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*VIA ALAMEDA COUNTY FTP SITE*

August 8, 2008

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

Re: **Groundwater Monitoring Report – Second Quarter 2008**  
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 Report – Second Quarter 2008*. The report describes groundwater monitoring, sampling, and other site activities.

In June and July, Pangea began implementation of the approved *Draft Corrective Action Plan and Pilot Test Work Plan* dated January 18, 2008. On June 26 and 27, 2008, Pangea installed new remediation test wells, repaired damaged remediation wells, and destroyed one remediation well. On July 8 though 11, 2008, Pangea conducted onsite pilot testing using the newly installed remediation test wells to determine if soil vapor extraction or dual phase extraction would be more effective for contaminant removal and for capturing hydrocarbon vapors created by air sparging.

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.**

Bob Clark-Riddell, P.E.  
Principal Engineer

Attachment: *Groundwater Monitoring Report – Second Quarter 2008*

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  
Som Gupta, c/o Carmerlengo & Johnson, 500 Airport Boulevard, Suite 230, Burlingame, CA 94010  
Ana Friel, Conestoga-Rovers & Associates, 19449 Riverside Drive, Suite 230, Sonoma, CA 95476  
SWRCB Geotracker (electronic copy)

**PANGEA Environmental Services, Inc.**



## GROUNDWATER MONITORING REPORT – SECOND QUARTER 2008

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

August 8, 2008

*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) performed groundwater monitoring and sampling during the current quarter at the subject site. The purpose of the monitoring and sampling is to evaluate dissolved contaminant concentrations and groundwater flow direction. The site location is shown on Figure 1. Current groundwater analytical results and elevation data are shown on Figure 2. Current and historical data are summarized on Table 1.

## **SITE BACKGROUND**

The former Shell-branded service station is located at the northeast corner of 14<sup>th</sup> 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 unpaved. 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. Quarterly groundwater monitoring activities have been performed at the site since 1996.

As requested by the ACEH, Pangea submitted a *Draft Corrective Action Plan and Pilot Test Workplan (Draft CAP)* dated January 18, 2008. The Draft CAP proposed additional feasibility testing and implementation of either soil vapor extraction and air sparging (SVE/AS), or dual-phase extraction and air sparging (DPE/AS), based on test results. A detailed summary of previous environmental work conducted at the site between 1991 and 2006 is presented in the Draft CAP. The Alameda County Environmental Health (ACEH) approved

the Draft CAP/Pilot Test Workplan in a letter dated February 5, 2008, and provided testing approval on June 5, 2008 after soliciting public comments.

## **GROUNDWATER MONITORING AND SAMPLING**

On May 26, 2008, site monitoring wells were gauged for depth-to-water and inspected for separate-phase hydrocarbons (SPH) prior to collection of groundwater samples. Well caps were removed from all monitoring wells and technicians allowed at least 15 minutes for water level equilibration before measuring depth to water.

Prior to sample collection, approximately three casing volumes of water were purged using disposable bailers, an electric submersible pump, check valve with tubing, 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 as Appendix A.

## **MONITORING RESULTS**

Current and historical groundwater elevation data and analytical results are described below and summarized on Table 1. Groundwater 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 B.

### **Groundwater Flow Direction**

Based on depth-to-water data collected on May 26, 2008, 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.

### **Hydrocarbon Distribution in Groundwater**

No SPH were observed in any of the site wells. Hydrocarbons were not detected in wells MW-2 through MW-4. The maximum TPHg concentrations detected this quarter were in well VW/AS-1 (82,000 µg/L) while the

maximum benzene concentration was detected in well MW-5 (9,600 µg/L). Hydrocarbon concentrations in site wells are generally within historic ranges. Newly installed remediation wells have not yet been sampled. 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 the concentration of 20 µg/L detected last quarter in well MW-5. The MCL is the lowest possibly relevant Environmental Screening Level (ESL) established by the San Francisco Regional Water Quality Control Board. MTBE concentrations are shown in Table 1 and on Figure 2.

## **REMEDIATION SUMMARY**

### **Corrective Action**

Pangea submitted a *Draft Corrective Action Plan and Pilot Test Work Plan* (Draft CAP) on January 18, 2008 which was approved by the ACEH following a public comment period in a letter dated June 5, 2008. Pangea began implementing the approved pilot test work plan in June 2008.

### **Well Installation**

On June 26 and 27, 2008, Pangea installed five new remediation wells, replaced one remediation well and one monitoring well, and destroyed one remediation well. The locations of the remediation wells are shown on Figure 1. As requested in the June 5, 2008 ACEH letter, Pangea installed a soil vapor monitoring well between the existing site building and the northern property boundary. Well installation was conducted in accordance with the approved work plan. Remediation wells were installed to evaluate the effectiveness of proposed remedial approaches within the primary impact area. Pangea will submit a separate report detailing well installation activities.

### **Pilot Testing**

On July 8 through July 11, 2008, Pangea conducted onsite pilot testing using a 300-cfm liquid ring blower assembly with an oxidizer and conducted the pilot test as proposed in the Draft CAP. The objective of pilot testing was to determine which technique, soil vapor extraction (SVE) or dual-phase extraction (DPE), would be the more appropriate technique for removing hydrocarbons and capturing hydrocarbon vapors created by air sparging. Vacuum influence and water level measurements were collected during testing to confirm the appropriateness of the remediation well network. Pangea will submit a report describing pilot testing

procedures and results and will make recommendations on the most effective remediation methods.

## **OTHER SITE ACTIVITIES**

### **Upcoming Monitoring**

Pangea will continue groundwater monitoring and sampling at the site on a quarterly basis. All site monitoring wells will be gauged for depth to water and inspected for SPH. Groundwater samples will be collected from wells not containing SPH, and will be analyzed for TPHg, BTEX and MTBE by EPA Method 8015Cm/8021B. Previous samples from all monitoring wells at the site have also been analyzed for MTBE by EPA Method 8260B but due to relatively low MTBE detection in recent years, Pangea has discontinued analysis by EPA method 8260B to control cost. Pangea will summarize groundwater monitoring activities and results in a groundwater monitoring report following completion of each future groundwater monitoring event.

