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Alameda County
Environmental Health



May 28, 2010

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: **Well Installation Report**
Former Shell Service Station
1230 14th Street
Oakland, California
Fuel Leak Case No. RO0000433

Dear Mr. Wickham:

On behalf of property owner Andy Saberi, Pangea Environmental Services, Inc has prepared this *Well Installation Report* for the subject site. This report describes the installation of four new wells (two dual-phase extraction wells and two air sparge wells. This work was outlined in Pangea's *Draft Corrective Action Plan and Pilot Test Work Plan* dated January 18, 2008 that was approved by the Alameda County Environmental Health letter dated June 5, 2008.

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

Sincerely,
Pangea Environmental Services, Inc.

A handwritten signature in blue ink that reads "Bob Clark-Riddell".

Bob Clark-Riddell, P.E.
Principal Engineer

Attachment: *Well Installation Report*

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
Ana Friel, Conestoga-Rovers & Associates (electronic copy)
SWRCB Geotracker (electronic copy)

PANGEA Environmental Services, Inc.



WELL INSTALLATION REPORT

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

May 28, 2010

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 property owner Andy Saberi, Pangea Environmental Services, Inc. (Pangea) has prepared this *Well Installation Report* (report) for the above-referenced site. The report describes installation of four new wells - two dual phase extraction wells and two air sparge wells. This well work was performed to facilitate installation of the approved dual-phase extraction and air sparging system. The following sections describe the site background, well installation, development and groundwater sampling.

SITE BACKGROUND

This site background section includes the site description, site history, previous environmental work, and site conditions. The site conditions subsection describes the sediment lithology, groundwater depth and flow direction, and hydrocarbon distribution in site soil and groundwater.

Site Description

The former Shell-branded service station is located at the northeast corner of the 14th Street and Union Street intersection 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 City of Oakland records, the current site building was constructed in 1958. 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 1980's.

Previous Environmental Work

Previous environmental work has included significant site assessment, a sensitive receptor evaluation/well survey, risk evaluation, two rounds of feasibility testing (in 2000 and 2006), several rounds of interim remedial action, and implementation of a prior CAP. Quarterly groundwater monitoring activities have been performed at the site since 1996. A summary of previous environmental work conducted at the site between 1991 and 2006 and prior boring/well location maps is included in Pangea's *Draft Corrective Action Plan and Pilot Test Work Plan* (Draft CAP/WP) dated January 18, 2008.

Well Installation Report
1230 14th Street
Oakland, California
May 28, 2010

In 2007, a series of letters were exchanged by Shell Oil's consultant, owner Saberi's consultant, and ACEH regarding site remediation. On October 31, 2007, property owner Andy Saberi assumed the role as lead responsible party for corrective action at the site. On behalf of Mr. Saberi, Pangea proposed the remedial approach of DPE/AS. On November 29, 2007, ACEH requested a workplan for pilot testing during a period of lower water levels to evaluate SVE and DPE effectiveness for capture of air sparge vapors. In an October 29, 2008 letter, ACEH approved installation of a DPE/AS system.

Site Conditions

Sediment Lithology: Site investigations conducted to date indicate that subsurface materials encountered beneath the site consist primarily of silty sand, silty gravel, and sand to the total explored depth of 30 ft. The upper 9 to 10 ft of the filled former tank pit area consists of gravelly sand fill material. United States Geological Survey (USGS) publications and maps indicate the site is underlain by the Merritt Sand formation. Soil samples collected in March 2005 at depths of 5 and 8 feet below grade surface (ft bgs) from three onsite soil borings were submitted to a laboratory for grain size analysis, and the results indicated that the native soil type is silty to very silty sand, which is consistent with the description of the Merritt Sand formation.

Groundwater Depth and Flow Direction: Recorded groundwater depths beneath the site have ranged from 4.8 to 13.9 ft bgs. The shallowest groundwater elevations since monitoring began were observed in February and June 1998 and in March 2000. The groundwater flow direction, as calculated from depth to water measurements in onsite monitoring wells, is typically to the northeast.

Hydrocarbon Distribution in Soil and Groundwater: The primary hydrocarbon impact area is in the central portion of the site (in the vicinity of the former UST locations) and extends downgradient (northeast). The primary contaminants of concern at this site are benzene and total petroleum hydrocarbons as gasoline (TPHg), which exceed select Environmental Screening Levels (ESLs) established by the SFRWQCB.

Historical soil analytical results suggest that soil conditions have been improved by remedial activities, but elevated soil concentrations that exceed applicable ESLs were detected in all four post-remediation borings (SB-18 through SB-21).

For groundwater, recent monitoring results indicate that petroleum hydrocarbon concentrations exceed applicable ESLs (final ESLs for drinking water) in select site monitoring and remediation wells. Historical groundwater concentrations are shown on Table 1. Petroleum hydrocarbons are well delineated in groundwater to the east and north by low aqueous-phase hydrocarbon concentrations in well MW-6 and well MW-7, respectively. Petroleum hydrocarbons are defined to the west by well MW-4 and to the south by well MW-2.

Well Installation Report
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May 28, 2010

A primary concern for sites like this is the potential for volatile gasoline constituents (especially benzene) to intrude into indoor air where they may pose a risk to human health. Benzene concentrations in site soil and groundwater exceed the ESLs protective of indoor air under the commercial site use scenario.

WELL DESTRUCTION AND INSTALLATION

On March 3 and 4, 2010, Pangea coordinated the installation of four new wells - two dual-phase extraction wells and two air sparge wells - to facilitate installation of the approved DPE/AS system. Dual-phase extraction wells (DP-4 and DP-5) were constructed to facilitate water table drawdown in the capillary fringe and to enhance capture of hydrocarbon vapors created by air sparging. Air sparge remediation wells (AS-4 and AS-5) were installed to inject compressed air into the saturated zone to volatilize hydrocarbon vapors from saturated soil and groundwater. Site well locations are shown on Figure 2.

Well Drilling Activities

A comprehensive Site Safety Plan was prepared to protect site workers, and the plan was kept onsite during all field activities. Well installation permits were obtained from Alameda County Public Works Agency (ACPWA). Copies of the permits are presented in Appendix A. The proposed drilling locations were marked and Underground Service Alert was notified at least 72 hours before the proposed field activities.

Pangea retained Resonant Sonic International (RSI) of Woodland, California to install the wells. After reaching a depth of approximately 25 ft bgs in the boring for well AS-4, the plug was removed and soil and groundwater ('flowing sands') rapidly filled the augers preventing the drillers from constructing a good filter sand pack. The well casing was removed and the borehole was destroyed by tremmi-grouting. Direct-push drilling methods were attempted, but refusal at 20 and 22 ft depth in two attempted borings prevented well installation; the two boreholes were destroyed by tremmi-grouting. Finally, a fourth borehole was drilled using 6-inch hollow stem auger and the drillers were able to construct the well properly. Due to difficulty constructing well AS-4, well AS-5 was installed using revised direct-push drilling methods. First, a 3.25-inch diameter borehole was continuously cored to 25 ft depth and the tooling was removed, then the boring was re-drilled with a disposable tip and approximately 10 gallons of clean water were added to the borehole to prevent bridging. The addition of clean water prevented formation groundwater/soil from entering the borehole and the drillers were able to properly construct the well.

Well Installation Report
1230 14th Street
Oakland, California
May 28, 2010

Shallower dual-phase extraction wells DP-4 and DP-5 were drilled with 10-inch diameter, hollow stem augers and were screened based on the lithology of recent and historical nearby direct-push borings. Boring logs for the new wells are included in Appendix B. The drilling and well installation was observed in the field by Pangea Project Manager Morgan Gillies and supervised by Bob Clark-Riddell, a California Professional Civil Professional Engineer (P.E.).

Well Construction

The two AS wells were constructed of 1-inch diameter, schedule-80 PVC casing with 0.010-inch slotted screen. The two DP wells were constructed of 4-inch diameter, schedule-40 PVC casing with 0.010-inch slotted screen. Well construction details for the new wells are summarized on Table 2. Each well was protected by a traffic-rated vault and locking well cap. The soil characteristics and well construction details for the wells are shown on the boring logs (Appendix B).

Well Development

Pangea coordinated development of the new remediation wells by surge-block agitation and evacuation on April 16, 2010. Groundwater evacuation was conducted using an electric submersible pump or a peristaltic pump. At least ten casing volumes of groundwater were removed from each of the new wells. The investigation-derived waste generated during drilling was temporarily stored onsite in 55-gallon, DOT-approved drums pending disposal by a properly-licensed disposal company.

Additional well installation and development procedures are presented in Pangea's *Standard Operating Procedures for Monitoring Wells* in Appendix C. The well development field data sheets are presented in Appendix D.

Remediation Well Sampling

To help control costs, Pangea coordinated sampling of the new remediation wells immediately following well development. 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. Remediation well sampling data and purge information are included at the bottom of each well development data sheet (Appendix D). The laboratory analytical report is included in Appendix E.

Consistent with the approved work scope, no soil sampling and analysis was performed.

Well Installation Report
1230 14th Street
Oakland, California
May 28, 2010

Remediation Well Sampling Results

The highest TPHg and benzene concentrations detected in groundwater from the new remediation wells were 31,000 µg/L and 1,300 µg/L, respectively, in well AS-4. TPHg and benzene isoconcentration maps are shown on Figures 3 and 4, respectively. The highest concentrations of hydrocarbons in groundwater were detected in wells near and downgradient of the former UST excavation. The lateral extent of hydrocarbon contamination in the southern, eastern and western directions appears to be well defined by perimeter wells MW-2, MW-3, MW-4 and MW-6. The extent of contamination is primarily limited to the site, based on perimeter wells and relatively low concentrations found in downgradient well MW-7 located near the northern property boundary of the site.

CONCLUSIONS AND RECOMMENDATIONS

Based on the above information, Pangea offers the following conclusions and recommendations:

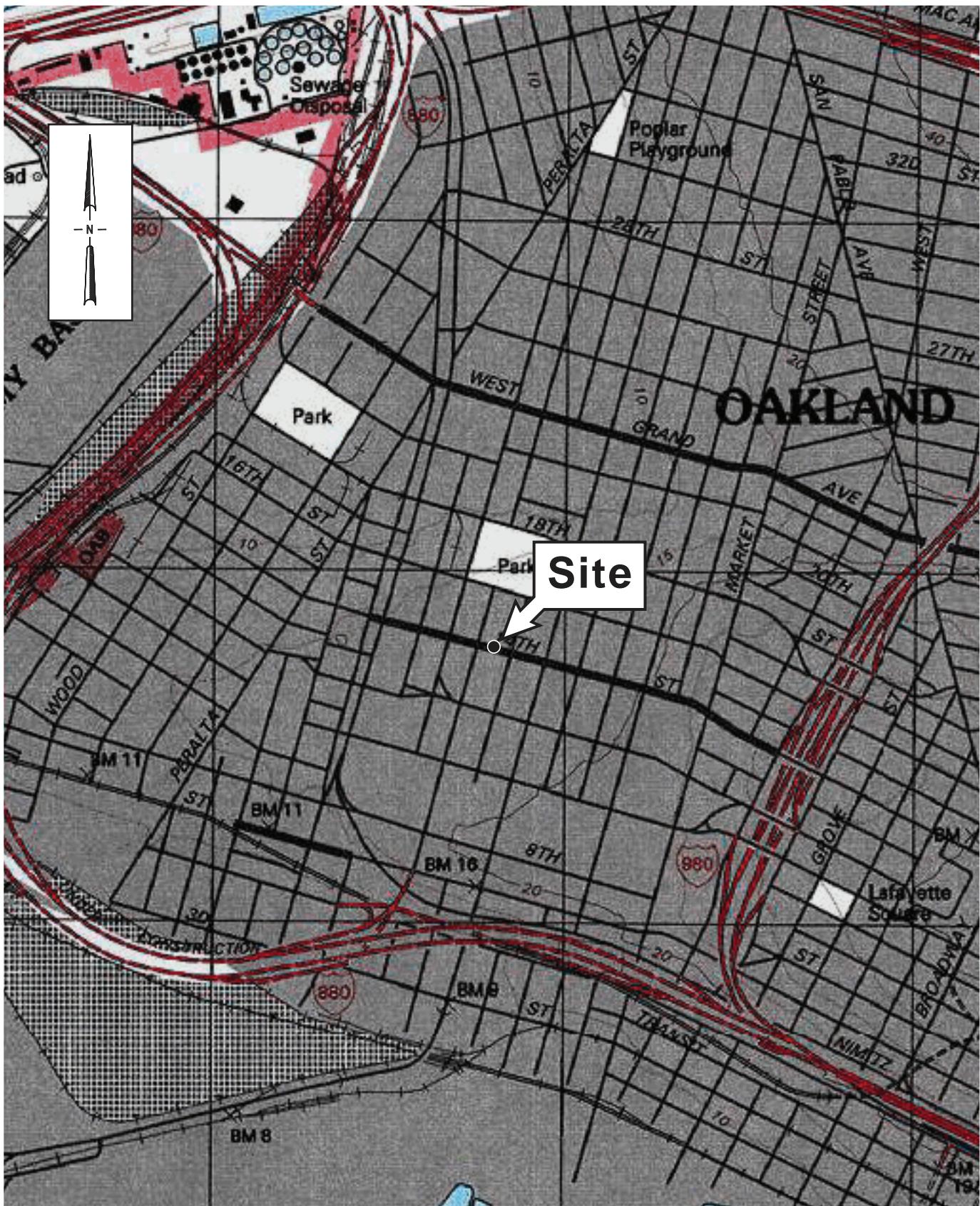
- The lateral extent of hydrocarbon contamination is well defined by the existing site monitoring and remediation well network. Analytical data from the new remediation wells confirms that the primary contaminant source area is near and downgradient of the former UST location in the center and northeastern portion of the site.
- The elevated concentrations of detected contaminants and relatively high permeability of strata encountered in the screened sections of the newly installed DP and AS wells indicate that the wells are appropriately targeted to remediate site soil and groundwater.

