October 2, 2008

GROUNDWATER MONITORING REPORT
Second Quarter, 2008

6211 San Pablo Avenue
Oakland, California

Project No. 280346
ACHCS Case No. RO0000127

Prepared For

Mr. Pritpaul Sappal
2718 Washburn Court
Vallejo, California 94591

Prepared By

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October 2, 2008

Mr. Pritpaul Sappal
2718 Washburn Court
Vallejo, California 94591

Subject: **Quarterly Groundwater Monitoring Report**
Second Quarter, 2008
6211 San Pablo Avenue
Oakland, California
AEI Project No. 280346
ACHCS Case No. RO0000127

Dear Mr. Sappal:

AEI Consultants (AEI) has prepared this report on behalf of Mr. Pritpaul Sappal (client), owner of the subject site, located at 6211 San Pablo Avenue, Oakland, California (Figure 1: Site Location Plan). This report has been prepared at the request of the client, as required by the Alameda County Health Care Services Agency (ACHCSA), and presents the findings of the 2nd Quarter 2008 groundwater monitoring and sampling event conducted on May 15, 2008.

Background

The subject property is located at 6211 San Pablo Avenue, northwest of the intersection of San Pablo Avenue and 62nd Street in a residential mixed with some light commercial area of Oakland, California (Figure 1). The site currently consists of a retail gasoline station with three underground storage tanks (USTs) dispensing gasoline fuel through six dual-sided fuel dispensing islands. Site features are included in Figure 3.

In April 1999, three borings B-1 through B-3 were advanced at the site. Significant concentrations of hydrocarbons were present in the soil and groundwater samples collected during the investigation. Subsequently, in June 1999, five additional soil borings were advanced (B-4 through B-8) at the site. Based on the data collected during the investigation, it was determined that additional assessment was necessary as the lateral extent of the contamination had not been determined. Therefore, in October 1999 monitoring wells MW-1 through MW-3 were installed and a groundwater monitoring program was initiated.

In November 2001, monitoring wells MW-4 through MW-6 were installed and borings B-9 through B-14 were advanced on the property. Based on the data obtained it was determined that

additional wells were necessary offsite and interim remedial action was required, therefore a workplan was prepared for the implementation of both. To date, the monitoring wells have not been installed due to difficulty obtaining an encroachment permit with the City of Oakland.

In an effort to remediate hydrocarbons at the site, five air sparge wells (AS-1 through AS-5), thirteen vapor extraction wells (VE-1 through VE-13), and one groundwater extraction well (EX-1) were installed in January 2004. In addition, well MW-1R was installed to replace well MW-1. In February 2004, three 10,000 gallon USTs and associated product piping were removed and replaced (with the current UST system) at the site. During construction activities, approximately 1,100 tons of soil and 40,000 to 60,000 gallons of groundwater was removed from the site and properly disposed of.

A soil vapor extraction system was installed and was operational from August 31, 2006 through November 19, 2007. The system is currently not operating at the site with the equipment being removed by the prior consultant in August and September 2008. In August 2007 borings DP-1 and DP-3 were installed at and in the vicinity of the site. Several offsite borings were expected to be completed, however, not able to be advanced for varying reasons. In September 2008, consulting activities were transferred to AEI consultants. AEI is currently working to complete necessary activities proposed in the Site Conceptual Model (SCM) dated May 27, 2008, including the submission of the SCM revision as requested by the ACHCSA in the June 26, 2008 letter.

The remainder of this report describes the findings of the second quarter 2008 monitoring event for the subject property. The field work was completed by Herschy Environmental, Inc. (Herschy), therefore AEI has prepared this report based on limited field notes obtained from Herschy. AEI assumes that Herschy performed the groundwater monitoring event in accordance with standard field practices.

Summary of Activities

On May 15, 2008, Herschy conducted the regularly scheduled quarterly sampling event and measured depth to water from the existing well network (MW-1R, EX-1, and MW-2 through MW-6). The depth to groundwater (from the top of the well casing) for each well was then measured. The wells were then purged using either a monsoon pump (EX-1), bailer (MW-1R and MW-4), or Wateraa check valve device with dedicated tubing (MW-2, MW-3, MW-5, and MW-6). Groundwater samples were collected directly from the bailer or dedicated tubing once field parameters had stabilized. The following parameters were measured/observed during purging: temperature, pH, electronic conductivity, and turbidity. Field forms of the groundwater sampling event are included in Appendix A.

The groundwater collected was placed in 40 ml volatile organic analysis (VOA) vials so that neither headspace nor air bubbles were visible within the sample containers. Samples were transported on ice under proper chain of custody protocol to Castle Analytical Laboratory of Atwater, California (Department of Health Services Certification #2480).

The groundwater samples were collected and analyzed for total petroleum hydrocarbons as gasoline (TPHg) (EPA Method 8015Cm), and benzene, toluene, ethylbenzene, and xylenes (collectively referred to as BTEX) and methyl tert-butyl ether (MTBE), by EPA Method 8021B. The groundwater samples were also analyzed for tert-Amyl Methyl Ether (TAME), tert-Butanol (TBA), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), 1,2-Dichloroethane (1,2-DCA), ethylene dibromide (EDB), and MTBE by EPA method 8260.

Field Results

No free product was encountered during monitoring activities during the recent sampling events. Groundwater elevations during the current quarterly monitoring episode ranged from 27.89 to 28.88 feet above mean sea level (amsl). The direction of the groundwater flow during the May 15, 2008 sampling event was towards the west with an estimated overall hydraulic gradient of 0.01 feet/foot. Historically, groundwater flow has been in a southwestern direction. Groundwater elevation data is summarized in Table 1 and 1b, and a groundwater elevation map is included as Figure 4.

Groundwater Quality

Select dissolved hydrocarbons were detected in the groundwater samples as follows:

- Monitoring well MW-1R was reported to contain TPHg, benzene, and MTBE at concentrations of 3,200 micrograms per liter (µg/L), 20 µg/L, and 4.2 µg/L, respectively. These concentrations are slightly higher then recently observed, however significantly higher then concentrations observed during much of 2007.
- Monitoring well MW-2 was reported to contain TPHg, benzene, MTBE, and TBA at a concentration of 81 µg/L, 0.59 µg/L, 38 µg/L, and 54 µg/L, respectively. These concentrations are at or near historical lows.
- Monitoring well MW-3 was reported to contain TPHg, MTBE, TAME, and TBA at concentrations of 43,000 µg/L, 62,000 µg/L, 1,100 µg/L, and 200,000 µg/L, respectively. The remaining constituents were not detected at or above the laboratory detection limit. These concentrations are relatively consistent to recent concentrations.
- Monitoring well MW-4 was reported to contain TPHg, benzene, MTBE, and TBA at concentrations of 22,000 µg/L, 670 µg/L, 3,300 µg/L, and 35,000 µg/L, respectively. These concentrations are relatively consistent to recent concentrations.
- Monitoring well MW-5 was reported to contain MTBE at a concentration of 1.7 µg/L. The remaining constituents were not detected at or above the laboratory detection limit.
- Monitoring well MW-6 was reported to contain MTBE, TAME, and TBA at a concentration of 13 µg/L, 1.0 µg/L, and 130 µg/L. The remaining constituents were not detected at or above the laboratory detection limit. These concentrations are relatively consistent to recent concentrations.

- Well EX-1 was reported to contain TPHg, benzene, MTBE, and TBA at concentrations of 24,000 µg/L, 2,100 µg/L, 1,800 µg/L, and 11,000 µg/L, respectively. This is only the third time well EX-1 has been sampled.

Complete groundwater sample analytical data from the sampling event is included in Table 2 and select data is displayed on Figure 5. Laboratory results and chain of custody documents are included in Appendix B.

Summary

Groundwater during the May 2008 episode was calculated to flow towards the west with an estimated overall hydraulic gradient of 0.01 feet/foot based on field data forms from Herschy. Historically groundwater has been calculated to flow towards the southwest. Hydrocarbon concentrations remained relatively consistent with concentrations reported during the previous sampling events. The 3rd quarter 2008 sampling event was completed by AEI on September, 10 2008. AEI anticipates submitting the report in the near future. AEI is also working on the SCM revision requested by the ACHCSA and expects to submit the required report before the revised due date of November 21, 2008.

REPORT LIMITATIONS AND SIGNATURES

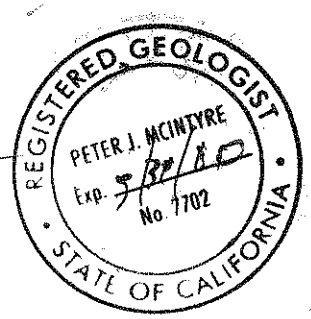
This report presents a summary of work completed by Herschy. The completed work includes observations and descriptions of site conditions based on field notes given to AEI. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide the requested information, but it cannot be assumed that they are representative of areas not sampled. All conclusions and/or recommendations are based on these analyses and observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document.

These services were performed in accordance with generally accepted practices, in the environmental engineering and consulting field, which existed at the time and location of the work. If you have any questions regarding our investigation, please do not hesitate to contact one of us at (925) 944-2899.

