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QUARTERLY GROUNDWATER MONITORING REPORT
Second Quarter 2008

PROJECT SITE:
Alaska Gas
1310 Central Avenue
Alameda, California 94501
LOP Case No. RO0000022

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Project No. 1035

September 3, 2008

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Tim Cook, P.E.
Principal

INTRODUCTION

This report presents the results of the second quarterly groundwater monitoring event for 2008 at Alaska Gas (the "Site"), located at 1310 Central Avenue in Alameda, California. The sampling described herein is part of an ongoing characterization of subsurface contamination caused by a release of petroleum hydrocarbons from underground storage tanks (USTs) and/or the associated piping formerly located at the Site. Cook Environmental Services, Inc. (CES) is conducting this investigation on behalf of the property owner, Mr. Nissan Saidian. Alameda County Environmental Health (ACEH) is the lead regulatory agency overseeing this investigation. The Case number for the Site is RO0000022. The quarterly monitoring program involves the sampling of five monitoring wells to delineate the extent of petroleum hydrocarbon compounds in shallow groundwater.

Site Description and Physical Setting

The Site is currently a gas station located in an area of mixed commercial and residential area in the south-central part of Alameda. The Site is located at the intersection of Encinal Avenue, Sherman Street and Central Avenue. A Site location map is shown on **Figure 1** and a site plan showing physical features and monitoring well locations is shown on **Figure 2**.

The Site investigation area has a surface elevation of approximately 25 feet above mean sea level (amsl). The Site is relatively flat. San Francisco Bay and the Alameda Estuary are located approximately one half mile from the Site.

Site History

In May 1996, Petrotek removed four underground storage tanks (USTs) from the Site. One 10,000 gallon, one 7,500-gallon and one 5,000-gallon UST contained gasoline and were removed from the western corner of the Site. A 500-gallon waste oil tank was removed from next to the building in the southern portion of the Site. Pump dispensers and related product piping were also removed.

Free product was observed floating on the groundwater in the gasoline UST excavation. A water sample from the gasoline UST excavation yielded 2,800 micrograms per liter (ug/L) of total petroleum hydrocarbons as gasoline (TPH-g) and 100 ug/L benzene. Soil samples collected from this same excavation yielded up to 5,000 milligrams per kilogram (mg/Kg) of TPH-g and 31 mg/Kg benzene. Soil samples collected from beneath the pump island yielded up to 6,800 mg/Kg TPH-g and 63 mg/Kg benzene. A water sample from the waste oil excavation yielded 35,000 ug/L of diesel and motor oil range hydrocarbons, and 1,300 ug/L of TPH-g. These results are documented in a UST Closure Report submitted by Petrotek in May 1996.

Reportedly, Petrotek excavated approximately 600 cubic yards of contaminated soil from both UST excavations and disposed of it offsite. Approximately 15,000 gallons of water were

pumped from the excavations, treated and discharged to the sanitary sewer. Two new USTs, dispensers and product piping were installed.

In November 1998, All Environmental, Inc. (AEI) drilled 14 soil borings at the Site and collected soil and groundwater samples for analysis. Up to 5,900 mg/Kg of TPH-g was detected in soil samples collected from the borings. Up to 120,000 ug/L TPH-g and 7,200 ug/L benzene were detected in groundwater samples from the borings.

In December 1999, HerSchy Environmental installed three monitoring wells at the Site. Up to 43,000 ug/L TPH-g, 8,700 ug/L TPH-d, 1,300 ug/L benzene and 120,000 ug/L methyl tert-butyl ether (MtBE) were detected in water samples from the wells. The groundwater flow direction was southwesterly under a gradient of 0.0085.

One May 16, 2000, Aqua Science Engineers (ASE) began quarterly sampling at the Site. On July 28, 2000, ASE collected soil and groundwater samples from 12 Geoprobe borings (borings BH-a through BH-L) to delineate the extent of down gradient contamination. The Site continues to be sampled on a quarterly basis.

SCOPE OF WORK

The scope of work performed for this quarterly monitoring included the following tasks:

- Measured static water levels in five monitoring wells;
- Collected field measurements of pH, temperature, and specific conductance (SC) from each well;
- Purged at least three casing volumes of water from each well;
- Collected groundwater samples from each well;
- Analyzed groundwater samples for TPH-d, TPH-g, BTEX, MtBE, DIPE, EtBE, tAME, tBA, methanol, ethanol, EDB, and DCA (see the *Monitoring Well Purging and Sampling* section of this report for analyte names and analytical methods used);
- Updated the GeoTracker database; and
- Prepared this *Quarterly Monitoring Report*.

METHODS AND PROCEDURES

Groundwater Level Measurements

Quarterly groundwater monitoring was conducted on June 28, 2008. Depth-to-water measurements were taken after allowing the monitoring well to equilibrate with atmospheric pressure for approximately 30-minutes. The static water levels in each well were measured using an electronic water level indicator. The depth-to-water measurements and the total well depths were used to calculate the volume of standing water in each well. The static depth-to water

measurements were referenced to the surveyed top of each well casing to determine groundwater elevations.

Monitoring Well Purging and Sampling

At least three well volumes were purged from each well using a clean disposable bailer. The temperature, pH, and SC of the groundwater were intermittently monitored with portable instrumentation during purging. Water quality measurements were recorded on monitoring well sampling logs, copies of which are included in **Appendix A**. Well purge water was placed into labeled and sealed 55-gallon, DOT-approved steel drums and temporarily stored onsite.

Following purging, groundwater samples were collected from each monitoring well using a clean disposable bailer. Samples for TPH-g, BTEX and fuel oxygenates were decanted into laboratory supplied 40-ml volatile organic analysis (VOA) vials containing concentrated hydrochloric acid as a preservative. Care was taken to fill the VOA vials to eliminate headspace and chemical volatilization. Samples for TPH-d were decanted into laboratory supplied 1-liter amber glass jars containing concentrated hydrochloric acid as a preservative. Samples were labeled to indicate the project number, sample ID, and date collected. The same information was recorded on chain-of-custody forms. Samples were stored in a cooler filled with ice until submittal to the laboratory.

Samples were submitted under documented chain-of-custody control to McCampbell Analytical, Inc. of Pittsburg, California (DHS ELAP Certification No. 1644) and analyzed for for TPH-g and TPH-d by EPA Method 8015 modified; for BTEX by EPA Method 8021B; and for methyl tert-butyl ether (MtBE), di-isopropyl ether (DIPE), ethyl tert-butyl ether (EtBE), tert-amyl methyl ether (tAME), tert butyl alcohol (tBA), methanol, ethanol, ethylene di-bromide (EDB), and 1,2-dichloroethane (DCA) by EPA Method 8260B.

GeoTracker Requirements

All analytical data were submitted electronically to the California State Water Resources Control Board Geographical Environmental Information Management System (GeoTracker) database as required by AB2886 (Water Code Sections 13195-13198). Electronic analytical reports (EDF files) are prepared and formatted by the laboratory and submitted by Cook Environmental Services. Well latitudes, longitudes (GEO_XY files), and elevations (GEO_Z files) were previously submitted to the database. A well status and usage report (GEO_WELL file) is submitted for each monitoring event. A complete electronic copy of this report (GEO_REPORT file) in PDF format was also submitted. Updated maps (GEO_MAP files) are submitted when site features such as monitoring wells or soil borings are added.

DATA EVALUATION

Groundwater Levels and Gradient

Depth to water measurements were collected from five monitoring wells. Well construction details for each well are described in **Table 1**. The groundwater flow direction is N20°W with a gradient of 0.011 ft/ft. Groundwater levels and elevations are summarized in **Table 2**. Groundwater elevations contours are depicted on **Figure 3**. Hydrographs for the wells are shown on **Figure 4.**

Groundwater Analytical Results

TPH-g, BTEX, MtBE, tBA, and DCA are the primary constituents of concern and occur in the highest concentrations in wells MW-1 and MW-3. Contaminant concentrations this quarter were within the range of historical values. Groundwater analytical data for the current and previous quarters are summarized in **Table 3**. TPH-g concentrations in monitoring wells for the current sampling event are shown on **Figure 5**. Benzene concentrations are shown on **Figure 6**. MtBE concentrations are shown on **Figure 7**. A copy of the laboratory analytical report is included in **Appendix B**.

The highest hydrocarbon concentrations were observed in onsite wells MW-1 and MW-3. MW-1 is located near the fuel dispensers and MW-3 is located near the former USTs. TPH-g was detected in MW-1 at 8,400 ug/L and in MW-3 at 6,400 ug/L. TPH-g was detected in MW-5 at 540 ug/L. MW-5 is located approximately 60 feet down gradient (north) of the site and is the only offsite well in which TPH-g was detected.

Benzene was detected in MW-1 at 18 ug/L, in MW-3 at 97 ug/L and in MW-5 at 6.2 ug/L. MtBE was detected in MW-3 at 200 ug/L, in MW-5 at 550 ug/L and in MW-4 at 1.1 ug/L. MtBE was not detected in MW-1. Hydrocarbons were not detected in onsite well MW-2

In general, hydrocarbon concentrations have decreased since groundwater monitoring commenced in September 1999. **Figure 8** shows TPH-g and benzene concentration trends in well MW-1 and **Figure 9** shows these same concentration trends in well MW-3.

CONCLUSIONS

The groundwater flow direction this quarter is N20°W under a gradient of 0.011 ft/ft. The highest hydrocarbon concentrations were observed in onsite wells MW-1 and MW-3. TPH-g, benzene and MtBE were observed above Environmental Screening Levels (ESL) established by the San Francisco Bay RWQCB in well MW-5. This well is located approximately 60 feet down gradient of the site. MtBE was detected in down gradient well MW-4 at 1.1 ug/L. This concentration is less than the ESL of 5 ug/L.

RECOMMENDATIONS

We recommend additional site investigation including the collection of soil and groundwater samples to delineate the vertical extent of hydrocarbon contamination in the vicinity of the former USTs and dispenser island. We believe that Aqua Science Engineers, Inc. (ASE) adequately characterized the lateral extent of hydrocarbon contamination in their "*Report for Soil and Groundwater Assessment*" dated August 22, 2000.

As stated previously, the hydrocarbon plume has migrated offsite. It is not clear if this plume has migrated beneath residences located down gradient (i.e., north) of the Site. Further, it is not clear if this down gradient contamination poses a risk to human and environmental receptors. We recommend the preparation of a Sensitive Receptor Survey that will identify surface water bodies and water supply wells within 2,000 feet of the Site. The Sensitive Receptor Survey will use aerial photos to accurately depict neighboring structures, water wells and surface water bodies.

