

**Andy Saberi**  
1045 Airport Boulevard  
South San Francisco, CA 94080

**RECEIVED**

8:58 am, Aug 15, 2011  
Alameda County  
Environmental Health

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

Re: 1230 14<sup>th</sup> Street, Oakland, California  
ACEH Case No. 295

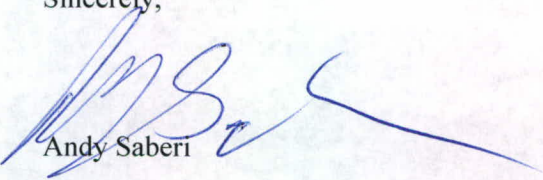
Dear Mr. Wickham:

I, Mr. Andy Saberi, 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 are true and correct to the best of my knowledge.

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

Sincerely,

  
Andy Saberi



August 11, 2011

VIA ALAMEDA COUNTY FTP SITE

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

Re: **Groundwater Monitoring and Remediation Report – First Half 2011**  
Former Shell Service Station  
1230 14<sup>th</sup> Street  
Oakland, California  
Fuel Leak Case No. RO0000433

Dear Mr. Wickham:

On behalf of property owner Andy Saberi, Pangea Environmental Services, Inc has prepared this *Groundwater Monitoring and Remediation Report – First Half 2011*. The report describes groundwater monitoring, sampling, site remediation and other site activities.

Due to reduced contaminant concentrations in site monitoring wells and prior elevated concentrations in site remediation wells, Pangea will sample site remediation wells during the upcoming fourth quarter sampling event. This sampling will help optimize site remediation efforts. Unless otherwise directed by Alameda County Environmental Health, Pangea will commence sampling of site remediation wells during the fourth quarter 2011 sampling event.

If you have any questions or comments, please call me at (510) 435-8664 or email [briddell@pangeaenv.com](mailto:briddell@pangeaenv.com).

Sincerely,  
**Pangea Environmental Services, Inc.**

A handwritten signature in blue ink, appearing to read "Bob Clark-Riddell".

Bob Clark-Riddell, P.E.  
Principal Engineer

Attachment: *Groundwater Monitoring and Remediation Report – First Half 2011*

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

**PANGEA Environmental Services, Inc.**

1710 Franklin Street, Suite 200, Oakland, CA 94612 Telephone 510.836.3700 Facsimile 510.836.3709 [www.pangeaenv.com](http://www.pangeaenv.com)



**GROUNDWATER MONITORING AND REMEDIATION REPORT –  
FIRST HALF 2011**

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

**August 11, 2011**

*Prepared for:*

Andy Saberi  
1045 Airport Boulevard  
South San Francisco, California 94080

*Prepared by:*

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

*Written by:*



Morgan Gillies  
Project Manager

Bob Clark-Riddell, P.E.  
Principal Engineer

**PANGEA Environmental Services, Inc.**

## **INTRODUCTION**

On behalf of Andy Saberi, Pangea Environmental Services, Inc. (Pangea) conducted groundwater monitoring and sampling, and remediation system maintenance and sampling at the subject site (Figure 1). The purpose of the monitoring and sampling is to evaluate dissolved contaminant concentrations and groundwater flow direction. The purpose of the remediation is to remove residual petroleum hydrocarbon from site soil and groundwater. Current groundwater analytical results and elevation data are shown on Figure 2. Current and historical data are summarized on Table 1. Well construction details are summarized on Table 2. Site remediation data are summarized on Tables 3 and 4.

## **SITE BACKGROUND**

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

### **Site History**

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

### **Previous Environmental Work**

Previous environmental work has included site assessment, a sensitive receptor evaluation/well survey, risk evaluation, two rounds of feasibility testing (in 2000 and 2006), and several remedial actions, including injection of oxygen releasing compound (ORC) into site wells in 1997, groundwater extraction (GWE) and dual-phase extraction (DPE) from 2002 to 2004, and hydrogen peroxide injection into site wells in 2003. Groundwater monitoring has been performed at the site since 1996.

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

## **GROUNDWATER MONITORING AND SAMPLING**

On May 23, 2011, site monitoring wells were gauged for depth-to-water and inspected for separate-phase hydrocarbons (SPH) prior to collection of groundwater samples. Site wells were sampled according to the approved groundwater monitoring program shown on Table A in Appendix A. Well caps were removed from all monitoring wells and technicians allowed at least 15 minutes for water level equilibration before measuring depth to water.

Before well purging, the dissolved oxygen (DO) concentration was measured in each well. DO was measured by lowering a downwell sensor to the approximate middle of the water column and allowing the reading to stabilize during gentle height adjustment. Prior to sample collection, approximately three casing volumes of water were purged using disposable bailers, an electric submersible pump, check valve with tubing, a clean PVC bailer, or a peristaltic pump. During well purging, field technicians measured pH, temperature and conductivity. A groundwater sample was collected from each well with a disposable bailer, and decanted into the appropriate containers supplied by the analytical laboratory. Groundwater samples were labeled, placed in protective plastic bags, and stored on crushed ice at or below 4°C. All samples were transported under chain-of-custody to the State-certified analytical laboratory. Purge water was 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 data and analytical results are described below and summarized on Table 1. Groundwater samples were collected from wells MW-1, MW-2, MW-3, MW-4, MW-5R, MW-6, MW-7, VW/MW-2 and VW/MW-4, in accordance with the approved *semi-annual* groundwater monitoring program (Table B in Appendix A). Samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8015Cm/8021B. Samples were analyzed by McCampbell Analytical, Inc., of Pittsburg, California, a State-certified laboratory. The laboratory analytical report is included in Appendix C.

### **Groundwater Flow Direction**

Based on depth-to-water data collected on May 23, 2011, the groundwater flow direction at the site is approximately *northeastwards*, as shown on Figure 2. The inferred groundwater flow direction is generally consistent with previous monitoring results. Depth-to-water and groundwater elevation data are presented in Table 1. Note that groundwater elevation increased in all site wells compared to the previous monitoring event between 0.28 and 0.62 ft, except for wells MW-7 (2.20 ft) and VW/MW-4 (0.05 ft). Therefore, based on these elevation changes, the measurements from wells MW-7 and VW/MW-4 were considered anomalous and were not used for contouring.

### **Hydrocarbon Distribution in Groundwater**

No SPH were observed in any of the site wells. The maximum TPHg and benzene concentrations detected this monitoring event were in source area well MW-5R (7,000 µg/L and 1,000 µg/L, respectively), the replacement well for damaged well MW-5, which are historic lows for this well. In general, hydrocarbon concentrations are within historic ranges and exhibit a stable to decreasing trend. Remediation well AS-1 was not sampled during this event due to the well being hard plumbed to the dual-phase extraction/air sparge (DPE/AS) remediation system. Groundwater analytical data are included in Table 1 and on Figure 2.

### **Fuel Oxygenate Distribution in Groundwater**

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

## REMEDIATION SUMMARY

### Dual Phase Extraction/Air Sparging System

The dual phase extraction (DPE) remediation system simultaneously extracts groundwater and soil vapor from site remediation wells. The remediation system layout is shown on Figure 3. The DPE system installed at the site consists of an electric catalytic oxidizer equipped with a 250 cfm positive-displacement blower. To maximize groundwater depression, a “stinger” (vacuum tube inserted below the water table) is used to both depress the water table and extract soil vapor in each of the remediation wells (DP-1 through DP-5). Extracted vapors are routed through an air/water separator and then treated by the electric catalytic oxidizer. The treated vapor is discharged to the atmosphere in accordance with Bay Area Air Quality Management District (BAAQMD) requirements. Groundwater captured within the air/water separator is pumped through two 1,000-lb canisters of granular activated carbon plumbed in series. The treated groundwater is discharged into the sewer in accordance with East Bay Municipal Utility District’s (EBMUD) requirements.

The air sparging (AS) system consists of a 5-hp piston air compressor that injects air into air sparge wells AS-1 through AS-5 controlled by timer-activated solenoid valves. The air sparging system is enclosed within a small shed to help reduce noise from the compressor.

### Operation and Performance

DPE system operation commenced on April 27, 2011. 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. System operation and performance data is summarized on Tables 2 and 3.

As of July 13, 2011, the DPE system operated for a total of about 509 hours (approximately 21 days). Laboratory analytical and performance data indicates that soil vapor removal rates observed during this reporting period ranged from 0.7 to 1.1 lbs/day TPHg and 0.03 to 0.06 lbs/day benzene. As of July 13, 2011, the vapor-phase portion of the DPE system removed a total of approximately 16 lbs TPHg and 0.8 lbs benzene. During this reporting period, the groundwater portion of the DPE system removed approximately 0.8 lbs TPHg and 0.1 lbs benzene.

On May 19, 2011, Pangea shut down the DPE system due to high effluent vapor concentrations detected in the samples collected on May 5, 2011. Pangea notified Flora Chan of BAAQMD of the exceedance and submitted a *System Startup Results* Report dated May 19, 2011 to BAAQMD. To evaluate oxidizer performance, Pangea raised the temperature in the oxidizer but the destruction efficiency did not improve. Further inspection found leakage around the catalytic cell within the oxidation chamber. After repair of the catalytic cell by the equipment provider, Pangea plans to restart the DPE unit and start up the newly installed air sparge system.

## **OTHER SITE ACTIVITIES**

### **Proposed Groundwater Monitoring Program Reductions**

The site groundwater monitoring frequency has been reduced from quarterly to *semi-annual* and *annual* for select site wells, as authorized by the ACEH letter dated July 23, 2009 letter. The approved groundwater monitoring program is summarized in Table A in Appendix A.

Due to reduced contaminant concentrations in site monitoring wells and prior elevated concentrations in site remediation wells, Pangea will sample site remediation wells during the upcoming fourth quarter sampling event. This sampling will help optimize site remediation efforts. Unless otherwise directed by Alameda County Environmental Health, Pangea will commence sampling of site remediation wells during the fourth quarter 2011 sampling event. Pangea will summarize groundwater monitoring activities and results in a groundwater monitoring report following completion of each future groundwater monitoring event.

## **ATTACHMENTS**

Figure 1 – Vicinity Map

Figure 2 – Groundwater Elevation and Hydrocarbon Concentration Map

Figure 3 – Remediation System Layout

Table 1 – Groundwater Elevation and Analytical Data

Table 2 – SVE Performance Data

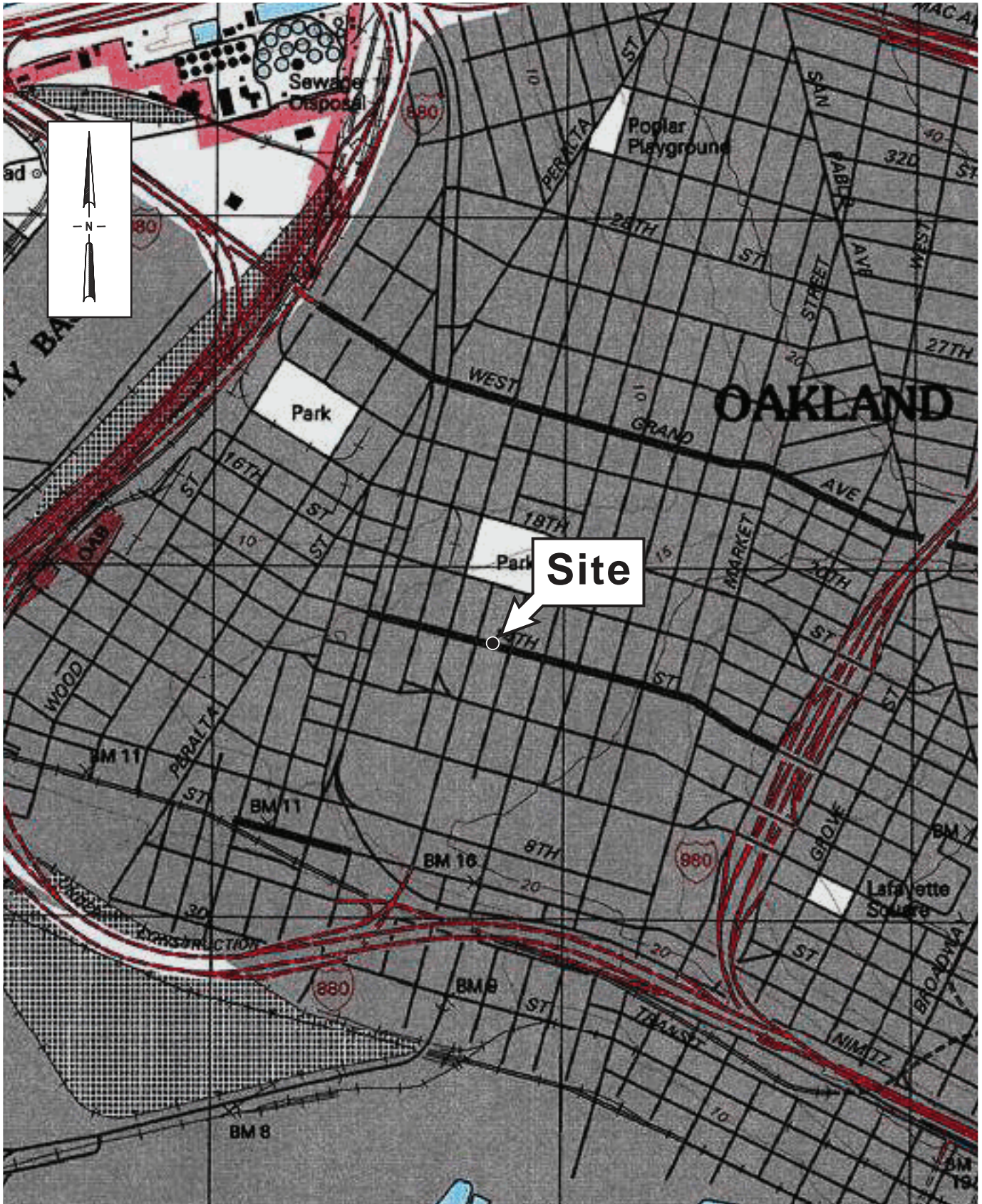
Table 3 – GWE Performance Data

Appendix A – Groundwater Monitoring Program

Appendix B – Groundwater Monitoring Field Data Sheets

Appendix C – Laboratory Analytical Report





Figure

**1**

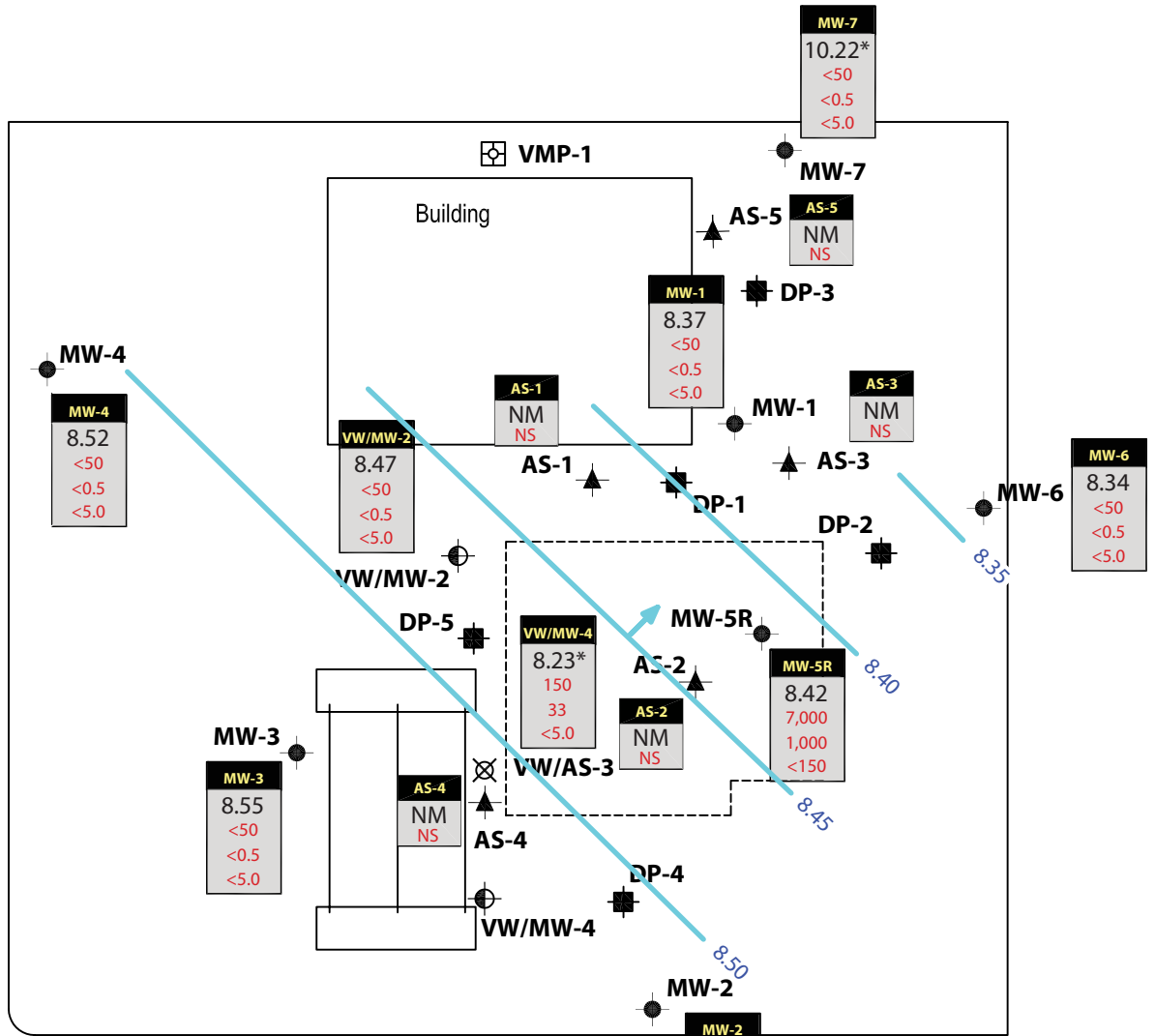
**Former Shell Service Station**

1230 14th Street  
Oakland, California



Vicinity Map

UNION STREET



**EXPLANATION**

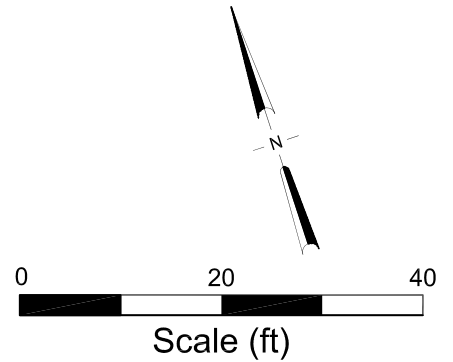
- DP-1 Dual phase extraction (DPE) well
- AS-1 Air sparge well (AS)
- VMP-1 Vapor monitoring point
- MW-1 Groundwater monitoring well
- VW/MW-4 Combination soil vapor extraction well/monitoring well
- VW/AS-3 Destroyed Well