Sincerely,
AEI Consultants

Jeremy Smith
Project Manager

Peter J. McIntyre, P.G.
Senior Project Geologist



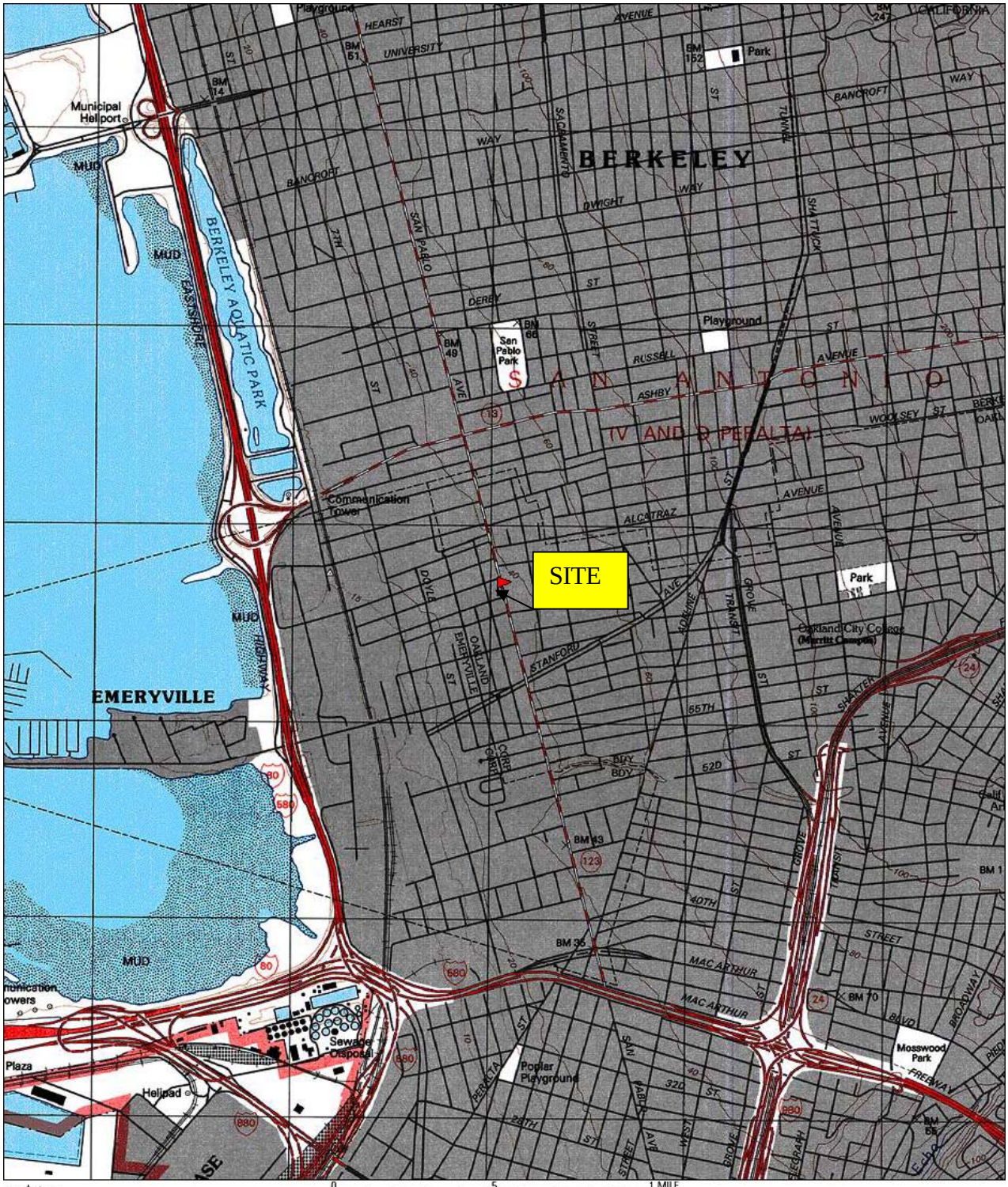
Figures
- Figure 1: Site Location Plan
- Figure 2: Extended Site Plan
- Figure 3: Site Plan
- Figure 4: Groundwater Elevation Map
- Figure 5: Groundwater Analytical Data

Tables
- Table 1: Groundwater Elevation Data
- Table 1b: Groundwater Flow Data
- Table 2: Groundwater Analytical Data

Appendix A: Groundwater Monitoring Well Field Sampling Forms
Appendix B: Laboratory Analyses with Chain of Custody Documentation

Distribution:
Mr. Pritpaul Sappal, 2718 Washburn Court, Vallejo, CA 94591
Mr. Paresh Khatri, ACHCSA, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502 (electronic upload)
Mr. Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612

FIGURES



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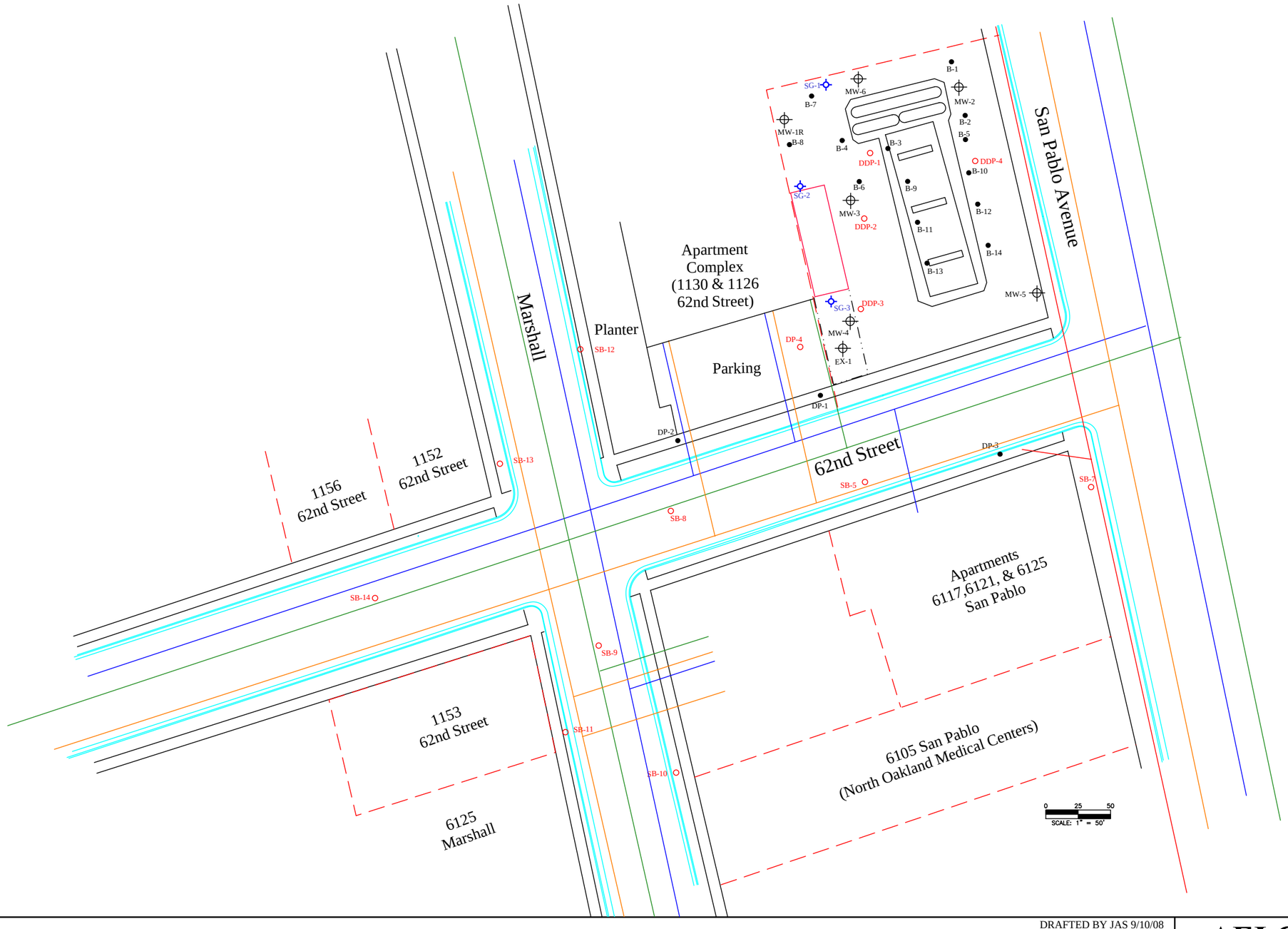
SITE LOCATION PLAN

6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

FIGURE 1
PROJECT NO. 280346



LEGEND

- MONITORING WELL
- SOIL BORING
- ABANDONED WELL
- PROPOSED BORING
- PROPOSED VAPOR PROBE
- VAPOR EXTRACTION WELL
- AIR SPARGE WELL
- APPROXIMATE PROPERTY BOUNDARY
- WATER LINE
- NATURAL GAS LINE
- ELECTRIC LINE
- SEWER LINE