Once the contaminant source areas have been adequately characterized, we recommend the preparation of a Feasibility Study/Corrective Action Plan (FS/CAP) to address remedial alternatives for mitigating adverse environmental impacts caused by the hydrocarbon plume.

Cook Environmental Services, Inc. will submit a work plan to the ACEH by September 30, 2008 to address further investigation of the source areas. The work plan will include a Sensitive Receptor Survey.

TABLES

Table 1. Well Construction Details
Alaska Gas
Alameda, California

Well ID	Date Installed	Total Depth (feet bg)	Screened Interval (feet bg)	Water-Bearing Zone	Screen Slot Size (inches)	Filter Pack Interval (feet bg)	Bentonite Interval (feet bg)	Grout Interval (feet bg)	TOC Elevation (feet amsl)	Northing Coordinates (feet)	Westing Coordinates (feet)
MW-1	10/11/99	18	17.35-2.5	Silty Sand	0.02	18-1.5	1.5-0.5	0.5-0	29.18	15.20394	46.13606
MW-2	10/11/99	18	18-4	Silty Sand	0.02	18-3	3-1.5	1.5-0	29.55	14.93558	45.97882
MW-3	10/11/99	20	19-4	Silty Sand	0.02	20-3	3-1.5	1.5-0	27.74	15.28672	47.24157
MW-4	04/03/06	16	15-5	Sand-Clayey Sand	0.02	15-4.5	4.5-4	4-0.5	26.23	17.12115	48.05243
MW-5	04/04/06	17	15-5	Sand-Clayey Sand	0.02	15-4.5	4.5-4	4-0.5	26.78	16.21022	47.48996

Table 2. Groundwater Elevation Data
Alaska Gas
Alameda, California

Well ID	Date	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation
MW-1	09/06/99	26.85	5.16	21.69
	05/16/00		3.24	23.61
	08/03/00		4.15	22.7
	12/05/00		4.9	21.95
	03/05/01		3.04	23.81
	06/04/01		4.01	22.84
	06/05/02		3.73	23.12
	09/09/02		5.06	21.79
	12/19/02		4.09	22.76
	03/10/03		3.5	23.35
	06/03/03		3.66	23.19
	09/19/03		4.91	21.94
	12/22/03		4.3	22.55
	03/12/04		2.93	23.92
	06/11/04		4.23	22.62
	09/13/04		5.02	21.83
	12/16/04		3.76	23.09
	03/21/05		2.81	24.04
	06/23/05		3.66	23.19
	09/30/05		4.55	22.3
	12/08/05		4.21	22.64
	03/01/06		2.9	23.95
	05/25/06	29.18	2.84	26.34
	08/10/06		4.35	24.83
	11/21/06		4.22	24.96
	02/06/07		4.39	24.79
	05/08/07		3.88	25.3
	08/06/07		5.02	24.16
	12/26/07		4.87	24.31
	06/28/08		4.77	24.41

Table 2. Groundwater Elevation Data
Alaska Gas
Alameda, California

Well ID	Date	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation
MW-2	09/06/99	27.18	5.56	21.62
	05/16/00		3.54	23.64
	08/03/00		4.44	22.74
	12/05/00		5.24	21.94
	03/05/01		3.28	23.9
	06/04/01		4.33	22.85
	06/05/02		3.98	23.2
	09/09/02		5.34	21.84
	12/19/02		4.33	22.85
	03/10/03		3.58	23.6
	06/03/03		3.87	23.31
	09/19/03		5.24	21.94
	12/22/03		4.47	22.71
	03/12/04		3.4	23.78
	06/11/04		4.51	22.67
	09/13/04		5.35	21.83
	12/16/04		4.09	23.09
	03/21/05		3.01	24.17
	06/23/05		3.91	23.27
	09/30/05		4.86	22.32
	12/08/05		4.49	22.69
	03/01/06		3.09	24.09
	05/25/06	29.55	3.16	26.39
	08/10/06		4.98	24.57
	11/21/06		4.81	24.74
	02/06/07		4.37	25.18
	05/08/07		4.12	25.43
	08/06/07		5.36	24.19
	12/26/07		5.03	24.52
	06/28/08		5.06	24.49

Table 2. Groundwater Elevation Data
Alaska Gas
Alameda, California

Well ID	Date	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation
MW-3	09/06/99	25.3	4.02	21.28
	05/16/00		2.06	23.24
	08/03/00		3.2	22.1
	12/05/00		3.71	21.59
	03/05/01		1.9	23.4
	06/04/01		2.72	22.58
	06/05/02		2.75	22.55
	09/09/02		3.88	21.42
	12/19/02		2.79	22.51
	03/10/03		2.36	22.94
	06/03/03		2.65	22.65
	09/19/03		3.15	22.15
	12/22/03		2.83	22.47
	03/12/04		2	23.3
	06/11/04		3.11	22.19
	09/13/04		3.9	21.4
	12/16/04		2.89	22.41
	03/21/05		1.93	23.37
	06/23/05		2.69	22.61
	09/30/05		4.54	20.76
	12/08/05		3.05	22.25
	03/01/06		1.95	23.35
	05/25/06	27.74	2.11	25.63
	08/10/06		3.25	24.49
	11/21/06		3.35	24.39
	02/06/07		3.34	24.4
	05/08/07		3.53	24.21
	08/06/07		3.91	23.83
	12/26/07		3.57	24.17
	06/28/08		3.66	24.08

Table 2. Groundwater Elevation Data
Alaska Gas
Alameda, California

Well ID	Date	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation
MW-4	05/25/06	26.23	2.54	23.69
	08/10/06		4.65	21.58
	11/21/06		4.63	21.6
	02/06/07		3.87	22.36
	05/08/07		4.21	22.02
	08/06/07		4.54	21.69
	12/26/07		2.9	23.33
	06/28/08		3.02	23.21
MW-5	05/25/06	26.78	2.6	24.18
	08/10/06		3.4	23.38
	11/21/06		3.27	23.51
	02/06/07		3.1	23.68
	05/08/07		3	23.78
	08/06/07		3.79	22.99
	12/26/07		3.38	23.4
	06/28/08		3.7	23.08

All measurements are in feet. DTW = Depth to water below top of PVC casing.
TOC = Top of casing. ELEV = Elevation above mean sea level.
D = The change in water level (elevation this quarter minus elevation last quarter).
Wells resurveyed on April 27, 2006

Table 3. Groundwater Analytical Results
Alaska Gas
Alameda, California

Well ID	Date	TPH-g	TPH-d	benzene	toluene	ethyl-benzene	xylenes	MtBE	tAME	tBA	Other Oxygenates
MW-1	09/06/99	**5,700**	**8,700**	**170**	59	22	85	**20,000**	NA	NA	NA
	05/16/00	**20,000**	<7,500	**38**	6.3	740	1,600	<5.0	<5.0	<50	<5.0
	08/03/00	**20,000**	<6,000	**56**	9.7	920	1,600	<0.5	<0.5	<50	<0.5
	12/05/00	**31,000**	<4,000	**64**	27	820	2,200	<10	<5.0	<50	<5.0
	03/05/01	**20,000**	<4,000	**19**	<5.0	480	870	<5	<5.0	<50	<5.0
	06/04/01	**23,000**	<7,000	**58**	50	710	2,100	**5.1**	<5.0	<50	<5.0
	06/05/02	**7,400**	<1,500	**9.3**	6.7	180	230	<1.0	<1.0	<10	<1.0
	09/09/02	**8,300**	<3500	**32**	20	390	670	<2.0	<2.0	<20	<2.0
	12/19/02	**5,100**	NS	**7.9**	2.5	56	93	<1.0	<1.0	<10	<1.0
	03/10/03	**2,000**	<2,000	**3.4**	2.9	80	98	<0.5	<0.5	<5.0	<0.5
	06/03/03	**7,300**	<4,000	**6.8**	9.9	300	1,000	2.3	<0.5	<5.0	<0.5
	09/19/03	**9,000**	<3,000	**26**	22	420	1,200	4.5	<1.5	<20	<1.5
	12/22/03	**4,300**	<2,000	**12**	6.7	200	290	**9.1**	<1.0	<10	<1.0
	03/12/04	**7,000**	<3,000	**8.3**	8.2	250	760	3.9	<2.0	<20	<2.0
	06/11/04	**13,000**	<4,000	**26**	27	530	1,700	<2.5	<2.5	<15	<2.5
	09/13/04	**17,000**	<4,000	**37**	42	840	2,000	<5.0	<5.0	<50	<5.0
	12/16/04	**1,800**	<1,000	**5.9**	1.9	100	35	**16**	<0.5	<5.0	<0.5
	03/21/05	**7,500**	<3,000	**3.4**	4.2	290	760	<1.5	<1.5	<20	<1.5
	06/23/05	**11,000**	<8,000	**15**	11	370	910	2.4	<1.5	<7.0	<1.5
	09/30/05	**9,800**	<4,000	**32**	25	540	680	1.6	<1.5	<7.0	<1.5
	12/08/05	**9,200**	<4,000	**27**	21	500	490	2.2	<1.5	<7.0	<1.5
	03/01/06	**6,500**	<4,000	**8.1**	9.4	370	660	**18**	<1.5	<6.0	<1.5
	05/25/06	**10,000**	<3,000	**19**	14	900	620	<1.5	<1.5	<7.0	<1.5
	08/10/06	**9,800**	<1,500	**16**	8.1	640	180	<1.5	<1.5	<7.0	<1.5
	11/21/06	**2,900**	<1,000	**7.8**	2.5	160	12	2.5	2.5	<5.0	<0.5
	02/06/07	**4,600**	<1,500	**9.4**	6	380	220	1	<0.50	<5.0	<0.50
	05/08/07	**3,700**	<800	**10**	4.6	320	86	1.5	<0.50	<5.0	<0.50
	08/06/07	**8,200**	<2,000	**14**	8.8	730	180	<0.50	<0.50	<5.0	<0.50
	12/26/07	**1,200**	<300	**2.3**	1.1	89	21	4.8	<0.50	<5.0	<0.50
	06/28/08	**8,400**	**3,900**	**18**	26	670	1,100	<2.5	<2.5	<10	<2.5