## **ATTACHMENTS**

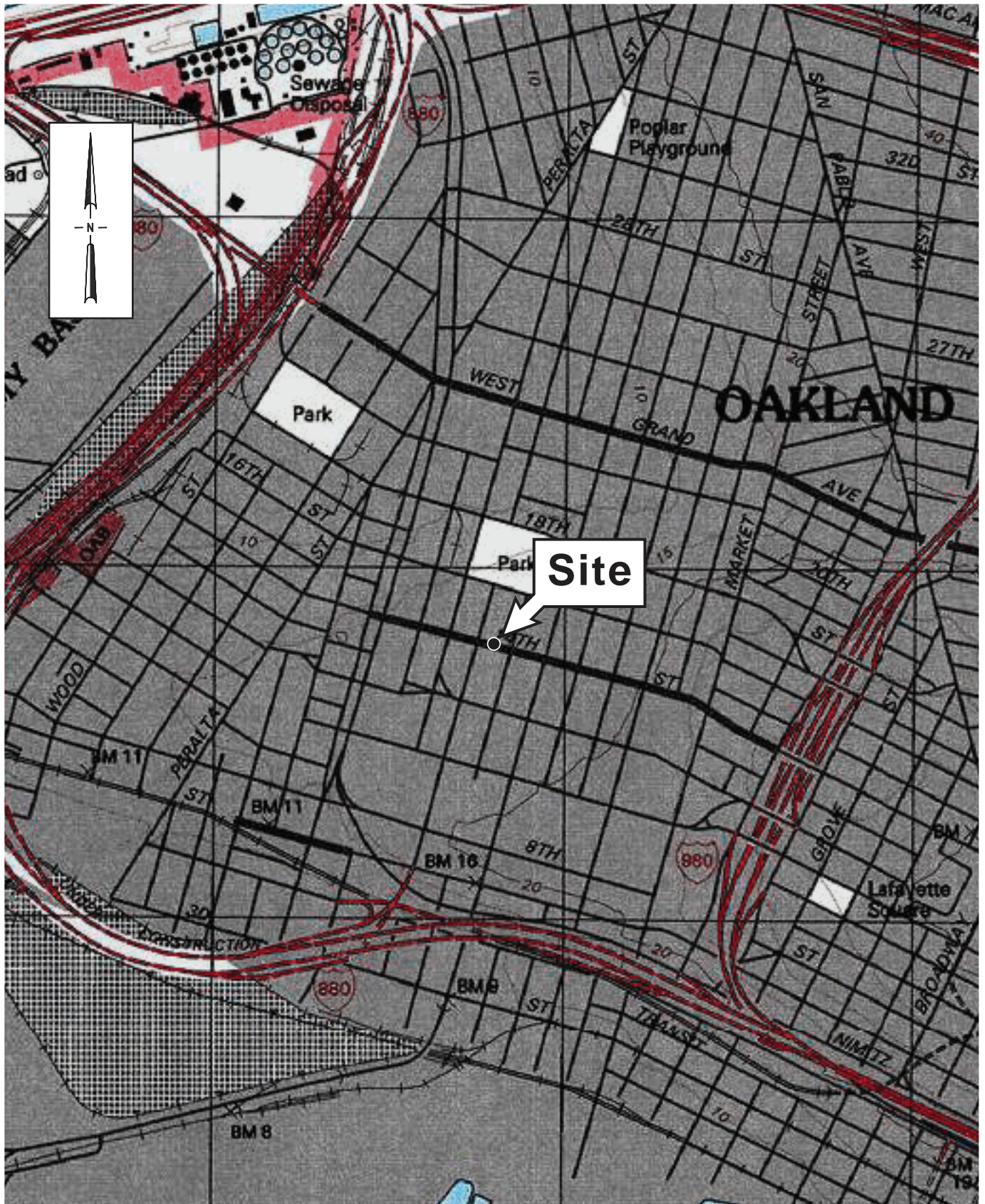
Figure 1 – Vicinity Map

Figure 2 – Groundwater Elevation and Hydrocarbon Concentration Map

Table 1 – Groundwater Elevation and Analytical Data

Appendix A – Groundwater Monitoring Field Data Sheets

Appendix B – Laboratory Analytical Results



Figure

**1**

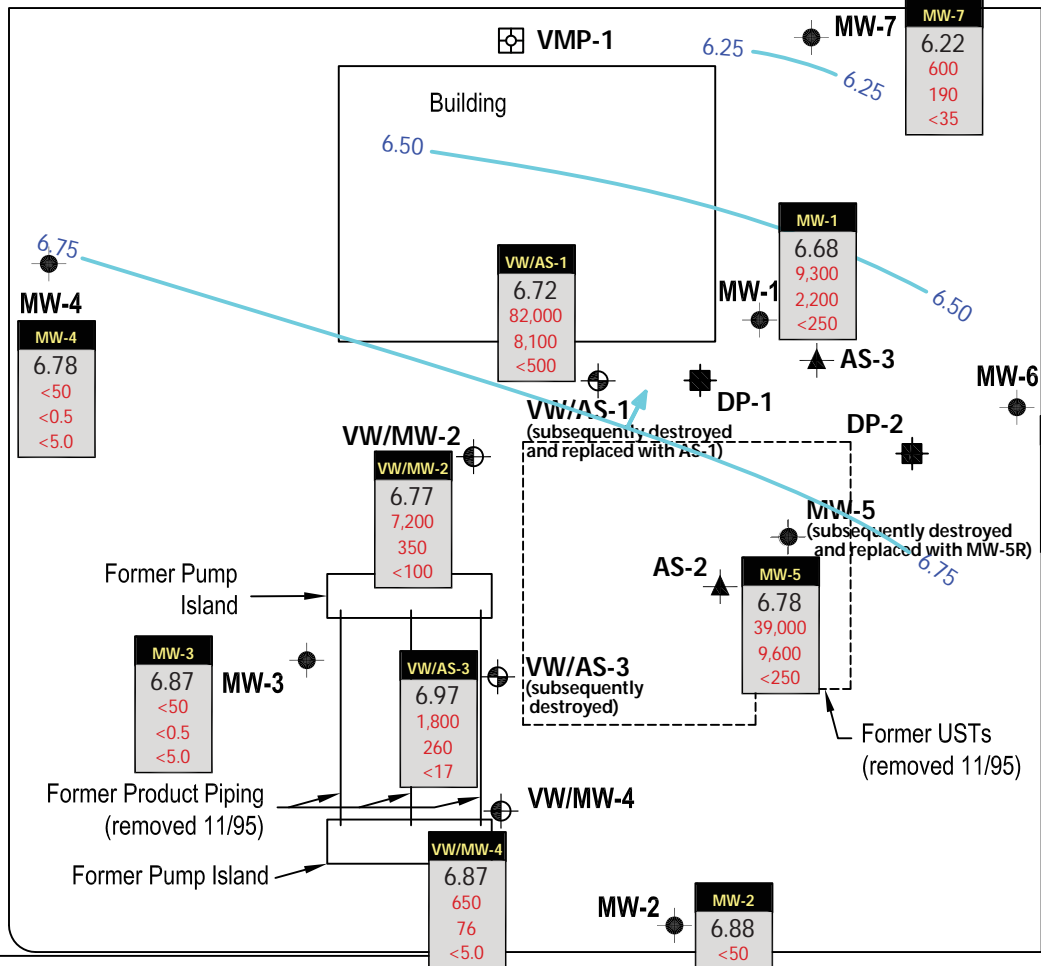
**Former Shell Service Station**

1230 14th Street  
Oakland, California



Vicinity Map

UNION STREET



**EXPLANATION**

- Groundwater monitoring well
- Combination air sparge/soil vapor extraction well
- Combination soil vapor extraction well/monitoring well
- Air sparge well
- Dual-phase-extraction well
- Vapor monitoring well

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

Groundwater elevation contour, in feet  
 Approximate groundwater flow direction

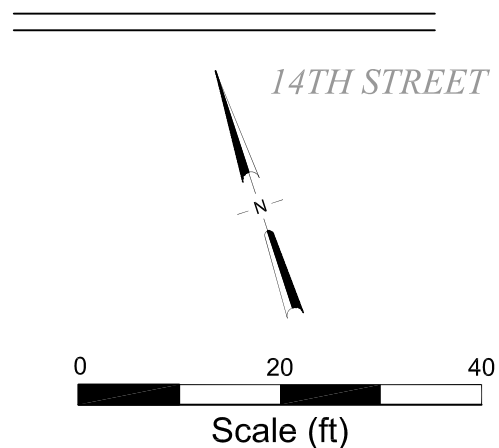


Figure  
**2**



# 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>MW-1</b>	03/25/96	9.53	9.05	37,000	7,400	1,500	720	3,300	<500	--
18.58	06/21/96	10.72	7.86	35,000	9,900	460	340	3,500	890	--
	09/26/96	12.88	5.70	19,000	8,200	510	780	790	<250	--
	12/19/96	12.59	5.99	27,000	120	1,200	1,400	2,800	<100	--
	12/19/96	12.59	5.99	32,000	12,000	1,300	1,600	3,100	830	--
	03/25/97	11.10	7.48	39,000	13,000	1,600	840	3,100	730	1.2
	06/26/97	12.42	6.16	--	--	--	--	--	--	'--
	09/26/97	13.31	5.27	--	--	--	--	--	--	0.8
	12/05/97	12.65	5.93	--	--	--	--	--	--	0.3
	02/19/98	6.46	12.12	16,000	5,500	450	500	800	<500	2.4
	06/08/98	6.62	11.96	--	--	--	--	--	--	1.2
	08/25/98	11.83	6.75	--	--	--	--	--	--	2.8
	12/28/98	12.01	6.57	--	--	--	--	--	--	2.6
	03/26/99	9.15	9.43	--	--	--	--	--	--	2.2
	06/30/99	11.22	7.36	--	--	--	--	--	--	3.8
	09/30/99	11.89	6.69	--	--	--	--	--	--	3.0
	12/27/99	13.55	5.03	34,800	8,660	953	956	2,770	<1,000	2.4/2.1
	01/21/00	13.42	5.16	40,600	14,700	1,850	1,210	3,670	<500	2.8
	03/07/00	8.11	10.47	--	--	--	--	--	--	0.4
	04/17/00	9.78	8.80	--	--	--	--	--	--	3.0/3.4
	04/18/00	--	--	18,300	8,060	543	528	872	<50.0	--
	09/21/00	13.11	5.47	--	--	--	--	--	--	5.2
	10/17/00	12.61	5.97	15,800	6,720	435	587	887	351(<66.7)	1.2/0.8
	01/09/01	12.94	5.64	--	--	--	--	--	--	0.3
	04/27/01	10.73	7.85	1,400	650	28	58	48	(<10)	1.8/2.1
	07/03/01	12.00	6.58	--	--	--	--	--	--	1.8
	12/06/01	10.53	8.05	4,500	1,500	85	160	210	(<50)	2.5/2.9
	01/23/02	9.33	9.25	--	--	--	--	--	--	0.1
	04/17/02	10.49	8.09	230	12	<0.50	4.6	2.5	(<5.0)	6.3/5.3
	07/18/02	11.98	6.60	--	--	--	--	--	--	1.2
	11/11/02	13.00	5.58	12,000	2,600	240	470	640	(-8.5)	0.2/0.2
	01/16/03	9.68	8.90	--	--	--	--	--	--	4.4
	03/13/03	10.45	8.13	820	340	2.7	<2.0	3.2	(<20)	2.8/0.9
	04/23/03	10.32	8.26	900	550	19	49	49	(<50)	0.9/0.1
	05/13/03	10.28	8.30	740	510	18	43	46	(<50)	0.1/0.2
	06/13/03	11.16	7.42	<5,000	1,500	82	180	250	(<500)	0.3/0.8
	07/14/03	11.66	6.92	5,300	3,400	160	340	420	(<20)	0.6/0.3
	09/29/03	12.44	6.14	10,000	5,700	400	670	1,000	(<50)	0.6/0.7
	10/29/03	12.63	5.95	19,000	6,600	560	820	1,300	(26)	0.6/0.4
	01/05/04	10.17	8.41	380	140	7.1	6.2	16	(<1.0)	5.0/0.8
	04/01/04	9.57	9.01	79	0.59	<0.50	<0.50	<1.0	(<0.50)	4.6/1.2
	07/02/04	11.81	6.77	4,100	2,100	33	110	81	(<10)	0.6/0.5
	11/03/04	12.53	6.05	8,000	3,800	150	480	460	(<25)	1.45/2.1
	01/04/05	9.39	9.19	120	23	1.6	2.0	3.5	(<0.50)	4.21/2.82
	04/13/05	7.63	10.95	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	2.44/2.77
	07/13/05	10.85	7.73	930 e	400	6.1	<5.0	10	(<5.0)	0.84/0.66
	10/28/05	12.44	6.14	8,300	5,500	190	590	470	(<25)	0.2/0.2
	01/17/06	8.61	9.97	<50	2.2	1.1	1.4	4.8	(<0.50)	5.8/5.3
	02/23/06	9.60	8.98	--	18.1	2.22	1.89	4.50	--	--
	03/09/06	7.65	10.93	--	1.80	<0.500	<0.500	1.82	--	--
	04/21/06	6.35	12.23	<50.0	1.54	1.03	4.20	5.82	(<0.500)	--
	05/01/06	7.38	11.20	268	41.3	4.62	3.83	26.1	(<0.500)	0.27/0.36
	06/23/06	10.09	8.49	3,990	362	13.1	12.4	71.5	(<0.500)	--
	07/11/06	10.09	8.49	6,190	3,740	52.0	67.8	982	(<0.500)	--
	08/30/06	11.55	7.03	29,200	7,380	596	443	1,680	(4.45)	0.39/0.52
	09/29/06	11.97	6.61	76,100	9,300	859 i	1,290	2,820 i	(<5.00)	--
	10/13/06	12.08	6.50	49,500	7,580	770	1,030	2,860	(2.75)	--
	11/03/06	12.47	6.11	42,600	8,450	592	869	1,970	(2.69)	2.60/1.15
	12/26/06	11.80	6.78	19,000	4,600	360	640	1,300	(<5.0)	--
	01/11/07	11.84	6.74	23,000	6,000	320	780	1,100	(<25)	--
	01/30/07	12.18	6.40	3,700	890	74	170	220	(<25)	1.18/0.76