DRAFTED BY JAS 9/10/08
REVISED BY JAS 9/26/08

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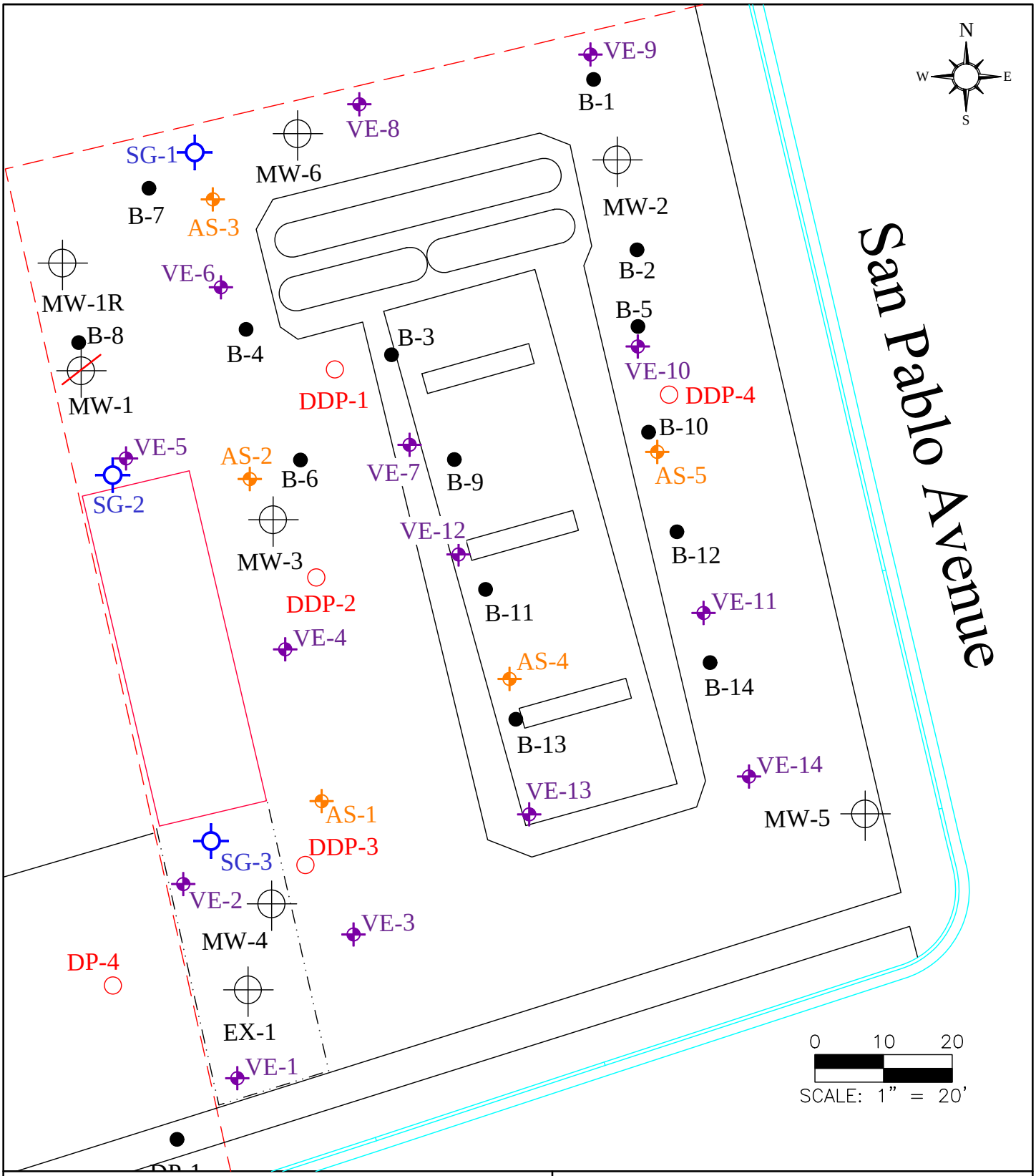
EXTENDED SITE PLAN

6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

FIGURE 2
PROJECT NO. 280346



LEGEND

- MONITORING WELL
- SOIL BORING
- ABANDONED WELL
- PROPOSED BORING
- PROPOSED VAPOR PROBE
- VAPOR EXTRACTION WELL
- AIR SPARGE WELL

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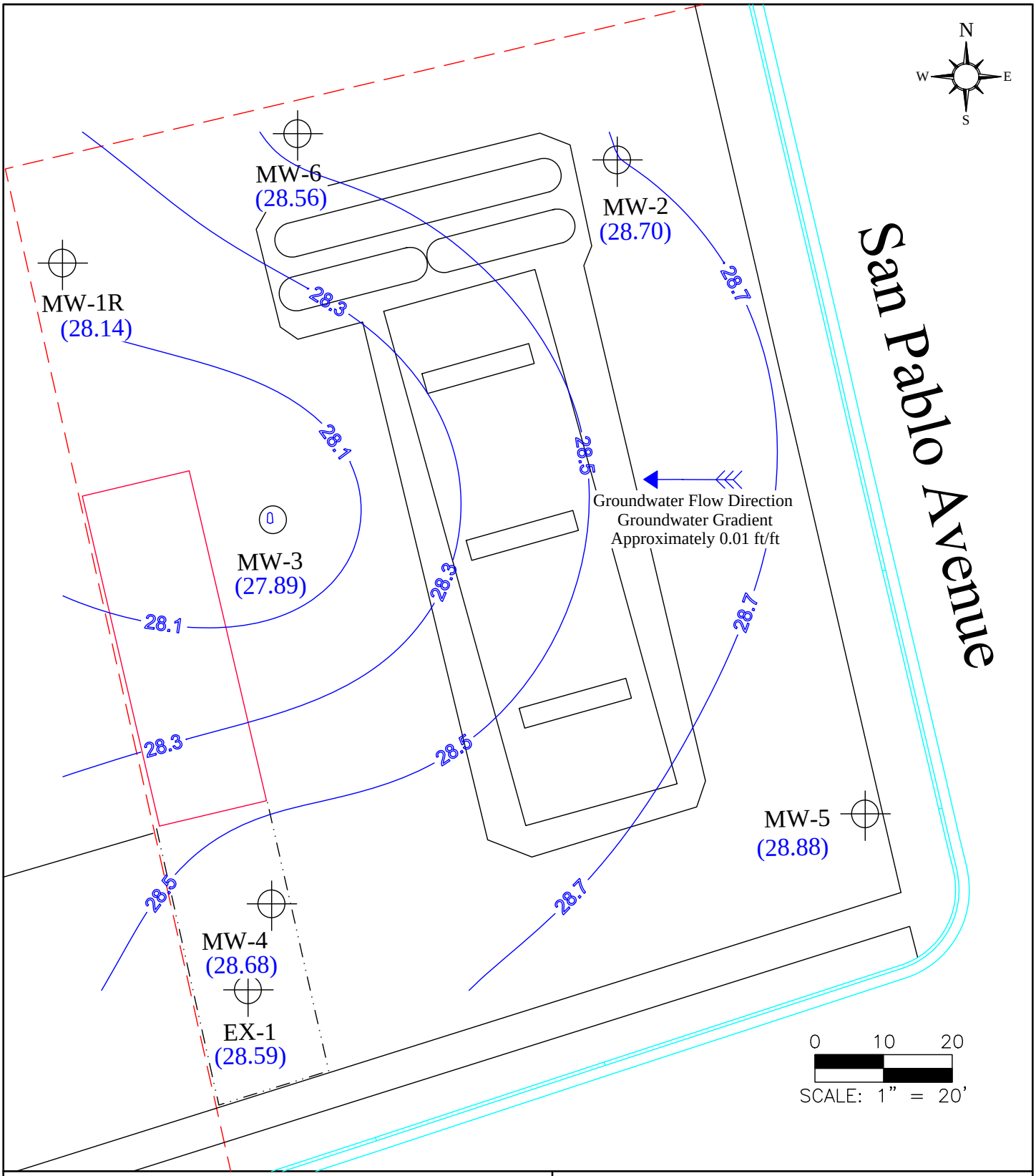
2500 CAMINO DIABLO, WALNUT CREEK

