RO2745

Denis L. Brown

Shell Oil Products US
HSE – Environmental Services
20945 S. Wilmington Ave.
Carson, CA 90810-1039
Tel (707) 865 0251
Fax (707) 865 2542
Email denis.l.brown@shell.com

October 13, 2005

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

Re: Groundwater Monitoring Report – Third Quarter 2005
Shell-branded Service Station
1601 Webster Street
Alameda, California
SAP Code 135032
Incident No. 97564701
ACHCSA No. 13-503

Dear Mr. Wickham:

Attached for your review and comment is a copy of the *Groundwater Monitoring Report – Third Quarter 2005* for the above referenced site. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

Denis L. Brown
Project Manager

CAMBRIA

October 13, 2005

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

Re: **Third Quarter 2005 Status Report**
Shell-branded Service Station
1601 Webster Street
Alameda, California
Incident # 97564701
SAP Code 135032
ACHCSA # 13-503

Dear Mr. Wickham:

Cambria Environmental Technology, Inc. (Cambria) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) in accordance with the quarterly reporting requirements of 23 CCR 2652d.

SITE LOCATION AND DESCRIPTION

The subject property is an operating Shell-branded service station located on the northwest corner of Webster Street and Lincoln Avenue in Alameda, California (Figure 1). The station layout includes three underground storage tanks (USTs), a former waste oil UST, two current dispensers and two former dispensers islands, a station building, and a kiosk (Figure 2). The local topography is flat with a site elevation at approximately 13 feet above mean sea level. The site is surrounded by a mix of commercial and residential development.

THIRD QUARTER 2005 ACTIVITIES

Periodic groundwater extraction (GWE) and sampling from TBW-N continued on a monthly basis. Onyx Industrial performed monthly batch GWE events on June 6, July 11, and August 8, 2005. Blaine performed monthly gauging and sampling on June 10, July 15 and August 17, 2005. No SPH was observed in TBW-N during any of these events. The groundwater samples from TBW-N were analyzed for TPHg, BTEX, MTBE, di-isopropyl ether (DIPE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and ethyl tert butyl ether (ETBE), ethylene dibromide (EDB), 1,2-dichloroethane (1,2-DCA), and ethanol. A copy of Blaine's monitoring report, including laboratory reports, is included in Appendix A.

Cambria Environmental Technology, Inc.

270 Perkins Street
Sonoma, CA 95476
Tel (707) 935-4850
Fax (707) 935-6649

To date, an estimated volume of 1,982.1 gallons of separate-phase hydrocarbons (SPH) were recovered as separate-phase liquid. As of the end of August 2005, an estimated mass of 121.2 pounds (an equivalent volume of 19.4 gallons) of dissolved TPHg was recovered in water. The analytical results for TBW-N are presented in the Blaine's data table in Appendix A. Cambria's water removal data and estimates of SPH and dissolved-phase product recovery are summarized in Table 1. Figure 3 graphically illustrates the volume of recovered groundwater and TPHg concentrations versus time. Figure 4 graphically illustrates the volume of recovered groundwater and benzene concentrations versus time. Figure 5 graphically illustrates the volume of recovered groundwater and MTBE concentrations versus time.

ANTICIPATED FOURTH QUARTER 2005 ACTIVITIES

Batch GWE Activities: The periodic GWE will continue and Blaine will continue the monthly gauging and sampling of TBW-N. Cambria will prepare a status report documenting the activities.

Site Investigation Activities: On behalf of Shell, Cambria submitted a *Site Invetsigation Work Plan* dated July 15, 2005. The scope of work included installing 6 groundwater monitoring wells and 8 soil borings for vertical and lateral assessment as well as groundwater monitoring. The work plan was approved by Alameda County Environmental Health in correspondence dated August 8, 2005. Encroachment and drilling permits are being acquired, and an access agreement with a private offsite property owner is being negotiated. The work is tentatively scheduled to occur the week of October 31 through November 3, 2005.

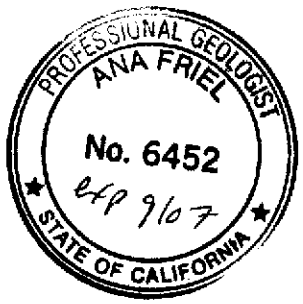
CLOSING

If you have any questions regarding this submittal, please call Ana Friel at (707) 268-3812.

Sincerely,
Cambria Environmental Technology, Inc.