Table 3. Groundwater Analytical Results
Alaska Gas
Alameda, California

Well ID	Date	TPH-g	TPH-d	benzene	toluene	ethyl-benzene	xylenes	MtBE	tAME	tBA	Other Oxygenates
MW-2	09/06/99	**6,000**	70	**1,300**	92	50	400	**6,800**	NA	NA	NA
	05/16/00	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	08/03/00	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	12/05/00	<50	**1,400**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	03/05/01	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	06/04/01	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	06/05/02	<50	**2,300**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	09/09/02	<50	**1,300**	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<5.0	<0.5
	12/19/02	<50	--	<0.5	<0.5	<0.5	<0.5	**16**	<0.5	<5.0	<0.5
	03/10/03	<50	**3,000**	<0.5	<0.5	<0.5	<0.5	1	<0.5	<5.0	<0.5
	06/03/03	<50	**700**	<0.5	<0.5	<0.5	<0.5	2	<0.5	<5.0	<0.5
	09/19/03	<50	**1,400**	<0.5	<0.5	<0.5	<0.5	4.7	<0.5	<5.0	<0.5
	12/22/03	<50	**1,000**	<0.5	<0.5	<0.5	<0.5	**39**	<0.5	<5.0	<0.5
	03/12/04	<50	**250**	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<5.0	<0.5
	06/11/04	<50	**920**	<0.5	<0.5	<0.5	<0.5	0.75	<0.5	<5.0	<0.5
	09/13/04	<50	**140**	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<5.0	<0.5
	12/16/04	<50	**150**	<0.5	<0.5	<0.5	<0.5	**12**	<0.5	<5.0	<0.5
	03/21/05	<50	**130**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	06/23/05	<50	**1,100**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	09/30/05	<50	**300**	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<5.0	<0.5
	12/08/05	<50	**600**	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	<5.0	<0.5
	03/01/06	<50	**920**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	05/25/06	<50	**160**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	08/10/06	<50	**870**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	11/21/06	<50	**130**	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	<5.0	<0.5
	02/06/07	<50	**450**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	05/08/07	<50	**160**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	08/06/07	<50	**180**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	12/26/07	<50	**190**	<0.5	<0.5	<0.5	<0.5	2.9	<0.5	<5.0	<0.5
	06/28/08	<50	**180**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<2.0

Table 3. Groundwater Analytical Results
Alaska Gas
Alameda, California

Well ID	Date	TPH-g	TPH-d	benzene	toluene	ethyl-benzene	xylenes	MtBE	tAME	tBA	Other Oxygenates
MW-3	09/06/99	**43,000**	**870**	**860**	70	<0.5	65	**120,000**	NA	NA	NA
	05/16/00	**1,700**	<5,000	**2,800**	60	380	190	**990**	9.1	350	<5.0
	08/03/00	**16,000**	<2,000	**1,600**	29	210	53	**1,200**	21	260	<2.0
	12/05/00	**17,000**	**5800**	**1,700**	45	460	240	**1,100**	21	230	<5.0
	03/05/01	**29,000**	<1,300	**2,100**	68	280	100	**180**	<8.0	<80	<8.0
	06/04/01	**17,000**	<6,000	**2,000**	56	340	230	**300**	<10	130	<10
	06/05/02	**11,000**	<2,000	**1,600**	46	210	47	**790**	<10	220	<10
	09/09/02	**12,000**	<800	**1,400**	44	130	27	**760**	<10	160	<5.0
	12/19/02	**10,000**	NS	**740**	32	180	38	**86**	<5.0	<50	<5.0
	03/10/03	**13,000**	<6,000	**1,200**	42	240	35	**470**	5.3	140	<2.5
	06/03/03	**6,500**	<3,000	**750**	21	46	15	**1,300**	<50	280	<10
	09/19/03	**9,800**	<3,000	**1,500**	38	170	32	**420**	<10	150	<5.0
	12/22/03	**8,800**	<2,000	**1,100**	32	82	20	**330**	5.8	52	<2.5
	03/12/04	**7,600**	<3,000	**590**	23	69	17	**470**	9.2	63	<1.5
	06/11/04	**7,800**	<2,000	**840**	19	58	15	**710**	12	140	<2.5
	09/13/04	**7,500**	<1,500	**840**	17	23	7.8	**730**	15	93	<2.5
	12/16/04	**9,300**	<2,000	**1,100**	26	76	13	**600**	12	130	<2.5
	03/21/05	**11,000**	<3,000	**1,200**	37	190	24	**460**	9.3	100	<2.5
	06/23/05	**9,600**	<4,000	**1,100**	28	93	23	**370**	8.2	67	<1.5
	09/30/05	**9,000**	<3,000	**690**	18	32	14	**380**	8.4	72	<1.5
	12/08/05	**8,700**	<3,000	**560**	23	38	12	**350**	6.9	82	<1.5
	03/01/06	**8,400**	<2,000	**410**	24	42	13	**360**	8	58	<1.5
	05/25/06	**9,900**	<2,000	**630**	25	13	13	**190**	5.3	59	<1.5
	08/10/06	**14,000**	<3,000	**690**	**43**	130	26	**200**	5.4	70	<1.5
	11/21/06	**10,000**	<3,000	**580**	37	96	25	**240**	6.3	72	<1.5
	02/06/07	**7,700**	<1,000	**520**	36	90	23	**260**	7.4	54	<1.5
	05/08/07	**4,700**	<800	**150**	0.86	<0.5	<0.5	**170**	5	52	<0.5
	08/06/07	**6,000**	<1,000	**240**	26	34	17	**180**	5	55	<0.5
	12/26/07	**8,100**	<1,500	**76**	14	17	12	**150**	4.3	37	<0.9
	06/28/08	**6,400**	**3,100**	**97**	17	19	13	**200**	5.6	38	<5.0

Table 3. Groundwater Analytical Results
Alaska Gas
Alameda, California

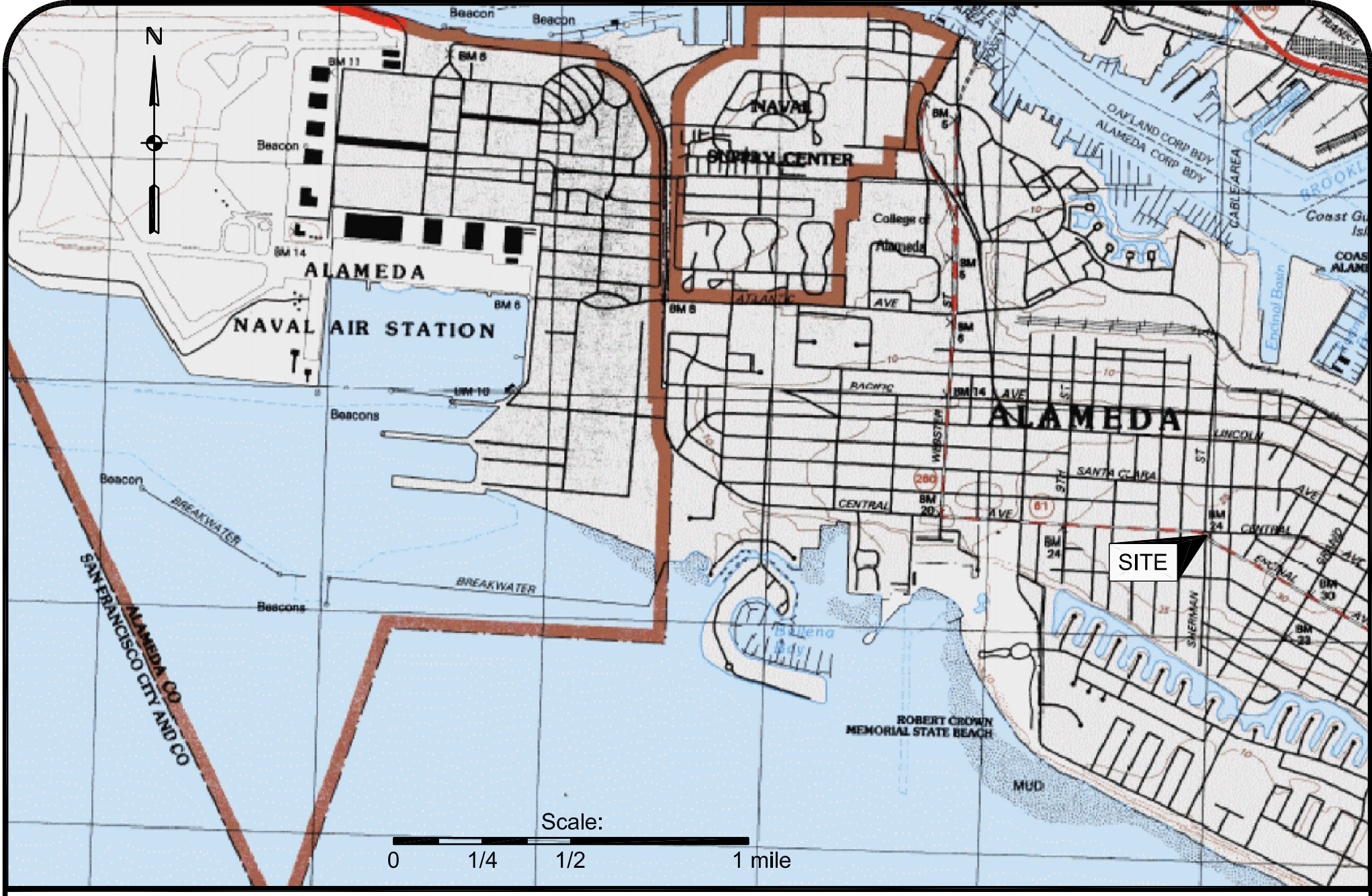
Well ID	Date	TPH-g	TPH-d	benzene	toluene	ethyl-benzene	xylenes	MtBE	tAME	tBA	Other Oxygenates
MW-4	05/25/06	<50	86	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<5.0	<0.5
	08/10/06	<50	<50	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<5.0	<0.5
	11/21/06	<50	<50	<0.5	<0.5	<0.5	<0.5	0.59	<0.5	<5.0	<0.5
	02/06/07	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	05/08/07	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	08/06/07	<50	<50	<0.5	<0.5	<0.5	<0.5	0.82	<0.5	<5.0	<0.5
	12/26/07	<50	<50	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<5.0	<0.5
	06/28/08	<50	88	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5
MW-5	11/21/06	**410**	<80	<2.5	<2.5	<2.5	<2.5	**1,800**	28	44	<2.5
	05/25/06	55	<50	<0.5	<0.5	<0.5	<0.5	**1,100**	19	9.1	<0.5
	08/10/06	<250	<50	<2.5	<2.5	<2.5	<2.5	**1,500**	25	28	<2.5
	02/06/07	**430**	<50	6.9	<2.5	<2.5	<2.5	**1,600**	26	34	<2.5
	05/08/07	<250	<50	<2.5	<2.5	<2.5	<2.5	**1,200**	20	38	<2.5
	08/06/07	**330**	<80	<2.5	<2.5	<2.5	<2.5	**1,000**	20	39	<2.5
	12/26/07	**490**	<50	<2.5	<2.5	<2.5	<2.5	**1,000**	18	28	<2.5
	06/28/08	**510**	**290**	**6.2**	1.0	<0.5	2.3	**550**	11	<40	<10
ESL		100	100	1.0	40	30	20	5	NE	50,000	NA

Notes:

Units are micrograms per liter (ug/L).

