RECEIVED

10:25 am, May 05, 2011 Alameda County Environmental Health

Mr. Paresh Khatri Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Re: Former Exxon Station

5175 Broadway Oakland, California ACHCSA Fuel Leak Case No. RO0000139 SFRWQCB Site No. 01-0958 UST Fund Claim No. 003406

Dear Mr. Khatri:

I, Mr. Ernie Nadel of Rockridge Heights, LLC, have retained Pangea Environmental Services, Inc. (Pangea) as the environmental consultant for the project referenced above. Pangea is submitting the attached report on my behalf.

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

Sincerely,

Ernie Nadel

Rockridge Heights, LLC



May 3, 2011

VIA ALAMEDA COUNTY FTP SITE

Ms. Donna Drogos Alameda County Environmental Health 1331 Harbor Bay Parkway, Suite 250 Alameda, California 94502

Re: Groundwater Monitoring and Remediation Report – First Quarter 2011

5175 Broadway Street Oakland, California ACEH Fuel Leak Case No. RO#0000139

Dear Ms. Drogos:

On behalf of Rockridge Heights LLC, Pangea Environmental Services, Inc., has prepared this *Groundwater Monitoring Report*—*First Quarter 2011*. The report describes groundwater monitoring, sampling, site remediation, and other site activities.

Due to the commencement of active remediation in December 2010, Pangea has commenced *quarterly* monitoring of key site wells to evaluate system performance. Additional information about the groundwater monitoring program is summarized herein and in Appendix A. If you have any questions or comments, please call me at (510) 435-8664.

Sincerely,

Pangea Environmental Services, Inc.

Bob Clark-Riddell, P.E.

Principal Engineer

Attachment: Groundwater Monitoring and Remediation Report - First Quarter 2011

cc: Rockridge Heights, LLC, C/O Ernie Nadel, 6100 Pinewood Road, Oakland, California 94611 SWRCB Geotracker (Electronic copy)



GROUNDWATER MONITORING AND REMEDIATION REPORT - FIRST QUARTER 2011

5175 Broadway Oakland, California

May 3, 2011

Prepared for:

Rockridge Heights, LLC C/O Ernie Nadel 6100 Pinewood Road Oakland, California 94611

Prepared by:

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

Written by:

Morgan Gillies

Project Manager

Bob Clark-Riddell, P.E. Principal Engineer

PANGEA Environmental Services, Inc.

INTRODUCTION

On behalf of Rockridge Heights, LLC, Pangea Environmental Services, Inc. (Pangea) conducted groundwater monitoring and sampling, and remediation system operation and sampling during this quarter at the subject site (Figure 1). The purpose of the monitoring and sampling is to evaluate dissolved contaminant concentrations, determine the groundwater flow direction, and inspect site wells for separate-phase hydrocarbons (SPH). The purpose of the remediation is to clean up petroleum hydrocarbons from a historic fuel release. Current groundwater analytical results and elevation data are shown on Figures 2 and 3. Current and historical groundwater data are summarized on Table 1. Site remediation data are summarized on Tables 3 and 4.

SITE BACKGROUND

The subject property is located at 5175 Broadway Street, at the southwest corner of the intersection of Broadway and Coronado Avenue in Oakland, California in Alameda County (Figure 1). The site is approximately 0.6 miles south-southeast of Highway 24 and approximately 2.3 miles east of Interstate 80 and the San Francisco Bay. The property is relatively flat lying, with a slight slope to the south-southwest, and lies at an elevation of approximately 160 feet above mean sea level. Topographic relief in the area surrounding the site also slopes generally towards the south-southwest. The western site boundary is the top of an approximately 10 foot high retaining wall that separates the site from an adjacent apartment complex.

The property has been vacant since 1979 and was formerly occupied by an Exxon Service Station used for fuel sales and automobile repair. The site is approximately 13,200 square feet in area and the majority of the ground surface is paved with concrete and/or asphalt, although the former tank location is not paved. Land use to the west and northwest is residential, including apartment buildings and single family homes. Properties to the northeast, east and south of the site are commercial. The site and adjacent properties are shown on Figure 2.

Environmental compliance work commenced when the site USTs were removed in January 1990. Three 8,000-gallon steel single-walled USTs, associated piping, and a 500-gallon steel single-walled waste oil tank were removed. Tank Project Engineering, Inc. (TPE) conducted the tank removal and observed holes in all four tanks. Approximately 700 tons of contaminated soil was excavated during tank removal and was subsequently remediated and reused for onsite backfill by TPE. In April 1990, TPE installed and sampled monitoring wells MW-1, MW-2 and MW-3. In June 1991, Soil Tech Engineering (STE), subsequently renamed Environmental Soil Tech Consultants (ESTC), installed monitoring wells STMW-4 and STMW-5. Groundwater monitoring was conducted on the site intermittently until October 2002. Golden Gate Tank Removal (GGTR) performed additional assessment in January and February 2006. In June 2006, the property

was purchased by Rockridge Heights, LLC. Pangea commenced quarterly groundwater monitoring at the site in July 2006. MTBE is not considered to be a contaminant of concern because use of the site for fuel sales predates widespread use of MTBE in gasoline and because analytical results have not shown significant detections of MTBE.

In January and March 2007, Pangea installed twelve wells (MW-2C, MW-3A, MW-3C, MW-4A, MW-5A, MW-5B, MW-5C, MW-6A, MW-7B, MW-7C, MW-8A and MW-8C) and three offsite soil borings to help define the vertical and lateral extent of groundwater contamination. Pangea also abandoned four monitoring wells (MW-2, MW-3, STMW-4 and STMW-5) to reduce the risk of vertical contaminant migration and improve the quality of monitoring data. New wells installed at the site were categorized according to the depths of their screen intervals. Shallow (A-zone) wells have screen intervals of approximately 10 to 15 feet bgs, which generally straddle the top of the water table and are generally screened in surficial fill and alluvium. Intermediate-depth (B-zone) wells are screened at approximately 15 to 20 feet bgs, either in surficial strata or underlying fractured bedrock, while deep (C-zone) wells are generally screened at approximately 20 to 25 feet bgs and into fractured bedrock. Well MW-1 is screened across both the A-zone and B-zone.

In April 2007, Pangea performed a dual-phase extraction (DPE) pilot test to evaluate whether DPE is an appropriate remedial technology to remove residual hydrocarbons from beneath the site. In July 2007, Pangea submitted an Interim Remedial Action Plan for site corrective action.

In August 2007, Pangea installed three offsite monitoring wells (MW-9A, MW-9C and MW-10A) and conducted subslab vapor sampling in the commercial building located immediately south of the site. The purpose of the offsite well installation was to determine the downgradient extent of contaminant migration, and to help evaluate downgradient effects of any future remediation conducted onsite. The purpose of the subslab vapor sampling was to determine whether vapor migrating from underlying groundwater had impacted soil vapor. Soil gas sampling was also conducted near the southern and western edge of the property. Soil gas sampling and offsite monitoring well installation is described in Pangea's *Soil Gas Sampling and Well Installation Report* dated October 23, 2007. Further subslab/soil gas sampling was conducted at the two adjacent properties in June 2008 and reported in Pangea's *Additional Soil Gas Sampling Report* dated July 14, 2008.

In response to a letter from ACEH dated June 10, 2008, Pangea submitted a *Revised Site Conceptual Model and Corrective Action Plan* (Revised CAP) dated July 23, 2008. ACEH commented on the Revised CAP in a letter dated July 31, 2008 and Pangea prepared a *Corrective Action Plan Addendum* dated August 11, 2008 to address ACEH comments. In a letter dated August 22, 2008, ACEH approved the CAP and Addendum as a 'Draft CAP' and initiated the public-participation process. The *Final Corrective Action Plan* dated March 25, 2009 recommended remediation via DPE and air sparging. In response to an ACEH letter dated April 16,

2009, Pangea submitted a *Final Corrective Action Plan – Addendum* dated May 18, 2009, which provided justification for the recommended remedial action. ACEH approved the *Final CAP Addendum* in a letter dated June 18, 2009. On August 19, 2009, Pangea oversaw installation of six dual-phase extraction (DPE) wells and one air sparging (AS) well to facilitate implementation of the approved corrective action plan. Operation of the DPE system began on December 8, 2010 and operation of the AS system began on March 16, 2011.

GROUNDWATER MONITORING AND SAMPLING

On March 1 and 2, 2011, Pangea conducted groundwater monitoring and sampling at the site in accordance with the groundwater monitoring program in Appendix A. Site monitoring wells were gauged for depth-to-water and inspected for separate-phase hydrocarbons (SPH). To obtain water levels representative of the piezometric surface, technicians removed all well caps (allowing water levels to equilibrate) and turned off the remediation system one day prior to sampling.

Prior to sample collection, approximately three casing volumes of water were purged using disposable bailers, an electric submersible pump, or a clean PVC bailer (although fewer casing volumes were purged if the well dewatered). During well purging, field technicians measured the pH, temperature and conductivity of the water. 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 stored onsite in DOT-approved 55-gallon drums. Groundwater monitoring field data sheets, including purge volumes and field parameter measurements, are presented in Appendix B.

MONITORING RESULTS

Current and historical groundwater elevation and analytical data are described below and summarized on Table 1, Figure 2 and Figure 3. To facilitate data evaluation, well construction details are summarized on Table 2. Groundwater samples were analyzed for total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015C with silica gel cleanup; total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015C; and benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 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 March 1, 2011, shallow groundwater (A-zone) flows generally

southeastwards throughout most of the site and downgradient from the site, as shown on Figure 2. The relatively high groundwater elevation measured in well MW-6A suggests that shallow groundwater is mounded in the former UST excavation and that the local flow direction radiates outwards away from the former excavation area towards the northeast corner of the site in the direction of MW-4A. These observations are interpreted as indicating that the unpaved former UST excavation has acted as a collector for rainwater and that the asphalt pavement covering the remainder of the site serves to reduce infiltration elsewhere while directing rainwater to the unpaved UST excavation area. The current inferred flow direction in shallow groundwater is generally consistent with previous monitoring results. In addition, groundwater flow direction may be affected by dual-phase extraction (DPE) from site wells, which was performed on wells on the southeastern portion of the site just prior to this monitoring event.

Groundwater flow in deep groundwater (C-zone) is generally *southeastwards* to *southwards* across the site and beneath the adjacent commercial property, as shown on Figure 3. Generally, the elevation of the piezometric surface for C-zone wells is lower than elevations for A-zone wells, indicating that a downward gradient is present. The inferred flow direction is generally consistent with previous monitoring results, and may be affected by DPE at the site.

Hydrocarbon Distribution in Groundwater

<u>Current Distribution:</u> The maximum TPHg, TPHd and benzene concentrations detected this quarter were 27,000 μg/L, 51,000 μg/L and 1,400 μg/L, respectively, in source area remediation well DPE-3. Hydrocarbon concentrations were generally within historic ranges and trends in most site wells, except for low concentrations described below. No measurable thickness of separate-phase hydrocarbons (SPH) was observed in any monitoring wells this quarter, although an immeasurable sheen was observed by the laboratory in the samples from monitoring wells MW-3C, MW-7B and DPE-3.

Most importantly, *historic low* concentrations of TPHg and benzene were detected in wells shallow wells MW-3A, MW-4A and MW-8A, and in deep source area well MW-3C. These historic low concentrations are attributed to the recently commenced DPE and AS remediation. For example, benzene concentrations in well MW-4A reduced from $16,000~\mu g/L$ to $310~\mu g/L$, while TPHg concentrations similarly reduced from $23,000~\mu g/L$ to $270~\mu g/L$ since the prior monitoring event. TPHg and benzene concentration trends for key shallow and deep wells are illustrated on Figures 5 and 6, respectively.

<u>Historic Distribution:</u> Shallow (A-zone) groundwater contains petroleum hydrocarbons at elevated concentrations in two primary areas near the former UST excavation: a northern area in the vicinity of well MW-4A, and a southwestern area in the vicinity of wells MW-3A and MW-8A. Prior shallow grab groundwater sampling data also indicates that the southern area of contamination extends to the southern site boundary in the vicinity of wells MW-7B and MW-7C (where *benzene* concentrations are apparently

biodegrading in these deeper wells). The non-detect concentrations of hydrocarbons in wells MW-9A and MW-10A indicate that offsite migration of petroleum hydrocarbons in shallow groundwater is minimal. The observed distribution of hydrocarbons in A-zone groundwater is presumably due to plume migration radially away from the excavation area, likely caused by mounding of groundwater within the uncapped former UST excavation during the rainy season.

Contaminant distribution in deeper groundwater differs significantly from the distribution of hydrocarbons in shallow groundwater. Elevated contaminant concentrations within deeper groundwater (B-zone and C-zone) are apparently present in the vicinity of wells MW-3C, MW-7B and MW-7C in the central and southern portions of the site. Again, the apparent biodegradation of benzene and select other compounds in wells MW-7B and MW-7C suggests that deeper hydrocarbons are attenuating. Site remediation is also likely improving site conditions. Well screen intervals for shallow and deep wells are summarized on Table 2.

Fuel Oxygenate Distribution in Groundwater

No MTBE was detected above reporting limits in any samples obtained from site monitoring wells this monitoring event. MTBE is not a contaminant of concern at this site both due to the lack of detections, and because the USTs were removed in 1990 prior to widespread use of MTBE as a fuel oxygenate.

REMEDIATION SYSTEM 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 4. Extraction and treatment is performed using a 25 hp liquid ring vacuum pump with a 400 cubic foot per minute (cfm) electric catalytic oxidizer. 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 10 remediation wells (DPE-1 through DPE-6 and MW-3A, MW-4A, MW-7B and MW-8A). 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 200-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 Ingersoll-Rand rotary-screw air compressor capable of injecting 16 cfm of air and reaching pressures of 125 psig. Injection into the seven air sparge wells (AS-1, MW-1, MW-2C, MW-3C, MW-5B, MW-7C and MW-8C) is controlled by timer-activated solenoid valves

May 3, 2011

and individual well needle valves on the well flow meters. The remediation system layout is shown on Figure 4.

Operation and Performance

DPE and AS system operation commenced on December 8, 2010 and March 16, 2011, respectively. The DPE system was initially operated to target elevated impact within the northern portion of the site (wells DPE-1, MW-3A, MW-4A and MW-8A). After initial contaminant mass removal rates decreased, DPE remediation was focused on the southern portion of the site, and AS was commenced soon thereafter. AS was initiated on wells MW-2C and MW-3C near the center of the site, and later expanded to include well MW-7C and well MW-8C. System operation and performance data is summarized on Tables 3 and 4.

As of March 31, 2011, the DPE system operated for a total of about 2,091 hours (approximately 87 days). Laboratory analytical and performance data indicates that soil vapor removal rates observed during this reporting period ranged from 1.5 to 27.1 lbs/day TPHg and 0.00 to 0.23 lbs/day benzene. As of March 31, 2011, the vapor-phase portion of the DPE system removed a total of approximately 761 lbs TPHg and 5.6 lbs benzene. During this reporting period, the groundwater portion of the DPE system removed approximately 0.23 lbs TPHg and 0.006 lbs benzene.

The DPE/AS system is monitored in accordance with air permit requirements of the *Authority to Construct Permit* 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.

Evaluation of Remediation Effectiveness

The calculated hydrocarbon mass removal and reported concentration reduction in groundwater suggest that the DPE/AS system is effectively remediating the site subsurface. Hydrocarbon mass removal and concentration reduction are described above. Pangea plans to continue operation and optimization of the DPE/AS system. Future groundwater monitoring will also help evaluate the effectiveness of air sparging, which commenced in March 2011 after the current monitoring event. The TPHg and benzene concentration trends for key shallow and deep groundwater wells are illustrated on Figures 5 and 6.

OTHER SITE ACTIVITIES

Groundwater Monitoring

Due to the commencement of active remediation in December 2010, Pangea has commenced *quarterly* monitoring of key site wells. Quarterly monitoring is commonly required during active remediation to evaluate remediation effectiveness and facilitate modification/adjustment of the remediation efforts. Pangea

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proposed quarterly monitoring of key wells and annual monitoring of other wells in the *Groundwater Monitoring Report – Second Half 2010* dated October 31, 2010 and requested regulatory concurrence.

Unless otherwise directed by the ACEH, Pangea will continue *quarterly* groundwater monitoring and sampling at the site in accordance with the monitoring program shown in Appendix A. The program includes *quarterly* monitoring of twelve site wells (MW-1, MW-3A, MW-3C, MW-4A, MW-7B, MW-7C, MW-8A, MW-8C, MW-9C, DPE-2, DPE-3 and DPE-4) and *annual* monitoring (third quarter) of seven wells (MW-2C, MW-5A, MW-5B, MW-5C, MW-6A, MW-9A and MW-10A). The program may be expanded to include other wells upon completion of site remediation to help assess conditions during the case closure evaluation period. Groundwater samples will be analyzed for TPHg/BTEX/MTBE by EPA Method 8015Cm/8021B, and for TPHd by EPA Method 8015C with silica gel cleanup. Pangea will summarize groundwater monitoring activities and results in a groundwater monitoring report.

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 – Site Location Map

Figure 2 – Groundwater Elevation Contour and Hydrocarbon Concentration Map (Shallow)

Figure 3 – Groundwater Elevation Contour and Hydrocarbon Concentration Map (Deep)

Figure 4 – Remediation System Layout

Figure 5 – TPHg and Benzene Concentration Trends in Shallow Groundwater

Figure 6 – TPHg and Benzene Concentration Trends in Deep Groundwater

Table 1 – Groundwater Analytical Data

Table 2 – Well Construction Details

Table 3 – SVE System Performance Data

Table 4 – GWE System Performance Data

Appendix A – Groundwater Monitoring Program

Appendix B – Groundwater Monitoring Field Data Sheets

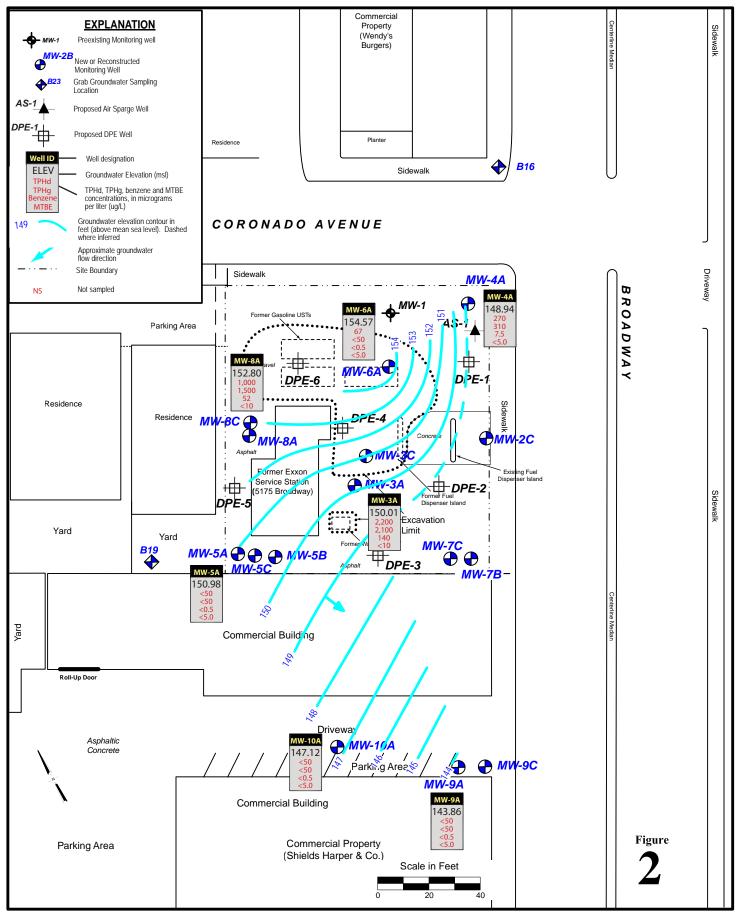
Appendix C – Laboratory Analytical Reports

Former Exxon Station 5175 Broadway Oakland, California



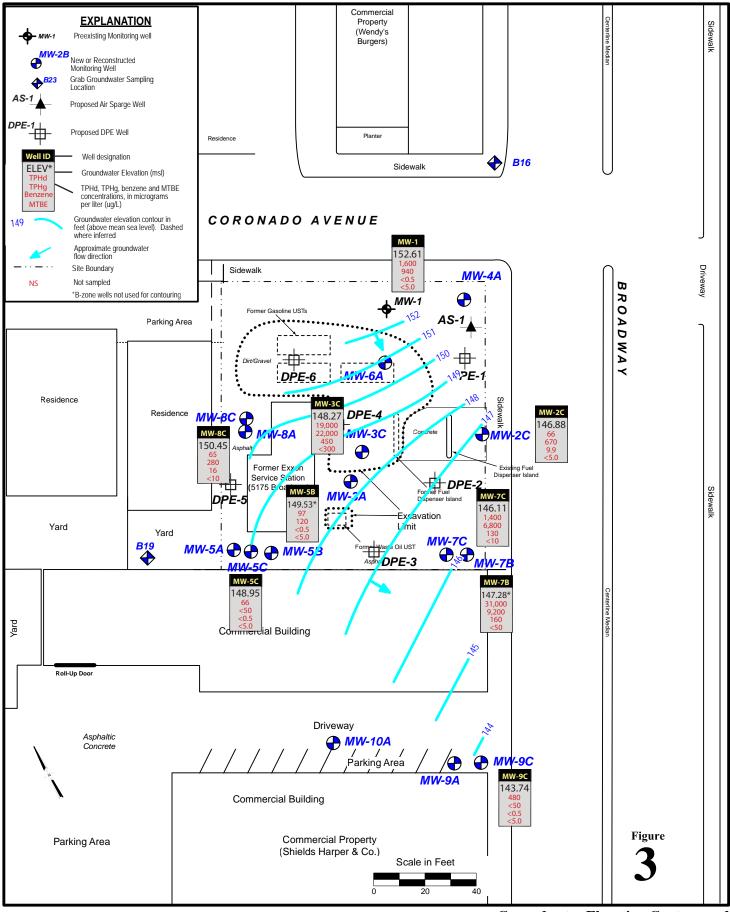
Site Location Map

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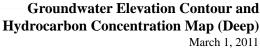


Former Exxon Station 5175 Broadway Oakland, California Groundwater Elevation Contour and Hydrocarbon Concentration Map (Shallow)

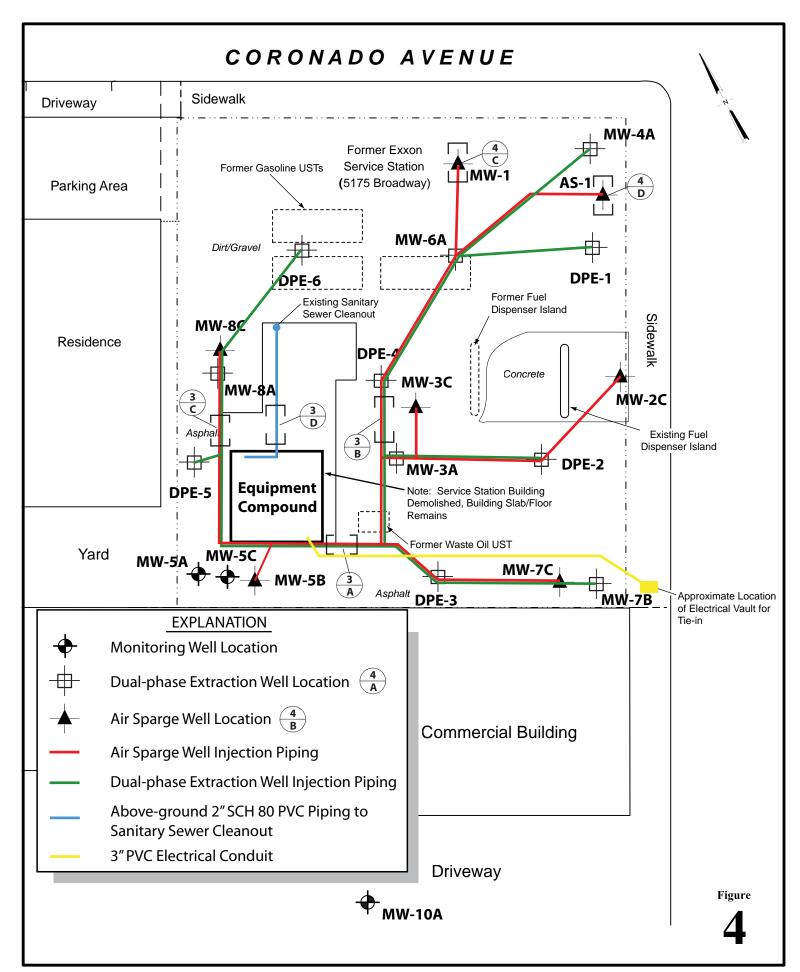


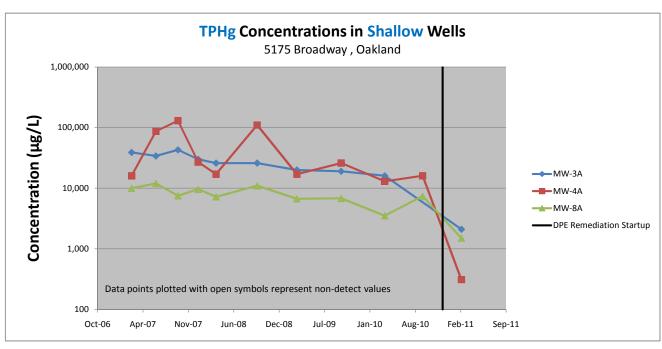


Former Exxon Station 5175 Broadway Oakland, California









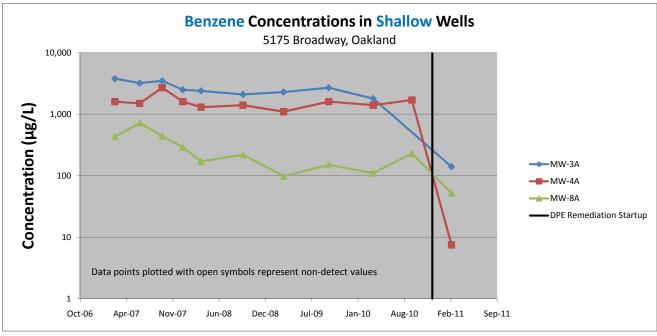
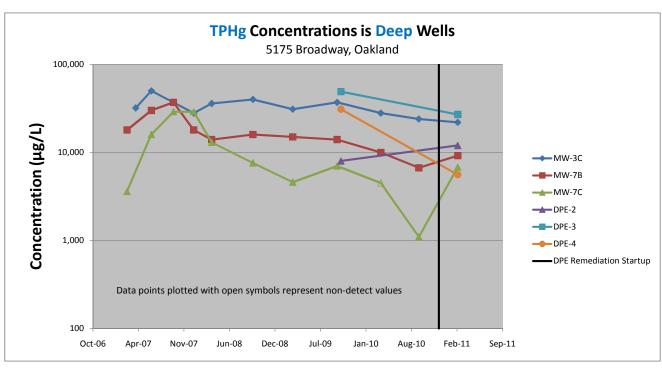