Karen Newton
Staff Engineer

Ana Friel
Senior Project Geologist
PG 6452



Attachments

Table 1. Groundwater and Product Removal Data

Figure 1. Vicinity/Sensitive Receptor Survey Map
Figure 2. Site Plan/Historical Sample Location Map
Figure 3. GWE Pumping Volume, and TPHg Concentration
Figure 4. GWE Pumping Volume, and Benzene Concentration
Figure 5. GWE Pumping Volume, and MTBE Concentration

Appendix A. Blaine Services Inc. First Quarter 2005 Groundwater Monitoring Report

cc: Mr. Denis Brown, Shell Oil Products US
Mr. Thomas H. Kosel, ConocoPhillips Risk Management & Remediation, 76 Broadway, Sacramento, CA 95818
Mr. James C. Kirschner, ATC Associates, Inc., 6602 Owens Drive, Suite 100, Pleasanton, CA 94588 (consultant for ConocoPhillips)

Table 1. Groundwater and Product Removal Data - Shell Service Station, Incident # 97564701, 1601 Webster St, Alameda, California.

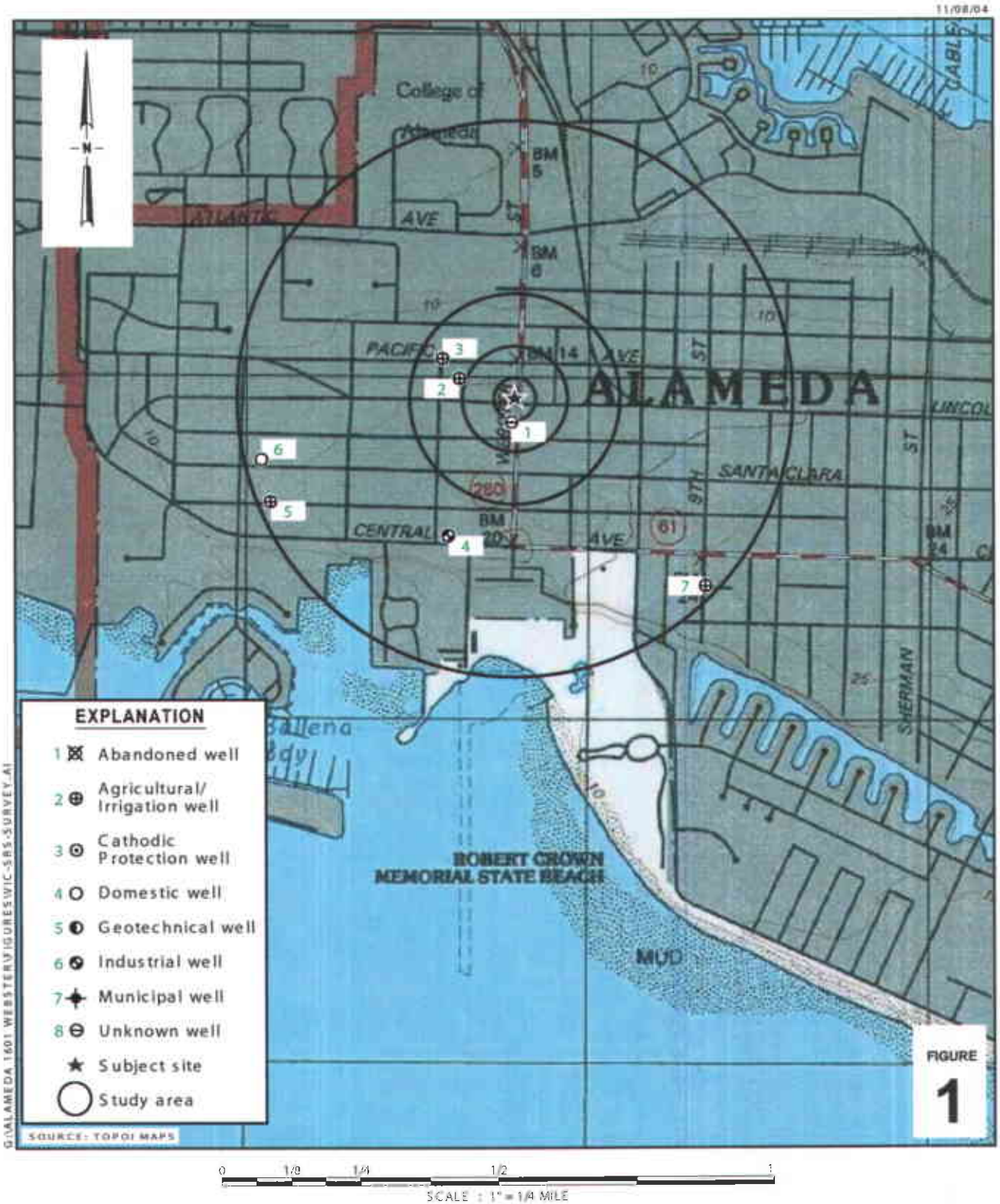
Date	Total Volume Hauled (gals)	Cumulative Volume (gals)	Measured Product Thickness in Vacuum Truck (ft)	Dissolved TPHg Conc. (ppm)	Est pounds TPHg removed in Dissolved Phase (lbs)	Estimated Volume of Product Removed as SPH (gal)	Estimated Volume of Product Removed as dissolved phase (gal)	Comments
								FUEL RELEASE ESTIMATE: UST gaging by SJ Weaver on 8/18 read 71.5 inches = 8,340 gallons, per tank chart. On 8/19 gaging by SJ Weaver read 55 inches = 6,256 gallons, per tank chart. Net est. Loss = 8,340-6,256 = 2,084 gallons.
8/19/2004	2,168	2,168	NM	*120*	*2.17*		*0.36*	Pumped from well into open Baker tank. Then tank emptied by PSC vacuum truck
8/19/2004	2,535	4,703	NM	*120*	*2.54*	915	*0.42*	Pumped from well into open Baker tank. Also pumped directly into Vacuum Truck. Then open Baker tank emptied by PSC
8/20/2004	0	4,703	NM	*120*	*0.00*	--	*0.00*	Pumped into closed Baker tank - none hauled.
8/21/2004	4,369	9,072	NM	*120*	*4.37*	*50*	*0.72*	Pumped into closed Baker tank, then began emptying closed tank by vacuum truck. Estimated SPH volume from similar data.
8/21/2004	*3,654*	12,726	0.67	*120*	*3.66*	773	*0.60*	From closed Baker tank and well. Volumes based on verbal report - missing bills of lading
8/21/2004	*2,091*	14,817	0.04	*120*	*2.09*	57	*0.34*	From well and baker tank. Volumes based on verbal report - missing bills of lading
8/22/2004	319	15,136	NM	*120*	*0.32*	*NM*	*0.05*	Baker Tank cleaning water.