ATTACHMENTS

Figure 1 – Vicinity Map
Figure 2 – Well Location Map
Figure 3 – Distribution of TPHg in Groundwater
Figure 4 – Distribution of Benzene in Groundwater

Table 1 – Groundwater Analytical Data
Table 2 – Well Construction Details

Appendix A – Permits
Appendix B – Boring Logs
Appendix C – Standard Operating Procedures
Appendix D – Well Development Field Data Sheets
Appendix E – Laboratory Analytical Report



Figure

1

Former Shell Service Station

1230 14th Street
Oakland, California

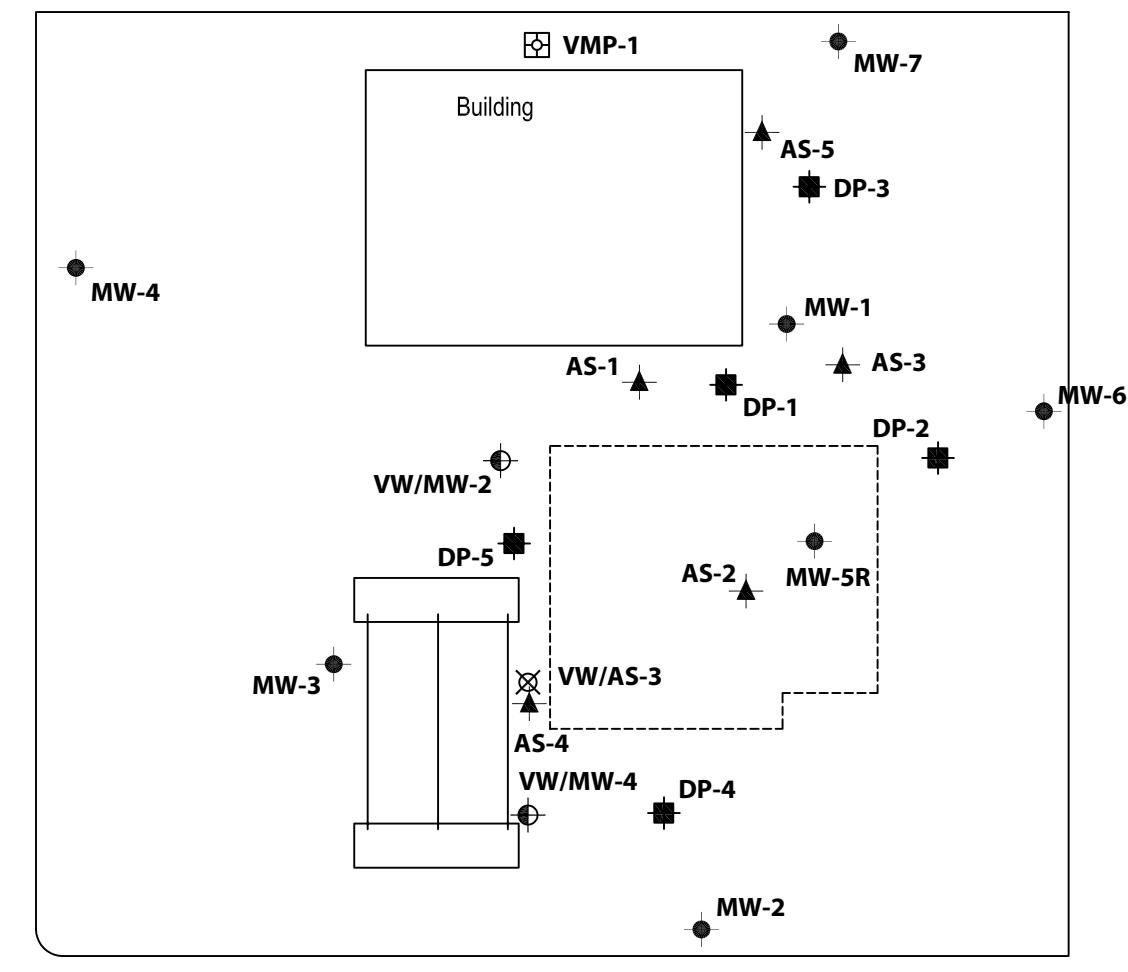


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Vicinity Map

GW

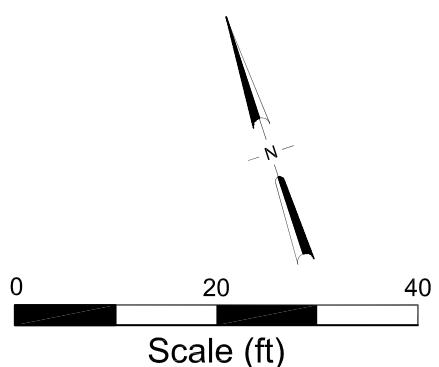
UNION STREET



14TH STREET

EXPLANATION

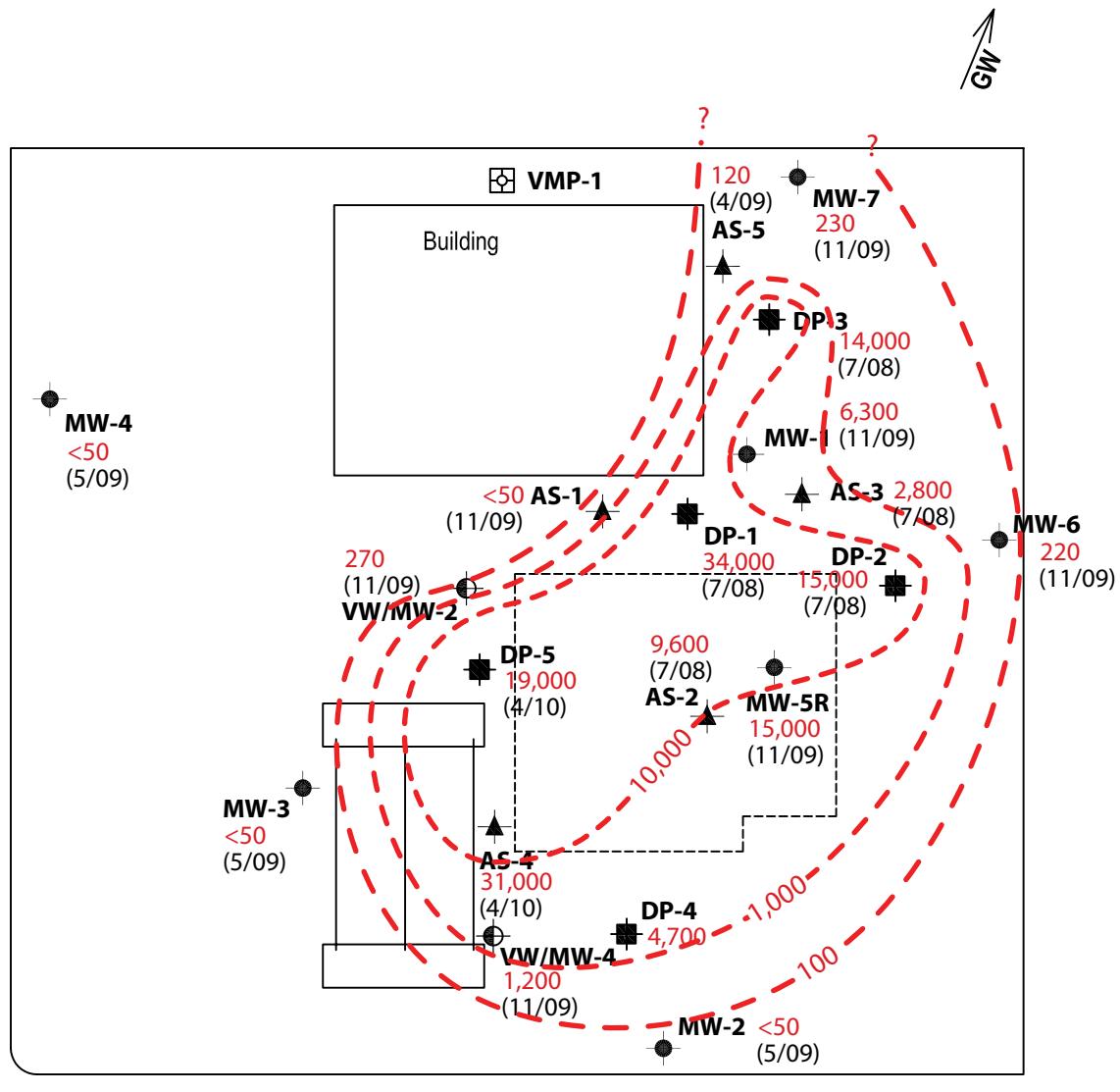
- DP-1** ── Dual phase extraction (DPE) well
- AS-1** ▲ Air sparge well (AS)
- VMP-1** ☐ Vapor monitoring point
- MW-1** ● Groundwater monitoring well
- VW/MW-4** ○ Combination soil vapor extraction well/monitoring well
- VW/AS-3** ✘ Destroyed well
- GW** ↗ Estimated groundwater flow direction