Figure 5. TPHg and Benzene Concentration Trends in Shallow Groundwater



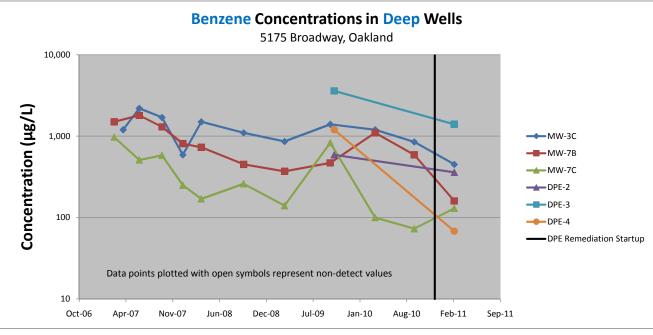


Figure 6. TPHg and Benzene Concentration Trends in Deep Groundwater

 Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID	Date		Groundwater	Depth										Dissolved
TOC Elev	Sampled	SPH	Elevation	to Water	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Oxygen
(ft)		(ft)	(ft)	(ft)	←				μg/L —				→	mg/L
SHALLOW WEI	LLS													
MW-3A	03/09/07		152.20	9.35	4,500	39,000	3,800	220	830	2,800	< 500			
(161.55)	03/26/07		152.33	9.22										
(161.57)	06/24/07		151.61	9.94	11,000	34,000	3,200	330	990	3,200	<250			
	09/29/07		150.21	11.36	11,000	43,000	3,500	150	730	2,200	<1,000			
	12/27/07		150.20	11.37	8,700	30,000	2,500	24	520	930	<100			
	03/15/08		152.27	9.30	10,000	26,000	2,400	110	700	1,200	<250			
	09/12/08		149.57	12.00	9,000	26,000	2,100	29	560	280	<100			
	03/06/09		152.66	8.91	6,500	20,000	2,300	59	740	410	<180			
	09/17/09		149.47	12.10	6,900	19,000	2,700	33	660	110	<250			
	03/28/10		152.50	9.07	4,300	16,000	1,800	38	220	340	<100			
	09/11/10		149.44	12.13	1,500	10,000	1,000	50		water to sample	1100			
	03/01/11		150.01	11.56	2,200	2,100	140	10	37	97	<10			
					_,,	_,								
MW-4A	03/09/07		152.88	9.56	3,600	16,000	1,600	36	37	150	<250			
(162.44)	03/26/07		152.56	9.88										
	06/24/07		152.02	10.42	110,000	87,000	1,500	59	290	800	< 500			
	09/29/07		151.33	11.11	170,000	130,000	2,700	69	400	1,400	<240			
	12/27/07		152.33	10.11	19,000	27,000	1,600	31	100	320	<90			
	03/15/08		152.51	9.93	38,000	17,000	1,300	< 50	120	380	< 500			
	09/12/08		151.72	10.72	120,000	110,000	1,400	< 50	210	660	< 500			
	03/06/09		153.84	8.60	32,000	17,000	1,100	15	<10	190	<100			
	09/17/09		151.44	11.00	25,000	26,000	1,600	63	140	320	<350			
	03/28/10		152.69	9.75	9,200	13,000	1,400	29	16	160	<100			
	09/11/10		151.34	11.10	23,000	16,000	1,700	43	140	330	<250			
	03/01/11		148.94	13.50	270	310	7.5	1.0	<0.5	7.7	<5.0	-	-	
	00,100,105		150.40	10.12		50	0.5	0.7	0.5	0.5				
MW-5A	03/09/07		150.40	10.42	56	<50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0			
(160.82)	03/26/07		150.00	10.82										
	06/24/07		148.94	11.88	<50	180	< 0.5	< 0.5	< 0.5	< 0.5	<5.0			
	09/29/07		147.86	12.96										
	12/27/07		148.40	12.42										
	03/15/08		149.96	10.86	<50	180	0.91	< 0.5	< 0.5	< 0.5	<5.0			
	09/12/08		147.50	13.32						water to sample				
	03/06/09		151.33	9.49	230	460	2.0	3.0	0.68	1.9	<5.0			
	09/17/09		148.02	12.80						water to sample				
	03/28/10		150.30	10.52	<50	69	< 0.5	< 0.5	< 0.5	< 0.5	<5.0			
	09/11/10		147.72	13.10						water to sample				
	03/01/11		150.98	9.84	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			

Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID	Date		Groundwater	Depth										Dissolved
TOC Elev	Sampled	SPH	Elevation	to Water	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Oxygen
(ft)	•	(ft)	(ft)	(ft)	←				μg/L —				→	mg/L
MW-6A	03/09/07		154.91	6.67	380	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
(161.58)	03/26/07		154.41	7.17										
	06/24/07		153.79	7.79	590	140	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	09/29/07		152.84	8.74	540	52	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	12/27/07		154.27	7.31	170	94	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/15/08		154.42	7.16	150	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	09/12/08		152.92	8.66	510	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/06/09		155.76	5.82	110	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	09/17/09		152.89	8.69	280	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/28/10		154.55	7.03	<50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	09/11/10		152.99	8.59	<50	<50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0			
	03/01/11		154.57	7.01	67	<50	<0.5	<0.5	<0.5	<0.5	<5.0			
MW-8A	03/09/07		152.05	9.52	4,200	10,000	430	18	<10	88	<100			
(161.57)	03/26/07		151.74	9.83										
	06/24/07		151.40	10.17	17,000	12,000	720	500	230	880	<300			
	09/29/07		150.64	10.95	5,300	7,500	440	67	26	240	<90			
(161.59)	12/27/07		152.00	9.59	13,000	9,600	290	100	90	360	<100			
	03/15/08		152.00	9.59	7,500	7,200	170	28	270	110	<100			
	09/12/08		150.27	11.32	9,900	11,000	220	31	110	180	<50			
	03/06/09		153.01	8.58	5,500	6,700	98	17	57	63	<50			
	09/17/09		150.83	10.76	5,200	6,800	150	19	10	35	<25			
	03/28/10		151.86	9.73	2,600	3,500	110	7.2	<1.7	19	<17			
	09/11/10		150.43	11.16	4,800	7,400	230	25	15	40	<90			
	03/01/11		152.80	8.79	1,000	1,500	52	3.5	24	11	<10			
MW-9A	09/29/07		142.76	12.61	86	<50	2.6	<0.5	<0.5	<0.5	<5.0			
(155.37)	12/27/07		143.51	11.86	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0			
(133.37)	03/15/08		143.35	12.02	<50	<50	0.85	<0.5	<0.5	<0.5	<5.0			
	09/12/08		142.60	12.77	<50	<50	1.2	<0.5	<0.5	<0.5	<5.0			
	03/06/09		144.18	11.19	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0			
	09/17/09		142.91	12.46	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0			_
	03/28/10		143.49	11.88	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0			
	09/11/10		142.71	12.66	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0			
	03/01/10		143.86	11.51	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0			
MW-10A	09/29/07		144.35	10.53	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
(154.88)	12/27/07		145.50	9.38	<50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/15/08		145.96	8.92	<50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	09/12/08		143.82	11.06	<50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/06/09		147.45	7.43	<50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	09/17/09		144.11	10.77	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			

Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID	Date	CDII	Groundwater	Depth										Dissolve
TOC Elev	Sampled	SPH	Elevation	to Water	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Oxygen
(ft)		(ft)	(ft)	(ft)	\leftarrow				μg/L				→	mg/L
MW-10A	03/28/10		146.25	8.63	<50	<50	<0.5	<0.5	< 0.5	<0.5	<5.0			
(cont.)	09/11/10		144.19	10.69	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0			
(com.)	03/01/10		147.12	7.76	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0			
EEP WELLS														
MW-1	04/30/89					200	18	5	2	12				
(97.71)	05/17/90		88.45	9.26										
	09/26/90		87.79	9.92		1,300	55	31	120	100				
	01/14/91		88.17	9.54		3,100	350	83	86	130				
(102.04)	07/03/91		92.62	9.42		580	32	41	40	55				
	11/11/91		92.59	9.45		330	20	2	2	11				
(101.83)	03/04/92		93.90	7.93		810	11	5	10	23				
	06/02/92		92.85	8.98		2,200	93	32	40	120				
	09/28/92		92.54	9.29		2,900	24	78	19	37				
	01/11/93		94.27	7.56		1,700	5.7	6	11	28				
	08/15/94		92.64	9.19		2,000	120	3	6	16				
(97.50)	11/07/96		88.77	8.73	270	1,200	3	1.1	1.5	3.8	< 0.5			
	02/12/97		89.58	7.92	< 50	1,800	13	5.7	4.8	17	< 0.5			
	06/16/97		88.46	9.04	< 50	330	27	< 0.5	< 0.5	1.2	< 0.5			
	09/30/97		89.94	7.56	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			
(97.50)	01/27/98		89.54	7.96	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			
	04/24/98		89.52	7.98	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			
	08/17/98		88.52	8.98	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			
	11/16/98		88.60	8.90	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			
	02/16/99		88.86	8.64	< 50	110	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			
	05/17/99		89.00	8.50		280	1.1	0.6	< 0.5	< 0.5	< 0.5			
	08/17/99		88.26	9.24	86	790	5.6	4.3	4.5	11	< 5.0			
	11/17/99		87.06	10.44		1,300	3.6	1.9	2.7	6.6	<1.0			
	02/17/00		89.02	8.48		580	1.1	2.3	3.6	4.9	< 5.0			
	05/17/00		89.26	8.24		1,500	130	6.8	6.1	<5.0	< 5.0			
	08/17/00		88.73	8.77		550	160	<25	<25	<25	<25			
	11/15/00		88.46	9.04		130	< 5.0	< 5.0	< 5.0	<5.0	< 5.0			
	02/16/01		89.90	7.60		400	26	< 5.0	<5.0	<5.0	< 5.0			
	01/11/02		89.42	8.08	160	600	74	53	14	52	110			
(161.03)	07/01/02		152.01	9.02	280	670	25	< 5.0	<5.0	<5.0	< 5.0			
	10/04/02		151.29	9.74	520	1,800	130	7.8	8.1	14	< 5.0			
	07/28/06		151.93	9.10	86	250	42	1.7	1.4	3.1	<1.0	51	1.5	0.21
	10/16/06		151.98	9.05	110	390	16	< 0.5	1.5	2.2	< 0.5	41	1.6	0.17
(161.10)	01/09/07		152.90	8.20	160	530	21	1.7	2.8	5.1				0.22
	03/26/07		152.84	8.26										
	06/24/07		152.12	8.98	220	500	24	1.1	2.2	4.2	< 5.0			

Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID	Date		Groundwater	Depth										Dissolved
TOC Elev	Sampled	SPH	Elevation	to Water	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Oxygen
(ft)		(ft)	(ft)	(ft)	←				μg/L				→	mg/L
MW-1	09/29/07		151.44	9.66	180	540	19	1.2	2.3	5.3	< 5.0			
(cont.)	12/27/07		152.60	8.50	200	290	10	0.65	1.2	3.0	< 5.0			
	03/15/08		152.72	8.38	340	680	24	1.1	1.9	2.9	<10			
	09/12/08		151.86	9.24	320	1,000	13	< 0.5	0.61	1.4	<5.0			
	03/06/09		154.40	6.70	2,700	2,500	28	3.2	4.8	10	<17			
	09/17/09		151.67	9.43	170	300	4.4	< 0.5	< 0.5	2.3	< 5.0			
	03/28/10		153.05	8.05	290	1,000	16	1.2	1.1	4.2	<5.0			
	09/11/10		151.50	9.60	190	270	6.9	< 0.5	0.75	2.1	<5.0			
	03/01/11		152.61	8.49	1,600	940	<0.5	<0.5	0.55	2.0	<5.0			
MW-2C	03/09/07		152.24	8.41	140	450	40	9.3	2.9	16	<10			
(160.65)	03/26/07		151.93	8.72										
	06/24/07		151.21	9.44	160	440	30	1.8	5.9	7.4	< 5.0			
	09/29/07		150.45	10.20	120	200	13	< 0.5	< 0.5	2.0	< 5.0			
	12/27/07		151.42	9.23	83	190	13	0.83	< 0.5	1.9	< 5.0			
	03/15/08		151.83	8.82	120	250	24	2.2	5.2	4.5	< 5.0			
	09/12/08		150.73	9.92	< 50	130	7.1	< 0.5	1.2	0.83	< 5.0			
	03/06/09		153.21	7.44	95	180	8.0	1.1	1.5	2.8	< 5.0			
	09/17/09		150.57	10.08	< 50	64	4.3	< 0.5	0.62	0.88	< 5.0			
	03/28/10		152.02	8.63	< 50	94	4.6	< 0.5	0.77	1.2	< 5.0			
	09/11/10		150.31	10.34	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/01/11		146.88	13.77	66	670	9.9	<0.5	0.92	0.58	<5.0			
MW-3C	03/26/07		151.15	10.64										
(161.79)	04/16/07		150.87	10.92	36,000	32,000	1,200	710	600	1,900	< 500			
	06/24/07		149.43	12.36	200,000	50,000	2,200	4,100	860	6,100	< 500			
	09/29/07		148.33	13.46	48,000	37,000	1,700	3,300	830	4,800	<1,000			
	12/27/07		149.79	12.00	29,000	28,000	590	900	630	2,000	< 500			
	03/15/08		150.70	11.09	21,000	36,000	1,500	2,400	570	3,700	< 500			
	09/12/08		148.37	13.42	11,000	40,000	1,100	1,200	600	3,000	< 500			
	03/06/09		152.04	9.75	13,000	31,000	860	420	540	2,200	< 500			
	09/17/09		148.59	13.20	14,000	37,000	1,400	690	400	4,300	<1,200			
	03/28/10		151.15	10.64	10,000	28,000	1,200	540	750	3,200	<150			
	09/11/10		148.48	13.31	13,000	24,000	850	390	550	3,100	<1,000			
	03/01/11		148.27	13.52	19,000	22,000	450	110	600	1,500	<300			-
MW-5B	03/09/07		146.42	15.08	59	140	1.3	0.77	<0.5	1.6	<5.0			
(161.50)	03/26/07		148.88	12.62										
	06/24/07		147.98	13.52	53	52	1.1	< 0.5	< 0.5	< 0.5	< 5.0			
	09/29/07		146.60	14.90	< 50	< 50	0.95	< 0.5	< 0.5	< 0.5	< 5.0			
	12/27/07		148.41	13.09	< 50	58	1.4	< 0.5	0.60	< 0.5	< 5.0			
	03/15/08		148.95	12.55	<50	61	2.6	1.1	1.1	3.0	< 5.0			

Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID	Date		Groundwater	Depth										Dissolved
TOC Elev	Sampled	SPH	Elevation	to Water	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Oxygen
(ft)		(ft)	(ft)	(ft)	\leftarrow				—— μg/L —				→	mg/L
MW-5B	09/12/08		146.35	15.15	<50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
(cont.)	03/06/09		150.36	11.14	<50	67	2.0	1.4	1.3	3.3	<5.0			
	09/17/09		146.94	14.56	< 50	58	0.66	< 0.5	< 0.5	< 0.5	< 5.0			
	03/28/10		149.38	12.12	< 50	110	2.7	0.78	< 0.5	1.6	< 5.0			
	09/11/10		145.55	15.95	< 50	110	0.56	< 0.5	< 0.5	< 0.5	< 5.0			
	03/01/11		149.53	11.97	97	120	<0.5	<0.5	<0.5	<0.5	<5.0	-	-	
MW-5C	03/09/07		148.12	12.91	<50	<50	< 0.5	< 0.5	<0.5	< 0.5	<5.0			
(161.03)	03/26/07		148.41	12.62										
	06/24/07		147.58	13.45	< 50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	09/29/07		146.41	14.62	66	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	12/27/07		148.10	12.93	< 50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/15/08		148.48	12.55	< 50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	09/12/08		146.04	14.99	< 50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/06/09		149.73	11.30	< 50	<50	0.52	< 0.5	< 0.5	< 0.5	< 5.0			
	09/17/09		146.60	14.43	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/28/10		148.68	12.35	< 50	< 50	1.3	< 0.5	< 0.5	< 0.5	< 5.0			
	09/11/10		146.22	14.81	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/01/11		148.95	12.08	66	<50	<0.5	<0.5	<0.5	<0.5	<5.0			
MW-7B	03/09/07		147.97	11.18	930	18,000	1,500	1,600	140	1,800	<600			
(159.15)	03/26/07		148.10	11.05										
(10).10)	06/24/07		147.54	11.61	40,000	30,000	1,800	2,400	240	2,800	< 700			
(159.02)	09/29/07		146.91	12.11	16,000	37,000	1,300	1,500	180	2,700	<500			
(15).02)	12/27/07		147.37	11.65	7,700	18,000	810	880	38	1,600	<50			
	03/15/08		147.66	11.36	7,900	14,000	730	820	110	1,200	<250			
	09/12/08		146.87	12.15	27,000	16,000	450	340	19	1,300	<120			
	03/06/09		147.90	11.12	15,000	15,000	370	270	13	1,000	<150			
	09/17/09		146.94	12.08	10,000	14,000	470	330	44	1,100	<170			
	03/28/10		148.17	10.85	2,300	10,000	1,100	750	46	1,100	<300			
	09/11/10		146.81	12.21	2,900	6,700	590	260	84	550	<210			
	03/01/10		147.28	11.74	31,000	9,200	160	96	53	510	<50			
MW-7C	03/09/07		145.44	13.09	190	3,600	970	100	12	90	<120			
(158.53)	03/26/07		147.53	11.00										
(130.33)	06/24/07		146.65	11.88	7,100	16,000	510	520	190	1,300	<100			
	09/29/07		146.63	12.32	11,000	29,000	580	1,400	600	4,800	<1,000			
	12/27/07		146.74	11.79	56,000	29,000	250	410	430	3,300	<50			
	03/15/08		146.74	11.79	7,000	13,000	170	58	430 170	1,300	<100			
	03/13/08		146.02	12.51	2,600	7,600	260	38		330	<100 <50			
	03/06/09		146.02	10.88	1,900	4,600	140	38 21	76 15	93	<30 <15			
	03/06/09		147.63	12.30	2,200	7.000	830	38	23	93	<100			
	09/1//09		140.23	14.30	4,400	7,000	030	38	23	90	<100			

 Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID TOC Elev	Date Sampled	SPH	Groundwater Elevation	Depth to Water	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Dissolved
(ft)	Sampled	(ft)	(ft)	(ft)	1PH0 ←	трну	Веплепе	Totuene	Ethylbenzene μg/L —	Aylenes	MIBE	DIPE	1,2-DCA	Oxygen mg/L
()1)		(11)	(II)	(11)					µg/L					mg/L
MW-7C	03/28/10		147.32	11.21	940	4,500	<100	79	2.0	59	66			
(cont.)	09/11/10		145.77	12.76	350	1,100	73	3.6	2.0	5.2	<15			
(,	03/01/11		146.11	12.42	1,400	6,800	130	9.6	3.1	8.0	<10			
MW-8C	03/09/07		149.18	12.15	<50	150	9.8	1.3	2.0	3.9	<5.0			
(161.33)	03/26/07		149.56	11.77										
	06/24/07		148.96	12.37	< 50	<50	0.57	< 0.5	< 0.5	< 0.5	< 5.0			
	09/29/07		148.35	12.98	< 50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	12/27/07		149.84	11.49	< 50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/15/08		149.94	11.39	<50	110	6.0	1.7	2.4	2.4	< 5.0			
	09/12/08		148.18	13.15	<50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/06/09		151.25	10.08	< 50	<50	2.1	< 0.5	0.87	0.76	< 5.0			
	09/17/09		148.63	12.70	< 50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/28/10		149.94	11.39	< 50	84	6.6	0.89	2.9	2.7	< 5.0			
	09/11/10		148.33	13.00	<50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/01/11		150.45	10.88	65	280	16	3.7	7.9	6.2	<10			
MW-9C	09/29/07		142.67	12.27	390	68	2.2	0.88	< 0.5	< 0.5	<5.0			
(154.94)	12/27/07		143.40	11.54	<50	<50	0.84	< 0.5	< 0.5	< 0.5	< 5.0			
	03/15/08		143.98	10.96	<50	<50	0.55	< 0.5	< 0.5	< 0.5	< 5.0			
	09/12/08		142.53	12.41	<50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/06/09		144.09	10.85	<50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	09/17/09		142.84	12.10	<50	<50	<0.5	< 0.5	< 0.5	< 0.5	<5.0			
	03/28/10		143.34	11.60	<50	<50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0			
	09/11/10		139.13	15.81	<50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0			
	03/01/11		143.74	11.20	480	<50	<0.5	<0.5	<0.5	<0.5	<5.0			
REMEDIATION	WELLS													
AS-1	10/04/09			11.38		<50	3.6	<0.5	<0.5	<0.5	<5.0			
DPE-1	10/04/09			10.38		1,600	210	4.4	5.1	34	<35			
DPE-2	10/04/09			11.33		8,000	590	220	92	760	<250			
	03/01/11	-		16.10	14,000	12,000	360	130	96	1,700	<50			
DPE-3	10/04/09			11.85		49,000	3,600	4,400	1,300	6,500	<2,500			
	03/01/11			11.37	51,000	27,000	1,400	810	870	3,300	<700			
DPE-4	10/04/09			11.50		31,000	1,200	2,900	530	4,700	<1,200			
	03/01/11			13.88	5,100	5,600	68	100	42	350	<50			

 Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID	Date		Groundwater	Depth		•		•			•			Dissolved
TOC Elev	Sampled	SPH	Elevation	to Water	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Oxygen
(ft)		(ft)	(ft)	(ft)					μg/L					mg/L
DPE-5	10/04/09			14.46		2,900	78	71	29	260	<50			
DPE-6	10/04/09			11.05		1,800	6.7	5.2	2.6	34	<5.0			
ESTROYED W						2,000								
MW-2	04/30/89					230	39	18	5	23				
(97.78)	05/17/90		87.78	10.00										
	09/29/90		86.95	10.83		850	970	5	25	47				
	01/14/91		87.15	10.63		3,100	30	52	24	34				
(102.02)	07/03/91		91.94	10.08		1,590	30	52	24	34				
	11/11/91		91.81	10.21		960	320	15	4	29				
	03/04/92		93.32	8.70		1,500	9.5	8.4	9.8	22				
	06/02/92		92.50	9.52		2,800	84	41	59	95				
	09/28/92		91.93	10.09		1,600	47	20	47	97				
	01/11/93		93.50	8.52		2,500	8.6	10	17	32				
(97.49)	08/15/94		87.58	9.91		6,000	450	60	100	95				
	11/07/96		87.47	10.02	780	4,200	25	4.9	8.1	14	< 0.5			
	02/12/97		88.58	8.91	5,700	1,800	16	3.1	3.4	8.8	< 0.5			
	06/16/97		87.74	9.75	<50	2,500	22	5.1	7.8	11	< 0.5			
	09/30/97		89.60	7.89	<50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			
	01/27/98		89.11	8.38	<50	<50	<0.5	< 0.5	< 0.5	< 0.5	<0.5			
	04/24/98		88.81	8.68	1,400	2,100	18	6.5	4.8	21	<0.5			
	08/17/98		87.75	9.74	<50	2,900	5.1	4.5	5.8	17	<0.5			
	11/16/98		87.35	10.14	<50	1,400	2.1	1.9	2.3	4.8	<0.5			
	02/16/99		88.57	8.92	<50	1,600	82	16	<2.5	40	59			
	05/17/99		88.23	9.26		8,200	43	73	140	100	<250			
	08/17/99		87.45	10.04	260	2,900	20	81	17	38	<5.0			
	11/17/99		85.97	11.52	<50	2,600	7	3.7	5.3	12.9	<1.0			
	02/17/00		87.99	9.50		1,700	3.2	6.8	11	12.3	<5.0			
	05/17/00		88.65	9.30 8.84		3,800	450	65	110	80	<25			
	08/17/00		88.99	8.50		4,300	440	<50	78	<50	<50			
	11/15/00		87.55	9.94		5,800	320	41	78	64	<25			
	02/16/01		88.97	8.52		2,200	110	20	38	33	<5.0			
	01/11/02		88.67	8.82	620	3,100	280	86	84	110	<50			
(160.98)	07/01/02		151.34	9.64	940	2,600	300	29	45	27	<10			
	10/04/02		150.46	10.52	390	4,000	440	66	140	120	<25			
	07/28/06		150.96	10.02	340	1,300	150	9.9	6	18	< 0.5	3.6	< 0.5	0.17
	10/16/06		150.45	10.53	76	150	16	1.0	3.5	2.2	< 0.5	1.2	< 0.5	0.19
	01/09/07		151.65	9.33	84	210	27	2.6	8.1	6.8				0.14
	01/25/07					Well	Destroyed							

Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID	Date		Groundwater	Depth										Dissolved
TOC Elev	Sampled	SPH	Elevation	to Water	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Oxygen
(ft)	-	(ft)	(ft)	(ft)	←				μg/L	-			──	mg/L
MW-3	04/30/90					56,000	3,600	8,600	1,300	7,200				
(98.14)	05/17/90		85.72	12.42										
	09/26/90		84.64	13.50		54,000	5,100	420	1,600	8,000				
	01/14/91		85.56	12.58		35,000	2,600	6,600	1,500	5,700				
(102.46)	07/03/91		90.38	12.08		33,000	4,120	4,300	1,400	4,800				
	11/11/91		90.17	12.29		57,000	3,900	8,400	2,100	14,000				
(102.18)	03/04/92		91.92	10.26		57,000	720	870	81	3,100				
(97.94)	06/02/92		86.54	11.40		50,000	240	240	220	740				
	09/28/92		85.30	12.64		64,000	110	93	97	250				
	01/11/93		87.84	10.10		68,000	210	280	360	990				
	08/15/94		85.74	12.20		50,000	870	1,200	1,300	3,000				
	11/07/96		85.54	12.40	470	68,000	33	27	63	120	< 0.5			
	02/12/97		87.71	10.23	3,500	25,000	39	43	15	91	< 0.5			
	06/16/97		86.15	11.79	< 50	9,700	26	29	45	81	< 0.5			
	09/30/97		88.54	9.40	1,600	6,000	43	36	12	11	< 0.5			
	01/27/98		88.14	9.80	560	380	5.7	4.1	1.7	9.1	< 0.5			
	04/24/98		88.04	9.90	680	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			
	08/17/98		86.48	11.46	< 50	16,000	200	18	31	82	< 0.5			
	11/16/98		85.54	12.40	< 50	68,000	86	54	69	130	< 0.5			
	02/16/99		87.22	10.72	< 50	33,000	270	110	< 5.0	770	170			
	05/17/99		87.40	10.54		72,000	280	230	320	890	<250			
	08/17/99		85.99	11.95	1,800	20,000	51	41	61	130	<5.0			
	11/17/99		84.34	13.60		1,700	39	22	31	84	<1.0			
	02/17/00		87.26	10.68		8,800	16	39	74	90	<5.0			
	05/17/00		87.69	10.25		22,000	300	260	410	940	<5.0			
	08/17/00		86.10	11.84		15,000	230	140	470	750	<50			
	11/15/00		86.12	11.82		12,000	250	210	390	700	<25			
	02/16/01		88.26	9.68		7,400	40	72	700	250	<25			
	01/11/02		88.36	9.58	1,900	9,300	230	200	290	580	<25			
(161.43)	07/01/02		150.29	11.14	5,200	13,000	230	220	450	890	<13			
,	10/04/02		148.61	12.82	4,900	11,000	280	170	450	730	<25			
	07/28/06			Not Sampl	ed - Unable to l	ocate well								
	10/16/06			_	ed - Unable to l									
	01/09/07				ed - Unable to l									
	01/22/07		149.81	11.62	93,000	34,000	770	250	760	2,000	<1,000			
	03/16/07				,	- 1,000	Well Destroye			_,	,			
	********							-						
STMW-4	07/03/91		92.58	11.00		3,100	610	62	39	150				
(103.58)	11/11/91		92.50	11.08		3,600	990	15	2.6	180				
(101.08)	03/04/92		91.64	9.44		5,000	35	20	22	71				
(98.80)	06/02/92		88.48	10.32		13,000	140	45	63	210				
	00/02/72		00.40	10.52		15,000	140	73	03	210				

 Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID	Date		Groundwater	Depth										Dissolved
TOC Elev	Sampled	SPH	Elevation	to Water	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Oxygen
(ft)		(ft)	(ft)	(ft)	←				μg/L				→	mg/L
STMW-4	01/11/93		89.52	9.28		24,000	26	88	92	280				
(cont.)	08/15/94		88.26	10.54		9,000	500	34	46	130				
	11/07/96		88.43	10.37	180	13,000	40	2.9	7.8	19	<0.5			
	02/12/97		89.44	9.36	5,700	5,300	95	5.3	5.9	18	<0.5			
	06/16/97		88.40	10.40	<50	5,300	37	6.2	1.7	11	<0.5			
	09/30/97		90.30	8.50	<50	2,700	42	7.7	5.7	26	< 0.5			
	01/27/98		89.90	8.90	300	3,000	60	17	12	49	< 0.5			
	04/24/98		89.30	9.50	<50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			
	08/17/98		88.44	10.36	< 50	29,000	36	24	59	160	< 0.5			
	11/16/98		88.24	10.56	< 50	13,000	26	21	20	41				
	02/16/99		89.16	9.64	< 50	32,000	660	16	16	150	<100			
	05/17/99		88.84	9.96		13,000	1600	30	45	78	<250			
	08/17/99		88.16	10.64	990	12,000	260	22	33	72	< 5.0			
	11/17/99		86.78	12.02		7,900	21	12	17	40	<1.0			
	02/17/00		89.48	9.32		4,900	8.9	21	38	50	< 5.0			
	05/17/00		89.15	9.65		9,600	840	< 50	61	< 50	<50			
	08/17/00		88.46	10.34		5,100	680	< 50	62	< 50	< 50			
	11/15/00		88.28	10.52		3,900	640	<25	26	27	<25			
	02/16/01		89.60	9.20		5,700	560	<25	<25	<25	<25			
	01/11/02		89.22	9.58	930	4,900	560	59	25	<25	<250			
(162.13)	07/01/02		151.85	10.28	6,700	6,700	470	18	32	45	<13			
	10/04/02		151.05	11.08	2,900	13,000	590	26	65	110	<25			
	07/28/06	0.04	151.53	10.60	39,000	25,000	960	21	73	130	< 5.0	65	< 5.0	0.22
	10/16/06	0.06	151.30	10.83	14,000	14,000	790	28	81	130	< 5.0	30	< 5.0	0.26
	01/09/07	0.03	152.20	9.93			Not Sampled - SI	РΗ						0.24
	01/26/07						Well Destroyed							0.24
STMW-5	07/03/91		88.70	13.29		690	99	81	19	98				
(101.99)	11/11/91		87.99	14.00		410	61	2.4	1.4	20				
(101.36)	03/04/92		89.56	11.80		460	13	6.5	11	18				
	06/02/92		88.30	13.06		1,800	27	20	21	43				
	09/28/92		87.32	14.04		1,500	14	6.1	18	22				
	01/11/93		89.75	11.61		800	1.8	3	3.1	9.4				
	08/15/94		87.51	13.85		3,000	320	62	34	220				
(97.14)	11/07/96		83.47	13.67	330	1,200	11	1.7	4.4	13	< 0.5			
	02/17/97		85.07	12.07	3,700	1,000	11	17	1.7	9.7	< 0.5			
	06/19/97		83.81	13.33	2,300	950	7.4	1	1	7.2	< 0.5			
	09/30/97		85.90	11.24	1,100	710	5.8	4	1	1	< 0.5			
	01/27/98		85.50	11.64	1,100	340	2	1.8	1.6	8.2	< 0.5			
	04/24/98		85.30	11.84	< 50	3,300	12	9.4	8.5	37	< 0.5			
	08/17/98		83.94	13.20	< 50	5,300	26	17	14	39	< 0.5			
	11/16/98		83.40	13.74	<50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			

Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID TOC Elev	Date Sampled	SPH	Groundwater Elevation	Depth to Water	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Dissolved Oxygen
(ft)		(ft)	(ft)	(ft)	←				μg/L					mg/L
STMW-5	02/16/99		84.92	12.22	< 50	950	150	3.8	1.4	14	11			
(cont.)	05/17/99		84.56	12.58		2,800	67	9.4	<2.5	16	30			
	08/17/99		83.66	13.48	230	2,800	18	17	18	36	< 5.0			
	11/17/99		82.26	14.88		1,600	3.9	2.3	3.2	7.5	<1.0			
	02/17/00		84.58	12.56		770	1.5	3.2	5.8	7	< 5.0			
	05/17/00		85.06	12.08		4,500	<25	<25	<25	<25	<25			
	08/17/00		83.58	13.56		2,900	170	64	100	250	<10			
	11/15/00		83.86	13.28		2,100	120	24	40	54	< 5.0			
	02/16/01		85.54	11.60		850	58	9.8	9.4	18	< 5.0			
	01/11/02		85.42	11.72	< 50	920	76	16	16	28	13			
(160.65)	07/01/02		147.51	13.14	1,500	4,300	71	14	14	36	< 5.0			
	10/04/02		146.13	14.52	60	1,400	71	17	26	35	< 5.0			
	07/28/06		147.30	13.35	370	700	22	4.3	1.2	6.6	< 0.5	< 0.5	< 0.5	0.24
	10/16/06		146.91	13.74	240	590	14	1.6	1.3	3.2	< 0.5	< 0.5	< 0.5	0.21
	01/09/07		148.19	12.46	180	390	30	3.2	1.8	3.2				0.17
	01/18/07							Destroyed						
RAB GROUNI	DWATER SAMPL	ING - 2007												
B-18	01/23/07			7.1	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			
B-19	03/19/07			4	<50	<50	< 0.5	< 0.5	<0.5	< 0.5	< 0.5			
RAB GROUNI	DWATER SAMPL	ING - 2006												
B1-W	02/01/06			9.5	<84	710	(0.52)	(0.59)	(<0.50)	(0.66)	<1.0	<5.0	< 0.50	
B3-W	02/08/06			9.63	<280	23,000	(3,300)	(660)	(170)	(910)	< 50	380	<25	
B4-W	02/08/06			8.24		9,700	(320)	(13)	(200)	(180)	<20	1,300	12	
B5-W	02/08/06			6.96		10,000	(150)	(11)	(210)	(190)	<10	< 50	< 5.0	
B6-W	02/06/06			12.1		5,600	(3.9)	(3.1)	(54)	(61)	< 5.0	<25	< 2.5	
B7-W	02/08/06			11.72		8,000	(2,200)	(300)	(240)	(830)	<20	<100	53	
B8-W	02/08/06			9.97		18,000	(330)	(53)	(440)	(1,200)	<20	<100	11	
B10-W	02/06/06			13.3		6,800	(<5.0)	(5.7)	(170)	(69)	<10	<50	< 5.0	
B11-W	02/10/06			14.3		230,000	(13,000)	(19,000)	(960)	(20,000)	<200	<1,000	150	
B12-W	02/03/06			7.92		460	(1.6)	(2.1)	(1.6)	(3.5)	<1.0	<5.0	0.62	
B13-W	02/03/06			11.67	<60	1,700	(12)	(9.4)	(18)	(22)	<5.0	<25	<2.5	
B14-W	02/06/06			13.1		38,000	(410)	(25)	(290)	(95)	<50	<250	<25	
B15-W	02/01/06			8.75	<620	2,700	(3.2)	(2.7)	(22)	(4.3)	<5.0	<25	<2.5	
D13-11	02/01/00			0.15	\020	2,700	(3.4)	(2.7)	(22)	(4.5)	₹3.0	~43	~2.3	

Abbreviations:

 $\mu g/L = Micrograms \ per \ liter - approximately equal to parts per billion = ppb.$

mg/L = Milligrams per liter - approximately equal to parts per million = ppm.

Table 1. Groundwater Analytical Data - Former Exxon Station, 5175 Broadway, Oakland, CA

Well ID	Date		Groundwater	Depth										Dissolved
TOC Elev	Sampled	SPH	Elevation	to Water	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DIPE	1,2-DCA	Oxygen
(ft)		(ft)	(ft)	(ft)	←				μg/L				\longrightarrow	mg/L

SPH = Separate-phase hydrocarbons encountered in well (value in parentheses is thickness in feet).

Groundwater elevation is calculated according to the relationship: groundwater elevation = TOC (elevation) - (depth to water) + (0.8)(SPH thickness).

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

TPHd = Total petroleum hydrocarbons as diesel by EPA Method 8015C.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8021B.

 $MTBE = Methyl \ tertiary-butyl \ ether \ by \ EPA \ Method \ 8021B. \ (Concentrations \ in parentheses \ are \ by \ EPA \ Method \ 8260B).$

DIPE = Diisopropyl ether by EPA Method 8260B.

1,2-DCA = 1,2-Dichloroethane by EPA Method 8260B.

Table 2 – Well Use and Construction Details-5175 Broadway, Oakland, CA

Well ID	Total Depth of Well (feet bgs)	Screened Interval (ft bgs)	Well Casing Nominal Diameter (inches)	Sand & Slot Size
DPE – Existing Wells				
MW-3A (DPE)	14	9-14	2	#2/12 – 0.01 Slot
MW-4A (DPE)	15	8-15	2	#2/12 – 0.01 Slot
MW-6A (DPE)	17	8-17	2	#2/12 – 0.01 Slot
MW-7B (DPE)	18.5	15.5-18.5	2	#2/12 – 0.01 Slot
MW-8A (DPE)	15	8-15	2	#2/12 – 0.01 Slot
DPE – New Wells	<u>, </u>			
DPE 1 – DPE 6	19 – 20	10-13/19-20	2	#2/12 – 0.01 Slot
AIR SPARGING – Exist	ing Wells			
MW-1 (AS)	23	13-23	4	8x20 - 0.02 Slot
MW-2C (AS)	23	18-23	2	#2/12 – 0.01 Slot
MW-3C (AS)	27	22-27	2	#2/12 – 0.01 Slot
MW-5B (AS)	20	17-20	2	#2/12 – 0.01 Slot
MW-7C (AS)	25	20-25	2	#2/12 – 0.01 Slot
MW-8C (AS)	25	20-25	2	#2/12 – 0.01 Slot
AIR SPARGING -New \	Well			
AS-1	20	16-20	1	#2/12 – 0.01 Slot
GROUNDWATER MON	ITORING ONLY			
MW-5A	14	10-14	2	#2/12 – 0.01 Slot
MW-5C	27	22-27	2	#2/12 – 0.01 Slot
MW-9A	15.5	7.5-15.5	2	#2/12 – 0.01 Slot
MW-9C	21	17-21	2	#2/12 – 0.01 Slot
MW-10A	18	8-18	2	#2/12 – 0.01 Slot

 $bgs = below\ ground\ surface$

Table 3	Table 3. SVE (DPE) Performance Data - 5175 Broadway, Oakland, CA							Removal			Emission Reporting									
Date	Wells	Oxidizer Hr Meter Reading (hours)	Total Time (days)		System Vapor Flow Rate (cfm)	Applied Vacuum ("Hg)	•	Influent TPHg Data (ppmv)	Influent Benzene Data (ppmv)	Influent OVA Reading (ppmv)	SVE TPHg Removal Rate (lbs/day)	SVE Benzene Removal Rate (lbs/day)		Cumulative SVE Benzene Removal (lbs)	Effluent TPHg Lab (ppmv)	Effluent Benzene Lab Data (ppmv)	TPHg Abatement Efficiency (lbs/day)	Benzene Abatement Efficiency (lbs/day)	Benzene Emission Rate (lbs/day)	Cumulative Vapor Flow (cf)
	DPE-1, MW-3A, 4A, 8A		0.0	0.0	65	22	INF-V	1,300	6.4	1,270	27.1	0.12	0.0	0						0
	DPE-1, MW-3A, 4A, 8A DPE-1, MW-3A, 4A, 8A		0.5 3.3	0.5 2.9	65 93	22 20	INF-V	900 430	5.7 1.7	916	18.8 12.8	0.11 0.05	8.6 45.5	0.05 0.18	< 7.0	< 0.077	> 98.4	> 95.5	< 0.002	42,900 427,920
	DPE-1, MW-3A, 4A, 8A		12	9.0	125	17	INF-V	440	5.2	758	17.6	0.19	204.6	1.89						2,050,920
01/07/11	DPE-1, 4	5585	23	10.3	31	25	INF-V	640	6.1	1,000	6.4	0.06	270.3	2.46						2,511,828
02/02/11 02/22/11	DPE-1, 4 DPE-1, 2, 4, MW-4A	6019 6490	41 60	18.1 19.6	31 50	18 18	INF-V INF-V	1,200 370	6.1 1.8	1,168 632	11.9 5.9	0.06 0.03	486.3 602.7	3.45 3.96						3,319,812 4,731,912
02/28/11	DPE-1, 2, 4, MW-4A	6634	66	6.0	30	24		160	1.0		1.5	0.03	611.9	4.02						4,990,212
03/09/11	DPE-1, 2, 4, MW-4A	6797	73	6.8	86	18	INF-V	77	0.12	54	2.1	0.00	626.4	4.04						5,833,872
03/15/11	DPE-1, 2, 4, MW-4A	6941	79	6.0	86	21		77	0.12	63	2.1	0.00	639.1	4.06						6,574,848
03/16/11	DPE-2, 3, 4, MW-7B	6967	80	1.1	60	22		160	0.12	200	3.1	0.00	642.4	4.06						6,667,728
03/21/11	DPE-2, 3, 4, MW-7B	7081	85	4.8	53	23	INF-V	420	4.8	367	7.1	0.07	676.5	4.41						7,032,156
03/31/11	DPE-2, 3, 4, MW-7B	7131	87	6.9	98	26		550	8.0	603	17.3	0.23	761.2	5.62						7,636,752

Notes:

ALL = Wells DPE-1 through DPE-6, MW-3A, MW-4A, MW-7B and MW-8A

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

System data estimated when specific data not available.

cfm = actual cubic feet (cf) per minute based on anemometer readings (from vacuum side of vacuum pump during SVE).

ppmv = parts per million on volume to volume basis. Actual lab data shown in **bold.** Lab data estimated for dates without lab data to allow mass removal calculation.

lbs = Pounds

"Hg = Inches of mercury vacuum

SVE = Soil Vapor Extraction

OVA = Organic Vapor Analyzer (Horiba Model MEXA 324JU)

TPHg and Benzene Removal Rates = For dates where no laboratory analytical data was collected, the lab data is estimated based on prior lab data and OVA readings to calculate period and cumulative mass removal.

Hydrocarbon Removal/Emission Rate = Rate based on Bay Area Air Quality Management District's Manual of Procedures for Soil Vapor Extraction dated July 17, 1991.

Rate = lab concentration (ppmv) x system flowrate (scfm) x (1lb-mole/386 ft³) x molecular weight (86 lb/lb-mole for TPH-Gas hexane) x 1440 min/day x 1/1,000,000.

Table 4. GWE (DPE) System Performance Summary - 5175 Broadway, Oakland, California

		Totalizer	Interval	Interval	Average	TPHg	Benzene	MTBE	ТРНд	Benzene	MTBE	_
Well ID	Date	Reading ¹ (gallons)	Flow Volume (gallons)	Duration (days)	Flow Rate (gpm)	Concentration (ug/L)	Concentration (ug/L)	Concentration (ug/L)	Removed (Lbs)	Removed (Lbs)	Removed (Lbs)	Comments
System	12/08/10	0	0	0					0.000	0.000	0.000	System startup testing, water not discharged to sewer yet.
Influent	12/10/10	248	248	2	0.09				0.000	0.000	0.000	
	12/14/10	1,120	872	4	0.15	300	4.6	ND(<5.0)	0.002	0.000	0.000	Startup water sampling of influent (12/14)
	12/22/10	3,585	2,465	8	0.21				0.006	0.000	0.000	
	01/07/11	7,622	4,037	16	0.18				0.010	0.000	0.000	System shutdown 1/14 due to noise complaint
	02/02/11	16,840	9,218	26	0.25	1,300	52	ND(<10)	0.100	0.004	0.000	Off on arrival; restart.
	02/22/11	25,427	8,587	20	0.30	680	8.4	ND(<5.0)	0.049	0.001	0.000	
	02/28/11	28,855	3,428	6	0.40				0.019	0.000	0.000	
	03/09/11	31,981	3,126	9	0.24				0.018	0.000	0.000	
	03/15/11	34,398	2,417	6	0.28				0.014	0.000	0.000	
	03/16/11	34,961	563	1	0.39				0.003	0.000	0.000	
	03/31/11	36,763	1,802	15	0.08				0.010	0.000	0.000	_
								=	0.231	0.006	0.000	Total Cumulative Removal (Lbs)
-												
System	12/08/10											
Effluent	12/14/10					ND (<50)	ND (<0.5)	ND (<5.0)				Startup water sampling of effluent (12/14)
	02/22/11					ND (<50)	ND (<0.5)	ND (<5.0)				

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

ABBREVIATIONS AND NOTES:

1 = Initial totalizer reading was 23,559. Therefore, shown reading above 0 is actual reading minus 23,559. The 12/10/10 reading of 23,807 less 23,559 equals 248 gallons discharged.

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

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

Benzene analyzed by EPA Method 8021B

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

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

^{-- =} not measured/not available

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

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

APPENDIX A

Groundwater Monitoring Program

Table A. Quarterly Groundwater Monitoring Program During Active Remediation

Rockridge Heights, 5175 Broadway, Oakland, CA

Well ID	Well Type	Screened Interval (ft bgs)	Well Location for Monitoring	Casing Diam. (in)	Gauge Frequency	Sample Frequency ¹
Shallow Wells						
MW-3A	Mon + DPE	9-14	Downgradient (Onsite)	2	Q	Q
MW-4A	Mon + DPE	8-15	NE Corner, Upgradient (Onsite)	2	Q	Q
MW-5A	Mon	10-14	SW Corner, Downgradient (Onsite)	2	Q	A
MW-6A	Mon + DPE	8-17	Source Area, Upgradient (Onsite)	2	Q	A
MW-8A	Mon + DPE	8-15	W Boundary, Downgradient (Onsite)	2	Q	Q
MW-9A	Mon	7.5-15.5	Downgradient (Offsite)	2	Q	A
MW-10A	Mon	7.5-15.5	Downgradient (Offsite)	2	Q	A
Deep Wells						
MW-1	Mon + AS	n + AS 13-23 N Boundary, Upgradient (O		2	Q	Q
MW-2C	Mon + AS	18-23	E Boundary, Downgradient (Onsite)	2	Q	A
MW-3C	Mon + AS	22-27	Source Area, Downgradient (Onsite)	2	Q	Q
MW-5B	Mon + AS	17-20	SW Corner, Downgradient (Onsite)	2	Q	A
MW-5C	Mon	22-27	SW Corner, Downgradient (Onsite)	2	Q	A
MW-7B	Mon + DPE	15.5-18.5	SE Corner, Downgradient (Onsite)	2	Q	Q
MW-7C	Mon + AS	20-25	SE Corner, Downgradient (Onsite)	2	Q	Q
MW-8C	Mon + AS	20-25	W Boundary, Crossgradient (Onsite)	2	Q	Q
MW-9C	Mon	17-21	Downgradient (Offsite)	2	Q	Q
AS-1	AS	16-20	NE Corner, Upgradient (Onsite)	1		
DPE-1	DPE	9-19	NE Corner, Upgradient (Onsite)	4		
DPE-2	DPE	9-19	E Boundary, Downgradient (Onsite)	4	Q	Q
DPE-3	DPE	10-20	S Boundary, Downgradient (Onsite)	4	Q	Q
DPE-4	DPE	13-18	Source Area, Downgradient (Onsite)	4	Q	Q
DPE-5	DPE	9-19	W Boundary, Crossgradient (Onsite)	4		
DPE-6	E-6 DPE 14-		Source Area (Onsite)	4		

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 and Total Petroleum Hydrocarbons as Diesel (TPHd) by EPA Method 8015C with silica gel clean-up.

Q = Quarterly (Typically March, June, September and December)

A = Annually (Typically September)

 $Mon = Groundwater\ Monitoring\ Well$

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

DPE = Dual Phase Extraction Well

AS = Air Sparge Well

APPENDIX B

Groundwater Monitoring Field Data Sheets



Well Gauging Data Sheet

Project.Ta	sk #:1145	.001.226		Project Name: Rockreidge Heights						
Address:	5175 Bro	adway, Oa	akland, CA		1					
Name: Ste	eve Hunter			Signature: Shopping						
Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point			
MW-1	2	1053			8.49	22.85				
MW-2C	2	1040			13.77	23.50				
MW-3A	2	1058			11.56	13.88				
MW-3C	2	1103			13.52	26.99				
MW 41	2	1117			13.50	14.74				
MW-5A	2	1000	·	934	13.62	13.62				
MW-5B	2	1015			11.97	19-31				
MW-5C	2	1010			12.08	26.82				
MW 6A	2	1031			7.01	14.86				
MW-7B	# 2	1/1[11,74	1342				
MK 7C	2	1047		2/.5	1242	2467				

Comments: 411 Wells opened on 2/28/11



Well Gauging Data Sheet

Project.Ta	sk #:1145	.001.226		Project Name: Rockreidge Heights						
Address:	5175 Bro	adway, Oa	akland, CA	Date: 3/1/11						
Name: Ste	eve Hunter			Signature: Share						
Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point			
MW-3A	2	1123			8,79	14.65				
MW-8C	2	1023			1088	25.02				
Mu-94	2	0941			11,51	15.00	i			
MW-9C	2	0930			11.24	24.55				
MW-104	2	0947			7.76	18.07				
DPE-2	4	1127			16.10	1959				
DPE3	4	136			11.37	19.55				
DPE4	4	1142			1388	16.94				

Comments: All wells opened on 2/28/11



MONITORING FIELD DATA	A SHEET Well ID: MW-								
Project.Task #:1145.001.226	Project Name: Rockridge Heights								
Address: 5175 Broadway, Oakland, CA	Address: 5175 Broadway, Oakland, CA								
Date: 3/1/11 -3/2/11	Weather: Rain								
Well Diameter: \mathcal{Q}''	Volume/ft. 1" = 0.04 3" = 0.37 6" = 1.47 2" = 0.16 4" = 0.65 radius ² * 0.163								
Total Depth (TD): 22.85	Depth to Product:								
Depth to Water (DTW): 8.49	Product Thickness:								
Water Column Height: 14.36	1 Casing Volume: 2-30 gallons								
Reference Point: T.O.C	Casing Volumes: 7 gallons								
Purging Device: Disposable Bailer									
Sampling Device: Disposable Bailer									
Time Temp © pH Cond (µs)	NTU DO(mg/L) ORP (mV) Vol(gal) DTW								
0841 15-9 7.18 154/	-94 2.5								
0846 17.1 7.14 1539	-100 5								
C853 17.4 7.15 1521	-105 7								
Comments: DTW & Similary 12-3	32_								
<u></u>	- ₁								
Sample ID: MW-/	Sample Time: 0905								
Laboratory: McCampbell	Sample Date: 3-2-1/								
Containers/Preservative: 3-VOA's (HCL), 1-1Liter Amber (HCL)									
Analyzed for: TPHg/BTEX/MTBE (8015Cm/8021), TPHd (8015C) w/silica gel clean-up									
Sampler Name: Steve Hunter	Signature: The High								



MONITORING FIELD DATA	A SHEET Well ID: MW-ZC		
Project.Task #:1145.001.226	Project Name: Rockridge Heights		
Address: 5175 Broadway, Oakland, CA			
Date: 3/1/11 -3/2/11	Weather: $\frac{1}{2}$ = 0.04 3" = 0.37 6" = 1.47 2" = 0.16 4" = 0.65 radius ² * 0.163		
Well Diameter:	Volume/ft. $1" = 0.04$ $3" = 0.37$ $6" = 1.47$ $2" = 0.16$ $4" = 0.65$ radius ² * 0.163		
Total Depth (TD): 23.50	Depth to Product:		
Depth to Water (DTW): 13.77	Product Thickness:		
Water Column Height: 9.73	1 Casing Volume: 1.56 gallons		
Reference Point: T.O.C	Casing Volumes: 4.67 gallons		
Purging Device: Disposable Bailer			
Sampling Device: Disposable Bailer			
Time Temp © pH Cond (µs)	NTU DO(mg/L) ORP (mV) Vol(gal) DTW		
0731 16.8 648 764	-20		
0736 173 6.76 813	-54		
0742 17.1 6.81 815	-62		
	†		
 	 		
	 		
<u> </u>			
Comments: DINE Smalling.	10.52		
Sample ID: MW-2C Sample Time: 6747			
Laboratory: McCampbell Sample Date: 3-2-1/			
Containers/Preservative: 3-VOA's (HCL),	1-1Liter Amber (HCL)		
Analyzed for: TPHg/BTEX/MTBE (8015Cm/8021), TPHd (8015C) w/silica gel clean-up			
Sampler Name: Steve Hunter Signature: 54			



MONITORING FIELD DAT	A SHEET Well ID: MW-34		
Project.Task #:1145.001.226	Project Name: Rockridge Heights		
Address: 5175 Broadway, Oakland, CA			
Date: 3/1/11 -3/2/11	Weather: Cloudy		
Well Diameter: 2"	Volume/ft. 1" = 0.04 3" = 0.37 6" = 1.47 2" = 0.16 4" = 0.65 radius ² * 0.163		
Total Depth (TD): 13.88	Depth to Product:		
Depth to Water (DTW): 11.56	Product Thickness:		
Water Column Height: 2-32	1 Casing Volume: 0-37 gallons		
Reference Point: T.O.C	Casing Volumes: 1,25 gallons		
Purging Device: Disposable Bailer			
Sampling Device: Disposable Bailer			
Time Temp © pH Cond (µs)	NTU DO(mg/L) ORP (mV) Vol(gal) DTW		
1354 17.8 7.34 1206	-75 0,50		
1359 179 7-11 1229	-76 1,00		
	:25 gallon 5		
7,02 110,10 100,10 100,10			
Comments: DIWE Sampling.	12,19		
	 		
	·····		
Sample ID: MW-34 Sample Time: 1455			
Laboratory: McCampbell Sample Date: 3-2-[]			
Containers/Preservative: 3-VOA's (HCL), 1-1Liter Amber (HCL)			
Analyzed for: TPHg/BTEX/MTBE (8015Cm/8021), TPHd (8015C) w/silica gel clean-up			
Sampler Name: Steve Hunter Signature:			



MONITORING FIELD DATA	A SHEET Well ID: MW-3C		
Project.Task #:1145.001.226 Project Name: Rockridge Heights			
Address: 5175 Broadway, Oakland, CA			
Date: 3/1/11 -3/2/11	Weather: Cloudy		
Well Diameter:	Volume/ft. $1" = 0.04 3" = 0.37 6" = 1.47$ $2" = 0.16 4" = 0.65 \text{radius}^2 * 0.163$		
Total Depth (TD): 26.99	Depth to Product:		
Depth to Water (DTW): 13-5-2	Product Thickness:		
Water Column Height: 13.47	1 Casing Volume: 2.16 gallons		
Reference Point: T.O.C	1 Casing Volume: 2.16 gallons 3 Casing Volumes: 6.5 gallons		
Purging Device: Disposable Bailer			
Sampling Device: Disposable Bailer			
Time Temp © pH Cond (μs)	NTU DO(mg/L) ORP (mV) Vol(gal) DTW		
14/7 18.4 6-74 1611	-100 2.5		
1422 18.1 6.59 1744	-90 45		
1428 120 6.55 17.53	-87 65		
<u> </u>	 		
	 		
	 		
0.774.62			
Comments: PTW & Sampling: 15.	3 ~		
Sample ID: MW-36 Sample Time: 1440			
Laboratory: McCampbell Sample Date: 3-2-11			
Containers/Preservative: 3-VOA's (HCL), 1-1Liter Amber (HCL)			
Analyzed for: TPHg/BTEX/MTBE (8015Cm/8021), TPHd (8015C) w/silica gel clean-up			
Sampler Name: Steve Hunter Signature: 5th Ha			



MONITORING FIELD DATA	A SHEET	Well ID	: MW-4	iA
Project.Task #:1145.001.226	Project Name: Rockridge Heights			
Address: 5175 Broadway, Oakland, CA				
Date: 3/1/11 -3/2/11	Weather: Rau	N		
Well Diameter:	Volume/ft. $\frac{1" = 0.04}{2" = 0.16}$	3" = 0.37 4" = 0.65	6" = 1.47 radius ² * 0.1	163
Total Depth (TD): 17,74	Depth to Product:		^	
	Product Thicknes		-	
Depth to Water (DTW): 13.5 \$\text{\sqrt{Water Column Height:}}\$	 		8	gallons
Reference Point: T.O.C	1 Casing Volume: Casing Volu	mes: 2-	23	gallons
Purging Device: Disposable Bailer				
Sampling Device: Disposable Bailer				
Time Temp © pH Cond (µs)	NTU DO(mg/L	ORP (mV)	Vol(gal)	DTW
1611 16-7 7-74 1043		18	0.75	
1616 16.9 7.63 1052		17	1.50	
1616 16.9 7.63 1052 1621 Well dewatered	7		42	
		 		