# 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>	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
	<b>05/26/08</b>	<b>11.90</b>	<b>6.68</b>	<b>9,300</b>	<b>2,200</b>	<b>67</b>	<b>140</b>	<b>130</b>	<b>&lt;250</b>	<b>1.96/1.13</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	--
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	

# 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-2 Cont'd)</i>	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
	<b>05/26/08</b>	<b>11.02</b>	<b>6.88</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>1.86/1.32</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	
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	
<b>05/26/08</b>	<b>11.31</b>	<b>6.87</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>1.79/2.01</b>	

# 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>MW-4</b>	03/25/96	9.20	8.81	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
<i>18.01</i>	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	<0.50	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	<0.50	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	<0.50	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	<0.50	5.1/5.7
	05/13/03	9.55	8.46	<50	<0.50	<0.50	<0.50	<1.0	<0.50	2.0/2.5
	06/13/03	10.50	7.51	<50	<0.50	<0.50	<0.50	<1.0	<0.50	5.0/5.6
	07/14/03	10.86	7.15	<50	<0.50	<0.50	<0.50	<1.0	<0.50	3.9/4.2
	09/29/03	11.74	6.27	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.6/1.4
	10/29/03	11.95	6.06	58 b	<0.50	<0.50	<0.50	<1.0	<0.50	2.4/1.0
	01/05/04	10.35	7.66	<50	<0.50	<0.50	<0.50	<1.0	<0.50	7.4/7.5
	04/01/04	8.81	9.20	<50	<0.50	<0.50	<0.50	<1.0	<0.50	6.0/6.4
	07/02/04	11.10	6.91	<50	<0.50	<0.50	<0.50	<1.0	<0.50	0.8/0.6
	11/03/04	11.85	6.16	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.3/2.84
	01/04/05	9.06	8.95	<50	<0.50	<0.50	<0.50	<1.0	<0.50	7.12/6.37
	04/13/05	6.84	11.17	<50	<0.50	<0.50	<0.50	<0.50	<0.50	5.81/5.66
	07/13/05	10.20	7.81	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.87/3.75
	10/28/05	11.75	6.26	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.4/0.8
	01/17/06	8.00	10.01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.4/6.2
	03/09/06	6.55	11.46	--	--	--	--	--	--	--
	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
	<b>05/26/08</b>	<b>11.23</b>	<b>6.78</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>6.59/5.22</b>
<b>MW-5</b>	12/03/01	11.86	6.61	--	--	--	--	--	--	--
<i>18.47</i>	12/06/01	11.40	7.07	31,000	3,000	2,000	1,100	3,000	<0.50	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

# 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-5 (cont'd)	07/18/02	11.82	6.65	--	--	--	--	--	--	0.8
	11/11/02	12.86	5.61	100,000	7,100	12,000	3,000	17,000	(5.10)	1.2/1.4
	01/16/03	9.57	8.90	--	--	--	--	--	--	0.0
	03/13/03	10.30	8.17	33,000	2,800	2,200	980	4,600	(<100)	0.5/0.3
	04/07/03	10.29	8.18	--	--	--	--	--	--	--
	04/23/03	10.15	8.32	33,000	2,900	3,100	960	5,800	(<250)	0.1/0.1
	05/13/03	10.12	8.35	30,000	2,600	1,500	850	4,500	(<250)	0.4/0.3
	06/13/03	11.00	7.47	33,000	3,400	2,300	1,000	4,400	(<500)	0.3/0.3
	07/14/03	11.39	7.08	41,000	5,100	3,500	1,400	5,100	(<50)	0.5/0.5
	09/29/03	12.24	6.23	59,000	6,600	4,200	1,500	6,500	(<50)	0.6/0.5
	10/29/03	12.45	6.02	45,000	6,800	3,500	1,500	6,400	(21)	0.5/0.3
	01/05/04	9.97	8.50	26,000	4,900	1,700	1,100	3,300	(<50)	0.9/1.2
	04/01/04	9.43	9.04	29,000	5,300	2,700	880	2,900	(<50)	0.3/1.0
	07/02/04	11.62	6.85	19,000	5,300	740	1,100	1,400	(<50)	0.4/0.5
	11/03/04	12.26	6.21	31,000	7,500	2,300	1,400	4,400	(<50)	2.5/1.9
	01/04/05	9.13	9.34	18,000	3,500	1,200	730	2,300	(<25)	0.44/1.64
	04/13/05	7.60	10.87	7,000	100	460	180	880	(<1.0)	0.17/0.45
	07/13/05	10.63	7.84	9,400	2,400	840	440	1,100	(<13)	0.13/0.27
	10/28/05	12.14	6.33	28,000	16,000	2,900	1,400	3,100	(<50)	0.3/1.3
	01/17/06	8.52	9.95	6,700	1,200	720	400	1,500	(1.3)	0.6/2.6
	02/23/06	9.22	9.25	--	4,630	1,470	709	2,310	--	--
	03/09/06	7.15	11.32	--	474	90.3	63.3	169	--	--
	04/21/06	5.82	12.65	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	--
	05/01/06	7.23	11.24	779	6.77	41.1	20.0	130	(<0.500)	0.39/1.52
	06/23/06	10.06	8.41	22,600	2,830	557	469	1,210	(<0.500)	--
	07/11/06	10.06	8.41	31,100	3,880	2,080	857	3,700	(<0.500)	--
	08/30/06	11.32	7.15	28,200	4,840	1,320	705	2,430	(5.35)	0.47/3.64
	09/29/06	11.81	6.66	94,900	10,100	2,960	1,810	5,310 i	(7.20)	--
	10/13/06	12.01	6.46	48,200	7,710	1,360	1,250	3,460	(5.64)	--
	11/03/06	12.31	6.16	50,600	11,300	1,730	1,250	3,840	(<0.500)	0.60/4.10
	12/26/06	11.58	6.89	32,000	11,000	780	1,200	2,800	(<10)	--
	01/11/07	11.61	6.86	35,000	11,000	1,100	1,200	3,100	(<50)	--
	01/30/07	11.95	6.52	27,000	9,800	610	860	2,400	(<50)	0.87/0.62
03/01/07	10.95	7.52	23,000	9,400	640	1,200	3,100	(<50)	--	
04/26/07	10.69	7.78	48,000 k,l	14,000	1,300	1,600	3,600	(<100)	--	
06/01/07	11.25	7.22	54,000 k	15,000	2,800	2,200	6,100	(<100)	0.44/0.87	
06/21/07	11.96	6.51	32,000 k	12,000	1,200	1,400	2,780	(<100)	--	
07/03/07	11.81	6.66	41,000 k	15,000	1,800	1,900	4,050	(<100)	--	
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	
	<b>05/26/08</b>	<b>11.69</b>	<b>6.78</b>	<b>39,000</b>	<b>9,600</b>	<b>1,100</b>	<b>1,400</b>	<b>2,400</b>	<b>&lt;250</b>	<b>1.10/1.52</b>
MW-6 18.84	12/03/01	12.19	6.65	--	--	--	--	--	--	--
	12/06/01	11.70	7.14	76	5.7	3.8	1.4	7.0	(<5.0)	6.3/6.1
	01/23/02	9.57	9.27	--	--	--	--	--	--	8.7
	04/17/02	10.73	8.11	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	9.8/9.1
	07/18/02	12.27	6.57	--	--	--	--	--	--	1.7
	11/11/02	13.24	5.60	580	55	<0.50	<0.50	2.8	(<5.0)	0.3/0.6
	01/16/03	9.89	8.95	--	--	--	--	--	--	6.4
	03/13/03	10.66	8.18	--	--	--	--	--	--	5.5
	04/23/03	10.57	8.27	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	3.7/4.4
	05/13/03	10.56	8.28	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	3.5/3.0
	06/13/03	11.48	7.36	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	2.7/3.1
	07/14/03	11.83	7.01	230 b	3.4	<0.50	<0.50	<1.0	(<0.50)	1.8/1.3
	09/29/03	12.70	6.14	910 b	46	<2.5	<2.5	<5.0	(<2.5)	1.1/1.0
	10/29/03	12.91	5.93	830	38	0.53	<0.50	3.3	(0.60)	1.2/0.9
	01/05/04	10.35	8.49	93	0.92	<0.50	<0.50	<1.0	(<0.50)	6.2/4.3
	04/01/04	9.80	9.04	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	3.5/3.4
	07/02/04	12.09	6.75	370	3.0	<0.50	<0.50	<1.0	(<0.50)	0.6/1.0
11/03/04	12.84	6.00	540	22	0.73	<0.50	1.5	(0.82)	2.28/0.84	
01/04/05	9.55	9.29	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	6.71/5.16	