NT	analyte not tested	MtBE	methyl tert-butyl ether
TPH-g	total petroleum hydrocarbons as gasoline	tAME	tert-amyl methyl ether
TPH-d	total petroleum hydrocarbons as diesel	tBA	tert-butanol

FIGURES

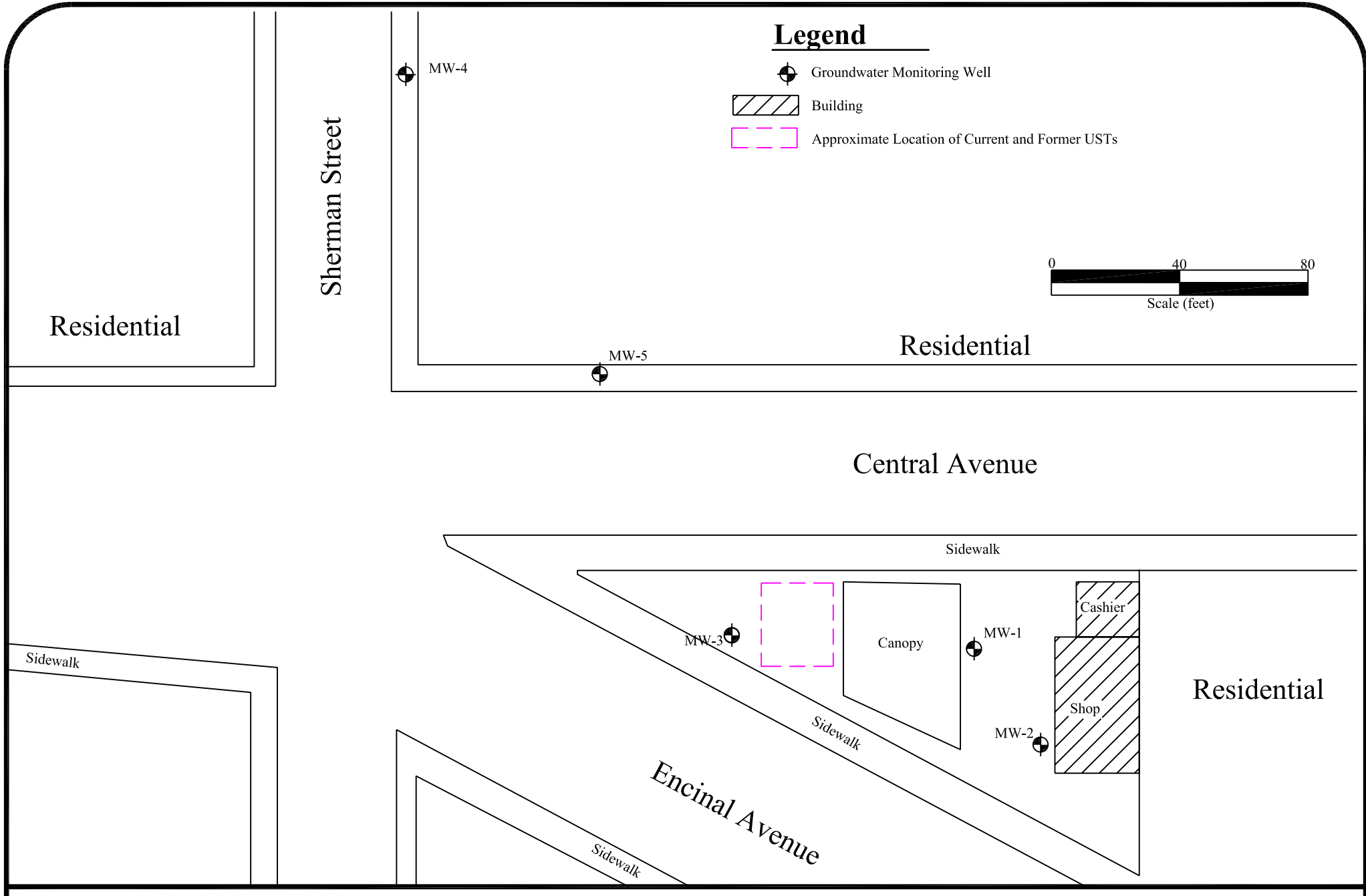


Cook Environmental Services, Inc.
3080 Hilltop Mall Rd.
Richmond, CA 94806
(510) 226-1200 work
(925) 787-6869 cell
tcook@cookenvironmental.com

Site Location Map

Alaska Gas
1310 Central Avenue
Alameda, California

Project #: 1035	Figure: 1
Date: 8/21/08	
Scale: As Shown	



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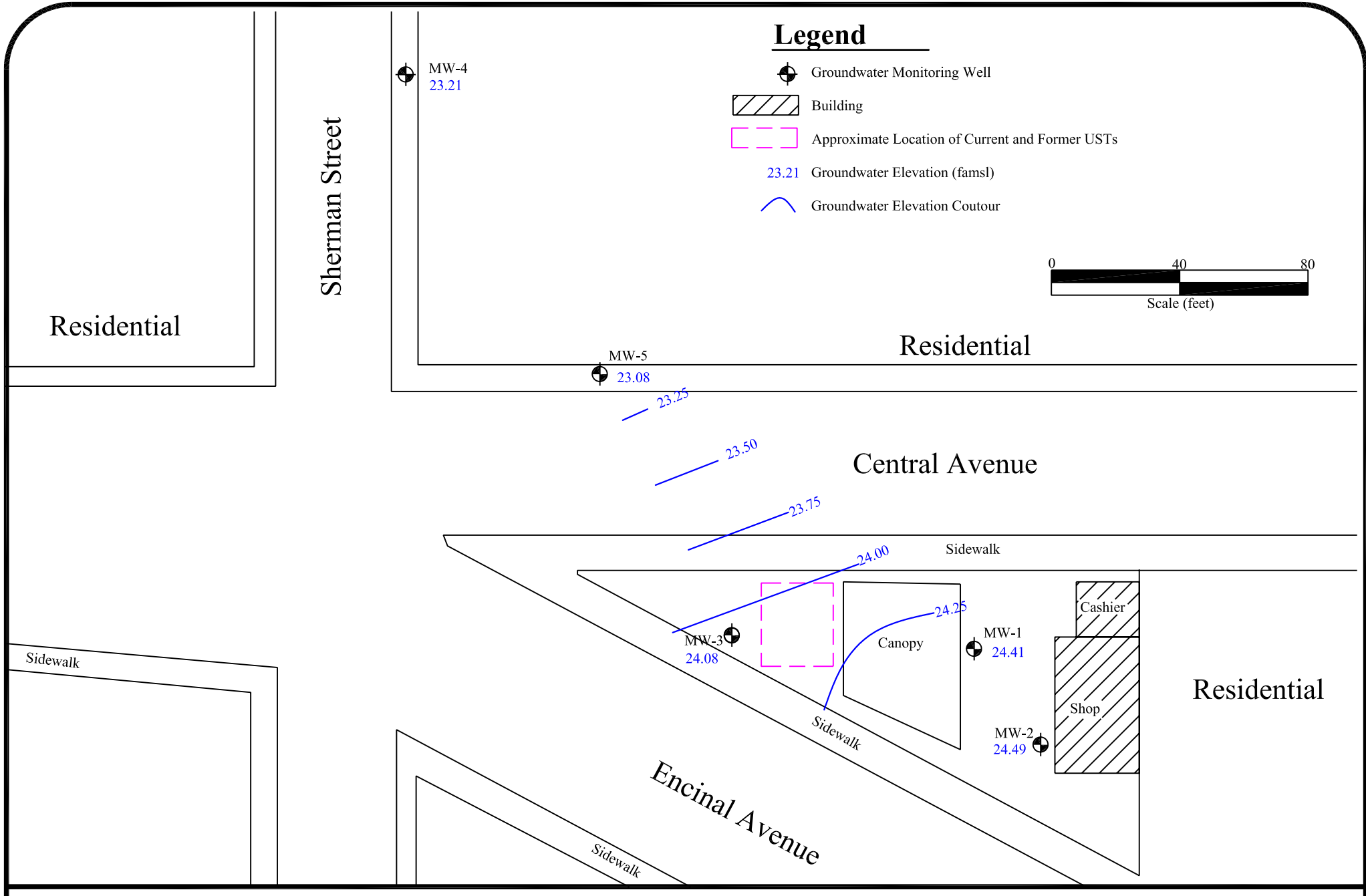
Site Plan
Alaska Gas
1310 Central Avenue
Alameda, California

Project #: 1035	Figure: 2
Date: 8/21/08	
Scale: 1 "= 40 '	