8/22/2004	2,285	17,421	0.11	*120*	*2.29*	150	*0.38*	
8/23/2004	1,947	19,368	0.01	*120*	*1.95*	13	*0.32*	
8/24/2004	1,013	20,381	0.01	*120*	*1.01*	12	*0.17*	
8/25/2004	4,026	24,407		*120*	*4.03*		*0.66*	
8/26/2004	3,839	28,246		82	2.63		0.43	
8/27/2004	3,882	32,128		82	2.66		0.44	
8/28/2004	2,770	34,898		100	2.31		0.38	
8/29/2004	3,834	38,732		100	3.20		0.53	
8/30/2004	3,376	42,108		91	2.56	*12*	0.42	Half UST cleaning water and half groundwater from well. SPH amount estimated from 0.02' SPH in UST gaged on 8/21/04
8/31/2004	3,249	45,357		91	2.47		0.41	
9/1/2004	3,832	49,189		110	3.52		0.58	
9/2/2004	2,151	51,340		110	1.97		0.32	
9/3/2004	3,136	54,476		99	2.59		0.43	
9/4/2004	3,671	58,147		99	3.03		0.50	
9/5/2004	3,395	61,542		66	1.87		0.31	
9/6/2004	2,948	64,490		66	1.62		0.27	
9/7/2004	3,285	67,775		66	1.81		0.30	
9/8/2004	3,128	70,903		66	1.72		0.28	
9/9/2004	3,902	74,805		67	2.18		0.36	water from TBW-N, TBW-S, & TBW-E
9/10/2004	2,989	77,794		67	1.67		0.27	water from TBW-N, TBW-S, & TBW-E
9/13/2004	2,807	80,601		61	1.43		0.23	70-barrel truck
9/20/2004	4,266	84,867		120	4.27		0.70	
9/28/2004	4,691	89,558		99	3.88		0.64	
10/4/2004	4,050	93,608		80	2.70		0.44	
10/11/2004	3,121	96,729		57	1.48		0.24	
10/18/2004	3,597	100,326		68	2.04		0.34	
10/25/2004	4,127	104,453		81	2.79			2,641 additional gallons from tank cleaning were disposed of on 10/25/04
11/1/2004	5,047	109,500		86	3.62		0.59	
11/8/2004	2,178	111,678		100	1.82		0.30	
11/16/2004	4,891	116,569		83	3.39		0.56	concentration based on 11/23/04 sample
11/29/2004	4,531	121,100		160	6.05		0.99	concentration based on 11/30/04 sample
12/13/2004	5,208	126,308		120	5.21		0.86	concentration based on 12/15/04 sample
12/27/2004	4,800	131,108		100	4.01		0.66	concentration based on 12/27/04 sample
1/17/2005	3,580	134,688		86	2.57		0.42	concentration based on 1/17/05 sample
2/7/2005	2,389	137,077		97	1.93		0.32	concentration based on 2/4/05 sample
3/8/2005	4,843	141,920		94	3.80		0.62	concentration based on 3/3/05 sample
4/6/2005	4,711	146,631		27	1.06		0.17	concentration based on 4/12/05 sample
5/2/2005	4,706	151,337		42	1.65		0.27	concentration based on 5/13/05 sample
6/6/2005	5,011	156,348		46	1.92		0.32	concentration based on 6/10/05 sample
7/11/2005	4,627	160,975		48	1.85		0.30	concentration based on 7/15/05 sample
8/8/2005	4,785	165,760		36	1.44		0.24	concentration based on 8/17/05 sample