# 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-6 cont'd)</i>	04/13/05	7.89	10.95	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.99/2.87
	07/13/05	11.13	7.71	170	6.2	1.1	<0.50	<1.0	(0.71)	0.10/1.32
	10/28/05	12.74	6.10	490	22	<0.50	<0.50	<1.0	<0.50	0.6/0.3
	01/17/06	8.80	10.04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	5.3/4.9
	02/23/06	9.54	9.30	--	<0.500	<0.500	<0.500	<0.500	--	--
	03/09/06	7.25	11.59	--	<0.500	<0.500	<0.500	<0.500	--	--
	04/21/06	6.34	12.50	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	--
	05/01/06	7.32	11.52	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	0.72/0.63
	06/23/06	10.12	8.72	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	--
	07/11/06	10.12	8.72	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	--
	08/30/06	11.79	7.05	<50.0	3.32	<0.500	<0.500	<0.500	<0.500	0.80/0.86
	09/29/06	12.32	6.52	<50.0	1.59	<0.500	<0.500	<0.500	<0.500	--
	10/13/06	12.38	6.46	934	3.14	<0.500	<0.500	<0.500	<0.500	--
	11/03/06	12.77	6.07	112	10.6	<0.500	<0.500	<0.500	<0.500	3.80/1.10
	12/26/06	12.05	6.79	690	62	<0.50	<0.50	4.5	<0.50	--
	01/11/07	12.12	6.72	660	11	<0.50	<0.50	2.3	<0.50	--
	01/30/07	12.44	6.40	310	1.5	<0.50	<0.50	<1.0	<0.50	1.47/0.81
	03/01/07	10.97	7.87	360	3.6	<0.50	<0.50	0.87	<0.50	--
	04/26/07	11.18	7.66	210 k	0.72	<1.0	<1.0	<1.0	<1.0	--
	06/01/07	11.72	7.12	640 k	3.1	<1.0	<1.0	0.27 m	<1.0	0.69/0.50
	06/21/07	12.22	6.62	390 k	3.0	<1.0	<1.0	0.17 m	<1.0	--
	07/03/07	12.22	6.62	360 k	3.0	<1.0	0.36 m	1.2	<1.0	--
	08/16/07	12.74	6.10	400 k,1	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	
<b>05/26/08</b>	<b>12.20</b>	<b>6.64</b>	<b>6.64</b>	<b>&lt;50</b>	<b>1.1</b>	<b>0.88</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>6.77/6.59</b>
<b>MW-7</b>	12/03/01	12.66	6.18	--	--	--	--	--	--	--
<i>19.20</i>	12/06/01	12.20	6.64	1,800	390	<2.0	6.2	<2.0	<20	3.9/3.8
	01/23/02	10.00	8.84	--	--	--	--	--	--	9.4
	04/17/02	11.21	7.63	<50	<0.50	<0.50	<0.50	<0.50	<5.0	8.8/7.3
	07/18/02	12.69	6.15	--	--	--	--	--	--	0.8
	11/11/02	13.69	5.15	3,000	190	<0.50	<0.50	4.3	(5.2)	0.4/0.8
	01/16/03	10.36	8.48	--	--	--	--	--	--	7.9
	03/13/03	11.16	7.68	--	--	--	--	--	--	5.2
	04/23/03	11.02	7.82	250	48	<0.50	<0.50	<1.0	<5.0	3.2/1.3
	05/13/03	11.00	7.84	1,700	550	<2.5	<2.5	<5.0	<25	2.0/1.5
	06/13/03	11.90	6.94	1,500 b	470	<2.5	<2.5	<5.0	<25	1.8/1.6
	07/14/03	12.29	6.55	1300 b	1,200	<10	<10	<20	<10	0.4/0.2
	09/29/03	13.12	5.72	5,200	1,200	<10	<10	<20	<10	0.9/0.9
	10/29/03	13.34	5.50	4,800	1,100	<5.0	<5.0	<10	(8.9)	0.4/0.3
	01/05/04	10.85	7.99	53	6.7	<0.50	<0.50	<1.0	<0.50	1.4/2.3
	04/01/04	10.28	8.56	<50	<0.50	<0.50	<0.50	<1.0	<0.50	5.5/6.2
	07/02/04	12.48	6.36	8,100 d	3,400	<25	<25	<50	<25	0.8/0.8
	11/03/04	13.25	5.59	3,700	1,200	<5.0	<5.0	<10	<5.0	1.9/0.8
	01/04/05	10.02	8.82	<50	2.0	<0.50	<0.50	<1.0	<0.50	6.31/5.71
	04/13/05	8.46	10.38	<50	<0.50	<0.50	<0.50	<0.50	<0.50	5.87/5.89
	07/13/05	11.57	7.27	1,100	380	9.2	<2.5	37	<2.5	0.30/0.33
	10/28/05	13.15	5.69	5,100	2,900	<13	<13	<25	<13	0.6/0.9
	01/17/06	9.30	9.54	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.4/7.4
	02/23/06	10.03	8.81	--	<0.500	<0.500	<0.500	<0.500	--	--
	03/09/06	7.70	11.14	--	<0.500	<0.500	<0.500	<0.500	--	--
	04/21/06	6.66	12.18	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	--
	05/01/06	7.72	11.12	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	0.67/0.98
	06/23/06	10.55	8.29	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	--
	07/11/06	10.55	8.29	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	--
	08/30/06	12.35	6.49	1,520	150	13.3	5.78	53.0	(0.640)	0.52/0.79
	09/29/06	12.66	6.18	2,420	384	1.80	<0.500	5.44	(0.850)	--
	10/13/06	12.85	5.99	5,980	549	0.540	0.680	11.7	(0.930)	--
	11/03/06	13.73	5.11	3,190	501	<0.500	<0.500	5.38	(0.560)	2.2/1.4
	12/26/06	12.51	6.33	4,600	570	<0.50	44	2.1	<0.50	--
	01/11/07	12.55	6.29	3,900	490	<2.5	46	<5.0	<2.5	--
	01/30/07	12.89	5.95	2,500	380	<2.5	40	<5.0	<2.5	1.37/0.90

