						
1710	Franklin Street, Ste	. 200	14	th St			Date Receiv	ed: 01/2	4/12		
	, ~		Cli	ient Contact: M	organ Gillie	8	Date Extract	ted: 01/2	5/12		
Oakla	nd, CA 94612		Cli	ient P.O.:			Date Analyz	xed: 01/2	5/12		
Extractio	Ga on method: SW5030B	soline Rai	nge (C6-C	212) Volatile Hy Analyt	drocarbons			X and MT		rk Order:	1201648
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	EFF-V	А	630	ND	9.0	7.8	1.4	6.6	1	#	d1
002A	INF-V	А	5200	ND<80	77	72	15	62	6.7	100	d1

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

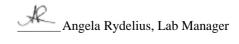
\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

# 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

	McCar		ell Ana Quality Cor	ytical, Inc. unts''		Toll Free Telepho	Pass Road, Pittsburg, CA 94565-1701 ne: (877) 252-9262 / Fax: (925) 252-9269 pbell.com / E-mail: main@mccampbell.com				
Pange	a Environmental	Svcs., Ii	nc.	Client Project II	D: #1150.0	Date Sampled: 01/24/12					
1710	Franklin Street, S	ta 200		14th St			Date Receiv	ved: 01/24/1	2		
1/10	Flankini Succi, S	ie. 200		Client Contact:	Morgan Gil	lies	Date Extract	ted: 01/25/1	12		
Oakla	nd, CA 94612			Client P.O.:			Date Analyz	zed: 01/25/1	12		
			nge (C6-C	12) Volatile Hydr				nd BTEX in j			
Extracti Lab ID	on method: SW5030E Client ID	Matrix	TPH(g)	Ar	Benzene	SW8021B/801 Toluene	5Bm Ethylbenzene	Xylenes	Wo: DF	rk Order: % SS	1201648 Comments
001A	EFF-V	A	180	ND	2.8	2.0	0.32	1.5	1	#	d1
002A	INF-V	Α	1500	ND<26	24	19	3.5	14	6.7	100	d1
	ppm (	mg/L) to j	opmv (ul/L) c	onversion for TPH(g)	assumes the m	olecular weight	of gasoline to be e	equal to that of h	exane.		
	ting Limit for $DF = 1$ ;	A	7.0	0.68	0.077	0.065	0.057	0.057	1		uL/L
	eans not detected at or ve the reporting limit	S	NA	NA	NA	NA	NA	NA	1	1	mg/Kg
	samples are reported P & SPLP extracts are			id samples in mg/kg,	wipe samples i	n µg/wipe, produ	uct/oil/non-aqueo	us liquid sample	s in mg/	L, water	samples and
	-			a surrogate peak; %SS							
	owing descriptions of kly modified or unmo			n are cursory in nature	and McCamp	bell Analytical is	not responsible f	or their interpret	ation:		

DHS ELAP Certification 1644





## **QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Air	QC Matrix: Water				BatchID	: 64315		WorkOrder: 1201648		
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked San	ple ID:	1201654-002C	
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) <sup>£</sup>	ND	60	121	114	5.47	119	70 - 130	20	70 - 130	
MTBE	ND	10	104	92.3	11.6	104	70 - 130	20	70 - 130	
Benzene	ND	10	106	100	5.63	105	70 - 130	20	70 - 130	
Toluene	ND	10	105	101	4.38	103	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	106	103	3.33	104	70 - 130	20	70 - 130	
Xylenes	ND	30	108	106	1.69	107	70 - 130	20	70 - 130	
%SS:	106	10	94	94	0	95	70 - 130	20	70 - 130	
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with tl	ne following	g exceptio	ns:			

#### BATCH 64315 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1201648-001A	01/24/12 10:10 AM	01/25/12	01/25/12 7:04 AM	1201648-002A	01/24/12 10:20 AM	01/25/12	01/25/12 3:19 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 = 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

A 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.	Client Project ID: #1150.001; 1230 14th St	Date Sampled:	02/15/12
1710 Franklin Street, Ste. 200		Date Received:	02/16/12
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported:	02/22/12
Oakland, CA 94612	Client P.O.:	Date Completed:	02/22/12

#### WorkOrder: 1202512

February 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.

1202512

M	[cCAMP]	1534 V	ANA Villow Pass	s Road	TIC.	AL.	, IN	C.					Ι	т	'U	RN	A						F C	U		OL L	_	RE	CC	OR	D	1	Q
	site: <u>www.mcc</u>	ampbell.												F	DE	Dee	quir	20	Con	14 (	Nor	mal		RUS No		24			8 HR		72 H	IR	5 DAY
and the second se	ne: (925) 252	-9262		DIII To			(925)	252	2-92	69		_	+	EL	л	Ree	quir	ear				_	_			rite	On	(DW	<u>0</u>	No			
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1710 Franklin Str									-	_		_	-																				Filter
1710 Franklin St	eet, buile 200	, Oaki		C-Mai		illies	ana	nge	aen	v.co	m		-	TBE																			Samples
Tele: (510) 836-3	702			ax: (		_	-	-						8015)/MTBE																			or Metals malysis:
Project #: 1150.0	01		F	rojec					h St					+ 801																			es / No
<b>Project Location:</b>	1230 14th St	., Oakla	nd											020+																			
Sampler Signatur	e:					_			_					(602/8020																			
	14	SAMI	PLING		lers	I	MAT	RD	K.		ESE			Gas	(8260)																		
SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other	BTEX & TPH as	5 Oxvgenates																		
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EFF-V	EFF	2/15	1710	1	Т		2	<			-	-	1	X		-		-	-	-							-	-	Ŧ	+	-	F	
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Relinquished By:		Date:	Time:	Rece	ived B	y:					k					Litt V	2001								-								
														PR	ES	ERV	ATI		OAS	0	&G	pH		S	отн	ER							

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#### McCampbell Analytical, Inc. **CHAIN-OF-CUSTODY RECORD** 1534 Willow Pass Rd Pittsburg, CA 94565-1701 WorkOrder: 1202512 **ClientCode: PEO** (925) 252-9262 WaterTrax EDF Fax 🖌 Email HardCopy WriteOn Excel Report to: Bill to: Morga В

Morgan Gillies	Email:	mgillies@pangeaenv.com
Pangea Environmental Svcs., Inc.	CC:	
1710 Franklin Street, Ste. 200	PO:	
Oakland, CA 94612	ProjectNo	#1150.001; 1230 14th St
(510) 836-3700 FAX: (510) 836-3709		

# ☐ ThirdParty

to:	Requested TAT:	5 days
Bob Clark-Riddell		
Pangea Environmental Svcs., Inc.		
1710 Franklin Street, Ste. 200	Date Received:	02/16/2012
Oakland, CA 94612	Date Printed:	02/16/2012

				Ē	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
1202512-001	INF-V	Air	2/15/2012 17:15		A											<u> </u>
1202512-002	EFF-V	Air	2/15/2012 17:10		А											

#### Test Legend:

1	G-MBTEX_AIR
6	
11	

2	
7	
12	

3	
8	

4	
-	
9	

5	
10	

Page 1 of 1

□J-flag

The following SampIDs: 001A, 002A contain testgroup.

#### Prepared by: Ana 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.



# Sample Receipt Checklist

Client Name:	Pangea Environme	ntal Svcs., Inc.			Date a	nd Time Received:	2/16/2012 6	:58:09 PM
Project Name:	#1150.001; 1230 1	4th St			Checkl	list completed and re	eviewed by:	Ana Venegas
WorkOrder N°:	1202512	Matrix: <u>Air</u>			Carrier	: <u>Benjamin Ysla</u>	s (MAI Courie	Ċ
		Cha	ain of Cu	ustody (COC	) Informat	ion		
Chain of custody	present?		Yes		No 🗌			
Chain of custody	signed when relinqui	shed and received?	Yes	✓	No 🗌			
Chain of custody	agrees with sample	abels?	Yes	✓	No 🗌			
Sample IDs note	d by Client on COC?		Yes	✓	No 🗌			
Date and Time o	f collection noted by (	Client on COC?	Yes	✓	No 🗌			
Sampler's name	noted on COC?		Yes		No 🗹			
			<u>Sample</u>	Receipt Inf	ormation			
Custody seals in	tact on shipping conta	ainer/cooler?	Yes		No 🗌		NA 🔽	
Shipping contain	er/cooler in good con	dition?	Yes	✓	No 🗌			
Samples in prope	er containers/bottles?		Yes		No 🗌			
Sample containe	rs intact?		Yes	✓	No 🗌			
Sufficient sample	e volume for indicated	I test?	Yes	✓	No 🗌			
		Sample Pres	servatio	n and Hold	Time (HT)	Information		
All samples rece	ived within holding tin	ne?	Yes	✓	No 🗌			
Container/Temp	Blank temperature		Coole	er Temp:			NA 🖌	
Water - VOA vial	s have zero headspa	ce / no bubbles?	Yes		No 🗌	No VOA vials subm	itted 🗹	
Sample labels ch	necked for correct pre	servation?	Yes		No 🗌			
Metal - pH accep	table upon receipt (p	H<2)?	Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?		Yes		No 🗹			

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

Comments:

\_\_\_\_\_

\_\_\_\_\_

	McCam	pbell A When Qual			<u>, Inc.</u>		oll Free Telepho	Pass Road, Pittsburg ne: (877) 252-9262 pbell.com / E-mail:	/ Fax: (925) 252	-9269					
Pange	a Environmental S	vcs., Inc.			roject ID:	#1150.001;	1230	Date Sample	ed: 02/1	5/12					
1710	Franklin Street, Ste	200		4th St				Date Received: 02/16/12							
1,10		. 200	C	Client Co	ontact: Mo	organ Gillies	8	Date Extract	ted: 02/1	7/12					
Oakla	nd, CA 94612		C	Client P.	.0.:			Date Analyz	xed: 02/1	7/12					
Extractio	Ga on method: SW5030B	asoline Rai	nge (C6-	-C12) V	-	drocarbons		ne with BTEX	X and MTI		rk Order:	1202512			
Lab ID	Client ID	Matrix	TPH(	(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments			
001A	INF-V	А	660	)		7.0	5.5	0.68	3.2	2	118	d1			
002A	EFF-V	А	ND	)		ND	0.26	ND	0.65	1	105				