TOTALS	165,760	121.2	1,982.1	19.4
	(gallons) Total Estimated Volume of Liquid Removed	(pounds) Total estimated mass based on dissolved TPHg concentrations	(gallons) Total Estimated Volume accounted for as liquid SPH	(gallons) Total estimated equivalent volume based on dissolved TPHg concentrations

NOTES:

Mass removal values are approximate only.

Pounds of TPHg/benzene/MTBE removal based on the calculation: (TPHg/benzene/MTBE concentration* (ppb)) x gallons pumped x ($8.3x10^{-9}$ (liters/galxpounds/µg))



Shell-branded Service Station
1601 Webster Street
Alameda, California
Incident #97437680

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Vicinity/Sensitive Receptor Survey Map

(200, 500, and 1,000 Ft., and1/2 Mile Radii)

05/10/05

EXPLANATION

- SB-1 ● Soil boring location (11/30/04, 12/1-2/04)
- ⊠ Attempted soil boring location (11/30,12/1-2/04), not completed due to refusal
- D-1-2' ◆ Soil sample location (8/10/04)
- TBW-N ✛ Tank backfill well location
- MW-1 ⊠ Destroyed monitoring well location
- D-1 ■ Soil sample location (WA, 1997)
- BH-C ● Soil boring location (WA, 10/92)
- #1 △ Soil sample location (Blaine, 6/87)
- #2 ○ Grab water sample location (Blaine, 6/87)
- Electrical line (E)
- Overhead electrical line (OE)
- Sanitary sewer line (SS)
- Water line (W)
- Power pole
- Street light

Site Plan/Historical Sample Location Map

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Shell-branded Service Station
1601 Webster Street
Alameda, California
Incident No.97564701

FIGURE
2

G:\ALAMEDA 1601 WEBSTER\FIGURES\SITE PLAN 5-05.DWG

Figure 3 - Shell 1601 Webster St, Alameda
Groundwater Pumping Volume,
and TPHg Concentration