# 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>	03/01/07	11.45	7.39	2,600	350	<2.5	35	3.5	(<2.5)	--
	04/26/07	11.62	7.22	2,300 k	290	<5.0	31	1.3 m	(<5.0)	--
	06/01/07	12.23	6.61	4,400 k	350	<2.0	19	<2.0	(1.1 m)	0.04/0.71
	06/21/07	12.67	6.17	2,600 k	260	<2.0	12	<2.0	(1.4 m)	--
	07/03/07	12.76	6.08	1,700 k	170	<1.0	7.7	0.86 m	(<1.0)	--
	08/16/07	13.20	5.64	1,900 k	44	<1.0	<1.0	<1.0	(<1.0)	0.5/1.1
	12/06/07	13.73	5.11	510	21	3.1	5.8	14	(1.2)	--
	02/25/08	10.65	8.19	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.11
	<b>05/26/08</b>	<b>12.62</b>	<b>6.22</b>	<b>600</b>	<b>190</b>	<b>2.3</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;35</b>	<b>1.31/3.52</b>
	<b>VW/MW-2</b>	03/25/96	9.04	9.26	13,000	900	920	180	1,500	<250
<i>18.30</i>	06/21/96	10.48	7.82	27,000	4,100	1,100	1,400	3,200	700	--
	09/26/96	12.52	5.78	27,000	5,300	1,900	980	2,200	<500	--
	09/26/96	12.52	5.78	29,000	5,800	2,200	1,100	2,500	<250	--
	12/19/96	12.42	5.88	50,000	6,200	5,100	1,700	5,600	590	--
	03/25/97	9.83	8.47	210	5.6	<0.50	0.52	<0.50	14	2.0
	03/25/97	9.83	8.47	250	1.7	0.58	0.51	<0.50	4.7	2.0
	06/26/97	12.43	5.87	--	--	--	--	--	--	--
	09/26/97	12.98	5.32	--	--	--	--	--	--	0.9
	12/05/97	12.20	6.10	--	--	--	--	--	--	0.4
	02/19/98	5.83	12.47	<50	1.5	<0.50	<0.50	0.71	<2.5	3.6
	06/08/98	5.80	12.50	--	--	--	--	--	--	1.0
	08/25/98	11.72	6.58	--	--	--	--	--	--	4.8
	12/28/98	11.69	6.61	--	--	--	--	--	--	2.7
	03/26/99	8.75	9.55	--	--	--	--	--	--	2.8
	06/30/99	10.72	7.58	--	--	--	--	--	--	4.7
	09/30/99	12.24	6.06	--	--	--	--	--	--	4.9
	12/27/99	13.92	4.38	13,500	1,330	1,310	490	1,400	<250	2.1/1.9
	01/21/00	13.26	5.04	12,100	2,200	1,080	429	1,120	<250	2.8
	03/07/00	7.87	10.43	--	--	--	--	--	--	3.7
	04/17/00	9.65	8.65	--	--	--	--	--	--	3.7/4.1
	04/18/00	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--
	09/21/00	12.75	5.55	--	--	--	--	--	--	6.2
	10/17/00	12.21	6.09	4,070	763	589	214	501	<50.0	0.8/0.7
	01/09/01	12.51	5.79	--	--	--	--	--	--	0.7
	04/27/01	10.21	8.09	80	5.7	<0.50	2.7	4.9	(<0.50)	2.3/2.8
	07/03/01	11.60	6.70	--	--	--	--	--	--	0.6
	12/06/01	11.15	7.15	160	1.7	1.0	1.8	4.6	(<5.0)	3.7/2.3
	01/23/02	9.07	9.23	--	--	--	--	--	--	0.5
	04/17/02	10.11	8.19	<50	2.1	<0.50	<0.50	<0.50	(<5.0)	4.9/4.4
	07/18/02	11.61	6.69	--	--	--	--	--	--	0.9
	11/11/02	12.63	5.67	15,000	1,300	1,300	680	1,800	(<5.0)	0.2/0.2
	01/16/03	9.35	8.95	--	--	--	--	--	--	0.4
	03/13/03	10.09	8.21	--	--	--	--	--	--	0.8
	04/07/03	10.09	8.21	--	--	--	--	--	--	--
	04/23/03	9.95	8.35	1,100	76	29	45	66	(<5.0)	0.8/0.3
	05/13/03	9.90	8.40	1,200	38	16	16	24	(<5.0)	0.2/0.2
	06/13/03	10.80	7.50	9,600	1,300	1,100	440	890	(<250)	0.2/0.5
	07/14/03	11.20	7.10	11,000	1,300	1,800	430	1,500	(<5.0)	0.5/0.5
09/29/03	12.05	6.25	12,000	860	980	410	1,100	(<10)	0.4/0.4	
10/29/03	12.29	6.01	12,000	1,100	940	530	1,200	(<10)	0.7/0.3	
01/05/04	9.82	8.48	190 b	<0.50	<0.50	<0.50	<1.0	(<0.50)	2.8/1.8	
04/01/04	9.24	9.06	410	1.4	0.54	1.6	1.0	(<0.50)	1.7/0.1	
07/02/04	11.33	6.97	5,500	440	370	170	410	(<2.5)	0.5/0.4	
11/03/04	12.14	6.16	3,800	260	210	150	600	(<2.5)	0.9/1.4	
01/04/05	9.03	9.27	280	5.8	20	7.8	26	(<0.50)	1.66/2.66	
04/13/05	7.38	10.92	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	0.79/0.58	
07/13/05	10.45	7.85	350	19	9.3	9.8	14	(<0.50)	0.10/0.08	
10/28/05	11.98	6.32	3,400	440	350	150	320	(<2.5)	0.4/0.1	
01/17/06	8.34	9.96	700	3.1	5.1	7.7	66	(<0.50)	2.7/1.6	
02/23/06	9.42	8.88	--	97.9	17.2	40.0	80.6	--	--	
03/09/06	7.35	10.95	--	<0.500	29.2	57.8	486	--	--	
04/21/06	5.99	12.31	<50.0	<0.500	0.960	<0.500	2.71	(<0.500)	--	

# 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/MW-2 cont'd)</i>	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
	<b>05/26/08</b>	<b>11.53</b>	<b>6.77</b>	<b>7,200</b>	<b>350</b>	<b>200</b>	<b>220</b>	<b>510</b>	<b>&lt;100</b>	<b>1.52/0.99</b>
	<b>VW/MW-4</b> <i>18.14</i>	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
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	



# 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/MW-4 cont'd)</i>	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	
	<b>05/26/08</b>	<b>11.27</b>	<b>6.87</b>	<b>650</b>	<b>76</b>	<b>7.9</b>	<b>4.9</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>0.95/0.96</b>	
	<b>VW/AS-1</b> <i>18.60</i>	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		

# 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>	09/29/03	12.48	6.12	9,600	2,300	100	1,200	670	(<20)	2.3/3.6
	10/29/03	12.73	5.87	10,000	2,000	39	1,000	370	(16)	3.3/3.6
	01/05/04	10.25	8.35	2,000	710	18	410	18	(13)	3.0/2.8
	04/01/04	9.60	9.00	27,000	9,100	1,200	2,200	1,400	(<50)	1.0/1.4
	07/02/04	11.80	6.80	18,000	6,500	170	1,200	1,200	(<50)	3.2/0.8
	11/03/04	12.56	6.04	4,500	1,700	23	280	55	(9.8)	1.7/1.9
	01/04/05	9.50	9.10	7,500	2,500	74	540	110	(<13)	1.19/0.53
	04/13/05	7.84	10.76	34,000	6,600	290	930	2,100	(<15)	1.60/1.88
	07/13/05	10.90	7.70	--	--	--	--	--	--	--
	07/22/05	10.96	7.64	8,200	5,900	86	340	320	(<25)	1.7/1.0
	10/28/05	12.30	6.30	2,100	1,300	18	63	21	(<5.0)	0.5/1.6
	01/17/06	8.65	9.95	6,200 g	2,900	190	400	600	(4.70)	1.4/1.0
	02/23/06	9.33	9.27	--	3,080	222	414	778	--	--
	03/09/06	7.40	11.20	--	1,350	88.5	128	164	--	--
	04/21/06	6.44	12.16	18,200	4,460	167	419	717	(2.79)	--
	05/01/06	7.22	11.38	19,700	5,300	261	664	1,050	(<0.500)	0.71/1.23
	06/23/06	9.73	8.87	20,600	3,820	305	259	435	(3.31 h)	--
	07/11/06	9.73	8.87	9,130	6,200	108	232	254	(<0.500)	--
	08/30/06	11.60	7.00	164,000	3,190	6,240	3,780	17,900	(<10.0)	0.4
	09/29/06	11.97	6.63	130,000	6,160	6,370 i	2,910	11,600 i	(<25.0)	--
	10/13/06	12.18	6.42	144,000	6,320	5,710	2,930	13,100	(1.03)	--
	11/03/06	12.21	6.39	112,000	8,290	5,670	2,760	12,100	(<0.500)	0.80
	12/26/06	11.74	6.86	94,000	6,900	5,100	3,100	13,000	(<50)	--
	01/11/07	11.83	6.77	73,000	6,600	5,500	3,000	12,000	(<50)	--
	01/30/07	12.12	6.48	54,000	6,800	4,500	2,200	8,800	(<50)	1.16/1.16
	03/01/07	10.71	7.89	52,000	6,300	3,700	3,400	12,000	(<50)	--
	04/26/07	10.84	7.76	72,000 k	7,200	4,500	3,000	10,900	(<50)	--
	06/01/07	11.40	7.20	70,000 k	7,600	4,900	3,200	12,100	(<50)	0.60/1.09
	06/21/07	11.92	6.68	59,000 k	7,300	3,700	3,200	12,100	(<50)	--
	07/03/07	11.98	6.62	70,000 k	8,800	4,700	3,500	13,500	(<50)	--
	08/16/07	12.53	6.07	67,000 k	9,000	5,500	3,900	14,200	(<50)	0.20/1
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	
<b>05/26/08</b>	<b>11.88</b>	<b>6.72</b>	<b>82,000</b>	<b>8,100</b>	<b>3,000</b>	<b>3,100</b>	<b>12,000</b>	<b>&lt;500</b>	<b>1.65/1.05</b>	
<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	