Figure

2

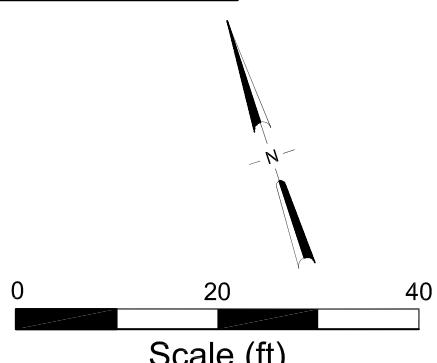
UNION STREET



14TH STREET

EXPLANATION

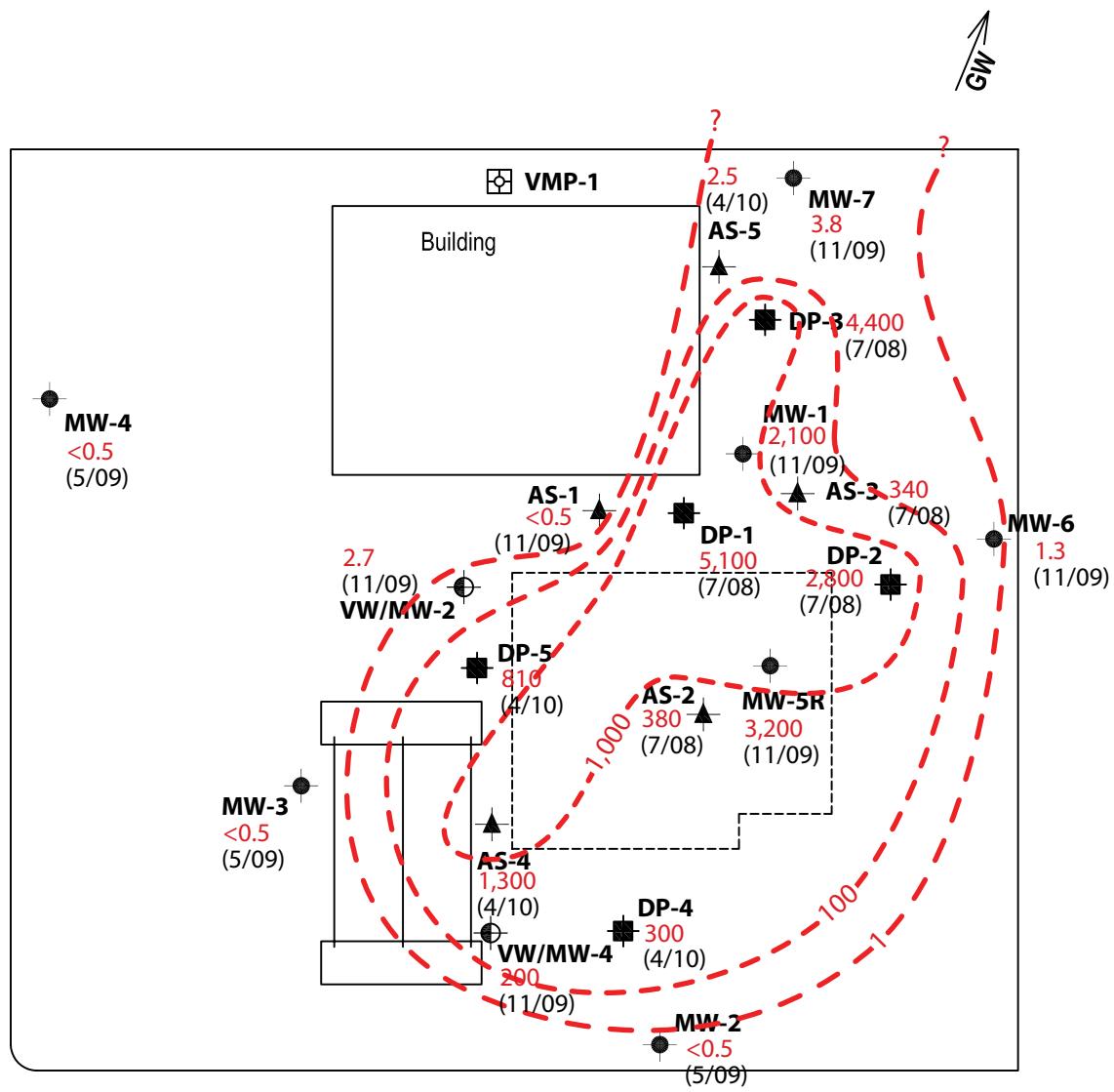
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- VMP-1** ◻ Vapor monitoring point
- MW-1** ● Groundwater monitoring well
- VW/MW-4** ○ Combination soil vapor extraction well/monitoring well
- GW** ↗ Estimated groundwater flow direction
- 100** - TPHg isoconcentration contour of shallow water bearing zone* (* Note AS wells screened from 22-25' bgs deeper than other wells)
- 3.8 (11/09)** TPHg concentration in micrograms per liter ($\mu\text{g}/\text{L}$); date sampled



Figure

3

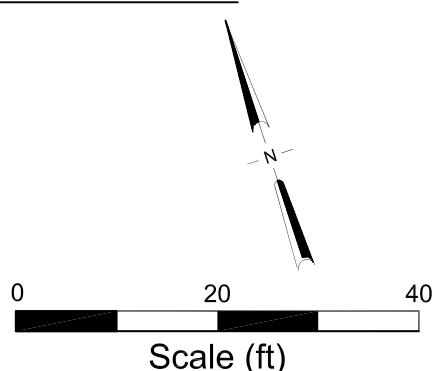
UNION STREET



14TH 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
- Estimated groundwater flow direction
- 100 - Benzene isoconcentration contour of shallow water bearing zone* (* Note AS wells screened from 22-25' bgs deeper than other wells)
- 3.8 (11/09) Benzene concentration in micrograms per liter ($\mu\text{g/L}$); date sampled



Figure

4

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

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
REMEDIATION WELLS										
AS-1	07/02/08	12.08	--	28,000	390	350	620	2,500	<500	--
	08/18/08	13.05	--	1,500	12	6.1	6.7	91	<17	1.94/2.41
	11/20/08	13.69	--	640	2.4	2.7	1.0	8.5	<5.0	2.51/2.91
	02/18/09	12.09	--	270	1.1	2.2	<0.5	<0.5	<5.0	2.94/2.99
	05/26/09	11.40	--	250	1.7	0.70	<0.5	3.5	<5.0	3.01/2.94
	11/23/09	13.38	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.94/2.65
AS-2	07/02/08	11.98	--	9,600	380	620	170	1,000	<50	--
AS-3	07/02/08	12.42	--	2,800	340	7.2	20	37	<50	--
AS-4	04/16/10	8.82	---	31,000	1,300	330	400	6,600	<500	---
AS-5	04/16/10	10.03	---	120	2.5	1.3	1.2	17	<5.0	---
DP-1	07/03/08	12.43	--	34,000	5,100	1,800	1,300	4,900	<350	--
DP-2	07/03/08	12.92	--	15,000	2,800	300	560	1,600	<150	--
DP-3	07/02/08	13.21	--	14,000	4,400	100	720	150	<350	--
DP-4	04/16/10	8.95	---	4,700	300	45	260	570	<100	---
DP-5	04/16/10	9.11	---	19,000	810	1,900	680	3,100	<350	---
GROUNDWATER AND/OR REMEDIATION WELLS										
MW-1	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	--

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

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-1 cont'd)	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
MW-2	03/25/96	8.19	9.71	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
17.90	06/21/96	9.94	7.96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	09/26/96	12.15	5.75	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
	12/19/96	11.70	6.20	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
	03/25/97	9.25	8.65	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.8
	06/26/97	11.36	6.54	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	09/26/97	12.56	5.34	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.1
	09/26/97	12.56	5.34	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.1
	12/05/97	11.15	6.75	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.7
	02/19/98	5.61	12.29	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.7
	06/08/98	5.58	12.32	<50	<0.30	<0.30	<0.30	<0.60	<10	3.2
	08/25/98	10.67	7.23	--	--	--	--	--	--	1.7
	12/28/98	11.65	6.25	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	0.4/0.8
	03/26/99	8.60	9.30	--	--	--	--	--	--	0.7
	06/30/99	10.30	7.60	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	2.3
	09/30/99	10.77	7.13	--	--	--	--	--	--	1.9
	12/27/99	12.21	5.69	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	0.7/0.7
	03/07/00	7.13	10.77	--	--	--	--	--	--	1.1
	04/17/00	8.35	9.55	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	1.8/1.8
	09/21/00	11.76	6.14	--	--	--	--	--	--	2.1
	10/17/00	11.80	6.10	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.9/0.6
	01/09/01	12.14	5.76	--	--	--	--	--	--	0.7
	04/27/01	9.85	8.05	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	1.1/0.9
	07/03/01	11.20	6.70	--	--	--	--	--	--	1.2
	12/06/01	10.77	7.13	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	3.9/2.1
	01/23/02	8.64	9.26	--	--	--	--	--	--	2.5
	04/17/02	9.61	8.29	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	3.5/5.2
	07/18/02	11.09	6.81	--	--	--	--	--	--	1.4
	11/11/02	12.16	5.74	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	0.2/0.3
	01/16/03	8.92	8.98	--	--	--	--	--	--	1.7
	03/13/03	9.60	8.30	--	--	--	--	--	--	1.1
	04/23/03	9.48	8.42	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.4/0.2
	05/13/03	9.45	8.45	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.5/0.3
	06/13/03	10.28	7.62	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	0.6/0.9
	07/14/03	10.67	7.23	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.5/0.09
	09/29/03	11.58	6.32	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.9/1.3
	10/29/03	11.76	6.14	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	4.3/0.5
	01/05/04	9.36	8.54	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.2/0.8
	04/01/04	8.77	9.13	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	4.0/0.3
	07/02/04	11.04	6.86	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.4/0.3
	11/03/04	11.71	6.19	<50	<0.50	<0.50	<0.50	<1.0	(0.54)	6.4/1.40
	01/04/05	8.68	9.22	<50	<0.50	<0.50	<0.50	<1.0	(0.62)	4.41/2.88
	04/13/05	7.13	10.77	<50	<0.50	<0.50	<0.50	<0.50	(1.7)	0.71/0.23
	07/13/05	10.30	7.60	<50	<0.50	<0.50	<0.50	<1.0	(2.3)	0.90/0.33
	10/28/05	11.61	6.29	<50	<0.50	<0.50	<0.50	<1.0	(4.2)	0.4/0.1
	01/17/06	8.21	9.69	<50	<0.50	<0.50	<0.50	<0.50	(5.0)	0.8/0.2
	03/09/06	7.70	10.20	--	--	--	--	--	--	--

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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)	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
	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	--	--	--	--	--	--	--
MW-3	03/25/96	8.47	9.71	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
<i>18.18</i>	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

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-3 cont'd)	07/14/03	10.98	7.20	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.4/0.03
	09/29/03	11.84	6.34	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.4/1.1
	10/29/03	12.05	6.13	58 b	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.8/0.4
	01/05/04	9.70	8.48	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.3/0.7
	04/01/04	9.03	9.15	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.2/0.6
	07/02/04	11.15	7.03	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.7/0.5
	11/03/04	11.98	6.20	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.65/2.75
	01/04/05	8.98	9.20	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	3.21/1.87
	04/13/05	7.22	10.96	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	4.92/5.28
	07/13/05	10.30	7.88	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.30/0.40
	10/28/05	11.81	6.37	<50 f	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.8/0.2
	01/17/06	8.17	10.01	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	3.1/2.0
	03/09/06	6.45	11.73	--	--	--	--	--	--	--
	04/21/06	5.96	12.22	--	--	--	--	--	--	--
	05/01/06	6.40	11.78	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500(<0.500)	0.68/0.42
	08/30/06	10.95	7.23	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500(<0.500)	3.53/3.14
	09/29/06	11.40	6.78	--	--	--	--	--	--	--
	11/03/06	11.91	6.27	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500(<0.500)	7.0/6.8
	01/30/07	11.55	6.63	<50	<0.50	<0.50	<0.50	<1.0	<0.50(<0.50)	1.45/1.10
	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	--	--	--	--	--	--	--
MW-4	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

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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>	10/17/00	11.96	6.05	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	5.5/1.2
	01/09/01	12.33	5.68	--	--	--	--	--	--	2.1
	04/27/01	9.96	8.05	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	5.3/3.8
	07/03/01	11.35	6.66	--	--	--	--	--	--	4.5
	12/06/01	10.99	7.02	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	10.23/6.5
	01/23/02	8.80	9.21	--	--	--	--	--	--	8.8
	04/17/02	9.75	8.26	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	7.0/5.1
	07/18/02	11.32	6.69	--	--	--	--	--	--	5.3
	11/11/02	12.36	5.65	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	3.6/2.0
	01/16/03	10.33	7.68	--	--	--	--	--	--	6.5
	03/13/03	10.06	7.95	--	--	--	--	--	--	6.5
	04/23/03	9.57	8.44	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	5.1/5.7
	05/13/03	9.55	8.46	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	2.0/2.5
	06/13/03	10.50	7.51	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	5.0/5.6
	07/14/03	10.86	7.15	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	3.9/4.2
	09/29/03	11.74	6.27	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.6/1.4
	10/29/03	11.95	6.06	58 b	<0.50	<0.50	<0.50	<1.0	(<0.50)	2.4/1.0
	01/05/04	10.35	7.66	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	7.4/7.5
	04/01/04	8.81	9.20	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	6.0/6.4
	07/02/04	11.10	6.91	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	0.8/0.6
	11/03/04	11.85	6.16	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.3/2.84
	01/04/05	9.06	8.95	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	7.12/6.37
	04/13/05	6.84	11.17	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	5.81/5.66
	07/13/05	10.20	7.81	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.87/3.75
	10/28/05	11.75	6.26	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	1.4/0.8
	01/17/06	8.00	10.01	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	6.4/6.2
	03/09/06	6.55	11.46	--	--	--	--	--	--	--
	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	--	--	--	--	--	--	--
MW-5	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	(<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