**Well ID** — Well designation  
**ELEV** — Groundwater elevation  
 TPHg  
 Benzene  
 MTBE — Hydrocarbon concentrations in groundwater in micrograms per liter (ug/L)

NM — Not measured

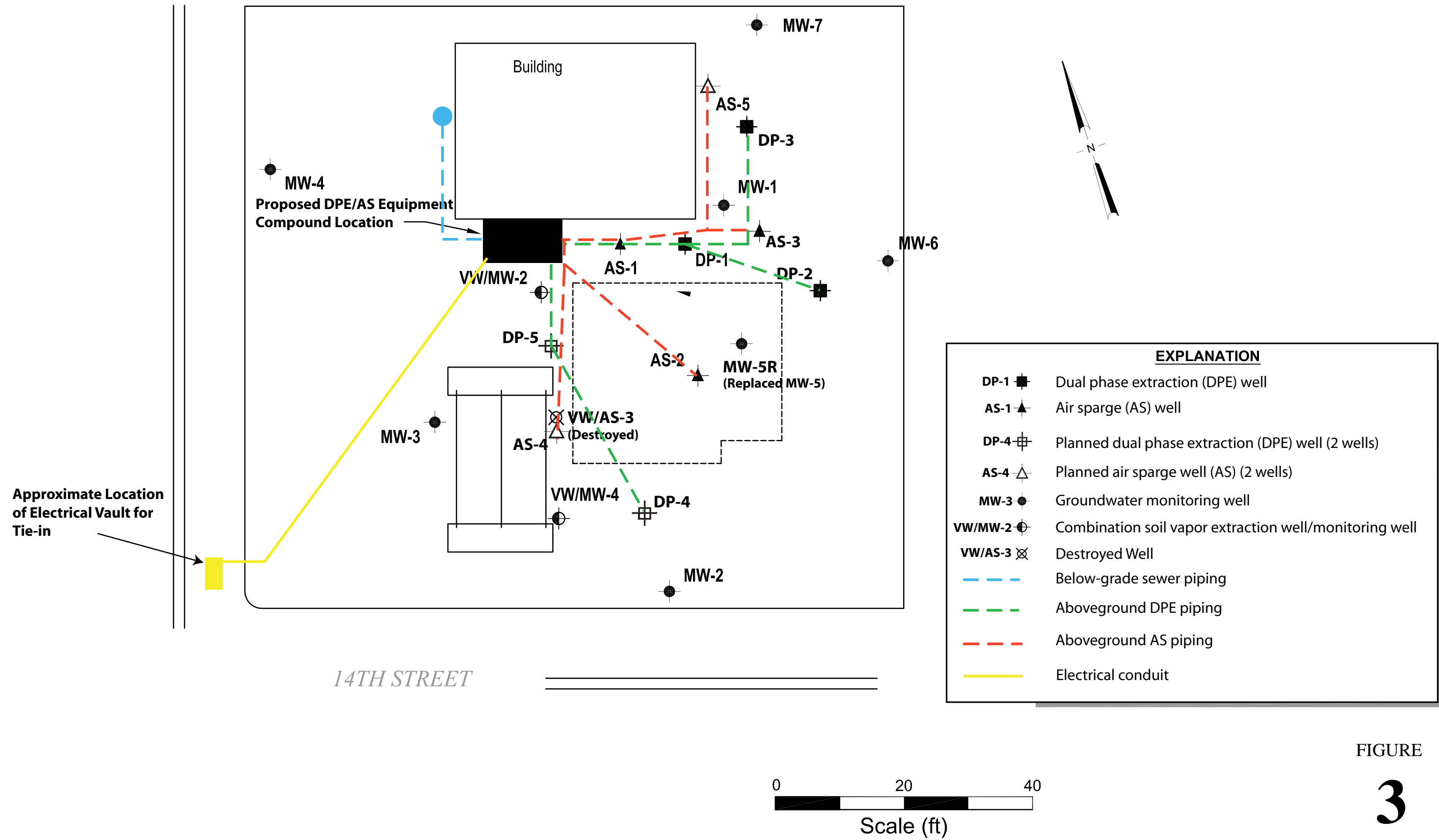
8.00 — Groundwater elevation contour, in feet

— Approximate groundwater flow direction



Figure

**2**



FIGURE

3

# Pangea

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

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
<b>REMEDIATION WELLS</b>										
<b>AS-1</b>	07/02/08	12.08	--	28,000	390	350	620	2,500	<500	--
	08/18/08	13.05	--	1,500	12	6.1	6.7	91	<17	1.94/2.41
	11/20/08	13.69	--	640	2.4	2.7	1.0	8.5	<5.0	2.51/2.91
	02/18/09	12.09	--	270	1.1	2.2	<0.5	<0.5	<5.0	2.94/2.99
	05/26/09	11.40	--	250	1.7	0.70	<0.5	3.5	<5.0	3.01/2.94
	11/23/09	13.38	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.94/2.65
	05/26/10	10.97	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.6/2.78
	12/30/10			Well Inaccessible						
<i>19.69</i>	<b>05/23/11</b>			Well Inaccessible						
<b>AS-2</b>	07/02/08	11.98	--	9,600	380	620	170	1,000	<50	--
<i>19.22</i>										
<b>AS-3</b>	07/02/08	12.42	--	2,800	340	7.2	20	37	<50	--
<i>19.5</i>										
<b>AS-4</b>	04/16/10	8.82	---	31,000	1,300	330	400	6,600	<500	---
<i>18.93</i>										
<b>AS-5</b>	04/16/10	10.03	---	120	2.5	1.3	1.2	17	<5.0	---
<i>19.99</i>										
<b>DP-1</b>	07/03/08	12.43	--	34,000	5,100	1,800	1,300	4,900	<350	--
<i>18.49</i>										
<b>DP-2</b>	07/03/08	12.92	--	15,000	2,800	300	560	1,600	<150	--
<i>19.04</i>										
<b>DP-3</b>	07/02/08	13.21	--	14,000	4,400	100	720	150	<350	--
<i>19.35</i>										
<b>DP-4</b>	04/16/10	8.95	---	4,700	300	45	260	570	<100	---
<i>18.21</i>										
<b>DP-5</b>	04/16/10	9.11	---	19,000	810	1,900	680	3,100	<350	---
<i>18.36</i>										
<b>GROUNDWATER AND/OR REMEDIATION WELLS</b>										
<b>MW-1</b>	03/25/96	9.53	9.05	37,000	7,400	1,500	720	3,300	<500	--
<i>18.58</i>	06/21/96	10.72	7.86	35,000	9,900	460	340	3,500	890	--
	09/26/96	12.88	5.70	19,000	8,200	510	780	790	<250	--
	12/19/96	12.59	5.99	27,000	120	1,200	1,400	2,800	<100	--
	12/19/96	12.59	5.99	32,000	12,000	1,300	1,600	3,100	830	--
	03/25/97	11.10	7.48	39,000	13,000	1,600	840	3,100	730	1.2
	06/26/97	12.42	6.16	--	--	--	--	--	--	--
	09/26/97	13.31	5.27	--	--	--	--	--	--	0.8
	12/05/97	12.65	5.93	--	--	--	--	--	--	0.3
	02/19/98	6.46	12.12	16,000	5,500	450	500	800	<500	2.4
	06/08/98	6.62	11.96	--	--	--	--	--	--	1.2
	08/25/98	11.83	6.75	--	--	--	--	--	--	2.8
	12/28/98	12.01	6.57	--	--	--	--	--	--	2.6
	03/26/99	9.15	9.43	--	--	--	--	--	--	2.2
	06/30/99	11.22	7.36	--	--	--	--	--	--	3.8
	09/30/99	11.89	6.69	--	--	--	--	--	--	3.0
	12/27/99	13.55	5.03	34,800	8,660	953	956	2,770	<1,000	2.4/2.1
	01/21/00	13.42	5.16	40,600	14,700	1,850	1,210	3,670	<500	2.8
	03/07/00	8.11	10.47	--	--	--	--	--	--	0.4
	04/17/00	9.78	8.80	--	--	--	--	--	--	3.0/3.4
	04/18/00	--	--	18,300	8,060	543	528	872	<50.0	--
	09/21/00	13.11	5.47	--	--	--	--	--	--	5.2
	10/17/00	12.61	5.97	15,800	6,720	435	587	887	351(<66.7)	1.2/0.8
	01/09/01	12.94	5.64	--	--	--	--	--	--	0.3

# Pangea

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

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
<i>(MW-1 cont'd)</i>	04/27/01	10.73	7.85	1,400	650	28	58	48	<10	1.8/2.1
	07/03/01	12.00	6.58	--	--	--	--	--	--	1.8
	12/06/01	10.53	8.05	4,500	1,500	85	160	210	<50	2.5/2.9
	01/23/02	9.33	9.25	--	--	--	--	--	--	0.1
	04/17/02	10.49	8.09	230	12	<0.50	4.6	2.5	<5.0	6.3/5.3
	07/18/02	11.98	6.60	--	--	--	--	--	--	1.2
	11/11/02	13.00	5.58	12,000	2,600	240	470	640	(-8.5)	0.2/0.2
	01/16/03	9.68	8.90	--	--	--	--	--	--	4.4
	03/13/03	10.45	8.13	820	340	2.7	<2.0	3.2	<20	2.8/0.9
	04/23/03	10.32	8.26	900	550	19	49	49	<50	0.9/0.1
	05/13/03	10.28	8.30	740	510	18	43	46	<50	0.1/0.2
	06/13/03	11.16	7.42	<5,000	1,500	82	180	250	<500	0.3/0.8
	07/14/03	11.66	6.92	5,300	3,400	160	340	420	<20	0.6/0.3
	09/29/03	12.44	6.14	10,000	5,700	400	670	1,000	<50	0.6/0.7
	10/29/03	12.63	5.95	19,000	6,600	560	820	1,300	(26)	0.6/0.4
	01/05/04	10.17	8.41	380	140	7.1	6.2	16	<1.0	5.0/0.8
	04/01/04	9.57	9.01	79	0.59	<0.50	<0.50	<1.0	<0.50	4.6/1.2
	07/02/04	11.81	6.77	4,100	2,100	33	110	81	<10	0.6/0.5
	11/03/04	12.53	6.05	8,000	3,800	150	480	460	<25	1.45/2.1
	01/04/05	9.39	9.19	120	23	1.6	2.0	3.5	<0.50	4.21/2.82
	04/13/05	7.63	10.95	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.44/2.77
	07/13/05	10.85	7.73	930 e	400	6.1	<5.0	10	<5.0	0.84/0.66
	10/28/05	12.44	6.14	8,300	5,500	190	590	470	<25	0.2/0.2
	01/17/06	8.61	9.97	<50	2.2	1.1	1.4	4.8	<0.50	5.8/5.3
	02/23/06	9.60	8.98	--	18.1	2.22	1.89	4.50	--	--
	03/09/06	7.65	10.93	--	1.80	<0.500	<0.500	1.82	--	--
	04/21/06	6.35	12.23	<50.0	1.54	1.03	4.20	5.82	<0.500	--
	05/01/06	7.38	11.20	268	41.3	4.62	3.83	26.1	<0.500	0.27/0.36
	06/23/06	10.09	8.49	3,990	362	13.1	12.4	71.5	<0.500	--
	07/11/06	10.09	8.49	6,190	3,740	52.0	67.8	982	<0.500	--
	08/30/06	11.55	7.03	29,200	7,380	596	443	1,680	(4.45)	0.39/0.52
	09/29/06	11.97	6.61	76,100	9,300	859 i	1,290	2,820 i	<5.00	--
	10/13/06	12.08	6.50	49,500	7,580	770	1,030	2,860	(2.75)	--
	11/03/06	12.47	6.11	42,600	8,450	592	869	1,970	(2.69)	2.60/1.15
	12/26/06	11.80	6.78	19,000	4,600	360	640	1,300	<5.0	--
	01/11/07	11.84	6.74	23,000	6,000	320	780	1,100	<25	--
	01/30/07	12.18	6.40	3,700	890	74	170	220	<25	1.18/0.76
	03/01/07	10.74	7.84	2,600	670	32	41	180	<10	--
	04/26/07	10.90	7.68	12,000 k,l	2,800	220	400	560	<20	--
	06/01/07	11.49	7.09	15,000 k	3,900	380	670	1,010	(1.8)	0.31/0.43
	06/21/07	12.07	6.51	13,000 k	3,800	400	620	1,060	<50	--
	07/03/07	12.00	6.58	21,000 k	6,100	510	960	1,760	<50	--
	08/16/07	12.55	6.03	20,000 k	5,800	460	1,100	1,730	<50	0.3/0.2
	12/06/07	13.00	5.58	53,000	9,400	560	1,400	3,000	<25	--
	02/25/08	9.91	8.67	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.74
05/26/08	11.90	6.68	9,300	2,200	67	140	130	<250	1.96/1.13	
08/18/08	12.82	5.76	15,000	3,300	110	380	430	<250	0.97/0.77	
11/20/08	13.46	5.12	18,000	4,700	190	770	910	<100	1.04/1.27	
02/18/09	11.77	6.81	2,200	54	8.7	45	76	<10	1.21/1.40	
05/26/09	11.18	7.40	750	31	7.1	3.5	23	<5.0	0.90/1.21	
11/23/09	13.15	5.43	6,300	2,100	53	170	180	<250	1.12/1.85	
05/26/10	10.74	7.84	550	96	6.2	3.1	14	<10	0.86/1.13	
12/30/10	10.53	8.05	280	40	4.6	2.8	17	<5.0	0.88/1.07	
	<b>05/23/11</b>	<b>10.21</b>	<b>8.37</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>1.68</b>
<b>MW-2</b> <i>17.90</i>	03/25/96	8.19	9.71	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	06/21/96	9.94	7.96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	09/26/96	12.15	5.75	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--