	 	 		
 	 	 		
	 	 		
		 		
	 	 	-	
	 	}		
	1	<u> </u>	L	
Comments: dewordered @ # 2 DIWE Simpling: 19	anlling			
DIWE Simpling: 14	13			
				
Sample ID: MW - 4A	Sample Time: 1645			
Laboratory: McCampbell	Sample Date: 3-2-1/			
Containers/Preservative: 3-VOA's (HCL),	1-1Liter Amber (HC	CL)		
Analyzed for: TPHg/BTEX/MTBE (8015C	m/8021), TPHd (80)15C) w/sil	ica gel cle	an-up
Sampler Name: Steve Hunter	Signature:	Hart		



MONITORING FIELD DATA	SHEET	Well ID	: MW-5	A
Project.Task #:1145.001.226	Project Name: Rockridge Heights			
Address: 5175 Broadway, Oakland, CA			- <u> </u>	
Date: 3/1/11 -3/2/11	Weather: Cle	2°6^		
Well Diameter: $\mathcal{Q}^{\prime\prime}$	Volume/ft. 1" = 0.04 2" = 0.16	3" = 0.37 4" = 0.65	6'' = 1.47 radius ² * 0.	163
Total Depth (TD): 1362	Depth to Product:			
Total Depth (TD): 1362 Depth to Water (DTW): 9.84	Product Thicknes	S:		
Water Column Height: 3.78	1 Casing Volume	06	<u> </u>	gallons
Reference Point: T.O.C	Casing Volu	ımes: 🗧	2	gallons
Purging Device: Disposable Bailer				
Sampling Device: Disposable Bailer				
Time Temp © pH Cond (µs)	NTU DO(mg/L	ORP (mV)	1	DTW
1441 146 6a2 2124	 	1-4	/	
1446 14.9 691 2114	 	29	1-5	
1450 15.0 6.92 2106	 	1-22	2	
	 	 		
 	 	 -	 	
			 	
	 	 		
		 	 	
 		 	 	
 	 	 	 	
Comments: DTWP Sounds	- '4- 10-4'		LL	
Comments: DTWE Sample	12: 10:12	<u></u>		
				
				
Sample ID: MW-54 Sample Time: 1503				
Laboratory: McCampbell	oratory: McCampbell Sample Date: 3-1-1/			
Containers/Preservative: 3-VOA's (HCL), 1	I-1Liter Amber (H0	CL)		
Analyzed for: TPHg/BTEX/MTBE (8015Cr			lica gel cle	ean-up
Sampler Name: Steve Hunter	Signature:	the All		



MONITORING FIELD DAT	A SHEET	Well ID: MW-S	B
Project.Task #:1145.001.226	Project Name: Ro	ockridge Heights	
Address: 5175 Broadway, Oakland, CA			
Date: 3/1/11 -3/2/11		ew	
Well Diameter: 2 "	Volume/ft. 1" = 0.04	3" = 0.37 $6" = 1.474" = 0.65$ radius ² * 0	100
	[2" = 0.16	4" = 0.65 radius	.163
Total Depth (TD): j2,31	Depth to Product	<u>:</u>	
Depth to Water (DTW): 11:97	Product Thicknes	4 1 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Water Column Height: 7-34	1 Casing Volume	: 1.18	gallons
Reference Point: T.O.C	3 Casing Volu	: 1.18 umes: 3.5	gallons
Purging Device: Disposable Bailer			
Sampling Device: Disposable Bailer			
Time Temp © pH Cond (µs)	NTU DO(mg/L) ORP (mV) Vol(gal)	DTW
1513 156 704 34AG		6 1.5	_
1518 62 668 4531		16 25	
		35	
			·
Comments: Well departered to	2-5 gallon 3		
DTW @ Samping 89	13		
			
Sample ID: MW-513	Sample Time:	1540	
Laboratory: McCampbell	Sample Date:	3-1-11	
Containers/Preservative: 3-VOA's (HCL)	, 1-1Liter Amber (H	CL)	
Analyzed for: TPHg/BTEX/MTBE (8015)	Cm/8021), TPHd (8	015C) w/silica gel cl	ean-up
Sampler Name: Steve Hunter	Signature:	I MA	



MONITORING FIELD DATA	A SHEET	Well ID: Mu	7-5
Project.Task #:1145.001.226	Project Name: Ro	ockridge Heights	
Address: 5175 Broadway, Oakland, CA			
Date: 3/1/11 -3/2/11	Weather: Ck	ci (
Well Diameter: 2"	Volume/ft. 1" = 0.04 2" = 0.16	3" = 0.37 6" = 1 4" = 0.65 radius	.47 ² * 0.163
Total Depth (TD): 268ス	Depth to Product:		
Total Depth (TD): 268ス Depth to Water (DTW): 1208	Product Thicknes	s:	
Water Column Height: 14.74	1 Casing Volume	: 2-3	gallons
Reference Point: T.O.C	S Casing Volu		gallons
Purging Device: Disposable Bailer			
Sampling Device: Disposable Bailer		-	
Time Temp © pH Cond (µs)	NTU DO(mg/L) ORP (mV) Vol(g	al) DTW
1402 18.0 6.84 1706		148 2.5	_
1408 17.8 6.58 1724		120 5	
1414 177 6,53 1729		116 7	
		<u> </u>	
Comments: DTWE Sumpling	. 16-23		
		<u> </u>	
_	1		
Sample ID: MW-5C	Sample Time: 1427		
Laboratory: McCampbell	Sample Date: 3-1-1/		
Containers/Preservative: 3-VOA's (HCL),			
Analyzed for: TPHg/BTEX/MTBE (80150			el clean-up
Sampler Name: Steve Hunter	Signature: 64		



MONITORING FIELD DATA	SHEET	Well ID: MW-G	SA
Project.Task #:1145.001.226	Project Name: Ro	ockridge Heights	
Address: 5175 Broadway, Oakland, CA			
Date: 3/1/11 -3/2/11	Weather: Cle	aer	
Well Diameter: \mathcal{Z}''		3'' = 0.37 $6'' = 1.474'' = 0.65$ radius ² * 0	163
	Depth to Product:		
Total Depth (TD): 14.36 Depth to Water (DTW): スタ/	Product Thicknes		
Water Column Height: 7.85	1 Casing Volume	1.25	gallons
Reference Point: T.O.C	3 Casing Volu	: 1.25 °C umes: 4	gallons
Purging Device: Disposable Bailer			
Sampling Device: Disposable Bailer			
Time Temp © pH Cond (µs)	NTU DO(mg/L) ORP (mV) Vol(gal)	DTW
1553 612 728 856	<u> </u>	57	
557 166 719 853		53	
1600 16-8 7.19 901		53	
		 	
		 	
	 	+	
	-		
		 	
		 	
Comments: DTW & Sampling	7.62		
Sample ID: Mwi-6A	Sample Time:	1610	
Laboratory: McCampbell	Sample Date: 3-1-11		
Containers/Preservative: 3-VOA's (HCL),		 CL)	
Analyzed for: TPHg/BTEX/MTBE (8015C			ean-up
Sampler Name: Steve Hunter Signature:			



MONITORING FIELD DA	TA SHEET Well ID: MW-7B		
Project.Task #:1145.001.226	Project Name: Rockridge Heights		
Address: 5175 Broadway, Oakland, CA			
Date: 3/1/11 -3/2/11	Weather :		
Well Diameter: 2 /	Volume/ft. $1" = 0.04$ $3" = 0.37$ $6" = 1.47$ $2" = 0.16$ $4" = 0.65$ radius ² * 0.163		
Total Depth (TD): 18,4.2	Depth to Product:		
Total Depth (TD): 18.4.2 Depth to Water (DTW): 11.74	Product Thickness:		
Water Column Height: (0.6)	1 Casing Volume: 107 gallons		
Reference Point: T.O.C	Casing Volumes: 3,25 gallons		
Purging Device: Disposable Bailer	<u> </u>		
Sampling Device: Disposable Bailer			
Time Temp® pH Cond (µs) NTU DO(mg/L) ORP (mV) Vol(gal) DTW		
1146 170 766 23			
1151 176 764 26	7 -55 2		
1203 well deward			
Comments: Well dewartered at	- 25 aullons		
Comments: Well dewatered at	14,19		
Sample ID: MW-78	Sample Time: 1255		
Laboratory: McCampbell	Sample Date: 3-2-1		
Containers/Preservative: 3-VOA's (HCI	L), 1-1Liter Amber (HCL)		
Analyzed for: TPHg/BTEX/MTBE (801	5Cm/8021), TPHd (8015C) w/silica gel clean-up		
Sampler Name: Steve Hunter	Signature: Staff		



MONITORING FIELD DAT	A SHEET	Well ID: MW-7C	
Project.Task #:1145.001.226	Project Name: Ro	ockridge Heights	
Address: 5175 Broadway, Oakland, CA			
Date: 3/1/11 -3/2/11	Weather: R	ain	
Well Diameter:	Volume/ft. 1" = 0.04 2" = 0.16	3" = 0.37 6" = 1.47 4" = 0.65 radius ² * 0.163	
Total Depth (TD): 24,67	Depth to Product		
Depth to Water (DTW): 12.42	Product Thicknes		
Water Column Height: 12.25	1 Casing Volume	2	
	3 Casing Volume	. ganorio	
Reference Point: T.O.C	Casing Voic	gallons gallons	
Purging Device: Disposable Bailer			
Sampling Device: Disposable Bailer Time Temp © pH Cond (µs)	NTU DO(mg/L	.) ORP (mV) Vol(gal) DTW	
(2803 15-9 6.35 1356	1410 DO(mg/L	88 2	
		-91 4	
1 1 1/1			
0814 17-7 6.73 1476	<u> </u>	-99 6	
		+	
		<u> </u>	
Comments: DTW & Sampling	7. 15.31		
			
Sample ID: Aw 76 Nw-7C	Sample Time:	<i>6</i> 830	
Laboratory: McCampbell Sample Date: 3-2-1/			
Containers/Preservative: 3-VOA's (HCL)	, 1-1Liter Amber (Ho	CL)	
Analyzed for: TPHg/BTEX/MTBE (8015	Cm/8021), TPHd (8	015C) w/silica gel clean-up	
Sampler Name: Steve Hunter		A 1	



MONITORING FIELD DA	TA SHEET Well ID: MW-84
Project.Task #:1145.001.226	Project Name: Rockridge Heights
Address: 5175 Broadway, Oakland, CA	\
Date: 3/1/11 -3/2/11	Weather: Cloudy
Well Diameter: 2 1	Weather: 2×4 Volume/ft. $1" = 0.04$ $3" = 0.37$ $6" = 1.47$ 2" = 0.16 $4" = 0.65$ radius ² * 0.163
	1
Total Depth (TD): 1465	Depth to Product:
Depth to Water (DTW): 8.79	Product Thickness:
Water Column Height: 14.65.5.8	1 Casing Volume: gallons
Reference Point: T.O.C	Casing Volumes: 3 gallons
Purging Device: Disposable Bailer	
Sampling Device: Disposable Bailer	
Time Temp © pH Cond (µs)) NTU DO(mg/L) ORP (mV) Vol(gal) DTW
0911 15.1 6-00 1619	-77
0915 16-2 681 1687	-105
0920 16,3 681 169	3 -111
Comments: DTWE Sam	pluz: 10.31
Sample ID: MW-84	Sample Time: 0930
Laboratory: McCampbell	Sample Date: 3-2-1/
Containers/Preservative: 3-VOA's (HCL	
	5Cm/8021), TPHd (8015C) w/silica gel clean-up
Sampler Name: Steve Hunter	Signature: Sh Linh



MONITORING FIELD DAT	A SHEET	Well ID: Mu/- 5	30	
Project.Task #:1145.001.226	Project Name: R	Project Name: Rockridge Heights		
Address: 5175 Broadway, Oakland, CA				
Date: 3/1/11 -3/2/11	Weather: Cle	re l		
Well Diameter: 2 1/	Volume/ft. 1" = 0.04 2" = 0.16	3" = 0.37 $6" = 1.474" = 0.65$ radius ² * 0.	163	
Total Depth (TD): 25.02	Depth to Product		 	
Depth to Water (DTW): Iのそろ	Product Thicknes			
Water Column Height: 14./4	1 Casing Volume	2,26	gallons	
Reference Point: T.O.C	Casing Vol	umes: 7	gallons	
Purging Device: Disposable Bailer				
Sampling Device: Disposable Bailer				
Time Temp © pH Cond (µs)	NTU DO(mg/l	ORP (mV) Vol(gal)	DTW	
1626 174 712 1503		19 2-5	-	
1632 18, 6.85 1518		-11 4,5		
1639 1841 686 1498		43 70	-	
				
	1 1	1 1		
Comments: Well began to dewrite DTWE sampling	r and hurse	Wester Pricine	haniki	
DTME A MANAGE	10126	it we term	uruy.	
Sampung	. 1136			
Sample ID: MW-8C	Sample Time:	1705		
Laboratory: McCampbell	Sample Date: 3/1/11			
Containers/Preservative: 3-VOA's (HCL)	, 1-1Liter Amber (H	CL)		
Analyzed for: TPHg/BTEX/MTBE (8015			ean-up	
Sampler Name: Steve Hunter	Signature: 52		•	



Well ID: MW-9 A MONITORING FIELD DATA SHEET Project Name: Rockridge Heights Project.Task #:1145.001.226 Address: 5175 Broadway, Oakland, CA Weather: Clear/vs inch Date: 3/1/11 -3/2/11 Well Diameter: Total Depth (TD): Depth to Product: **Product Thickness:** Depth to Water (DTW): 1 Casing Volume: 0.56 Water Column Height: gallons ∠ Casing Volumes: Reference Point: T.O.C gallons Purging Device: Disposable Bailer Sampling Device: Disposable Bailer Cond (µs) DO(mg/L) ORP (mV) Vol(gal) Time Temp © Hq NTU DTW 1243 1643 050 713 160 1651 1.25 251 1.75 1647 1258 DIW @ Sampling = 13-21 Comments: 1310 Sample ID: My -Sample Time: Laboratory: McCampbell Sample Date: Containers/Preservative: 3-VOA's (HCL), 1-1Liter Amber (HCL) Analyzed for: TPHg/BTEX/MTBE (8015Cm/8021), TPHd (8015C) w/silica gel clean-up Signature: Sampler Name: Steve Hunter



MONITORING FIELD DATA	SHEET Well I	D: MW-9C								
Project.Task #:1145.001.226	Project Name: Rockridge									
Address: 5175 Broadway, Oakland, CA										
Date: 3/1/11 -3/2/11	Weather :									
Well Diameter: 2	Volume/ft. 1" = 0.04 3" = 0.37 2" = 0.16 4" = 0.65									
Total Depth (TD): 20-55	Depth to Product:									
Depth to Water (DTW): il.20	Product Thickness:	_								
Water Column Height: 21 1,35	1 Casing Volume:	1,5 gallons								
Reference Point: T.O.C	Casing Volumes:	45 gallons								
Purging Device: Disposable Bailer										
Sampling Device: Disposable Bailer										
Time Temp © pH Cond (μs)	NTU DO(mg/L) ORP (m	V) Vol(gal) DTW								
1202 171 694 1732	\$ 18	1-5								
1207 16-9 6-37 1729	20	3.0								
1212 17.0 669 1721	16	4.5								
		+ + +								
Comments: DTW & Sampling	: 13.62									
44.44.										
Air O. C.										
Sample ID: MW-AC	Sample Time: 1230									
Laboratory: McCampbell	Sample Date: 3/1/11									
Containers/Preservative: 3-VOA's (HCL),	1-1Liter Amber (HCL)									
Analyzed for: TPHg/BTEX/MTBE (8015C	m/8021), TPHd (8015C) w/	silica gel clean-up								
Sampler Name: Steve Hunter Signature:										



Well ID: MW-10A MONITORING FIELD DATA SHEET Project Name: Rockridge Heights Project.Task #:1145.001.226 Address: 5175 Broadway, Oakland, CA Weather: Clear (Windy Date: 3/1/11 -3/2/11 Volume/ft. Well Diameter: 1307 Total Depth (TD): Depth to Product: 7.76 Depth to Water (DTW): **Product Thickness:** 1,65 14.31 1 Casing Volume: Water Column Height: gallons Reference Point: T.O.C Casing Volumes: gallons Purging Device: Disposable Bailer Sampling Device: Disposable Bailer DO(mg/L) ORP (mV) Vol(gal) Temp © рΗ Cond (µs) NTU DTW Time 6,83 1496 1323 1/28 as 11 1.5 1230 6-79 110-6 1531 3.5 673 5.0 1340 542 DIWE Samplus 8-32 Comments: Sample ID: MW-10A Sample Time: Laboratory: McCampbell Sample Date: Containers/Preservative: 3-VOA's (HCL), 1-1Liter Amber (HCL) Analyzed for: TPHg/BTEX/MTBE (8015Cm/8021), TPHd (8015C) w/silica gel clean-up Sampler Name: Steve Hunter Signature:



Well ID: UPE-2 MONITORING FIELD DATA SHEET Project.Task #:1145.001.226 Project Name: Rockridge Heights Address: 5175 Broadway, Oakland, CA Weather: | 1" = 0.04 | 3" = 0.37 | 2" = 0.16 | 4" = 0.65 Date: 3/1/11 -3/2/11 6" = 1.47 Well Diameter: 4" = 0.65 radius² * 0.163 Total Depth (TD): 19.59 Depth to Product: Depth to Water (DTW): 16.10 Product Thickness: 3,49 1 Casing Volume: 2.3 Water Column Height: gallons Reference Point: T.O.C Casing Volumes: gallons Purging Device: Disposable Bailer Sampling Device: Disposable Bailer NTU DO(mg/L) ORP (mV) Vol(gal) DTW Temp © рН Cond (µs) Time 6-43 174 -6 2.5 6-75 5.0 1500 W/E11 60 Comments: dewatered & 6 gallon 5 Sample ID: Sample Time: Sample Date: Laboratory: McCampbell Containers/Preservative: 3-VOA's (HCL), 1-1Liter Amber (HCL) Analyzed for: TPHg/BTEX/MTBE (8015Cm/8021), TPHd (8015C) w/silica gel clean-up Sampler Name: Steve Hunter Signature:



MONITORING FIELD DATA SHEET Well ID: DPF-3											
Project.Task #:1145.001.226	Project Name: Rockridge Heights										
Address: 5175 Broadway, Oakland, CA											
Date: 3/1/11 -3/2/11	Weather: Cloudy										
Well Diameter: 4 "(Volume/ft. $1" = 0.04 3" \neq 0.37 6" = 1.47$ $2" = 0.16 4" = 0.65 \text{radius}^2 * 0.163$										
Total Depth (TD): 19-53	Depth to Product:										
Depth to Water (DTW): 11.37	Product Thickness:										
Water Column Height: 1955 8,12											
Reference Point: T.O.C											
Purging Device: Disposable Bailer	gallons										
Sampling Device: Disposable Bailer											
Time Temp © pH Cond (µs)	NTU DO(mg/L) ORP (mV) Vol(gal) DTW										
1212 16.6 680 1648											
1224 169 689 1625											
1235 Well dewatered											
Comments: DTWE Samping	: 15-16										
											
Sample ID: DPE-3	Sample Time: /3/O										
Laboratory: McCampbell	Sample Date: 👸 3-2-1/										
Containers/Preservative: 3-VOA's (HCL)), 1-1Liter Amber (HCL)										
Analyzed for: TPHg/BTEX/MTBE (8015	5Cm/8021), TPHd (8015C) w/silica gel clean-up										
Sampler Name: Steve Hunter Signature:											



MONITORING FIELD DATA SHEET Well ID: DPE-4											
Project.T	ask #:114	5.001.226	3	Project N	lame: Roo	ckridge He	eights				
Address:	5175 Bro	adway, Oa	akland, CA	****							
Date: 3/1				Weather	Rai	И					
Well Diar	····	4"		Volume/ft.	1" = 0.04 2" = 0.16	3" = 0.37 4" = 0.65	6'' = 1.47	163			
			16 001			4 - 0.05	radius 0.	103			
Total Dep	oth (TD):		6,94	Depth to	Product:			'''			
		ΓW): /,		Product 7	Thickness	SI					
Water Co	lumn Hei	ght:	3.06	1 Casing	Volume:) 	gallons			
Referenc	e Point: T	.O.C		Ca	sing Volur	mes: 6	,	gallons			
Purging [Device: Di	sposable l	Bailer	<u>.</u> .		<u> </u>					
 Sampling	Device: [Disposable	e Bailer								
Time	Temp ©	pН	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW			
<i>153</i> 2	17-3	7.15	1534			18	2				
1539	17-7		1543			18	4				
1544	17-9	7.13	1546			19	6				
_											
	_										
					1						
					<u>-</u>						
						.59					
Comments	: DTA	ve s	ampling -	15-11	· · · · · · · · · · · · · · · · · · ·						
				<u>-</u>				<u> </u>			
Sample I	n. Di	DF-4		Sample :	Time [.]	160	0				
	•	mahall	· · · · · · · · · · · · · · · · · · ·			3-2					
	ry: McCa rs/Presen			Sample			- 1/				
			<u>'OA's (HCL), '</u>								
Analyzed	tor: TPH	lg/BTEX/M	MTBE (8015C)	m/8021), ` T	1PHd (80	15C) w/si	ica gel cle	ean-up			
Sampler	Name: St	eve Hunte	er	Signatur	e: 57						

APPENDIX C

Laboratory Analytical Report

McCampbell Analytical,	Inc.
"When Ovelity Counts"	

Pangea Environmental Svcs., Inc.	Client Project ID: #1145.001; Rockridge Heights	Date Sampled:	03/01/11-03/02/11
1710 Franklin Street, Ste. 200		Date Received:	03/03/11
1,73 7744444 200, 500, 200	Client Contact: Tina De La Fuente	Date Reported:	03/10/11
Oakland, CA 94612	Client P.O.:	Date Completed:	03/10/11

WorkOrder: 1103112

March 10, 2011

T .	TD:	
Dear	Tina:	١

Enclosed within are:

- 1) The results of the 19 analyzed samples from your project: #1145.001; Rockridge Heights,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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.

M	(cCAMP)	RELL	ANA	LV	ric	ΔI	T	VC					Т						ч	A I	N (OF		TI	т	OI	v	D	F	COF	D	
144	CAMI	1534	Willow Pas	s Rd.	110	CAL.	49 11	10	•				-	Т	TIR	N	AR		INI) 1	10	5	I			ω_	D
Web	site: www.mcc		burg, CA 9		ain@r	nece	mnh	ell c	nm.					•	CI		****	00	/142		A LV A			RUS	н	24	HR		48 I	HR	72 H	
	ne: (925) 252		COM EMA	a				5) 25		69				EI	DF Required? Coelt (Normal) No Write On (DW) No							No										
Report To: Tina	Delafuente		Е	Bill To	o: Pa	nge	a							Analysis Req						ques	st						Ot	her	Comments			
Company: Pange	a Environme	ental Ser	rvices, In	c.									_																			Filter
1710 Franklin Str	eet, Suite 20	0, Oakla											4			(F)										0				E.		Samples
					l: tde			_	ange	aen	v.co	om	-		dn	E&F/B&F)	8.1)									831				ETBE,		for Metals
Tele: (510) 836-3				Fax: (510) 836-3709 Project Name: Rockridge Heights (120) 849									625 / 8270 / 8310				PE,		analysis:													
Project #: 1145.001 Project Name: Rockridge Heights Project Location: 795 5th Ave, Redwood City, CA 5175 Broadway, Oaklard,										10	4	m/8021)	el ele	(552)	-pou		020		Ľ					8/8	20)	6		ld ,		Yes / No		
Sampler Signatur		Keuwoo	24,971	Ser.	215;	2 6	01000	auc	ey,	oai	Han	J'CA	7	SC m	ca g	& Grease (5520	ocar		02/8		ONLY			_			/ 60	/ 602	010)	TBA		
Sample: Digital	MI						METI ESE			E (801	v/ Silica	I & G	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)		EPA 608 / 8082 PCB's			EPA 524.2 / 624 / 8260	8270	PAH's / PNA's by EPA	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	5 Oxygenates(TAME, TBA, DIPE, MTBE) by 8260.						
				ers	Containers					1 1	LOE	IL VE	\neg	MTB	0	Fotal Petroleum Oil	enm	010	Y (E	081	082 1	EPA 8140 / 8141	EPA 8150 / 8151	624	EPA 525 / 625 / 8270	A's b	etals	tals (/ 200	s(T)		
SAMPLE ID (Field Point Name)	LOCATION			Containers	ont	١.								TPHg/BTEX/	TPHd (8015C)	troles	etrol	1/8	ONL	EPA 608 / 8081	8/8	40/	20/	4.2	9/9	PN	7 Mg	Me	8.00	by 8		
(* 1010 * 0101 * 1010)		Date	Time	Con	Type (Water	=	Air	Other	E	HCL	HNO3	Other	Hg/B	Hd (al Pe	tal P	V 60	EX	A 60	V 60	A 81	A 81	A 52	A 52	H's	M-I	F	1d (2	XYE (BE)		
				#	Ę,	3	Soil	Air	ō	ICE	Ħ	Ħ	ŏ	T	TP	Tot	Tol	EP	ВТ	EP	EP	EP	EP	EP	EP	PA	5	2	Les	5 O M		
AW-I		3-2-11	0905	4	Your!	X				X	X			x	X																	
MW-2C		3-2-11	0747	4	1	X				X	X		3	2	X																	
MW-34		3-2-11	1455	4		X				X	Y			V	X																	
MW-3C		3-2-11	1440	4		X				V	X		1	7	X																	
MW-4A		3-2-11	1645	4		X				X	X			1	X																	
MW-5A		-	1503	4		X				X	X			0	X																	
MW-5B		3-1-11	1540	4		X				X	X			7	V																	
MW-5C		3-1-11		y		X				Х	V		T	7	V																	
MW-6A		3-1-11		U		1				V	7				X																	
MW-7B		3-2-11	1255	4		V		\top		X	Y	\dagger	-		V														\Box			
NW-7C		3-2-11		4		1				V	X			7	V								,						\Box			
MW-8A			\$93P	U		V		+		X	X	+	1,	X	7																	
MW-84		3-1-11		1		V			+	X	X		_	1	X														\forall			
				4	V	X	_	+	+	1	7	+	+		7		\dashv															
MW-9A Relinquished By:		3-1-11 Date:	1310 Time:	Rece	ived B	v:				N			+	ICE	T/to	2	at		1									CON	IME	NTS:		
24114	2000	3-3-11	5/0	-	<u></u>				0	1			GOOD CONDITION COMMENTS:																			
Relinquished By:		Bate: /	Time:	Rece	ived B	χ:	_	. /		0	2	HEAD SPACE ABSENT V DECHLORINATED IN LAB																				
1	-	(2/1)	1600	1		h	2	1/0	M	4				API	PRO	PRI		CON	NTAI		RS_ \	\bigvee	_									
Relinquished By:	1	Date:	Time:	Rece	ived B	r		*					7	. Al	LO E	TE	D III						<u> </u>	2000	/	/						
	/													PRI	ESEI	RVA	TION		Ws.	08	kG.	ME pH<		S	TOTA	ER						

· both samples labelled MW-3cbut I was able to distinguish by the time sampled

McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Rd. TURN AROUND TIME Pittsburg, CA 94565 RUSH 24 HR 48 HR 72 HR Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelf (Normal) Write On (DW) No Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Tina Delafuente Bill To: Pangea **Analysis Request** Other Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260. Samples PAH's / PNA's by EPA 625 / 8270 / 8310 E-Mail: tdelafuente@pangeaenv.com for Metals Tele: (510) 836-3702 Fax: (510) 836-3709 analysis: Project Name: Rockridge Heights Project #: 1145.001 Yes / No BTEX ONLY (EPA 602 / 8020) EPA 608 / 8082 PCB's ONLY CAM-17 Metals (6010 / 6020) LUFT 5 Metals (6010 / 6020) Project Location: 795 5th Ave, Redwood City, CA 5175 Broadway, Ogtstand, CA Lead (200.8 / 200.9 / 6010) Sampler Signature: EPA 524.2 / 624 / 8260 EPA 601 / 8010 / 8021 METHOD EPA 525 / 625 / 8270 SAMPLING MATRIX Type Containers TPHg/BTEX/MTBE PRESERVED EPA 8140 / 8141 EPA 8150 / 8151 Containers TPHd (8015C) EPA 608 / 8081 SAMPLE ID LOCATION (Field Point Name) Sludge Date Time Other HNO3 HCL ICE Soil MW-ac 3-1-11 1730 MW-10A 3-1-11 1348 DPE-2 3-2-11 X 1310 DPE=3 3-2-11 1600 3-2-11 Relinquished By: Received By: ICE/to COMMENTS: Time: GOOD CONDITION HEAD SPACE ABSENT Received By: Relinguished By: Time: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Date: Relinquished By: Time: Received By: VOAS O&G METALS OTHER PRESERVATION pH<2

McCampbell Analytical, Inc.