CAMBRIA

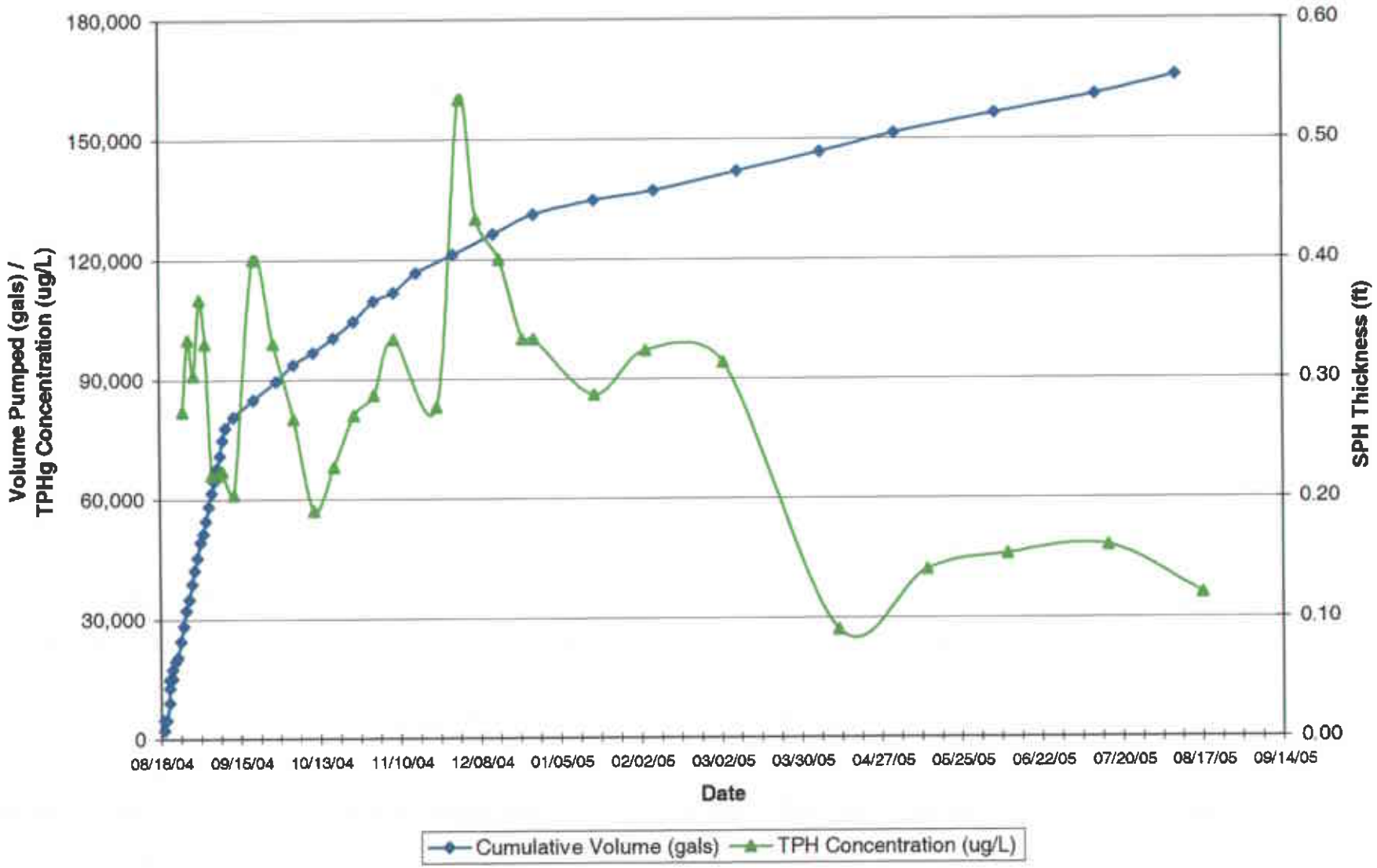
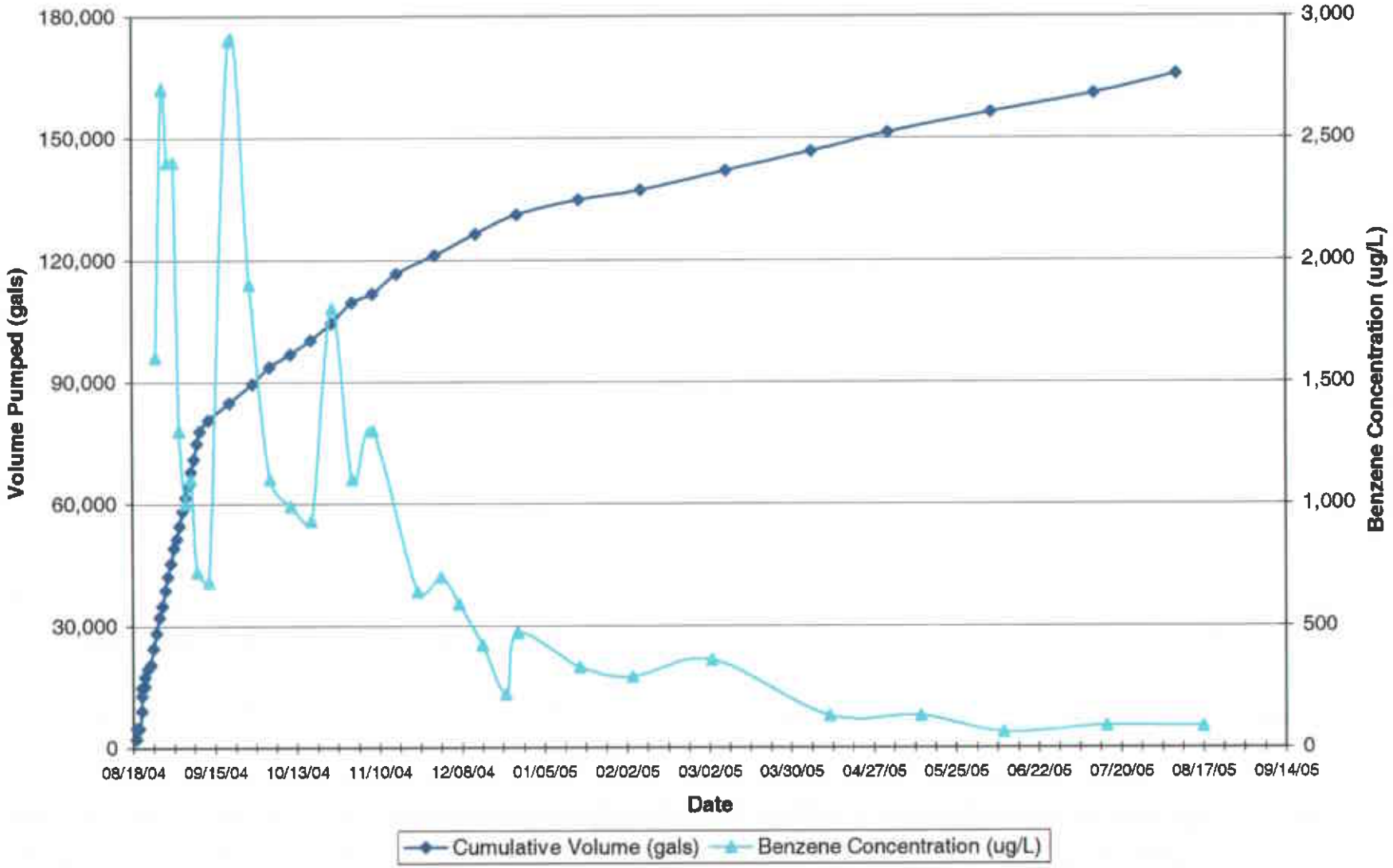