Reporting Limit for DF =1; ND means not detected at or	А	25	2.5	0.25	0.25	0.25	0.25	μg/L
above the reporting limit	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

	<u>McCan</u>		ell Anal Quality Con	ytical, Inc. unts''		Toll Free Teleph	/ Pass Road, Pittsburg one: (877) 252-9262 npbell.com / E-mail:	/ Fax: (925) 252-9	269						
Pange	a Environmental	Svcs., Iı	nc.	Client Project II	D: #1150.0	01; 1230	Date Sampled: 02/15/12								
1710	Franklin Street, S	te 200		14th St			Date Received: 02/16/12								
1/10	r runkim Succe, S	. 200		Client Contact:	Morgan Gil	lies	Date Extracted: 02/17/12								
Oakla	nd, CA 94612			Client P.O.:			Date Analyz	ed: 02/17/2	12						
			nge (C6-C	12) Volatile Hyd				nd BTEX in	ppmv*	×					
Extracti Lab ID	on method: SW5030B Client ID	Matrix	TPH(g)		Banzana	1	Ethylbenzene	Vulanas	Wo: DF	rk Order: % SS					
				MTBE	Benzene	Toluene		Xylenes			Comments				
001A	INF-V	A	180		2.1	1.4	0.15	0.72	2	118	d1				
002A	EFF-V	A	ND		ND	0.067	ND	0.15	1	105					
	ppm (	mg/L) to p	ppmv (ul/L) c	onversion for TPH(g)	assumes the m	olecular weight	of gasoline to be e	equal to that of h	iexane.						
	ting Limit for $DF = 1$ ;	А	7.0	0.68	0.077	0.065	0.057	0.057	1		uL/L				
	eans not detected at or ve the reporting limit	S	NA	NA	NA	NA	NA	NA	1	1	mg/Kg				
all TCL	samples are reported i P & SPLP extracts are red chromatogram; sar	reported	in μg/L.				-		-	L, water	samples and				
	owing descriptions of kly modified or unmo				and McCamp	bell Analytical is	s not responsible f	or their interpret	tation:						

Angela Rydelius, Lab Manager



## QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air	QC Matrix:	Water			BatchID	: 64935	WorkOrder: 1202512				
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked Sarr	ple ID:	1202451-006A		
Analyte	Sample	Sample Spiked		MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS		
TPH(btex) <sup>£</sup>	ND	60	115	107	7.63	112	70 - 130	20	70 - 130		
MTBE	ND	10	102	103	0.753	101	70 - 130	20	70 - 130		
Benzene	ND	10	104	100	4.35	98.9	70 - 130	20	70 - 130		
Toluene	ND	10	103	98.1	4.59	96.7	70 - 130	20	70 - 130		
Ethylbenzene	ND	10	103	98.4	4.74	97.3	70 - 130	20	70 - 130		
Xylenes	ND	30	104	98.7	5.43	98	70 - 130	20	70 - 130		
%SS:	104	10	99	102	2.22	98	70 - 130	20	70 - 130		
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with t	he following	exception	ns:				

#### BATCH 64935 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1202512-001A	02/15/12 5:15 PM	02/17/12	02/17/12 3:05 PM	1202512-001A	02/15/12 5:15 PM	02/17/12	02/17/12 3:05 PM
1202512-002A	02/15/12 5:10 PM	02/17/12	02/17/12 2:36 PM	1202512-002A	02/15/12 5:10 PM	02/17/12	02/17/12 2:36 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.

 $\pounds$  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



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# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; 1230 14th St	Date Sampled:	02/23/12
1710 Franklin Street, Ste. 200		Date Received:	02/23/12
1710 Frankin Succe, Ste. 200	Client Contact: Morgan Gillies	Date Reported:	02/29/12
Oakland, CA 94612	Client P.O.:	Date Completed:	02/27/12

#### WorkOrder: 1202686

February 29, 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.

M	<b>IcCAMP</b>	BELL	ANA	LYI	TIC.	AL	, II	NC						-				С	H	41	N	OF	C	US	ST(	OD	Y	RF	C	OI	RD		
		1534 V	Villow Pass ourg, CA 9	Road		12	A	2	68	6	)		-	T	UR	N.	AR	ou								Ę					I		M
Web	site: <u>www.mcc</u>	Pittsh	ourg, CA 9	4565	in	12		L	C C	-									-	5		-	F	US	н	24 H	łR	4	8 HI	R	72	HR	
Telephor	ne: (925) 252-	-9262	com Ena	AII: III)	ini@i	ax:	(92	5) 2	52-92	69				ED	)F I	Requ	uire	et? (	oel	t (N	orn	nal)	N	lo			On						
Report To: Morg		7808	B	Bill To				-					-	-	_			-	Ā	nal	vsis	Rec	nes	t		-			Т	0	ther	Т	Comments
Company: Pange	the second se	ental Ser				1.50				_	_		-								010			-					+	T		+	comments
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1710 Flankin St	eet, Suite 200	, Oaki		-Mai		illie	s@r	ane	reaer	V.C	om			8015)/MTBE																			Samples
Tele: (510) 836-3	702			ax: (					Seace		UIII			S)/M																			for Metals
Project #: 1150.0				rojec					4th St	0				801																			analysis: Yes / No
Project Location:	1230 14th St	-Oakla	nd	Tojee		inc.	1.00		1 01					+ 03																			1 CS / INO
Project Location: Sampler Signatur	1200 IT (1	y Oakia		-	-									(602/8020																			
Sumplet Signatur								-		N	MET	HO	D	(60)	6								_				-	-	+		-	-	
0		SAM	PLING		lers		MA	TR	IX		ESE			Gas	(8260)																		
SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Air	Sludge Other	ICE	HCL	HNO <sub>3</sub>	Other	BTEX & TPH as	5 Oxygenates																		
INF-V		2/23	1230	1	Т			X	-	-				Х														+	+	-	+	+	
EFF-V		2/23	1225	1	Т	$\vdash$		X	-	+	-			X	-	-										-	-	-	+	-	-	+	
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Refinquished By:		D'ate:	Time:	Reco	ejvéd I	sy:			V					PR	ESF	RVA	TIO		DAS	08	&G	ME pH<		s	отн	ER							

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# McCampbell Analytical, Inc. 1534 Willow Pass Rd

Pittsburg, CA 94565-1701



Page 1 of 1

(925) 252-9262				WorkOr	der: 1202686	Clier	ntCode: PEO		
	WaterTrax	WriteOn	<b>∠</b> EDF	Excel	Fax	✓ Email	HardCopy	ThirdParty	_J-flag
Report to:				Bill	to:		Re	quested TAT:	5 days
Morgan Gillies	Email: n	ngillies@pangea	env.com		Bob Clark-Rid	ddell			
Pangea Environmental Svcs., Inc.	cc:				Pangea Envir	ronmental Svcs	., Inc.		
1710 Franklin Street, Ste. 200	PO:				1710 Franklir	Street, Ste. 20	$D_0 Da$	te Received:	02/23/2012
Oakland, CA 94612	ProjectNo: #	<sup>‡</sup> 1150.001; 1230	14th St		Oakland, CA	94612	Da	te Printed:	02/24/2012
(510) 836-3700 FAX: (510) 836-3709									

					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
[]-		1				1	1	1	1	1				1		
1202686-001	INF-V	Air	2/23/2012 12:30		A	A										
1202686-002	EFF-V	Air	2/23/2012 12:25		А											

#### Test Legend:

1	G-MBTEX_AIR
6	
11	

2	PREDF REPORT
7	
12	

3	
8	

4	
9	

	5	
Γ	10	

The following SampIDs: 001A, 002A contain 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.



# Sample Receipt Checklist

Client Name:	Pangea Environmer	ntal Svcs., Inc.			Date a	and Time Received:	2/23/2012 7	:35:01 PM
Project Name:	#1150.001; 1230 14	th St			Check	list completed and re	eviewed by:	Zoraida Cortez
WorkOrder N°:	1202686	Matrix: <u>Air</u>			Carrie	r: <u>Rob Pringle (M</u>	AI Courier)	
		<u>Cha</u>	ain of Cu	istody (COC	<u>) Informa</u>	tion		
Chain of custody	present?		Yes	✓	No			
Chain of custody	signed when relinquis	hed and received?	Yes	✓	No			
Chain of custody	agrees with sample la	abels?	Yes	✓	No 🗌			
Sample IDs note	d by Client on COC?		Yes	✓	No			
Date and Time of	f collection noted by C	lient on COC?	Yes	✓	No			
Sampler's name	noted on COC?		Yes	✓	No			
			<u>Sample</u>	Receipt Inf	ormation			
Custody seals int	tact on shipping conta	iner/cooler?	Yes		No 🗌		NA 🗹	
Shipping contain	er/cooler in good cond	lition?	Yes	✓	No 🗌			
Samples in prope	er containers/bottles?		Yes	✓	No 🗌			
Sample containe	rs intact?		Yes	✓	No 🗌			
Sufficient sample	e volume for indicated	test?	Yes	✓	No			
		Sample Pres	servatio	n and Hold	<u> Fime (HT)</u>	Information		
All samples recei	ived within holding tim	e?	Yes	$\checkmark$	No			
Container/Temp	Blank temperature		Coole	r Temp:			NA 🖌	
Water - VOA vial	s have zero headspac	e / no bubbles?	Yes		No	No VOA vials submi	itted 🗹	
Sample labels ch	necked for correct pres	servation?	Yes	✓	No			
Metal - pH accep	table upon receipt (p⊦	I<2)?	Yes		No		NA 🗹	
Samples Receive	ed on Ice?		Yes		No 🖌			

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

Comments:

\_\_\_\_\_

\_\_\_\_\_

	McCam	pbell A When Qual			l <u>, Inc.</u>		oll Free Telepho	Pass Road, Pittsburg ne: (877) 252-9262 pbell.com / E-mail:	/ Fax: (925) 252	-9269		
Pange	a Environmental S	vcs., Inc.				#1150.001;	1230	Date Sample	ed: 02/2	3/12		
1710	Franklin Street, Ste	. 200		14th St				Date Receiv	red: 02/2	3/12		
	Succe, Ste		Ī	Client C	Contact: M	organ Gillies	5	Date Extract				
Oakla	nd, CA 94612			Client I	2.0.:			Date Analyz	xed: 02/24	4/12		
Enter		asoline Ra	nge (C	6-C12)	-			ne with BTE	X and MT		als Oad	1202686
Lab ID	on method: SW5030B Client ID	Matrix	TP	H(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	rk Order: % SS	Comments
001A	INF-V	A		100	ND<35	27	28	3.1	16	2	103	d1
002A	EFF-V	A	2	28	ND	ND	0.36	ND	0.34	1	114	d1

Reporting Limit for DF =1; ND means not detected at or	А	25	2.5	0.25	0.25	0.25	0.25	μg/L
above the reporting limit	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

	🖏 <u>McCan</u>		ell Anal Quality Cor	lytical, Inc. unts''		Toll Free Teleph	Pass Road, Pittsburg one: (877) 252-9262 npbell.com / E-mail:	/ Fax: (925) 252-9	269		
Pange	ea Environmental	Svcs., Iı	nc.	Client Project II	D: #1150.0	01; 1230	Date Sample	ed: 02/23/1	12		
1710	Franklin Street, S	ta 200		14th St			Date Receiv	red: 02/23/1	12		
1/10	Franklin Street, S	ic. 200		Client Contact:	Morgan Gil	lies	Date Extract	ted: 02/24/2	12		
Oakla	und, CA 94612			Client P.O.:			Date Analyz	zed: 02/24/2	12		
			nge (C6-C	12) Volatile Hyd				nd BTEX in			
Lab ID	on method: SW5030E Client ID	Matrix	TPH(g)	MTBE	Benzene	SW8021B/80 Toluene	Ethylbenzene	Xylenes	DF	rk Order: % SS	1202686 Comments
001A	INF-V	А	860	ND<10	8.5	7.3	0.71	3.7	2	103	d1
002A	EFF-V	А	7.9	ND	ND	0.094	ND	0.076	1	114	d1
	ppm (	mg/L) to p	opmv (ul/L) c	onversion for TPH(g)	assumes the m	olecular weight	of gasoline to be e	equal to that of h	nexane.		
	ting Limit for $DF = 1$ ;	А	7.0	0.68	0.077	0.065	0.057	0.057	1		uL/L
	eans not detected at or we the reporting limit	S	NA	NA	NA	NA	NA	NA	1	1	mg/Kg
all TCL	samples are reported P & SPLP extracts are red chromatogram; sar	reported	in μg/L.				-		-	/L, water	samples and
The foll	owing descriptions of kly modified or unmo	the TPH of	chromatogran	n are cursory in nature							

Angela Rydelius, Lab Manager



## QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air	QC Matrix:	Water			BatchID	: 65189	WorkOrder: 1202686				
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked Sam	ple ID:	1202671-011B		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS		
TPH(btex) <sup>£</sup>	ND	60	105	116	9.33	116	70 - 130	20	70 - 130		
MTBE	ND	10	98	101	3.51	113	70 - 130	20	70 - 130		
Benzene	ND	10	99.1	99.5	0.440	111	70 - 130	20	70 - 130		
Toluene	ND	10	96	98.2	2.15	109	70 - 130	20	70 - 130		
Ethylbenzene	ND	10	97.4	100	2.92	109	70 - 130	20	70 - 130		
Xylenes	ND	30	97.5	99.9	2.44	109	70 - 130	20	70 - 130		
%SS:	101	10	99	97	1.67	105	70 - 130	20	70 - 130		
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with th	ne following	g exceptio	ns:				

#### BATCH 65189 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1202686-001A	02/23/12 12:30 PM	I 02/24/12	02/24/12 11:48 PM	1202686-002A	02/23/12 12:25 PM	02/24/12	02/24/12 4:24 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.

 $\pounds$  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



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.	Client Project ID: #1150.001; 1230 14th St	Date Sampled:	02/27/12
1710 Franklin Street, Ste. 200		Date Received:	02/27/12
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported:	03/01/12
Oakland, CA 94612	Client P.O.:	Date Completed:	02/29/12

#### WorkOrder: 1202753

March 01, 2012

#### Dear Morgan:

Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #1150.001; 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.

Web	McCAMPBELL ANALYTICAL, INC. 1534 Willow Pass Road Pittsburg, CA 94565 Website: www.mccampbell.com Telephone: (925) 252-9262 Report To: Morgan Gillies Bill To: Pangea															ARC	U	ND	TI	ME			SH	24	HR	(D)	48 HI	R	۲2 I		5 DAY	
Report To: Morg	an Gillies		E	Bill To	: Pa	ngea												-	AI	alys	sis R	lequ	est						0	ther	(	Comment
<b>Company:</b> Pange	a Environme	ental Ser	vices, In	c.																											Τ.	
1710 Franklin Str	eet, Suite 200	0, Oakla	and, CA	94612										<u>ب</u>																		Filter
			E	C-Mai	l: mg	illies(	apa	nge	aen	v.co	m			MILE																		Samples or Metal
Tele: (510) 836-3'	702		F	ax: (	510)	836-3	709							8015)/MTBE																		inalysis:
Project #: 1150.00	01		P	rojec	t Nar	ne: 1	230	14 <sup>th</sup>	St				1	8																		Yes / No
<b>Project Location:</b>	1230 14th St	., Oakla	nd										1	120																	1	
Sampler Signatur														12/80																		
			PLING	~	ers	SL MATRIX METHOD PRESERVED 000							(8260)																			
SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub> Other		BTEX & TPH as	5 Oxygenates																	
INF-V	INF	2 27 12	1030	1	TEDLA		X	<					7	4																		
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McCampbell Analytical, Inc	2.			CHAIN	-OF-CUS	STODY	RECORD	Pag	e 1 of 1
Pittsburg, CA 94565-1701 (925) 252-9262				WorkO	rder: 1202753	Clie	ntCode: PEO		
	WaterTra	ax UvriteOn	<b>✓</b> EDF	Excel	Fax	🖌 Email	HardCopy	ThirdParty	_ J-flag
Report to:				Bi	ll to:		Red	uested TAT:	5 days
Morgan Gillies	Email:	mgillies@pangea	aenv.com		Bob Clark-Ride	dell			
Pangea Environmental Svcs., Inc.	cc:				Pangea Enviro	onmental Svcs	s., Inc.		
1710 Franklin Street, Ste. 200	PO:				1710 Franklin	Street, Ste. 20	00 Da	te Received:	02/27/2012
Oakland, CA 94612 (510) 836-3700 FAX: (510) 836-3709	-	: #1150.001; 1230	14th St		Oakland, CA 9	94612	Da	te Printed:	02/27/2012

								Re	quested	Tests (	See leg	end bel	ow)			
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1202753-001	INF-V	Air	2/27/2012 10:30		А	Α										

#### Test Legend:

1	G-MBTEX_AIR
6	
11	

2	PREDF REPORT
7	
12	

3	
8	

4	
-	
9	

5	
10	

The following SampID: 001A contains testgroup.

#### **Prepared by: Ana 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.



# Sample Receipt Checklist

Client Name:	Pangea Environme	ntal Svcs., Inc.			Date and Time Received: 2/27/2012 1:25:59 PM				
Project Name:	#1150.001; 1230 14	Ith St			Check	list completed and re	eviewed by:	Ana Venegas	
WorkOrder N°:	1202753	Matrix: <u>Air</u>			Carrie	r: <u>Rob Pringle (N</u>	IAI Courier)		
		Cha	ain of Cu	istody (COC	) Informat	tion			
Chain of custody	present?		Yes	✓	No				
Chain of custody	signed when relinqui	shed and received?	Yes	✓	No				
Chain of custody	agrees with sample I	abels?	Yes	✓	No 🗌				
Sample IDs note	d by Client on COC?		Yes	✓	No				
Date and Time of	f collection noted by (	Client on COC?	Yes	✓	No				
Sampler's name	noted on COC?		Yes	✓	No				
			<u>Sample</u>	Receipt Inf	ormation				
Custody seals int	tact on shipping conta	ainer/cooler?	Yes		No 🗌		NA 🖌		
Shipping contain	er/cooler in good con	dition?	Yes	✓	No 🗌				
Samples in prope	er containers/bottles?		Yes	✓	No 🗌				
Sample containe	rs intact?		Yes	✓	No 🗌				
Sufficient sample	e volume for indicated	test?	Yes	✓	No				
		Sample Pres	servatio	n and Hold 1	<u> Time (HT)</u>	Information			
All samples recei	ived within holding tim	ne?	Yes	✓	No				
Container/Temp	Blank temperature		Coole	er Temp:			NA 🗹		
Water - VOA vial	s have zero headspa	ce / no bubbles?	Yes		No 🗌	No VOA vials subm	itted 🗹		
Sample labels ch	necked for correct pre	servation?	Yes	$\checkmark$	No				
Metal - pH accep	table upon receipt (pl	H<2)?	Yes		No		NA 🖌		
Samples Receive	ed on Ice?		Yes		No 🖌				

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

Comments:

\_\_\_\_\_

\_\_\_\_\_

	McCam	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     14th St						#1150.001;	1230	Date Sampled: 02/27/12						
1710	Franklin Street, Ste	14th St				Date Received: 02/27/12								
	, Steet, Ste		Ī	Client	Contact: Mo	organ Gillie	5	Date Extracted: 02/28/12						
Oakla	nd, CA 94612			Client	P.O.:			Date Analyz	xed: 02/2	8/12				
Extractio	Ga n method: SW5030B	asoline Ra	nge (C	6-C12)	-	drocarbons		ne with BTEX	X and MT		rk Order:	1202753		
Lab ID	Client ID	Matrix	TPI	H(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments		
001A	INF-V	А	20	60	ND<5.0	2.7	2.0	ND	ND	1	94	d1		
-														

Reporting Limit for DF =1; ND means not detected at or	А	25	2.5	0.25	0.25	0.25	0.25	μg/L
above the reporting limit	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