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)	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
	05/26/08	11.69	6.78	39,000	9,600	1,100	1,400	2,400	<250	1.10/1.52
	06/27/08								MW-5 drilled out and replaced with MW-5R	
MW-5R	07/02/08	11.91	--	22,000	4,100	710	750	2,300	<250	--
	08/18/08	12.59	--	27,000	3,100	340	780	2,100	<100	0.57/3.23
	11/20/08	13.24	--	23,000	5,200	470	1,200	1,500	<250	0.83/2.50
	02/18/09	11.58	--	32,000	4,500	610	990	1,400	<500	1.04/2.11
	05/26/09	10.92	--	15,000	3,500	520	680	1,500	<200	0.85/1.05
	11/23/09	12.92	--	15,000	3,200	350	560	940	<250	0.98/2.30

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

Well ID	Date Measured	DTW (feet)	GWE (feet) (MSL)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Dissolved Oxygen (mg/L)
MW-6	12/03/01	12.19	6.65	--	--	--	--	--	--	--
18.84	12/06/01	11.70	7.14	76	5.7	3.8	1.4	7.0	(<5.0)	6.3/6.1
	01/23/02	9.57	9.27	--	--	--	--	--	--	8.7
	04/17/02	10.73	8.11	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	9.8/9.1
	07/18/02	12.27	6.57	--	--	--	--	--	--	1.7
	11/11/02	13.24	5.60	580	55	<0.50	<0.50	2.8	(<5.0)	0.3/0.6
	01/16/03	9.89	8.95	--	--	--	--	--	--	6.4
	03/13/03	10.66	8.18	--	--	--	--	--	--	5.5
	04/23/03	10.57	8.27	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	3.7/4.4
	05/13/03	10.56	8.28	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	3.5/3.0
	06/13/03	11.48	7.36	<50	<0.50	<0.50	<0.50	<1.0	(<5.0)	2.7/3.1
	07/14/03	11.83	7.01	230 b	3.4	<0.50	<0.50	<1.0	(<0.50)	1.8/1.3
	09/29/03	12.70	6.14	910 b	46	<2.5	<2.5	<5.0	(<2.5)	1.1/1.0
	10/29/03	12.91	5.93	830	38	0.53	<0.50	3.3	(0.60)	1.2/0.9
	01/05/04	10.35	8.49	93	0.92	<0.50	<0.50	<1.0	(<0.50)	6.2/4.3
	04/01/04	9.80	9.04	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	3.5/3.4
	07/02/04	12.09	6.75	370	3.0	<0.50	<0.50	<1.0	(<0.50)	0.6/1.0
	11/03/04	12.84	6.00	540	22	0.73	<0.50	1.5	(0.82)	2.28/0.84
	01/04/05	9.55	9.29	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	6.71/5.16
	04/13/05	7.89	10.95	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	2.99/2.87
	07/13/05	11.13	7.71	170	6.2	1.1	<0.50	<1.0	(0.71)	0.10/1.32
	10/28/05	12.74	6.10	490	22	<0.50	<0.50	<1.0	(<0.50)	0.6/0.3
	01/17/06	8.80	10.04	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	5.3/4.9
	02/23/06	9.54	9.30	--	<0.500	<0.500	<0.500	<0.500	--	--
	03/09/06	7.25	11.59	--	<0.500	<0.500	<0.500	<0.500	--	--
	04/21/06	6.34	12.50	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	05/01/06	7.32	11.52	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	0.72/0.63
	06/23/06	10.12	8.72	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	07/11/06	10.12	8.72	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	08/30/06	11.79	7.05	<50.0	3.32	<0.500	<0.500	<0.500	(<0.500)	0.80/0.86
	09/29/06	12.32	6.52	<50.0	1.59	<0.500	<0.500	<0.500	(<0.500)	--
	10/13/06	12.38	6.46	934	3.14	<0.500	<0.500	<0.500	(<0.500)	--
	11/03/06	12.77	6.07	112	10.6	<0.500	<0.500	<0.500	(<0.500)	3.80/1.10
	12/26/06	12.05	6.79	690	62	<0.50	<0.50	4.5	(<0.50)	--
	01/11/07	12.12	6.72	660	11	<0.50	<0.50	2.3	(<0.50)	--
	01/30/07	12.44	6.40	310	1.5	<0.50	<0.50	<1.0	(<0.50)	1.47/0.81
	03/01/07	10.97	7.87	360	3.6	<0.50	<0.50	0.87	(<0.50)	--
	04/26/07	11.18	7.66	210 k	0.72	<1.0	<1.0	<1.0	(<1.0)	--
	06/01/07	11.72	7.12	640 k	3.1	<1.0	<1.0	0.27 m	(<1.0)	0.69/0.50
	06/21/07	12.22	6.62	390 k	3.0	<1.0	<1.0	0.17 m	(<1.0)	--
	07/03/07	12.22	6.62	360 k	3.0	<1.0	0.36 m	1.2	(<1.0)	--
	08/16/07	12.74	6.10	400 k,l	2.8	<1.0	<1.0	<1.0	(<1.0)	0.4/0.1
	12/06/07	13.24	5.60	130	<0.5	1.6	<0.5	<0.5	(<0.5)	--
	02/25/08	10.26	8.58	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.81
	05/26/08	12.20	6.64	<50	1.1	0.88	<0.5	<0.5	<5.0	6.77/6.59
	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

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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)
MW-7	12/03/01	12.66	6.54	--	--	--	--	--	--	--
19.20	12/06/01	12.20	7.00	1,800	390	<2.0	6.2	<2.0	(<20)	3.9/3.8
	01/23/02	10.00	9.20	--	--	--	--	--	--	9.4
	04/17/02	11.21	7.99	<50	<0.50	<0.50	<0.50	<0.50	(<5.0)	8.8/7.3
	07/18/02	12.69	6.51	--	--	--	--	--	--	0.8
	11/11/02	13.69	5.51	3,000	190	<0.50	<0.50	4.3	(5.2)	0.4/0.8
	01/16/03	10.36	8.84	--	--	--	--	--	--	7.9
	03/13/03	11.16	8.04	--	--	--	--	--	--	5.2
	04/23/03	11.02	8.18	250	48	<0.50	<0.50	<1.0	(<5.0)	3.2/1.3
	05/13/03	11.00	8.20	1,700	550	<2.5	<2.5	<5.0	(<25)	2.0/1.5
	06/13/03	11.90	7.30	1,500 b	470	<2.5	<2.5	<5.0	(<25)	1.8/1.6
	07/14/03	12.29	6.91	1300 b	1,200	<10	<10	<20	(<10)	0.4/0.2
	09/29/03	13.12	6.08	5,200	1,200	<10	<10	<20	(<10)	0.9/0.9
	10/29/03	13.34	5.86	4,800	1,100	<5.0	<5.0	<10	(8.9)	0.4/0.3
	01/05/04	10.85	8.35	53	6.7	<0.50	<0.50	<1.0	(<0.50)	1.4/2.3
	04/01/04	10.28	8.92	<50	<0.50	<0.50	<0.50	<1.0	(<0.50)	5.5/6.2
	07/02/04	12.48	6.72	8,100 d	3,400	<25	<25	<50	(<25)	0.8/0.8
	11/03/04	13.25	5.95	3,700	1,200	<5.0	<5.0	<10	(<5.0)	1.9/0.8
	01/04/05	10.02	9.18	<50	2.0	<0.50	<0.50	<1.0	(<0.50)	6.31/5.71
	04/13/05	8.46	10.74	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	5.87/5.89
	07/13/05	11.57	7.63	1,100	380	9.2	<2.5	37	(<2.5)	0.30/0.33
	10/28/05	13.15	6.05	5,100	2,900	<13	<13	<25	(<13)	0.6/0.9
	01/17/06	9.30	9.90	<50	<0.50	<0.50	<0.50	<0.50	(<0.50)	6.4/7.4
	02/23/06	10.03	9.17	--	<0.500	<0.500	<0.500	<0.500	--	--
	03/09/06	7.70	11.50	--	<0.500	<0.500	<0.500	<0.500	--	--
	04/21/06	6.66	12.54	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	05/01/06	7.72	11.48	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	0.67/0.98
	06/23/06	10.55	8.65	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	07/11/06	10.55	8.65	<50.0	<0.500	<0.500	<0.500	<0.500	(<0.500)	--
	08/30/06	12.35	6.85	1,520	150	13.3	5.78	53.0	(0.640)	0.52/0.79
	09/29/06	12.66	6.54	2,420	384	1.80	<0.500	5.44	(0.850)	--
	10/13/06	12.85	6.35	5,980	549	0.540	0.680	11.7	(0.930)	--
	11/03/06	13.73	5.47	3,190	501	<0.500	<0.500	5.38	(0.560)	2.2/1.4
	12/26/06	12.51	6.69	4,600	570	<0.50	44	2.1	(<0.50)	--
	01/11/07	12.55	6.65	3,900	490	<2.5	46	<5.0	(<2.5)	--
	01/30/07	12.89	6.31	2,500	380	<2.5	40	<5.0	(<2.5)	1.37/0.90
	03/01/07	11.45	7.75	2,600	350	<2.5	35	3.5	(<2.5)	--
	04/26/07	11.62	7.58	2,300 k	290	<5.0	31	1.3 m	(<5.0)	--
	06/01/07	12.23	6.97	4,400 k	350	<2.0	19	<2.0	(1.1 m)	0.04/0.71
	06/21/07	12.67	6.53	2,600 k	260	<2.0	12	<2.0	(1.4 m)	--
	07/03/07	12.76	6.44	1,700 k	170	<1.0	7.7	0.86 m	(<1.0)	--
	08/16/07	13.20	6.00	1,900 k	44	<1.0	<1.0	<1.0	(<1.0)	0.5/1.1
	12/06/07	13.73	5.47	510	21	3.1	5.8	14	(1.2)	--
	02/25/08	10.65	8.55	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.11
	05/26/08	12.62	6.58	600	190	2.3	<0.5	<0.5	<35	1.31/3.52
	08/18/08	13.52	5.68	540	71	2.7	<0.5	0.85	<25	1.12/4.75
	11/20/08	14.14	5.06	160	2.2	1.3	<0.5	<0.5	<10	1.46/2.90
	02/18/09	12.48	6.72	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.08/2.70
	05/26/09	11.90	7.30	<50	2.8	0.60	<0.5	<0.5	<5.0	1.02/1.77
	11/23/09	13.85	5.35	230	3.8	3.5	<0.5	<0.5	<30	1.08/2.14

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

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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-2 <i>cont'd.</i>	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
VW/MW-4	03/25/96	8.45	9.69	83,000	6,500	7,000	2,000	11,000	<250	--
<i>18.14</i>	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

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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,	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

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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 <i>cont'd.</i>	05/26/09	10.55	7.59	540	16	11	1.3	1.1	<10	0.81/1.06
	11/23/09	12.55	5.59	1,200	200	12	3.5	12	<5.0	0.84/1.66
VW/AS-1	03/25/96	8.98	9.62	--	--	--	--	--	--	--
<i>18.60</i>	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

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-1 cont'd)	07/13/05	10.90	7.70	--	--	--	--	--	--	--
	07/22/05	10.96	7.64	8,200	5,900	86	340	320	(<25)	1.7/1.0
	10/28/05	12.30	6.30	2,100	1,300	18	63	21	(<5.0)	0.5/1.6
	01/17/06	8.65	9.95	6,200 g	2,900	190	400	600	(4.70)	1.4/1.0
	02/23/06	9.33	9.27	--	3,080	222	414	778	--	--
	03/09/06	7.40	11.20	--	1,350	88.5	128	164	--	--
	04/21/06	6.44	12.16	18,200	4,460	167	419	717	(2.79)	--
	05/01/06	7.22	11.38	19,700	5,300	261	664	1,050	(<0.500)	0.71/1.23
	06/23/06	9.73	8.87	20,600	3,820	305	259	435	(3.31 h)	--
	07/11/06	9.73	8.87	9,130	6,200	108	232	254	(<0.500)	--
	08/30/06	11.60	7.00	164,000	3,190	6,240	3,780	17,900	(<10.0)	0.4
	09/29/06	11.97	6.63	130,000	6,160	6,370 i	2,910	11,600 i	(<25.0)	--
	10/13/06	12.18	6.42	144,000	6,320	5,710	2,930	13,100	(1.03)	--
	11/03/06	12.21	6.39	112,000	8,290	5,670	2,760	12,100	(<0.500)	0.80
	12/26/06	11.74	6.86	94,000	6,900	5,100	3,100	13,000	(<50)	--
	01/11/07	11.83	6.77	73,000	6,600	5,500	3,000	12,000	(<50)	--
	01/30/07	12.12	6.48	54,000	6,800	4,500	2,200	8,800	(<50)	1.16/1.16
	03/01/07	10.71	7.89	52,000	6,300	3,700	3,400	12,000	(<50)	--
	04/26/07	10.84	7.76	72,000 k	7,200	4,500	3,000	10,900	(<50)	--
	06/01/07	11.40	7.20	70,000 k	7,600	4,900	3,200	12,100	(<50)	0.60/1.09
	06/21/07	11.92	6.68	59,000 k	7,300	3,700	3,200	12,100	(<50)	--
	07/03/07	11.98	6.62	70,000 k	8,800	4,700	3,500	13,500	(<50)	--
	08/16/07	12.53	6.07	67,000 k	9,000	5,500	3,900	14,200	(<50)	0.2/0.1
	12/06/07	12.97	5.63	180,000	9,500	5,000	4,100	16,000	(<17)	--
	02/25/08	9.84	8.76	47,000	3,500	1,200	1,500	4,400	<350	2.39
	05/26/08	11.88	6.72	82,000	8,100	3,000	3,100	12,000	<500	1.65/1.05
	06/27/08								VW/AS-1 drilled out and replaced with AS-1	
VW/AS-2	03/09/06	6.95	--	--	--	--	--	--	--	--
VW/AS-3	03/25/96	8.50	9.67	--	--	--	--	--	--	--
<i>18.17</i>	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