# Pangea

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

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
(MW-2 cont'd)	12/19/96	11.70	6.20	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	03/25/97	9.25	8.65	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
	06/26/97	11.36	6.54	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	09/26/97	12.56	5.34	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.1
	09/26/97	12.56	5.34	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.1
	12/05/97	11.15	6.75	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.7
	02/19/98	5.61	12.29	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.7
	06/08/98	5.58	12.32	<50	<0.30	<0.30	<0.30	<0.60	<10	3.2
	08/25/98	10.67	7.23	--	--	--	--	--	--	1.7
	12/28/98	11.65	6.25	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	0.4/0.8
	03/26/99	8.60	9.30	--	--	--	--	--	--	0.7
	06/30/99	10.30	7.60	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	2.3
	09/30/99	10.77	7.13	--	--	--	--	--	--	1.9
	12/27/99	12.21	5.69	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	0.7/0.7
	03/07/00	7.13	10.77	--	--	--	--	--	--	1.1
	04/17/00	8.35	9.55	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	1.8/1.8
	09/21/00	11.76	6.14	--	--	--	--	--	--	2.1
	10/17/00	11.80	6.10	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.9/0.6
	01/09/01	12.14	5.76	--	--	--	--	--	--	0.7
	04/27/01	9.85	8.05	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	1.1/0.9
	07/03/01	11.20	6.70	--	--	--	--	--	--	1.2
	12/06/01	10.77	7.13	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	3.9/2.1
	01/23/02	8.64	9.26	--	--	--	--	--	--	2.5
	04/17/02	9.61	8.29	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	3.5/5.2
	07/18/02	11.09	6.81	--	--	--	--	--	--	1.4
	11/11/02	12.16	5.74	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	0.2/0.3
	01/16/03	8.92	8.98	--	--	--	--	--	--	1.7
	03/13/03	9.60	8.30	--	--	--	--	--	--	1.1
	04/23/03	9.48	8.42	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.4/0.2
	05/13/03	9.45	8.45	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.5/0.3
	06/13/03	10.28	7.62	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.6/0.9
	07/14/03	10.67	7.23	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.5/0.9
	09/29/03	11.58	6.32	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.9/1.3
	10/29/03	11.76	6.14	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	4.3/0.5
	01/05/04	9.36	8.54	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.2/0.8
	04/01/04	8.77	9.13	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	4.0/0.3
	07/02/04	11.04	6.86	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.4/0.3
	11/03/04	11.71	6.19	<50	<0.50	<0.50	<0.50	<1.0	(0.54)	6.4/1.40
	01/04/05	8.68	9.22	<50	<0.50	<0.50	<0.50	<1.0	(0.62)	4.41/2.88
	04/13/05	7.13	10.77	<50	<0.50	<0.50	<0.50	<0.50	(1.7)	0.71/0.23
	07/13/05	10.30	7.60	<50	<0.50	<0.50	<0.50	<1.0	(2.3)	0.90/0.33
	10/28/05	11.61	6.29	<50	<0.50	<0.50	<0.50	<1.0	(4.2)	0.4/0.1
	01/17/06	8.21	9.69	<50	<0.50	<0.50	<0.50	<0.50	(5.0)	0.8/0.2
	03/09/06	7.70	10.20	--	--	--	--	--	--	--
	04/21/06	5.83	12.07	--	--	--	--	--	--	--
	05/01/06	6.34	11.56	<50.0	<0.500	<0.500	<0.500	<0.500	(4.33)	0.52/0.18
	08/30/06	10.71	7.19	<50.0	<0.500	<0.500	<0.500	<0.500	(1.98)	0.51/1.04
	09/29/06	11.03	6.87	--	--	--	--	--	--	--
	11/03/06	11.62	6.28	<50.0	<0.500	<0.500	<0.500	<0.500	(3.08)	0.44/0.40
	01/30/07	11.30	6.60	<50	<0.50	<0.50	<0.50	<1.0	(2.9)	0.92/0.63
	06/01/07	10.52	7.38	<50 k	0.71	<1.0	0.20 m	0.39 m	(1.7)	0.71/0.56
	08/16/07	11.60	6.30	<50 k	<0.50	<1.0	<1.0	<1.0	(1.3)	0.5/0.2
	12/06/07	12.39	5.51	<50	0.97	<0.5	0.56	1.5	(0.99)	--
	02/25/08	9.15	8.75	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.82
	05/26/08	11.02	6.88	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.86/1.32
	08/18/08	11.97	5.93	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.45/1.12
	11/20/08	12.64	5.26	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.10/1.16
	02/18/09	11.14	6.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.98/1.11

# Pangea

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

# Pangea

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Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
<i>(MW-3 cont'd)</i>	01/30/07	11.55	6.63	<50	<0.50	<0.50	<0.50	<1.0	<0.50(<0.50)	1.45/1.10
	06/01/07	10.86	7.32	<50 k	0.34 m	<1.0	<1.0	<1.0	<1.0(<1.0)	0.62/0.56
	08/16/07	11.87	6.31	<50 k	<0.50	<1.0	<1.0	<1.0	<1.0(<1.0)	0.2/0.2
	12/06/07	14.43	3.75	<50	1.8	1.0	0.90	4.4	(<0.5)	--
	02/25/08	9.37	8.81	<50	<0.5	<0.5	<0.5	<0.5	<5.0	4.91
	05/26/08	11.31	6.87	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.79/2.01
	08/18/08	12.28	5.90	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.57/1.52
	11/20/08	12.84	5.34	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.24/1.68
	02/18/09	11.45	6.73	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.16/1.38
	05/26/09	10.62	7.56	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.21/1.40
	11/23/09	12.59	5.59	--	--	--	--	--	--	--
	05/26/10	10.17	8.01	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.29/1.38
	12/30/10	10.08	8.10	--	--	--	--	--	--	--
	<b>05/23/11</b>	<b>9.63</b>	<b>8.55</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>
<b>MW-4</b> <i>18.01</i>	03/25/96	9.20	8.81	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	06/21/96	10.25	7.76	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	09/26/96	12.29	5.72	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	12/19/96	12.47	5.54	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	03/25/97	9.44	8.57	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
	06/26/97	11.57	6.44	<50	<0.50	<0.50	<0.50	<0.50	<2.5	6.2
	06/26/97	11.57	6.44	<50	<0.50	<0.50	<0.50	<0.50	<2.5	6.2
	09/26/97	12.75	5.26	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.1
	12/05/97	11.37	6.64	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.0
	12/05/97	11.37	6.64	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.0
	02/19/98	5.59	12.42	<50	<0.50	<0.50	<0.50	<0.50	<2.5	6.5
	06/08/98	5.65	12.36	<50	<0.30	<0.30	<0.30	<0.60	<10	2.6
	08/25/98	10.98	7.03	--	--	--	--	--	--	2.4
	12/28/98	11.83	6.18	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	1.3/1.2
	03/26/99	8.40	9.61	--	--	--	--	--	--	1.9
	06/30/99	10.53	7.48	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	7.6
	09/30/99	11.03	6.98	--	--	--	--	--	--	2.6
	12/27/99	12.53	5.48	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	1.9/0.8
	03/07/00	7.00	11.01	--	--	--	--	--	--	6.5
	04/17/00	8.57	9.44	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	5.1/5.1
	09/21/00	12.05	5.96	--	--	--	--	--	--	3.0
	10/17/00	11.96	6.05	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	5.5/1.2
	01/09/01	12.33	5.68	--	--	--	--	--	--	2.1
	04/27/01	9.96	8.05	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	5.3/3.8
	07/03/01	11.35	6.66	--	--	--	--	--	--	4.5
	12/06/01	10.99	7.02	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	10.23/6.5
	01/23/02	8.80	9.21	--	--	--	--	--	--	8.8
	04/17/02	9.75	8.26	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	7.0/5.1
	07/18/02	11.32	6.69	--	--	--	--	--	--	5.3
	11/11/02	12.36	5.65	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	3.6/2.0
	01/16/03	10.33	7.68	--	--	--	--	--	--	6.5
	03/13/03	10.06	7.95	--	--	--	--	--	--	6.5
	04/23/03	9.57	8.44	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	5.1/5.7
05/13/03	9.55	8.46	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	2.0/2.5	
06/13/03	10.50	7.51	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	5.0/5.6	
07/14/03	10.86	7.15	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	3.9/4.2	
09/29/03	11.74	6.27	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.6/1.4	
10/29/03	11.95	6.06	58 b	<0.50	<0.50	<0.50	<1.0	(<0.50)	2.4/1.0	
01/05/04	10.35	7.66	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	7.4/7.5	
04/01/04	8.81	9.20	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	6.0/6.4	
07/02/04	11.10	6.91	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.8/0.6	
11/03/04	11.85	6.16	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.3/2.84	
01/04/05	9.06	8.95	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	7.12/6.37	



# Pangea

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

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
<i>(MW-4 cont'd)</i>	04/13/05	6.84	11.17	<50	<0.50	<0.50	<0.50	<0.50	<0.50	5.81/5.66
	07/13/05	10.20	7.81	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.87/3.75
	10/28/05	11.75	6.26	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.4/0.8
	01/17/06	8.00	10.01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.4/6.2
	03/09/06	6.55	11.46	--	--	--	--	--	--	--
	04/21/06	5.45	12.56	--	--	--	--	--	--	--
	05/01/06	6.14	11.87	<50.0	<0.500	<0.500	<0.500	<0.500	<0.50	1.09/0.72
	08/30/06	10.82	7.19	<50.0	<0.500	<0.500	<0.500	<0.500	<0.50	4.31/4.35
	09/29/06	11.29	6.72	--	--	--	--	--	--	--
	11/03/06	11.81	6.20	<50.0	<0.500	<0.500	<0.500	<0.500	<0.50	3.30/2.40
	01/30/07	11.45	6.56	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.67/0.94
	06/01/07	10.72	7.29	67 k	<0.50	<1.0	<1.0	<1.0	<1.0	0.93/0.81
	08/16/07	11.81	6.20	<50 k	<0.50	<1.0	<1.0	<1.0	<1.0	0.5/1.3
	12/06/07	12.34	5.67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
	02/25/08	9.03	8.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0	6.84
	05/26/08	11.23	6.78	<50	<0.5	<0.5	<0.5	<0.5	<5.0	6.59/5.22
	08/18/08	12.20	5.81	<50	<0.5	<0.5	<0.5	<0.5	<5.0	7.99/2.89
	11/20/08	12.83	5.18	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.51/3.18
	02/18/09	11.23	6.78	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.90/3.15
	05/26/09	10.47	7.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.78/2.85
	11/23/09	12.51	5.50	--	--	--	--	--	--	--
	05/26/10	10.05	7.96	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.49/2.12
	12/30/10	10.11	7.90	--	--	--	--	--	--	--
<b>05/23/11</b>	<b>9.49</b>	<b>8.52</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>4.13</b>	
<b>MW-5</b> <i>18.47</i>	12/03/01	11.86	6.61	--	--	--	--	--	--	--
	12/06/01	11.40	7.07	31,000	3,000	2,000	1,100	3,000	<50	3.1/3.2
	01/23/02	9.24	9.23	--	--	--	--	--	--	0.9
	04/17/02	10.35	8.12	33,000	3,800	2,400	1,300	4,400	<200	5.3/3.8
	07/18/02	11.82	6.65	--	--	--	--	--	--	0.8
	11/11/02	12.86	5.61	100,000	7,100	12,000	3,000	17,000	(5.10)	1.2/1.4
	01/16/03	9.57	8.90	--	--	--	--	--	--	0.0
	03/13/03	10.30	8.17	33,000	2,800	2,200	980	4,600	<100	0.5/0.3
	04/07/03	10.29	8.18	--	--	--	--	--	--	--
	04/23/03	10.15	8.32	33,000	2,900	3,100	960	5,800	<250	0.1/0.1
	05/13/03	10.12	8.35	30,000	2,600	1,500	850	4,500	<250	0.4/0.3
	06/13/03	11.00	7.47	33,000	3,400	2,300	1,000	4,400	<500	0.3/0.3
	07/14/03	11.39	7.08	41,000	5,100	3,500	1,400	5,100	<50	0.5/0.5
	09/29/03	12.24	6.23	59,000	6,600	4,200	1,500	6,500	<50	0.6/0.5
	10/29/03	12.45	6.02	45,000	6,800	3,500	1,500	6,400	(21)	0.5/0.3
	01/05/04	9.97	8.50	26,000	4,900	1,700	1,100	3,300	<50	0.9/1.2
	04/01/04	9.43	9.04	29,000	5,300	2,700	880	2,900	<50	0.3/1.0
	07/02/04	11.62	6.85	19,000	5,300	740	1,100	1,400	<50	0.4/0.5
	11/03/04	12.26	6.21	31,000	7,500	2,300	1,400	4,400	<50	2.5/1.9
	01/04/05	9.13	9.34	18,000	3,500	1,200	730	2,300	<25	0.44/1.64
	04/13/05	7.60	10.87	7,000	100	460	180	880	<1.0	0.17/0.45
	07/13/05	10.63	7.84	9,400	2,400	840	440	1,100	<13	0.13/0.27
	10/28/05	12.14	6.33	28,000	16,000	2,900	1,400	3,100	<50	0.3/1.3
01/17/06	8.52	9.95	6,700	1,200	720	400	1,500	(1.3)	0.6/2.6	
02/23/06	9.22	9.25	--	4,630	1,470	709	2,310	--	--	
03/09/06	7.15	11.32	--	474	90.3	63.3	169	--	--	
04/21/06	5.82	12.65	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	--	
05/01/06	7.23	11.24	779	6.77	41.1	20.0	130	<0.500	0.39/1.52	
06/23/06	10.06	8.41	22,600	2,830	557	469	1,210	<0.500	--	
07/11/06	10.06	8.41	31,100	3,880	2,080	857	3,700	<0.500	--	
08/30/06	11.32	7.15	28,200	4,840	1,320	705	2,430	(5.35)	0.47/3.64	
09/29/06	11.81	6.66	94,900	10,100	2,960	1,810	5,310 i	(7.20)	--	
10/13/06	12.01	6.46	48,200	7,710	1,360	1,250	3,460	(5.64)	--	

# Pangea

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

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)	
<i>(MW-5 cont'd)</i>	11/03/06	12.31	6.16	50,600	11,300	1,730	1,250	3,840	(<0.500)	0.60/4.10	
	12/26/06	11.58	6.89	32,000	11,000	780	1,200	2,800	(<10)	--	
	01/11/07	11.61	6.86	35,000	11,000	1,100	1,200	3,100	(<50)	--	
	01/30/07	11.95	6.52	27,000	9,800	610	860	2,400	(<50)	0.87/0.62	
	03/01/07	10.95	7.52	23,000	9,400	640	1,200	3,100	(<50)	--	
	04/26/07	10.69	7.78	48,000 k,l	14,000	1,300	1,600	3,600	(<100)	--	
	06/01/07	11.25	7.22	54,000 k	15,000	2,800	2,200	6,100	(<100)	0.44/0.87	
	06/21/07	11.96	6.51	32,000 k	12,000	1,200	1,400	2,780	(<100)	--	
	07/03/07	11.81	6.66	41,000 k	15,000	1,800	1,900	4,050	(<100)	--	
	08/16/07	12.36	6.11	43,000 k,l	13,000	2,000	2,000	4,150	(<100)	0.6/0.1	
	12/06/07	12.81	5.66	37,000	7,900	640	1,100	1,500	(<17)	--	
	02/25/08	9.75	8.72	3,000	640	9.7	52	77	20	2.19	
	05/26/08	11.69	6.78	39,000	9,600	1,100	1,400	2,400	<250	1.10/1.52	
	06/27/08	MW-5 drilled out and replaced with MW-5R									
	<b>MW-5R</b>	07/02/08	11.91	--	22,000	4,100	710	750	2,300	<250	--
08/18/08		12.59	--	27,000	3,100	340	780	2,100	<100	0.57/3.23	
11/20/08		13.24	--	23,000	5,200	470	1,200	1,500	<250	0.83/2.50	
02/18/09		11.58	--	32,000	4,500	610	990	1,400	<500	1.04/2.11	
05/26/09		10.92	--	15,000	3,500	520	680	1,500	<200	0.85/1.05	
11/23/09		12.92	--	15,000	3,200	350	560	940	<250	0.98/2.30	
05/26/10		10.51	--	15,000	3,400	310	460	1,300	<350	0.88/0.95	
12/30/10		10.35	--	11,000	3,400	190	360	620	<250	0.89/1.02	
<i>18.40</i>	<b>05/23/11</b>	<b>9.98</b>	<b>8.42</b>	<b>7,000</b>	<b>1,000</b>	<b>49</b>	<b>320</b>	<b>190</b>	<b>&lt;150</b>	<b>0.03</b>	
<b>MW-6</b>	12/03/01	12.19	6.65	--	--	--	--	--	--	--	
	<i>18.84</i>	12/06/01	11.70	7.14	76	5.7	3.8	1.4	(<5.0)	6.3/6.1	
	01/23/02	9.57	9.27	--	--	--	--	--	--	8.7	
	04/17/02	10.73	8.11	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	9.8/9.1	
	07/18/02	12.27	6.57	--	--	--	--	--	--	1.7	
	11/11/02	13.24	5.60	580	55	<0.50	<0.50	2.8	(<5.0)	0.3/0.6	
	01/16/03	9.89	8.95	--	--	--	--	--	--	6.4	
	03/13/03	10.66	8.18	--	--	--	--	--	--	5.5	
	04/23/03	10.57	8.27	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	3.7/4.4	
	05/13/03	10.56	8.28	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	3.5/3.0	
	06/13/03	11.48	7.36	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	2.7/3.1	
	07/14/03	11.83	7.01	230 b	3.4	<0.50	<0.50	<1.0	(<0.50)	1.8/1.3	
	09/29/03	12.70	6.14	910 b	46	<2.5	<2.5	<5.0	(<2.5)	1.1/1.0	
	10/29/03	12.91	5.93	830	38	0.53	<0.50	3.3	(0.60)	1.2/0.9	
	01/05/04	10.35	8.49	93	0.92	<0.50	<0.50	<1.0	(<0.50)	6.2/4.3	
	04/01/04	9.80	9.04	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	3.5/3.4	
	07/02/04	12.09	6.75	370	3.0	<0.50	<0.50	<1.0	(<0.50)	0.6/1.0	
	11/03/04	12.84	6.00	540	22	0.73	<0.50	1.5	(0.82)	2.28/0.84	
	01/04/05	9.55	9.29	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	6.71/5.16	
	04/13/05	7.89	10.95	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	2.99/2.87	
	07/13/05	11.13	7.71	170	6.2	1.1	<0.50	<1.0	(0.71)	0.10/1.32	
	10/28/05	12.74	6.10	490	22	<0.50	<0.50	<1.0	(<0.50)	0.6/0.3	
	01/17/06	8.80	10.04	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	5.3/4.9	
	02/23/06	9.54	9.30	--	<0.500	<0.500	<0.500	<0.500	--	--	
	03/09/06	7.25	11.59	--	<0.500	<0.500	<0.500	<0.500	--	--	
	04/21/06	6.34	12.50	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--	
	05/01/06	7.32	11.52	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	0.72/0.63	
	06/23/06	10.12	8.72	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--	
	07/11/06	10.12	8.72	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--	
	08/30/06	11.79	7.05	<50.0	3.32	<0.500	<0.500	<0.500	(<0.500)	0.80/0.86	
	09/29/06	12.32	6.52	<50.0	1.59	<0.500	<0.500	<0.500	(<0.500)	--	
	10/13/06	12.38	6.46	934	3.14	<0.500	<0.500	<0.500	(<0.500)	--	
	11/03/06	12.77	6.07	112	10.6	<0.500	<0.500	<0.500	(<0.500)	3.80/1.10	