# 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/AS-3 cont'd)	07/03/01	11.55	6.62	--	--	--	--	--	--	2.6
	12/06/01	11.10	7.07	5,000	1,200	19	380	320	(<50)	0.9/1.1
	01/23/02	8.93	9.24	--	--	--	--	--	--	1.1
	04/17/02	10.00	8.17	17,000	5,000	<25	1,100	390	(<250)	3.2/3.2
	07/18/02	11.49	6.68	--	--	--	--	--	--	0.4
	11/11/02	12.43	5.74	1,700	290	1.5	150	2.8	(<10)	1.0/1.1
	01/16/03	9.32	8.85	--	--	--	--	--	--	4.7
	03/13/03	9.88	8.29	--	--	--	--	--	--	2.7
	04/23/03	9.85	8.32	150	47	0.67	8.5	3.2	(<5.0)	2.1/0.7
	05/13/03	9.81	8.36	440	35	<0.50	1.7	<1.0	(<5.0)	1.4/1.8
	06/13/03	10.77	7.40	580	71	<2.5	40	<5.0	(<25)	1.1/0.6
	07/14/03	11.12	7.05	1,100	120	4.9	63	9.3	(16)	2.0/2.2
	09/29/03	12.02	6.15	160	54	2.2	6.9	8.7	(1.1)	4.1/1.6
	10/29/03	12.25	5.92	350	16	<0.50	1.1	<1.0	(6.3)	3.2/1.6
	01/05/04	9.74	8.43	2,700	870	39	130	250	(5.5)	3.6/2.8
	04/01/04	9.06	9.11	1,300	240	4.1	36	45	(12.0)	1.1/1.0
	07/02/04	11.29	6.88	610	59	<1.0	3.6	<2.0	(10.0)	2.0/2.2
	11/03/04	12.02	6.15	200	<0.50	<0.50	<0.50	<1.0	(10.0)	2.1/2.3
	01/04/05	8.99	9.18	2,500	730	42	36	190	(<10)	1.72/1.36
	04/13/05	7.25	10.92	<50	1.6	<0.50	<0.50	<0.50	(0.61)	2.85/3.04
	07/13/05	10.30	7.87	--	--	--	--	--	--	--
	07/22/05	10.51	7.66	160	36	0.65	<0.50	2.5	(2.60)	1.4/1.3
	10/28/05	11.93	6.24	100	<0.50	<0.50	<0.50	<1.0	(1.70)	1.6/0.9
	01/17/06	8.25	9.92	1,400	510	29	16	47	(5.40)	1.9/0.8
	04/21/06	6.06	12.11	--	--	--	--	--	--	--
	05/01/06	6.83	11.34	1,350	74.4	<0.500	12.5	0.520	(3.30)	1.35/0.78
	08/30/06	11.00	7.17	940	77.7	2.67	2.94	5.57	(3.45)	0.80/0.98
	09/29/06	11.30	6.87	--	--	--	--	--	--	--
	11/03/06	12.29	5.88	346 j	83.6 j	5.17 j	2.34 j	13.5 j	(3.47 j)	1.10/0.80
	01/30/07	12.59	5.58	130	13	0.64	<0.50	7.2	(3.4)	0.76/0.64
	06/01/07	10.82	7.35	2,200 k	650	13	3.2 m	143	(7.8)	1.21/0.93
	08/16/07	11.95	6.22	1,000 k	200	4.0	1.1	47.7	(3.3)	0.8/0.2
	12/06/07	12.43	5.74	<50	<0.5	<0.5	<0.5	<0.5	(<0.5)	--
	02/25/08	9.40	8.77	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.14
	<b>05/26/08</b>	<b>11.20</b>	<b>6.97</b>	<b>1,800</b>	<b>260</b>	<b>6.0</b>	<b>4.3</b>	<b>35</b>	<b>&lt;17</b>	<b>0.86/4.39</b>

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.

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 DO Readings

## **APPENDIX A**

Groundwater Monitoring Field Data Sheets

Well Gauging Data Sheet

Project.Task #: 1150.001 215				Project Name: Saberi - 1230 14th St				
Address: 1230 14th Street, Oakland, CA						Date: 5/26/08		
Name: Sanjiv Gill				Signature: 				
Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point	
MW-1	2"	8:45			11.90	21.32	TOC                         	
MW-2	2"	8:15			11.02	22.02		
MW-3	2"	8:19			11.31	18.65		
MW-4	2"	8:05			11.23	19.81		
MW-5	4"	8:38			11.69	19.80		
MW-6	4"	8:22			12.20	19.70		
MW-7	4"	8:25			12.62	19.81		
VW/AS-1	2"	8:50			11.88	14.48		
VW/AS-3	2"	8:12			11.20	15.09* 13.38*		
VW/MW-2	2"	8:30			11.53	21.89		
VW/MW-4	2"	8:34			11.27	18.23		A

Comments:

VW/AS-3 1" DTB = 15.09 2" DTB = 13.38 coaxial well

## MONITORING FIELD DATA SHEET

Well ID: MW-1

Project Task #: 1150.001 215		Project Name: Saberi - 1230 14th St.						
Address: 1230 14th St., Oakland, CA								
Date: 5/26/08		Weather: <u>Cloudy</u>						
Well Diameter: <u>2"</u>		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): <u>21.32</u>		Depth to Product:						
Depth to Water (DTW): <u>11.90</u>		Product Thickness:						
Water Column Height: <u>9.42</u>		1 Casing Volume: <u>1.50</u> gallons						
Reference Point: TOC		<u>3</u> Casing Volumes: <u>4.50</u> gallons						
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>2:45</u>	<u>17.5</u>	<u>7.14</u>	<u>652</u>				<u>1.5</u>	
<u>2:50</u>	<u>17.4</u>	<u>7.13</u>	<u>672</u>				<u>3</u>	
<u>2:55</u>	<u>17.4</u>	<u>7.12</u>	<u>672</u>				<u>4.5</u>	

Comments: YSI 550A DO meter pre purge DO = 1.96 mg/l  
 post purge DO = 1.13 mg/l  
very turbid

Sample ID: <u>MW-1</u>	Sample Time: <u>3:00</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: 5/26/08
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

## MONITORING FIELD DATA SHEET

Well ID: MW-2

Project.Task #: 1150.001 215		Project Name: Saberi - 1230 14th St.						
Address: 1230 14th St., Oakland, CA								
Date: 5/26/08		Weather: <u>Cloudy</u>						
Well Diameter: <u>2"</u>		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): <u>22.02</u>		Depth to Product:						
Depth to Water (DTW): <u>11.02</u>		Product Thickness:						
Water Column Height: <u>11.00</u>		1 Casing Volume: <u>1.76</u> gallons						
Reference Point: TOC		<u>3</u> Casing Volumes: <u>5.28</u> gallons						
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Whal Pump								
Sampling Device: <u>Disposable Bailer</u>								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>11:15</u>	<u>18.0</u>	<u>6.89</u>	<u>705</u>				<u>1.5</u>	
<u>11:20</u>	<u>18.2</u>	<u>6.92</u>	<u>690</u>				<u>3</u>	
<u>11:25</u>	<u>18.2</u>	<u>6.90</u>	<u>663</u>				<u>5</u>	

Comments: Y5133A ~~DO~~ DO meter      pre purge DO = 1.86 mg/l  
 post purge DO = 1.32 mg/l

very turbid, silty brown

Sample ID: <u>MW-2</u>	Sample Time: <u>11:30</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: 5/26/08
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: <u>[Signature]</u>

## MONITORING FIELD DATA SHEET

Well ID: MW-3

Project Task #: 1150.001 215		Project Name: Saberi - 1230 14th St.						
Address: 1230 14th St., Oakland, CA								
Date: 5/26/08				Weather: <i>Cloudy</i>				
Well Diameter: <i>2"</i>				Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47	
					2" = 0.16	4" = 0.65	radius* 0.163	
Total Depth (TD): <i>18.65</i>				Depth to Product:				
Depth to Water (DTW): <i>11.31</i>				Product Thickness:				
Water Column Height: <i>7.34</i>				1 Casing Volume: <i>1.17</i> gallons				
Reference Point: TOC				3 Casing Volumes: <i>3.51</i> gallons				
Purging Device: <i>Disposable Bailer</i> , 3" PVC Bailer, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<i>11:45</i>	<i>17.8</i>	<i>6.75</i>	<i>818</i>				<i>1.5</i>	
<i>11:50</i>	<i>18.1</i>	<i>6.67</i>	<i>798</i>				<i>2.5</i>	
<i>11:55</i>	<i>18.1</i>	<i>6.65</i>	<i>791</i>				<i>3.5</i>	

Comments: *5509 YSI* ~~on~~ DO meter pre purge DO = *1.79* mg/l  
 post purge DO = *2.01* mg/l

*very turbid, silty*

Sample ID: <i>MW-3</i>		Sample Time: <i>12:00</i>	
Laboratory: McCampbell Analytical, INC.		Sample Date: 5/26/08	
Containers/Preservative: Voa/HCl			
Analyzed for: 8015, 8021			
Sampler Name: Sanjiv Gill		Signature: <i>[Signature]</i>	



**MONITORING FIELD DATA SHEET**

Well ID: MW-4

Project.Task #: 1150.001 215		Project Name: Saberi - 1230 14th St.						
Address: 1230 14th St., Oakland, CA								
Date: 5/26/08		Weather: <u>Cloudy</u>						
Well Diameter: <u>2"</u>		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): <u>19.81</u>		Depth to Product:						
Depth to Water (DTW): <u>11.23</u>		Product Thickness:						
Water Column Height: <u>8.58</u>		1 Casing Volume: <u>1.37</u> gallons						
Reference Point: TOC		<u>3</u> Casing Volumes: <u>4.11</u> gallons						
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>10:00</u>	<u>18.6</u>	<u>7.05</u>	<u>175</u>				<u>1.5</u>	
<u>10:05</u>	<u>18.6</u>	<u>6.97</u>	<u>175</u>				<u>3</u>	
<u>10:10</u>	<u>18.7</u>	<u>6.95</u>	<u>176</u>				<u>4</u>	