	McCar		ll Ana Quality Cor	ytical, Inc. unts''		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							
Pange	ea Environmental	Svcs., Ir	nc.	Client Project II	D: #1150.00	01; 1230	Date Sample	Date Sampled: 02/27/12					
1710	Franklin Street, S	te 200		14th St		Date Receive	ed: 02/27/1	12					
1/10	i iunkiin bireet, b	<i>ite.</i> 200		Client Contact:	Morgan Gil	lies	Date Extract	ed: 02/28/	12				
Oakla	nd, CA 94612			Client P.O.:			Date Analyz	ed: 02/28/	12				
			nge (C6-C	12) Volatile Hyd				d BTEX in					
Extracti Lab ID	ion method: SW5030E Client ID	3 Matrix	TPH(g)	A	alytical methods: Benzene	SW8021B/80 Toluene	Ethylbenzene	Xylenes	Wo: DF	rk Order: % SS	1202753 Comments		
001A	INF-V	A	73	ND<1.5	0.83	0.52	ND	ND	1	94	d1		
00111					0.00	0.02	110						
											L		
											L		
											<u>L</u>		
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											L		
	ppm (	(mg/L) to p	opmv (ul/L) c	onversion for TPH(g)	assumes the m	olecular weight	of gasoline to be e	qual to that of h	nexane.				
	ting Limit for DF =1; eans not detected at or	А	7.0	0.68	0.077	0.065	0.057	0.057	1		uL/L		
abov	ve the reporting limit	S	NA	NA	NA	NA	NA	NA	1		mg/Kg		
all TCL # clutter The foll	samples are reported P & SPLP extracts are red chromatogram; sa owing descriptions of kly modified or unmo	e reported i mple peak the TPH c	n µg/L. coelutes with hromatogran	a surrogate peak; %S	S = Percent Rec	covery of Surrog	gate Standard; DF	= Dilution Fact	or	L, water	samples and		





## **QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Air	QC Matrix:	Water			BatchID	: 65231	WorkOrder: 1202753			
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked Sam	ple ID:	1202720-009A	
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) <sup>£</sup>	ND	60	77.3	76.7	0.739	79.1	70 - 130	20	70 - 130	
MTBE	ND	10	113	111	1.11	119	70 - 130	20	70 - 130	
Benzene	ND	10	98.2	106	7.43	103	70 - 130	20	70 - 130	
Toluene	ND	10	101	109	7.85	105	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	106	115	7.79	112	70 - 130	20	70 - 130	
Xylenes	ND	30	108	119	9.70	111	70 - 130	20	70 - 130	
%SS:	103	10	88	85	3.27	89	70 - 130	20	70 - 130	
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with tl	he following	g exceptio	ns:			

### BATCH 65231 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1202753-001A	02/27/12 10:30 AM	I 02/28/12	02/28/12 6:19 PM	1202753-001A	02/27/12 10:30 AM	02/28/12	02/28/12 6:19 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.

 $\pounds$  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.

A/QC Officer



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# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; 1230 14th St.	Date Sampled:	02/28/12-03/01/12
1710 Franklin Street, Ste. 200		Date Received:	03/01/12
1710 Frankin Succe, Ste. 200	Client Contact: Morgan Gillies	Date Reported:	03/06/12
Oakland, CA 94612	Client P.O.:	Date Completed:	03/02/12

### WorkOrder: 1203039

March 06, 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.

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the second se	ne: (925) 252-	9262		Bill To		ax:	-	) 25	2-91	209			+			une		-	-	vsis I		_		inte	on (r		-	ther	Comme
Report To: Mors Company: Pange		ntol So.			J. Ta	ngea		-					+	-	-	-	-		liai	y 515 1	xequ	icst	1.					ther	N
1710 Franklin St					,								-																Filter
1/10 Franklin St	reet, Suite 200	, Oakia		E-Mai		illios	an	ana	1907	NV CO	om		-	8015)/MTBE															Samples
Tolos (510) 926 2	702			Fax: (					caci	17.00	om		-	W/M															for Meta
Tele: (510) 836-3				rojec					th Cr				-	8015															analysis Yes / No
Project #: 1150.0 Project Location:	1220 14th St	Oakla	nd	Tojec	1 1941	ne.	145	0 14	51				-	+															165/190
		., Oakia	nu	-									-	/8020															
Sampler Signatur	e:	110		-	_	T				IN	IFT	HOD	-	(602															
/		SAMI	PLING	- 90	ners		IA'	FRE	X			RVE		s Gas															
SAMPLE ID	LOCATION			iner	ıtai									TPH as															
	(Field Point Name)	Date	Time	ntai	Co	-		20	-			-		E 3															
	, tunic)	Date	Time	# Containers	Type Containers	Water	Soil	Slude	Other	ICE	HCL	HNO	Uther	BTEX &															
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Relinquished By:	- 5/	Date:	Time:	Recei	ived By		~	0	~	6	-	-	1	PRESE	RVE	ED IN	LA	B											
	/ /																VO	AS	0.8	GN	MET/	ALS	отн	ER					

### McCampbell Analytical, Inc. 1534 Willow Pass Rd Pittsburg, CA 94565-1701



Page 1 of 1

(925) 252-9262				WorkOr	der: 1203039	Clie	ntCode: PEO		
	WaterTrax	WriteOn	<b>∠</b> EDF	Excel	Fax	🖌 Email	HardCopy	ThirdParty	☐ J-flag
Report to:				Bil	I to:		Re	quested TAT:	5 days
Morgan Gillies	Email: m	ngillies@pangea	env.com		Bob Clark-Ric	ddell			
Pangea Environmental Svcs., Inc.	cc:				Pangea Envir	onmental Svcs	s., Inc.		
1710 Franklin Street, Ste. 200	PO:				1710 Franklir	Street, Ste. 20	00 <i>Da</i>	te Received:	03/01/2012
Oakland, CA 94612	ProjectNo: #	1150.001; 1230	14th St.		Oakland, CA	94612	De	te Printed:	03/01/2012
(510) 836-3700 FAX: (510) 836-3709									

					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
1203039-001	VMP-1	Air	2/28/2012 16:00		А	А										
1203039-002	INF-V	Air	3/1/2012 10:00		A		1									

#### Test Legend:

1	G-MBTEX_AIR
6	
11	

2	PREDF REPORT
7	
12	

3	
8	

4	
9	

5	
10	

The following SampIDs: 001A, 002A contain testgroup.

Prepared by: Maria 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.



# Sample Receipt Checklist

Client Name:	Pangea Environme	ntal Svcs., Inc.			Date a	and Time Received:	3/1/2012 8:	18:16 PM
Project Name:	#1150.001; 1230 14	Ith St.			Check	list completed and re	eviewed by:	Maria Venegas
WorkOrder N°:	1203039	Matrix: <u>Air</u>			Carrie	r: <u>Rob Pringle (N</u>	IAI Courier)	
		<u>Cha</u>	<u>iin of Cւ</u>	istody (COC	) Informat	tion		
Chain of custody	present?		Yes	✓	No 🗌			
Chain of custody	signed when relinquis	shed and received?	Yes	✓	No 🗌			
Chain of custody	agrees with sample la	abels?	Yes	✓	No 🗌			
Sample IDs note	d by Client on COC?		Yes	✓	No 🗌			
Date and Time of	f collection noted by C	Client on COC?	Yes	✓	No 🗌			
Sampler's name	noted on COC?		Yes	✓	No 🗌			
			Sample	Receipt Info	ormation			
Custody seals int	tact on shipping conta	iner/cooler?	Yes		No 🗌		NA 🔽	
Shipping contain	er/cooler in good cond	dition?	Yes	✓	No 🗌			
Samples in prope	er containers/bottles?		Yes	✓	No 🗌			
Sample containe	rs intact?		Yes	✓	No 🗌			
Sufficient sample	e volume for indicated	test?	Yes	✓	No 🗌			
		Sample Pres	servatio	n and Hold 1	<u> (HT)</u>	Information		
All samples recei	ived within holding tim	ie?	Yes	✓	No 🗌			
Container/Temp	Blank temperature		Coole	er Temp:			NA 🖌	
Water - VOA vial	s have zero headspac	ce / no bubbles?	Yes		No 🗌	No VOA vials subm	itted 🔽	
Sample labels ch	necked for correct pres	servation?	Yes	✓	No 🗌			
Metal - pH accep	table upon receipt (pł	1<2)?	Yes		No 🗌		NA 🗹	
Samples Received on Ice?					No 🗹			

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

Comments:

\_\_\_\_\_

\_\_\_\_\_

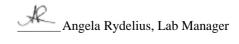
	McCampbell And "When Quality C				l <u>, Inc.</u>		oll Free Telepho	v Pass Road, Pittsburg, CA 94565-1701 hone: (877) 252-9262 / Fax: (925) 252-9269 mpbell.com / E-mail: main@mccampbell.com									
Pange	a Environmental S	vcs., Inc.				#1150.001;	1230	Date Sample	ed: 02/2	8/12-03	/01/12						
1710	Franklin Street, Ste	200		14th St.				Date Receiv	ed: 03/0	1/12							
1/10	i runkini Street, Ste	. 200		Client C	Contact: M	organ Gillies	3	Date Extract	ted: 03/02	2/12							
Oakla	nd, CA 94612			Client F	P.O.:			Date Analyz	xed: 03/02	2/12							
Extractio	Ga on method: SW5030B	asoline Ra	nge (Co	6-C12)	•	drocarbons		ne with BTE	X and MTI		rk Order:	1203039					
Lab ID	Client ID	Matrix	TPI	H(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments					
001A	VMP-1	А	Ν	ID	ND	ND	ND	ND	ND	1	105						
002A	INF-V	А	16	500	ND<20	25	24	3.5	21	4	99	d1					
						1											

Reporting Limit for DF =1; ND means not detected at or	А	25	2.5	0.25	0.25	0.25	0.25	μg/L
above the reporting limit	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