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)	10/17/00	12.13	6.04	7,730	2,700	<50.0	542	344	<250(42.1)	1.6/1.0
	01/09/01	12.51	5.66	--	--	--	--	--	--	2.2
	04/27/01	10.20	7.97	14,000	3,900	62	690	560	(46)	2.8/1.6
	07/03/01	11.55	6.62	--	--	--	--	--	--	2.6
	12/06/01	11.10	7.07	5,000	1,200	19	380	320	(<50)	0.9/1.1
	01/23/02	8.93	9.24	--	--	--	--	--	--	1.1
	04/17/02	10.00	8.17	17,000	5,000	<25	1,100	390	(<250)	3.2/3.2
	07/18/02	11.49	6.68	--	--	--	--	--	--	0.4
	11/11/02	12.43	5.74	1,700	290	1.5	150	2.8	(<10)	1.0/1.1
	01/16/03	9.32	8.85	--	--	--	--	--	--	4.7
	03/13/03	9.88	8.29	--	--	--	--	--	--	2.7
	04/23/03	9.85	8.32	150	47	0.67	8.5	3.2	(<5.0)	2.1/0.7
	05/13/03	9.81	8.36	440	35	<0.50	1.7	<1.0	(<5.0)	1.4/1.8
	06/13/03	10.77	7.40	580	71	<2.5	40	<5.0	(<25)	1.1/0.6
	07/14/03	11.12	7.05	1,100	120	4.9	63	9.3	(16)	2.0/2.2
	09/29/03	12.02	6.15	160	54	2.2	6.9	8.7	(1.1)	4.1/1.6
	10/29/03	12.25	5.92	350	16	<0.50	1.1	<1.0	(6.3)	3.2/1.6
	01/05/04	9.74	8.43	2,700	870	39	130	250	(5.5)	3.6/2.8
	04/01/04	9.06	9.11	1,300	240	4.1	36	45	(12.0)	1.1/1.0
	07/02/04	11.29	6.88	610	59	<1.0	3.6	<2.0	(10.0)	2.0/2.2
	11/03/04	12.02	6.15	200	<0.50	<0.50	<0.50	<1.0	(10.0)	2.1/2.3
	01/04/05	8.99	9.18	2,500	730	42	36	190	(<10)	1.72/1.36
	04/13/05	7.25	10.92	<50	1.6	<0.50	<0.50	<0.50	(0.61)	2.85/3.04
	07/13/05	10.30	7.87	--	--	--	--	--	--	--
	07/22/05	10.51	7.66	160	36	0.65	<0.50	2.5	(2.60)	1.4/1.3
	10/28/05	11.93	6.24	100	<0.50	<0.50	<0.50	<1.0	(1.70)	1.6/0.9
	01/17/06	8.25	9.92	1,400	510	29	16	47	(5.40)	1.9/0.8
	04/21/06	6.06	12.11	--	--	--	--	--	--	--
	05/01/06	6.83	11.34	1,350	74.4	<0.500	12.5	0.520	(3.30)	1.35/0.78
	08/30/06	11.00	7.17	940	77.7	2.67	2.94	5.57	(3.45)	0.80/0.98
	09/29/06	11.30	6.87	--	--	--	--	--	--	--
	11/03/06	12.29	5.88	346 j	83.6 j	5.17 j	2.34 j	13.5 j	(3.47 j)	1.10/0.80
	01/30/07	12.59	5.58	130	13	0.64	<0.50	7.2	(3.4)	0.76/0.64
	06/01/07	10.82	7.35	2,200 k	650	13	3.2 m	143	(7.8)	1.21/0.93
	08/16/07	11.95	6.22	1,000 k	200	4.0	1.1	47.7	(3.3)	0.8/0.2
	12/06/07	12.43	5.74	<50	<0.5	<0.5	<0.5	<0.5	(<0.5)	--
	02/25/08	9.40	8.77	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.14
	05/26/08	11.20	6.97	1,800	260	6.0	4.3	35	<17	0.86/4.39
	6/26/2008						Well Destroyed			

Notes:

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

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

c = Top of casing change due to maintenance.

d = Sample contains discrete peak in addition to gasoline.

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

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

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

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

i = Analyte was detected in the associated Method Blank.

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)
---------	---------------	------------	---------------------	----------------	-------------------	-------------------	------------------------	-------------------	----------------	----------------------------

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 Dissolved Oxygen Readings

Table 2 - Well Construction Details – 1230 14th Street, Oakland, CA

Well ID	Slot Size (inches)	Total Depth of Well (feet bgs)	Screened Interval (ft bgs)	Well Casing Nominal Diameter (inches)	Filter Pack Interval (ft bgs)	Casing Material
MW-1	0.020	22	7-22	2	6-27	PVC – Sched 40
MW-2	0.020	22.5	7.5-22.5	2	6-22.5	PVC – Sched 40
MW-3	0.020	21.5	7-21.5	2	6-21.5	PVC – Sched 40
MW-4	0.020	22	7-22	2	6-22	PVC – Sched 40
MW-6	0.020	20	5-20	4	4-20	PVC – Sched 40
MW-7	0.020	20	5-20	4	4-20	PVC – Sched 40
VW/MW-2	0.020	22	6-22	2	5-22	PVC – Sched 40
VW/MW-4	0.020	20	5-20	2	4-21.5	PVC – Sched 40
MW-5R	0.010	23	5-20	4	4-23	PVC – Sched 40
DP-1	0.010	23	8-20	4	7-23	PVC – Sched 40
DP-2	0.010	23	8-20	4	7-23	PVC – Sched 40
DP-3	0.010	23	8-20	4	7-23	PVC – Sched 40
DP-4	0.010	20	8-20	4	7-20	PVC – Sched 40
DP-5	0.010	20	8-20	4	7-20	PVC – Sched 40
AS-1	0.010	25	22-25	1	21-25	PVC – Sched 80
AS-2	0.010	25	22-25	1	21-25	PVC – Sched 80
AS-3	0.010	25	22-25	1	21-25	PVC – Sched 80
AS-4	0.010	25	22-25	1	21.5-25	PVC – Sched 40
AS-5	0.010	25	21.5-25	1	21-24.5	PVC – Sched 40
VMP-1	0.0057*	5	4.25-4.75	1/2	4-5	Stainless Steel/Polyethylene

bgs = below ground surface

* = pore screen size

APPENDIX A

Permits

Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 02/17/2010 By jamesy

Permit Numbers: W2010-0090 to W2010-0091
Permits Valid from 03/03/2010 to 03/04/2010

Application Id: 1265417805422 **City of Project Site:** Oakland
Site Location: 1230 14th St **Completion Date:** 02/26/2010
Project Start Date: 02/24/2010 **Extension Start Date:** 03/03/2010 **Extension End Date:** 03/04/2010
Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org **Extended By:** vickyh1
Extension Count: 1

Applicant: Pangea Environmental Services - Morgan Gillies **Phone:** 510-836-3700
1710 Franklin St., Suite 200, Oakland, CA 94612

Property Owner: Andy Saberi **Phone:** --
1045 Airport Blvd., South San Francisco, CA 94080

Client: ** same as Property Owner **

Receipt Number: WR2010-0042	Total Due: \$530.00
Payer Name : Robert Clark-Riddell	Total Amount Paid: \$530.00
	Paid By: VISA
PAID IN FULL	

Works Requesting Permits:

Remediation Well Construction-Extraction - 2 Wells

Driller: RSI Drilling - Lic #: 802334 - Method: hstem

Work Total: \$265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2010-0090	02/17/2010	05/25/2010	DP-4	10.00 in.	4.00 in.	7.00 ft	20.00 ft
W2010-0090	02/17/2010	05/25/2010	DP-5	10.00 in.	4.00 in.	7.00 ft	20.00 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.
4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

Alameda County Public Works Agency - Water Resources Well Permit

5. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
6. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).
7. Minimum surface seal thickness is two inches of cement grout placed by tremie
8. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
9. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

Remediation Well Construction-Injection - 2 Wells

Driller: RSI Drilling - Lic #: 802334 - Method: hstem

Work Total: \$265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2010-0091	02/17/2010	05/25/2010	AS-4	6.00 in.	1.00 in.	21.00 ft	25.00 ft
W2010-0091	02/17/2010	05/25/2010	AS-5	6.00 in.	1.00 in.	21.00 ft	25.00 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
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Alameda County Public Works Agency - Water Resources Well Permit

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-

APPENDIX B

Boring Logs



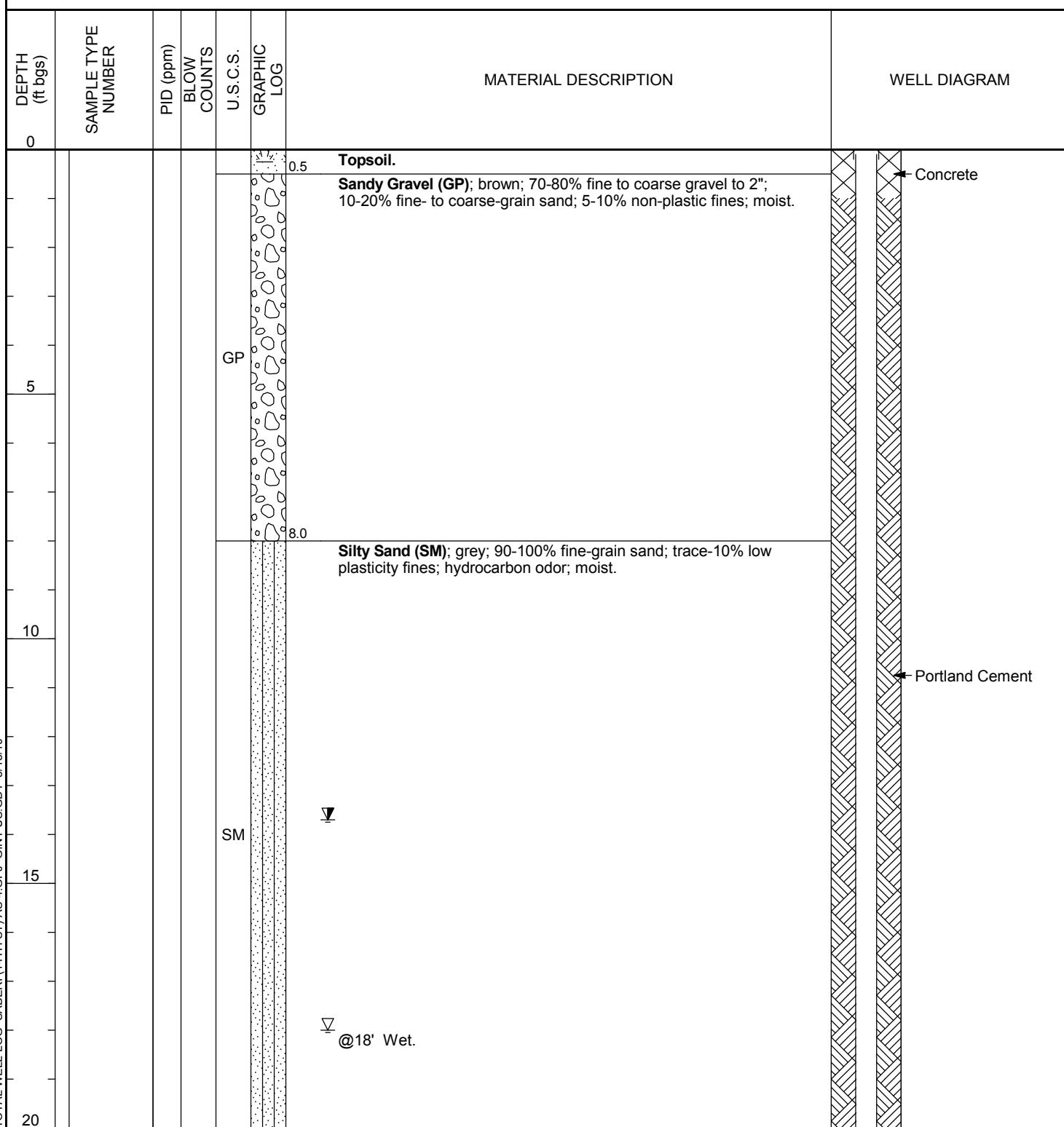
Pangea Environmental Services, Inc.
1710 Franklin Street Suite 200
Oakland, CA 94612

WELL NUMBER AS-4

PAGE 1 OF 2

CLIENT Saberi
PROJECT NUMBER 1150.001
DATE STARTED 3/3/10 COMPLETED 3/3/10
DRILLING CONTRACTOR RSI
DRILLING METHOD Hollow Stem Auger
LOGGED BY Morgan Gillies CHECKED BY Bob Clark-Riddell
NOTES Logged from cuttings.