SITE PLAN

6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

FIGURE 3
PROJECT NO. 280346



LEGEND

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MONITORING WELL

(28.68) = Groundwater Elevation Mean Sea Level

Depth to Groundwater Collected on May 15, 2008

Contour Line Gradient = 0.20 Feet

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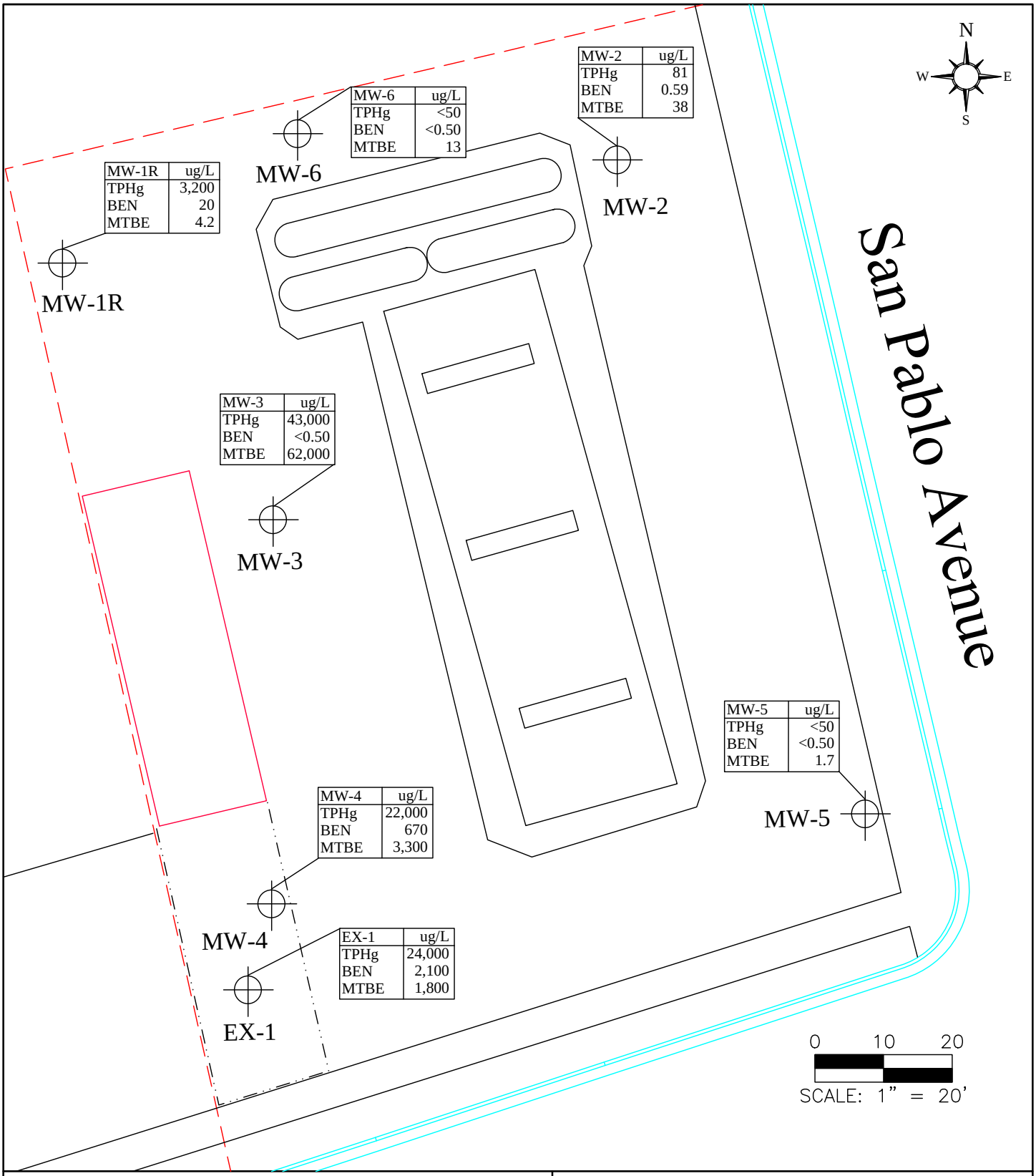
2500 CAMINO DIABLO, WALNUT CREEK

GROUNDWATER ELEVATION MAP

6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

FIGURE 4

PROJECT NO. 280346



LEGEND

DRAFTED BY JAS 09-10-08
REVISED BY JAS 09-26-08

MONITORING WELL

TPHg = Total Petroleum Hydrocarbons as Gasoline
BEN = Benzene
MTBE = Methyl Ter-butyl Ether
ug/L = Micrograms per Liter (ppb)

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GROUNDWATER ANALYTICAL MAP - May 15, 2008

6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

FIGURE 5
PROJECT NO. 280346

TABLES

Table 1, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346

Groundwater Elevation Data

Well ID (Screen Interval)	Date Collected	Well Elevation *(ft amsl)*	Depth to Water *(ft)*	Groundwater Elevation *(ft amsl)*
MW-1R (3-23)	5/15/2008	36.67	8.53	28.14
MW-2 (6-21)	5/15/2008	36.33	7.63	28.70
MW-3 (6-21)	5/15/2008	35.12	7.23	27.89
MW-4 (5-20)	5/15/2008	34.11	5.43	28.68
MW-5 (5-25)	5/15/2008	35.17	6.29	28.88
MW-6 (5-25)	5/15/2008	36.07	7.51	28.56
EX-1 (5-30)	5/15/2008	33.28	4.69	28.59

Table 1b, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346
Groundwater Flow Data

Event #	Date	Average Water Table Elevation (ft amsl)	Change from Previous Episode (ft)	Gradient (Flow Direction) (ft/ft)
1	11/7/1999	NA	NA	0.0068 (SW)
2	3/8/2001	NA	NA	0.0092 (SW)
3	11/17/2001	NA	NA	0.0091 (SW)
4	3/31/2002	NA	NA	0.0108 (SSW)
5	9/9/2003	NA	NA	0.0031 (SW)
6	12/9/2003	NA	NA	0.0031 (SW)
7	2/19/2004	NA	NA	0.0154 (SW)
8	5/24/2004	NA	NA	0.0081 (WSW)
9	9/3/2004	NA	NA	0.0075 (SW)
10	11/2/2004	NA	NA	0.0083 (WSW)
11	2/17/2005	NA	NA	0.0036 (SW)
12	5/24/2005	NA	NA	0.0097 (SSW)
13	8/15/2005	NA	NA	0.013 (SW)
14	11/17/2005	NA	NA	0.010 (SW)
15	2/8/2006	NA	NA	0.010 (SW)
16	5/5/2006	NA	NA	0.013 (SSW)
17	8/18/2006	NA	NA	0.0125 (SSW)
18	12/1/2006	NA	NA	0.03 (S)
19	2/23/2007	NA	NA	0.012 (SW)
20	5/10/2007	NA	NA	0.013 (SW)
21	8/16/2007	NA	NA	0.022 (SW)
22	11/8/2007	NA	NA	0.012 (WSW)
23	2/14/2008	NA	NA	0.013 (SW)
24	**5/15/2008**	**28.49**	**NA**	**0.01 (W)**

ft amsl = feet above mean sea level
All water level depths are measured from the top of casing
NA = not available

Table 2, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346

Groundwater Analytical Data

Sample ID	Date	TPHg µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	TBA µg/L	1,2-DCA µg/L	EDB µg/L	Methanol µg/L	Ethanol µg/L
MW-1	11/7/1999	5,700	170	59	22	85	20,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/8/2001	17,000	480	150	52	170	38,000	NA	NA	NA	NA	NA	NA	NA	NA
	11/17/2001	10,000	230	210	60	250	22,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	12,000	61	ND	ND	29	35,000	NA	NA	NA	NA	NA	NA	NA	NA
	11/9/2003	19,000	ND	ND	ND	ND	50,000	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	22,000	150	ND	ND	ND	66,000	NA	NA	NA	NA	NA	NA	NA	NA
MW-1R	11/17/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/9/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/19/2004	1,800	95	130	44	200	220	NA	NA	NA	NA	NA	NA	NA	NA
	5/24/2004	210	12	10	5.4	23	79	ND	ND	2.1	37	ND	ND	ND	ND
	9/3/2004	300	1.5	7.1	9.4	42	81	ND	ND	1.6	ND	ND	ND	ND	ND
	11/2/2004	290	14	30	9.5	45	45	ND	ND	1.1	ND	NA	NA	ND	ND
	2/17/2005	530	3.4	ND	ND	2.6	1,000	ND	ND	100	ND	NA	NA	ND	ND
	5/24/2005	NA	NA	NA	NA	NA	NA	ND	ND	610	ND	ND	ND	NA	NA
	8/15/2005	2,500	64	240	61	210	2,300	ND	ND	210	ND	ND	ND	NA	NA
	11/17/2005	2,500	66	290	75	290	1,300	ND	ND	110	1,600	ND	ND	NA	NA
	2/8/2006	3,300	100	310	86	470	1,400	ND	ND	130	1,400	ND	ND	NA	NA
	5/5/2006	3,400	170	350	97	550	1,100	ND	ND	100	2,400	ND	ND	NA	NA
	8/18/2006	5,800	190	1,000	230	1,000	490	ND	ND	36	2,900	ND	ND	NA	NA
	12/1/2006	410	1.7	6.3	1.2	47	100	ND	ND	4.7	100	ND	ND	NA	NA
	2/23/2007	ND	ND	0.51	ND	1.4	3	ND	ND	ND	ND	ND	ND	NA	NA
	5/10/2007	ND	ND	ND	ND	2.0	5.9	ND	ND	ND	ND	ND	ND	NA	NA
	8/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
	11/8/2007	1,300	11	82	54	270	1.4	ND	ND	ND	ND	ND	ND	NA	NA
	2/14/2008	800	7.6	31	23	150	1.7	ND	ND	ND	ND	ND	ND	NA	NA
	5/15/2008	**3,200**	**20**	**200**	**110**	**550**	**4.2**	**ND<0.50**	**ND<0.50**	**1.0**	**ND<20**	**ND<0.50**	**ND<0.50**	**NA**	**NA**
MW-2	11/7/1999	6,000	1,300	92	50	400	6,800	NA	NA	NA	NA	NA	NA	NA	NA
	3/8/2001	41,000	8,100	870	2,000	4,100	26,000	NA	NA	NA	NA	NA	NA	NA	NA
	11/17/2001	18,000	3,700	180	610	640	16,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	32,000	6,500	270	1,700	2,700	19,000	NA	NA	NA	NA	NA	NA	NA	NA
	9/9/2003	24,000	4,600	ND	1,200	440	19,000	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	31,000	6,200	170	1,600	2,700	19,000	NA	NA	NA	NA	NA	NA	NA	NA
	2/19/2004	21,000	4,600	120	970	2,000	15,000	NA	NA	NA	NA	NA	NA	NA	NA
	5/24/2004	1,200	120	3	63	67	1,900	ND	ND	ND	ND	ND	ND	ND	ND
	9/3/2004	2,300	120	ND	51	70	1,700	ND	ND	26	ND	ND	ND	ND	ND
	11/2/2004	530	35	ND	17	30	520	ND	ND	28	100	NA	NA	ND	ND
	2/17/2005	18,000	2,100	31	800	680	20,000	ND	ND	1,000	ND	NA	NA	ND	ND
	5/24/2005	22,000	3,200	52	1,400	1,700	16,000	ND	ND	NS	NS	ND	ND	NS	NS
	8/15/2005	2,000	66	ND	46	47	2,400	ND	ND	95	880	ND	ND	NA	NA
	11/17/2005	760	19	0.64	15	13	1,000	ND	ND	26	810	ND	ND	NA	NA
	2/8/2006	10,000	1,500	8	660	380	4,300	ND	ND	120	2,800	ND	ND	NA	NA
	5/5/2006	15,000	1,800	ND	1,200	1,200	5,800	ND	ND	150	4,300	ND	ND	NA	NA
	8/18/2006	360	11	ND	13	9.7	160	ND	ND	4.6	600	ND	ND	NA	NA
	12/1/2006	11,000	1,000	ND	990	910	2,100	ND	ND	87	2,000	ND	ND	NA	NA
	2/23/2007	3,200	210	ND	270	85	900	ND	ND	33	1,400	ND	ND	NA	NA
	5/10/2007	590	31	ND	39	22	200	ND	ND	5.9	250	ND	ND	NA	NA
	8/16/2007	650	49	ND	71	49	100	ND	ND	3.5	82	ND	ND	NA	NA
	11/8/2007	110	1.6	ND	1.9	1.6	23	ND	ND	0.64	48	ND	ND	NA	NA
	2/14/2008	350	24	ND	12	5.9	190	ND	ND	7.7	320	ND	ND	NA	NA
	5/15/2008	**81**	**0.59**	**ND<0.50**	**0.71**	**0.66**	**38**	**ND<0.50**	**ND<0.50**	**1.4**	**54**	**ND<0.50**	**ND<0.50**	**NA**	**NA**