	<u>McCan</u>		ell Anal Quality Cor	<u>ytical, Inc.</u> unts''		Toll Free Telepho	Pass Road, Pittsburg one: (877) 252-9262 upbell.com / E-mail:	/ Fax: (925) 252-9			
Pange	ea Environmental	Svcs., Ir	nc.	Client Project ID	#1150.0	01; 1230	Date Sample	ed: 02/28/1	2		
1710	Franklin Street, S	te 200		14th St.			Date Receiv	red: 03/01/1	2		
1/10	runkini Succi, S			Client Contact: N	/lorgan Gil	llies	Date Extract	ted: 03/02/1	2		
Oakla	und, CA 94612			Client P.O.:			Date Analyz	zed: 03/02/1	2		
			nge (C6-C	12) Volatile Hydro				nd BTEX in j			
Extracti Lab ID	Client ID	Matrix	TPH(g)		lytical methods	1	Ethylbenzene	Vylanaa	Wo DF	rk Order: % SS	
				MTBE	Benzene	Toluene		Xylenes			Comments
001A	VMP-1	A	ND	ND	ND	ND	ND	ND	1	105	
002A	INF-V	Α	450	ND<5.0	7.7	6.2	0.80	4.8	4	99	d1
	ppm (	mg/L) to p	opmv (ul/L) c	onversion for TPH(g) a	ssumes the m	nolecular weight	of gasoline to be e	equal to that of h	exane.		
	ting Limit for DF =1;	А	7.0	0.68	0.077	0.065	0.057	0.057	1		uL/L
	eans not detected at or we the reporting limit	S	NA	NA	NA	NA	NA	NA	1	1	ng/Kg
	samples are reported in P & SPLP extracts are			id samples in mg/kg, w	vipe samples	in μg/wipe, prodι	uct/oil/non-aqueo	us liquid sample	s in mg/	L, water	samples and
# clutter	ed chromatogram; sa	mple peak	coelutes with	surrogate peak; %SS	= Percent Re	covery of Surroga	ate Standard; DF	= Dilution Factor	or		
	owing descriptions of kly modified or unmo			n are cursory in nature a icant	and McCamp	bell Analytical is	not responsible f	or their interpret	ation:		





## **QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Air	QC Matrix:	Water			BatchID	: 65395	WorkOrder: 1203039				
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked Sam	ple ID:	1203030-001A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)				
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS		
TPH(btex) <sup>£</sup>	ND	60	78.7	78	0.862	77.8	70 - 130	20	70 - 130		
MTBE	ND	10	108	104	3.32	109	70 - 130	20	70 - 130		
Benzene	ND	10	92.8	90.8	2.14	92.8	70 - 130	20	70 - 130		
Toluene	ND	10	93.2	91.2	2.06	95.3	70 - 130	20	70 - 130		
Ethylbenzene	ND	10	101	98.9	2.05	101	70 - 130	20	70 - 130		
Xylenes	ND	30	102	99.7	2.42	100	70 - 130	20	70 - 130		
% SS:	107	10	89	86	3.37	87	70 - 130	20	70 - 130		
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with th	ne following	g exceptio	ns:				

### BATCH 65395 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1203039-001A	02/28/12 4:00 PM	03/02/12	03/02/12 6:35 PM	1203039-002A	03/01/12 10:00 AM	03/02/12	03/02/12 4:22 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 = 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.

A QA/QC Officer



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# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1150.001; 1230 14th St	Date Sampled:	03/13/12
1710 Franklin Street, Ste. 200		Date Received:	03/13/12
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported:	03/19/12
Oakland, CA 94612	Client P.O.:	Date Completed:	03/15/12

### WorkOrder: 1203398

March 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.

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Report To: Mor	ne: (925) 252	2-9262		Bill To			(925)	252	2-92	69	_	_	+	ED	T K	equi	reu	e	_	naly		-			wrn	e On	(1)			_	Lo	
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Tele: (510) 836-3	702			Fax: (				~~~						SVM																		Metals
Project #: 1150.0	01		]	Projec					h St					801																		alysis: s / No
Project Location:	1230 14 <sup>th</sup> S	t., Oakla	ind											120+																	1.	37 140
Sampler Signatu	re:	- 10	l a	20										(602/8020																		
		SAM	PLING		ers	I	MAT	RIX	ζ.			HOD		Gas (6	8260)																	
SAMPLE ID	LOCATION			ners	tain									H as	es (																	
SAMPLEID	(Field Point Name)	Date	Time	Containers	Type Containers	Water	_	Sludge	Other	63	I	HNO3	her	BTEX & TPH	5 Oxygenates (8260)																	
				#	Tyj	W	Soil	Slu	õ	ICE	HCL		Other	BTE	50																	
ENF-W	IWF	3/3	955	3		X				×	×			×																	$\square$	
EFF-W	EFF	1	950	3		X				X	×			X																		
			1	-																												
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Relinquished By:	-	Date:	Time:	Recei	ived B	**	X			1	1	/			/t° /	OND	ITIC	ON								C	OM	MEN	rs:			
W.B. Jakato	X	11511		-			0	<	/				-1-	HEA	D SI	ACE	AB	SEN	1000													
Relinquished By:		Date:	Time:	Recei	wed By	d	C	~	4				1	APP	ROP	RIAT	EC	ONT	AIN													
Relinquished By:	10.0	Date:	Time:	Recei	yed B	y:	-	_	V	-			1'	RE	SER	VED																
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# McCampbell Analytical, Inc.



Page 1 of 1

Pittsburg, CA 94565-1701 (925) 252-9262				WorkOr	der: 1203398	8 Clie	ntCode: PEO		
	WaterTrax	WriteOn	✓ EDF	Excel	Fax	🖌 Email	HardCopy	ThirdParty	J-flag
Report to:				Bil	l to:		Re	equested TAT:	5 days
Morgan Gillies	Email: r	mgillies@pangea	aenv.com		Bob Clark-R	iddell			
Pangea Environmental Svcs., Inc.	cc:				Pangea Envi	ironmental Svcs	., Inc.		
1710 Franklin Street, Ste. 200	PO:				1710 Frankli	n Street, Ste. 20	$D_0 D_0$	ate Received:	03/13/2012
Oakland, CA 94612	ProjectNo: #	#1150.001; 1230	14th St		Oakland, CA	94612	De	ate Printed:	03/13/2012
(510) 836-3700 FAX: (510) 836-3709	)								

					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
			T			1		1	1	1					1	-
1203398-001	INF-W	Water	3/13/2012 9:55			A	Α									
1203398-002	EFF-W	Water	3/13/2012 9:50			А										
1203398-003	INF-V	Air	3/13/2012 9:45		А											

#### Test Legend:

1	G-MBTEX_AIR
6	
11	

2	G-MBTEX_W
7	
12	

3	PREDF REPORT
8	

4	
9	

5	
10	

The following SampID: 003A 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.



# Sample Receipt Checklist

Client Name:	Pangea Environmer	ntal Svcs., Inc.			Date a	and Time Received:	3/13/2012 6	:17:30 PM
Project Name:	#1150.001; 1230 14	th St			Check	klist completed and	reviewed by:	Zoraida Cortez
WorkOrder N°:	1203398	Matrix: <u>Air/Water</u>			Carrie	er: <u>Rob Pringle (</u>	MAI Courier)	
		<u>Chai</u>	n of Cı	ustody (CC	DC) Informa	tion		
Chain of custody	present?		Yes	✓	No 🗌			
Chain of custody	signed when relinquis	shed and received?	Yes	✓	No 🗌			
Chain of custody	agrees with sample la	abels?	Yes	✓	No 🗌			
Sample IDs note	d by Client on COC?		Yes	✓	No 🗌			
Date and Time o	f collection noted by C	Client on COC?	Yes	✓	No 🗌			
Sampler's name	noted on COC?		Yes	✓	No 🗌			
		1	Sample	e Receipt I	nformation			
Custody seals in	tact on shipping conta	iner/cooler?	Yes		No 🗌		NA 🗹	
Shipping contain	er/cooler in good cond	dition?	Yes	✓	No 🗌			
Samples in prope	er containers/bottles?		Yes	✓	No 🗌			
Sample containe	rs intact?		Yes	✓	No 🗌			
Sufficient sample	e volume for indicated	test?	Yes	✓	No 🗌			
		Sample Pres	ervatio	n and Hol	<u>d Time (HT)</u>	Information		
All samples rece	ived within holding tim	le?	Yes	✓	No 🗌			
Container/Temp	Blank temperature		Coole	er Temp:	2.7°C		NA	
Water - VOA vial	s have zero headspac	ce / no bubbles?	Yes	✓	No 🗌	No VOA vials subr	nitted 🗌	
Sample labels ch	necked for correct pres	servation?	Yes	✓	No 🗌			
Metal - pH accep	table upon receipt (p⊦	1<2)?	Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No 🗌			
		(Ice Type	e: WE	TICE)				

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

Comments:

	McCam	pbell A 'When Qual			II, Inc.		oll Free Telepho	Pass Road, Pittsburg one: (877) 252-9262 pbell.com / E-mail: 1	/ Fax: (925) 252	2-9269			
Pange	a Environmental S	vcs., Inc.				#1150.001;	1230	Date Sample	ed: 03/1	3/12			
17101	Franklin Street, Ste	e. 200		14th St				Date Received: 03/13/12					
1,101				Client	Contact: M	organ Gillie	8	Date Extracted: 03/14/12					
Oakla	nd, CA 94612			Client	P.O.:			Date Analyz	ed: 03/1	4/12			
Extractio	Ga n method: SW5030B	asoline Rai	nge (C	c6-C12)	-	drocarbons		ne with BTEX	X and MT		rk Order:	1203398	
Lab ID         Client ID         Matrix         TPH(g)         MTBE				MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments		
003A	INF-V	А	3.	500	ND<30	37	65	12	78	4	119	d1	

Reporting Limit for DF =1; ND means not detected at or	А	25	2.5	0.25	0.25	0.25	0.25	μg/L
above the reporting limit	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