PROJECT NAME Saberi - 1230 14th Street
PROJECT LOCATION 1230 14th Street
GROUND ELEVATION _____ HOLE SIZE 6"
GROUND WATER LEVELS:
▽ AT TIME OF DRILLING 18.0 ft
AT END OF DRILLING ---
▽ 4hrs AFTER DRILLING 13.7 ft



(Continued Next Page)



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

WELL NUMBER AS-4

PAGE 2 OF 2

CLIENT Saberi

PROJECT NAME Saberi - 1230 14th Street

PROJECT NUMBER 1150.001

PROJECT LOCATION 1230 14th Street

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION				WELL DIAGRAM
		FID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	
20					Silty Sand (SM); grey; 90-100% fine-grain sand; trace-10% low plasticity fines; hydrocarbon odor; moist. (continued)	<p>Bottom of hole at 25.0 feet.</p>
25				SM	25.0	

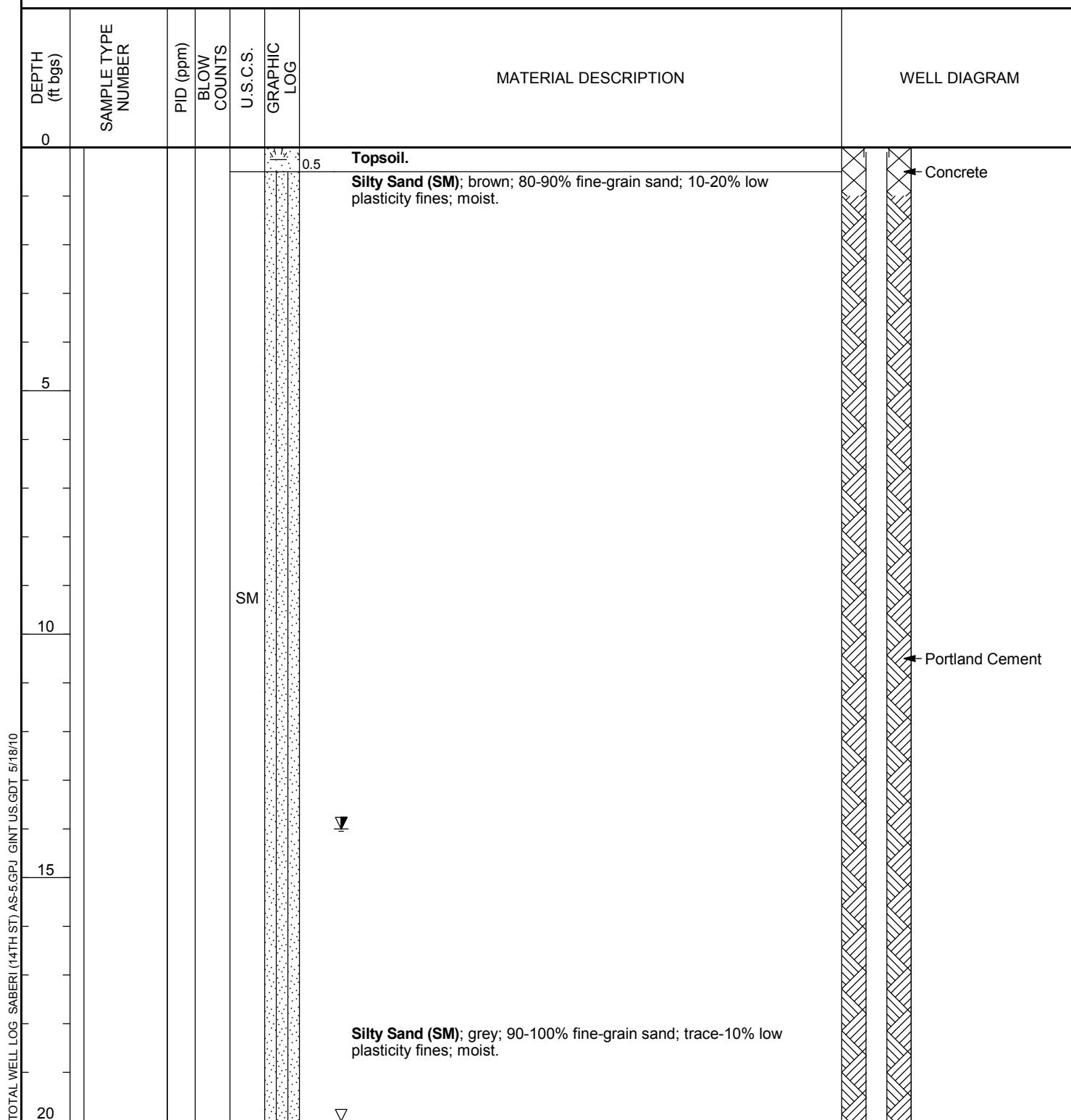


Pangea Environmental Services, Inc.
1710 Franklin Street Suite 200
Oakland, CA 94612

WELL NUMBER AS-5

PAGE 1 OF 2

CLIENT Saberi PROJECT NAME Saberi - 1230 14th Street
PROJECT NUMBER 1150.001 PROJECT LOCATION 1230 14th Street
DATE STARTED 3/3/10 COMPLETED 3/3/10 GROUND ELEVATION _____ HOLE SIZE 3.25"
DRILLING CONTRACTOR RSI GROUND WATER LEVELS:
DRILLING METHOD Direct Push AT TIME OF DRILLING 20.0 ft
LOGGED BY Morgan Gillies CHECKED BY Bob Clark-Riddell AT END OF DRILLING ---
NOTES AFTER DRILLING 14.0 ft



(Continued Next Page)



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

WELL NUMBER AS-5

PAGE 2 OF 2

CLIENT Saberi

PROJECT NAME Saberi - 1230 14th Street

PROJECT NUMBER 1150.001

PROJECT LOCATION 1230 14th Street

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION				WELL DIAGRAM
		FID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	
20					Silty Sand (SM); grey; 90-100% fine-grain sand; trace-10% low plasticity fines; moist. (continued) @20' Wet, hydrocarbon odor.	 Diameter 0.010" Slotted Screen Schedule 80 PVC'. At the bottom of the borehole is a textured area labeled 'Slough'."/>
25				25.0	Bottom of hole at 25.0 feet.	



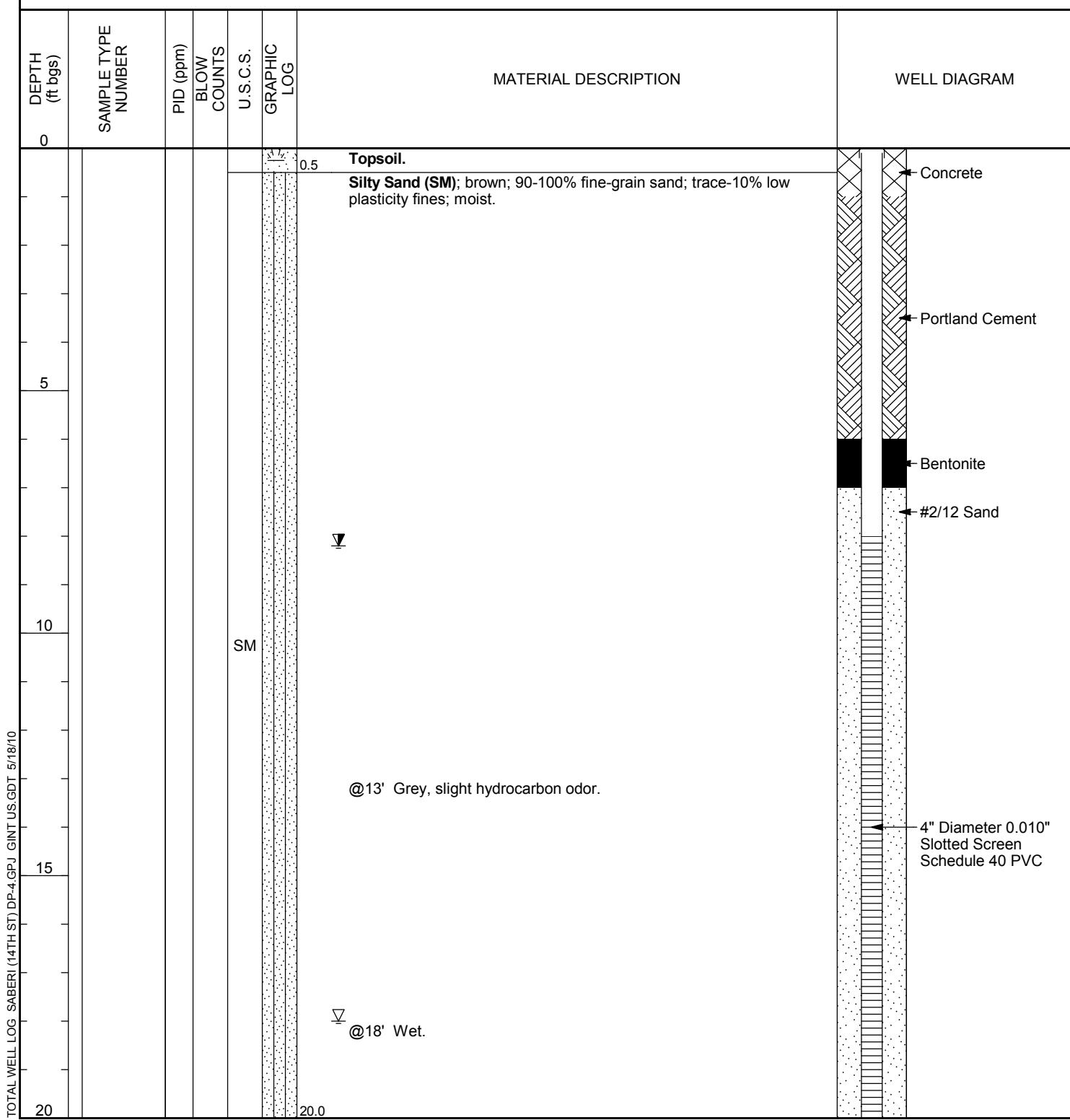
Pangea Environmental Services, Inc.
1710 Franklin Street Suite 200
Oakland, CA 94612

WELL NUMBER DP-4

PAGE 1 OF 1

CLIENT Saberi
PROJECT NUMBER 1150.001
DATE STARTED 3/3/10 COMPLETED 3/3/10
DRILLING CONTRACTOR RSI
DRILLING METHOD Hollow Stem Auger
LOGGED BY Morgan Gillies CHECKED BY Bob Clark-Riddell
NOTES Logged from cuttings.