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

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
<i>(MW-6 cont'd)</i>	12/26/06	12.05	6.79	690	62	<0.50	<0.50	4.5	(<0.50)	--
	01/11/07	12.12	6.72	660	11	<0.50	<0.50	2.3	(<0.50)	--
	01/30/07	12.44	6.40	310	1.5	<0.50	<0.50	<1.0	(<0.50)	1.47/0.81
	03/01/07	10.97	7.87	360	3.6	<0.50	<0.50	0.87	(<0.50)	--
	04/26/07	11.18	7.66	210 k	0.72	<1.0	<1.0	<1.0	(<1.0)	--
	06/01/07	11.72	7.12	640 k	3.1	<1.0	<1.0	0.27 m	(<1.0)	0.69/0.50
	06/21/07	12.22	6.62	390 k	3.0	<1.0	<1.0	0.17 m	(<1.0)	--
	07/03/07	12.22	6.62	360 k	3.0	<1.0	0.36 m	1.2	(<1.0)	--
	08/16/07	12.74	6.10	400 k,l	2.8	<1.0	<1.0	<1.0	(<1.0)	0.4/0.1
	12/06/07	13.24	5.60	130	<0.5	1.6	<0.5	<0.5	(<0.5)	--
	02/25/08	10.26	8.58	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.81
	05/26/08	12.20	6.64	<50	1.1	0.88	<0.5	<0.5	<5.0	6.77/6.59
	08/18/08	13.10	5.74	160	11	2.4	<0.5	0.57	<5.0	1.13/3.35
	11/20/08	13.73	5.11	120	1.1	1.7	<0.5	0.68	<5.0	0.98/2.11
	02/18/09	11.95	6.89	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.70/1.92
	05/26/09	11.46	7.38	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.72/1.65
	11/23/09	13.42	5.42	220	1.3	2.6	<0.5	1.0	<15	0.91/1.51
	05/26/10	11.04	7.80	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.82/1.49
	12/30/10	10.83	8.01	150	0.73	2.4	<0.5	<0.5	<5.0	1.02/2.19
		<b>05/23/11</b>	<b>10.50</b>	<b>8.34</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>
<b>MW-7</b> <i>19.20</i>	12/03/01	12.66	6.54	--	--	--	--	--	--	--
	12/06/01	12.20	7.00	1,800	390	<2.0	6.2	<2.0	(<20)	3.9/3.8
	01/23/02	10.00	9.20	--	--	--	--	--	--	9.4
	04/17/02	11.21	7.99	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	8.8/7.3
	07/18/02	12.69	6.51	--	--	--	--	--	--	0.8
	11/11/02	13.69	5.51	3,000	190	<0.50	<0.50	4.3	(5.2)	0.4/0.8
	01/16/03	10.36	8.84	--	--	--	--	--	--	7.9
	03/13/03	11.16	8.04	--	--	--	--	--	--	5.2
	04/23/03	11.02	8.18	250	48	<0.50	<0.50	<1.0	(<5.0)	3.2/1.3
	05/13/03	11.00	8.20	1,700	550	<2.5	<2.5	<5.0	(<25)	2.0/1.5
	06/13/03	11.90	7.30	1,500 b	470	<2.5	<2.5	<5.0	(<25)	1.8/1.6
	07/14/03	12.29	6.91	1300 b	1,200	<10	<10	<20	(<10)	0.4/0.2
	09/29/03	13.12	6.08	5,200	1,200	<10	<10	<20	(<10)	0.9/0.9
	10/29/03	13.34	5.86	4,800	1,100	<5.0	<5.0	<10	(8.9)	0.4/0.3
	01/05/04	10.85	8.35	53	6.7	<0.50	<0.50	<1.0	(<0.50)	1.4/2.3
	04/01/04	10.28	8.92	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	5.5/6.2
	07/02/04	12.48	6.72	8,100 d	3,400	<25	<25	<50	(<25)	0.8/0.8
	11/03/04	13.25	5.95	3,700	1,200	<5.0	<5.0	<10	(<5.0)	1.9/0.8
	01/04/05	10.02	9.18	<50	2.0	<0.50	<0.50	<1.0	(<0.50)	6.31/5.71
	04/13/05	8.46	10.74	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	5.87/5.89
	07/13/05	11.57	7.63	1,100	380	9.2	<2.5	37	(<2.5)	0.30/0.33
	10/28/05	13.15	6.05	5,100	2,900	<13	<13	<25	(<13)	0.6/0.9
	01/17/06	9.30	9.90	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	6.4/7.4
	02/23/06	10.03	9.17	--	<0.500	<0.500	<0.500	<0.500	--	--
	03/09/06	7.70	11.50	--	<0.500	<0.500	<0.500	<0.500	--	--
	04/21/06	6.66	12.54	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	05/01/06	7.72	11.48	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	0.67/0.98
	06/23/06	10.55	8.65	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	07/11/06	10.55	8.65	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	08/30/06	12.35	6.85	1,520	150	13.3	5.78	53.0	(0.640)	0.52/0.79
	09/29/06	12.66	6.54	2,420	384	1.80	<0.500	5.44	(0.850)	--
	10/13/06	12.85	6.35	5,980	549	0.540	0.680	11.7	(0.930)	--
11/03/06	13.73	5.47	3,190	501	<0.500	<0.500	5.38	(0.560)	2.2/1.4	
12/26/06	12.51	6.69	4,600	570	<0.50	44	2.1	(<0.50)	--	
01/11/07	12.55	6.65	3,900	490	<2.5	46	<5.0	(<2.5)	--	
01/30/07	12.89	6.31	2,500	380	<2.5	40	<5.0	(<2.5)	1.37/0.90	
03/01/07	11.45	7.75	2,600	350	<2.5	35	3.5	(<2.5)	--	

# Pangea

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

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
<i>(MW-7 cont'd)</i>	04/26/07	11.62	7.58	2,300 k	290	<5.0	31	1.3 m	<5.0	--
	06/01/07	12.23	6.97	4,400 k	350	<2.0	19	<2.0	(1.1 m)	0.04/0.71
	06/21/07	12.67	6.53	2,600 k	260	<2.0	12	<2.0	(1.4 m)	--
	07/03/07	12.76	6.44	1,700 k	170	<1.0	7.7	0.86 m	<1.0	--
	08/16/07	13.20	6.00	1,900 k	44	<1.0	<1.0	<1.0	<1.0	0.5/1.1
	12/06/07	13.73	5.47	510	21	3.1	5.8	14	(1.2)	--
	02/25/08	10.65	8.55	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.11
	05/26/08	12.62	6.58	600	190	2.3	<0.5	<0.5	<35	1.31/3.52
	08/18/08	13.52	5.68	540	71	2.7	<0.5	0.85	<25	1.12/4.75
	11/20/08	14.14	5.06	160	2.2	1.3	<0.5	<0.5	<10	1.46/2.90
	02/18/09	12.48	6.72	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.08/2.70
	05/26/09	11.90	7.30	<50	2.8	0.60	<0.5	<0.5	<5.0	1.02/1.77
	11/23/09	13.85	5.35	230	3.8	3.5	<0.5	<0.5	<30	1.08/2.14
	05/26/10	11.46	7.74	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.88/1.61
	12/30/10	11.18	8.02	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.91/1.7
	<b>05/23/11</b>	<b>8.98</b>	<b>10.22</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>0.91</b>
<b>VW/MW-2</b> <i>18.30</i>	03/25/96	9.04	9.26	13,000	900	920	180	1,500	<250	--
	06/21/96	10.48	7.82	27,000	4,100	1,100	1,400	3,200	700	--
	09/26/96	12.52	5.78	27,000	5,300	1,900	980	2,200	<500	--
	09/26/96	12.52	5.78	29,000	5,800	2,200	1,100	2,500	<250	--
	12/19/96	12.42	5.88	50,000	6,200	5,100	1,700	5,600	590	--
	03/25/97	9.83	8.47	210	5.6	<0.50	0.52	<0.50	14	2.0
	03/25/97	9.83	8.47	250	1.7	0.58	0.51	<0.50	4.7	2.0
	06/26/97	12.43	5.87	--	--	--	--	--	--	--
	09/26/97	12.98	5.32	--	--	--	--	--	--	0.9
	12/05/97	12.20	6.10	--	--	--	--	--	--	0.4
	02/19/98	5.83	12.47	<50	1.5	<0.50	<0.50	0.71	<2.5	3.6
	06/08/98	5.80	12.50	--	--	--	--	--	--	1.0
	08/25/98	11.72	6.58	--	--	--	--	--	--	4.8
	12/28/98	11.69	6.61	--	--	--	--	--	--	2.7
	03/26/99	8.75	9.55	--	--	--	--	--	--	2.8
	06/30/99	10.72	7.58	--	--	--	--	--	--	4.7
	09/30/99	12.24	6.06	--	--	--	--	--	--	4.9
	12/27/99	13.92	4.38	13,500	1,330	1,310	490	1,400	<250	2.1/1.9
	01/21/00	13.26	5.04	12,100	2,200	1,080	429	1,120	<250	2.8
	03/07/00	7.87	10.43	--	--	--	--	--	--	3.7
	04/17/00	9.65	8.65	--	--	--	--	--	--	3.7/4.1
	04/18/00	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--
	09/21/00	12.75	5.55	--	--	--	--	--	--	6.2
	10/17/00	12.21	6.09	4,070	763	589	214	501	<50.0	0.8/0.7
	01/09/01	12.51	5.79	--	--	--	--	--	--	0.7
	04/27/01	10.21	8.09	80	5.7	<0.50	2.7	4.9	<0.50	2.3/2.8
	07/03/01	11.60	6.70	--	--	--	--	--	--	0.6
	12/06/01	11.15	7.15	160	1.7	1.0	1.8	4.6	<5.0	3.7/2.3
	01/23/02	9.07	9.23	--	--	--	--	--	--	0.5
	04/17/02	10.11	8.19	<50	2.1	<0.50	<0.50	<0.50	<5.0	4.9/4.4
	07/18/02	11.61	6.69	--	--	--	--	--	--	0.9
	11/11/02	12.63	5.67	15,000	1,300	1,300	680	1,800	<5.0	0.2/0.2
01/16/03	9.35	8.95	--	--	--	--	--	--	0.4	
03/13/03	10.09	8.21	--	--	--	--	--	--	0.8	
04/07/03	10.09	8.21	--	--	--	--	--	--	--	
04/23/03	9.95	8.35	1,100	76	29	45	66	<5.0	0.8/0.3	
05/13/03	9.90	8.40	1,200	38	16	16	24	<5.0	0.2/0.2	
06/13/03	10.80	7.50	9,600	1,300	1,100	440	890	<250	0.2/0.5	
07/14/03	11.20	7.10	11,000	1,300	1,800	430	1,500	<5.0	0.5/0.5	
09/29/03	12.05	6.25	12,000	860	980	410	1,100	<10	0.4/0.4	
10/29/03	12.29	6.01	12,000	1,100	940	530	1,200	<10	0.7/0.3	

# Pangea

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Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
VW/MW-2 cont'd)	01/05/04	9.82	8.48	190 b	<0.50	<0.50	<0.50	<1.0	(<0.50)	2.8/1.8
	04/01/04	9.24	9.06	410	1.4	0.54	1.6	1.0	(<0.50)	1.7/0.1
	07/02/04	11.33	6.97	5,500	440	370	170	410	(<2.5)	0.5/0.4
	11/03/04	12.14	6.16	3,800	260	210	150	600	(<2.5)	0.9/1.4
	01/04/05	9.03	9.27	280	5.8	20	7.8	26	(<0.50)	1.66/2.66
	04/13/05	7.38	10.92	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	0.79/0.58
	07/13/05	10.45	7.85	350	19	9.3	9.8	14	(<0.50)	0.10/0.08
	10/28/05	11.98	6.32	3,400	440	350	150	320	(<2.5)	0.4/0.1
	01/17/06	8.34	9.96	700	3.1	5.1	7.7	66	(<0.50)	2.7/1.6
	02/23/06	9.42	8.88	--	97.9	17.2	40.0	80.6	--	--
	03/09/06	7.35	10.95	--	<0.500	29.2	57.8	486	--	--
	04/21/06	5.99	12.31	<50.0	<0.500	0.960	<0.500	2.71	(<0.500)	--
	05/01/06	7.25	11.05	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	0.43/0.10
	06/23/06	10.05	8.25	3,150	35.6	9.24	20.7	113	(<0.500)	--
	07/11/06	10.05	8.25	9,270	413	78.2	91.5	341	(2.40)	--
	08/30/06	11.12	7.18	4,900	135	45.5	73.3	180	(2.40)	0.37/0.62
	09/29/06	11.61	6.69	12,300	243	142	290	634	(2.50)	--
	10/13/06	12.01	6.29	19,300	292	169	384	1,080	(1.84)	--
	11/03/06	12.12	6.18	9,300	655	233	366	729	(4.15)	2.0/1.05
	12/26/06	11.41	6.89	2,600	61	50	74	250	(<0.50)	--
	01/11/07	11.45	6.85	5,200	160	190	170	570	(<0.50)	--
	01/30/07	12.21	6.09	2,200	160	20	84	200	(<2.5)	1.37/0.79
	03/01/07	10.40	7.90	520	0.50	0.53	3.3	15	(<0.50)	--
	04/26/07	10.51	7.79	5,700 k	220	140	170	420	(<2.0)	--
	06/01/07	11.00	7.30	4,300 k	150	150	140	380	(<2.0)	0.36/0.23
	06/21/07	11.78	6.52	9,000 k	540	500	350	870	(1.8 m)	--
	07/03/07	11.64	6.66	4,500 k	230	160	160	440	(<5.0)	--
	08/16/07	12.12	6.18	8,800 k	550	520	430	1,020	(<5.0)	0.3/0.1
	12/06/07	12.43	5.87	2,600	110	84	64	180	(2.4)	--
	02/25/08	9.55	8.75	620	100	4.1	4.9	2.0	<5.0	2.48
	05/26/08	11.53	6.77	7,200	350	200	220	510	<100	1.52/0.99
	08/18/08	12.45	5.85	7,000	420	160	180	460	<100	0.70/0.67
	11/20/08	13.09	5.21	3,400	86	84	75	230	<50	0.93/1.47
02/18/09	11.35	6.95	1,400	3.5	16	7.2	28	<15	0.77/1.18	
05/26/09	10.76	7.54	1,000	9.5	26	17	56	<5.0	0.84/1.19	
11/23/09	12.77	5.53	270	2.7	5.0	1.5	3.5	<5.0	0.81/2.49	
05/26/10	10.36	7.94	490	3.5	12	4.3	23	<5.0	0.69/0.94	
12/30/10	10.11	8.19	180	0.75	4.0	1.2	4.8	<5.0	0.79/1.02	
	<b>05/23/11</b>	<b>9.83</b>	<b>8.47</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>0.68</b>
VW/MW-4 18.14	03/25/96	8.45	9.69	83,000	6,500	7,000	2,000	11,000	<250	--
	03/25/96	8.45	9.69	84,000	6,400	7,000	2,100	12,000	<250	--
	06/21/96	10.38	7.76	110,000	14,000	15,000	3,700	17,000	1,700	--
	06/21/96	10.38	7.76	100,000	12,000	12,000	2,900	13,000	<1,000	--
	09/26/96	12.43	5.71	52,000	13,000	2,700	2,100	3,200	<500	--
	12/19/96	11.87	6.27	75,000	15,000	6,600	3,000	7,600	<1,250	--
	03/25/97	9.60	8.54	56,000	4,700	1,500	2,500	6,300	580	2.4
	06/26/97	12.36	5.78	--	--	--	--	--	--	--
	09/26/97	12.82	5.32	--	--	--	--	--	--	0.4
	12/05/97	12.15	5.99	--	--	--	--	--	--	0.3
	02/19/98	5.85	12.29	4,100	320	40	44	520	<50	1.8
	02/19/98	5.85	12.29	4,300	340	44	47	540	<50	1.8
	06/08/98	5.87	12.27	--	--	--	--	--	--	1.8
	08/25/98	10.96	7.18	--	--	--	--	--	--	2.5
	12/28/98	11.28	6.86	--	--	--	--	--	--	0.9
	03/26/99	8.45	9.69	--	--	--	--	--	--	1.9
06/30/99	9.70	8.44	--	--	--	--	--	--	3.6	
09/30/99	11.78	6.36	--	--	--	--	--	--	2.6	