Comments: VSI 550A DO meter      pre purge DO = 6.59 mg/l  
 post purge DO = 5.22 mg/l  
very turbid, thick silty brown

Sample ID: <u>MW-4</u>	Sample Time: <u>10:15</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: 5/26/08
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: <u>[Signature]</u>


## MONITORING FIELD DATA SHEET

Well ID: **MW-5**

Project.Task #: 1150.001 215		Project Name: Saberi - 1230 14th St.						
Address: 1230 14th St., Oakland, CA								
Date: 5/26/08		Weather: <b>Cloudy</b>						
Well Diameter: <b>4"</b>		Volume/ft. 1" = 0.04    3" = 0.37    6" = 1.47 2" = 0.16    4" = 0.65    radius* 0.163						
Total Depth (TD): <b>19.80</b>		Depth to Product:						
Depth to Water (DTW): <b>11.69</b>		Product Thickness:						
Water Column Height: <b>8.11</b>		1 Casing Volume: <b>5.27</b> gallons						
Reference Point: TOC		3 Casing Volumes: <b>15.81</b> gallons						
Purging Device: <u>Disposable Bailer</u> <del>3" Bailer</del> , Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
2:15	17.7	6.60	1437				5.5	
2:20	17.8	6.70	1425				11	
2:25	17.8	6.75	1425				16	

Comments: ~~YSI 550A~~ DO meter      pre purge DO = 1.10 mg/l  
 post purge DO = 1.52 mg/l

*caseing is bent at 10' / very turbid, very silty, light sheen*

Sample ID: <b>MW-5</b>	Sample Time: <b>2:30</b>
Laboratory: McCampbell Analytical, INC.	Sample Date: 5/26/08
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 


## MONITORING FIELD DATA SHEET

Well ID: MW-6

Project.Task #: 1150.001 215				Project Name: Saberi - 1230 14th St.										
Address: 1230 14th St., Oakland, CA														
Date: 5/26/08				Weather: <u>Cloudy</u>										
Well Diameter: <u>4"</u>				Volume/ft. <table border="1" style="font-size: small; border-collapse: collapse;"> <tr> <td>1" = 0.04</td> <td>3" = 0.37</td> <td>6" = 1.47</td> </tr> <tr> <td>2" = 0.16</td> <td>4" = 0.65</td> <td>radius* 0.163</td> </tr> </table>					1" = 0.04	3" = 0.37	6" = 1.47	2" = 0.16	4" = 0.65	radius* 0.163
1" = 0.04	3" = 0.37	6" = 1.47												
2" = 0.16	4" = 0.65	radius* 0.163												
Total Depth (TD): <u>19.70</u>				Depth to Product:										
Depth to Water (DTW): <u>12.20</u>				Product Thickness:										
Water Column Height: <u>7.50</u>				1 Casing Volume: <u>4.87</u> gallons										
Reference Point: TOC				<u>3</u> Casing Volumes: <u>14.61</u> gallons										
Purging Device: Disposable Bailer, <u>3" PVC Bailer</u> , Whal Pump														
Sampling Device: Disposable Bailer														
Time	Temp (°C)	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW						
<u>12:15</u>	<u>16.5</u>	<u>6.63</u>	<u>551</u>				<u>5</u>							
<u>12:20</u>	<u>16.5</u>	<u>6.54</u>	<u>549</u>				<u>10</u>							
<u>12:25</u>	<u>16.6</u>	<u>6.55</u>	<u>562</u>				<u>14.5</u>							

Comments: YSI 550A ~~OxiTron~~ DO meter  
 pre purge DO = 6.77 mg/l  
 post purge DO = 6.59 mg/l

very turbid, silty

Sample ID: <u>MW-6</u>	Sample Time: <u>12:30</u>
Laboratory: <u>McCampbell Analytical, INC.</u>	Sample Date: <u>5/26/08</u>
Containers/Preservative: <u>Voac/HCl</u>	
Analyzed for: <u>8015, 8021</u>	
Sampler Name: <u>Sanjiv Gill</u>	Signature: 


## MONITORING FIELD DATA SHEET

Well ID: **MW-7**

Project.Task #: 1150.001 215		Project Name: Saberi - 1230 14th St.						
Address: 1230 14th St., Oakland, CA								
Date: 5/26/08		Weather: <b>Cloudy</b>						
Well Diameter: <b>4"</b>		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): <b>19-81</b>		Depth to Product:						
Depth to Water (DTW): <b>12-62</b>		Product Thickness:						
Water Column Height: <b>7.19</b>		1 Casing Volume: <b>4.67</b> gallons						
Reference Point: TOC		<b>3</b> Casing Volumes: <b>14.01</b> gallons						
Purging Device: Disposable Bailer, <u>3" PVC Bailer</u> , Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:45	16.6	6.63	768				5	
12:50	16.6	6.53	769				10	
12:55	16.6	6.53	781				14	

Comments: ~~YSI 550A~~ **YSI 550A** DO meter      pre purge DO = **1.31** mg/l  
 post purge DO = **3.52** mg/l

**very turbid**

Sample ID: <b>MW-7</b>	Sample Time: <b>1:00</b>
Laboratory: McCampbell Analytical, INC.	Sample Date: 5/26/08
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 


## MONITORING FIELD DATA SHEET

Well ID: VW/AS-1

Project.Task #: 1150.001 215		Project Name: Saberi - 1230 14th St.						
Address: 1230 14th St., Oakland, CA								
Date: 5/26/08		Weather: <u>cloudy</u>						
Well Diameter: <u>2''</u>		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): <u>14.48</u>		Depth to Product:						
Depth to Water (DTW): <u>11.88</u>		Product Thickness:						
Water Column Height: <u>2.60</u>		1 Casing Volume: <u>0.41</u> gallons						
Reference Point: TOC		<u>3</u> Casing Volumes: <u>1.23</u> gallons						
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>3:15</u>	<u>18.0</u>	<u>6.69</u>	<u>1154</u>				<u>0.5</u>	
<u>3:20</u>	<u>18.0</u>	<u>6.86</u>	<u>1151</u>				<u>1.0</u>	
<u>3:25</u>	<u>17.9</u>	<u>6.71</u>	<u>1112</u>				<u>1.5</u>	

Comments: YSI 550A ~~Canon~~ DO meter      pre purge DO = 1.65 mg/l  
 post purge DO = 1.05 mg/l

very turbid, very silty, thick gerr, heavy sheen, strong odor


Sample ID: <u>VW/AS-1</u>	Sample Time: <u>3:30</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: 5/26/08
Containers/Preservative: <u>Voa/HCl</u>	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

## MONITORING FIELD DATA SHEET

Well ID: VW/AS-3

Project.Task #: 1150.001 215		Project Name: Saberi - 1230 14th St.						
Address: 1230 14th St., Oakland, CA								
Date: 5/26/08		Weather: <u>Cloudy</u>						
Well Diameter: <u>2"</u>		Volume/ft. 1" = 0.04    3" = 0.37    6" = 1.47 2" = 0.16    4" = 0.65    radius* 0.163						
Total Depth (TD): <u>15.09</u>		Depth to Product:						
Depth to Water (DTW): <u>11.20</u>		Product Thickness:						
Water Column Height: <u>3.89</u>		1 Casing Volume: <u>0.62</u> gallons						
Reference Point: TOC		<u>3</u> Casing Volumes: <u>1.86</u> gallons						
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump <u>3/4" Disposable Bailer</u>								
Sampling Device: Disposable Bailer <u>3/4" Disposable Bailer</u>								
Time	Temp (°C)	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>10:35</u>	<u>17.5</u>	<u>6.64</u>	<u>1293</u>				<u>1.0</u>	
<u>10:45</u>	<u>17.5</u>	<u>6.72</u>	<u>1192</u>				<u>1.5</u>	
<u>10:55</u>	<u>17.4</u>	<u>6.70</u>	<u>1198</u>				<u>2.0</u>	

Comments: YSI 550A DO meter      pre purge DO = 0.86 mg/l  
very turbid, very silty, thick grey      post purge DO = 4.39 mg/l  
purged from 1" well in the 2" well used 1" DTB but calculated as a 2" well (DO taken out of hole) probe does not fit in hole

Sample ID: <u>VW/AS3</u>	Sample Time: <u>11:00</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: 5/26/08
Containers/Preservative: <u>Voac/HCl</u>	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 


## MONITORING FIELD DATA SHEET

Well ID: VU/MW-2

Project.Task #: 1150.001 215		Project Name: Saberi - 1230 14th St.						
Address: 1230 14th St., Oakland, CA								
Date: 5/26/08		Weather: <u>Cloudy</u>						
Well Diameter: <u>2"</u>		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): <u>21.89</u>		Depth to Product:						
Depth to Water (DTW): <u>11.53</u>		Product Thickness:						
Water Column Height: <u>10.36</u>		1 Casing Volume: <u>1.65</u> gallons						
Reference Point: TOC		<u>3</u> Casing Volumes: <u>4.95</u> gallons						
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>1:15</u>	<u>17.6</u>	<u>6.75</u>	<u>691</u>				<u>1.5</u>	
<u>1:20</u>	<u>17.7</u>	<u>6.72</u>	<u>693</u>				<u>3</u>	
<u>1:25</u>	<u>17.7</u>	<u>6.74</u>	<u>711</u>				<u>5</u>	