1534 Willow Pass Rd
Pittsburg CA 04565 Pittsburg, CA 94565-1701

CHAIN-OF-CUSTODY RECORD

Page 1 of 2

(925) 25	2-9262					Work	Order	: 1103	112		Client	Code: 1	ΈO				
		WaterTrax	WriteOr	EDF		Excel		Fax		Email		Hard	dCopy	Thi	rdParty	☐ J-1	flag
-	ronmental Svcs., Inc. n Street, Ste. 200 94612	cc: PO: ProjectNo: #		pangeaenv.com ockridge Heights			Pa 17	ob Clark angea E	nvironi ıklin St	ronmental Svcs., In n Street, Ste. 200 . 94612			Dat	uested e Rece e Prin	ived:	5 o 03/03/2 03/03/2	
									Red	uested	Tests	(See le	gend b	elow)			
Lab ID	Client I	D	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1103112-001	MW-1		Water	3/2/2011 9:05		Α	A	В									
1103112-002	MW-20)	Water	3/2/2011 7:47	10	Α		В									
1103112-003	MW-3A	1	Water	3/2/2011 14:55	ΙĒ	Α		В									
1103112-004	MW-30		Water	3/2/2011 14:40		Α		В									
1103112-005	MW-4A	1	Water	3/2/2011 16:45		Α		В									
1103112-006	MW-5A	1	Water	3/1/2011 15:03		Α		В									
1103112-007	MW-5E	3	Water	3/1/2011 15:40		Α		В									
1103112-008	MW-50		Water	3/1/2011 14:27		Α		В									
1103112-009	MW-6A	١	Water	3/1/2011 16:10		Α		В									
1103112-010	MW-7E	3	Water	3/2/2011 12:55		Α		В									
1103112-011	MW-70		Water	3/2/2011 8:30		Α		В									
1103112-012	MW-8A	١	Water	3/2/2011 9:30		Α		В									
1103112-013	MW-80)	Water	3/1/2011 17:05		Α		В									
1103112-014	MW-9A	١	Water	3/1/2011 13:10		Α		В									
Test Legend:																	
1 G-MBT	EX_W 2	PREDF REF	PORT	3 ТР	H(D)W	SG_W		4						5			
6	7			8	•	_		9						10			
11	1:	2		<u> </u>									•	-			
	<u> </u>	,											Prepa	red by:	: Melis	sa Valle	<u></u>

Comments:

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

McCampbell Analytical, Inc.

1534 Willow Pass Rd Pittsburg, CA 94565-1701

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

(925) 252-9262				,	WorkO	rder:	11031	112	Cli	entCod	e: PEO				
	WaterTrax	WriteO	n 🔽 EDF		Excel	[Fax	<u>~</u>	Email		HardCopy	Third	dParty	☐ J -1	lag
Report to:					В	ill to:					Red	quested	TAT:	5 c	lays
Tina De La Fuente	Email:	tdelafuente@	pangeaenv.com			Во	b Clark	-Riddell							
Pangea Environmental Svcs., Inc.	CC:					Pa	ngea Er	nvironme	ental Sv	cs., Inc.				02/02/	• • • •
1710 Franklin Street, Ste. 200	PO:					17	10 Fran	klin Stre	et, Ste.	200	Da	te Recei	ived:	03/03/2	2011
Oakland, CA 94612	ProjectNo:	#1145.001; F	Rockridge Heights			Oa	kland, (CA 9461	2		Da	te Print	ed:	03/03/2	2011
(510) 836-3700 FAX (510) 836-3709)														
								Requ	ested T	ests (Se	e legend l	below)			
Lab ID Client ID		Matrix	Collection Date	Hold	1	2	3	4	5	6	7 8	9	10	11	12

				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
1103112-015	MW-9C	Water	3/1/2011 12:30		Α		В									
1103112-016	MW-10A	Water	3/1/2011 13:48		Α		В									
1103112-017	DPE-2	Water	3/2/2011 15:15		Α		В									
1103112-018	DPE-3	Water	3/2/2011 13:10		Α		В									
1103112-019	DPE-4	Water	3/2/2011 16:00		Α		В									

Test Legend:

1 G-MBTEX_W	2 PREDF REPORT	3 TPH(D)WSG_W	4	5
6	7	8	9	10
11	12			
				Prepared by: Melissa Valles

Comments:

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

Sample Receipt Checklist

Client Name:	Pangea Enviro	onmentai	Svcs., Inc	•		Date an	ad Time Received: 3/3/2011	5:11:31 PM
Project Name:	#1145.001; Ro	ckridge H	leights			Checkli	ist completed and reviewed by:	Melissa Valles
WorkOrder N°:	1103112	Matrix	<u>Water</u>			Carrier:	Rob Pringle (MAI Courier)	
			<u>Chai</u>	n of Cu	stody (C	COC) Informat	<u>ion</u>	
Chain of custody	y present?			Yes	V	No 🗆		
Chain of custody	y signed when relir	nquished an	d received?	Yes	V	No 🗆		
Chain of custody	y agrees with sam	ole labels?		Yes		No 🗸		
Sample IDs note	d by Client on COC	?		Yes	V	No 🗆		
Date and Time o	of collection noted by	y Client on C	COC?	Yes	~	No 🗆		
Sampler's name	noted on COC?			Yes	~	No 🗆		
			<u> </u>	Sample	Receipt	Information		
Custody seals in	ntact on shipping co	ontainer/coo	ler?	Yes		No 🗆	NA 🔽	
Shipping contain	ner/cooler in good o	ondition?		Yes	V	No 🗆		
Samples in prop	er containers/bottle	es?		Yes	~	No 🗆		
Sample containe	ers intact?			Yes	✓	No 🗆		
Sufficient sample	e volume for indica	ted test?		Yes	✓	No 🗌		
		<u>Sa</u>	ample Prese	ervatio	n and Ho	old Time (HT)	<u>Information</u>	
All samples rece	eived within holding	time?		Yes	✓	No 🗌		
Container/Temp	Blank temperature			Coole	er Temp:	2.6°C	NA 🗆	
Water - VOA via	als have zero head	space / no t	oubbles?	Yes	✓	No □ I	No VOA vials submitted \Box	
Sample labels c	hecked for correct	preservatio	n?	Yes	~	No 🗌		
Metal - pH accep	otable upon receipt	(pH<2)?		Yes		No 🗆	NA 🗹	
Samples Receiv	red on Ice?			Yes	V	No 🗆		
			(Ice Ty	pe: WE	TICE)		
* NOTE: If the "	No" box is checked	d, see comn	ments below. — — —					
		- — — -						
Client contacted	:		Date contact	cted:			Contacted by:	
Comments:	I received two sam	ples labelled	d MW-3C and	d none l	abelled M	1W-3A. I was at	ole to tell which sample was whi	ch by the time sampled.

"When Ouality Counts'

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Telephone: 877-252-9262 Fax: 925-252-9269

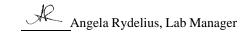
Pangea Environmental Svcs., Inc.	Client Project ID: #1145.001; Rockridge Heights	Date Sampled:	03/01/11-03/02/11
1710 Franklin Street, Ste. 200	neights	Date Received:	03/03/11
	Client Contact: Tina De La Fuente	Date Extracted:	03/04/11-03/08/11
Oakland, CA 94612	Client P.O.:	Date Analyzed:	03/04/11-03/08/11

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

	Gasonne Range (Co-C12) Volathe riyurocarbons as Gasonne with D1EA and M11DE													
Extraction	on method: SW5030B			Analyt	ical methods: S	SW8021B/8015	Bm		Wor	k Order:	103112			
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments			
001A	MW-1	W	940	ND	ND	ND	0.55	2.0	1	116	d7,d9			
002A	MW-2C	W	670	ND	9.9	ND	0.92	0.58	1	112	d1			
003A	MW-3A	W	2100	ND<10	140	10	37	97	2	100	d1			
004A	MW-3C	W	22,000	ND<300	450	110	600	1500	20	106	d1,b6,b1			
005A	MW-4A	W	310	ND	7.5	1.0	ND	7.7	1	101	d1			
006A	MW-5A	W	ND	ND	ND	ND	ND	ND	1	108				
007A	MW-5B	W	120	ND	ND	ND	ND	ND	1	104	d6,b1			
008A	MW-5C	W	ND	ND	ND	ND	ND	ND	1	102				
009A	MW-6A	W	ND	ND	ND	ND	ND	ND	1	102				
010A	MW-7B	W	9200	ND<50	160	96	53	510	10	112	d1,b6			
011A	MW-7C	W	6800	ND<10	130	9.6	3.1	8.0	2	95	d1			
012A	MW-8A	W	1500	ND<10	52	3.5	24	11	1	92	d1			
013A	MW-8C	W	280	ND<10	16	3.7	7.9	6.2	1	116	d1			
014A	MW-9A	W	ND	ND	ND	ND	ND	ND	1	105				
015A	MW-9C	W	ND	ND	ND	ND	ND	ND	1	103				
016A	MW-10A	W	ND	ND	ND	ND	ND	ND	1	105	b1			
	ting Limit for DF =1;	W	50	5.0	0.5	0.5	0.5	0.5		μg/L	,			
	eans not detected at or	S	1.0	0.05	0.005	0.005	0.005	0.005	5 mg/Kg		g			

TCLP & SPLP extracts in mg/L.

- +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
- b6) lighter than water immiscible sheen/product is present
- d1) weakly modified or unmodified gasoline is significant
- d6) one to a few isolated non-target peaks present in the TPH(g) chromatogram
- d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram



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

Pangea Environmental Svcs., Inc.	Client Project ID: #1145.001; Rockridge	Date Sampled:	03/01/11-03/02/11
1710 Franklin Street, Ste. 200	Heights	Date Received:	03/03/11
	Client Contact: Tina De La Fuente	Date Extracted:	03/04/11-03/08/11
Oakland, CA 94612	Client P.O.:	Date Analyzed:	03/04/11-03/08/11

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

Analytical methods: SW8021B/8015Bm Extraction method: SW5030B Work Order: 1103112 Lab ID Client ID Matrix TPH(g) MTBE Benzene Toluene Ethylbenzene Xylenes DF % SS Comments 017A DPE-2 W 12,000 ND<50 360 130 96 1700 10 114 W ND<700 1400 810 870 3300 10 121 018A DPE-3 27,000 d1,b6 019A W 5600 ND<50 68 100 42 350 10 103 DPE-4 d1 Reporting Limit for DF = 1; W 0.5 50 5.0 0.5 0.5 0.5 μ g/L ND means not detected at or 1.0 0.05 0.005 0.005 0.005 0.005 mg/Kg above the reporting limit

- # 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
- b6) lighter than water immiscible sheen/product is present
- d1) weakly modified or unmodified gasoline is significant
- d6) one to a few isolated non-target peaks present in the TPH(g) chromatogram
- d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram

Angela Rydelius, Lab Manager

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

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200	Client Project ID: #1145.001; Rockridge	Date Sampled: 03/01/11-03/02/11
	Heights	Date Received: 03/03/11
	Client Contact: Tina De La Fuente	Date Extracted: 03/03/11
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/04/11-03/09/11

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up*

Analytical methods: SW8015B Extraction method SW3510C/3630C Work Order: 1103112 TPH-Diesel DF Lab ID Client ID Matrix % SS Comments (C10-C23) 1103112-001B MW-1 W 1600 101 e11,e2 1103112-002B MW-2C W 66 1 105 e2,e4 1103112-003B e11,e2,e7 MW-3A W 2200 1 100 MW-3C 1103112-004B W 19,000 119 e4/e11,b6,b1 1 1103112-005B MW-4A W 270 105 e11,e2 1103112-006B MW-5A W ND 99 1103112-007B MW-5B W 97 100 e2,b1 1 1103112-008B MW-5C W 1 102 e2 66 1103112-009B MW-6A W 67 1 101 e11.e2 1103112-010B MW-7B W 31,000 10 82 e11,b6 1103112-011B MW-7C W 1400 102 e4/e11 1103112-012B MW-8A W 1000 1 102 e4/e11,e7,e2 1103112-013B MW-8C W 100 65 1 e4 1103112-014B MW-9A W ND 1 101 1103112-015B MW-9C W 480 100 e7,e2 Reporting Limit for DF = 1; $\mu g/L$ W 50 ND means not detected at or S NA NA

- %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
- b6) lighter than water immiscible sheen/product is present

above the reporting limit

- e2) diesel range compounds are significant; no recognizable pattern
- e4) gasoline range compounds are significant.; and/or e11) stoddard solvent/mineral spirit (?)
- e7) oil range compounds are significant



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

[#] cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract/matrix interference.

Pangea Environmental Svcs., Inc.	Client Project ID: #1145.001; Rockridge Heights	Date Sampled: 03/01/11-03/02/11
1710 Franklin Street, Ste. 200	neights	Date Received: 03/03/11
	Client Contact: Tina De La Fuente	Date Extracted: 03/03/11
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/04/11-03/09/11

Oakialiu, CA 9401	<u> </u>	Chefit F.O	1	Date Allaryzed 05/04/11-05/09/11					
	Total Extrac	table Petroleum Hydi	rocarbons with Silica Gel C	lean-Up*					
Extraction method SW3	3510C/3630C	Analytical	methods: SW8015B	Work Order: 110311					
Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS	Comments			
1103112-016B	MW-10A	w	ND	1	100	b1			
1103112-017B	DPE-2	w	14,000	5	107	e4/e11,e2			
1103112-018B	DPE-3	w	51,000	20	96	e4/e11,b6			
1103112-019B	DPE-4	W	5100	1	114	e11,e7,e2			
	Limit for DF =1;	W	50		μg/L				
ND means	not detected at or	C	NΛ		NΙΛ				

above the reporting limit	S	NA	NA
* water samples are reported in µg/L, wipe samples in and all DISTLC / STLC / SPLP / TCLP extracts are			-aqueous liquid samples in mg/L,

[#] cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract/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
- b6) lighter than water immiscible sheen/product is present
- e2) diesel range compounds are significant; no recognizable pattern
- e4) gasoline range compounds are significant.; and/or e11) stoddard solvent/mineral spirit (?)
- e7) oil range compounds are significant



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 56584 WorkOrder 1103112

EPA Method SW8015B	Spiked Sample ID: N/A											
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			١
	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	107	108	0.178	N/A	N/A	70 - 130	30
%SS:	N/A	625	N/A	N/A	N/A	92	92	0	N/A	N/A	70 - 130	30

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

BATCH 56584 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1103112-001B	03/02/11 9:05 AM	03/03/11	03/04/11 2:10 AM	1103112-002B	03/02/11 7:47 AM	03/03/11	03/09/11 3:52 PM
1103112-003B	03/02/11 2:55 PM	03/03/11	03/04/11 3:18 AM	1103112-004B	03/02/11 2:40 PM	03/03/11	03/04/11 4:26 AM
1103112-005B	03/02/11 4:45 PM	03/03/11	03/04/11 9:49 PM	1103112-006B	03/01/11 3:03 PM	03/03/11	03/04/11 6:42 AM
1103112-007B	03/01/11 3:40 PM	03/03/11	03/04/11 7:50 AM	1103112-008B	03/01/11 2:27 PM	03/03/11	03/04/11 2:38 PM
1103112-009B	03/01/11 4:10 PM	03/03/11	03/04/11 7:24 PM	1103112-010B	03/02/11 12:55 PM	03/03/11	03/07/11 6:21 PM
1103112-011B	03/02/11 8:30 AM	03/03/11	03/04/11 1:21 AM	1103112-012B	03/02/11 9:30 AM	03/03/11	03/04/11 12:11 AM
1103112-013B	03/01/11 5:05 PM	03/03/11	03/04/11 3:39 AM	1103112-014B	03/01/11 1:10 PM	03/03/11	03/04/11 2:30 AM

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

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

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

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

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

QA/QC Officer

DHS ELAP Certification 1644

QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 56658 WorkOrder 1103112

EPA Method SW8021B/8015Bm Extraction SW5030B Spiked Sample ID: 1103112-016											16A	
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	D Acceptance Criteria (%)			
7 mary to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)	ND	60	97.3	103	5.45	110	95.5	14.0	70 - 130	20	70 - 130	20
MTBE	ND	10	121	119	2.05	122	119	2.41	70 - 130	20	70 - 130	20
Benzene	ND	10	116	118	0.985	122	117	4.29	70 - 130	20	70 - 130	20
Toluene	ND	10	104	104	0	113	104	8.22	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	105	104	0.212	112	104	6.83	70 - 130	20	70 - 130	20
Xylenes	ND	30	119	118	0.319	124	118	5.34	70 - 130	20	70 - 130	20
%SS:	105	10	102	103	0.587	117	104	11.8	70 - 130	20	70 - 130	20

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

BATCH 56658 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1103112-001A	03/02/11 9:05 AM	03/08/11	03/08/11 5:17 AM	1103112-002A	03/02/11 7:47 AM	03/07/11	03/07/11 6:24 PM
1103112-003A	03/02/11 2:55 PM	03/07/11	03/07/11 5:54 PM	1103112-004A	03/02/11 2:40 PM	03/04/11	03/04/11 4:56 PM
1103112-005A	03/02/11 4:45 PM	03/08/11	03/08/11 7:12 PM	1103112-006A	03/01/11 3:03 PM	03/07/11	03/07/11 7:55 PM
1103112-007A	03/01/11 3:40 PM	03/04/11	03/04/11 5:27 PM	1103112-008A	03/01/11 2:27 PM	03/04/11	03/04/11 5:57 PM
1103112-009A	03/01/11 4:10 PM	03/04/11	03/04/11 6:27 PM	1103112-010A	03/02/11 12:55 PM	03/08/11	03/08/11 4:53 AM
1103112-011A	03/02/11 8:30 AM	03/08/11	03/08/11 6:42 PM	1103112-012A	03/02/11 9:30 AM	03/08/11	03/08/11 7:42 PM
1103112-013A	03/01/11 5:05 PM	03/04/11	03/04/11 6:57 PM	1103112-014A	03/01/11 1:10 PM	03/04/11	03/04/11 7:28 PM
1103112-015A	03/01/11 12:30 PM	03/04/11	03/04/11 7:58 PM	1103112-016A	03/01/11 1:48 PM	03/04/11	03/04/11 8:28 PM
1103112-017A	03/02/11 3:15 PM	03/08/11	03/08/11 5:23 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).

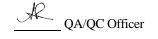
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the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



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 56692 WorkOrder 1103112

EPA Method SW8021B/8015Bm Extraction SW5030B Spiked Sample ID: 1103139-021A												21A	
Analyte	Sample	Spiked	MS	MSD MS-MSD LCS LCSD LCS-LCSD A						cceptance Criteria (%)			
7 mary to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD	
TPH(btex)	ND	60	108	111	3.17	92.3	94.3	2.19	70 - 130	20	70 - 130	20	
MTBE	ND	10	115	114	1.13	114	120	4.54	70 - 130	20	70 - 130	20	
Benzene	ND	10	104	105	1.20	106	109	2.36	70 - 130	20	70 - 130	20	
Toluene	ND	10	103	105	2.47	106	106	0	70 - 130	20	70 - 130	20	
Ethylbenzene	ND	10	104	105	1.46	105	105	0	70 - 130	20	70 - 130	20	
Xylenes	ND	30	106	108	1.20	108	108	0	70 - 130	20	70 - 130	20	
%SS:	101	10	98	98	0	98	95	2.88	70 - 130	20	70 - 130	20	

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

BATCH 56692 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1103112-018A	03/02/11 1:10 PM	f 03/08/11	03/08/11 5:53 AM	1103112-019A	03/02/11 4:00 PM	03/08/11	03/08/11 8:52 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).

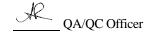
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the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



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 56693 WorkOrder 1103112

EPA Method SW8015B Extraction SW3510C/3630C					Spiked Sample ID: N/A							
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	,
, many to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	88.5	89	0.554	N/A	N/A	70 - 130	30
%SS:	N/A	625	N/A	N/A	N/A	92	92	0	N/A	N/A	70 - 130	30

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

BATCH 56693 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1103112-015B	03/01/11 12:30 PM	03/03/11	03/04/11 4:48 AM	1103112-016B	03/01/11 1:48 PM	03/03/11	03/04/11 5:57 AM
1103112-017B	03/02/11 3:15 PM	03/03/11	03/05/11 12:12 AM	1103112-018B	03/02/11 1:10 PM	03/03/11	03/04/11 8:37 PM
1103112-019B	03/02/11 4:00 PM	03/03/11	03/04/11 4:29 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.

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 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway; Rockridge Heights	Date Sampled: 12/14/10	
1710 Franklin Street, Ste. 200		Date Received: 12/14/10	
2, 10 1 1 1 1 2 1 2 1 2 1 2 1 2 1	Client Contact: Morgan Gillies	Date Reported: 12/15/10	
Oakland, CA 94612	Client P.O.:	Date Completed: 12/15/10	

WorkOrder: 1012482

December 15, 2010

Dear	Moı	rgan:
------	-----	-------

Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: 5175 Broadway; Rockridge Heights,
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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.

RUSH

1012482

McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Rd. TURN AROUND TIME Pittsburg, CA 94565 RUSH 24 HR 48 HR 72 HR Website: www.mccampbell.com Email: main@mccampbell.com 5 DA EDF Required? Coelt (Normal) No Write On (DW) Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Morgan Gillies Bill To: Pangea **Analysis Request** Other Comme Company: Pangea Environmental Services, Inc. TPH as Diesel (8015) with Silica Gel Cleanup Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260. Sample PAH's / PNA's by EPA 625 / 8270 / 8310 E-Mail: mgillies@pangeaenv.com Total Petroleum Hydrocarbons (418.1) for Met Tele: (510) 836-3702 Fax: (510) 836-3709 analysis Project Name: Rockridge Heights Project #: 5175 Broadway Yes / No BTEX ONLY (EPA 602 / 8020) EPA 608 / 8082 PCB's ONLY CAM-17 Metals (6010 / 6020) LUFT 5 Metals (6010 / 6020) Project Location: 5175 Broadway, Oakland, CA Sampler Signature: EPA 524.2 / 624 / 8260 EPA 601 / 8010 / 8021 EPA 525 / 625 / 8270 METHOD SAMPLING MATRIX PRESERVED EPA 8150 / 8151 SAMPLE ID LOCATION (Field Point Name) Sludge Date Time HNO, HCL ICE 12/14 1025 ICE/1° 5.60 Relinquished By: Received By: COMMENTS: GOOD CONDITION HEAD SPACE ABSENT Relinquished By: Received By Time APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By Time: Received By: VOAS O&G METALS OTHER PRESERVATION pH<2

McCampbell Analytical, Inc.

1534 Willow Pass Rd

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Pittsburg, CA 94565-1701 **WorkOrder: 1012482** ClientCode: PEO (925) 252-9262 WaterTrax WriteOn **✓** EDF Excel Fax ✓ Email HardCopy ThirdParty J-flag Bill to: Report to: Requested TAT: 1 day Bob Clark-Riddell Morgan Gillies Email: mgillies@pangeaenv.com Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. cc: Date Received: 12/14/2010 PO: 1710 Franklin Street, Ste. 200 1710 Franklin Street, Ste. 200 Oakland, CA 94612 Oakland, CA 94612 ProjectNo: 5175 Broadway; Rockridge Heights Date Printed: 12/14/2010 (510) 836-3700 FAX (510) 836-3709 Requested Tests (See legend below) Lab ID **Client ID** Collection Date Hold 2 3 5 6 8 9 10 12 Matrix 1 11 1012482-001 EFF-W Water 12/14/2010 10:25 Α

Test Legend:

1 G-MBTEX_W	2 PREDF REPORT	3	4	5	
6	7	8	9	10	
11	12				
				Prepared by: Melissa V	Za ll ag

Comments:

Sample Receipt Checklist

Client Name:	Pangea Environm	nental Svcs., Inc.			Date a	and Time Received:	12/14/2010	5:36:43 PM
Project Name:	5175 Broadway;	Rockridge Height	s		Check	klist completed and r	eviewed by:	Melissa Valles
WorkOrder N°:	1012482	Matrix Water			Carrie	r: <u>Client Drop-In</u>		
		Chain	of Cu	stody (C	COC) Informa	ation		
Chain of custody	present?		Yes	V	No 🗆			
Chain of custody	signed when relinquis	shed and received?	Yes	V	No 🗆			
Chain of custody	agrees with sample la	abels?	Yes	✓	No 🗌			
Sample IDs noted	by Client on COC?		Yes	V	No 🗆			
Date and Time of	collection noted by Cli	ent on COC?	Yes	✓	No 🗆			
Sampler's name r	noted on COC?		Yes	V	No 🗆			
		<u>S</u>	ample	Receipt	Information	<u>!</u>		
Custody seals in	tact on shipping contai	ner/cooler?	Yes		No 🗆		NA 🗹	
Shipping containe	er/cooler in good cond	ition?	Yes	V	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 Preser	vatio	n and Ho	old Time (HT)) Information		
All samples recei	ived within holding time	e?	Yes	✓	No 🗌			
Container/Temp I	Blank temperature		Coole	er Temp:	5.6°C		NA 🗆	
Water - VOA vial	ls 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 (pH	<2)?	Yes		No 🗆		NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No 🗆			
		(Ice Type	e: WE	TICE)			
* NOTE: If the "N	No" box is checked, se	ee comments below.						
=====	======	======		:	====	=====	====	======
Client contacted:		Date contact	ed:			Contacted	by:	
Comments:								

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway; Rockridge Heights	Date Sampled:	12/14/10
1710 Franklin Street, Ste. 200	Rockridge Heights	Date Received:	12/14/10
	Client Contact: Morgan Gillies	Date Extracted:	12/15/10
Oakland, CA 94612	Client P.O.:	Date Analyzed:	12/15/10

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1012482

Extraction	on method: SW 5030B			Anaiyi	ical methods: S	W 8021B/8015	Bm		Worl	k Order:	.012482
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	EFF-W	W	ND	ND	ND	ND	ND	ND	1	100	
	rting Limit for DF =1; eans not detected at or	W	50	5.0	0.5	0.5	0.5	0.5		μg/L	,
	ve the reporting limit	S	1.0	0.05	0.005	0.005	0.005	0.005 mg/Kg			g

* 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:

QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 55040 WorkOrder 1012482

EPA Method SW8021B/8015Bm	Extra	ction SW	5030B					S	Spiked San	nple ID	: 1012482-0	01A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	
7 mary to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btexf)	ND	60	95.1	97	2.04	112	103	8.71	70 - 130	20	70 - 130	20
MTBE	ND	10	116	113	2.47	103	110	6.42	70 - 130	20	70 - 130	20
Benzene	ND	10	106	102	3.69	101	103	1.92	70 - 130	20	70 - 130	20
Toluene	ND	10	106	103	3.40	102	104	1.79	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	105	102	2.81	100	103	2.03	70 - 130	20	70 - 130	20
Xylenes	ND	30	108	105	2.94	104	106	2.00	70 - 130	20	70 - 130	20
%SS:	100	10	96	95	0.825	95	96	1.37	70 - 130	20	70 - 130	20

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

BATCH 55040 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1012482-001A	12/14/10 10:25 AM	1 12/15/10	12/15/10 2:37 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).