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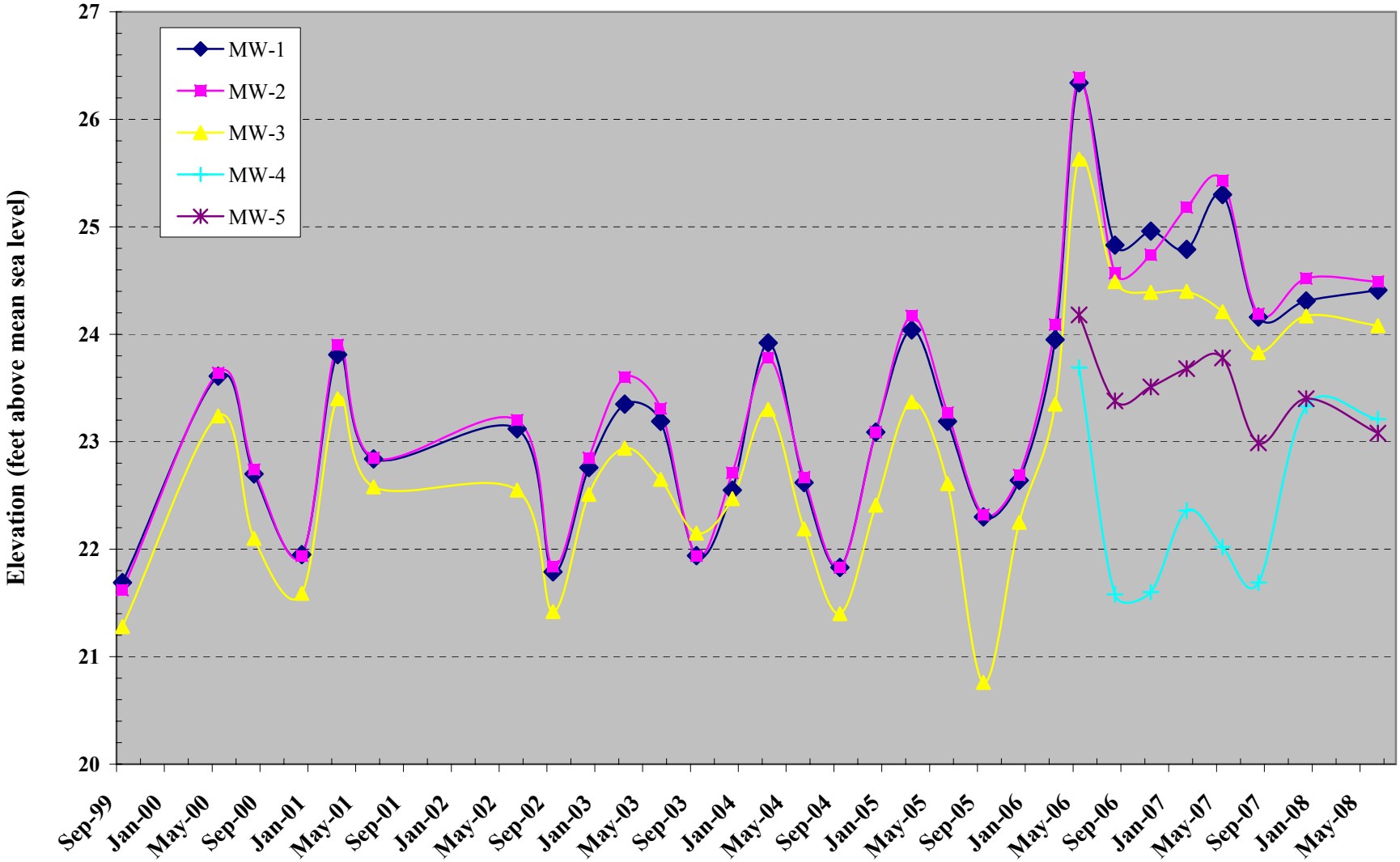
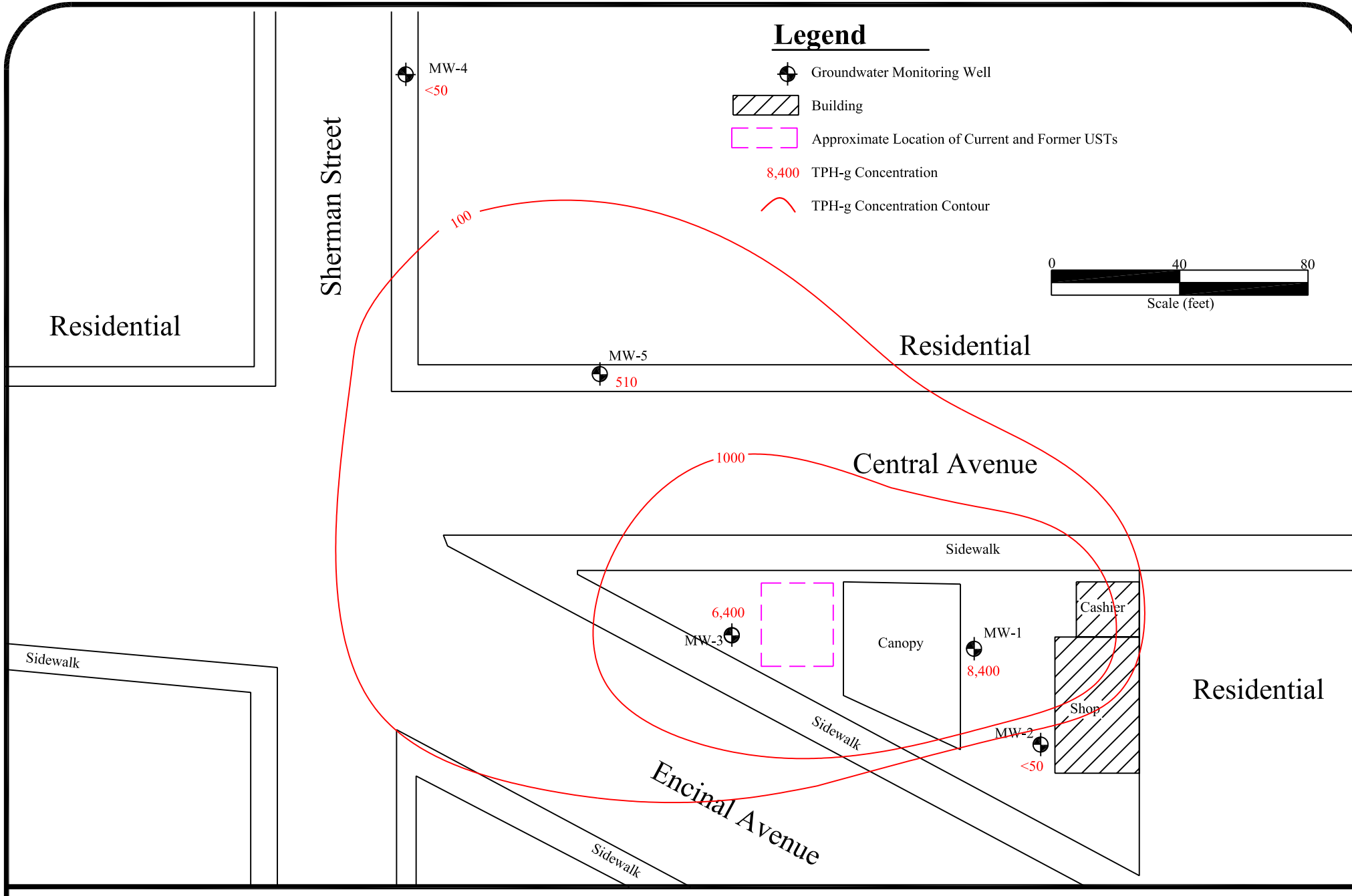
GROUNDWATER ELEVATIONS

Alaska Gas
1310 Central Avenue
Alameda, California

Project #: 1035	Figure: 3
Date: 8/21/08	
Scale: 1 "= 40 '	

Figure 4. Monitoring Well Hydrographs
Alaska Gas
Alameda, CA





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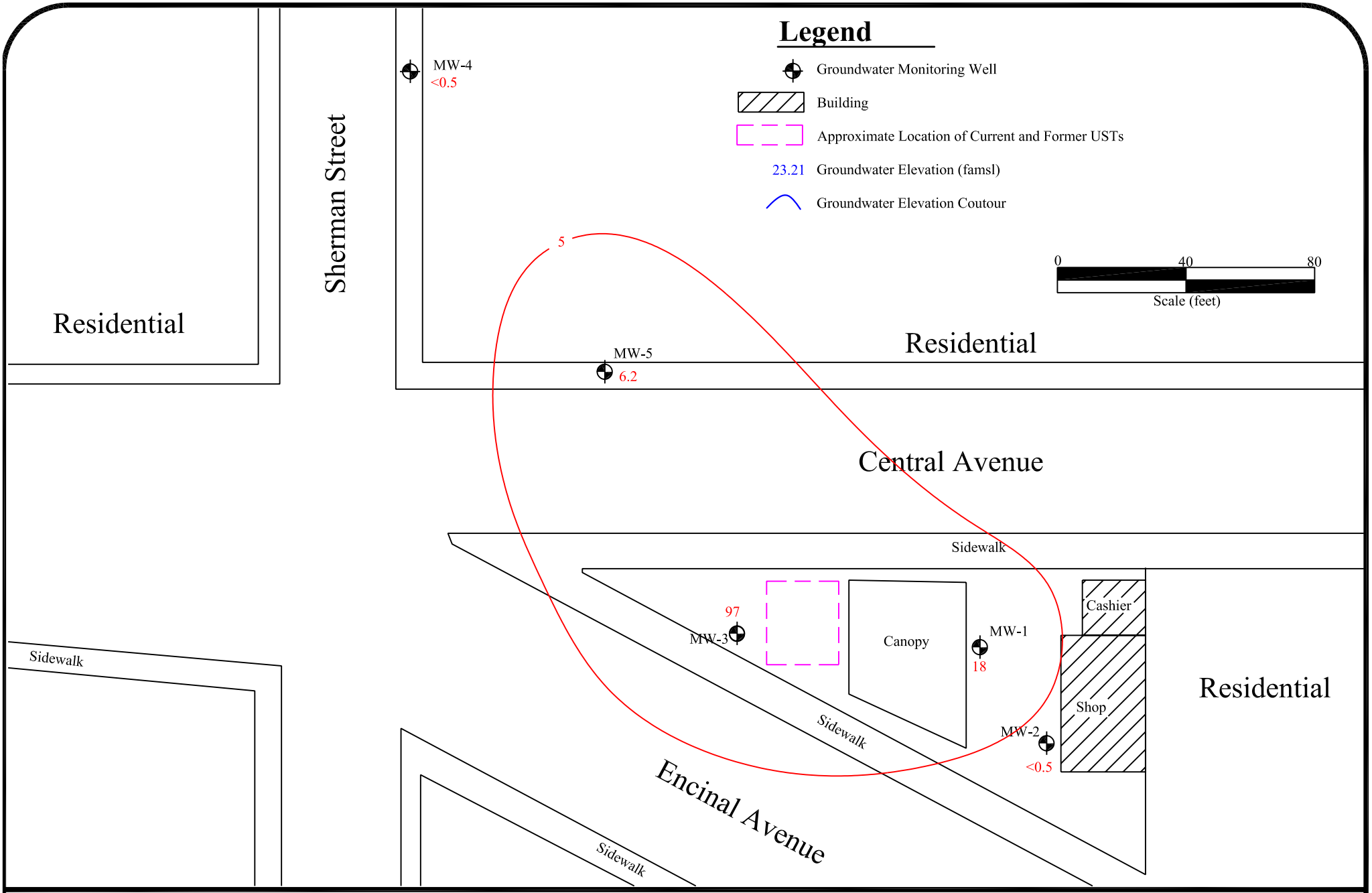
TPH-g Concentrations in Groundwater