Comments: YSI 550A DO meter      pre purge DO = 1.52 mg/l  
 post purge DO = 0.99 mg/l

very turbid, silty, light sheen

Sample ID: <u>VU/MW-2</u>	Sample Time: <u>1:30</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: 5/26/08
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

## MONITORING FIELD DATA SHEET

Well ID: VW/MW-4

Project.Task #: 1150.001 215		Project Name: Saberi - 1230 14th St.							
Address: 1230 14th St., Oakland, CA									
Date: 5/26/08		Weather: <u>Cloudy</u>							
Well Diameter: <u>2"</u>		Volume/ft. <table border="1"> <tr> <td>1" = 0.04</td> <td>3" = 0.37</td> <td>6" = 1.47</td> </tr> <tr> <td>2" = 0.16</td> <td>4" = 0.65</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </table>		1" = 0.04	3" = 0.37	6" = 1.47	2" = 0.16	4" = 0.65	radius <sup>2</sup> * 0.163
1" = 0.04	3" = 0.37	6" = 1.47							
2" = 0.16	4" = 0.65	radius <sup>2</sup> * 0.163							
Total Depth (TD): <u>18.23</u>		Depth to Product:							
Depth to Water (DTW): <u>11.27</u>		Product Thickness:							
Water Column Height: <u>6.96</u>		1 Casing Volume: <u>1.11</u> gallons							
Reference Point: TOC		<u>3</u> Casing Volumes: <u>3.33</u> gallons							


Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump

Sampling Device: Disposable Bailer

Time	Temp (°C)	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>1:45</u>	<u>17.7</u>	<u>6.70</u>	<u>829</u>				<u>1</u>	
<u>1:50</u>	<u>17.7</u>	<u>6.68</u>	<u>830</u>				<u>2</u>	
<u>1:55</u>	<u>17.9</u>	<u>6.62</u>	<u>811</u>				<u>3</u>	

Comments: Oakton DO meter pre purge DO = 0.95mg/l  
 post purge DO = 0.96mg/l

very turbid, very silty, thick grey

Sample ID: <u>VW/MW-4</u>	Sample Time: <u>2:00</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: 5/26/08
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 



## **APPENDIX B**

### Laboratory Analytical Results



**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-1230 14th St,	Date Sampled: 05/26/08
	Client Contact: Celia Costarella	Date Received: 05/27/08
	Client P.O.:	Date Reported: 06/02/08
		Date Completed: 05/30/08

**WorkOrder: 0805670**

June 02, 2008

Dear Celia:

Enclosed within are:

- 1) The results of the **11** analyzed samples from your project: **#1150.001; Saberi-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.

0805670

**Pangea Environmental Services, Inc.**

1710 Franklin Street  
Oakland, CA 94612

Website: [www.pangeaenv.com](http://www.pangeaenv.com)

Telephone: (510) 836-3700

Fax: (510) 836-3709

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

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

Report To: Celia Costarella Bill To: Pangea  
Company: Pangea Environmental Technology, Inc.  
1710 Franklin Street, Suite 200, Oakland, CA 94612  
E-Mail: [ccostarella@pangeaenv.com](mailto:ccostarella@pangeaenv.com)  
Tele: (510) 735-1751 Fax: (510) 836-3709  
Project #: 1150.001 Project Name: Saberi-1230 14th St.  
Project Location: 1230 14th St, Oakland CA  
Sampler Signature: Muskan Environmental Sampling

Analysis Request										Other	Comments							
BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	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)	TO3 / TO15	Filter Samples for Metals analysis: Yes / No	

SAMPLE ID (Field Point Name)	LOCATION (1721 Webster / Douglas Parking)	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED						
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other			
MW-1		5-26-08	3:00	3	Voa	X					X	X					
MW-2			11:30														
MW-3			12:00														
MW-4			10:15														
MW-5			2:30														
MW-6			12:30														
MW-7			1:00														
VW/AS1			3:30														
VW/AS3			11:00														
VW/MW2			1:30														
VW/MW4		X	2:00	X	X	X					X	X					

Relinquished By: *[Signature]* Date: 5/27 Time: 12:10 Received By: *[Signature]*  
 Relinquished By: *[Signature]* Date: 5/27 Time: 1740 Received By: *[Signature]*  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

ICE/r# 3.8  
 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: 0805670

ClientCode: PEO

WriteOn   
  EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

Report to:	Celia Costarella	Email: ccostarella@pangeaenv.com	Bill to:	Bob Clark-Riddell	Requested TAT: 5 days
	Pangea Environmental Svcs., Inc.	cc:		Pangea Environmental Svcs., Inc.	Date Received: 05/27/2008
	1710 Franklin Street, Ste. 200	PO:		1710 Franklin Street, Ste. 200	Date Printed: 05/27/2008
	Oakland, CA 94612	ProjectNo: #1150.001; Saberi-1230 14th 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	
0805670-001	MW-1	Water	5/26/2008 15:00	<input type="checkbox"/>	A	A											
0805670-002	MW-2	Water	5/26/2008 11:30	<input type="checkbox"/>	A												
0805670-003	MW-3	Water	5/26/2008 12:00	<input type="checkbox"/>	A												
0805670-004	MW-4	Water	5/26/2008 10:15	<input type="checkbox"/>	A												
0805670-005	MW-5	Water	5/26/2008 14:30	<input type="checkbox"/>	A												
0805670-006	MW-6	Water	5/26/2008 12:30	<input type="checkbox"/>	A												
0805670-007	MW-7	Water	5/26/2008 13:00	<input type="checkbox"/>	A												
0805670-008	VW/AS-1	Water	5/26/2008 15:30	<input type="checkbox"/>	A												
0805670-009	VW/AS-3	Water	5/26/2008 11:00	<input type="checkbox"/>	A												
0805670-010	VW/MW-2	Water	5/26/2008 13:30	<input type="checkbox"/>	A												
0805670-011	VW/MW-4	Water	5/26/2008 14:00	<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: **05/27/08 8:02:42 PM**

Project Name: **#1150.001; Saberi-1230 14th St,**

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

WorkOrder N°: **0805670** 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: 3.8°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted
- Sample labels checked for correct preservation? Yes  No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA

\* 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-1230 14th St,	Date Sampled: 05/26/08
		Date Received: 05/27/08
	Client Contact: Celia Costarella	Date Extracted: 05/28/08-05/30/08
	Client P.O.:	Date Analyzed 05/28/08-05/30/08

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

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0805670

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	9300,a	ND<250	2200	67	140	130	50	101
002A	MW-2	W	ND	ND	ND	ND	ND	ND	1	89
003A	MW-3	W	ND	ND	ND	ND	ND	ND	1	92
004A	MW-4	W	ND	ND	ND	ND	ND	ND	1	92
005A	MW-5	W	39,000,a	ND<250	9600	1100	1400	2400	50	105
006A	MW-6	W	ND	ND	1.1	0.88	ND	ND	1	101
007A	MW-7	W	600,a	ND<35	190	2.3	ND	ND	1	117
008A	VW/AS-1	W	82,000,a,h	ND<500	8100	3000	3100	12,000	100	104
009A	VW/AS-3	W	1800,a	ND<17	260	6.0	4.3	35	3.3	118
010A	VW/MW-2	W	7200,a	ND<100	350	200	220	510	20	115
011A	VW/MW-4	W	650,a	ND	76	7.9	4.9	ND	1	102

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	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request; p) see attached narrative.



### QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0805670

EPA Method SW8021B/8015Cm		Extraction SW5030B			BatchID: 35883			Spiked Sample ID: 0805670-004A				
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	94	84.9	10.2	96.3	96.6	0.292	70 - 130	20	70 - 130	20
MTBE	ND	10	107	92.4	14.3	106	104	2.23	70 - 130	20	70 - 130	20
Benzene	ND	10	85	80.9	4.91	94.7	99	4.50	70 - 130	20	70 - 130	20
Toluene	ND	10	94	89.1	5.38	96.1	98.1	2.07	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	92.5	86.8	6.39	103	103	0	70 - 130	20	70 - 130	20
Xylenes	ND	30	103	95.7	6.90	114	114	0	70 - 130	20	70 - 130	20
%SS:	92	10	92	94	1.23	91	91	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 35883 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0805670-001A	05/26/08 3:00 PM	05/29/08	05/29/08 5:05 AM	0805670-002A	05/26/08 11:30 AM	05/28/08	05/28/08 11:12 PM
0805670-003A	05/26/08 12:00 PM	05/28/08	05/28/08 11:45 PM	0805670-004A	05/26/08 10:15 AM	05/29/08	05/29/08 12:18 AM
0805670-005A	05/26/08 2:30 PM	05/29/08	05/29/08 5:39 AM	0805670-006A	05/26/08 12:30 PM	05/29/08	05/29/08 1:24 AM
0805670-007A	05/26/08 1:00 PM	05/29/08	05/29/08 1:58 AM	0805670-008A	05/26/08 3:30 PM	05/29/08	05/29/08 7:23 AM
0805670-009A	05/26/08 11:00 AM	05/30/08	05/30/08 3:26 AM	0805670-010A	05/26/08 1:30 PM	05/29/08	05/29/08 8:33 AM
0805670-011A	05/26/08 2:00 PM	05/29/08	05/29/08 2:31 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.