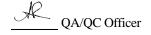
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the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



McCampbell Analytical, Inc.

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: #5175 Broadway; Rockridge Height	Date Sampled: 12/08/10
1710 Franklin Street, Ste. 200		Date Received: 12/09/10
1770 Trankini Succi, Stc. 200	Client Contact: Morgan Gillies	Date Reported: 12/15/10
Oakland, CA 94612	Client P.O.:	Date Completed: 12/10/10

WorkOrder: 1012317

December 15, 2010

Dear	M	organ:
------	---	--------

Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #5175 Broadway; Rockridge Height,
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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.

McCAMPBELL ANALYTICAL, INC. 1534 Willow Pass Rd. Pittsburg, CA 94565 Website: www.mccampbell.com Telephone: (925) 252-9262 Fax: (925) 252-9269						11			CHAIN OF CUSTODY RECORD TURN AROUND TIME RUSH 24 HR 48 HR 72 HR 5 EDF Required? Coelt (Normal) No Write On (DW) No						5 DAY																			
Report To: Morg	Name and Address of the Owner, where the Owner, which is the Owne		1	Bill To		THE RESERVE AND ADDRESS OF THE PERSON NAMED IN	_													A	nal	ysis	Re	ques	st						Ot	her	(Comments
Company: Pange	a Environme	ental Ser	rvices, Ir	ic.											\top	d													1			T	- 2	
1710 Franklin Str	eet, Suite 20	0, Oakla	and, CA	94612	2							-] ,	3	ann	E														ਜ਼			Filter
			J	E-Mail	l: mg	illie	s@j	pan	geae	nv.	con	n		1	MEM	Cle	7/B&	=									8310				ETBE,			Samples or Metals
Tele: (510) 836-3				Fax: (510) 836-3709						3	8015)/MTBE	Gel	E&F	(418													E, E			malysis:				
Project #: 5175 Bi				-	ect Name: Rockridge Heights					_	- 4	+ 8	ilica	5520	ons		(50)		×					/82	6			DIPE,			es / No			
Project Location:	111	way, Oal	kland, C	A									_	0000	8020	th	ase (carb		/ 80		ONLY					625	6020)	020	6	BA,			
Sampler Signatur	e: •					_				_	245	77114	20	- 5	(602/8020) wi	Gre	dro	21	602		3's C			09		PA		9/0	601	E, T			
		SAMI	PLING		ers		MATRIX METHOD PRESERVED					Gas (8015)il &	Hy	/80	EPA		PCF	_	_	/82	827(by E	09)	(601	0.9	AM.						
SAMPLE ID (Field Point Name)	LOCATION	Date	Time	# Containers	Type Containers	Water	Soil	Air	Sludge	T				TPH as	BTEX & TPH as (TPH as Diesel (8015) with Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270	CAM-17 Metals (6010 /	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	5 Oxygenates(TAME, TBA, MTBE) by 8260.			
INF-V	INF	12/8/10	1330	1	Т	\vdash		х		+	+	+	+	+	X	+			7											\vdash	1	+	+	
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			-	\vdash		\vdash	-	+	+	+	+	+	+	+	+	+	-															-	+	
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Action and District D	1	19/10	1530	1	Received By:				HEAD SPACE ABSENT DECHLORINATED IN LAB APPROPRIATE CONTAINERS REPT IN PPMV																									
Relinquished By:		4//							PRESERVED IN LAB																									
Relinquished By: Time: Received By:								P	VOAS O&G METALS OTHER PRESERVATION pH<2				++-																					

McCampbell Analytical, Inc.

1534 Willow Pass Rd Pittsburg, CA 94565-1701

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Pittsburg, CA 94565-1701 (925) 252-9262					Work()rder:	10123	17	•	ClientC	ode: P	EO				
	WaterTrax	WriteOr	n ✓ EDF		Excel	[Fax	[✓ Email		Hard	Copy	Thir	dParty	☐ J-1	flag
Report to:					E	Bill to:						Req	uested	TAT:	5 c	days
Morgan Gillies	Email: ı	mgillies@par	ngeaenv.com			Во	b Clark-	Ridde	I							
Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200	cc: PO:					17	ngea Er 10 Franl	klin Str	eet, Ste		nc.				12/09/2	
Oakland, CA 94612 (510) 836-3700 FAX (510) 836-370		#5175 Broad [,]	way; Rockridge H	eight		Oa	ıkland, C	CA 946	12			Dat	e Print	ted:	12/09/2	2010
								Req	uested	Tests	(See le	gend b	elow)			
Lab ID Client ID)	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1012317-001 INF-V		Air	12/8/2010 13:30		Α	Α										

Test Legend:

1 G-MBTEX_AIR	2 PREDF REPORT	3	4	5	
6	7	8	9	10	
11	12				
The following SampID: 001A con	ntains testgroup.			Prepared by: Maria Ve	enegas

Comments:

Sample Receipt Checklist

Client Name:	Pangea Environ	mental Svcs., Inc.			Date a	and Time Received:	12/9/2010	3:48:55 PM
Project Name:	#5175 Broadway	r; Rockridge Heigl	ht		Check	klist completed and r	eviewed by:	Maria Venegas
WorkOrder N°:	1012317	Matrix <u>Air</u>			Carrie	er: Rob Pringle (M	Al Courier)	
		Chain	of Cu	stody (CO	C) Informa	ation_		
Chain of custody	y present?		Yes	V	No 🗆			
Chain of custody	/ signed when relinqu	ished and received?	Yes	V	No \square			
Chain of custody	agrees with sample	labels?	Yes	✓	No 🗌			
Sample IDs noted	d by Client on COC?		Yes	\checkmark	No \square			
Date and Time of	f collection noted by C	lient on COC?	Yes	\checkmark	No 🗆			
Sampler's name i	noted on COC?		Yes	✓	No \square			
		<u>s</u>	ample	Receipt Ir	nformation	<u>1</u>		
Custody seals in	tact on shipping cont	ainer/cooler?	Yes		No 🗆		NA 🔽	
Shipping contain	er/cooler in good con	dition?	Yes	V	No 🗆			
Samples in prope	er containers/bottles?		Yes	\checkmark	No \square			
Sample containe	ers intact?		Yes	\checkmark	No 🗆			
Sufficient sample	e volume for indicated	I test?	Yes	✓	No 🗌			
		Sample Prese	rvatio	n and Hold	I Time (HT) Information		
All samples recei	ived within holding tin	ne?	Yes	✓	No 🗌			
Container/Temp I	Blank temperature		Coole	er Temp:			NA 🗹	
Water - VOA via	ls have zero headspa	ace / no bubbles?	Yes		No \square	No VOA vials subm	itted 🗹	
Sample labels ch	hecked for correct pre	eservation?	Yes	\checkmark	No 🗌			
Metal - pH accep	otable upon receipt (pl	H<2)?	Yes		No \square		NA 🗹	
Samples Receive	ed on Ice?		Yes		No 🗹			
* NOTE: If the "I	No" box is checked, s	see comments below.		====	:===:	=====		======
Client contacted:		Date contact	ted:			Contacted	by:	
Comments:								

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: #5175 Broadway; Rockridge Height	Date Sampled:	12/08/10
1710 Franklin Street, Ste. 200	Rockridge Height	Date Received:	12/09/10
	Client Contact: Morgan Gillies	Date Extracted:	12/09/10
Oakland, CA 94612	Client P.O.:	Date Analyzed:	12/09/10

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

Analytical methods: SW8021B/8015Bm Extraction method: SW5030B Work Order: 1012317

Extraction	on method: SW 5030B	Matrix TPH(o)		Allaly	near methods:	5 W 6021D/6013	DIII		WOII	1012317	
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-V	A	4500	ND<25	21	5.4	2.9	14	10	103	d1
	rting Limit for DF =1;	A	25	2.5	0.25	0.25	0.25	0.25		μg/L	
	eans not detected at or ve the reporting limit	S	1.0	0.05	0.005	0.005	0.005	0.005		mg/K	

Above the reporting limit S 1.0 0.05 0.005 0.005 0.005 0.005 mg/Kg	Reporting Limit for DF =1;	A	25	2.5	0.25	0.25	0.25	0.25	μg/L
	ND means not detected at or 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 $\mu g/L$, soil/sludge/solid samples in mg/kg, wipe samples in $\mu g/wipe$, product/oil/non-aqueous liquid samples in mg/L.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

d1) weakly modified or unmodified gasoline is significant

[#] cluttered chromatogram; sample peak coelutes with surrogate peak.

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

Pangea Environmental Svcs., Inc.	Client Project ID: #5175 Broadway;	Date Sampled:	12/08/10
1710 Franklin Street, Ste. 200	Rockridge Height	Date Received:	12/09/10
	Client Contact: Morgan Gillies	Date Extracted:	12/09/10
Oakland, CA 94612	Client P.O.:	Date Analyzed:	12/09/10

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

Extraction method: SW5030B SW8021B/8015Bm Analytical methods: Work Order: 1012317 MTBE DF Lab ID Client ID Matrix TPH(g) Benzene Toluene Ethylbenzene Xylenes % SS Comments

001A	INF-V	A	1300	ND<6.8	6.4	1.4	0.65	3.2	10	103	d1

ppm (mg/L	.) to ppm	ıv (ul/L) conver	sion for TPH(g)) assumes the m	olecular weight	of gasoline to b	e equal to that	of hexa	ne.
Reporting Limit for DF =1;	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L
ND means not detected at or above the reporting limit	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

^{*} 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 all TCLP & SPLP extracts are reported in $\mu g/L$.

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



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 54932 WorkOrder 1012317

EPA Method SW8021B/8015Bm	Extra	ction SW	5030B					S	Spiked San	nple ID:	: 1012292-0	A60		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)					
7 tildiyto	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD		
TPH(btex)	ND	60	83.9	88.7	5.65	94.9	99.8	5.01	70 - 130	20	70 - 130	20		
MTBE	ND	10	97.7	103	5.68	120	124	2.82	70 - 130	20	70 - 130	20		
Benzene	ND	10	94.4	98.4	4.13	110	118	7.54	70 - 130	20	70 - 130	20		
Toluene	ND	10	93.1	99.5	6.62	98.7	106	7.39	70 - 130	20	70 - 130	20		
Ethylbenzene	ND	10	94.3	98.4	4.34	101	103	2.43	70 - 130	20	70 - 130	20		
Xylenes	ND	30	96.2	100	4.23	115	120	3.48	70 - 130	20	70 - 130	20		
%SS:	99	10	99	96	3.19	98	103	4.70	70 - 130	20	70 - 130	20		

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

BATCH 54932 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1012317-001A	12/08/10 1:30 PM	M 12/09/10	12/09/10 6:20 PM	1012317-001A	12/08/10 1:30 PM	12/09/10	12/09/10 6:20 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.

QA/QC Officer

McCampbell Analytical, Inc.

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway; Rockridge Heights	Date Sampled: 12/14/10
1710 Franklin Street, Ste. 200		Date Received: 12/14/10
200	Client Contact: Morgan Gillies	Date Reported: 12/20/10
Oakland, CA 94612	Client P.O.:	Date Completed: 12/20/10

WorkOrder: 1012489

December 20, 2010

Dear	Morgan	1:
------	--------	----

Enclosed within are:

- 1) The results of the 3 analyzed samples from your project: 5175 Broadway; Rockridge Heights,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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.

	(cCAMP)	1534 Pitts	Willow Par burg, CA 9	ss Rd. 94565									1	ΓUI	RN	AR							US	ì		7		Ę			A
	site: <u>www.mc</u> ne: (925) 252		com Em	ail: ma		ax: (59			E	DF	Req	uire	d? (Coel	t (l	Vori	mal)		No			HR e Oi		48 I		72 HI	R 5 DAY
Report To: Morg	an Gillies		I	Bill To	: Pa	ngea							E					Α	nal	ysis	Re	ques	st_						Ot	her	Comments
Company: Pange	a Environm	ental Ser	rvices, In	ic.										d														П			Filter
1710 Franklin Str	eet, Suite 20	0, Oakla	and, CA	94612	2								ω ω	ann	E														ಬ್		Samples
			I	E-Mai	l: mg	illies(a pa	ngea	env	v.co	m		Ę	S.	/B&	9									8310				ETBE,		for Metals
Tele: (510) 836-3	702			ax: (_			-					8015)/MTBE	130	E&I	(418									-				E, E		analysis:
Project #: 5175 B				Projec	t Nai	me: R	ocki	ridge	H	eigh	ts		- 8	llica	8520	ons		20)		>					625 / 8270	6	_		DIPE,		Yes / No
Project Location:	4-75		kland, C	A									8020	th S	ise (arb		/ 80		ONLY					625	6020)	020	6	TBA,		
Sampler Signatur	e:		de	_	_				_				602/8020	wi (Gres	droc	=	602		1,8 C			99	_	PA	01	9/0	109	e e		
		SAM	PLING	, s	ers	M	IAT	RIX		PRE	ETH SER		1 %	8015	Oil &	n Hy	/ 802	EPA		PCB	-	-	4 / 82	8270	by E	s (60)	109)	/ 6.00	CAME 0.		
SAMPLE ID (Field Point Name)	LOCATION	Date	Time	# Containers	Type Containers	Water	Air	Sludge	Other	ICE	HCL	Other Other	BTEX & TPH as	TPH as Diesel (8015) with Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA	CAM-17 Metals (6010 /	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	5 Oxygenates(TAME, MTBE) by 8260.		
INF-W	INF	12/14	1030	5	WAS Ardio	V	\top		7	×	X	\top	Ⅴ	X																_	
300	2001	1-10/	1000		AHA	10			1			+	ť																		
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Relinquished By:		Date:	Time: 1	Pece	ived B		-	-	_				16	E/t°	^ .	4											CON	IME	ENTS:		
Kellidaned By.	160	14/10	1600-	Mett	ived b		1						G	OOD	COL	DIT	ION										CON	VII.VII.	21119.		
Relinquished By:	2	Date:	Time:	Rece	ived B	v:	V	D	\sim	/		\neq	_	EAD ECH				_	AB	_											
X-	1/12/	V /	1730		R	_0	8	1			/		A	PPRO	PRI	ATE	CO	NTA		RS_		_									
Relinquished By:	17	Bate:	Time:	Rece	tved B	y:			1	_			1 PI	RESE	RVE	DIN	LA	В	_												
10 II	,												PI	RESE	RVA	TIO		AS	08	kG	ME pH<		S	ОТН	IER						

McCampbell Analytical, Inc.

1534 Willow Pass Rd

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Pittsburg, (925) 252	CA 94565-1701 -9262					Work	Order	: 1012	489	(ClientC	ode: P	ЕО				
		WaterTrax	WriteOr	n 🔽 EDF		Excel		Fax	[✓ Email		Hard	Сору	Thi	irdParty	J.	-flag
Report to: Morgan Gillies	S	Email: n	ngillies@par	ngeaenv.com			Bill to: Bc	ob Clark	-Ridde	II			Req	uested	I TAT:	5	days
•			147 Broadw	ay; Rockridge Hei	ghts		17	angea E ′10 Fran akland, (ıklin Str	eet, Ste		nc.		e Rece e Prin		12/14/ 12/14/	
								1	Req	uested	Tests	(See le	gend b	elow)			
Lab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1012489-001	INF-W		Water	12/14/2010 10:30			В	Α	Α								
1012489-002	EFF-V		Air	12/13/2010 14:00		Α											
1012489-003	INF-V		Air	12/13/2010 14:05		Α											

<u>lest Legena</u> :				
1 G-MBTEX_AIR	2 G-MBTEX_W	3 PREDF REPORT	4 TPH(D)WSG_W	5
6	7	8	9	10
11	12			
The following SampIDs: 002A, 00	3A contain testgroup.			Prepared by: Ana Venegas

Comments:

Sample Receipt Checklist

Client Name:	Pangea Environmen	ntal Svcs., Inc.			Date a	and Time Received:	12/14/2010	6:13:00 PM
Project Name:	5147 Broadway; Ro	ckridge Height	s		Check	klist completed and re	eviewed by:	Ana Venegas
WorkOrder N°:	1012489 M	atrix <u>Air/Water</u>			Carrie	er: Rob Pringle (M	Al Courier)	
		<u>Chain</u>	of Cu	stody (C	OC) Informa	ation		
Chain of custody	/ present?		Yes	V	No 🗆			
Chain of custody	signed when relinquishe	d and received?	Yes	V	No 🗆			
Chain of custody	agrees with sample labe	els?	Yes	✓	No 🗌			
Sample IDs noted	d by Client on COC?		Yes	✓	No 🗆			
Date and Time of	f collection noted by Client	on COC?	Yes	✓	No 🗆			
Sampler's name r	noted on COC?		Yes	✓	No 🗆			
		Sa	ımple	Receipt	Information	<u>1</u>		
Custody seals int	tact on shipping containe	r/cooler?	Yes		No 🗆		NA 🔽	
Shipping containe	er/cooler in good conditio	n?	Yes	V	No 🗆			
Samples in prope	er containers/bottles?		Yes	✓	No 🗆			
Sample containe	ers intact?		Yes	✓	No 🗆			
Sufficient sample	e volume for indicated tes	t?	Yes	✓	No 🗌			
		Sample Preser	vatio	n and Ho	old Time (HT) Information		
All samples recei	ived within holding time?		Yes	✓	No 🗌			
Container/Temp E	Blank temperature		Coole	er Temp:	6.8°C		NA 🗆	
Water - VOA vial	ls have zero headspace	no bubbles?	Yes		No 🗆	No VOA vials subm	itted 🗹	
Sample labels ch	necked for correct preser	vation?	Yes	~	No 🗌			
Metal - pH accep	otable upon receipt (pH<2))?	Yes		No 🗆		NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No 🗆			
		(Ice Type	e: WE	TICE)			
* NOTE: If the "N	No" box is checked, see o	comments below.						
	======	======		:				======
Client contacted:		Date contact	ed:			Contacted	by:	
Comments:								

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway; Rockridge Heights	Date Sampled:	12/14/10
1710 Franklin Street, Ste. 200	Rockridge Heights	Date Received:	12/14/10
	Client Contact: Morgan Gillies	Date Extracted:	12/17/10
Oakland, CA 94612	Client P.O.:	Date Analyzed:	12/17/10

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1012489

Extraction	on method: SW5030B	Analytical methods: SW8021B/8015Bm							Work Order: 1012489		
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001B	INF-W	W	300	ND	4.6	1.5	1.6	10	1	100	d1
	ting Limit for DF =1;	W	50	5.0	0.5	0.5	0.5	0.5		μg/L	
	eans not detected at or ve the reporting limit	S	1.0	0.05	0.005	0.005	0.005	0.005		mg/K	g

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

[#] cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference.

- %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor
- +The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
- d1) weakly modified or unmodified gasoline is significant

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway;	Date Sampled: 12/14/10
1710 Franklin Street, Ste. 200	Rockridge Heights	Date Received: 12/14/10
,	Client Contact: Morgan Gillies	Date Extracted: 12/14/10
Oakland, CA 94612	Client P.O.:	Date Analyzed 12/15/10

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up*

Extraction method SW3510C/3630C Analytical methods: SW8015B Work Order: 1012489

Extraction method SV	nethod SW3510C/3630C Analytical methods: SW8015B				Work Order: 1012489			
Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS	Comments		
1012489-001A	INF-W	W	260	1		e2,e4		
	ng Limit for DF =1;	W	50		με	/L		
	ns not detected at or the reporting limit	S	NA		N	A		

* water samples are reported in µg/L	, wipe samples in μg/wipe, soil/solic	l/sludge samples in mg/kg,	product/oil/non-aqueous l	liquid samples i	n mg/L,
and all DISTLC / STLC / SPLP / TO	CLP extracts are reported in µg/L.				

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

- e2) diesel range compounds are significant; no recognizable pattern
- e4) gasoline range compounds are significant.



[#] cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract/matrix interference.

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

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway; Rockridge Heights	Date Sampled:	12/13/10
1710 Franklin Street, Ste. 200	Rockridge Heights	Date Received:	12/14/10
	Client Contact: Morgan Gillies	Date Extracted:	12/15/10-12/17/10
Oakland, CA 94612	Client P.O.:	Date Analyzed:	12/15/10-12/17/10

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

Analytical methods: SW8021B/8015Bm Extraction method: SW5030B Work Order: 1012489

Extraction	on memod. Sw 5030B	Anarytical methods. Swooz1b/8013biii				WOLK Oldel. 1012469					
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
002A	EFF-V	A	ND	ND	ND	ND	ND	ND	1	101	
003A	INF-V	A	1500	ND<10	5.6	1.9	2.4	5.7	4	107	d1
	ting Limit for DF =1;	A	25	2.5	0.25	0.25	0.25	0.25		μg/L	,
	eans not detected at or ve the reporting limit	S	1.0	0.05	0.005	0.005	0.005	0.005		mg/K	

above the reporting limit	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg
* water and vapor samples are rep	orted in	μg/L, soil/sludge/s	olid samples i	n mg/kg, wipo	e samples in µ	g/wipe, produc	t/oil/non-aque	ous 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

1534 Willow Pass Road, Pittsburg, CA 94565-1701 $Web: www.mccampbell.com \qquad E-mail: main@mccampbell.com\\$ Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway;	Date Sampled:	12/13/10
1710 Franklin Street, Ste. 200	Rockridge Heights	Date Received:	12/14/10
	Client Contact: Morgan Gillies	Date Extracted:	12/15/10-12/17/10
Oakland, CA 94612	Client P.O.:	Date Analyzed:	12/15/10-12/17/10

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

SW8021B/8015Bm Extraction method: SW5030B Analytical methods: Work Order: 1012489 Client ID Matrix MTBE Ethylbenzene DF % SS Lab ID TPH(g) Benzene Toluene Xylenes Comments 002A EFF-V 101 Α ND ND ND ND ND ND 1 003A INF-V Α 430 ND<2.7 1.7 0.49 0.54 1.3 4 107 d1

ppm (mg/L	ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.									
Reporting Limit for DF =1; ND means not detected at or	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L	
above the reporting limit	S	NA	NA	NA	NA	NA	NA	1	mg/Kg	

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

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

d1) weakly modified or unmodified gasoline is significant



1534 Willow Pass Road, Pittsburg, CA 94565-1701 Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway; Rockridge Heights	Date Sampled: 12/14/10
1710 Franklin Street, Ste. 200	Rockridge Heights	Date Received: 12/14/10
	Client Contact: Morgan Gillies	Date Extracted: 12/14/10
Oakland, CA 94612	Client P.O.:	Date Analyzed 12/15/10

	Total Extracta	able Petroleum Hyd	lrocarbons with Silica Gel Clear	ı-Up*		
Extraction method	SW3510C/3630C	Analytica	l methods: SW8015B	7	Work Order:	1012489
Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS	Comments
1012489-001A	INF-W	W	260	1	100	e2,e4
	rting Limit for DF =1;	W	50		μg/L	
ND m	eans not detected at or	S	NA	_	NA	

* water samples are reported in µg/L	, wipe samples in μg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/l
and all DISTLC / STLC / SPLP / To	CLP extracts are reported in µg/L.

NA

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

- e2) diesel range compounds are significant; no recognizable pattern
- e4) gasoline range compounds are significant.

above the reporting limit



NA

[#] cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract/matrix interference.

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

QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 55010 WorkOrder 1012489

EPA Method SW8021B/8015Bm	EPA Method SW8021B/8015Bm Extraction SW5030B									Spiked Sample ID: 1012468-002A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)		
Analyto	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD	
TPH(btex ^f)	ND	60	99.8	99.4	0.414	97.7	100	2.42	70 - 130	20	70 - 130	20	
MTBE	ND	10	118	119	1.09	118	123	4.55	70 - 130	20	70 - 130	20	
Benzene	ND	10	113	113	0	110	117	5.77	70 - 130	20	70 - 130	20	
Toluene	ND	10	100	99.1	1.13	99	103	4.43	70 - 130	20	70 - 130	20	
Ethylbenzene	ND	10	98.3	98.2	0.111	98.3	102	3.44	70 - 130	20	70 - 130	20	
Xylenes	ND	30	112	111	1.11	111	115	3.15	70 - 130	20	70 - 130	20	
%SS:	99	10	104	104	0	103	107	3.28	70 - 130	20	70 - 130	20	

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

BATCH 55010 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1012489-001B	12/14/10 10:30 AM	I 12/17/10	12/17/10 4:56 AM				

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

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

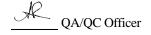
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the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

£ 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.



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 55059 WorkOrder 1012489

EPA Method SW8021B/8015Bm	Extra	ction SW	5030B					8	Spiked San	nple ID	: 1012512-0	A800
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	1
Analyto	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btexf	ND	60	88.6	85.5	3.52	87.6	95	8.06	70 - 130	20	70 - 130	20
МТВЕ	ND	10	101	93.5	8.19	96.9	102	5.27	70 - 130	20	70 - 130	20
Benzene	ND	10	93.4	86.4	7.86	91.7	95.6	4.23	70 - 130	20	70 - 130	20
Toluene	ND	10	93.3	87.1	6.87	92.4	96.4	4.26	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	91.8	86.6	5.90	91.7	95.3	3.90	70 - 130	20	70 - 130	20
Xylenes	ND	30	95.1	89.2	6.37	94.1	98	4.03	70 - 130	20	70 - 130	20
%SS:	105	10	97	97	0	97	98	0.829	70 - 130	20	70 - 130	20

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

BATCH 55059 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1012489-002A	12/13/10 2:00 PM	12/17/10	12/17/10 2:27 AM	1012489-002A	12/13/10 2:00 PM	12/17/10	12/17/10 2:27 AM
1012489-003A	12/13/10 2:05 PM	12/15/10	12/15/10 1:04 PM	1012489-003A	12/13/10 2:05 PM	12/15/10	12/15/10 1:04 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.

QA/QC Officer

QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 55003 WorkOrder 1012489

EPA Method SW8015B	Extraction SW3510C/3630C						Spiked Sample ID: N/A					
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	SD Acceptance Criteria (Criteria (%)	١
, analyto	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	102	103	0.694	N/A	N/A	70 - 130	30
%SS:	N/A	625	N/A	N/A	N/A	88	88	0	N/A	N/A	70 - 130	30

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

BATCH 55003 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed	
1012489-001A	12/14/10 10:30 AM	1 12/14/10	12/15/10 7:01 AM					

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

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

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

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

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

QA/QC Officer

McCampbell Analytical,	Inc.
"When Quality Counts"	

Pangea Environmental Svcs., Inc.	Client Project ID: #5175 Broadway; Rockridge Heights	Date Sampled: 12/22/10
1710 Franklin Street, Ste. 200		Date Received: 12/22/10
1770 Hankim Street, Sec. 200	Client Contact: Morgan Gillies	Date Reported: 12/28/10
Oakland, CA 94612	Client P.O.:	Date Completed: 12/29/10

WorkOrder: 1012792

December 29, 2010

Dear	Mor	gan:
------	-----	------

Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #5175 Broadway; Rockridge Heights,
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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.

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Telepho	ne: (925) 252				F	ax:	(925		52-92	269				EI)F F	Requ	iire	d? (_	_			No	V	Vrite	e Oı	ı (D	W)	_			
Report To: Morg				Bill To	e: Pa	nge	a						_						A	nal	ysis	Rec	ques	t	_	_	_		_	0	ther	Com	nents
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Tele: (510) 836-3	702			E-Mai Fax: (eaer	iv.c	om		\dashv	8015)/MTBE	elC	& F/B	18.1									/8310				ET.		for M	
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200000000000000000000000000000000000000				ers	aine	П		T	Т	1				1 as C	8) la	0 111	enm	010	Y (E	180	082	8141	8151	624	25/1	4.8 F	stals	tals	/ 20(S(T)			
SAMPLE ID (Field Point Name)	LOCATION	Date	Time	# Containers	Type Containers	Water	Soil	All	Other	ICE	HCL	HNO ₃	Other	BTEX & TPH	TPH as Diesel (8015) with Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010/8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 /	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	5 Oxygenates(TAME, TBA, MTBE) by 8260.	1		
INF-V	INF	12/22	1350	1	Tella		-	/	-	-			-	$\overline{}$			-													_	-	-	75 15 15
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McCampbell Analytical, Inc.