	McCampbell Anal "When Quality Cou Pangea Environmental Svcs., Inc.					Toll Free Teleph	Pass Road, Pittsburg, CA 94565-1701 one: (877) 252-9262 / Fax: (925) 252-9269 npbell.com / E-mail: main@mccampbell.com				
Pange	ea Environmental	Svcs., Ir	ic.	Client Project II	D: #1150.0	01; 1230	Date Sample	ed: 03/13/	12		
1710	Franklin Street, S	te 200		14th St			Date Receiv	ed: 03/13/	12		
1,10	i iunkini biroot, b	. 200		Client Contact:	Morgan Gil	lies	Date Extract	ed: 03/14/	12		
Oakla	nd, CA 94612			Client P.O.:		Date Analyz	ed: 03/14/	12			
Extract	Gaso ion method: SW5030E		nge (C6-C	12) Volatile Hyd Ai	rocarbons a			nd BTEX in		¢ rk Order:	1203398
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
003A	INF-V	А	990	ND<10	11	17	2.7	18	4	119	d1
	ppm (	mg/L) to p	opmv (ul/L) c	onversion for TPH(g)	assumes the m	olecular weight	of gasoline to be e	equal to that of l	nexane.		
	ting Limit for DF =1; eans not detected at or	А	7.0	0.68	0.077	0.065	0.057	0.057	1		uL/L
abov	ve the reporting limit	S	NA	NA	NA	NA	NA	1		mg/Kg	
all TCL	vapor samples are reported in $\mu$ L/L, soil/sludge/solid samples in mg/kg, wipe samples in $\mu$ g/wipe, product/oil/non-aqueous liquid samples in mg/L, water samples and TCLP & SPLP extracts are reported in $\mu$ g/L.										
The foll	owing descriptions of kly modified or unmo	the TPH o	hromatogran	n are cursory in nature							



	McCam	pbell A When Qua			l <u>, Inc.</u>		oll Free Telepho	Pass Road, Pittsburg ne: (877) 252-9262 pbell.com / E-mail:	/ Fax: (925) 252	-9269			
Pange	ea Environmental S	vcs., Inc.				#1150.001;	1230	Date Sampled: 03/13/12					
1710	Franklin Street, Ste	200		14th St				Date Received: 03/13/12					
1110		. 200		Client 0	Contact: Mo	organ Gillies	5	Date Extracted: 03/15/12-03/16/12					
Oakla	nd, CA 94612			Client I	P.O.:			Date Analyz	ed: 03/1	5/12-03	/16/12		
Extractio	Ga on method: SW5030B	asoline Ra	nge (C	6-C12)	-	drocarbons		ne with BTE	X and MT		rk Order:	1203398	
Lab ID   Client ID   Matrix   TPH(g)   MTBE				MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments		
001A	INF-W	W	21	100	ND	70	190	49	460	1	103	d1	
002A	EFF-W	W	Ν	ND	ND	ND	ND	ND	ND	1	103		

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

DHS ELAP Certification 1644



W.O. Sample Matrix: Air	QC Matrix:	QC Matrix: Water			BatchID	: 65751	WorkOrder: 1203398			
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked Sam	ple ID:	1203360-002A	
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) <sup>£</sup>	ND	60	113	115	2.12	107	70 - 130	20	70 - 130	
MTBE	ND	10	84.8	82.5	2.60	88.7	70 - 130	20	70 - 130	
Benzene	ND	10	101	100	0.379	98.4	70 - 130	20	70 - 130	
Toluene	ND	10	99.2	102	2.27	96.7	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	99.4	99.4	0	96.7	70 - 130	20	70 - 130	
Xylenes	0.56	30	102	102	0	98.8	70 - 130	20	70 - 130	
%SS:	120	10	118	120	1.48	108	70 - 130	20	70 - 130	
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with th	he following	g exceptio	ns:			

			<u>BATCH 65751 SI</u>	JMMARY			
Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1203398-003A	03/13/12 9:45 AM	03/14/12	03/14/12 4:16 AM	1203398-003A	03/13/12 9:45 AM	03/14/12	03/14/12 4:16 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.

 $\pounds$  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.

A QA/QC Officer



W.O. Sample Matrix: Water	QC Matrix: Water				BatchID	: 65789	WorkOrder: 1203398			
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked Sam	ple ID:	1203360-005A	
Analyte	Sample	Spiked	MS	MSD	MS-MSD LCS		Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) <sup>£</sup>	ND	60	113	111	2.02	111	70 - 130	20	70 - 130	
MTBE	ND	10	82.7	77.8	6.08	88.5	70 - 130	20	70 - 130	
Benzene	ND	10	112	114	1.79	106	70 - 130	20	70 - 130	
Toluene	ND	10	114	117	2.39	107	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	111	115	3.18	104	70 - 130	20	70 - 130	
Xylenes	ND	30	112	114	2.18	107	70 - 130	20	70 - 130	
%SS:	120	10	115	103	11.4	105	70 - 130	20	70 - 130	
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with th	ne following	g exception	ns:			

	BATCH 65789 SUMMARY										
Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed				
1203398-001A	03/13/12 9:55 AM	03/15/12	03/15/12 8:17 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.

 $\pounds$  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.

₩\_\_\_QA/QC Officer



W.O. Sample Matrix: Water	QC Matrix:	Water			BatchID	: 65849		WorkOrder: 1203398				
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked Sam	ple ID:	1203443-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)					
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS			
TPH(btex) <sup>£</sup>	ND	60	115	115	0	113	70 - 130	20	70 - 130			
MTBE	ND	10	115	102	12.0	93.4	70 - 130	20	70 - 130			
Benzene	ND	10	97.4	99.7	2.42	91.8	70 - 130	20	70 - 130			
Toluene	ND	10	99.7	101	0.959	92.4	70 - 130	20	70 - 130			
Ethylbenzene	ND	10	96.1	98.9	2.83	88.8	70 - 130	20	70 - 130			
Xylenes	ND	30	98.5	101	2.74	91.2	70 - 130	20	70 - 130			
%SS:	98	10	103	104	1.24	94	70 - 130	20	70 - 130			
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with th	ne following	g exceptio	ns:					

			BATCH 65849 SI	UMMARY			
Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1203398-002A	03/13/12 9:50 AM	03/16/12	03/16/12 4:48 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.

 $\pounds$  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.

A/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.	Client Project ID: #1150.001; 1230 14th Street	Date Sampled: 06/20/12
1710 Franklin Street, Ste. 200		Date Received: 06/20/12
	Client Contact: Morgan Gillies	Date Reported: 06/25/12
Oakland, CA 94612	Client P.O.:	Date Completed: 06/22/12

### WorkOrder: 1206611

June 25, 2012

### Dear Morgan:

Enclosed within are:

- 1) The results of the 2 analyzed samples from your project: #1150.001; 1230 14th Street,
- 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.

Wel	IcCAMP	1534 W Pittsb campbell.	illow Pass ourg, CA 9	8 Road	- uin@n	2 nccai	0 (	0 ( 11.co	e (	1						N A		DUI	ND	TI	ME		[	SH	[ 24					72 H		5 DAY
Report To: Mor	one: (925) 252	-9262	I	Bill To			(925)	25	2-92	69	_	_	+	Lab	I I	tequ	nee		-	-	-	Requ	_		1110	e On	(D)	<del>''</del> _		her	To	omments
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1710 Franklin St														643																		ïlter
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Tele: (510) 836-3	3702			ax: (	-									8015)/MTBE																		or Metals nalysis:
Project #: 1150.0				rojec					h St					801																		es / No
<b>Project Location</b>	: 1230 14 <sup>th</sup> St	., Oaklaı	nd							_				020+																		
Sampler Signatu	re:	1.	ace	_		_								02/8																		
		SAME	PLING		ers	1	MAT	RE	ĸ		AET ESE			Gas (6	(8260)																	
SAMPLE ID	LOCATION			ler	tain									SE .																		
SAMPLE ID	(Field Point	Dete	-	# Containers	Containers			4						FTPH	Oxygenates																	
	Name)	Date	Time	Col	Type (	Water	-	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other	BTEX &	Dxyg																	
				#	F	3	Soil	2 2	ō	R	Ħ	H	õ	BT	50																	
EFF-V	EFF	6/20/12	1015	1	T		X							X														T				
INF-V	INF	6/20/12	1020	1	T	$\vdash$	×	-	+			-	-	X				+	+	+	+	+	+	+	+		_	+	-	-	┢	
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# McCampbell Analytical, Inc.



1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

(925) 252-9262			WorkOr	der: 1206611	Clier	ntCode: PEO		
	☐ WaterTrax ☐ WriteOn	<b>∠</b> EDF	Excel	EQuIS	Email	HardCop	y ThirdParty	☐J-flag
Report to:			Bill	to:		R	equested TAT:	5 days
Morgan Gillies	Email: mgillies@pangea	env.com		Bob Clark-Rid	dell			
Pangea Environmental Svcs., Inc.	CC:			Pangea Enviro	onmental Svcs			
1710 Franklin Street, Ste. 200	PO:			1710 Franklin	Street, Ste. 20	$D_0 \qquad L$	oate Received:	06/20/2012
Oakland, CA 94612	ProjectNo: #1150.001; 1230	14th Street		Oakland, CA S	94612	L	ate Printed:	06/20/2012
(510) 836-3700 FAX: (510) 836-3709								

				Ī	Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
			1				r	r			r		-	r	-	
1206611-001	EFF-V	Air	6/20/2012 10:15		Α	Α										I
1206611-002	INF-V	Air	6/20/2012 10:20		А											

#### Test Legend:

1	G-MBTEX_AIR
6	
11	

2	PREDF REPORT
7	
12	

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The following SampIDs: 001A, 002A contain 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.