Table 2, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346

Groundwater Analytical Data

Sample ID	Date	TPHg µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	TBA µg/L	1,2-DCA µg/L	EDB µg/L	Methanol µg/L	Ethanol µg/L
MW-3	11/7/1999	43,000	860	70	ND	65	120,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/8/2001	90,000	1,800	ND	ND	ND	210,000	NA	NA	NA	NA	NA	NA	NA	NA
	11/17/2001	110,000	1,600	ND	ND	ND	300,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	130,000	2,400	670	300	390	300,000	NA	NA	NA	NA	NA	NA	NA	NA
	9/9/2003	190,000	1,600	ND	ND	ND	420,000	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	170,000	2,000	ND	ND	ND	4,500,000	NA	NA	NA	NA	NA	NA	NA	NA
	2/19/2004	86,000	1,800	630	ND	ND	160,000	NA	NA	NA	NA	NA	NA	NA	NA
	5/24/2004	120,000	2,200	ND	180	220	400,000	ND	ND	15,000	ND	ND	ND	ND	ND
	9/3/2004	180,000	2,000	ND	ND	ND	510,000	ND	ND	14,000	ND	ND	ND	ND	ND
	11/2/2004	150,000	1,700	ND	ND	ND	350,000	ND	ND	31,000	140,000	NA	NA	ND	ND
	2/17/2005	130,000	2,100	420	210	730	290,000	ND	ND	11,000	ND	NA	NA	ND	ND
	5/24/2005	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/15/2005	110,000	1,500	ND	ND	ND	260,000	ND	ND	21,000	25,000	ND	ND	NA	NA
	11/17/2005	200,000	2,400	ND	ND	ND	580,000	ND	ND	24,000	49,000	ND	ND	NA	NA
	2/8/2006	470,000	3,800	660	ND	790	490,000	ND	ND	26,000	49,000	ND	ND	NA	NA
	5/5/2006	400,000	3,300	ND	ND	ND	590,000	ND	ND	21,000	86,000	ND	ND	NA	NA
	8/18/2006	310,000	1,800	ND	ND	ND	440,000	ND	ND	23,000	79,000	ND	ND	NA	NA
	12/1/2006	270,000	ND	ND	ND	ND	290,000	ND	ND	11,000	90,000	ND	ND	NA	NA
	2/23/2007	220,000	ND	ND	ND	ND	260,000	ND	ND	15,000	33,000	ND	ND	NA	NA
	5/10/2007	140,000	ND	ND	ND	ND	180,000	ND	ND	7,100	80,000	ND	ND	NA	NA
	8/16/2007	69,000	ND	ND	ND	ND	85,000	ND	ND	3,400	180,000	ND	ND	NA	NA
	11/8/2007	34,000	ND	ND	ND	ND	38,000	ND	ND	1,400	140,000	ND	ND	NA	NA
	2/14/2008	41,000	ND	ND	ND	ND	44,000	ND	ND	1,900	110,000	ND	ND	NA	NA
	5/15/2008	**43,000**	**ND<100**	**ND<100**	**ND<100**	**ND<100**	**62,000**	**ND<100**	**ND<100**	**1,100**	**200,000**	**ND<100**	**ND<100**	**NA**	**NA**
MW-4	11/17/2001	64,000	960	1,400	360	1,600	140,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	78,000	4,400	4,700	690	2,700	150,000	NA	NA	NA	NA	NA	NA	NA	NA
	9/6/2007	49,000	710	840	ND	10,000	3,600	ND	ND	510	32,000	ND	ND	NA	NA
	11/8/2007	64,000	1,300	2,600	1,000	8,500	1,500	ND	ND	360	14,000	ND	ND	NA	NA
	2/14/2008	60,000	390	460	230	2,000	52,000	ND	ND	2,000	58,000	ND	ND	NA	NA
	5/15/2008	**22,000**	**670**	**130**	**740**	**2,700**	**3,300**	**ND<5.0**	**ND<5.0**	**340**	**35,000**	**ND<5.0**	**ND<5.0**	**NA**	**NA**

Table 2, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346

Groundwater Analytical Data

Sample ID	Date	TPHg µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	TBA µg/L	1,2-DCA µg/L	EDB µg/L	Methanol µg/L	Ethanol µg/L
MW-5	11/17/2001	210	15	12	11	23	4.8	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	120	11	7.4	6.1	16	4.2	NA	NA	NA	NA	NA	NA	NA	NA
	9/9/2003	ND	1.5	ND	ND	ND	1.7	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	130	32	ND	2.6	0.57	5	NA	NA	NA	NA	NA	NA	NA	NA
	2/19/2004	ND	ND	ND	ND	ND	1.5	NA	NA	NA	NA	NA	NA	NA	NA
	5/24/2004	ND	ND	ND	ND	ND	0.55	ND	ND	ND	ND	ND	ND	ND	ND
	9/3/2004	100	6.4	ND	ND	0.79	4.2	ND	ND	ND	ND	ND	ND	ND	ND
	11/2/2004	ND	2.6	ND	1.7	0.87	1	ND	ND	ND	ND	ND	ND	ND	ND
	2/17/2005	51	0.74	ND	0.94	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND
	5/24/2005	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	NA	NA
	8/15/2005	ND	ND	ND	ND	ND	0.88	ND	ND	ND	ND	ND	ND	NA	NA
	11/17/2005	71	0.81	ND	1.1	ND	1.4	ND	ND	ND	ND	ND	ND	NA	NA
	2/8/2006	50	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	NA	NA
	5/5/2006	ND	ND	ND	ND	ND	0.93	ND	ND	ND	ND	ND	ND	NA	NA
	8/18/2006	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	NA	NA
	12/1/2006	ND	0.69	ND	ND	0.52	0.97	ND	ND	ND	ND	ND	ND	NA	NA
	2/23/2007	73	ND	ND	ND	ND	1.7	ND	ND	ND	ND	ND	ND	NA	NA
	5/10/2007	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	NA	NA
	8/16/2007	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	NA	NA
	11/8/2007	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	NA	NA
	2/14/2008	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	NA	NA
	5/15/2008	**ND<50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**1.7**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<20**	**ND<0.50**	**ND<0.50**	**NA**	**NA**
MW-6	11/17/2001	3,500	160	260	95	420	1,500	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	3,200	410	170	82	280	3,000	NA	NA	NA	NA	NA	NA	NA	NA
	9/9/2003	800	49	ND	7.4	ND	1,700	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	970	150	9.9	31	83	1,200	NA	NA	NA	NA	NA	NA	NA	NA
	2/19/2004	1,900	280	58	17	160	2,700	NA	NA	NA	NA	NA	NA	NA	NA
	9/3/2004	1,100	27	ND	14	27	2,200	ND	ND	85	ND	ND	ND	ND	ND
	11/2/2004	1,800	32	ND	5	11	4,100	ND	ND	170	270	ND	ND	ND	ND
	2/17/2005	5,600	190	34	41	110	10,000	ND	ND	780	2,000	ND	ND	ND	ND
	8/15/2005	1,800	27	ND	6	23	3,800	ND	ND	300	3,500	ND	ND	NA	NA
	11/17/2005	1,100	30	ND	4	9	2,400	ND	ND	190	9,500	ND	ND	NA	NA
	2/8/2006	3,600	220	43	66	160	2,700	ND	ND	180	7,800	ND	ND	NA	NA
	5/5/2006	1,600	130	21	37	65	1,400	ND	ND	53	3,100	ND	ND	NA	NA
	8/18/2006	270	27	ND	3	4	240	ND	ND	11	2,400	ND	ND	NA	NA
	12/1/2006	1,700	ND	ND	ND	ND	1,700	ND	ND	92	800	ND	ND	NA	NA
	2/23/2007	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	NA	NA
	5/10/2007	ND	3.0	ND	ND	1.9	26	ND	ND	2	48	ND	ND	NA	NA
	8/16/2007	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	NA	NA
	11/8/2007	ND	ND	ND	ND	ND	5.3	ND	ND	ND	ND	ND	ND	NA	NA
	2/14/2008	ND	ND	ND	ND	ND	11	ND	ND	0.94	220	ND	ND	NA	NA
	5/15/2008	**ND<50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**13**	**ND<0.50**	**ND<0.50**	**1.0**	**130**	**ND<0.50**	**ND<0.50**	**NA**	**NA**
EX-1	2/19/2004	120,000	9,500	4,300	840	3,900	150,000	NA	NA	NA	NA	NA	NA	NA	NA
	2/14/2008	84,000	2,300	4,900	1,800	14,000	3,900	ND	ND	610	10,000	ND	ND	NA	NA
	5/15/2008	**24,000**	**2,100**	**750**	**640**	**2,100**	**1,800**	**ND<0.50**	**ND<0.50**	**380**	**11,000**	**ND<0.50**	**ND<0.50**	**NA**	**NA**