# Pangea

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Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
VW/MW-4 cont'd)	12/27/99	12.63	5.51	33,900	3,740	2,000	1,130	5,090	587	0.4/0.2
	01/21/00	13.07	5.07	13,900	1,560	568	227	1,990	<500(21.0a)	1.0
	03/07/00	7.82	10.32	--	--	--	--	--	--	0.9
	04/17/00	9.18	8.96	--	--	--	--	--	--	1.4/1.9
	04/18/00	--	--	757	103	8.59	30.8	84.2	<25.0	--
	09/21/00	12.18	5.96	--	--	--	--	--	--	5.0
	10/17/00	12.03	6.11	8,360	2,060	391	468	1,170	147	0.7/0.8
	01/09/01	12.42	5.72	--	--	--	--	--	--	0.9
	04/27/01	10.13	8.01	7,100	2,300	50	460	250	(<10)	1.0/1.4
	07/03/01	11.42	6.72	--	--	--	--	--	--	1.2
	12/06/01	11.02	7.12	7,700	750	90	300	350	(<25)	2.5/1.9
	01/23/02	8.89	9.25	--	--	--	--	--	--	0.4
	04/17/02	9.89	8.25	4,800	760	27	240	150	(<25)	4.7/5.1
	07/18/02	11.37	6.77	--	--	--	--	--	--	0.6
	11/11/02	12.41	5.73	14,000	2,800	480	700	1,300	(<100)	0.3/0.3
	01/16/03	9.17	8.97	--	--	--	--	--	--	0.8
	03/13/03	9.85	8.29	--	--	--	--	--	--	1.1
	04/23/03	9.74	8.40	2,400	710	28	160	100	(<50)	0.2/0.05
	05/13/03	9.70	8.44	3,300	720	35	170	160	(<50)	0.2/0.2
	06/13/03	10.55	7.59	8,200	1,700	220	460	790	(<250)	0.3/0.3
	07/14/03	10.90	7.24	3,700	900	190	220	540	(<10)	0.5/0.4
	09/29/03	11.83	6.31	7,500	1,800	300	390	860	(<20)	0.5/0.6
	10/29/03	12.03	6.11	10,000	2,600	400	510	1,200	(<13)	0.5/0.4
	01/05/04	9.60	8.54	1,000	70	12	30	56	(<1.0)	1.7/1.2
	04/01/04	9.00	9.14	1,000	64	7.0	22	18	(<1.0)	0.6/0.1
	07/02/04	11.00	7.14	5,600	1,500	57	380	180	(<10)	0.4/0.4
	11/03/04	11.85	6.29	9,400	2,400	210	560	890	(<10)	1.5/2.1
	01/04/05	8.89	9.25	110	12	<0.50	2.3	<1.0	(<0.50)	2.40/1.05
	04/13/05	7.25	10.89	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	1.55/0.52
	07/13/05	10.20	7.94	1,300	520	5.1	100	17	(<2.5)	0.08/0.08
	10/28/05	11.84	6.30	2,500	830	44	170	140	(5.4)	0.6/0.2
	01/17/06	8.05	10.09	<50	<0.50	<0.50	0.56	<0.50	(<0.50)	2.7/0.6
	02/23/06	8.77	9.37	--	1.42	0.930	0.580	<0.500	--	--
	03/09/06	6.75	11.39	--	<0.500	<0.500	<0.500	0.680	--	--
	04/21/06	5.69	12.45	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	05/01/06	6.65	11.49	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	0.51/0.37
	06/23/06	9.22	8.92	920	8.69	1.32	5.63	9.68	(<0.500)	--
	07/11/06	9.22	8.92	<50.0	109	<0.500	3.91	<0.500	(<0.500)	--
	08/30/06	10.87	7.27	2,360	331	12.8	65.4	29.3	(2.64)	0.24/0.56
	09/29/06	11.40	6.74	5,920	327	23.2 i	146	112 i	(2.63)	--
	10/13/06	11.53	6.61	6,560	299	16.6	134	90.4	(3.58)	--
	11/03/06	11.87	6.27	3,530	212	9.14	87.8	52.8	(5.11)	2.60/4.0
	12/26/06	11.17	6.97	960	43	1.0	17	2.7	(<0.50)	--
	01/11/07	11.18	6.96	830	86	1.8	41	3.9	(1.40)	--
	01/30/07	11.53	6.61	2,100	450	15	99	46	(3.0)	1.13/0.91
	03/01/07	10.00	8.14	700	4.8	<0.50	1.8	0.77	(<0.50)	--
	04/26/07	10.26	7.88	930 k	84	5.2	21	9.5	(<1.0)	--
	06/01/07	10.80	7.34	2,000 k	340	7.6	58	17.6	(1.7 m)	0.46/0.42
	06/21/07	11.32	6.82	1,400 k	360	9.7	46	26.1	(2.2)	--
	07/03/07	11.39	6.75	2,700 k	650	24	91	65	(<2.0)	--
	08/16/07	11.87	6.27	1,400 k	240	8.8	32	42.3	(<5.0)	0.3/0.1
	12/06/07	12.40	5.74	3,600	480	16	39	29	(3.5)	--
	02/25/08	9.39	8.75	56	22	<0.5	<0.5	0.50	<5.0	4.61
	05/26/08	11.27	6.87	650	76	7.9	4.9	<0.5	<5.0	0.95/0.96
	08/18/08	12.23	5.91	2,700	540	28	28	71	<25	0.78/0.79
	11/20/08	12.87	5.27	2,000	390	19	13	49	<50	1.17/0.95
	02/18/09	11.29	6.85	850	17	11	3.6	25	<15	0.82/1.02
	05/26/09	10.55	7.59	540	16	11	1.3	1.1	<10	0.81/1.06

# Pangea

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

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
VW/MW-4 cont'd)	11/23/09	12.55	5.59	1,200	200	12	3.5	12	<5.0	0.84/1.66
	05/26/10	10.15	7.99	410	26	6.3	2.3	3.7	<5.0	0.77/0.84
	12/30/10	9.96	8.18	520	14	8.7	2.3	2.4	<5.0	0.8/1.26
	<b>05/23/11</b>	<b>9.91</b>	<b>8.23</b>	<b>150</b>	<b>33</b>	<b>2.2</b>	<b>3.4</b>	<b>2.1</b>	<b>&lt;5.0</b>	<b>0.50</b>
VW/AS-1 18.60	03/25/96	8.98	9.62	--	--	--	--	--	--	--
	06/21/96	10.95	7.65	--	--	--	--	--	--	--
	09/26/96	12.98	5.62	--	--	--	--	--	--	--
	12/19/96	12.67	5.93	--	--	--	--	--	--	--
	03/25/97	10.12	8.48	--	--	--	--	--	--	--
	06/26/97	12.34	6.26	--	--	--	--	--	--	--
	09/26/97	13.40	5.20	--	--	--	--	--	--	--
	12/05/97	11.96	6.64	--	--	--	--	--	--	5.2
	02/19/98	6.22	12.38	--	--	--	--	--	--	1.3
	06/08/98	6.20	12.40	--	--	--	--	--	--	1.0
	08/25/98	11.59	7.01	--	--	--	--	--	--	1.6
	12/28/98	11.74	6.86	--	--	--	--	--	--	1.3
	03/26/99	9.20	9.40	--	--	--	--	--	--	1.3
	06/30/99	11.08	7.52	--	--	--	--	--	--	2.1
	09/30/99	11.94	6.66	--	--	--	--	--	--	1.9
	12/27/99	11.01	7.59	8,940	2,000	95.7	1,200	570	606	1.6/1.8
	03/07/00	7.35	11.25	--	--	--	--	--	--	--
	04/17/00	9.08	9.52	--	--	--	--	--	--	1.9/2.0
	04/18/00	--	--	20,800	6,550	1,220	2,270	1,720	<250	--
	09/21/00	11.98	6.62	--	--	--	--	--	--	2.1
	10/17/00	12.62	5.98	38,400	7,240	5,980	1,960	5,730	534(72.4)	2.5/1.0
	01/09/01	13.03	5.57	--	--	--	--	--	--	1.9
	04/27/01	10.71	7.89	34,000	8,000	2,100	2,500	2,000	(<25)	2.9/2.1
	07/03/01	12.03	6.57	--	--	--	--	--	--	2.0
	12/06/01	11.63	6.97	6,000	990	35	820	59	(<25)	1.2/0.8
	01/23/02	9.34	9.26	--	--	--	--	--	--	0.9
	04/17/02	10.41	8.19	12,000	2,900	57	1,400	98	(<200)	3.3/2.9
	07/18/02	12.13	6.47	--	--	--	--	--	--	0.3
	11/11/02	13.15	5.45	2,200	340	7.3	250	24	(<20)	1.2/1.3
	01/16/03	9.73	8.87	--	--	--	--	--	--	2.3
	03/13/03	10.45	8.15	11,000	2,500	55	1,800	170	(<100)	2.1/1.9
	04/07/03	10.40	8.20	--	--	--	--	--	--	--
04/23/03	10.28	8.32	9,500	4,100	200	1,400	200	(<250)	1.2/0.4	
05/13/03	10.26	8.34	9,700	2,300	110	1,100	140	(<250)	0.5/2.0	
06/13/03	11.15	7.45	9,300	2,300	77	820	<100	(<500)	1.0/0.5	
07/15/03	11.62	6.98	5,500	2,000	230	620	360	(20)	1.8/1.9	
09/29/03	12.48	6.12	9,600	2,300	100	1,200	670	(<20)	2.3/3.6	
10/29/03	12.73	5.87	10,000	2,000	39	1,000	370	(16)	3.3/3.6	
01/05/04	10.25	8.35	2,000	710	18	410	18	(13)	3.0/2.8	
04/01/04	9.60	9.00	27,000	9,100	1,200	2,200	1,400	(<50)	1.0/1.4	
07/02/04	11.80	6.80	18,000	6,500	170	1,200	1,200	(<50)	3.2/0.8	
11/03/04	12.56	6.04	4,500	1,700	23	280	55	(9.8)	1.7/1.9	
01/04/05	9.50	9.10	7,500	2,500	74	540	110	(<13)	1.19/0.53	
04/13/05	7.84	10.76	34,000	6,600	290	930	2,100	(<15)	1.60/1.88	
07/13/05	10.90	7.70	--	--	--	--	--	--	--	
07/22/05	10.96	7.64	8,200	5,900	86	340	320	(<25)	1.7/1.0	
10/28/05	12.30	6.30	2,100	1,300	18	63	21	(<5.0)	0.5/1.6	
01/17/06	8.65	9.95	6,200 g	2,900	190	400	600	(4.70)	1.4/1.0	
02/23/06	9.33	9.27	--	3,080	222	414	778	--	--	

# Pangea

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

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
<i>(VW/AS-1 cont'd)</i>	03/09/06	7.40	11.20	--	1,350	88.5	128	164	--	--
	04/21/06	6.44	12.16	18,200	4,460	167	419	717	(2.79)	--
	05/01/06	7.22	11.38	19,700	5,300	261	664	1,050	(<0.500)	0.71/1.23
	06/23/06	9.73	8.87	20,600	3,820	305	259	435	(3.31 h)	--
	07/11/06	9.73	8.87	9,130	6,200	108	232	254	(<0.500)	--
	08/30/06	11.60	7.00	164,000	3,190	6,240	3,780	17,900	(<10.0)	0.4
	09/29/06	11.97	6.63	130,000	6,160	6,370 i	2,910	11,600 i	(<25.0)	--
	10/13/06	12.18	6.42	144,000	6,320	5,710	2,930	13,100	(1.03)	--
	11/03/06	12.21	6.39	112,000	8,290	5,670	2,760	12,100	(<0.500)	0.80
	12/26/06	11.74	6.86	94,000	6,900	5,100	3,100	13,000	(<50)	--
	01/11/07	11.83	6.77	73,000	6,600	5,500	3,000	12,000	(<50)	--
	01/30/07	12.12	6.48	54,000	6,800	4,500	2,200	8,800	(<50)	1.16/1.16
	03/01/07	10.71	7.89	52,000	6,300	3,700	3,400	12,000	(<50)	--
	04/26/07	10.84	7.76	72,000 k	7,200	4,500	3,000	10,900	(<50)	--
	06/01/07	11.40	7.20	70,000 k	7,600	4,900	3,200	12,100	(<50)	0.60/1.09
	06/21/07	11.92	6.68	59,000 k	7,300	3,700	3,200	12,100	(<50)	--
	07/03/07	11.98	6.62	70,000 k	8,800	4,700	3,500	13,500	(<50)	--
	08/16/07	12.53	6.07	67,000 k	9,000	5,500	3,900	14,200	(<50)	0.2/0.1
	12/06/07	12.97	5.63	180,000	9,500	5,000	4,100	16,000	(<17)	--
	02/25/08	9.84	8.76	47,000	3,500	1,200	1,500	4,400	<350	2.39
05/26/08	11.88	6.72	82,000	8,100	3,000	3,100	12,000	<500	1.65/1.05	
06/27/08				VW/AS-1 drilled out and replaced with AS-1						
<b>VW/AS-2</b>	03/09/06	6.95	--	--	--	--	--	--	--	--
<b>VW/AS-3</b> <i>18.17</i>	03/25/96	8.50	9.67	--	--	--	--	--	--	--
	06/21/96	10.42	7.75	--	--	--	--	--	--	--
	09/26/96	12.49	5.68	--	--	--	--	--	--	--
	12/19/96	12.28	5.89	--	--	--	--	--	--	--
	03/25/97	9.61	8.56	--	--	--	--	--	--	--
	06/26/97	11.80	6.37	--	--	--	--	--	--	--
	09/26/97	12.89	5.28	--	--	--	--	--	--	--
	12/05/97	11.38	6.79	--	--	--	--	--	--	1.8
	02/19/98	6.24	11.93	--	--	--	--	--	--	1.3
	06/08/98	6.25	11.92	--	--	--	--	--	--	1.2
	08/25/98	11.43	6.74	--	--	--	--	--	--	1.3
	12/28/98	11.63	6.54	--	--	--	--	--	--	1.7
	03/26/99	8.92	9.25	--	--	--	--	--	--	1.5
	06/30/99	10.71	7.46	--	--	--	--	--	--	2.5
	09/30/99	11.78	6.39	--	--	--	--	--	--	1.5
	12/27/99	12.57	5.60	488	47.9	2.60	16.9	8.50	35.4	1.5/2.1
	03/07/00	4.82	13.35	--	--	--	--	--	--	--
	04/17/00	8.69	9.48	--	--	--	--	--	--	2.0/2.4
	04/18/00	--	--	3,110	871	<5.00	141	56.8	78.2	--
	09/21/00	11.65	6.52	--	--	--	--	--	--	2.5
	10/17/00	12.13	6.04	7,730	2,700	<50.0	542	344	<250(42.1)	1.6/1.0
01/09/01	12.51	5.66	--	--	--	--	--	--	2.2	
04/27/01	10.20	7.97	14,000	3,900	62	690	560	(46)	2.8/1.6	
07/03/01	11.55	6.62	--	--	--	--	--	--	2.6	
12/06/01	11.10	7.07	5,000	1,200	19	380	320	(<50)	0.9/1.1	
01/23/02	8.93	9.24	--	--	--	--	--	--	1.1	
04/17/02	10.00	8.17	17,000	5,000	<25	1,100	390	(<250)	3.2/3.2	
07/18/02	11.49	6.68	--	--	--	--	--	--	0.4	
11/11/02	12.43	5.74	1,700	290	1.5	150	2.8	(<10)	1.0/1.1	
01/16/03	9.32	8.85	--	--	--	--	--	--	4.7	
03/13/03	9.88	8.29	--	--	--	--	--	--	2.7	
04/23/03	9.85	8.32	150	47	0.67	8.5	3.2	(<5.0)	2.1/0.7	