PROJECT NAME Saberi - 1230 14th Street
PROJECT LOCATION 1230 14th Street
GROUND ELEVATION _____ HOLE SIZE 10"
GROUND WATER LEVELS:
▽ AT TIME OF DRILLING 18.0 ft
AT END OF DRILLING ---
▽ 25hrs AFTER DRILLING 8.2 ft





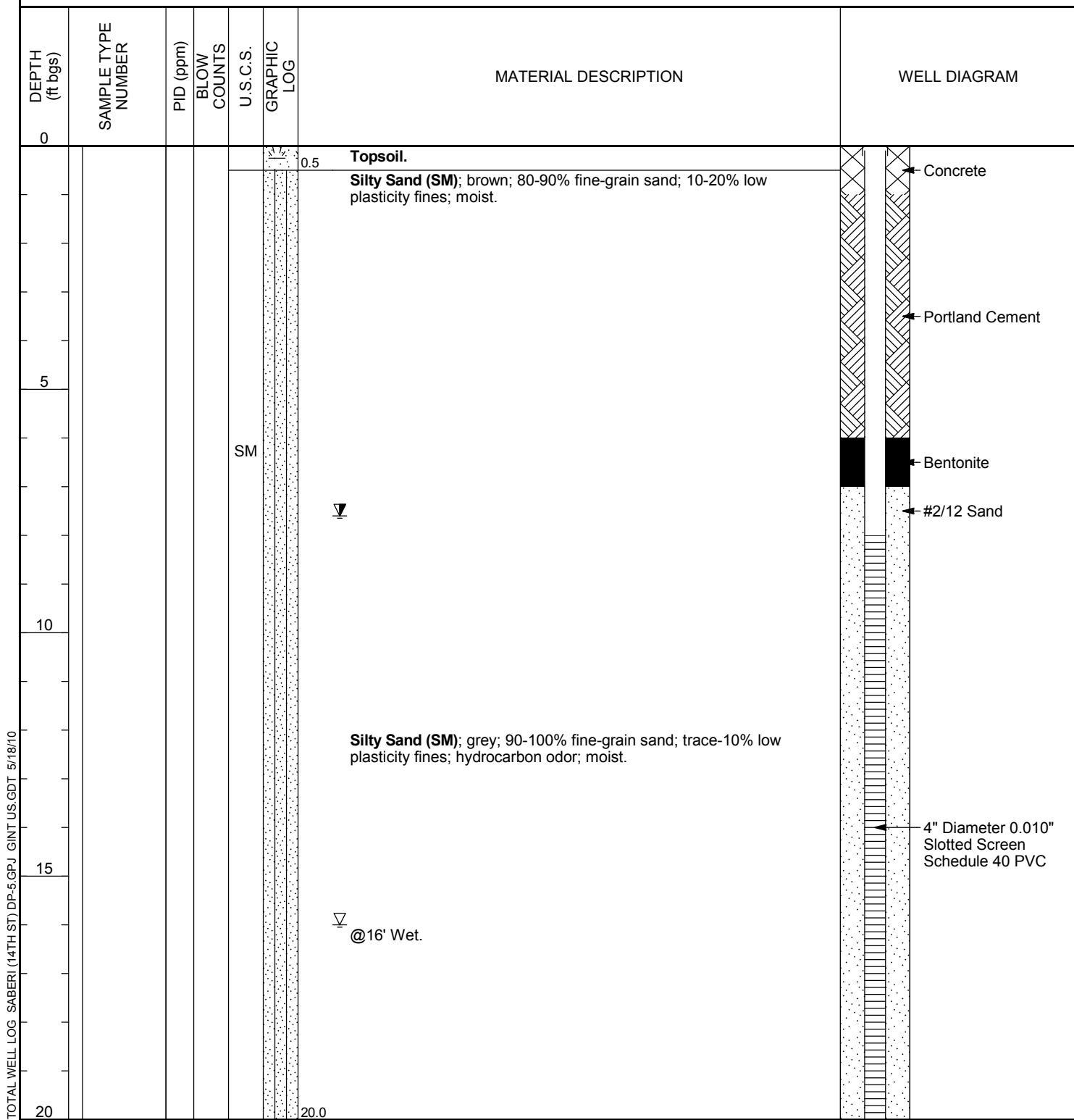
Pangea Environmental Services, Inc.
1710 Franklin Street Suite 200
Oakland, CA 94612

WELL NUMBER DP-5

PAGE 1 OF 1

CLIENT Saberi
PROJECT NUMBER 1150.001
DATE STARTED 3/3/10 COMPLETED 3/3/10
DRILLING CONTRACTOR RSI
DRILLING METHOD Hollow Stem Auger
LOGGED BY Morgan Gillies CHECKED BY Bob Clark-Riddell
NOTES Logged from cuttings.

PROJECT NAME Saberi - 1230 14th Street
PROJECT LOCATION 1230 14th Street
GROUND ELEVATION _____ HOLE SIZE 10"
GROUND WATER LEVELS:
 AT TIME OF DRILLING 16.0 ft
 AT END OF DRILLING ---
 27hrs AFTER DRILLING 7.6 ft



APPENDIX C

Standard Operating Procedures

STANDARD FIELD PROCEDURES FOR MONITORING WELLS

This document describes Pangea Environmental Services' standard field methods for drilling, installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Well Construction and Surveying

Groundwater monitoring wells are installed in soil borings to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 feet below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two ft above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I, II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security. The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. Wells may be surged prior to installation of the well seal to ensure that there are no voids in the sand pack. Development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

Groundwater Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

APPENDIX D

Well Development Field Data Sheets



Page 1 of 1

Well Gauging Data Sheet

Comments:

Pg 1 of 2

MONITORING FIELD DATA SHEET

Well ID: DP-4

Project Task #: 1150.001	Project Name: Saber - 1230 14th St.		
Address: 1230 14th Street, Oakland, CA			
Date: 4/16/10	Weather: Sunny		
Well Diameter: 4 "	Volume/ft.	1" = 0.04 2" = 0.16	3" = 0.37 4" = 0.65 radius ² * 0.163
Total Depth (TD): 20.00	Depth to Product:		
Depth to Water (DTW): 8.95	Product Thickness:		
Water Column Height: 11.05	1 Casing Volume:	7.18	gallons
Reference Point: TOC	10 Casing Volumes:	71.80	gallons
Purging Device: Disposable Bailer, 3" PVC Bailer, Parastaltic Pump, Whal Pump			

Sampling Device: Disposable Bailer

Time	Temp °C	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
6:00-6:30	<i>surged</i>							
6:33	16.9	7.28	690	grey silt			7	10.16
6:38	17.4	7.33	714	fine brown silt			14	12.46
6:41	17.1	7.39	740	" "	"		21	12.90
6:46	17.8	7.40	746	" "	"		28	13.36
6:51	17.5	7.44	719	less silt			35	14.10
6:56	17.8	7.48	713	light brown clear			42	15.69
7:00-7:30	<i>surged</i>							
7:32	17.7	7.45	790	clear			49	12.16
7:37	17.5	7.34	771	clear			56	12.94
7:42	17.4	7.31	753	clear			63	13.60

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

Sample ID: DP-4	Sample Time: 3:40
Laboratory: McCampbell Analytical, INC.	Sample Date: 4/16/10
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET

Well ID: DP-4

Project Task #: 1150.001	Project Name: Saberi - 1230 14th St.							
Address: 1230 14th Street, Oakland, CA								
Date: 4/16/10	Weather: Sunny							
Well Diameter: 4"	Volume/ft. 1" = 0.04 3" = 0.37 6" = 1.47 2" = 0.16 4" = 0.65 radius ² * 0.163							
Total Depth (TD): 20.00	Depth to Product:							
Depth to Water (DTW): 8.45	Product Thickness:							
Water Column Height: 11.05	1 Casing Volume: 7.18 gallons							
Reference Point: TOC	10 Casing Volumes: 71.80 gallons							
Purging Device: Disposable Bailer, 3" PVC Bailer, Parastaltic Pump Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp °C	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
7:47	17.1	7.35	758		clear	72	14.08	
7:49					Hard Bottom DTB=20.22,		14.01	
Well developed								
Comments: YSI 550A DO meter				pre purge DO =	mg/l			
				post purge DO =	mg/l			

Sample ID: DP-4	Sample Time: 3:40
Laboratory: McCampbell Analytical, INC.	Sample Date: 4/16/10
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

p310f2

MONITORING FIELD DATA SHEET

Well ID: DP-5

Project Task #: 1150.001	Project Name: Saberi - 1230 14th St.							
Address: 1230 14th Street, Oakland, CA								
Date: 4/16/10	Weather: Sunny							
Well Diameter: 4"	Volume/ft. 1" = 0.04 3" = 0.37 6" = 1.47 2" = 0.16 4" = 0.65 radius ² * 0.163							
Total Depth (TD): 20.02	Depth to Product:							
Depth to Water (DTW): 9.11	Product Thickness:							
Water Column Height: 10.91	1 Casing Volume: 7.09 gallons							
Reference Point: TOC	10 Casing Volumes: 70.90 gallons							
Purging Device: Disposable Bailer, 3" PVC Bailer, Parastaltic Pump, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp @	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
8:40-9:10	surge ed							
9:05	19.2	7.08	1460	green heavy silt	7	9.97		
9:10	19.5	7.24	1090	" "	14	10.60		
9:15	18.3	7.29	846	" "	21	10.91		
9:20	18.5	7.10	839	less silty	28	11.10		
9:25	18.7	7.14	822	grey light silt	35	11.70		
9:30	18.1	7.20	805	slightly turbid	42	11.82		
9:35-10:05	surge ed							
10:10	17.4	7.13	1290	very turbid finesilt	49	10.08		
10:15	17.0	7.21	1215	clear	56	10.11		
10:20	17.0	7.18	1262	clear	63	10.18		
Comments: YSI 550A DO meter				pre purge DO =	mg/l			
				post purge DO =	mg/l			

Sample ID: DP-5	Sample Time: 3:50
Laboratory: McCampbell Analytical, INC.	Sample Date: 4/16/10
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET

Well ID: DP-5
PG 20f2

Project Task #: 1150.001	Project Name: Saberi - 1230 14th St.							
Address: 1230 14th Street, Oakland, CA								
Date: 4/16/10	Weather: Sunny							
Well Diameter: 4"	Volume/ft. 1" = 0.04 3" = 0.37 6" = 1.47 2" = 0.16 4" = 0.65 radius ² * 0.163							
Total Depth (TD): 20.02	Depth to Product:							
Depth to Water (DTW): 9.11	Product Thickness:							
Water Column Height: 10.91	1 Casing Volume: 7.09 gallons							
Reference Point: TOC	10 Casing Volumes: 70.90 gallons							
Purging Device: Disposable Bailer, 3" PVC Bailer, Parastaltic Pump, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
10:25	17.6	7.25	1256		clear	71	10.68	
10:27				Hard bottom	DTB = 20.10,		10.56	
Well developed								
Comments: YSI 550A DO meter				pre purge DO =		mg/l		
				post purge DO =		mg/l		

Sample ID: DP-5	Sample Time: 3:50
Laboratory: McCampbell Analytical, INC.	Sample Date: 4/16/10 4/16/10
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

ps/df2

MONITORING FIELD DATA SHEET

Well ID: AS-4

Project Task #: 1150.001		Project Name: Saberi - 1230 14th St.							
Address: 1230 14th Street, Oakland, CA									
Date:	4/16/10		Weather:	Sunny					
Well Diameter:	1"		Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47			
				2" = 0.16	4" = 0.65	radius ² * 0.163			
Total Depth (TD):	25.14		Depth to Product:						
Depth to Water (DTW):	8.82		Product Thickness:						
Water Column Height:	16.32		1 Casing Volume:	0.65		gallons			
Reference Point: TOC			10 Casing Volumes:	6.50		gallons			
Purging Device: Disposable Bailer, 3" PVC Bailer Parastaltic Pump Water Pump									
Sampling Device: Disposable Bailer									
Time	Temp °C	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW	
1:45-2:15	Surged								
1:20	16.4	7.40	1950	very turbid, thick green silt	"	"	0.5	9.07	
1:25	16.8	7.38	1750	"	"	"	1.5	9.40	
1:30	16.1	7.20	1710	"	"	"	2.0	9.77	
1:35	16.4	7.15	1390	"	"	"	2.5	9.94	
1:40	18.2	7.10	1040	"	"	"	3.0	10.50	
1:45	18.2	7.08	950	less silty			3.5	11.68	
1:50-2:20	Surged								
2:25	16.9	7.20	920	green silty, less opaque			4.0	9.60	
2:30	17.3	7.17	946	slightly turbid	"	"	4.5	10.46	
2:35	17.1	7.15	952	"	"		5.0	10.59	
Comments: YSI 550A DO meter				pre purge DO =	mg/l				
				post purge DO =	mg/l				