Figure 4 - Shell 1601 Webster St, Alameda
Groundwater Pumping Volume,
and Benzene Concentration

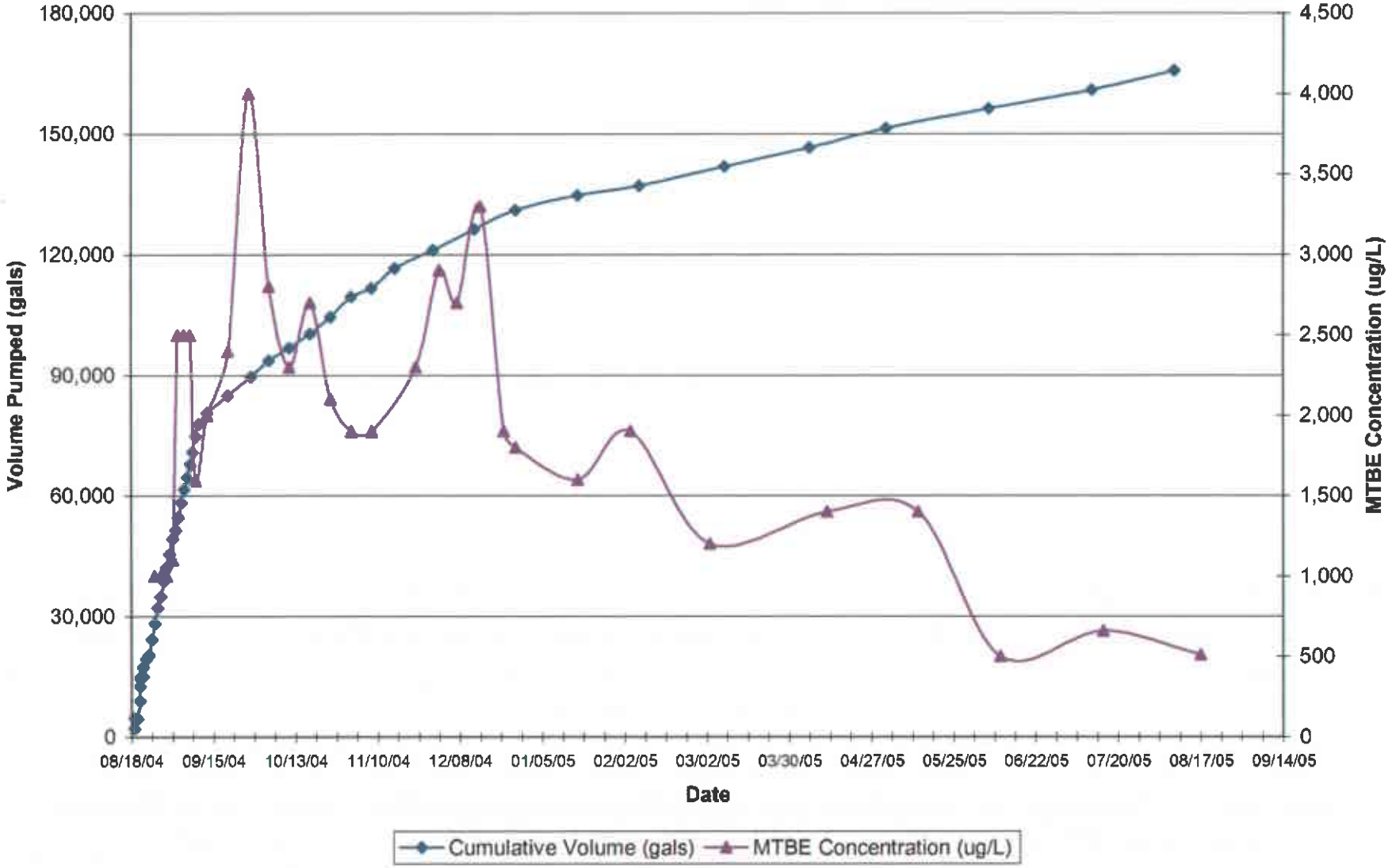
CAMBRIA



GWE Data Tables - Figure4-GW Vols, Benzene

Figure 5 - Shell 1601 Webster St, Alameda
Groundwater Pumping Volume,
and MTBE Concentration

CAMBRIA



GWE Data Tables - Figure5-GW Vols, MTBE

Appendix A

Blaine Tech Services, Inc.
Groundwater Monitoring Report

BLAINE
TECH SERVICES INC.

GROUNDWATER SAMPLING SPECIALISTS
SINCE 1985

September 14, 2005

Denis Brown
Shell Oil Products US
20945 South Wilmington Avenue
Carson, CA 90810

Third Quarter 2005 Groundwater Monitoring at
Shell-branded Service Station
1601 Webster Street
Alameda, CA

Monitoring performed on June 10, July 15, and
August 17, 2005

Groundwater Monitoring Report **050817-DW-2**

This report covers the routine monitoring of groundwater wells at this Shell-branded facility. In accordance with standard procedures that conform to Regional Water Quality Control Board requirements, routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, calculated purge volume (if applicable), elapsed evacuation time (if applicable), total volume of water removed (if applicable), and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

At a minimum, Blaine Tech Services, Inc. field personnel are certified on completion of a forty-hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight-hour refresher courses.

Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. Our activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrological conditions or formulation of recommendations was performed.

Please call if you have any questions.

Yours truly,

Leon Gearhart
Project Coordinator

LG/ks

attachments: Cumulative Table of WELL CONCENTRATIONS
Certified Analytical Report
Field Data Sheets

cc: Ana Friel
Cambria Environmental Technology, Inc.
P.O. Box 259
Sonoma, CA 95476-0259

WELL CONCENTRATIONS
Shell Service Station
1601 Webster Street
Alameda, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
TBW-E	11/23/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.31	NA
TBW-E	12/01/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.01	NA
TBW-E	12/07/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.32	NA