Table 2, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346

Groundwater Analytical Data

Sample ID	Date	TPHg µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	TBA µg/L	1,2-DCA µg/L	EDB µg/L	Methanol µg/L	Ethanol µg/L

Notes:
TPHg = total petroleum hydrocarbons as gasoline using EPA Method 8015
Benzene, toluene, ethylbenzene, and xylenes using EPA Method 8021B
MTBE = methyl-tertiary butyl ether using EPA Method 8021B; EPA Method 8260B Beginning in May 2008
TBA = tert-butyl alcohol using EPA Method 8260B
TAME = tert-amyl methyl ether using EPA Method 8260B
DIPE = diisopropyl ether using EPA Method 8260B
ETBE = ethyl tert-butyl ether using EPA Method 8260B
1,2-DCA = 1,2-dichloroethane using EPA Method 8260B
EDB = Ethylene dibromide using EPA Method 8260B
Methanol and Ethanol using EPA Method 8260B
µg/L= micrograms per liter
ND = non detect at respective reporting limit
NA - not analyzed

APPENDIX A

GROUNDWATER MONITORING WELL FIELD SAMPLING FORMS

HerSchy Environmental

WATER SAMPLE FIELD DATA SHEET

Client Name: ALASKA GAS Location: OAKLAND

Purged By: WEST Sampled by: WEST

Sample ID: EX-1 Type: Groundwater X Surface Water ____ Other ____

Casing Diameter (inches): 2 * 3 ____ 4 X 5 ____ 6 ____ Other ____

Casing Elevation (feet/MSL): ____ Volume in Casing (gal.): 12.7

Depth of Well (feet): 27.50 Calculate Purge Volume (gal.): 38.3

Depth to Water (feet): 4.69 Actual Purge Volume (gal.): 40+

Date Purged: 05-15-08 Date Sampled: 05-15-08 0920

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0856	~	7.03	801	71.6	Cloudy
0902	13	7.03	772	67.7	Cloudy
0908	26	6.95	764	66.9	Cloudy
0915	39	7.00	763	66.3	Cloudy

Sheen Y/N?: N Odor: Petroleum

Purging Equipment: Monsoon Pump

Sampling Equipment: BAILER

Remarks: ____

Sampler's Signature: John L West

/Water Sample Sheet.wpd

HerSchy Environmental

WATER SAMPLE FIELD DATA SHEET

Client Name: ALASKA GAS Location: OAKLAND

Purged By: WEST Sampled by: WEST

Sample ID: MW-1R Type: Groundwater X Surface Water ____ Other ____

Casing Diameter (inches): 2 X 3 ____ 4 ____ 5 ____ 6 ____ Other ____

Casing Elevation (feet/MSL): ____ Volume in Casing (gal.): 2.3

Depth of Well (feet): 22.65 Calculate Purge Volume (gal.): 6.9

Depth to Water (feet): 8.53 Actual Purge Volume (gal.): 7+

Date Purged: 05-15-08 Date Sampled: 05-15-08

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0633	1	6.93	524	63.7	CLEAR
0638	2.3	6.61	516	64.3	CLEAR
0642	4.6	6.62	538	64.6	CLEAR
0647	6.9	6.71	554	64.7	CLEAR

Sheen Y/N?: N Odor: ~~NONE~~ SLIGHT PETROLEUM

Purging Equipment: BAILER

Sampling Equipment: BAILER

Remarks: ____

Sampler's Signature: John L Wes

/Water Sample Sheet.wpd

HerSchy Environmental **WATER SAMPLE FIELD DATA SHEET**

Client Name: ALASKA GAS Location: OAKLAND

Purged By: WEST Sampled by: WEST

Sample ID: MW-2 Type: Groundwater X Surface Water ____ Other ____

Casing Diameter (inches): 2 X 3 ____ 4 ____ 5 ____ 6 ____ Other ____

Casing Elevation (feet/MSL): 36.33 Volume in Casing (gal.): 2.1

Depth of Well (feet): 20.90 Calculate Purge Volume (gal.): 6.5

Depth to Water (feet): 7.63 Actual Purge Volume (gal.): 6.5+

Date Purged: 05-15-08 Date Sampled: 05-15-08 0757

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0744	✓	6.85	632	65.5	Cloudy
0747	2.1	6.85	638	65.9	Cloudy
0750	4.2	6.91	650	65.4	Cloudy
0754	6.5	6.90	649	66.1	Cloudy

Sheen Y/N?: N Odor: NONE

Purging Equipment: WATERRA

Sampling Equipment: WATERRA

Remarks:

Sampler's Signature: John L. Wells

/Water Sample Sheet.wpd

HerSchy Environmental

WATER SAMPLE FIELD DATA SHEET

Client Name: ALASKA GAS Location: OAKLAND

Purged By: WEST Sampled by: WEST

Sample ID: MW-3 Type: Groundwater X Surface Water ____ Other ____

Casing Diameter (inches): 2 X 3 ____ 4 ____ 5 ____ 6 ____ Other ____

Casing Elevation (feet/MSL): 33.12 Volume in Casing (gal.): 2.3

Depth of Well (feet): 21.20 Calculate Purge Volume (gal.): 6.8

Depth to Water (feet): 7.23 Actual Purge Volume (gal.): 9+

Date Purged: 05-15-08 Date Sampled: 05-15-08 0720

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0707	-	6.63	757	65.0	Cloudy
0710	2.3	6.62	771	65.5	Cloudy
0714	4.6	6.68	763	65.6	Cloudy
0718	6.8	6.70	764	65.9	Cloudy

Sheen Y/N?: N Odor: PETROLEUM

Purging Equipment: WATERRA

Sampling Equipment: WATERRA

Remarks: ____

Sampler's Signature: John L Wes

/Water Sample Sheet.wpd

HerSchy Environmental

WATER SAMPLE FIELD DATA SHEET

Client Name: ALASKA GAS Location: OAKLAND

Purged By: WEST Sampled by: WEST

Sample ID: MW-4 Type: Groundwater X Surface Water ____ Other ____

Casing Diameter (inches): 2 X 3 ____ 4 ____ 5 ____ 6 ____ Other ____

Casing Elevation (feet/MSL): ____ Volume in Casing (gal.): 2.3

Depth of Well (feet): 19.70 Calculate Purge Volume (gal.): 7.0

Depth to Water (feet): 5.43 Actual Purge Volume (gal.): 7.0+

Date Purged: 05-15-08 Date Sampled: 05-15-08 0842

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0827	—	6.76	837	70.5	CLEAR
0831	2.3	6.92	857	67.3	CLOUDY
0834	4.6	7.00	859	66.5	CLOUDY
0838	7.0	7.03	854	66.1	CLOUDY

Sheen Y/N?: N Odor: PETROLEUM

Purging Equipment: BAILER

Sampling Equipment: BAILER

Remarks:

Sampler's Signature: John L Wes

/Water Sample Sheet.wpd

HerSchy Environmental

WATER SAMPLE FIELD DATA SHEET

Client Name: ALASKA GAS Location: OAKLAND

Purged By: WEST Sampled by: WEST

Sample ID: MW-5 Type: Groundwater X Surface Water ____ Other ____

Casing Diameter (inches): 2 X 3 ____ 4 ____ 5 ____ 6 ____ Other ____

Casing Elevation (feet/MSL): 35.17 Volume in Casing (gal.): 3.0

Depth of Well (feet): 24.90 Calculate Purge Volume (gal.): 9.1

Depth to Water (feet): 6.29 Actual Purge Volume (gal.): 9.1+

Date Purged: 05-15-08 Date Sampled: 05-15-08 0815

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0803	-	6.96	756	66.7	Cloudy
0805	3	7.00	740	66.5	Cloudy
0808	6	6.91	728	66.5	Cloudy
0811	9.1	6.95	726	66.5	Cloudy