Alaska Gas
1310 Central Avenue
Alameda, California

Project #: 1035	Figure: 5
Date: 8/21/08	
Scale: 1 "= 40 '	



Cook Environmental Services, Inc.
271 Las Juntas Way
Walnut Creek, CA 94597
(925) 937-1759 work
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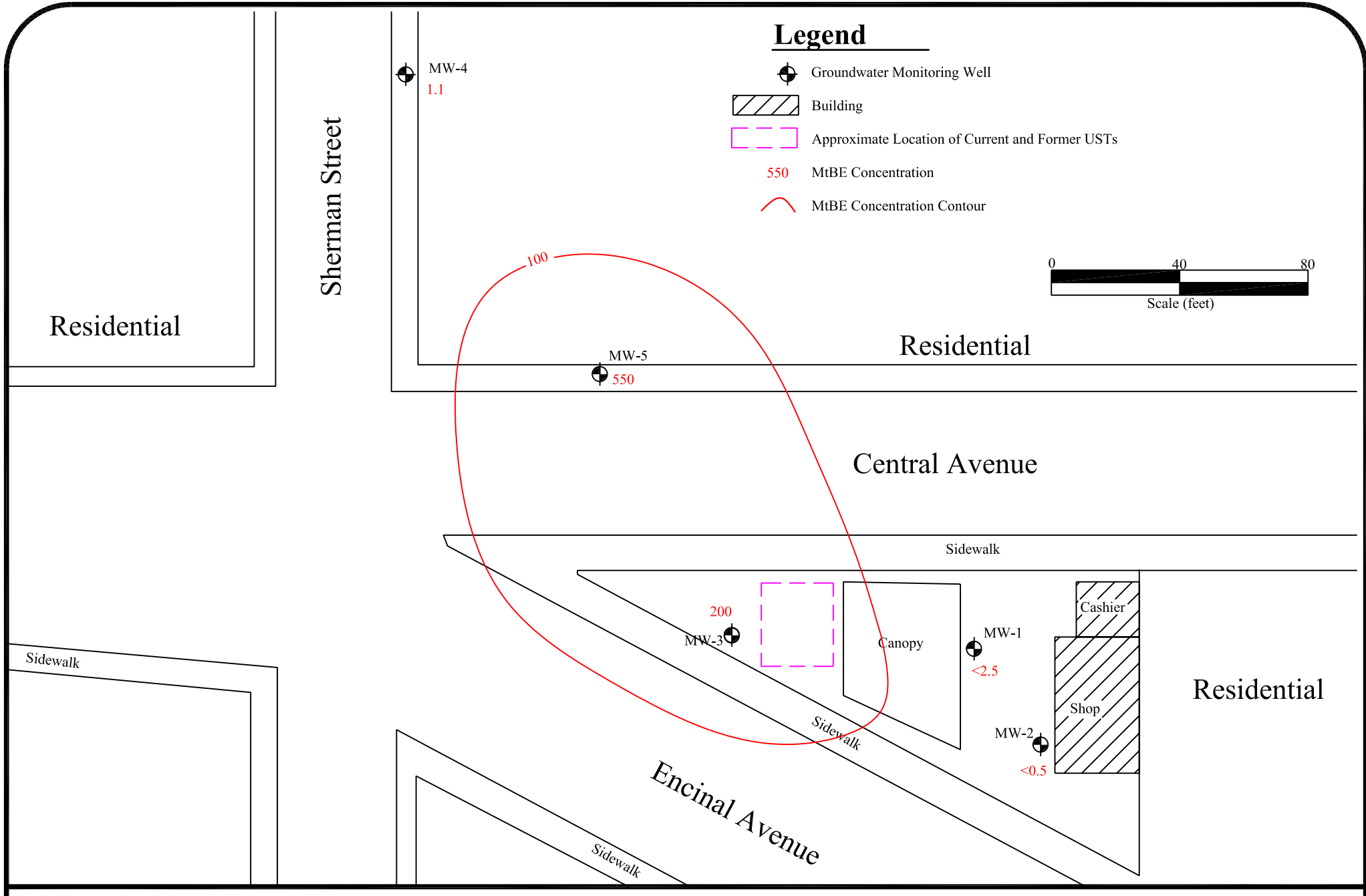
cookenvironmental@att.net

Benzene Concentrations in Groundwater

Alaska Gas
1310 Central Avenue
Alameda, California

Project #: 1035	Figure: 6
Date: 8/21/08	
Scale: 1 "= 40 '	



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MtBE Concentrations in Groundwater

Alaska Gas
1310 Central Avenue
Alameda, California

Project #: 1035	Figure: 7
Date: 8/21/08	
Scale: 1 "= 40 '	

Figure 8. TPH-g and Benzene vs. Time in Well MW-1
Alaska Gas
Alameda, California

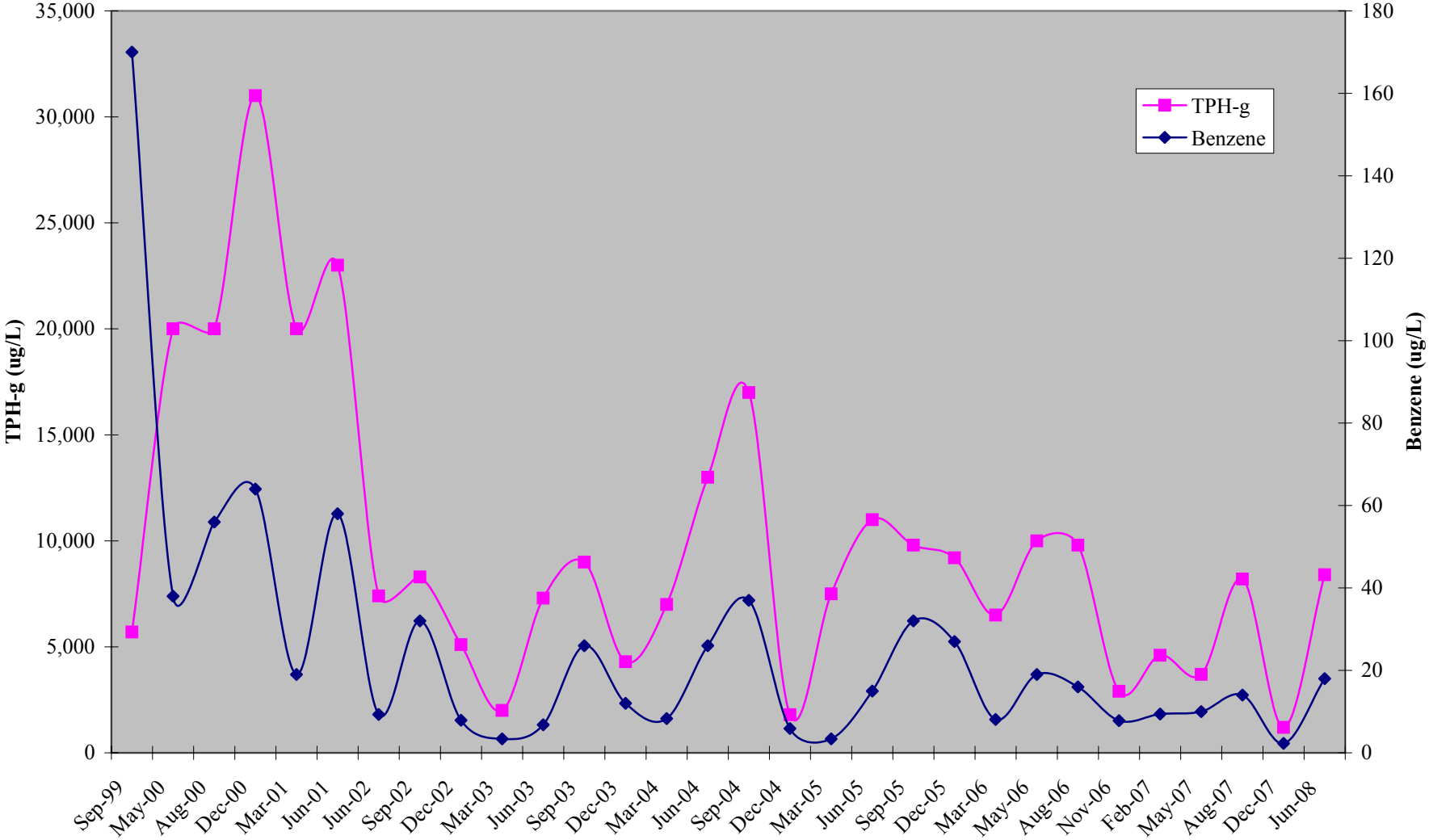
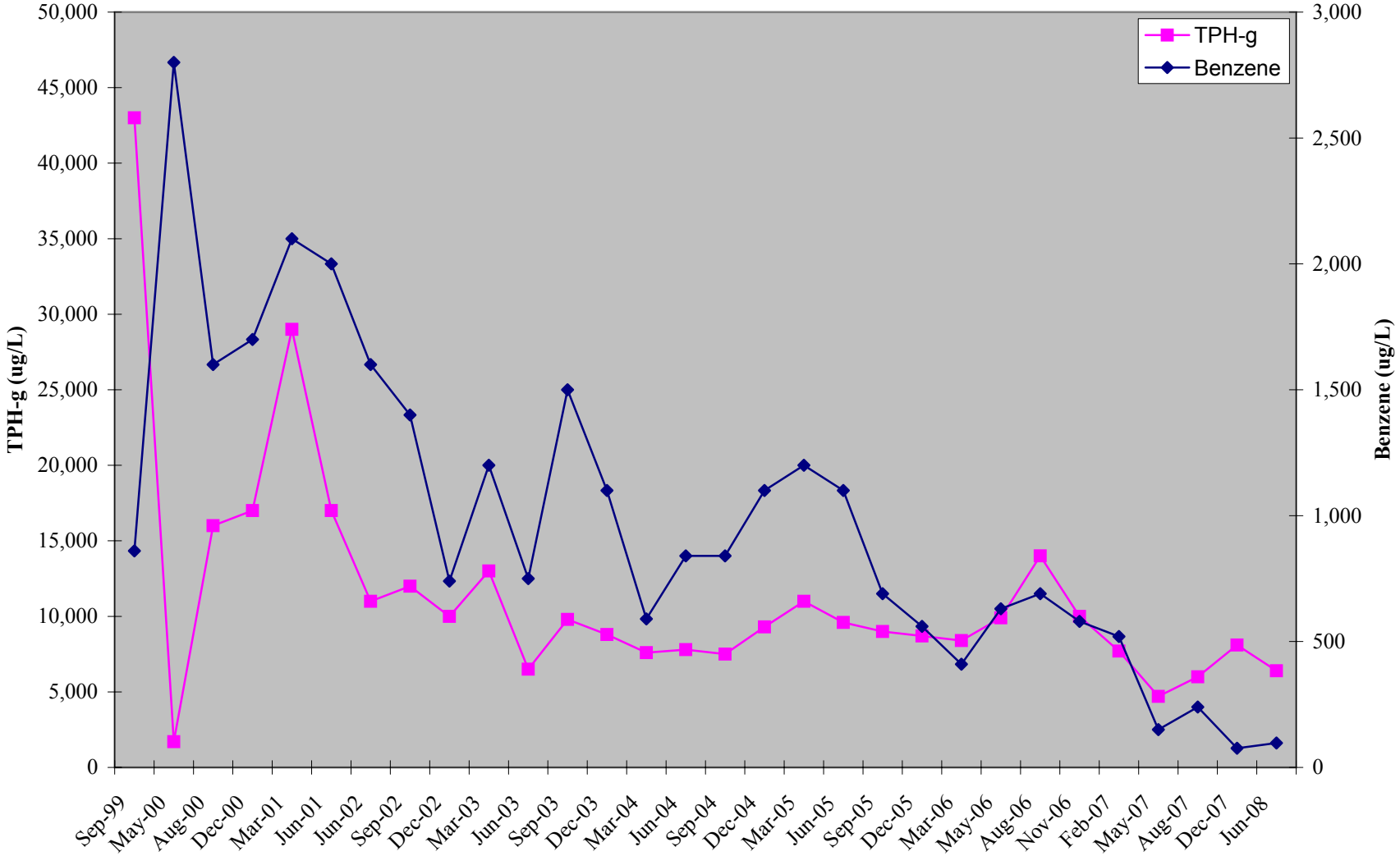