1534 Willow Pass Rd

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

	rg, CA 94565-1701 252-9262					Work	Order	: 1012	792	Cl	ientCode: I	EO				
		WaterTrax	WriteOn	✓ EDF		Excel		Fax	5	✓ Email	Har	dCopy	Third	dParty	J-f	lag
Report to: Morgan Gill	ies	Email: r	mgillies@pan	geaenv.com			Bill to:	b Clark	-Riddel	II		Req	uested [·]	TAT:	5 d	lays
•		cc: PO: ProjectNo: ‡	#5175 Broadv	vay; Rockridge He	eights		17	•	ıklin Str	nental Sv eet, Ste. 12			e Recei e Print		12/22/2 12/22/2	
									Req	uested T	ests (See le	gend b	elow)			
Lab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	4	5	6 7	8	9	10	11	12
1012792-001	INF-V		Air	12/22/2010 13:50		Α	Α									

Test Legend:

1 G-MBTEX_AIR	2 PREDF REPORT	3	4	5
6	7	8	9	10
11	12			
				Prepared by: Zoraida Cortez

Comments:

Sample Receipt Checklist

Client Name:	Pangea Environ	mental Svcs., Inc.			Date a	and Time Received:	12/22/2010	4:53:30 PM
Project Name:	#5175 Broadway	r; Rockridge Heigl	hts		Check	klist completed and r	eviewed by:	Zoraida Cortez
WorkOrder N°:	1012792	Matrix <u>Air</u>			Carrie	er: <u>Benjamin Ysla</u>	s (MAI Courier)	1
		Chain	of Cu	stody (CO	C) Informa	ation_		
Chain of custody	y present?		Yes	V	No \square			
Chain of custody	/ signed when relinqu	ished and received?	Yes	\checkmark	No \square			
Chain of custody	agrees with sample	labels?	Yes	✓	No 🗌			
Sample IDs noted	d by Client on COC?		Yes	\checkmark	No 🗆			
Date and Time of	f collection noted by C	lient on COC?	Yes	\checkmark	No 🗆			
Sampler's name i	noted on COC?		Yes	✓	No \square			
		<u>s</u>	ample	Receipt Ir	nformation	<u>1</u>		
Custody seals in	tact on shipping cont	ainer/cooler?	Yes		No 🗆		NA 🔽	
Shipping contain	er/cooler in good con	dition?	Yes	V	No 🗆			
Samples in prope	er containers/bottles?		Yes	✓	No 🗆			
Sample containe	ers intact?		Yes	✓	No \square			
Sufficient sample	e volume for indicated	I test?	Yes	✓	No 🗌			
		Sample Prese	rvatio	n and Hold	I Time (HT) Information		
All samples recei	ived within holding tin	ne?	Yes	✓	No 🗌			
Container/Temp I	Blank temperature		Coole	er Temp:			NA 🗹	
Water - VOA via	ls have zero headspa	ace / no bubbles?	Yes		No 🗆	No VOA vials subm	itted 🗹	
Sample labels ch	hecked for correct pre	eservation?	Yes	\checkmark	No 🗌			
Metal - pH accep	otable upon receipt (p	H<2)?	Yes		No \square		NA 🔽	
Samples Receive	ed on Ice?		Yes		No 🗹			
* NOTE: If the "I	No" box is checked, s	see comments below.		====	:===:	=====	====	:=====
Client contacted:		Date contac	ted:			Contacted	by:	
Comments:								

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. Client Project ID: #5175 Broadway; Date Sampled: 12/22/10 Rockridge Heights Date Received: 12/22/10 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 12/23/10 Oakland, CA 94612 Client P.O.: Date Analyzed: 12/23/10

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

Analytical methods: SW8021B/8015Bm Extraction method: SW5030B Work Order: 1012792

Extraction	on method: SW5030B			Analy	tical methods:	SW 8021B/8015	Bm		Worl	k Order:	1012792
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-V	A	1600	ND<35	17	ND<1.0	1.2	2.6	4	117	d1
Repor	ting Limit for DF =1;	A	25	2.5	0.25	0.25	0.25	0.25		μg/I	
	eans not detected at or we the reporting limit	S	1.0	0.05	0.005	0.005	0.005	0.005		mg/K	g

	Reporting Limit for DF =1; ND means not detected at or	A	25	2.5	0.25	0.25	0.25	0.25	μg/L
Г	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.

%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

[#] cluttered chromatogram; sample peak coelutes with surrogate peak.

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: #5175 Broadway; Rockridge Heights	Date Sampled:	12/22/10
1710 Franklin Street, Ste. 200	Rockridge Heights	Date Received:	12/22/10
	Client Contact: Morgan Gillies	Date Extracted:	12/23/10
Oakland, CA 94612	Client P.O.:	Date Analyzed:	12/23/10

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

Extraction method: SW5030B SW8021B/8015Bm Analytical methods: Work Order: 1012792

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-V	A	440	ND<10	5.2	ND<0.26	0.28	0.60	4	117	d1

ppm (mg/L	.) to ppm	ıv (ul/L) conver	sion for TPH(g)) assumes the m	olecular weight	of gasoline to b	e equal to that	of hexa	ne.
Reporting Limit for DF =1;	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L
ND means not detected at or above the reporting limit	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

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

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



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 55252 WorkOrder 1012792

EPA Method SW8021B/8015Bm	Extra	ction SW	5030B					S	Spiked San	nple ID	: 1012783-0	06E
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	
7 may to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)	ND	60	118	117	1.15	122	121	0.226	70 - 130	20	70 - 130	20
MTBE	ND	10	83.7	83.2	0.554	85.6	84	1.90	70 - 130	20	70 - 130	20
Benzene	ND	10	118	120	1.88	119	119	0	70 - 130	20	70 - 130	20
Toluene	ND	10	119	121	1.76	120	120	0	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	122	124	1.69	124	124	0	70 - 130	20	70 - 130	20
Xylenes	ND	30	123	125	1.72	126	125	0.380	70 - 130	20	70 - 130	20
%SS:	105	10	103	103	0	104	103	1.16	70 - 130	20	70 - 130	20

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

BATCH 55252 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1012792-001A	12/22/10 1:50 PM	M 12/23/10	12/23/10 9:41 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).

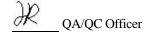
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the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



McCampbell Analytical,	Inc.
"Wil O1it Ct-"	

Pangea Environmental Svcs., Inc.	Client Project ID: #5175 Broadway; Rockridge	Date Sampled: 01/07/11
1710 Franklin Street, Ste. 200	Heights	Date Received: 01/07/11
1710 Plankini Sueci, Sie. 200	Client Contact: Morgan Gillies	Date Reported: 01/12/11
Oakland, CA 94612	Client P.O.:	Date Completed: 01/12/11

WorkOrder: 1101148

January 12, 2011

Dear	Morga	an:
------	-------	-----

Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #5175 Broadway; Rockridge Heights,
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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.

1101148

Web	site: www.mc	1534 Pitts campbell	Willow Pa	ss Rd. 94565	ain@r	ncca	mpb	ell.c	om	2/0								οι	Coel	T	IM	E		RUS	H	Ę	□ HR	0.0	48 1	HR	72 HI	R 5 DAY
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Company: Pange		ental Sei			0. 1.0	nge							1						1		7 515	100	ue						Г	0.	ner-	
1710 Franklin Str					2								╛	ш	dnu	6														7-5		Filter
	E-Mail: mgillies@pangeaenv.com											MTB	Ce	B&	=									310				TBI		Samples for Metals		
Tele: (510) 836-3	702		1	Fax:	(510)	836-	-370	9						8015)/MTBE	Je S	E&F	(418									8/0/				E, E		analysis:
Project #: 5175 B				Projec	et Nai	me:	Roc	krid	lge I	leig	hts		_	+ 80	lica	925	ons		20)		×					827	6	_		DIP		Yes / No
Project Location:		way, Oa	kland, C	A_									_	0020	th Si	ise (§	arb		/ 80		NE					625	9050	020	6	BA,		
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-		SAM	PLING	l	53		MA	ΓRI	X		MET			Gas (8015	3 11	Hy	/ 802	EPA		PCB	_	_	/ 82	827(by E	99	109)	0.9	WV .		
SAMPLE ID (Field Point Name)	LOCATION	Date	Time	Containers	Containers	er			ge	Γ				BTEX & TPH as (TPH as Diesel (8015) with Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010/8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	5 Oxygenates(TAME, TBA, DIPE, ETBE MTBE) by 8260.		
				Co#	Type	Water	Soil	Air	Other	ICE	HCL	HNO3	Other	BTEX	ГРН	Fotal	Fotal	EPA	BTE	EPA	EPA	EPA	EPA	EPA	EPA	PAH	CAM	LUF	Lead	S Oxy		
+NF 1/	TNIE	1/-/-	1100	1	Tall		1	/	-	-			+	~		•														-	+	
INF-V	INF	47/1	1600	-	Beg	1	-/	1	+	⊢	\vdash	-	\dashv	\wedge						-												
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Kemigasiya	1	15/41	110	nece	aved D		_		>	<	_	_	1	GO	OD	CON	DIT			_								COI	HIVEL	1413.		
Refinquished By:	Belinquished By: Date: Time: Received By:								1-	7,,			AD S				INL	AB	_	/												
4	1	17/1	1800	14	11	+	4	1	5	1	1/	11	APPROPRIATE CONTAINERS PRESERVED IN LAB																			
Relinquished By:	1	Date:	Time:	Reco	ived B	y:	-						\exists	FK	EOE	· · E	D III															
														PRI	ESEI	RVA	TIO		DAS	08	kG	ME pH<		S	ОТН	IER						

McCampbell Analytical, Inc.

1534 Willow Pass Rd Pittsburg, CA 94565-1701

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

	52-9262					WorkC)rder:	11011	148	Client	Code: Pl	EO				
		WaterTrax	WriteOn	✓ EDF		Excel		Fax	VE	imail	Hard	Сору	Third	Party	☐ J-1	lag
Report to: Morgan Gill	ias	Email: r	ngillies@pan	deseny com		E	Bill to:	· Clark-	-Riddell			Req	uested 1	ГАТ:	5 c	lays
Pangea Env	vironmental Svcs., Inc. lin Street, Ste. 200 A 94612	cc: PO: ProjectNo: #	•	/ay; Rockridge He	eights		Par 171	igea Er 0 Franl	nvironmen klin Street CA 94612				e Recei e Printe		01/07/2 01/07/2	
									Reques	ted Tests	s (See leg	jend b	elow)			
Lab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	4	5 6	7	8	9	10	11	12
1101148-001	INF-V		Air	1/7/2011 16:00		Α	Α									

Test Legend:

1 G-MBTEX_AIR	2 PREDF REPORT	3	4	5
6	7	8	9	10
11	12			
The following SampID: 001A con	tains testgroup.			Prepared by: Shino Hamilton

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 Envi	ronmental Svcs., Inc.		Date and Time Received: 1/7/2011 5:58:17 PM							
Project Name:	#5175 Broad	way; Rockridge Heig	hts		Check	klist completed and reviewed b	y: Shino Hamilton				
WorkOrder N°:	1101148	Matrix Air			Carrie	er: Rob Pringle (MAI Courier	1				
		<u>Chair</u>	of Cu	ıstody (C	OC) Informa	ation					
Chain of custod	ly present?		Yes	V	No 🗆						
Chain of custod	ly signed when re	linquished and received?	Yes	V	No 🗆						
Chain of custod	ly agrees with sar	nple labels?	Yes	✓	No 🗌						
Sample IDs note	ed by Client on CO	C?	Yes	V	No 🗆						
Date and Time of	of collection noted	by Client on COC?	Yes	✓	No 🗆						
Sampler's name	noted on COC?		Yes	V	No 🗆						
		<u>s</u>	ample	Receipt	Information	<u>1</u>					
Custody seals in	ntact on shipping	container/cooler?	Yes		No 🗆	NA 🔽					
Shipping contain	ner/cooler in good	condition?	Yes	V	No 🗆						
Samples in prop	per containers/bot	tles?	Yes	~	No 🗆						
Sample containe	ers intact?		Yes	✓	No 🗆						
Sufficient sample	le volume for indi	cated test?	Yes	✓	No 🗌						
		Sample Prese	rvatio	n and Ho	old Time (HT) Information					
All samples rece	eived within holdir	ng time?	Yes	✓	No 🗌						
Container/Temp	Blank temperatur	е	Coole	er Temp:	12.6°C	NA 🗆					
Water - VOA via	als have zero hea	dspace / no bubbles?	Yes		No 🗆	No VOA vials submitted 🗹					
Sample labels of	checked for corre	ct preservation?	Yes	✓	No 🗌						
Metal - pH acce	ptable upon recei	ot (pH<2)?	Yes		No 🗆	NA 🗹					
Samples Receiv	ved on Ice?		Yes		No 🗸						
* NOTE: If the "	'No" box is check	ed, see comments below.		:		=======	=======				
Client contacted	l:	Date contac	ted:			Contacted by:					
Comments:											

Pangea Environmental Svcs., Inc.	Client Project ID: #5175 Broadway; Rockridge Heights	Date Sampled:	01/07/11
1710 Franklin Street, Ste. 200	Rockridge Heights	Date Received:	01/07/11
	Client Contact: Morgan Gillies	Date Extracted:	01/08/11
Oakland, CA 94612	Client P.O.:	Date Analyzed:	01/08/11

	G	asoline R	Range (C6-C12)	Volatile Hy	drocarbons	as Gasoline	e with BTEX a	and MTBE	*		
Extraction 1	method: SW5030B			Analy	tical methods:	SW8021B/8015	5Bm		Wor	k Order:	1101148
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-V	A	2300	ND<45	20	2.2	1.1	3.3	4	113	d1
	ng Limit for DF =1;	A	25	2.5	0.25	0.25	0.25	0.25		μg/l	
	ns not detected at or the reporting limit	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 ug/wipe, product/oil/non-aqueous liquid samples in mg/L.
water and vapor samples are reported in µg/L, som/studge/some samples in mg/kg, wipe samples in µg/wipe, product/on/non-aqueous nquid samples in mg/L.

[#] cluttered chromatogram; sample peak coelutes with surrogate peak.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

d1) weakly modified or unmodified gasoline is significant

_Angela Rydelius, Lab Manager

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

			.,	
Pangea Environmental Svcs., Inc.	Client Project ID: #. Rockridge Heights	5175 Broadway;	Date Sampled:	01/07/11
1710 Franklin Street, Ste. 200	Rockridge Heights		Date Received:	01/07/11
	Client Contact: Mor	rgan Gillies	Date Extracted:	01/08/11
Oakland, CA 94612	Client P.O.:		Date Analyzed:	01/08/11

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

Extracti	on method: SW5030E	3		I	Analytical methods	Worl	Order:	1101148			
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-V	A	640	ND<15	6.1	0.58	0.26	0.75	4	113	d1

ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.									
Reporting Limit for DF =1;	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L
ND means not detected at or above the reporting limit	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

^{*} 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 all TCLP & SPLP extracts are reported in $\mu g/L$.

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

Angela Rydelius, Lab Manager

QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 55513 WorkOrder 1101148

EPA Method SW8021B/8015Bm Extraction SW5030B Spiked Sample ID: 1101145-012									12A			
Analyte	Sample	Spiked	MS	MSD MS-MSD LCS LCSD LCS-LCSD Acceptance Criteria (%						Criteria (%)		
7 may to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)	ND	60	107	109	2.30	107	103	3.99	70 - 130	20	70 - 130	20
MTBE	ND	10	102	106	4.14	105	107	1.65	70 - 130	20	70 - 130	20
Benzene	ND	10	99	102	2.73	96.5	94.3	2.26	70 - 130	20	70 - 130	20
Toluene	ND	10	99.8	107	7.25	97.3	95.2	2.18	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	98.3	101	2.25	96.5	94.5	2.10	70 - 130	20	70 - 130	20
Xylenes	ND	30	102	105	2.87	99	97	2.03	70 - 130	20	70 - 130	20
%SS:	100	10	99	99	0	96	95	0.505	70 - 130	20	70 - 130	20

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

BATCH 55513 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101148-001A	01/07/11 4:00 PM	M 01/08/11	01/08/11 2:08 AM	1101148-001A	01/07/11 4:00 PM	01/08/11	01/08/11 2:08 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.

QA/QC Officer

McCampbell Analytical, Inc.

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway, Oakland, CA;	Date Sampled: 02/02/11	
1710 Franklin Street, Ste. 200	Rockridge Heights	Date Received: 02/03/11	
2.20	Client Contact: Morgan Gillies	Date Reported: 02/09/11	
Oakland, CA 94612	Client P.O.:	Date Completed: 02/09/11	

WorkOrder: 1102113

February 09, 2011

Dear	Morgan	:
------	--------	---

Enclosed within are:

- 1) The results of the 2 analyzed samples from your project: 5175 Broadway, Oakland, CA; Rockridge Heights,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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.

1102113

McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Rd. TURN AROUND TIME Pittsburg, CA 94565 24 HR RUSH 48 HR **72 HR** Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) Write On (DW) No Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Morgan Gillies Bill To: Pangea **Analysis Request** Other Comments Company: Pangea Environmental Services, Inc. TPH as Diesel (8015) with Silica Gel Cleanup Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Total Petroleum Oil & Grease (5520 E&F/B&F) 5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260. Samples PAH's / PNA's by EPA 625 / 8270 / 8310 E-Mail: mgillies@pangeaenv.com Total Petroleum Hydrocarbons (418.1) for Metals Fax: (510) 836-3709 Tele: (510) 836-3702 analysis: Project Name: Rockridge Heights Project #: 5175 Broadway Yes / No BTEX ONLY (EPA 602 / 8020) EPA 608 / 8082 PCB's ONLY CAM-17 Metals (6010 / 6020) LUFT 5 Metals (6010 / 6020) Project Location: 5175 Broadway, Oakland, CA Lead (200.8 / 200.9 / 6010) Sampler Signature: EPA 524.2 / 624 / 8260 EPA 601 / 8010 / 8021 EPA 525 / 625 / 8270 METHOD SAMPLING MATRIX Type Containers BTEX & TPH as Gas PRESERVED EPA 8150 / 8151 EPA 8140 / 8141 # Containers EPA 608 / 8081 SAMPLE ID LOCATION (Field Point Name) Sludge Date Time HNO3 Other Other HCL ICE Soil INF-W INF XX INF-V INF Relinquished By: Date: Time: Received By: ICE/t° .) . L COMMENTS: GOOD CONDITION HEAD SPACE ABSENT Relinquished By: Date: Received By: Time: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Date: Relinquished By: Time: Received By: VOAS O&G METALS OTHER PRESERVATION

McCampbell Analytical, Inc.

1534 Willow Pass Rd Pittsburg, CA 94566

Pittsburg, CA 94565-1701

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

(925) 25	2-9262				Wor	kOrder	: 1102	113	ClientC	ode: PEC)				
		WaterTrax	WriteOn	☐ EDF	Exce	el	Fax	✓ Em	ail	HardCo	ру	Third	dParty	☐ J-1	flag
Report to:						Bill to:					Requ	ested -	TAT:	5 0	days
~	ronmental Svcs., Inc. n Street, Ste. 200 94612	cc: PO: ProjectNo:	mgillies@pan 5175 Broadwa Heights	geaenv.com ay, Oakland, CA;	Rockridge	Pa 17	angea E ′10 Fran	-Riddell nvironmenta ıklin Street, S CA 94612				Recei Print		02/03/2	
								Requeste	d Tests	(See legei	nd be	low)			
Lab ID	Client ID		Matrix	Collection Date	Hold 1	2	3	Requeste 4 5	d Tests	(See legei	nd be	low) 9	10	11	12
Lab ID 1102113-001	Client ID		Matrix Water	Collection Date 2/2/2011 14:45	Hold 1	2	3 B	· · ·		(See legei			10	11	12
				T	Hold 1	2 A	<u> </u>	· · ·		(See leger			10	11	12

Test Legend:

1	G-MBTEX_AIR	2 G-MBTEX_W	3 TPF	H(D)WSG_W	5	
6		7	8	9	1	0
11		12				
The fol	lowing SampID: 002A con	tains testgroup.			Prepare	ed by: Zoraida Cortez

Comments:

Sample Receipt Checklist

Client Name:	Pangea Environr	nental Svcs., In	c.		Date a	and Time Received:	2/3/2011 7	:35:30 PM
Project Name:	5175 Broadway,	Oakland, CA; Ro	ockridg	je Heigl	nts Check	klist completed and r	eviewed by:	Zoraida Cortez
WorkOrder N°:	1102113	Matrix Air/Water			Carrie	r: Rob Pringle (M	IAI Courier)	
		Cha	in of Cu	ıstody (C	COC) Informa	ation		
Chain of custody	/ present?		Yes	V	No 🗆			
Chain of custody	signed when relinqui	shed and received?	Yes	V	No \square			
Chain of custody	agrees with sample	abels?	Yes	✓	No 🗌			
Sample IDs noted	d by Client on COC?		Yes	V	No 🗆			
Date and Time of	f collection noted by Cl	ient on COC?	Yes	~	No 🗆			
Sampler's name r	noted on COC?		Yes		No 🗸			
			<u>Sample</u>	Receipt	t Information	!		
Custody seals in	tact on shipping conta	iner/cooler?	Yes		No 🗆		NA 🔽	
Shipping contain	er/cooler in good cond	lition?	Yes	V	No 🗆			
Samples in prope	er containers/bottles?		Yes	✓	No 🗆			
Sample containe	ers intact?		Yes	✓	No \square			
Sufficient sample	e volume for indicated	test?	Yes	✓	No 🗌			
		Sample Pres	ervatio	n and Ho	old Time (HT) Information		
All samples recei	ived within holding tim	e?	Yes	✓	No 🗌			
Container/Temp I	Blank temperature		Coole	er Temp:	5.2°C		NA \square	
Water - VOA via	ls 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 (pF	I<2)?	Yes		No 🗆		NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No 🗆			
		(Ice T	ype: WE	T ICE)			
* NOTE: If the "N	No" box is checked, s	ee comments below	<i>/</i> .					
=====		=====		===	====	=====	====	======
Client contacted:		Date conta	acted:			Contacted	by:	
Comments:								

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway, Oakland, CA; Rockridge Heights	Date Sampled:	02/02/11
1710 Franklin Street, Ste. 200	Oakiand, CA, Rockinge Heights	Date Received:	02/03/11
	Client Contact: Morgan Gillies	Date Extracted:	02/04/11
Oakland, CA 94612	Client P.O.:	Date Analyzed:	02/04/11

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

Analytical methods: SW8021B/8015Bm Extraction method: SW5030B Work Order: 1102113

Extraction	on method: SW 5030B			Allalyt	near methods:	5 W 6021D/6013	DIII		Work Order: 1102113			
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments	
002A	INF-V	A	4200	ND<25	20	2.8	4.1	13	4	83	d1	
	rting Limit for DF =1;	A	25	2.5	0.25	0.25	0.25	0.25		μg/L		
	eans not detected at or ve the reporting limit	S	1.0	0.05	0.005	0.005	0.005	0.005		mg/K		

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

^{*} 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.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

d1) weakly modified or unmodified gasoline is significant

[#] cluttered chromatogram; sample peak coelutes with surrogate peak.

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

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway,	Date Sampled:	02/02/11
1710 Franklin Street, Ste. 200	Oakland, CA; Rockridge Heights	Date Received:	02/03/11
	Client Contact: Morgan Gillies	Date Extracted:	02/04/11
Oakland, CA 94612	Client P.O.:	Date Analyzed:	02/04/11

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

SW8021B/8015Bm Extraction method: SW5030B Work Order: Analytical methods: 1102113 Client ID Matrix MTBE Toluene Ethylbenzene DF % SS Lab ID TPH(g) Benzene Xylenes Comments 002A INF-V 1200 0.94 4 Α ND<10 6.1 0.72 2.9 83 d1

ppm (mg/L	ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.											
Reporting Limit for DF =1;	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L			
ND means not detected at or above the reporting limit	S	NA	NA	NA	NA	NA	NA	1	mg/Kg			

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

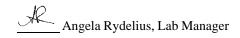
cluttered chromatogram; sample peak coelutes with surrogate peak.

%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



Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway, Oakland, CA; Rockridge Heights	Date Sampled:	02/02/11
1710 Franklin Street, Ste. 200	Oakiand, CA, Rockinge Heights	Date Received:	02/03/11
	Client Contact: Morgan Gillies	Date Extracted:	02/05/11
Oakland, CA 94612	Client P.O.:	Date Analyzed:	02/05/11

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1102113

Extraction	on method: SW 5030B			Anaiyt	ical methods:	SW 8021B/8015	Bm		Worl	1102113	
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-W	W	1300	ND<10	52	12	16	65	1	107	d1
	rting Limit for DF =1;	W	50	5.0	0.5	0.5	0.5	0.5		μg/L	
	eans not detected at or ve the reporting limit	S	1.0	0.05	0.005	0.005	0.005	0.005		mg/K	g

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

[#] cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference.

- %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor
- +The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
- d1) weakly modified or unmodified gasoline is significant

Oakland, CA 94612

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269

Date Analyzed 02/05/11

Pangea Environmental Svcs., Inc. Client Project ID: 5175 Broadway, Date Sampled: 02/02/11 Oakland, CA; Rockridge Heights Date Received: 02/03/11 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 02/03/11

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up*

Analytical methods: SW8015B Extraction method SW3510C/3630C Work Order: 1102113

Client P.O.:

Extraction method SW3	3510C/3630C	Analytical		Work Order: 1102113				
Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS	Comments		
1102113-001B	INF-W	W	600	1	104	e4,e2		
	Limit for DF =1; not detected at or	W	50			/L		
	e reporting limit	S	NA		N	A		

^{*} water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in $\mu g/L$.

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

- e2) diesel range compounds are significant; no recognizable pattern
- e4) gasoline range compounds are significant.



[#] cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract/matrix interference.

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

QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water/Air QC Matrix: Water BatchID: 56032 WorkOrder 1102113

EPA Method SW8021B/8015Bm Extraction SW5030B Spiked Sample ID: 1102														
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)					
7 tildiyto	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD		
TPH(btexf)	ND	60	92.6	95.1	2.59	95.5	95.7	0.223	70 - 130	20	70 - 130	20		
MTBE	ND	10	121	122	1.27	120	114	5.61	70 - 130	20	70 - 130	20		
Benzene	ND	10	120	120	0	122	116	5.16	70 - 130	20	70 - 130	20		
Toluene	ND	10	105	106	0.614	109	106	2.44	70 - 130	20	70 - 130	20		
Ethylbenzene	ND	10	103	105	1.69	108	105	2.81	70 - 130	20	70 - 130	20		
Xylenes	ND	30	114	116	2.23	122	118	3.71	70 - 130	20	70 - 130	20		
%SS:	111	10	104	107	2.30	105	108	2.91	70 - 130	20	70 - 130	20		

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

BATCH 56032 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1102113-001A	02/02/11 2:45 PM	f 02/05/11	02/05/11 3:57 AM	1102113-002A	02/02/11 2:50 PM	02/04/11	02/04/11 1:39 PM

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

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

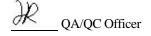
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 55953 WorkOrder 1102113

EPA Method SW8015B	Extra	Spiked Sample ID: N/A										
Analyte	Sample	Spiked	oiked MS MSD		MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance		
7 thaty to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	98.7	98.4	0.267	N/A	N/A	70 - 130	30
%SS:	N/A	625	N/A	N/A	N/A	96	96	0	N/A	N/A	70 - 130	30

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

BATCH 55953 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1102113-001B	02/02/11 2:45 PM	M 02/03/11	02/05/11 5:32 AM				

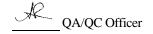
MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

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

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

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

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



McCampbell Analytical,	Inc.
"When Quality Counts"	

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway, Rockridge Heights	Date Sampled: 0)2/22/11
1710 Franklin Street, Ste. 200		Date Received: 0)2/23/11
7,707744444	Client Contact: Tina De La Fuente	Date Reported: 0	03/01/11
Oakland, CA 94612	Client P.O.:	Date Completed: 0)2/28/11

WorkOrder: 1102709

March 01, 2011

D		•		
Dear	- 1 1	ın	а	•

Enclosed within are:

- 1) The results of the 3 analyzed samples from your project: 5175 Broadway, Rockridge Heights,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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.