Sample ID: AS-4	Sample Time: 4:10
Laboratory: McCampbell Analytical, INC.	Sample Date: 4/16/10
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET

pg 2 of 2
Well ID: AS4

Project Task #: 1150.001	Project Name: Saberi - 1230 14th St.							
Address: 1230 14th Street, Oakland, CA								
Date: 4/16/10	Weather: Sunny							
Well Diameter: 1"	Volume/ft.	1" = 0.04 3" = 0.37 6" = 1.47 2" = 0.16 4" = 0.65 radius ² * 0.163						
Total Depth (TD): 25.14	Depth to Product:							
Depth to Water (DTW): 8.82	Product Thickness:							
Water Column Height: 16.32	1 Casing Volume:	0.65 gallons						
Reference Point: TOC	10 Casing Volumes:	6.50 gallons						
Purging Device: Disposable Bailer, 3" PVC Bailer, Parastatic Pump, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp °C	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
2:40	17.5	7.18	918	slight /x turbid	" "	5.5	11.68	
2:45	17.5	7.16	924	" "	" "	6.0	12.52	
2:50	17.3	7.19	927	" "	" "	6.5	12.78	
				Hard Bottom	DTB = 25.19,		12.25	
				Well Developed				
Comments: YSI 550A DO meter			pre purge DO =	mg/l				
			post purge DO =	mg/l				

Sample ID: AS-4	Sample Time: 4:10
Laboratory: McCampbell Analytical, INC.	Sample Date: 4/16/10
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

PS 10 f2

MONITORING FIELD DATA SHEET

Well ID: AS-5

Project.Task #:	1150.001	Project Name:	Saber - 1230 14th St.					
Address: 1230 14th Street, Oakland, CA								
Date:	4/16/10	Weather:	Sunny					
Well Diameter:	1"	Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47			
			2" = 0.16	4" = 0.65	radius ² * 0.163			
Total Depth (TD):	24.30	Depth to Product:						
Depth to Water (DTW):	10.03	Product Thickness:						
Water Column Height:	██████████ 14.27	1 Casing Volume:	0.57	gallons				
Reference Point: TOC		10 Casing Volumes:	5.70	gallons				
Purging Device: Disposable Bailer, 3" PVC Bailer, Parastaltic Pump Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp @	pH	Cond (μs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:05-11:35	Surged							
11:41	18.9	6.82	1910	very turbid, silty grey thick	1.5	10.84		
11:45	18.4	7.10	2240	" "	" "	1.0	12.10	
11:50	18.1	7.14	1860	" "	" "	1.5	13.61	
11:55	18.2	7.10	1710	" "	" "	2.0	13.88	
12:00	18.0	7.06	1390	" "	" "	2.5	14.60	
12:05	18.1	7.04	1096	less silty, light grey	3.0	15.29		
12:15-12:45	Surged							
12:50	17.1	7.07	960	light grey, silty	3.5	13.91		
12:55	17.3	7.05	920	slightly turbid	4.0	13.98		
1:00	17.0	7.09	918	" "	4.5	14.11		
Comments: YSI 550A DO meter				pre purge DO =	mg/l			
				post purge DO =	mg/l			

Sample ID:	AS-5	Sample Time:	4:00
Laboratory:	McCampbell Analytical, INC.	Sample Date:	██████████ 4/16/10
Containers/Preservative: Voa/HCl			
Analyzed for: 8015, 8021			
Sampler Name:	Sanjiv Gill	Signature:	

MONITORING FIELD DATA SHEET

Well ID: AS-5

Project Task #: 1150.001	Project Name: Saberi - 1230 14th St.							
Address: 1230 14th Street, Oakland, CA								
Date: 4/16/10	Weather: Sunny							
Well Diameter: 1"	Volume/ft. 1" = 0.04 3" = 0.37 6" = 1.47 2" = 0.16 4" = 0.65 radius ² * 0.163							
Total Depth (TD): 24.30	Depth to Product:							
Depth to Water (DTW): 10.03	Product Thickness:							
Water Column Height: 14.27	1 Casing Volume: 0.57 gallons							
Reference Point: TOC	10 Casing Volumes: 5.70 gallons							
Purging Device: Disposable Bailer, 3" PVC Bailer, <u>Parastaltic Pump</u> , Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp °C	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
1:05	17.2	7.10	924	clear			5.0	14.19
1:10	17.6	7.15	910	clear			5.5	14.66
1:15	17.7	7.21	909	clear			6.0	14.78
1:17				Hard Bottom	DTB = 24.37			14.46
				Well developed				
Comments: YSI 550A DO meter				pre purge DO =	mg/l			
				post purge DO =	mg/l			

Sample ID: AS-5	Sample Time: 4:00
Laboratory: McCampbell Analytical, INC.	Sample Date: <u>4/16/10</u>
Containers/Preservative: VOA/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature: 

APPENDIX E

Laboratory Analytical Report



McCampbell Analytical, Inc.

"When Quality Counts"

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

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; Saberi-1230 14th Street	Date Sampled: 04/16/10
		Date Received: 04/19/10
	Client Contact: Morgan Gillies	Date Reported: 04/22/10
	Client P.O.:	Date Completed: 04/21/10

WorkOrder: 1004556

April 22, 2010

Dear Morgan:

Enclosed within are:

- 1) The results of the **4** analyzed samples from your project: **#1150.001; Saberi-1230 14th Street,**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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

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

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.



McCAMPBELL ANALYTICAL, INC.
1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701 **1004SS6**
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

Report To:	Morgan Gillies	Bill To:	Pangea					
Company:	Pangea Environmental Services Inc. 1710 Franklin St., Ste: 200 Oakland, CA 94612							
Tele:	(510) 836-3702	E-Mail:	mgillies@pangeacore.com					
Project #:	1150.001	Fax:	(510) 836-3709					
Project Location:	1230 14th Street, Oakland, CA							
Sampler Signature:	Muskan Environmental Sampling							
SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX		METHOD PRESERVED
		Date	Time			Water	Soil	
DP-4		4/16/10	3:40	3	VOA	X		X X
DP-5			3:50					
AS-4			4:10					
AS-5		X	4:00	X	X	X	X	X X

CHAIN OF CUSTODY RECORD

TURN AROUND TIME
RUSH 24 HR 48 HR 72 HR 5 DAY
GeoTracker EDF PDF Excel Write On (DW)
 Check if sample is effluent and "J" flag is required

Report To: Morgan Grillies				Bill To: Pangea		Check if sample is effluent and if sampling is required					
Company: Pangea Environmental Services Inc.											
1710 Franklin St., Ste: 200 Oakland, CA 94612				E-Mail: m grillies@pangeacon.com							
Tele: (510) 836-3702				Fax: (510) 836-3709							
Project #: 1150.001				Project Name: Saber-1230 14th St.							
Project Location: 1230 14th Street, Oakland, CA											
Sampler Signature: Muskan Environmental Sampling											
SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX	METHOD PRESERVED	Analysis Request		Other	Comments
		Date	Time					BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE	TPH as Diesel (8015)		
DP-4		4/16/10	3:40	3	VOR	Water	X	Total Petroleum Hydrocarbons (418.1)			Filter Samples for Metals analysis: Yes / No
DP-5			3:50			Soil	X	EPA 502.2 / 601 / 8010 / 8021 (HVOCS)			
AS-4			4:10			Air	X	MTBE / BTEX ONLY (EPA 602 / 8021)			
AS-5			4:00			Sludge	X	EPA 505 / 608 / 8081 (CI Pesticides)			
						Other	X	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners			
							X	EPA 507 / 8141 (NP Pesticides)			
							X	EPA 515 / 8151 (Acidic CI Herbicides)			
							X	EPA 524.2 / 624 / 8260 (VOCs)			
							X	EPA 525.2 / 625 / 8270 (SVOCs)			
							X	EPA 8270 SLIM / 8310 (PAHs / PNAs)			
							X	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)			
							X	LUFF 5 Metals (200.7 / 200.8 / 6010 / 6020)			
							X	Lead (200.7 / 200.8 / 6010 / 6020)			
Relinquished By:				Date: 4/19 Time: 2pm		Received By:		Comments:			
Relinquished By:				Date: 4/19/10 Time: 18:00		Received By:		ICE/t ^a yes 2.9°C GOOD CONDITION ✓ HEAD SPACE ABSENT ✓ DECHLORINATED IN LAB MA APPROPRIATE CONTAINERS ✓ PRESERVED IN LAB MA			
Relinquished By:				Date: 4/19/10 Time: 19:20		Received By:		PRESERVATION VOAS O&G METALS OTHER pH<2			

McCampbell Analytical, Inc.

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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Report to:

Morgan Gillies Email: mgillies@pangeaenv.com
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX (510) 836-3709

cc:
PO:
ProjectNo: #1150.001; Saberi-1230 14th Street

Bill to:

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

Requested TAT: 5 days

Date Received: 04/19/2010

Date Printed: 04/19/2010

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
1004556-001	DP-4	Water	4/16/2010 15:40	<input type="checkbox"/>	A											
1004556-002	DP-5	Water	4/16/2010 15:50	<input type="checkbox"/>	A											
1004556-003	AS-4	Water	4/16/2010 16:10	<input type="checkbox"/>	A											
1004556-004	AS-5	Water	4/16/2010 16:00	<input type="checkbox"/>	A											

Test Legend:

1	G-MBTEX_W
6	
11	

2	
7	
12	

3	
8	

4	
9	

5	
10	

Prepared by: Samantha Arbuckle

Comments:

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



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"When Quality Counts"

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

Sample Receipt Checklist

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

Date and Time Received: **4/19/2010 8:28:14 PM**

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

Checklist completed and reviewed by: **Samantha Arbuckle**

WorkOrder N°: **1004556** Matrix Water

Carrier: EnviroTech (RC)

Chain of Custody (COC) Information

- | | | |
|---|---|-----------------------------|
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Sample IDs noted by Client on COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Date and Time of collection noted by Client on COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Sampler's name noted on COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

Sample Receipt Information

- | | | | |
|--|---|-----------------------------|--|
| Custody seals intact on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper containers/bottles? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |

Sample Preservation and Hold Time (HT) Information

- | | | | |
|---|---|-----------------------------|---|
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Container/Temp Blank temperature | Cooler Temp: 2.9°C | | NA <input type="checkbox"/> |
| Water - VOA vials have zero headspace / no bubbles? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | No VOA vials submitted <input type="checkbox"/> |
| Sample labels checked for correct preservation? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Metal - pH acceptable upon receipt (pH<2)? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Samples Received on Ice? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |

(Ice Type: WET ICE)

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

Client contacted:

Date contacted:

Contacted by:

Comments:



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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; Saberi-1230 14th Street	Date Sampled:	04/16/10
		Date Received:	04/19/10
	Client Contact: Morgan Gillies	Date Extracted:	04/21/10
	Client P.O.:	Date Analyzed:	04/21/10

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1004556

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.

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

d1) weakly modified or unmodified gasoline is significant

 Angela Rydelius, Lab Manager



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 50076

WorkOrder 1004556

EPA Method SW8021B/8015Bm		Extraction SW5030B								Spiked Sample ID: 1004552-020A			
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) ^f	ND	60	102	103	1.05	108	103	4.87	70 - 130	20	70 - 130	20	
MTBE	ND	10	114	119	4.49	99	97.2	1.82	70 - 130	20	70 - 130	20	
Benzene	ND	10	87.4	93	6.18	92.6	87.6	5.58	70 - 130	20	70 - 130	20	
Toluene	ND	10	87.8	93	5.70	92.5	88	5.00	70 - 130	20	70 - 130	20	
Ethylbenzene	ND	10	87.3	91.7	4.98	90.9	86.7	4.72	70 - 130	20	70 - 130	20	
Xylenes	ND	30	88.9	93.3	4.78	92.3	89	3.65	70 - 130	20	70 - 130	20	
%SS:	101	10	97	101	3.49	99	96	3.60	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 50076 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1004556-001A	04/16/10 3:40 PM	04/21/10	04/21/10 2:42 AM	1004556-002A	04/16/10 3:50 PM	04/21/10	04/21/10 3:45 AM
1004556-003A	04/16/10 4:10 PM	04/21/10	04/21/10 4:14 AM	1004556-004A	04/16/10 4:00 PM	04/21/10	04/21/10 5:13 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.

^f 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.