# Pangea

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

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
(VW/AS-3 cont'd)	05/13/03	9.81	8.36	440	35	<0.50	1.7	<1.0	(<5.0)	1.4/1.8
	06/13/03	10.77	7.40	580	71	<2.5	40	<5.0	(<25)	1.1/0.6
	07/14/03	11.12	7.05	1,100	120	4.9	63	9.3	(16)	2.0/2.2
	09/29/03	12.02	6.15	160	54	2.2	6.9	8.7	(1.1)	4.1/1.6
	10/29/03	12.25	5.92	350	16	<0.50	1.1	<1.0	(6.3)	3.2/1.6
	01/05/04	9.74	8.43	2,700	870	39	130	250	(5.5)	3.6/2.8
	04/01/04	9.06	9.11	1,300	240	4.1	36	45	(12.0)	1.1/1.0
	07/02/04	11.29	6.88	610	59	<1.0	3.6	<2.0	(10.0)	2.0/2.2
	11/03/04	12.02	6.15	200	<0.50	<0.50	<0.50	<1.0	(10.0)	2.1/2.3
	01/04/05	8.99	9.18	2,500	730	42	36	190	(<10)	1.72/1.36
	04/13/05	7.25	10.92	<50	1.6	<0.50	<0.50	<0.50	(0.61)	2.85/3.04
	07/13/05	10.30	7.87	--	--	--	--	--	--	--
	07/22/05	10.51	7.66	160	36	0.65	<0.50	2.5	(2.60)	1.4/1.3
	10/28/05	11.93	6.24	100	<0.50	<0.50	<0.50	<1.0	(1.70)	1.6/0.9
	01/17/06	8.25	9.92	1,400	510	29	16	47	(5.40)	1.9/0.8
	04/21/06	6.06	12.11	--	--	--	--	--	--	--
	05/01/06	6.83	11.34	1,350	74.4	<0.500	12.5	0.520	(3.30)	1.35/0.78
	08/30/06	11.00	7.17	940	77.7	2.67	2.94	5.57	(3.45)	0.80/0.98
	09/29/06	11.30	6.87	--	--	--	--	--	--	--
	11/03/06	12.29	5.88	346 j	83.6 j	5.17 j	2.34 j	13.5 j	(3.47 j)	1.10/0.80
	01/30/07	12.59	5.58	130	13	0.64	<0.50	7.2	(3.4)	0.76/0.64
	06/01/07	10.82	7.35	2,200 k	650	13	3.2 m	143	(7.8)	1.21/0.93
	08/16/07	11.95	6.22	1,000 k	200	4.0	1.1	47.7	(3.3)	0.8/0.2
	12/06/07	12.43	5.74	<50	<0.5	<0.5	<0.5	<0.5	(<0.5)	--
	02/25/08	9.40	8.77	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.14
	05/26/08	11.20	6.97	1,800	260	6.0	4.3	35	<17	0.86/4.39
	6/26/2008									Well Destroyed

**Notes:**

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

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

c = Top of casing change due to maintenance.

d = Sample contains discrete peak in addition to gasoline.

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

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

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

h = Secondary ion abundances were outside method requirements. Identification based on analytical judgement.

i = Analyte was detected in the associated Method Blank.

j = pH>2

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

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

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

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

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

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

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

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

-- = Not applicable

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

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

MSL = Mean sea level

ft. = Feet

<n = Below detection limit

(D) = Duplicate sample

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

# Pangea

Table 2. SVE (DPE) Performance Data - 1230 14th Street, Oakland, CA									Removal				Emission Reporting						Notes
Date	Wells	Oxidizer Hr Meter Reading (hours)	System Vapor Flow Rate (cfm)	Lab Applied Vacuum ("Hg)	Lab Sample ID	Influent TPHg Lab (ppmv)	Influent Benzene Lab Data (ppmv)	Influent OVA Reading (ppmv)	SVE TPHg Removal Rate (lbs/day)	SVE Benzene Removal Rate (lbs/day)	Cumulative SVE TPHg Removal (lbs)	Cumulative SVE Benzene Removal (lbs)	Effluent TPHg Lab (ppmv)	Effluent Benzene Lab Data (ppmv)	TPHg Abatement Efficiency (%)	Benzene Abatement Efficiency (%)	Benzene Emission Rate (lbs/day)	Cumulative Vapor Flow (cf)	
04/27/11	DP-1,2,4,5	10730.2	107	9	---	32	2.0	34	1.1	0.06	0.0	0	---	---	---	---	---	0	Startup Test
05/05/11	DP-1,2,4,5	10895.3	107	7	INF-V	<b>28</b>	<b>1.5</b>	23	1.0	0.05	6.6	0.32	<b>22</b>	<b>1.0</b>	<b>21.4</b>	<b>33.3</b>	<b>0.031</b>	1,059,942	On
05/16/11	DP-1,2,4,5	11164.0	107	4	---	20	1.0	---	0.7	0.03	14.3	0.67	---	---	---	---	---	2,784,996	On
05/19/11	DP-1,2,4,5	11239.0	107	4	---	20	1.0	12	0.7	0.03	16.4	0.77	---	---	---	---	---	3,266,496	On. Shutdown due to high EFF-V conc.
07/13/11	DP-1,2,4,5	11241.4	107	7	---	20	1.0	12	0.7	0.03	16.5	0.77	---	---	---	---	---	3,281,904	Off. Restart, check cat cell, send for repair.

**Notes:**

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

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

System data estimated when specific data not available.

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

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

lbs = Pounds

"Hg = Inches of mercury vacuum

SVE = Soil Vapor Extraction

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

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

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

Rate = lab concentration (ppmv) x system flowrate (scfm) x (1lb-mole/386 ft<sup>3</sup>) x molecular weight (86 lb/lb-mole for TPH-Gas hexane) x 1440 min/day x 1/1,000,000.

# Pangea

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

Well ID	Date	Totalizer Reading <sup>1</sup> (gallons)	Interval Flow Volume (gallons)	Interval Duration (days)	Average Flow Rate (gpm)	TPHg Concentration (ug/L)	Benzene Concentration (ug/L)	MTBE Concentration (ug/L)	TPHg Removed (Lbs)	Benzene Removed (Lbs)	MTBE Removed (Lbs)	Comments
<b>System Influent</b>	04/27/11	0	0	0	--	<b>960</b>	<b>120</b>	<b>ND (&lt;5.0)</b>	0.000	0.000	0.000	Startup water sampling of influent (3/7/11)
	05/05/11	60,732	60,732	8	5.27	---	---	---	0.485	0.061	0.000	On.
	05/16/11	98,599	37,867	11	2.39	---	---	---	0.302	0.038	0.000	On.
	05/19/11	99,596	997	3	0.23	---	---	---	0.008	0.001	0.000	On. Shutdown due to high EFF-V conc.
	07/13/11	99,596	0	55	0.00	---	---	---	0.000	0.000	0.000	Off. Restart, check cat cell. Send for repair.
									<b>0.795</b>	<b>0.099</b>	<b>0.000</b>	<b>Total Cumulative Removal (Lbs)</b>
<b>System Effluent</b>	04/27/11	---	---	---	---	<b>ND (&lt;50)</b>	<b>ND (&lt;0.5)</b>	<b>ND (&lt;5.0)</b>	---	---	---	Startup water sampling of effluent (3/7/11)

<i>Discharge Limits (ug/L):</i>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>
	<i>Benzene</i>	<i>Toluene</i>	<i>Ethylbenzene</i>	<i>Total Xylenes</i>

**ABBREVIATIONS AND NOTES:**

1 = Initial totalizer reading was 2,090. Therefore, shown reading above 0 is actual reading plus minus 2,090. The 05/05/11 reading of 62,822 less 2,090 equals 60,732 gallons discharged.

gpm = Gallons per minute

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

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

Benzene analyzed by EPA Method 8021B

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

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

-- = not measured/not available

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

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

## **APPENDIX A**

### Groundwater Monitoring Program

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

1230 14th Street, Oakland, CA

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

Notes and Abbreviations:

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

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

2nd = Annually during second quarter, typically May

Mon = Groundwater Monitoring Well

Rem= Remediation Well

VW = Vapor Extraction Well

VMP= Vapor Monitoring Well

DP = Dual Phase Extraction

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

-- = Not applicable, gauged or sampled.

## **APPENDIX B**

Groundwater Monitoring Field Data Sheets

Well Gauging Data Sheet

Project Task #: 1150.001, <del>227</del> 227			Project Name: Saberi 1230 14th St.					
Address: 1230 14th Street Oakland, CA						Date: 5-23-11		
Name: Steve Hunter				Signature: <i>Steve Hunter</i>				
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"	1103	-	-	10.21	21.28	TOC	
MW-2	2"	1042	-	-	9.37	22.11	↓	
MW-3	2"	1037	-	-	9.63	18.60		
MW-4	2"	1033	-	-	9.49	19.82		
MW-5R	4"	1119	-	-	9.98	22.70		
MW-6	4"	1048	-	-	10.50	19.81		
MW-7	4"	1054	-	-	8.98	10.92		
VW/MW-2	2"	1110	-	-	9.83	21.77		
VW/MW-4	2"	1115	-	-	9.91	17.44		

Comments: AS-1 is inaccessible.

Wells opened 45 minutes prior to gauging.

## MONITORING FIELD DATA SHEET

Well ID: *MW-1*

Project.Task #: 1150.001, <i>227</i>		Project Name: Saberi 1230 14th Street						
Address: 1230 14th Street Oakland, CA								
Date: <i>5-23-11</i>				Weather: <i>Clear</i>				
Well Diameter: <i>2"</i>		Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47			
			2" = 0.16	4" = 0.65	radius <sup>2</sup> * 0.163			
Total Depth (TD): <i>21.28</i>				Depth to Product:				
Depth to Water (DTW): <i>10.21</i>				Product Thickness:				
Water Column Height: <i>11.07</i>				1 Casing Volume: <i>1.77</i>		gallons		
Reference Point: <i>TOC</i>				Casing Volumes: <i>6</i>		gallons		
Purging Device: Disposable Bailer								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<i>1503</i>					<i>1.68</i>		<i>φ</i>	
<i>1508</i>	<i>16.6</i>	<i>6.44</i>	<i>605</i>			<i>112</i>	<i>2</i>	
<i>1513</i>	<i>17.3</i>	<i>6.63</i>	<i>536</i>			<i>110</i>	<i>4</i>	
<i>1519</i>	<i>17.6</i>	<i>6.97</i>	<i>531</i>			<i>110</i>	<i>6</i>	

Comments:

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Sample ID: <i>MW-1</i>		Sample Time: <i>1530</i>	
Laboratory: McCampbell		Sample Date: <i>5-23-11</i>	
Containers/Preservative: 3 HCl Voas			
Analyzed for: TPHg and BTEX by EPA Method 8015Cm/8021; MTBE by EPA Method 8260B			
Sampler Name: <i>Steve Hunter</i>		Signature: <i>[Signature]</i>	



## MONITORING FIELD DATA SHEET

Well ID: MW-2

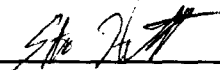
Project.Task #: 1150.001.227		Project Name: Saberi 1230 14th Street	
Address: 1230 14th Street Oakland, CA			
Date: 5-23-11		Weather: Clear	
Well Diameter: 2"		Volume/ft. 1" = 0.04   3" = 0.37   6" = 1.47 2" = 0.16   4" = 0.65   radius <sup>2</sup> * 0.163	
Total Depth (TD): 22.11		Depth to Product: —	
Depth to Water (DTW): 9.37		Product Thickness: —	
Water Column Height: 12.74		1 Casing Volume: 2 gallons	
Reference Point: TOC		3 Casing Volumes: 6 gallons	

Purging Device: Disposable Bailer

Sampling Device: Disposable Bailer

Time	Temp (°C)	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
1241					0.48		0	
1246	17.8	6.69	720			115	2	
1251	18.3	6.40	692			141	4	
1300	18.1	6.42	689			137	6	

Comments:

Sample ID: MW-2		Sample Time: 1310	
Laboratory: McCampbell		Sample Date: 5-23-11	
Containers/Preservative: 3 HCl Voas			
Analyzed for: TPHg and BTEX by EPA Method 8015Cm/8021; MTBE by EPA Method 8260B			
Sampler Name: Steve Hunter		Signature: 	

## MONITORING FIELD DATA SHEET

Well ID: *MW-3*

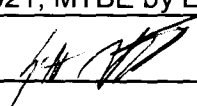
Project.Task #: 1150.001, 227				Project Name: Saberi 1230 14th Street				
Address: 1230 14th Street Oakland, CA								
Date: <i>5-23-11</i>				Weather: <i>Clear</i>				
Well Diameter: <i>2"</i>				Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47	
					2" = 0.16	4" = 0.65	radius <sup>2</sup> * 0.163	
Total Depth (TD): <i>18.60</i>				Depth to Product: <i>—</i>				
Depth to Water (DTW): <i>9.63</i>				Product Thickness: <i>—</i>				
Water Column Height: <i>8.97</i>				1 Casing Volume: <i>1.43</i>		gallons		
Reference Point: <i>TOC</i>				3 Casing Volumes: <i>4.5</i>		gallons		
Purging Device: Disposable Bailer								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<i>1211</i>					<i>1.52</i>		<i>0</i>	
<i>1216</i>	<i>17.3</i>	<i>6.32</i>	<i>706</i>			<i>132</i>	<i>1.5</i>	
<i>1221</i>	<i>17.6</i>	<i>6.33</i>	<i>720</i>			<i>132</i>	<i>3.0</i>	
<i>1226</i>	<i>17.7</i>	<i>6.35</i>	<i>722</i>			<i>131</i>	<i>4.5</i>	

Comments:

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Sample ID: <i>MW-3</i>		Sample Time: <i>8 1230</i>	
Laboratory: McCampbell		Sample Date: <i>5-23-11</i>	
Containers/Preservative: 3 HCl Voas			
Analyzed for: TPHg and BTEX by EPA Method 8015Cm/8021; MTBE by EPA Method 8260B			
Sampler Name: <i>Steve Hunter</i>		Signature: 	

## MONITORING FIELD DATA SHEET

Well ID: *MW-4*

Project.Task #: 1150.001 , <i>227</i>		Project Name: Saberi 1230 14th Street	
Address: 1230 14th Street Oakland, CA			
Date: <i>5-23-11</i>		Weather: <i>Clear</i>	
Well Diameter: <i>2"</i>	Volume/ft.	1" = 0.04	3" = 0.37
		2" = 0.16	4" = 0.65
		6" = 1.47	radius <sup>2</sup> * 0.163
Total Depth (TD): <i>19.82</i>	Depth to Product: <i>-</i>		
Depth to Water (DTW): <i>9.49</i>	Product Thickness: <i>-</i>		
Water Column Height: <i>10.33</i>	1 Casing Volume: <i>1.65</i>		gallons
Reference Point: <i>TOC</i>	3 Casing Volumes: <i>5</i>		gallons

Purging Device: Disposable Bailer

Sampling Device: Disposable Bailer

Time	Temp (°C)	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<i>1131</i>					<i>4.13</i>		<i>0</i>	
<i>1137</i>	<i>17.6</i>	<i>6.73</i>	<i>251</i>			<i>97</i>	<i>1.5</i>	
<i>1142</i>	<i>17.9</i>	<i>6.91</i>	<i>259</i>			<i>101</i>	<i>3.0</i>	
<i>1149</i>	<i>18.1</i>	<i>6.92</i>	<i>263</i>			<i>106</i>	<i>5.0</i>	

Comments:

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Sample ID: <i>MW-4</i>	Sample Time: <i>1200</i>
Laboratory: McCampbell	Sample Date: <i>3-23-11</i>
Containers/Preservative: 3 HCl Voas	
Analyzed for: TPHg and BTEX by EPA Method 8015Cm/8021; MTBE by EPA Method 8260B	
Sampler Name: <i>Steve Hunter</i>	Signature: <i>[Signature]</i>



**MONITORING FIELD DATA SHEET**

Well ID: *MW-5R*

Project.Task #: 1150.001, <i>227</i>		Project Name: Saberi 1230 14th Street						
Address: 1230 14th Street Oakland, CA								
Date: <i>5-23-11</i>		Weather: <i>Clear</i>						
Well Diameter: <i>4"</i>	Volume/ft.	1" = 0.04	3" = 0.37					
		2" = 0.16	4" = 0.65					
Total Depth (TD): <i>22.70</i>		Depth to Product: <i>-</i>						
Depth to Water (DTW): <i>9.98</i>		Product Thickness: <i>-</i>						
Water Column Height: <i>12.72</i>		1 Casing Volume: <i>8.27</i> gallons						
Reference Point: <i>TOC</i>		Casing Volumes: <i>25</i> gallons						
Purging Device: Disposable Bailer								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<i>1657</i>					<i>0.03</i>		<i>0</i>	
<i>1702</i>	<i>17.7</i>	<i>6.43</i>	<i>1197</i>			<i>-97</i>	<i>8</i>	
<i>1711</i>	<i>17.9</i>	<i>6.52</i>	<i>1093</i>			<i>-83</i>	<i>16</i>	
<i>1718</i>	<i>18.0</i>	<i>6.56</i>	<i>1062</i>			<i>-80</i>	<i>24</i>	