# Sample Receipt Checklist

Client Name:	Pangea Environmer	ntal Svcs., Inc.			Date and	d Time Received:	6/20/2012 8:16:09 PM
Project Name:	#1150.001; 1230 14	th Street			LogIn R	eviewed by:	Zoraida Cortez
WorkOrder N°:	1206611	Matrix: <u>Air</u>			Carrier:	<u>Rob Pringle (M</u>	AI Courier)
		<u>Cha</u>	ain of Cu	istody (COC	) Informatic	<u>on</u>	
Chain of custody	present?		Yes	✓	No 🗌		
Chain of custody	signed when relinquis	shed and received?	Yes	✓	No 🗌		
Chain of custody	agrees with sample la	abels?	Yes	✓	No 🗌		
Sample IDs note	d by Client on COC?		Yes	✓	No 🗌		
Date and Time of	f collection noted by C	lient on COC?	Yes	✓	No 🗌		
Sampler's name	noted on COC?		Yes	✓	No 🗌		
			<u>Sample</u>	Receipt Inf	ormation		
Custody seals in	tact on shipping conta	iner/cooler?	Yes		No 🗌		NA 🗹
Shipping contain	er/cooler in good cond	lition?	Yes	$\checkmark$	No 🗌		
Samples in prope	er containers/bottles?		Yes	$\checkmark$	No 🗌		
Sample containe	rs intact?		Yes	✓	No 🗌		
Sufficient sample	e volume for indicated	test?	Yes	✓	No 🗌		
		Sample Pre	servatio	n and Hold <sup>·</sup>	<u>Time (HT) In</u>	nformation	
All samples recei	ived within holding tim	e?	Yes	✓	No 🗌		
Container/Temp	Blank temperature		Coole	er Temp:			NA 🖌
Water - VOA vial	s have zero headspac	e / no bubbles?	Yes		No 🗌 N	No VOA vials submi	tted 🗹
Sample labels ch	necked for correct pres	servation?	Yes	✓	No 🗌		
Metal - pH accep	table upon receipt (pł	1<2)?	Yes		No 🗌		NA 🗹
Samples Receive	ed on Ice?		Yes		No 🖌		

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

Comments:

\_\_\_\_\_

\_\_\_\_\_

		bell / Vhen Qua			l <u>, Inc.</u>		ll Free Telepho	Pass Road, Pittsburg ne: (877) 252-9262 pbell.com / E-mail:	/ Fax: (925) 252	-9269		
Pange	a Environmental Sv	cs., Inc.				#1150.001;	1230	Date Sample	ed: 06/20	0/12		
1710	Franklin Street, Ste.	200		14th St	reet			Date Receiv	red: 06/20	0/12		
				Client (	Contact: Mo	organ Gillies	5	Date Extract	ted: 06/2	1/12		
Oakla	nd, CA 94612			Client I	P.O.:			Date Analyz	xed: 06/2	1/12		
Extractic	Gas	oline Ra	nge (C	(6-C12)	-		<b>as Gasoli</b> w8021B/8015	ne with BTE	X and MTI		rk Order:	1206611
Lab ID	Client ID	Matrix	TP	PH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	EFF-V	A		ND	ND	ND	ND	ND	ND	1	105	
002A	INF-V	А	1	600	ND<5.0	14	22	2.1	16	2	#	d1

Reporting Limit for DF =1; ND means not detected at or	А	25	2.5	0.25	0.25	0.25	0.25	μg/L
above the reporting limit	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

	<u>McCan</u>		ell Anal Quality Cou	<u>ytical, Inc.</u> unts''		Toll Free Telepho	Pass Road, Pittsburg one: (877) 252-9262 pbell.com / E-mail:	/ Fax: (925) 252-92						
Pange	ea Environmental	Svcs., Iı	nc.	Client Project ID	#1150.0	01; 1230	Date Sample	ed: 06/20/1	2					
1710	Franklin Street, S	te 200		14th Street			Date Receiv	red: 06/20/1	2					
1/10	r runkini biroot, b	. 200		Client Contact: N	/lorgan Gil	llies	Date Extrac	ted: 06/21/1	2					
Oakla	und, CA 94612			Client P.O.:			Date Analyz	xed: 06/21/1	2					
			nge (C6-C	•	latile Hydrocarbons as Gasoline with MTBE and BTEX in ppmv*									
Extracti	on method: SW5030E	Matrix	TPH(g)	Ana	lytical methods Benzene	: SW8021B/801 Toluene	5Bm Ethylbenzene	Xylenes	Woi DF	k Order: % SS	1206611 Comments			
001A	EFF-V	A	ND	ND	ND	ND	ND	ND	1	105				
002A	INF-V	А	450	ND<1.4	4.4	5.8	0.48	3.6	2	#	d1			
-														
	ppm (	mg/L) to p	opmv (ul/L) c	onversion for TPH(g) a	ssumes the m	nolecular weight o	of gasoline to be e	equal to that of h	exane.					
	ting Limit for $DF = 1$ ; eans not detected at or	А	7.0	0.68	0.077	0.065	0.057	0.057	1		uL/L			
abov	ve the reporting limit	S	NA	NA	NA	NA	NA	NA	1		mg/Kg			
	samples are reported P & SPLP extracts are			id samples in mg/kg, w	vipe samples	in μg/wipe, prodι	act/oil/non-aqueo	us liquid sample	s in mg/	L, water	samples and			
# clutter	ed chromatogram; sa	nple peak	coelutes with	surrogate peak; %SS	= Percent Re	covery of Surroga	ate Standard; DF	= Dilution Facto	or					
	owing descriptions of kly modified or unmo			n are cursory in nature a ïcant	and McCamp	bell Analytical is	not responsible f	or their interpret	ation:					

Angela Rydelius, Lab Manager



W.O. Sample Matrix: Air	QC Matrix:	Water			BatchID	: 68506		WorkO	rder: 1206611
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked Sam	ple ID:	1206563-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex) <sup>£</sup>	ND	60	109	103	5.84	89	70 - 130	20	70 - 130
MTBE	220	10	NR	NR	NR	96.6	N/A	N/A	70 - 130
Benzene	ND	10	98	95	3.10	77.8	70 - 130	20	70 - 130
Toluene	ND	10	97.4	93.4	4.25	77.3	70 - 130	20	70 - 130
Ethylbenzene	ND	10	96.3	92.6	3.97	79.1	70 - 130	20	70 - 130
Xylenes	ND	30	93.2	89.1	4.41	80.6	70 - 130	20	70 - 130
%SS:	85	10	98	97	1.14	91	70 - 130	20	70 - 130
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with t	he following	g exception	ns:		

			<u>BATCH 68506 SI</u>	JMMARY			
Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1206611-001A	06/20/12 10:15 AM	06/21/12	06/21/12 4:06 PM	1206611-002A	06/20/12 10:20 AM	06/21/12	06/21/12 7:02 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.

 $\pounds$  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.

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.	Client Project ID: #1150.001; 1230 14th St	Date Sampled: 07/05/12
1710 Franklin Street, Ste. 200		Date Received: 07/06/12
1710 Frankin Subot, Sto. 200	Client Contact: Morgan Gillies	Date Reported: 07/11/12
Oakland, CA 94612	Client P.O.:	Date Completed: 07/10/12

### WorkOrder: 1207123

July 12, 2012

### Dear Morgan:

Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #1150.001; 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.

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	e: (510) 836-3 ject #: 1150.0				Fax: ( Projec					th C+	_		_	-	8015																			analysis:
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1	/		SAM	PLING	- yo	lers		MA	TRI	X			RVI		Gas	(8260)																		
S	AMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	i	r T	Other	ICE	HCL .	HNO <sub>3</sub>	Other	BTEX & TPH as	5 Oxygenates																		
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# McCampbell Analytical, Inc.

Pittsburg, CA 94565-1701



Page 1 of 1

(925) 252-9262				WorkOr	der: 1207123	Clie	ntCode: PEO		
	WaterTrax	WriteOn	✓ EDF	Excel	EQuIS	✓ Email	HardCopy	ThirdParty	J-flag
Report to:				Bill	l to:		Re	quested TAT:	5 days
Morgan Gillies	Email: n	ngillies@pangea	aenv.com		Bob Clark-Ride	dell			
Pangea Environmental Svcs., Inc.	cc:				Pangea Enviro	onmental Svcs			
1710 Franklin Street, Ste. 200	PO:				1710 Franklin	Street, Ste. 2	00 Da	te Received:	07/06/2012
Oakland, CA 94612 (510) 836-3700 FAX: (510) 836-3709	-	1150.001; 1230	14th St		Oakland, CA 9	4612	Da	te Printed:	07/06/2012

					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
1207123-001	INF-W	Water	7/5/2012 15:30		А	Α										

#### Test Legend:

1	G-MBTEX_W
6	
11	

2	PREDF REPORT
7	
12	

3	
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4	
9	

5	
10	

### 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.



# Sample Receipt Checklist

Client Name:	Pangea Environmer	ntal Svcs., Inc.			Date a	nd Time Received:	7/6/2012 2:	34:59 PM
Project Name:	#1150.001; 1230 14	th St			LogIn	Reviewed by:		Gabrielle Walker
WorkOrder N°:	1207123	Matrix: Water			Carrier	r: <u>Rob Pringle (M</u>	AI Courier)	
		<u>Cha</u>	in of Cu	<u>istody (C</u>	OC) Informat	ion		
Chain of custody	present?		Yes	✓	No 🗌			
Chain of custody	v signed when relinquis	shed and received?	Yes	✓	No 🗌			
Chain of custody	agrees with sample la	abels?	Yes	✓	No 🗌			
Sample IDs note	d by Client on COC?		Yes	✓	No 🗌			
Date and Time o	f collection noted by C	lient on COC?	Yes	✓	No 🗌			
Sampler's name	noted on COC?		Yes	✓	No 🗌			
			Sample	Receipt	Information			
Custody seals in	tact on shipping conta	iner/cooler?	Yes		No 🗌		NA 🗹	
Shipping contain	er/cooler in good conc	lition?	Yes	✓	No 🗌			
Samples in prope	er containers/bottles?		Yes	✓	No 🗌			
Sample containe	ers intact?		Yes	✓	No 🗌			
Sufficient sample	e volume for indicated	test?	Yes	✓	No 🗌			
		Sample Pres	ervatio	n and Ho	ld Time (HT)	Information		
All samples rece	ived within holding tim	e?	Yes		No 🗌			
Container/Temp	Blank temperature		Coole	r Temp:	4.9°C			
Water - VOA vial	ls have zero headspac	e / no bubbles?	Yes	✓	No 🗌	No VOA vials submi	tted	
Sample labels ch	necked for correct pres	servation?	Yes	✓	No 🗌			
Metal - pH accep	otable upon receipt (p⊦	1<2)?	Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No 🗌			
		(Ісе Тур	e: WE	TICE )				
* NOTE: If the "N	lo" box is checked, se	e comments below.						