TBW-E	12/15/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.55	NA
TBW-E	12/23/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.95	NA
TBW-E	12/27/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.47	NA
TBW-N	11/23/2004	83,000	640	27,000	1,700	20,000	2,300	<400	<400	<400	1,300	<10,000	<100	<100	NA	5.64	NA
TBW-N	12/01/2004	160,000	700	31,000	2,300	24,000	2,900	<400	<400	<400	1,200	<10,000	<100	<100	NA	6.35	NA
TBW-N	12/07/2004	130,000	590	29,000	2,300	24,000	2,700	<400	<400	<400	1,300	<10,000	<100	<100	NA	5.65	NA
TBW-N	12/15/2004	120,000	420	26,000	2,000	22,000	3,300	<400	<400	<400	<1,000	<10,000	<100	<100	NA	5.85	NA
TBW-N	12/23/2004	100,000	220	23,000	1,900	20,000	1,900	<400	<400	<400	<1,000	<10,000	<100	<100	NA	5.30	NA
TBW-N	12/27/2004	110,000	470	26,000	2,300	22,000	1,800	<400	<400	<400	<1,000	<10,000	<100	<100	NA	7.80	NA
TBW-N	01/17/2005	86,000	330	22,000	2,200	21,000	1,600	<400	<400	<400	1,600	<10,000	<100	<100	NA	6.59	NA
TBW-N	02/04/2005	97,000	290	23,000	1,800	20,000	1,900	<400	<400	<400	<1,000	<10,000	<100	<100	NA	4.50	NA
TBW-N	03/02/2005	94,000	360	24,000	2,000	19,000	1,200	<400	<400	<400	<1,000	<10,000	<100	<100	NA	4.11	NA
TBW-N	04/12/2005	27,000	130	9,300	1,100	8,700	1,400	<100	<100	<20	390	<2,500	<25	<25	NA	4.08	NA
TBW-N	05/13/2005	42,000	130	8,700	1,500	12,000	1,400	<100	<100	<100	440	<2,500	<25	<25	NA	4.45	NA
TBW-N	**06/10/2005**	**46,000**	**63**	**5,500**	**1,300**	**11,000**	**500**	**<100**	**<100**	**<100**	**<250**	**<2,500**	**<25**	**<25**	**NA**	**4.97**	**NA**
TBW-N	**07/15/2005**	**48,000**	**88**	**8,400**	**1,300**	**9,500**	**660**	**<100**	**<100**	**<100**	**310**	**<2,500**	**<25**	**<25**	**NA**	**5.18**	**NA**
TBW-N	**08/17/2005 a**	**36,000**	**85**	**8,500**	**1,200**	**11,000**	**510**	**<200**	**<200**	**<200**	**<500**	**<5,000**	**<50**	**<50**	**18.08**	**5.28**	**12.80**
TBW-S	11/23/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.18	NA
TBW-S	12/01/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.87	NA
TBW-S	12/07/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.15	NA
TBW-S	12/15/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.38	NA
TBW-S	12/23/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.81	NA
TBW-S	12/27/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.35	NA