Comments:

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Sample ID: <i>MW-5R</i>	Sample Time: <i>1730</i>
Laboratory: McCampbell	Sample Date: <i>5-23-11</i>
Containers/Preservative: 3 HCl Voas	
Analyzed for: TPHg and BTEX by EPA Method 8015Cm/8021; MTBE by EPA Method 8260B	
Sampler Name: <i>Stae Hunter</i>	Signature: <i>Stae Hunter</i>

## MONITORING FIELD DATA SHEET

Well ID: *MW-6*

Project.Task #: 1150.001 <i>.227</i>		Project Name: Saberi 1230 14th Street	
Address: 1230 14th Street Oakland, CA			
Date: <i>5-23-11</i>		Weather: <i>Clear</i>	
Well Diameter: <i>4"</i>	Volume/ft.	1" = 0.04	3" = 0.37
		2" = 0.16	4" = 0.65
radius <sup>2</sup> * 0.163		6" = 1.47	
Total Depth (TD): <i>19.81</i>	Depth to Product:		
Depth to Water (DTW): <i>10.50</i>	Product Thickness:		
Water Column Height: <i>9.31</i>	1 Casing Volume: <i>6</i>	gallons	
Reference Point: <i>TOC</i>	Casing Volumes: <i>18</i>	gallons	

Purging Device: Disposable Bailer

Sampling Device: Disposable Bailer

Time	Temp (°C)	pH	Cond (µs)	NTU	DO (mg/L)	ORP (mV)	Vol (gal)	DTW
<i>1322</i>					<i>2.93</i>		<i>Ø</i>	
<i>1327</i>	<i>17.3</i>	<i>6.41</i>	<i>462</i>			<i>119</i>	<i>6</i>	
<i>1332</i>	<i>17.6</i>	<i>6.37</i>	<i>498</i>			<i>123</i>	<i>12</i>	
<i>1338</i>	<i>17.8</i>	<i>6.52</i>	<i>503</i>			<i>125</i>	<i>18</i>	

Comments:

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Sample ID: <i>MW-6</i>	Sample Time: <i>1345</i>
Laboratory: McCampbell	Sample Date: <i>5-23-11</i>
Containers/Preservative: 3 HCl Voas	
Analyzed for: TPHg and BTEX by EPA Method 8015Cm/8021; MTBE by EPA Method 8260B	
Sampler Name: <i>Steve Hunter</i>	Signature: <i>[Signature]</i>

## MONITORING FIELD DATA SHEET

Well ID: *MW-7*

Project.Task #: 1150.001, <i>227</i>		Project Name: Saberi 1230 14th Street						
Address: 1230 14th Street Oakland, CA								
Date: <i>5-23-11</i>		Weather: <i>Clear</i>						
Well Diameter: <i>4"</i>	Volume/ft.	1" = 0.04	3" = 0.37					
		2" = 0.16	4" = 0.65					
		6" = 1.47	radius <sup>2</sup> * 0.163					
Total Depth (TD): <i>19.90</i>	Depth to Product: <i>-</i>							
Depth to Water (DTW): <i>10.92</i>	Product Thickness: <i>-</i>							
Water Column Height: <i>8.98</i>	1 Casing Volume: <i>6</i>	gallons						
Reference Point: <i>TOC</i>	Casing Volumes: <i>18</i>	gallons						
Purging Device: Disposable Bailer								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<i>1403</i>					<i>0.91</i>		<i>0</i>	
<i>1410</i>	<i>16.6</i>	<i>6.58</i>	<i>522</i>			<i>111</i>	<i>6</i>	
<i>1422</i>	<i>17.5</i>	<i>6.63</i>	<i>531</i>			<i>107</i>	<i>12</i>	
<i>1431</i>	<i>17.8</i>	<i>6.72</i>	<i>534</i>			<i>103</i>	<i>18</i>	

Comments:

Sample ID: <i>MW-7</i>	Sample Time: <i>1445</i>
Laboratory: McCampbell	Sample Date: <i>5-23-11</i>
Containers/Preservative: 3 HCl Voas	
Analyzed for: TPHg and BTEX by EPA Method 8015Cm/8021; MTBE by EPA Method 8260B	
Sampler Name: <i>Steve Hunter</i>	Signature: <i>[Signature]</i>

## MONITORING FIELD DATA SHEET

Well ID: VW/MW-2

Project.Task #: 1150.001, <u>227</u>		Project Name: Saberi 1230 14th Street	
Address: 1230 14th Street Oakland, CA			
Date: <u>5-23-11</u>		Weather: <u>Clear</u>	
Well Diameter: <u>2"</u>	Volume/ft.	1" = 0.04	3" = 0.37
		2" = 0.16	4" = 0.65
Total Depth (TD): <u>21.77</u>		Depth to Product: <u>-</u>	
Depth to Water (DTW): <u>9.83</u>		Product Thickness: <u>-</u>	
Water Column Height: <u>11.94</u>		1 Casing Volume: <u>2</u> gallons	
Reference Point: <u>TOC</u>		Casing Volumes: <u>6</u> gallons	

Purging Device: Disposable Bailer

Sampling Device: Disposable Bailer

Time	Temp (°C)	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>1547</u>					<u>0.68</u>		<u>0</u>	
<u>1552</u>	<u>16.6</u>	<u>6.51</u>	<u>576</u>			<u>114</u>	<u>2</u>	
<u>1557</u>	<u>17.3</u>	<u>6.63</u>	<u>581</u>			<u>-111</u>	<u>4</u>	
<u>1601</u>	<u>17.5</u>	<u>6.65</u>	<u>580</u>			<u>-103</u>	<u>6</u>	

Comments:

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Sample ID: <u>VW/MW-2</u>	Sample Time: <u>1610</u>
Laboratory: <u>McC Campbell</u>	Sample Date: <u>5-23-11</u>
Containers/Preservative: <u>3 HCl Voas</u>	
Analyzed for: <u>TPHg and BTEX by EPA Method 8015Cm/8021; MTBE by EPA Method 8260B</u>	
Sampler Name: <u>Steve Hunter</u>	Signature: <u>[Signature]</u>

## MONITORING FIELD DATA SHEET

Well ID: *VW/MW-4*

Project.Task #: 1150.001, <i>227</i>		Project Name: Saberi 1230 14th Street	
Address: 1230 14th Street Oakland, CA			
Date: <i>5-23-11</i>		Weather: <i>Clear</i>	
Well Diameter: <i>2"</i>	Volume/ft.	1" = 0.04	3" = 0.37
		2" = 0.16	4" = 0.65
Total Depth (TD): <i>17.44</i>		Depth to Product: <i>—</i>	
Depth to Water (DTW): <i>9.91</i>		Product Thickness: <i>—</i>	
Water Column Height: <i>7.53</i>		1 Casing Volume: <i>1.20</i> gallons	
Reference Point: <i>TOC</i>		Casing Volumes: <i>4</i> gallons	

Purging Device: Disposable Bailer

Sampling Device: Disposable Bailer

Time	Temp (°C)	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<i>1623</i>					<i>0.50</i>		<i>Ø</i>	
<i>1630</i>	<i>17.2</i>	<i>6.26</i>	<i>481</i>			<i>-9</i>	<i>1.5</i>	
<i>1635</i>	<i>17.8</i>	<i>6.43</i>	<i>492</i>			<i>-11</i>	<i>3</i>	
<i>1639</i>	<i>17.7</i>	<i>6.48</i>	<i>501</i>			<i>-13</i>	<i>4</i>	

Comments:

Sample ID: <i>VW/MW-4</i>	Sample Time: <i>1650</i>
Laboratory: <i>McC Campbell</i>	Sample Date: <i>5-23-11</i>
Containers/Preservative: <i>3 HCl Voas</i>	
Analyzed for: <i>TPHg and BTEX by EPA Method 8015Cm/8021; MTBE by EPA Method 8260B</i>	
Sampler Name: <i>Steve Hunter</i>	Signature: <i>[Signature]</i>



## **APPENDIX C**

### Laboratory Analytical Report



**McC Campbell Analytical, Inc.**

"When Quality Counts"

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

Pangea Environmental Svcs., Inc.  1710 Franklin Street, Ste. 200  Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th St	Date Sampled: 05/23/11
		Date Received: 05/24/11
	Client Contact: Tina De La Fuente	Date Reported: 05/31/11
	Client P.O.:	Date Completed: 05/27/11

**WorkOrder: 1105712**

May 31, 2011

Dear Tina:

Enclosed within are:

- 1) The results of the **9** analyzed samples from your project: **#1150.001; 1230 14th St,**
- 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

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.

1105712

**McCAMPBELL ANALYTICAL, INC.**

1534 Willow Pass Road  
Pittsburg, CA 94565

Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)

Telephone: (925) 252-9262

Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

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

**Report To:** Tina de la Fuente **Bill To:** Pangea  
**Company:** Pangea Environmental Services, Inc.  
 1710 Franklin Street, Suite 200, Oakland, CA 94612  
**E-Mail:** [tdelafuente@pangeaenv.com](mailto:tdelafuente@pangeaenv.com)  
**Tele:** (510) 836-3702 **Fax:** (510) 836-3709  
**Project #:** 1150.001 **Project Name:** 1230 14<sup>th</sup> St  
**Project Location:** 1230 14<sup>th</sup> St., Oakland  
**Sampler Signature:** *Stu Hust*

**Analysis Request**

**Other**

**Comments**

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				TPHq (8015C) BTEX (8020) MTBE (8015Cm/8021B)	Five fuel oxygenates by EPA Method 8260	Filter Samples for Metals analysis: Yes/No	
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other				
MW-1		5-23-11	1530	3	Vials	X					X	X		X	X	X		
MW-2			1310	3		X					X	X		X	X	X		
MW-3			1230	3		X					X	X		X	X	X		
MW-4			1200	3		X					X	X		X	X	X		
MW-5R			1730	3		X					X	X		X	X	X		
MW-6			1345	3		X					X	X		X	X	X		
MW-7			1445	3		X					X	X		X	X	X		
VW/MW-2			1610	3		X					X	X		X	X	X		
VW/MW-4			1650	3		X					X	X		X	X	X		

**Relinquished By:** *Stu Hust* **Date:** 5/24/11 **Time:** 1500  
**Relinquished By:** *[Signature]* **Date:** 5/24/11 **Time:** 1545  
**Relinquished By:** *[Signature]* **Date:** **Time:**

**Received By:** *[Signature]*  
**Received By:** *[Signature]*  
**Received By:** *[Signature]*  
 ICE/° *11.2*  
 GOOD CONDITION  
 HEAD SPACE ABSENT  
 DECHLORINATED IN LAB  
 APPROPRIATE CONTAINERS  
 PRESERVED IN LAB  
 COMMENTS:  
 VOAS O&G METALS OTHER  
 PRESERVATION pH<2

# McC Campbell Analytical, Inc.



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

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1105712

ClientCode: PEO

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

**Report to:**

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

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

**Bill to:**

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

**Requested TAT: 5 days**

**Date Received: 05/24/2011**

**Date Printed: 05/24/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1105712-001	MW-1	Water	5/23/2011 15:30	<input type="checkbox"/>	A	A											
1105712-002	MW-2	Water	5/23/2011 15:10	<input type="checkbox"/>	A												
1105712-003	MW-3	Water	5/23/2011 12:30	<input type="checkbox"/>	A												
1105712-004	MW-4	Water	5/23/2011 12:00	<input type="checkbox"/>	A												
1105712-005	MW-5R	Water	5/23/2011 17:30	<input type="checkbox"/>	A												
1105712-006	MW-6	Water	5/23/2011 13:45	<input type="checkbox"/>	A												
1105712-007	MW-7	Water	5/23/2011 14:45	<input type="checkbox"/>	A												
1105712-008	VW/MW-2	Water	5/23/2011 16:10	<input type="checkbox"/>	A												
1105712-009	VW/MW-4	Water	5/23/2011 16:50	<input type="checkbox"/>	A												

**Test Legend:**

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

**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: **5/24/2011 4:56:49 PM**

Project Name: **#1150.001; 1230 14th St**

Checklist completed and reviewed by: **Ana Venegas**

WorkOrder N°: **1105712** Matrix Water

Carrier: Rob Pringle (MAI Courier)

**Chain of Custody (COC) Information**

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

**Sample Receipt Information**

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

**Sample Preservation and Hold Time (HT) Information**

- All samples received within holding time? Yes  No
- Container/Temp Blank temperature Cooler Temp: 11.2°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted
- Sample labels checked for correct preservation? Yes  No
- Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA
- Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

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

=====

Client contacted:

Date contacted:

Contacted by:

Comments:



# McC Campbell Analytical, Inc.

"When Quality Counts"

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

Pangea Environmental Svcs., Inc.  1710 Franklin Street, Ste. 200  Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th St	Date Sampled: 05/23/11
	Client Contact: Tina De La Fuente	Date Received: 05/24/11
	Client P.O.:	Date Extracted: 05/25/11-05/26/11
		Date Analyzed: 05/25/11-05/26/11

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1105712

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	MW-1	W	ND	ND	ND	ND	ND	ND	1	100	b1
002A	MW-2	W	ND	ND	ND	ND	ND	ND	1	99	b1
003A	MW-3	W	ND	ND	ND	ND	ND	ND	1	99	b1
004A	MW-4	W	ND	ND	ND	ND	ND	ND	1	98	b1
005A	MW-5R	W	7000	ND<150	1000	49	320	190	10	114	d1
006A	MW-6	W	ND	ND	ND	ND	ND	ND	1	102	
007A	MW-7	W	ND	ND	ND	ND	ND	ND	1	105	
008A	VW/MW-2	W	ND	ND	ND	ND	ND	ND	1	109	b1
009A	VW/MW-4	W	150	ND	33	2.2	3.4	2.1	1	123	d1,b1

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

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

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

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

b1) aqueous sample that contains greater than ~1 vol. % sediment  
d1) weakly modified or unmodified gasoline is significant



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

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 58567

WorkOrder 1105712

EPA Method SW8021B/8015Bm		Extraction SW5030B							Spiked Sample ID: 1105690-002A			
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) <sup>£</sup>	ND	60	103	106	3.51	86.5	101	15.1	70 - 130	20	70 - 130	20
MTBE	ND	10	118	122	3.44	118	114	3.30	70 - 130	20	70 - 130	20
Benzene	ND	10	103	104	1.55	102	100	1.89	70 - 130	20	70 - 130	20
Toluene	ND	10	102	103	0.647	102	100	1.36	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	101	102	0.104	99.7	99.2	0.486	70 - 130	20	70 - 130	20
Xylenes	1.1	30	101	101	0	102	101	0.746	70 - 130	20	70 - 130	20
%SS:	99	10	96	96	0	97	97	0	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 58567 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105712-001A	05/23/11 3:30 PM	05/25/11	05/25/11 8:11 PM	1105712-002A	05/23/11 3:10 PM	05/25/11	05/25/11 8:44 PM
1105712-003A	05/23/11 12:30 PM	05/25/11	05/25/11 9:16 PM	1105712-004A	05/23/11 12:00 PM	05/25/11	05/25/11 9:49 PM
1105712-005A	05/23/11 5:30 PM	05/26/11	05/26/11 10:35 PM	1105712-006A	05/23/11 1:45 PM	05/25/11	05/25/11 11:24 PM
1105712-007A	05/23/11 2:45 PM	05/25/11	05/25/11 11:56 PM	1105712-008A	05/23/11 4:10 PM	05/26/11	05/26/11 5:53 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.



**McC Campbell Analytical, Inc.**

"When Quality Counts"

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

Pangea Environmental Svcs., Inc.  1710 Franklin Street, Ste. 200  Oakland, CA 94612	Client Project ID: #1150.001: Saberi	Date Sampled: 03/07/11
		Date Received: 03/07/11
	Client Contact: Tina De La Fuente	Date Reported: 03/08/11
	Client P.O.:	Date Completed: 03/08/11

**WorkOrder: 1103221**

March 08, 2011

Dear Tina:

Enclosed within are:

- 1) The results of the **1** analyzed sample from your project: **#1150.001: Saberi**,
- 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

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.