Sheen Y/N?: N Odor: NONE

Purging Equipment: WATERRA

Sampling Equipment: WATERRA

Remarks: ____

Sampler's Signature: John L Wes

/Water Sample Sheet.wpd

HerSchy Environmental

WATER SAMPLE FIELD DATA SHEET

Client Name: ALASKA GAS Location: OAKLAND

Purged By: WEST Sampled by: WEST

Sample ID: MW-6 Type: Groundwater X Surface Water ____ Other ____

Casing Diameter (inches): 2 X 3 ____ 4 ____ 5 ____ 6 ____ Other ____

Casing Elevation (feet/MSL): 36.07 Volume in Casing (gal.): 2.5

Depth of Well (feet): 23.10 Calculate Purge Volume (gal.): 7.6

Depth to Water (feet): 7.51 Actual Purge Volume (gal.): 7.6+

Date Purged: 05-15-08 Date Sampled: 05-15-08 0740

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
0728	-	6.97	627	65.0	CLOUDY
0731	2.5	7.00	611	64.9	CLOUDY
0734	5.0	6.90	607	64.9	CLOUDY
0737	7.6	6.96	606	64.9	CLOUDY

Sheen Y/N?: N Odor: NONE

Purging Equipment: WATERRA

Sampling Equipment: WATERRA

Remarks: ____

Sampler's Signature: John L Wes

/Water Sample Sheet.wpd

CASTLE ANALYTICAL LABORATORY

CHAIN OF CUSTODY

Location: 2331 Shuttle Drive, Bldg [illegible], Atwater, CA 95301
Mailing Address: 2331 Shuttle Drive, Atwater, CA 95301
Phone: (209) 384-2530 Fax: (209) 384-1507

Certificate No. [illegible]

PAGE 1 OF 1

Customer: ALASKA GAS
Address:
City/State/Zip: OAKLAND
Phone / FAX:
Proj # / P.O. #:
Report Attention: [illegible]
Sampler Signature: [signature]
Printed: JOHN S WEST

Method of Shipment:

Notes:

SAMPLE ID	DATE	TIME	DESCRIPTION/LOCATION			Analyses												OBSERVATIONS/REMARKS
E-1	05/15	0910		G	L	X	X			X	X						3	
MW-1R	"	0650		"	"	"	"			"	"							
MW-2	"	0757		"	"	"	"			"	"							
MW-3	"	0720		"	"	"	"			"	"							
MW-4	"	0842		"	"	"	"			"	"							
MW-5	"	[illegible]		"	"	"	"			"	"							
MW-6	"	0740		"	"	"	"			"	"							

Total number of containers submitted to the laboratory:

	Signature	Printed Name	Date	Time	Company
Relinquished by:	[signature]	JOHN S WEST	05/15	1300	HERSCHY ENV
Received by:	[signature]	[illegible]	[illegible]	[illegible]	Castle Analytical Lab
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

Note: All special requests (e.g. quick turn-around) must be cleared through authorized laboratory personnel.

RESULTS DUE:
☐ VERBAL ☒ WRITTEN

APPENDIX B

LABORATORY ANALYTICAL REPORT WITH CHAIN OF CUSTODY DOCUMENTATION

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate # 2480
2333 Shuttle Drive, Atwater, CA 95301
Phone: (209) 384-2930
Fax: (209) 384-1507

HerSchy Environmental P.O. Box 229 Bass Lake, CA 93604 Attn: Reijo Ratilainen	Client Project ID: Alaska Gas - Oakland Reference Number: 11106 Sample Description: Water Sample Prep/Analysis Method: EPA 5030/8015B, 8021B Lab Numbers: 11106-1W, 2W, 3W, 4W, 5W	Sampled: 05-15-08 Received: 05-15-08 Extracted: 05-16-08 Analyzed: 05-16-08 Reported: 05-29-08

TOTAL PETROLEUM HYDROCARBONS - GASOLINE WITH BTEX DISTINCTION

ANALYTE	REPORTING LIMIT (ug/L)	SAMPLE ID EX-1 (ug/L)	SAMPLE ID MW-1R (ug/L)	SAMPLE ID MW-2 (ug/L)	SAMPLE ID MW-3 (ug/L)	SAMPLE ID MW-4 (ug/L)
MTBE	0.50	1600	17**	31	45000	3300
BENZENE	0.50	2100	20	0.59	ND	670
TOLUENE	0.50	750	200	ND	ND	130
ETHYL BENZENE	0.50	640	110	0.71	ND	740
TOTAL XYLENES	0.50	2100	550	0.66	ND	2700
GASOLINE RANGE HYDROCARBONS	50	24000	3200	81	43000*	22000
Report Limit Multiplication Factor:		200	10	1	200	100
Report Limit Multiplication Factor for MTBE only:					2000	

Gasoline value due to MTBE.
***Interferent peak present; see 8260 value.*

Surrogate % Recovery:	FID: 102% / PID: 102%	FID: 107% / PID: 99.4%	FID: 92.5% / PID: 97.5%	FID: 85.9% / PID: 84.6%	FID: 97.7% / PID: 92.0%
Instrument ID:	VAR-GC1	VAR-GC1	VAR-GC1	VAR-GC1	VAR-GC1

Analytes reported as ND were not detected or below the Practical Quantitation Limit
Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

APPROVED BY: _____
James C. Phillips / Laboratory Director or
Cleri J. Cons / Laboratory Manager

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate # 2480
2333 Shuttle Drive, Atwater, CA 95301
Phone: (209) 384-2930
Fax: (209) 384-1507

HerSchy Environmental	Client Project ID: Alaska Gas - Oakland	Sampled: 05-15-08
P.O. Box 229	Reference Number: 11106	Received: 05-15-08
Bass Lake, CA 93604	Sample Description: Water	Extracted: 05-16-08
Attn: Reijo Ratilainen	Sample Prep/Analysis Method: EPA 5030/8015B, 8021B	Analyzed: 05-16-08
	Lab Numbers: 11106-6W, 7W	Reported: 05-29-08

TOTAL PETROLEUM HYDROCARBONS - GASOLINE WITH BTEX DISTINCTION

ANALYTE	REPORTING LIMIT (ug/L)	SAMPLE ID MW-5 (ug/L)	SAMPLE ID MW-6 (ug/L)
MTBE	0.50	1.6	10
BENZENE	0.50	ND	ND
TOLUENE	0.50	ND	ND
ETHYL BENZENE	0.50	ND	ND
TOTAL XYLENES	0.50	ND	ND
GASOLINE RANGE HYDROCARBONS	50	ND	ND
Report Limit Multiplication Factor:		1	1

Surrogate % Recovery:	PID: 99.3% / FID: 104%	PID: 95.4% / FID: 103%
Instrument ID:	VAR-GC1	VAR-GC1

Analytes reported as ND were not detected or below the Practical Quantitation Limit
Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

APPROVED BY:

James G. Phillips / Laboratory Director or
Clari J. Cope / Laboratory Manager

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate # 2480
2333 Shuttle Drive, Atwater, CA 95301
Phone: (209) 384-2930
Fax: (209) 384-1507

HerSchy Environmental	Client Project ID: Alaska Gas - Oakland	Method: EPA 5030/8015M,8020
P.O. Box 229	Reference Number: 11106	Instrument ID: Var-GC1
Bass Lake, CA 93604	Sample Description: Water	Extracted: 05-16-08
Attn: Reijo Ratilainen	Analyst: Jim Phillips	Analyzed: 05-16-08
		Reported: 05-29-08

QUALITY CONTROL DATA REPORT

ANALYTE	Gasoline	MTBE	Benzene	Toluene	Ethyl Benzene	Total Xylenes
Spike Concentration:	220	3.68	2.64	19.4	4.04	23.2
Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
LCS Batch #:	VW-5168	VW-5168	VW-5168	VW-5168	VW-5168	VW-5168
LCS % Recovery:	105%	119%	107%	93.4%	86.5%	86.0%
Surrogate Recovery:	101%	99.2%	99.2%	99.2%	99.2%	99.2%
Control Limits:	70-130 %	70-130 %	70-130 %	70-130 %	70-130 %	70-130 %
MS/MSD Batch #:	VW-5168	VW-5168	VW-5168	VW-5168	VW-5168	VW-5168
Spike Concentration:	220	3.68	2.64	19.4	4.04	23.2
MS % Recovery:	79.1%	91.1%	84.5%	83.6%	81.8%	83.0%
Surrogate Recovery:	99.8%	103%	103%	103%	103%	103%
MSD % Recovery:	81.8%	97.3%	88.4%	87.0%	82.2%	84.8%
Surrogate Recovery:	99.6%	103%	103%	103%	103%	103%
Relative % Difference:	2.93%	6.10%	4.37%	3.94%	0.513%	2.08%
Method Blank :	ND	ND	ND	ND	ND	ND
Surrogate Recovery:	97.0%	103%	103%	103%	103%	103%

The LCS (Laboratory Check Sample) is a control sample of known, interferent free matrix that is fortified with representative analytes and analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery is used for validation of sample batch results. Due to matrix effects, the QC limits and recoveries for MS/MSD's are advisory only and are not used to accept or reject batch results.