Comments:

\_\_\_\_\_

		pbell A 'When Quali		tical, Inc. ""		oll Free Telepho	Pass Road, Pittsburg ne: (877) 252-9262 pbell.com / E-mail:	/ Fax: (925) 252	-9269		
Pange	a Environmental S	vcs., Inc.		lient Project ID:	#1150.001;	1230	Date Sample	ed: 07/0	5/12		
17101	Franklin Street, Ste	e. 200	14	4th St			Date Receiv	ed: 07/0	6/12		
1/101			С	lient Contact: N	Iorgan Gillie	8	Date Extract	ted: 07/0	9/12		
Oakla	nd, CA 94612		С	lient P.O.:			Date Analyz	xed: 07/0	9/12		
Extractio	Ga n method: SW5030B	asoline Rar	nge (C6-	C12) Volatile H Anal	ydrocarbons			X and MT		rk Order:	1207123
Lab ID	Client ID	Matrix	TPH(g	g) MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-W	w	1000	) ND	26	73	9.9	160	1	102	d1

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



### **QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Water	QC Matrix:	Water			BatchID	: 68965	WorkOrder: 1207123				
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked Sam	ple ID:	1207141-002A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)		
, unary co	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS		
TPH(btex) <sup>£</sup>	ND	60	97.8	95.9	1.99	93.5	70 - 130	20	70 - 130		
MTBE	ND	10	87.5	92.5	5.61	102	70 - 130	20	70 - 130		
Benzene	ND	10	89.5	90.4	1.01	90	70 - 130	20	70 - 130		
Toluene	ND	10	91.7	92	0.254	92.6	70 - 130	20	70 - 130		
Ethylbenzene	ND	10	91.4	92.4	1.04	91.2	70 - 130	20	70 - 130		
Xylenes	ND	30	94.1	95	1.01	94.5	70 - 130	20	70 - 130		
%SS:	91	10	93	92	1.14	91	70 - 130	20	70 - 130		
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with th	he following	g exception	ns:				

			BATCH 68965 SI	<u>JMMARY</u>			
Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1207123-001A	07/05/12 3:30 PM	07/09/12	07/09/12 3:38 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.

£ 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.



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.	Client Project ID: #1150.001; 1230 14th Street	Date Sampled: 07/10/12
1710 Franklin Street, Ste. 200		Date Received: 07/10/12
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 07/12/12
Oakland, CA 94612	Client P.O.:	Date Completed: 07/12/12

### WorkOrder: 1207204

July 12, 2012

### Dear Morgan:

Enclosed within are:

- 1) The results of the 2 analyzed samples from your project: #1150.001; 1230 14th Street,
- 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.



	Web	site: <u>www.mcc</u> ne: (925) 252	1534 V Pittsl campbell.	Villow Pass burg, CA 9 .com Em	s Road 4565 ail: ma	ain@r F	2 nccal ax:	_(925)	72 11.co	20							N A		OU	ND	T	M	E			H	24 H	IR	48 (DW	HR		D 72 H	R 5 DAY	
	Report To: Morg	an Gillies		H	Bill To	: Pa	ngea	1										_		A	nal	ysis	Rec	jues	t						Oth	er	Commen	its
	Company: Pange	a Environmo	ental Ser	vices, In	c.																									T	T			
	1710 Franklin Str	eet, Suite 20	0, Oakla	and, CA	94612	2									8																		Filter	
				H	C-Mai	l: mg	illies	@pa	nge	aen	v.co	m			MTB																		Samples	
	Tele: (510) 836-3	702		F	ax: (	510)	836-	3709							8015)/MTBE																		for Meta analysis:	
	Project #: 1150.0	01		F	rojec	t Nar	ne:	1230	14 <sup>t</sup>	h St		_			- 80																		Yes / No	
	<b>Project Location:</b>		, Oakla	nd	-	0									020																		1007.110	
	Sampler Signatur	e:	1	100	2										(602/8020																		1.1	
	/	10	SAMI	PLING	~	ers	I	MAT	RD	ĸ	M		HOD RVE		Gas (6)	(8260)																		~
	SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other	90	5 Oxygenates (																		
	EFF-W	EFF	710	140	3	VEAC	x				×	x			$\mathbf{x}$														-	+	+	-		-
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	Relinquished By:	170	Date: 7/10/2	Time:	Rece	ixed B	2	in	1	y.	1	2-	-6		GO	OD	CONI SPAC	DITI		T	_							C	OMM	IENT	S:			
4	Relinquished By:		Date:	Time:	Recei	ived B	y:								DE0 APF	CHL	ORIN	NAT TE O	ED I CON	N LA		s		-10										
	Relinquished By:		Date:	Time:	Rece	ived B	y:										RVAT		vo		08		ME" pH<		s (	OTHI	ER							

# McCampbell Analytical, Inc.

Pittsburg, CA 94565-1701



Page 1 of 1

(925) 252-9262				WorkO	rder: 1207204	Clie	entCode: PEO		
	WaterTrax	WriteOn	✓ EDF	Excel	EQuIS	Email	HardCop	by ThirdParty	_J-flag
Report to:				Bil	I to:		F	equested TAT:	3 days
Morgan Gillies	Email: n	ngillies@pangea	env.com		Bob Clark-Ride	dell			
Pangea Environmental Svcs., Inc.	CC:				Pangea Enviro	nmental Svc			
1710 Franklin Street, Ste. 200	PO:				1710 Franklin	Street, Ste. 2	00 <i>I</i>	Date Received:	07/10/2012
Oakland, CA 94612	ProjectNo: #	<sup>‡</sup> 1150.001; 1230	14th Street		Oakland, CA 9	4612	1	Date Printed:	07/10/2012
(510) 836-3700 FAX: (510) 836-3709									

								Re	quested	Tests (	See lege	end belo	ow)			
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1207204-001	EFF-W	Water	7/10/2012 14:10		A	Α										<u> </u>
1207204-002	INF-W	Water	7/10/2012 14:15		А											

#### Test Legend:

1	G-MBTEX_W
6	
11	

2	PREDF REPORT
7	
12	

3	
8	

4	
9	

5	
10	

**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.



# Sample Receipt Checklist

Client Name:	Pangea En	vironmental Svcs., Inc.			Date a	and Time Received:	7/10/2012 6:12:51 PM		
Project Name:	#1150.001;	; 1230 14th Street			LogIn	Reviewed by:	Zoraida Cortez		
WorkOrder N°:	1207204	Matrix: Water			Carrie	r: <u>Client Drop-In</u>			
		<u>Chair</u>	n of Cu	istody (C	OC) Informat	tion			
Chain of custody	present?		Yes	✓	No				
Chain of custody	signed wher	n relinquished and received?	Yes	✓	No				
Chain of custody	agrees with	sample labels?	Yes	✓	No 🗌				
Sample IDs note	d by Client o	n COC?	Yes	✓	No 🗌				
Date and Time of	f collection n	oted by Client on COC?	Yes	✓	No 🗌				
Sampler's name	noted on CO	C?	Yes	✓	No 🗌				
		2	Sample	Receipt	Information				
Custody seals in	tact on shipp	ing container/cooler?	Yes		No 🗌		NA 🗹		
Shipping contain	er/cooler in g	jood condition?	Yes	✓	No 🗌				
Samples in prope	er containers	/bottles?	Yes	✓	No 🗌				
Sample containe	rs intact?		Yes	✓	No 🗌				
Sufficient sample	e volume for i	indicated test?	Yes	✓	No 🗌				
		Sample Prese	ervatio	n and Ho	old Time (HT)	Information			
All samples rece	ived within ho	olding time?	Yes	✓	No 🗌				
Container/Temp	Blank tempe	rature	Coole	r Temp:	5.2°C				
Water - VOA vial	s have zero l	headspace / no bubbles?	Yes	✓	No 🗌	No VOA vials submi	tted		
Sample labels ch	necked for co	rrect preservation?	Yes	✓	No				
Metal - pH accep	table upon re	eceipt (pH<2)?	Yes		No 🗌		NA 🗹		
Samples Receive	ed on Ice?		Yes	✓	No 🗌				
		(Ісе Туре	e: WE	TICE )	)				

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

Comments:

\_\_\_\_\_

\_\_\_\_\_

McCampbell Analytical, Inc. "When Quality Counts"					l <u>, Inc.</u>	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								
Pange	a Environmental Svo	cs., Inc.				#1150.001;	1230	Date Sample	Date Sampled: 07/10/12					
1710	Franklin Street, Ste.	14th St	reet			Date Receiv	ed: 07/10	0/12						
				Client C	Contact: Mo	organ Gillies	6	Date Extract	ted: 07/12	2/12				
Oakla	nd, CA 94612			Client H	P.O.:			Date Analyz	ed: 07/12	2/12				
Extra atia	Gas	oline Ra	nge (C	6-C12)	-		as Gasolin w8021B/8015	ne with BTE	X and MTI		rk Order:	1207204		
Lab ID	Client ID	Matrix	TP	H(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments		
001A	EFF-W	w		ND	ND	ND	ND	ND	ND	1	93			
002A	INF-W	w	9	000	ND	16	59	7.9	180	1	101	d1		

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

DHS ELAP Certification 1644



W.O. Sample Matrix: Water	QC Matrix: Water				BatchID	: 69040		WorkOrder: 1207204		
EPA Method: SW8021B/8015Bm Extraction: S	W5030B						Spiked Sam	ple ID:	1207204-001A	
Analyte	Sample Spiked MS MS			MSD	MS-MSD LCS		Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) <sup>£</sup>	ND	60	104	95	8.70	93.8	70 - 130	20	70 - 130	
MTBE	ND	10	101	98.9	2.24	99.7	70 - 130	20	70 - 130	
Benzene	ND	10	83.1	82.6	0.539	85.4	70 - 130	20	70 - 130	
Toluene	ND	10	85.5	83.3	2.55	84.5	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	88.4	85.1	3.75	85.5	70 - 130	20	70 - 130	
Xylenes	ND	30	94.2	87.9	6.91	87.4	70 - 130	20	70 - 130	
%SS:	93	10	85	87	1.97	86	70 - 130	20	70 - 130	
All target compounds in the Method Blank of this extraction ba NONE	tch were ND	less than th	e method	RL with th	ne following	g exceptio	ns:			

	BATCH 69040 SUMMARY										
	Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed			
ſ	1207204-001A	07/10/12 2:10 PM	07/12/12	07/12/12 1:09 AM	1207204-002A	07/10/12 2:15 PM	07/12/12	07/12/12 1:39 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.

 $\pounds$  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.

K\_\_\_QA/QC Officer