1103221

**RUSH**

**McCAMPBELL ANALYTICAL, INC.**

1534 Willow Pass Rd.  
Pittsburg, CA 94565

Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)

Telephone: (925) 252-9262

Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**

**TURN AROUND TIME**

RUSH  24 HR  48 HR  72 HR  5 DAY

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

Report To: Tina Delafuente Bill To: Pangea  
Company: Pangea Environmental Services, Inc.  
1230 14<sup>th</sup> Street, Oakland, CA  
E-Mail: [tdelafuente@pangeaenv.com](mailto:tdelafuente@pangeaenv.com)  
Tele: (510) 836-3702 Fax: (510) 836-3709  
Project #: 1150-001 Project Name: Saberi  
Project Location: 1230 14<sup>th</sup> St. Oakland, CA  
Sampler Signature: *[Signature]*

**Analysis Request** Other Comments

TPH <sub>g</sub> /BTEX/MTBE (8015C m/8021)	TPH <sub>d</sub> (8015C) w/ Silica gel clean up	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.	Filter Samples for Metals analysis: Yes / No

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED							
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other				
EFF-W	EFF	3-7-11	1345	3	Keels	X												

Relinquished By: *[Signature]* Date: 3-7-11 Time: 15:26 Received By: ENVIRO-TECH SERVICES AA  
Relinquished By: ENVIRO-TECH SR Date: 3/7 Time: 1640 Received By: *[Signature]*  
Relinquished By: *[Signature]* Date: 3/7 Time: 1600 Received By: *[Signature]*

ICE# 5.2  
GOOD CONDITION \_\_\_\_\_  
HEAD SPACE ABSENT \_\_\_\_\_  
DECHLORINATED IN LAB \_\_\_\_\_  
APPROPRIATE CONTAINERS \_\_\_\_\_  
PRESERVED IN LAB \_\_\_\_\_  
VOAS O&G METALS OTHER  
PRESERVATION pH<2

# McC Campbell Analytical, Inc.



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

# CHAIN-OF-CUSTODY RECORD

**WorkOrder: 1103221**

**ClientCode: PEO**

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

<b>Report to:</b>		<b>Bill to:</b>	<b>Requested TAT: 1 day</b>
Tina De La Fuente	Email: tdelafuente@pangeaenv.com	Bob Clark-Riddell	
Pangea Environmental Svcs., Inc.	cc:	Pangea Environmental Svcs., Inc.	<b>Date Received: 03/07/2011</b>
1710 Franklin Street, Ste. 200	PO:	1710 Franklin Street, Ste. 200	<b>Date Printed: 03/07/2011</b>
Oakland, CA 94612	ProjectNo: #1150.001: Saberi	Oakland, CA 94612	
(510) 836-3700    FAX (510) 836-3709			

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1103221-001	EFF-W	Water	3/7/2011 13:45	<input type="checkbox"/>	A	A											

**Test Legend:**

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

**Prepared by: Ana Venegas**

**Comments:**    24hr rush

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: **3/7/2011 5:28:51 PM**

Project Name: **#1150.001: Saberi**

Checklist completed and reviewed by: **Ana Venegas**

WorkOrder N°: **1103221** Matrix Water

Carrier: Derik Cartan (MAI Courier)

**Chain of Custody (COC) Information**

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

**Sample Receipt Information**

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

**Sample Preservation and Hold Time (HT) Information**

- All samples received within holding time? Yes  No
  - Container/Temp Blank temperature Cooler Temp: 5.2°C NA
  - Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted
  - Sample labels checked for correct preservation? Yes  No
  - Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA
  - Samples Received on Ice? Yes  No
- (Ice Type: WET ICE )

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

=====

Client contacted:

Date contacted:

Contacted by:

Comments:



**McC Campbell Analytical, Inc.**

"When Quality Counts"

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

Pangea Environmental Svcs., Inc.  1710 Franklin Street, Ste. 200  Oakland, CA 94612	Client Project ID: #1150.001: Saberi	Date Sampled: 03/07/11
		Date Received: 03/07/11
	Client Contact: Tina De La Fuente	Date Extracted: 03/07/11
	Client P.O.:	Date Analyzed: 03/07/11

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1103221

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	102	

Reporting Limit for DF =1;	W	50	5.0	0.5	0.5	0.5	0.5	0.5	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	0.005	mg/Kg

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

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

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



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

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 56754

WorkOrder 1103221

Analyte	EPA Method SW8021B/8015Bm		Extraction SW5030B						Spiked Sample ID: 1103221-001A			
	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) <sup>f</sup>	ND	60	85.8	97.7	13.0	93.3	95.5	2.28	70 - 130	20	70 - 130	20
MTBE	ND	10	104	110	5.65	109	106	2.63	70 - 130	20	70 - 130	20
Benzene	ND	10	102	111	8.43	103	98.1	4.79	70 - 130	20	70 - 130	20
Toluene	ND	10	99.2	111	11.6	104	96.3	7.41	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	99	111	11.9	103	96.9	6.53	70 - 130	20	70 - 130	20
Xylenes	ND	30	101	114	11.7	106	101	5.32	70 - 130	20	70 - 130	20
%SS:	102	10	108	100	7.74	96	95	1.24	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 56754 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1103221-001A	03/07/11 1:45 PM	03/07/11	03/07/11 8:25 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 SW8021B/8015Bm**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 58585

WorkOrder 1105712

Analyte	EPA Method SW8021B/8015Bm		Extraction SW5030B						Spiked Sample ID: 1105714-001A			
	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) <sup>£</sup>	ND	60	82.9	85.1	2.69	88.9	87.5	1.63	70 - 130	20	70 - 130	20
MTBE	ND	10	112	91.8	19.7	106	111	4.15	70 - 130	20	70 - 130	20
Benzene	ND	10	103	101	1.81	101	98.2	3.28	70 - 130	20	70 - 130	20
Toluene	ND	10	102	99.6	2.34	98.2	97.6	0.581	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	99.8	97.7	2.11	98.9	96.3	2.62	70 - 130	20	70 - 130	20
Xylenes	ND	30	102	99.4	2.59	101	98.9	1.96	70 - 130	20	70 - 130	20
%SS:	102	10	101	104	2.95	100	98	2.46	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 58585 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105712-009A	05/23/11 4:50 PM	05/26/11	05/26/11 6:23 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.



**McC Campbell Analytical, Inc.**

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

Pangea Environmental Svcs., Inc.  1710 Franklin Street, Ste. 200  Oakland, CA 94612	Client Project ID: #1150.001; Saberi	Date Sampled: 03/07/11
		Date Received: 03/07/11
	Client Contact: Tina De La Fuente	Date Reported: 03/10/11
	Client P.O.:	Date Completed: 03/10/11

**WorkOrder: 1103220**

March 11, 2011

Dear Tina:

Enclosed within are:

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

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.

1103220

**McCAMPBELL ANALYTICAL, INC.**  
 1534 Willow Pass Rd.  
 Pittsburg, CA 94565  
 Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
 Telephone: (925) 252-9262 Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**  
**TURN AROUND TIME**  RUSH  24 HR  48 HR  72 HR  5 DAY  
 EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Tina Delafuente Bill To: Pangea  
 Company: Pangea Environmental Services, Inc.  
 1230 14<sup>th</sup> Street, Oakland, CA  
 E-Mail: [tdelafuente@pangeaenv.com](mailto:tdelafuente@pangeaenv.com)  
 Tele: (510) 836-3702 Fax: (510) 836-3709  
 Project #: 1150.001 Project Name: Saberi  
 Project Location: 1230 14<sup>th</sup> St., Oakland, CA  
 Sampler Signature: *Sta Hood*

Analysis Request										Other	Comments						
TPH <sub>g</sub> /BTEX/MTBE (8015Cm/8021)	TPH <sub>d</sub> (8015C) w/ Silica gel clean up	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.	Filter Samples for Metals analysis: Yes / No

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED						
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other			
X INF-W	INF	3-7-11	1400	3	Vials	X					X	X					

Relinquished By: *Sta Hood* Date: 3-7-11 Time: 15:26  
 Received By: *ENVIRO-TECH SERVICES AA*  
 Relinquished By: *Enviro-Tech SE* Date: 3/7 Time: 1640  
 Received By: *[Signature]*  
 Relinquished By: *Denk [Signature]* Date: 3/7 Time: 1600  
 Received By: *[Signature]*

ICE# 5.2 COMMENTS:  
 GOOD CONDITION \_\_\_\_\_  
 HEAD SPACE ABSENT \_\_\_\_\_  
 DECHLORINATED IN LAB \_\_\_\_\_  
 APPROPRIATE CONTAINERS \_\_\_\_\_  
 PRESERVED IN LAB \_\_\_\_\_  
 VOAS O&G METALS OTHER  
 PRESERVATION pH<2



**McC Campbell Analytical, Inc.**



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

**CHAIN-OF-CUSTODY RECORD**

**WorkOrder: 1103220**

**ClientCode: PEO**

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

<b>Report to:</b>		<b>Bill to:</b>	<b>Requested TAT: 5 days</b>
Tina De La Fuente	Email: tdelafuente@pangeaenv.com	Bob Clark-Riddell	
Pangea Environmental Svcs., Inc.	cc:	Pangea Environmental Svcs., Inc.	<b>Date Received: 03/07/2011</b>
1710 Franklin Street, Ste. 200	PO:	1710 Franklin Street, Ste. 200	<b>Date Printed: 03/07/2011</b>
Oakland, CA 94612	ProjectNo: #1150.001; Saberi	Oakland, CA 94612	
(510) 836-3700    FAX (510) 836-3709			

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1103220-001	INF-W	Water	3/7/2011 14:00	<input type="checkbox"/>	A	A											

**Test Legend:**

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

**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: **3/7/2011 5:20:03 PM**

Project Name: **#1150.001; Saberi**

Checklist completed and reviewed by: **Ana Venegas**

WorkOrder N°: **1103220** Matrix Water

Carrier: Derik Cartan (MAI Courier)

**Chain of Custody (COC) Information**

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

**Sample Receipt Information**

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

**Sample Preservation and Hold Time (HT) Information**

- All samples received within holding time? Yes  No
- Container/Temp Blank temperature Cooler Temp: 5.2°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted
- Sample labels checked for correct preservation? Yes  No
- Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA
- Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

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

=====

Client contacted:

Date contacted:

Contacted by:

Comments:



# McC Campbell Analytical, Inc.

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

Pangea Environmental Svcs., Inc.  1710 Franklin Street, Ste. 200  Oakland, CA 94612	Client Project ID: #1150.001; Saberi	Date Sampled: 03/07/11
		Date Received: 03/07/11
	Client Contact: Tina De La Fuente	Date Extracted: 03/09/11
	Client P.O.:	Date Analyzed: 03/09/11

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1103220

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-W	W	960	ND	120	13	12	61	1	106	d1

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

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

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

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell 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: Water

QC Matrix: Water

BatchID: 56745

WorkOrder 1103220

EPA Method SW8021B/8015Bm		Extraction SW5030B							Spiked Sample ID: 1103200-002E			
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) <sup>f</sup>	ND	60	94.7	93.9	0.801	96	92.3	3.89	70 - 130	20	70 - 130	20
MTBE	ND	10	118	116	1.76	116	124	6.30	70 - 130	20	70 - 130	20
Benzene	ND	10	105	104	1.31	105	106	0.243	70 - 130	20	70 - 130	20
Toluene	ND	10	94.1	92.6	1.61	93.6	93.4	0.253	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	94.3	93.8	0.498	95.1	94.2	0.894	70 - 130	20	70 - 130	20
Xylenes	ND	30	107	106	0.314	107	106	0.841	70 - 130	20	70 - 130	20
%SS:	99	10	102	100	1.93	99	100	0.524	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 56745 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1103220-001A	03/07/11 2:00 PM	03/09/11	03/09/11 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.



**McC Campbell Analytical, Inc.**

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Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.  1710 Franklin Street, Ste. 200  Oakland, CA 94612	Client Project ID: #1150.001; 1230 14st St	Date Sampled: 05/05/11
		Date Received: 05/05/11
	Client Contact: Morgan Gillies	Date Reported: 05/10/11
	Client P.O.:	Date Completed: 05/09/11

**WorkOrder: 1105139**

May 10, 2011

Dear Morgan:

Enclosed within are:

- 1) The results of the **2** analyzed samples from your project: **#1150.001; 1230 14st St,**
- 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

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.

1105139

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road  
Pittsburg, CA 94565

Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)

Telephone: (925) 252-9262

Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH  24 HR  48 HR  72 HR  5 DAY

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

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

Analysis Request										Other	Comments						
BTX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015) w/ 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)	Five fuel oxygenates by EPA Method 8260	Filter Samples for Metals analysis: Yes / No
EFF-V	EFF	5-5-11	0800	1	Teal	X	X	X	X								
INF-V	INF	5-5-11	0815	1	Teal	X	X	X	X								

Relinquished By: *[Signature]* Date: 5-5-11 Time: 1530 Received By: *[Signature]*  
 Relinquished By: *[Signature]* Date: 5/5/11 Time: 1700 Received By: *[Signature]*  
 Relinquished By: *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

ICE/rp \_\_\_\_\_ COMMENTS: \_\_\_\_\_  
 GOOD CONDITION \_\_\_\_\_  
 HEAD SPACE ABSENT \_\_\_\_\_  
 DECHLORINATED IN LAB \_\_\_\_\_  
 APPROPRIATE CONTAINERS \_\_\_\_\_  
 PRESERVED IN LAB \_\_\_\_\_  
 VOAS O&G METALS OTHER  
 PRESERVATION pH<2

# McC Campbell Analytical, Inc.



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

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1105139

ClientCode: PEO

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

Report to:		Bill to:	Requested TAT: <b>5 days</b>
Morgan Gillies	Email: mgillies@pangeaenv.com	Bob Clark-Riddell	
Pangea Environmental Svcs., Inc.	cc:	Pangea Environmental Svcs., Inc.	Date Received: <b>05/05/2011</b>
1710 Franklin Street, Ste. 200	PO:	1710 Franklin Street, Ste. 200	Date Printed: <b>05/05/2011</b>
Oakland, CA 94612	ProjectNo: #1150.001; 1230 14st St	Oakland, CA 94612	
(510) 836-3700    FAX (510) 836-3709			

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1105139-001	EFF-V	Air	5/5/2011 8:00	<input type="checkbox"/>	A	A											
1105139-002	INF-V	Air	5/5/2011 8:15	<input type="checkbox"/>	A												

**Test Legend:**

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

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

**Prepared by: Ana Venegas**

**Comments:**

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



**Sample Receipt Checklist**

Client Name: **Pangea Environmental Svcs., Inc.**

Date and Time Received: **5/5/2011 6:34:59 PM**

Project Name: **#1150.001; 1230 14st St**

Checklist completed and reviewed by: **Ana Venegas**

WorkOrder N°: **1105139** Matrix Air

Carrier: Rob Pringle (MAI Courier)

**Chain of Custody (COC) Information**

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

**Sample Receipt Information**

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

**Sample Preservation and Hold Time (HT) Information**

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

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

=====

Client contacted:

Date contacted:

Contacted by:

Comments:





# McC Campbell Analytical, Inc.

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

Pangea Environmental Svcs., Inc.  1710 Franklin Street, Ste. 200  Oakland, CA 94612	Client Project ID: #1150.001; 1230 14st St	Date Sampled: 05/05/11
	Client Contact: Morgan Gillies	Date Received: 05/05/11
	Client P.O.:	Date Extracted: 05/06/11
		Date Analyzed: 05/06/11

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1105139

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	EFF-V	A	80	ND	3.4	1.7	0.56	2.7	1	104	d1
002A	INF-V	A	100	ND	4.8	2.5	0.93	3.9	1	109	d1

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

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

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

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

d1) weakly modified or unmodified gasoline is significant



# McC Campbell Analytical, Inc.

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

Pangea Environmental Svcs., Inc.  1710 Franklin Street, Ste. 200  Oakland, CA 94612	Client Project ID: #1150.001; 1230 14st St	Date Sampled: 05/05/11
	Client Contact: Morgan Gillies	Date Received: 05/05/11
	Client P.O.:	Date Extracted: 05/06/11
		Date Analyzed: 05/06/11

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1105139

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	EFF-V	A	22	ND	1.0	0.44	0.13	0.62	1	104	d1
002A	INF-V	A	28	ND	1.5	0.66	0.21	0.88	1	109	d1

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

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

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

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

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell 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: 58153

WorkOrder 1105139

EPA Method SW8021B/8015Bm		Extraction SW5030B							Spiked Sample ID: 1105173-003A			
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) <sup>£</sup>	ND	60	88.8	85.4	3.96	112	111	0.993	70 - 130	20	70 - 130	20
MTBE	ND	10	117	117	0	95.9	103	7.15	70 - 130	20	70 - 130	20
Benzene	ND	10	108	105	3.03	98.2	100	2.03	70 - 130	20	70 - 130	20
Toluene	ND	10	101	103	1.11	99.8	102	2.06	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	100	99.6	0.733	104	105	1.87	70 - 130	20	70 - 130	20
Xylenes	ND	30	106	102	3.29	108	109	0.522	70 - 130	20	70 - 130	20
%SS:	96	10	99	101	2.49	98	94	4.80	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 58153 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105139-001A	05/05/11 8:00 AM	05/06/11	05/06/11 3:23 PM	1105139-002A	05/05/11 8:15 AM	05/06/11	05/06/11 9:59 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.