APPROVED BY: _____

James C. Phillips / Laboratory Director or
Clarid. Corie / Laboratory Manager

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate No. 2480
2333 Shuttle Drive, Atwater, CA 95301
Phone: (209) 384-2930
Fax: (209) 384-1507

HerSchy Environmental	Client Project ID: Alaska Gas - Oakland	Sampled: 05-15-08
P.O. Box 229	Reference Number: 11106	Received: 05-15-08
Bass Lake, CA 93604	Sample Description: Water	Extracted: 05-21-08
Attn: Reijo Ratilainen	Sample Prep/Analysis Method: EPA 5030/8260B	Analyzed: 05-21-08
	Lab Numbers: 11106-1W, 2W, 3W, 4W, 5W	Reported: 05-29-08

GASOLINE ADDITIVES AND SOLVENTS BY EPA METHOD 8260 GC/MS

ANALYTE	REPORTING LIMIT (µg/L)	SAMPLE ID EX-1 (µg/L)	SAMPLE ID MW-1R (µg/L)	SAMPLE ID MW-2 (µg/L)	SAMPLE ID MW-3 (µg/L)	SAMPLE ID MW-4 (µg/L)
FUEL OXYGENATES						
Methyl tert-Butyl Ether (MTBE)	0.50	1800	4.2	38	62000	3300
Di-isopropyl Ether (DIPE)	0.50	ND	ND	ND	ND	ND
Ethyl tert-Butyl Ether (ETBE)	0.50	ND	ND	ND	ND	ND
tert-Amyl Methyl Ether (TAME)	0.50	380	1.0	1.4	1100	340
tert-Butanol (TBA)	20	11000	ND	54	200000	35000
VOLATILE HALOCARBONS & AROMATICS						
1,2-Dichloroethane (1,2-DCA)	0.50	ND	ND	ND	ND	ND
Ethylene Dibromide (EDB)	0.50	ND	ND	ND	ND	ND
Report Limit Multiplication Factor:		10	1	1	200	10
Report Limit Multiplication Factor for MTBE & TBA only:		100			2000	200

Surrogate Recoveries					
1,2-Dichloroethane-d4	106%	106%	113%	98.0%	99.6%
Toluene-d8	99.0%	89.3%	98.6%	104%	100%

Instrument ID: VARIAN MS
Analytes reported as ND were not detected or below the Practical Quantitation Limit
Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor
(µg/L) = micrograms per liter or parts per billion (ppb)

APPROVED BY:
James C. Phillips / Laboratory Director or
Clarid. Cone / Laboratory Manager

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate No. 2480

2333 Shuttle Drive, Atwater, CA 95301

Phone: (209) 384-2930
Fax: (209) 384-1507

HerSchy Environmental
P.O. Box 229
Bass Lake, CA 93604
Attn: Reijo Ratilainen

Client Project ID: Alaska Gas - Oakland
Reference Number: 11106
Sample Description: Water
Sample Prep/Analysis Method: EPA 5030/8260B
Lab Numbers: 11106-6W, 7W

Sampled: 05-15-08
Received: 05-15-08
Extracted: 05-21-08
Analyzed: 05-21-08
Reported: 05-29-08

GASOLINE ADDITIVES AND SOLVENTS BY EPA METHOD 8260 GC/MS

ANALYTE	REPORTING LIMIT (µg/L)	SAMPLE ID MW-5 (µg/L)	SAMPLE ID MW-6 (µg/L)
FUEL OXYGENATES			
Methyl tert-Butyl Ether (MTBE)	0.50	1.7	13
Di-isopropyl Ether (DIPE)	0.50	ND	ND
Ethyl tert-Butyl Ether (ETBE)	0.50	ND	ND
tert-Amyl Methyl Ether (TAME)	0.50	ND	1.0
tert-Butanol (TBA)	20	ND	130
VOLATILE HALOCARBONS & AROMATICS			
1,2-Dichloroethane (1,2-DCA)	0.50	ND	ND
Ethylene Dibromide (EDB)	0.50	ND	ND
Report Limit Multiplication Factor:		1	1

Surrogate Recoveries		
1,2-Dichloroethane-d4	109%	111%
Toluene-d8	102%	110%

Instrument ID: VARIAN MS
Analytes reported as ND were not detected or below the Practical Quantitation Limit
Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor
(µg/L) = micrograms per liter or parts per billion (ppb)

APPROVED BY:

James C. Phillips / Laboratory Director or
Clari J. Cone / Laboratory Manager

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate No. 2480
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Phone: (209) 384-2930
Fax: (209) 384-1507

HerSchy Environmental P.O. Box 229 Bass Lake, CA 93604 Attn: Reijo Ratilainen	Client Project ID: Alaska Gas - Oakland Reference Number: 11106 Matrix: Water Analyst: Clari Cone	Method: EPA 5030/8260 Instrument ID: HP 5972 MS Prepared: 05-21-08 Analyzed: 05-21-08 Reported: 05-29-08

QUALITY CONTROL DATA REPORT

SPIKE ID: VWMS-5218

COMPOUNDS	Reporting Limit µg/L	BLANK Result µg/L	Spiking Level µg/L	Control Spike %R	%R Limits
t-Butyl Alcohol (t-BA)	20.0	ND	75.0	95.5%	27.2 - 178.4
Methyl t-butyl ether (MTBE)	0.50	ND	2.50	89.6%	59.7 - 153.0
Diisopropyl ether (DIPE)	0.50	ND	2.50	84.8%	72.1 - 129.6
Ethyl t-Butyl ether (ETBE)	0.50	ND	2.50	96.8%	66.1 - 130.8
t-Amyl methyl ether (TAME)	0.50	ND	2.50	97.6%	60.2 - 137.1
1,2-Dichloroethane (1,2-DCA)	0.50	ND	2.50	86.4%	91.2 - 137.6
Ethylene dibromide (EDB)	0.50	ND	2.50	86.4%	69.5 - 128.9
Surrogates:					
1,2-Dichloroethane-d4	1.0	87.3%	10.0	95.0%	81.7 - 125.4
Toluene-d8	1.0	96.6%	10.0	100%	90.3 - 112.6

COMPOUNDS	Spiking Level µg/L	MATRIX SPIKE %R	MATRIX SPIKE DUP %R	%R Limits	%RPD
t-Butyl Alcohol (t-BA)	75.0	101%	99.2%	45.1 - 151.2	1.38%
Methyl t-butyl ether (MTBE)	2.50	108%	108%	70.9 - 144.1	0.347%
Diisopropyl ether (DIPE)	2.50	101%	101%	73.6 - 126.5	0.396%
Ethyl t-Butyl ether (ETBE)	2.50	99.2%	108%	74.8 - 128.1	8.12%
t-Amyl methyl ether (TAME)	2.50	88.4%	97.6%	62.5 - 118.6	8.76%
1,2-Dichloroethane (1,2-DCA)	2.50	96.0%	102%	85.4 - 144.6	6.45%
Ethylene dibromide (EDB)	2.50	90.8%	93.2%	73.3 - 125.1	2.61%
Surrogate:					
1,2-Dichloroethane-d4	10.0	91.1%	108%	80.2 - 126.9	16.6%
Toluene-d8	10.0	104%	102%	82.6 - 114.9	2.72%

The LCS (Laboratory Check Sample) is a control sample of known, interferent free matrix that is fortified with representative analytes and analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery is used for validation of sample batch results. Due to matrix effects, the QC limits and recoveries for MS/MSD's are advisory only and are not used to accept or reject batch results.

APPROVED BY: _____

James C. Phillips / Laboratory Director or
Clari J. Cone / Laboratory Manager

CASTLE ANALYTICAL LABORATORY

CHAIN OF CUSTODY

Location: 2333 Shuttle Drive, Bldg 908/909, Atwater, CA 95301
Mailing Address: 2333 Shuttle Drive, Atwater, CA 95301
Phone: (209) 384-2930 - Fax: (209) 384-1507

Certificate No. 2480

PAGE 1 OF 1

Customer: ALASKA Gas
Address:
City/State/ZIP: OAKLAND
Phone / FAX:
Proj # / P.O. #:
Report Attention: Rob
Sampler Signature: John S. West
Printed: JOHN S. WEST

Lab ID	SAMPLE ID	DATE	TIME	DESCRIPTION/LOCATION	SAMPLE TYPE (g) grab (c) composite (d) discrete	SAMPLE MATRIX (s) solid (l) liquid (o) other	BTEX/TPH-GAS	MTBE	TPH-DIESEL	TRPH 418.1M	Oxy's / EDB / DCA by 8260	8260	Electronic Deliverables (EDF)	NUMBER OF CONTAINERS	OBSERVATIONS/REMARKS
	EX-1	05-15	0920		G	L	X	X			X			3	
	MW-1R		0850												
	MW-2		0757												
	MW-3		0720												
	MW-4		0842												
	MW-5		0815												
	MW-6		0740												

Method of Shipment:

Notes:

Relinquished by:	John S. West	JOHN S. WEST	05-15	1300	HERSHEY ENV
Received by:		Adriana Magaña	5-15-08	1245	Castle Analytical Lab.
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

Total number of containers submitted to the laboratory

Note: All special requests (e.g. quick turn times) must be cleared through authorized laboratory personnel.

RESULTS DUE: _____

☐ VERBAL ☐ WRITTEN