Figure 9. TPH-g and Benzene vs Time in MW-3
Alaska Gas
Alameda, California



APPENDIX A

Monitoring Well Sampling Logs

MONITORING WELL SAMPLING LOG

SITE NAME/LOCATION: Alaska Gas PROJECT #: 002

DATE: 6/28/08 SAMPLER'S INITIALS: CM

WELL ID: MW- 4 WELL DIAMETER (in): 2

WELL DEPTH (ft): 14.2 DEPTH TO WATER (ft): 3.02 WATER COLUMN Ht (ft): 11.18

STANDING WATER VOLUME (gal): 1.9 3 VOLUMES (gal): 5.6

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: (Bailer) or Mini-Whaler Pump (circle the correct method) SAMPLING METHOD: disposable PE bailer

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C) F	pH	SC (uS)	DO (mg/L)	Comments
						DO prior to purging
1232	2	67.9	7.03	449		
1305	4	65.5	7.04	436		slow recharge
1343	6	66.3	7.01	412		
						Sampled 1350

WELL ID: MW- 5 WELL DIAMETER (in): 2

WELL DEPTH (ft): 14.8 DEPTH TO WATER (ft): 3.70 WATER COLUMN Ht (ft): 11.1

STANDING WATER VOLUME (gal): 1.84 3 VOLUMES (gal): 5.5

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: Bailer or Mini-Whaler Pump (circle the correct method) SAMPLING METHOD: disposable PE bailer

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C) F	pH	SC (uS)	DO (mg/L)	Comments
						DO prior to purging
1240	2	66.8	7.01	788		
1247	4	66.0	7.01	718		some odor
1249	6	66.3	7.01	722		good recharge
						sampled 1255

MONITORING WELL SAMPLING LOG

SITE NAME/LOCATION: Alaska Gas PROJECT #: 002

DATE: 6/28/08 SAMPLER'S INITIALS: CM

WELL ID: MW-2 WELL DIAMETER (in): 2

WELL DEPTH (ft): 12.2 DEPTH TO WATER (ft): 5.06 WATER COLUMN Ht (ft): 7.14

STANDING WATER VOLUME (gal): 1.18 3 VOLUMES (gal): 3.6

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: (Bailer) or Mini-Whaler Pump (circle the correct method) SAMPLING METHOD: disposable PE bailer

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C) F	pH	SC (uS)	DO (mg/L)	Comments
						DO prior to purging
1314	2	69.9	6.52	252		
1317	4	69.2	7.01	293		
1319	6	69.1	7.01	306		Brown
						Sampled 1322

WELL ID: MW-1 WELL DIAMETER (in): 2

WELL DEPTH (ft): 11.03 DEPTH TO WATER (ft): 4.77 WATER COLUMN Ht (ft): 6.26

STANDING WATER VOLUME (gal): 1.03 3 VOLUMES (gal): 3.11

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: (Bailer) or Mini-Whaler Pump (circle the correct method) SAMPLING METHOD: disposable PE bailer

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C) F	pH	SC (uS)	DO (mg/L)	Comments
						DO prior to purging
1336	2	71.7	7.01	440		
1421	4	71.0	7.01	489		
1428	6	71.3	7.01	479		
						Sampled 1430

MONITORING WELL SAMPLING LOG

SITE NAME/LOCATION: Alaska Gas PROJECT #: 002

DATE: 6/26/08 SAMPLER'S INITIALS: CM

WELL ID: MW-3 WELL DIAMETER (in): 2

WELL DEPTH (ft): 16.03 DEPTH TO WATER (ft): 3.66 WATER COLUMN Ht (ft): 12.37

STANDING WATER VOLUME (gal): 2.05 3 VOLUMES (gal): 6.16

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: (Bailer) or Mini-Whaler Pump (circle the correct method) SAMPLING METHOD: disposable PE bailer

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C) ~~F~~	pH	SC (uS)	DO (mg/L)	Comments
						DO prior to purging
1400	2	70.2	7.01	728		Strong odor + sheen
1404	4	69.0	7.01	694		
1406	6	68.9	7.01	631		green
						Sampled 1410

WELL ID: MW- WELL DIAMETER (in):

WELL DEPTH (ft): DEPTH TO WATER (ft): WATER COLUMN Ht (ft):

STANDING WATER VOLUME (gal): 3 VOLUMES (gal):

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: Bailer or Mini-Whaler Pump (circle the correct method) SAMPLING METHOD: disposable PE bailer

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C)	pH	SC (uS)	DO (mg/L)	Comments
						DO prior to purging

APPENDIX B

Laboratory Analytical Reports

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

Clay Mokri 2100 P. Street #2 Sacramento, CA 95816	Client Project ID: Vallero	Date Sampled: 06/28/08
		Date Received: 06/30/08
	Client Contact: Clay Mokri	Date Reported: 07/08/08
	Client P.O.:	Date Completed: 07/08/08

WorkOrder: 0806846

July 08, 2008

Dear Clay:

Enclosed within are:

1) The results of the **5** analyzed samples from your project: **Vallero,**
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 0806896
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

GeoTracker EDF ☑ PDF ☐ Excel ☐ Write On (DW) ☐

Report To: Clay Mokri Bill To: SAME

Company:

2100 P St #2

Sacramento CA 95816 E-Mail: cmokri@ezmi.net

Tele: ( ) Fax: ( )

Project #: Project Name: Valero

Project Location: Alameda, CA

Sampler Signature:

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	MTBE / BTEX & TPH as Gas (602 / 8021 + 8015)	MTBE / BTEX ONLY (EPA 602 / 8021)	TPH as Diesel / Motor Oil (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	5 oxys	Other	Other	Other	Comments
MW-1		6/28/08	1430	6	X	X					X	X			X														X				
MW-2			1322																													
MW-3			1410																													
MW-4			1350																													
MW-5			1355																													

Relinquished By:	Date:	Time:	Received By:
Clay Mokri	6/28/08	725	
Relinquished By:	Date:	Time:	Received By:
	6/30/08	20:30	
Relinquished By:	Date:	Time:	Received By:

ICE/t° 4.3°C

GOOD CONDITION ✓

HEAD SPACE ABSENT ✓

DECHLORINATED IN LAB NA

APPROPRIATE CONTAINERS ✓

PRESERVED IN LAB ✓

PRESERVATION VOAS ✓ O&G METALS OTHER pH<2

COMMENTS: ✓ note Delete Motor Oil 8015

* : 5 voa + 1 amber

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0806846 **ClientCode: CMO**

☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☐ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Clay Mokri
Clay Mokri
2100 P. Street #2
Sacramento, CA 95816
(530) 902-7106 FAX

Email: cmokri@e2m.net
cc:
PO:
ProjectNo: Vallejo

Bill to:
,

Requested TAT: 5 days

Date Received: **06/30/2008**
Date Printed: **07/01/2008**

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
0806846-001	MW-1	Water	6/28/2008 14:30	☐	B	A	A									
0806846-002	MW-2	Water	6/28/2008 13:22	☐	B	A										
0806846-003	MW-3	Water	6/28/2008 14:10	☐	B	A										
0806846-004	MW-4	Water	6/28/2008 13:50	☐	B	A										
0806846-005	MW-5	Water	6/28/2008 12:55	☐	B	A										

Test Legend:

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

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.