Web	site: www.mco	1534 Pitts campbell.	Willow Pas burg, CA 9	ss Rd. 4565	ain@r	ncca		ell.c	om	269			EDF Required? Coelt (Normal) No Write On (DW) No .							R 5 DAY												
Report To: Morg	an Gillies Za	or Delat	Dente F	Bill To	o: Pa	nge	a						Т						A	naly	sis l	Req	ues	t						C	ther	Commen
Company: Pange		F																														
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1710 Prankini Sti	cet, builte 20	o, oma			il: mg								٦	TB	ea	B&F	0									310				LBE		Samples for Metal
Tele: (510) 836-3	702				(510)								\exists	8015)/MTBE	- E	&F/	18									00/				(E)		analysis:
Project #: 5175 B					et Nai	_			ge F	[eia]	hfs		\dashv	801	ca	20 E	18 (4		6							3270				IP.		Yes / No
Project Location:		way Oal			Lt I vali	iiic.	ROCE		ge I	reigi	uto		\dashv	+ 00	Sil	(55)	-po		8020	2.5	LY					5/8	20)	00		2		1037110
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Sampler Signatur	e: 2//			_	_	Т				METHOD		+	(602	5) 4	5 3	ydra	17	A 60		B's			260	0,	EP/	010	10	160	드			
		SAMI	PLING		ers		MAT	1ATRI		PRESERVED			Gas	(801		Oil 8		(EP.	-	82 PC	4	15	4/8	82	by	9) s	99)	6.00	Ž.			
SAMPLE ID (Field Point Name)	LOCATION	Date	Time	# Containers	Type Containers	Water	Soil	Cluden	Other	ICE	HCL	HNO ₃	Other	BTEX & TPH as	TPH as Diesel (8015) with Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260.		
INFA	W	2-22-11	1500	3	VOAL	V				X	X		1	X																		'
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McCampbell Analytical, Inc.

INF-W

EFF-W

INF-V

Water

Water

Air

1102709-001

1102709-002

1102709-003

1534 Willow Pass Rd Pittsburg, CA 94565-1701

CHAIN-OF-CUSTODY RECORD

Α

Α

Page 1 of 1

(925) 252-9262				Work(Order:	11027	709	ClientC	ode: PE	O				
	WaterTrax	WriteOn	✓ EDF	Excel		Fax	✓ Ema	il	HardC	Сору	Third	Party	☐ J-1	flag
Report to:				I	Bill to:					Requ	iested T	AT:	5 c	days
Tina De La Fuente Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612 (510) 836-3700 FAX (510) 836-3709	cc: PO: ProjectNo: {	·	eangeaenv.com y, Rockridge Heigh	nts	Par 171	ngea En 10 Frank	-Riddell nvironmental klin Street, S CA 94612		nc.		Receiv Printe		02/23/2 02/25/2	
							Requeste	d Tests	(See lege	end be	elow)			
Lab ID Client ID		Matrix	Collection Date F	lold 1	2	3	4 5	6	7	8	9	10	11	12

2/22/2011 15:00

2/22/2011 15:15

2/22/2011 14:00

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1 G-MBTEX_AIR	2 G-MBTEX_W	3 PREDF REPORT	4	5
6	7	8	9	10
11	12			
The following SampID: 003A contains	s 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 and Time Received: 2/23/2011 2:40:36 PM				
Project Name:	e: 5175 Broadway, Rockridge Heights						Checklist completed and reviewed by: Ana Venegas				
WorkOrder N°:	1102709 Matrix	Air/Water			Ca	arrie	er: Rob Pringle (M	Al Courier)			
		<u>Chain o</u>	of Cu	stody (C	COC) Info	rma	ation				
Chain of custody	y present?		Yes	V	No [
Chain of custody	y signed when relinquished and	d received?	Yes	V	No [
Chain of custody	y agrees with sample labels?	,	Yes	✓	No [
Sample IDs noted	d by Client on COC?	,	Yes	V	No [
Date and Time o	f collection noted by Client on C	OC?	Yes	✓	No [
Sampler's name	noted on COC?		Yes	v	No [
		Sar	nple	Receipt	Informa	tior	<u>n</u>				
Custody seals in	ntact on shipping container/cool	er?	Yes		No [NA 🗹			
Shipping contain	ner/cooler in good condition?	,	Yes	V	No [
Samples in prop	er containers/bottles?	,	Yes	✓	No [
Sample containe	ers intact?	,	Yes	✓	No [
Sufficient sample	e volume for indicated test?		Yes	✓	No [
	<u>Sa</u>	mple Preserv	atior	n and Ho	old Time	(HT	Γ <u>) Information</u>				
All samples rece	eived within holding time?		Yes	✓	No [
Container/Temp	Blank temperature	(Coole	er Temp:	7°C			NA \square			
Water - VOA via	als have zero headspace / no b	ubbles?	Yes	✓	No [No VOA vials subm	itted \square			
Sample labels cl	hecked for correct preservation	1?	Yes	✓	No [
Metal - pH accep	otable upon receipt (pH<2)?	,	Yes		No [NA 🔽			
Samples Receive	red on Ice?		Yes	✓	No [
		(Ice Type:	WE	TICE)						
* NOTE: If the "I	No" box is checked, see comm	ents below.									
=====	=======	====	==	===	===	=	======	====	=======		
Client contacted:	:	Date contacted	d:				Contacted	by:			
Comments:											

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway, Rockridge Heights	Date Sampled:	02/22/11
1710 Franklin Street, Ste. 200	Rockridge Heights	Date Received:	02/23/11
	Client Contact: Tina De La Fuente	Date Extracted:	02/24/11
Oakland, CA 94612	Client P.O.:	Date Analyzed:	02/24/11

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

Analytical methods: SW8021B/8015Bm Extraction method: SW5030B Work Order: 1102709 MTBE Lab ID Client ID Matrix TPH(g) Benzene Toluene Ethylbenzene Xylenes DF % SS Comments 003A INF-V 1300 ND<17 6.0 2.8 3.7 14 117

Reporting Limit for DF $=1$;	A	25	2.5	0.25	0.25	0.25	0.25	μg/L
ND means not detected at or above the reporting limit	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg
* *************************************	nouted in	ua/L sail/aludas/s	olid sommles i	n ma/lea rriin		a/rrima muadria	t/ail/man agua	ous liquid somples in mo/I

 $\%\,SS = Percent\;Recovery\;of\;Surrogate\;Standard$

DF = Dilution Factor

d1) weakly modified or unmodified gasoline is significant

Angela Rydelius, Lab Manager

^{*} 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.

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

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway,	Date Sampled:	02/22/11
1710 Franklin Street, Ste. 200	Rockridge Heights	Date Received:	02/23/11
	Client Contact: Tina De La Fuente	Date Extracted:	02/24/11
Oakland, CA 94612	Client P.O.:	Date Analyzed:	02/24/11

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

SW8021B/8015Bm Extraction method: SW5030B Analytical methods: Work Order: 1102709 Matrix MTBE DF % SS Lab ID Client ID TPH(g) Benzene Toluene Ethylbenzene Xylenes Comments 003A INF-V 370 117 A ND<4.5 1.8 0.72 0.843.2 6.7 d1

ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.									
Reporting Limit for DF =1;	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L
ND means not detected at or above the reporting limit	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

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

Angela Rydelius, Lab Manager

Pangea Environmental Svcs., Inc.	Client Project ID: 5175 Broadway, Rockridge Heights	Date Sampled:	02/22/11
1710 Franklin Street, Ste. 200	Rockridge Heights	Date Received:	02/23/11
	Client Contact: Tina De La Fuente	Date Extracted:	02/26/11
Oakland, CA 94612	Client P.O.:	Date Analyzed:	02/26/11

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

	G	asomic i	talige (Co-C12)	voiaule 11y	ui ocai bolis	as Gasonne	WILLDILA	iiid WIIDE			
Extraction	on method: SW5030B			Analyt	tical methods: 5	SW8021B/8015	Bm		Wor	k Order:	1102709
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-W	W	680	ND	8.4	4.4	8.4	49	1	98	d1
002A	EFF-W	w	ND	ND	ND	ND	ND	ND	1	98	
	rting Limit for DF =1; eans not detected at or	W	50	5.0	0.5	0.5	0.5	0.5		μg/L	,
	ve the reporting limit	S	1.0	0.05	0.005	0.005	0.005	0.005		mg/K	g

* 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.	

- +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



[#] 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/Air QC Matrix: Water BatchID: 56437 WorkOrder 1102709

EPA Method SW8021B/8015Bm	Extra	ction SW	5030B					S	Spiked San	nple ID	: 1102687-0	01E
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	
7 tildiyto	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)	ND	60	109	107	1.64	106	108	1.53	70 - 130	20	70 - 130	20
MTBE	ND	10	90	98.5	9.02	105	92.3	12.8	70 - 130	20	70 - 130	20
Benzene	ND	10	116	113	2.57	113	113	0	70 - 130	20	70 - 130	20
Toluene	ND	10	103	101	1.65	101	101	0	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	105	102	2.74	102	101	0.665	70 - 130	20	70 - 130	20
Xylenes	ND	30	118	115	2.64	115	116	0.468	70 - 130	20	70 - 130	20
%SS:	96	10	104	103	0.578	104	102	1.74	70 - 130	20	70 - 130	20

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

BATCH 56437 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1102709-001A	02/22/11 3:00 PM	02/26/11	02/26/11 9:14 PM	1102709-002A	02/22/11 3:15 PM	02/26/11	02/26/11 4:14 AM
1102709-003A	02/22/11 2:00 PM	02/24/11	02/24/11 12:36 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).

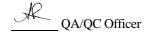
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the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

£ 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"

Pangea Environmental Svcs., Inc.	Client Project ID: #1145.001; Rock Heights	Date Sampled: 03/09/11
1710 Franklin Street, Ste. 200		Date Received: 03/10/11
1770 Training Street, Sec. 200	Client Contact: Morgan Gillies	Date Reported: 03/15/11
Oakland, CA 94612	Client P.O.:	Date Completed: 03/11/11

WorkOrder: 1103338

March 15, 2011

Dear	Mo	rgan:
------	----	-------

Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #1145.001; Rock Heights,
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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.

1103338

McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 RUSH 24 HR 48 HR 72 HR 5 DAY Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coeft (Normal) Write On (DW) No Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Morgan Gillies Bill To: Pangea Analysis Request Other Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 TPH as Diesel (8015) w/ Silica Gel Cleanup by EPA Method 8260 Samples PAH's / PNA's by EPA 625 / 8270 / 8310 E-Mail: mgillies@pangeaenv.com Total Petroleum Hydrocarbons (418.1) for Metals Fax: (510) 836-3709 Tele: (510) 836-3702 analysis: Project Name: Rock Heights Project: 1145.001 BTEX ONLY (EPA 602 / 8020) Yes / No EPA 608 / 8082 PCB's ONLY CAM-17 Metals (6010 / 6020) LUFT 5 Metals (6010 / 6020) Project Location: 5175 Broadway, Oakland, CA Lead (200.8 / 200.9 / 6010) Sampler Signature: 4 EPA 524.2 / 624 / 8260 EPA 525 / 625 / 8270 METHOD Five fuel oxygenates SAMPLING MATRIX BTEX & TPH as Gas Type Containers PRESERVED EPA 8140 / 8141 EPA 8150 / 8151 Containers EPA 608 / 8081 LOCATION SAMPLE ID (Field Point Sludge Name) Date Time Other HNO3 Other HCL ICE INF-V INF 3-9-11 X X 1145 ICE/t°/V//+ Relinquished By: Date: Received By: COMMENTS: Time: GOOD CONDITION HEAD SPACE ABSENT Relinguished By: Date: Received By: Time: DECHLORINATED IN LAB mun Vt APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Date: Time: Received By: VOAS O&G METALS OTHER PRESERVATION

McCampbell Analytical, Inc.

1534 Willow Pass Rd

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Pittsburg, CA 94565-1701 (925) 252-9262					Work	Order:	11033	338	Cli	entCode	e: PEO				
	WaterTrax	WriteOn	✓ EDF		Excel	[Fax	✓	Email		HardCopy	Thir	dParty	☐ J-1	flag
Peport to: Morgan Gillies Email: mgillies@pangeaenv.com Pangea Environmental Svcs., Inc. cc: 1710 Franklin Street, Ste. 200 PO: Oakland, CA 94612 ProjectNo: #1145.001; Rock Heights (510) 836-3700 FAX (510) 836-3709					Bill to: Bob Clark-Riddell Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612				Requested TAT: Date Received: Date Printed:			,			
Lab ID Client ID		Matrix	Collection Date	Hold	1	2	3	Requ 4	ested Te	ests (Se	e legend l	pelow)	10	11	12
1103338-001 INF-V		Air	3/9/2011 11:45		Α	Α									

Test Legend:

Toot Logona.					
1 G-MBTEX_AIR	2 PREDF REPORT	3	4	5	
6	7	8	9	10	
11	12				
The following SampID: 001A con	tains testgroup.			Prepared by: Maria Veneg	as

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 Enviro	nmental Svcs., In	C.		Date a	and Time Received:	3/10/2011	3:57:18 PM
Project Name:	#1145.001; Ro	k Heights			Check	klist completed and r	eviewed by:	Maria Venegas
WorkOrder N°:	1103338	Matrix Air			Carrie	er: Rob Pringle (M	IAI Courier)	
		<u>Ch</u>	ain of Cu	ıstody	(COC) Informa	ation		
Chain of custody	y present?		Yes	V	No 🗆			
Chain of custody	y signed when relin	quished and received	? Yes	V	No 🗆			
Chain of custody	y agrees with samp	le labels?	Yes	✓	No 🗌			
Sample IDs noted	d by Client on COC?		Yes	V	No \square			
Date and Time o	f collection noted by	Client on COC?	Yes	~	No 🗆			
Sampler's name	noted on COC?		Yes	V	No 🗆			
			Sample	Recei	pt Information	<u>1</u>		
Custody seals in	ntact on shipping co	ntainer/cooler?	Yes		No 🗆		NA 🗹	
Shipping contain	ner/cooler in good co	ondition?	Yes	V	No 🗆			
Samples in prop	er containers/bottle	s?	Yes	V	No \square			
Sample containe	ers intact?		Yes	✓	No 🗆			
Sufficient sample	e volume for indicat	ed test?	Yes	✓	No 🗌			
		Sample Pre	servatio	n and F	Hold Time (HT) Information		
All samples rece	eived within holding	time?	Yes	✓	No 🗆			
Container/Temp	Blank temperature		Cool	er Temp	:		NA 🗹	
Water - VOA via	als have zero heads	pace / no bubbles?	Yes		No 🗆	No VOA vials subm	itted 🗹	
Sample labels cl	hecked for correct p	preservation?	Yes	~	No 🗌			
Metal - pH accep	otable upon receipt	(pH<2)?	Yes		No \square		NA 🗹	
Samples Receiv	ed on Ice?		Yes		No 🗹			
* NOTE: If the "I	No" box is checked	, see comments belo	v.					
====	=====	======			====	======	====	======
Client contacted:	:	Date conf	acted:			Contacted	by:	
Comments:								

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Telephone: 877-252-9262 Fax: 925-252-9269

Account of the Control of the Contro				
Pangea Environmental Svcs., Inc.	Client Project ID: #	1145.001; Rock	Date Sampled:	03/09/11
1710 Franklin Street, Ste. 200	Heights		Date Received:	03/10/11
	Client Contact: Mo	organ Gillies	Date Extracted:	03/10/11
Oakland, CA 94612	Client P.O.:		Date Analyzed:	03/10/11

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

Analytical methods: SW8021B/8015Bm Extraction method: SW5030B Work Order: 1103338 Lab ID Client ID Matrix TPH(g)MTBE Benzene Toluene Ethylbenzene Xylenes DF % SS Comments 001A INF-V 270 ND 0.37 ND 0.30 1.3 117 d1 Reporting Limit for DF = 1; 0.25 Α 2.5 0.25 0.25 25 0.25 μg/L ND means not detected at or 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
--	----------------------------	----------------------------------	-----------------

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

above the reporting limit

d1) weakly modified or unmodified gasoline is significant

Angela Rydelius, Lab Manager

[#] cluttered chromatogram; sample peak coelutes with surrogate peak.

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

Pangea Environmental Svcs., Inc.	Client Project ID: #1145.001; Rock	Date Sampled:	03/09/11
1710 Franklin Street, Ste. 200	Heights	Date Received:	03/10/11
,	Client Contact: Morgan Gillies	Date Extracted:	03/10/11
Oakland, CA 94612	Client P.O.:	Date Analyzed:	03/10/11

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

SW8021B/8015Bm Extraction method: SW5030B Analytical methods: Work Order: 1103338 Matrix MTBE DF % SS Lab ID Client ID TPH(g) Benzene Toluene Ethylbenzene Xylenes Comments 001A INF-V ND 117 A 77 ND 0.12 0.0680.30 1 d1

ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.										
Reporting Limit for DF =1;	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L	
ND means not detected at or above the reporting limit	S	NA	NA	NA	NA	NA	NA	1	mg/Kg	

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

Angela Rydelius, Lab Manager

QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 56810 WorkOrder 1103338

EPA Method SW8021B/8015Bm Extraction SW5030B Spiked Sample ID: 1103324									: 1103324-0	02A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	Criteria (%)	
raidiyto	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btexf)	ND	60	94.9	95.7	0.901	99.5	94.3	5.27	70 - 130	20	70 - 130	20
MTBE	ND	10	105	114	8.26	110	109	1.48	70 - 130	20	70 - 130	20
Benzene	ND	10	107	109	2.05	105	103	2.05	70 - 130	20	70 - 130	20
Toluene	ND	10	93.3	97.7	4.70	93.3	90.8	2.78	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	95.5	98.8	3.33	95.1	92.9	2.36	70 - 130	20	70 - 130	20
Xylenes	ND	30	108	112	4.26	108	106	2.51	70 - 130	20	70 - 130	20
%SS:	103	10	101	103	1.63	99	100	0.906	70 - 130	20	70 - 130	20

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

BATCH 56810 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1103338-001A	03/09/11 11:45 AM	03/10/11	03/10/11 5:20 PM	1103338-001A	03/09/11 11:45 AM	03/10/11	03/10/11 5:20 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.

QA/QC Officer

McCampbell Analytical,	Inc.
"W/ O1it Ct-"	

Pangea Environmental Svcs., Inc.	Client Project ID: #5175 Broadway; Rockridge	Date Sampled: 03/21/11	
1710 Franklin Street, Ste. 200	Heights	Date Received: 03/22/11	
1770 Hankini Succe, Sec. 200	Client Contact: Morgan Gillies	Date Reported: 03/28/11	
Oakland, CA 94612	Client P.O.:	Date Completed: 03/24/11	

WorkOrder: 1103743

March 28, 2011

Dear	Mor	gan
------	-----	-----

Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #5175 Broadway; Rockridge Heights,
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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.

Web	IcCAMP	1534 Pitts campbell	Willow Pa burg, CA	ss Rd. 94565	∭ ain@ı	0 Z	mph	Pell.	13)					UR			ou	ND	T	M	E	\ F	RUSI	H	OD 24 I	HR		48 H	CORE	D 2 HR	5 DAY
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1710 Franklin Sti	eet, Suite 20	o, Oaki			_	illie	s@n	ano	reaer	ıv.c	om		\neg	8015)/MTBE	Clea	B&F	0									310				ETBE,		for Metals
Tele: (510) 836-3	E-Mail: mgillies@pangeaenv.com Tele: (510) 836-3702 Fax: (510) 836-3709								\neg	S)/M	el C	&F/	18.									8/0				ET.		analysis:				
Project #: 5175 B					et Nai				lge F	leig	hts	8		801	ca (20 E	ns (4		6							827				DIP		Yes / No
Project Location:	The state of the s	way, Oa							Ber		22.00		\neg	+ 07	Sili	e (55	ě		802		ALY.					25/	020	20)	_	34,		
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Sumprer Signatur	1100	CAM	DI INC				N.T.A.	TDI	v	I	иет	НО	D	09) \$	15)	& G	lydr	021	9 V		CB3			826	0/3	EP	9109	010	9/6	ME		
SAMPLING E MATRIX PRESERVED						ED	Ga	(80	Oii	H	8/0	(EP	-	2 P(41	51	24/	/ 87	s by	als (Js (6	200	F 99									
SAMPLE ID				neı	İİ									H a	esel	enm	olen	801	LY	808	808	/ 81	/81	9/2	625	NA	Met	leta	00	y 82		
(Field Point Name)	LOCATION	Date	Time	Containers	S	L.			e L			m		BTEX & TPH	TPH as Diesel (8015) with Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010/8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	5 Oxygenates(TAME, TBA, DIPE, MTBE) by 8260.		
		Date	Time	S	be	Water	T I	- ·	Other	ICE	HCL	HNO3	Other	EX	На	tal P	tal	9 Y	LEX	9 V e	A 6	PA 8	PA8	PA	PA	AH,	AM	5	ead	O E		
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McCampbell Analytical, Inc.

1534 Willow Pass Rd

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

	52-9262				Wor	kOrdei	:: 11037	743	Cli	ientCode: P	EO				
		WaterTrax	WriteOn	✓ EDF	Exce	I	Fax		✓ Email	Hard	Сору	Third	dParty	☐ J -1	lag
Report to:						Bill to	:				Req	uested	TAT:	5 c	lays
•	vironmental Svcs., Inc. lin Street, Ste. 200 A 94612	cc: PO: ProjectNo: #	ngillies@pang ±5175 Broadwa	eaenv.com ay; Rockridge Hei	ghts	P: 17	•	nvironn klin Str	nental Sv eet, Ste.			e Recei e Print		03/22/2	
								Req	uested T	ests (See le	gend b	elow)			
Lab ID	Client ID		Matrix	Collection Date	Hold 1	2	3	4	5	6 7	8	9	10	11	12
4400740 004	INIE V		Δ'	0/04/0044 40 45		Α.									

Test Legend:

1 G-MBTEX_AIR	2 PREDF REPORT	3	4	5
6	7	8	9	10
11	12			
The following SampID: 001A cont	ains 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 Enviro	nmental Svcs., Inc.	Date and Time Received: 3/22/2011 7:52:28 PM							
Project Name:	#5175 Broadwa	ay; Rockridge Heig	hts		Check	list completed and re	eviewed by:	Zoraida Cortez		
WorkOrder N°:	1103743	Matrix <u>Air</u>			Carrie	r: Rob Pringle (M.	AI Courier)			
		<u>Chair</u>	of Cu	stody (CO	C) Informa	tion				
Chain of custody	y present?		Yes	V	No 🗆					
Chain of custody	y signed when relind	quished and received?	Yes	V	No 🗆					
Chain of custody	y agrees with sampl	e labels?	Yes	✓	No 🗌					
Sample IDs noted	d by Client on COC?		Yes	V	No 🗆					
Date and Time o	f collection noted by	Client on COC?	Yes	✓	No 🗆					
Sampler's name	noted on COC?		Yes	✓	No 🗆					
		<u>s</u>	ample	Receipt I	<u>nformation</u>					
Custody seals in	ntact on shipping cor	ntainer/cooler?	Yes		No 🗆		NA 🔽			
Shipping contain	ner/cooler in good co	andition?	Yes	V	No 🗆					
Samples in prop	er containers/bottle	s?	Yes	V	No 🗆					
Sample containe	ers intact?		Yes	✓	No 🗆					
Sufficient sample	e volume for indicate	ed test?	Yes	✓	No 🗌					
		Sample Prese	rvatio	n and Holo	d Time (HT)	<u>Information</u>				
All samples rece	eived within holding t	ime?	Yes	✓	No 🗌					
Container/Temp	Blank temperature		Coole	er Temp:			NA 🗹			
Water - VOA via	als have zero heads	pace / no bubbles?	Yes		No \square	No VOA vials submi	tted 🗹			
Sample labels cl	hecked for correct p	reservation?	Yes	V	No 🗌					
Metal - pH accep	otable upon receipt (pH<2)?	Yes		No 🗆		NA 🗹			
Samples Receive	ed on Ice?		Yes	V	No 🗆					
		(Ice Typ	e: WE	ET ICE)						
* NOTE: If the "I	No" box is checked,	see comments below.								
		======	=					======		
Client contacted:	:	Date contac	ted:			Contacted	by:			
Comments:										

Pangea Environmental Svcs., Inc.	Client Project ID: #5175 Broadway; Rockridge Heights	Date Sampled:	03/21/11
1710 Franklin Street, Ste. 200	Rockridge Heights	Date Received:	03/22/11
	Client Contact: Morgan Gillies	Date Extracted:	03/23/11
Oakland, CA 94612	Client P.O.:	Date Analyzed:	03/23/11

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*													
Extraction	method: SW5030B			Analy	tical methods:	SW8021B/8015	iBm .		Wor	k Order:	1103743		
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments		
001A	INF-V	A	1500	ND<30	16	7.1	2.0	12	2	113	d1		
	ng Limit for DF =1; ins not detected at or	A	25	2.5	0.25	0.25	0.25	0.25		μg/I			
	the reporting limit	S	1.0	0.05	0.005	0.005	0.005	0.005		mg/k			

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

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

d1) weakly modified or unmodified gasoline is significant

Angela Rydelius, Lab Manager

[#] cluttered chromatogram; sample peak coelutes with surrogate peak.

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

When Guanty Edunes		Telephone: 077 202 7202 Tulki 720 202 7207							
Pangea Environmental Svcs., Inc.	Client Project ID: # Rockridge Heights	5175 Broadway;	Date Sampled:	03/21/11					
1710 Franklin Street, Ste. 200	Rockridge Heights		Date Received:	03/22/11					
	Client Contact: Mor	rgan Gillies	Date Extracted:	03/23/11					
Oakland, CA 94612	Client P O ·		Date Analyzed:	03/23/11					

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

Extracti	on method: SW5030E	3		I	Analytical methods	Wor	k Order:	1103743			
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-V	A	420	ND<10	4.8	1.9	0.46	2.7	2	113	d1

ppm (mg/I	ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.													
Reporting Limit for DF =1;	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L					
ND means not detected at or above the reporting limit	S	NA	NA	NA	NA	NA	NA	1	mg/Kg					

^{*} 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 all TCLP & SPLP extracts are reported in $\mu g/L$.

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

Angela Rydelius, Lab Manager

QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 57113 WorkOrder 1103743

EPA Method SW8021B/8015Bm Extraction SW5030B Spiked Sample ID: 1103733-005								05A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)	ND	60	99.2	97.3	1.93	100	94.4	5.74	70 - 130	20	70 - 130	20
MTBE	ND	10	108	107	1.22	102	103	1.06	70 - 130	20	70 - 130	20
Benzene	ND	10	102	102	0	102	99.2	2.73	70 - 130	20	70 - 130	20
Toluene	ND	10	103	102	0.448	102	100	2.32	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	102	101	1.55	102	99.6	2.25	70 - 130	20	70 - 130	20
Xylenes	ND	30	105	108	2.43	104	102	1.97	70 - 130	20	70 - 130	20
%SS:	99	10	98	101	2.90	99	96	2.89	70 - 130	20	70 - 130	20

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

BATCH 57113 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1103743-001A	03/21/11 10:45 AM	1 03/23/11	03/23/11 1:40 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.

A QA/QC Officer