McCampbell Analytical, Inc.
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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: **Clay Mokri**

Date and Time Received: **6/30/2008 10:17:40 PM**

Project Name: **Vallejo**

Checklist completed and reviewed by: Samantha Arbuckle

WorkOrder N°: **0806846** Matrix Water

Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 4.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
TTLC Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑

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

Client contacted: Date contacted: Contacted by:

Comments:

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

Clay Mokri	Client Project ID: Vallero	Date Sampled: 06/28/08
		Date Received: 06/30/08
2100 P. Street #2	Client Contact: Clay Mokri	Date Extracted: 07/03/08-07/09/08
Sacramento, CA 95816	Client P.O.:	Date Analyzed 07/03/08-07/09/08

Oxygenated Volatile Organics by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0806846

Lab ID	0806846-001B	0806846-002B	0806846-003B	0806846-004B	Reporting Limit for DF =1	
Client ID	MW-1	MW-2	MW-3	MW-4		
Matrix	W	W	W	W		
DF	5	1	10	1	S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND<2.5	ND	5.6	ND	NA	0.5
t-Butyl alcohol (TBA)	ND<10	ND	38	ND	NA	2.0
Diisopropyl ether (DIPE)	ND<2.5	ND	ND<5.0	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<2.5	ND	ND<5.0	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	ND<2.5	ND	200	1.1	NA	0.5
Surrogate Recoveries (%)						
%SS1:	106	90	101	90		
Comments	a3					

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

a3) sample diluted due to high organic content

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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

Clay Mokri	Client Project ID: Vallero	Date Sampled: 06/28/08
		Date Received: 06/30/08
2100 P. Street #2	Client Contact: Clay Mokri	Date Extracted: 07/03/08-07/09/08
Sacramento, CA 95816	Client P.O.:	Date Analyzed 07/03/08-07/09/08

Oxygenated Volatile Organics by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0806846

					Reporting Limit for DF =1	
Lab ID	0806846-005B					
Client ID	MW-5					
Matrix	W					
DF	20				S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	11				NA	0.5
t-Butyl alcohol (TBA)	ND<40				NA	2.0
Diisopropyl ether (DIPE)	ND<10				NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<10				NA	0.5
Methyl-t-butyl ether (MTBE)	550				NA	0.5
Surrogate Recoveries (%)						
%SS1:	85					
Comments						

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

a3) sample diluted due to high organic content

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

Clay Mokri	Client Project ID: Vallero	Date Sampled: 06/28/08
		Date Received: 06/30/08
2100 P. Street #2	Client Contact: Clay Mokri	Date Extracted: 07/02/08-07/03/08
Sacramento, CA 95816	Client P.O.:	Date Analyzed 07/02/08-07/03/08

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0806846

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	8400,d2	ND<100	18	26	670	1100	10	99
002A	MW-2	W	ND	ND	ND	ND	ND	ND	1	95
003A	MW-3	W	6400,d1	ND<300	97	17	19	13	3.3	122
004A	MW-4	W	ND	ND	ND	ND	ND	ND	1	94
005A	MW-5	W	510,d1	490	6.2	1.0	ND	2.3	1	107

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

d1) weakly modified or unmodified gasoline is significant
d2) heavier gasoline range compounds are significant (aged gasoline?)

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0806846

EPA Method SW8260B **Extraction SW5030B** **BatchID: 36652** **Spiked Sample ID: 0806846-002B**

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
tert-Amyl methyl ether (TAME)	ND	10	94.5	95.4	1.01	110	103	6.48	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	84.9	84.5	0.480	111	101	9.49	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	91.6	91.3	0.334	101	96.7	4.58	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	93.8	93.9	0.0606	125	117	6.97	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	95.1	96.1	0.966	126	117	7.31	70 - 130	30	70 - 130	30
%SS1:	90	25	95	95	0	103	103	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 36652 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0806846-001B	06/28/08 2:30 PM	07/04/08	07/04/08 7:33 AM	0806846-002B	06/28/08 1:22 PM	07/03/08	07/03/08 1:58 AM
0806846-003B	06/28/08 2:10 PM	07/07/08	07/07/08 2:22 PM	0806846-004B	06/28/08 1:50 PM	07/03/08	07/03/08 2:40 AM
0806846-005B	06/28/08 12:55 PM	07/09/08	07/09/08 12:20 PM				

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

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

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

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

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

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
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Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0806846

EPA Method SW8021B/8015Cm	Extraction SW5030B				BatchID: 36646			Spiked Sample ID: 0806846-004A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	96	90.6	5.83	93.6	90.8	3.08	70 - 130	20	70 - 130	20
MTBE	ND	10	96.3	96.7	0.388	90.8	97.9	7.58	70 - 130	20	70 - 130	20
Benzene	ND	10	82.9	82.7	0.159	84.1	84.2	0.0273	70 - 130	20	70 - 130	20
Toluene	ND	10	82.5	81.7	0.878	83.7	83.6	0.0292	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	87.4	87.4	0	88.6	88	0.648	70 - 130	20	70 - 130	20
Xylenes	ND	30	97.4	97.7	0.296	98.8	98.4	0.367	70 - 130	20	70 - 130	20
%SS:	94	10	91	90	0.543	91	91	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 36646 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0806846-001A	06/28/08 2:30 PM	07/03/08	07/03/08 2:00 AM	0806846-002A	06/28/08 1:22 PM	07/02/08	07/02/08 8:10 AM
0806846-003A	06/28/08 2:10 PM	07/03/08	07/03/08 2:32 AM	0806846-004A	06/28/08 1:50 PM	07/02/08	07/02/08 8:42 AM
0806846-005A	06/28/08 12:55 PM	07/02/08	07/02/08 11:50 PM	0806846-005A	06/28/08 12:55 PM	07/03/08	07/03/08 9:02 AM

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

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

Clay Mokri 2100 P. Street #2 Sacramento, CA 95816	Client Project ID: Vallero	Date Sampled: 06/28/08
		Date Received: 06/30/08
	Client Contact: Clay Mokri	Date Reported: 07/08/08
	Client P.O.:	Date Completed: 07/08/08

WorkOrder: 0806846

August 06, 2008

Dear Clay:

Enclosed within are:

1) The results of the **5** analyzed samples from your project: **Vallero,**
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 0806896
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

GeoTracker EDF ☑ PDF ☐ Excel ☐ Write On (DW) ☐

Report To: Clay Mokri Bill To: SAME

Company:

2100 P St #2

Sacramento CA 95816 E-Mail: cmokri@ezmi.net

Tele: ( ) Fax: ( )

Project #: Project Name: Valero

Project Location: Valero Alameda, CA

Sampler Signature:

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other
MW-1		6/25/08	1430	6	*	X					X	X		
MW-2		"	1322	"	"	"					"	"		
MW-3		"	1410	"	"	"					"	"		
MW-4		"	1350	"	"	"					"	"		
MW-5		"	1055	"	"	"					"	"		

Analysis Request

MTBE / BTEX & TPH as Gas (602 / 8021 + 8015)	MTBE / BTEX ONLY (EPA 602 / 8021)	TPH as Diesel / Motor Oil (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	5 oxys	Other	Other	Other
X		X												X			
"		"												"			
"		"												"			
"		"												"			
"		"												"			

Other

Comments: Filter Samples for Metals analysis: Yes / No

TPH(D) Added to all samples per E-mail. * Attached.

Relinquished By:	Date:	Time:	Received By:
Clay Mokri	6/25/08	725	
Relinquished By:	Date:	Time:	Received By:
	6/30/08	20:30	
Relinquished By:	Date:	Time:	Received By:

ICE/t° 4.2°C

GOOD CONDITION ✓

HEAD SPACE ABSENT ✓

DECHLORINATED IN LAB NA

APPROPRIATE CONTAINERS ✓

PRESERVED IN LAB ✓

PRESERVATION VOAS ✓ O&G METALS OTHER pH<2

COMMENTS: * note Delete Motor Oil 8015

* = 5 voa + 1 amber

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 080684 A **ClientCode: CMO**

☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☐ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Clay Mokri
Clay Mokri
2100 P. Street #2
Sacramento, CA 95816
(530) 902-7106 FAX

Email: cmokri@e2m.net
cc:
PO:
ProjectNo: Vallero

Bill to:
Clay Mokri
2100 P. Street #2
Sacramento, CA 95816

Requested TAT: 5 days
Date Received: **06/30/2008**
Date Add-On: **07/02/2008**
Date Printed: **07/02/2008**

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
0806846-001	MW-1	Water	6/28/2008 14:30	☐	C											
0806846-002	MW-2	Water	6/28/2008 13:22	☐	C											
0806846-003	MW-3	Water	6/28/2008 14:10	☐	C											
0806846-004	MW-4	Water	6/28/2008 13:50	☐	C											
0806846-005	MW-5	Water	6/28/2008 12:55	☐	C											

Test Legend:

1	TPH(D)_W	2		3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Samantha Arbuckle

Comments: Added TPH(D) to all samples 7/2/08 Per E-mail.

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"

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

Clay Mokri	Client Project ID: Vallero	Date Sampled: 06/28/08
		Date Received: 06/30/08
2100 P. Street #2	Client Contact: Clay Mokri	Date Extracted: 07/02/08
Sacramento, CA 95816	Client P.O.:	Date Analyzed 07/07/08

Total Extractable Petroleum Hydrocarbons*

Extraction method SW3510C Analytical methods: SW8015C Work Order: 0806846

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS
0806846-001C	MW-1	W	3900,e4	1	95
0806846-002C	MW-2	W	180,e7,e2	1	95
0806846-003C	MW-3	W	3100,e4	1	107
0806846-004C	MW-4	W	88,e7,e2	1	98
0806846-005C	MW-5	W	290,e7,e4	1	115

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

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

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

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

e2) diesel range compounds are significant; no recognizable pattern
e4) gasoline range compounds are significant.
e7) oil range compounds are significant

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 36671 WorkOrder 0806846

EPA Method SW8015C **Extraction SW3510C** **Spiked Sample ID: N/A**

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-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	98.7	99.9	1.20	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	105	106	0.536	N/A	N/A	70 - 130	30

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

BATCH 36671 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0806846-001C	06/28/08 2:30 PM	07/02/08	07/07/08 7:52 PM	0806846-002C	06/28/08 1:22 PM	07/02/08	07/07/08 9:06 PM
0806846-003C	06/28/08 2:10 PM	07/02/08	07/07/08 10:23 PM	0806846-004C	06/28/08 1:50 PM	07/02/08	07/07/08 11:35 PM
0806846-005C	06/28/08 12:55 PM	07/02/08	07/07/08 8:57 PM				

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

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

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

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

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

DHS ELAP Certification 1644

QA/QC Officer