WELL CONCENTRATIONS
Shell Service Station
1601 Webster Street
Alameda, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
TBW-W	11/23/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.14	NA
TBW-W	12/01/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.86	NA
TBW-W	12/07/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.13	NA
TBW-W	12/15/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.37	NA
TBW-W	12/23/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.79	NA
TBW-W	12/27/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.32	NA

Abbreviations:
TPPH = Total petroleum hydrocarbons as gasoline by modified EPA Method 8260B.
BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B.
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether, analyzed by EPA Method 8260B
ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260B
TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260B
TBA = Tertiary butyl alcohol or tertiary butanol, analyzed by EPA Method 8260B
1,2-DCA = 1,2-Dichloroethane, analyzed by EPA Method 8260B
EDB = Ethylene Dibromide, analyzed by EPA Method 8260B
TOC = Top of Casing Elevation
GW = Groundwater
ug/L = Parts per billion
MSL = Mean sea level
ft. = Feet
<n = Below detection limit
NA = Not applicable

WELL CONCENTRATIONS
Shell Service Station
1601 Webster Street
Alameda, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)

Notes:

a = Extracted out of holding time.

Ethanol analyzed by EPA Method 8260B.

Well TBW-N surveyed September 1, 2005 by Virgil Chavez Land Surveying of Vallejo, CA.

SEVERN TRENT STL

Submission#: 2005-08-0615

Blaine Tech Services, Inc.

September 14, 2005

1680 Rogers Avenue
San Jose, CA 95112-1105

Attn.: Leon Gearhart

Project#: BTS#050817-DW-2
Project: 97564701
Site: 1601 Webster St., Alameda

Dear Mr.Gearhart,

Attached is our report for your samples received on 08/18/2005 13:35
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 10/02/2005 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: mbrewer@stl-inc.com

Sincerely,

Melissa Brewer

Melissa Brewer
Project Manager

SEVERN TRENT STL

Submission: 2005-08-0615

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.
Attn.: Leon Gearhart

1680 Rogers Avenue
San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#050817-DW-2
97564701

Received: 08/18/2005 13:35

Site: 1601 Webster St., Alameda

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
TBW-N	08/17/2005 09:40	Water	1

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Prep(s): 5030B | Test(s): 8260B
Sample ID: **TBW-N** | Lab ID: 2005-08-0615 -1
Sampled: 08/17/2005 09:40 | Extracted: 9/9/2005 11:46
Matrix: Water | QC Batch#: 2005/09/09-1C.64
Analysis Flag: H1, pH: <2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	36000	5000	ug/L	100.00	09/09/2005 11:46	
Benzene	85	50	ug/L	100.00	09/09/2005 11:46	
Toluene	8500	50	ug/L	100.00	09/09/2005 11:46	
Ethylbenzene	1200	50	ug/L	100.00	09/09/2005 11:46	
Total xylenes	11000	100	ug/L	100.00	09/09/2005 11:46	
tert-Butyl alcohol (TBA)	ND	500	ug/L	100.00	09/09/2005 11:46	
Methyl tert-butyl ether (MTBE)	510	50	ug/L	100.00	09/09/2005 11:46	
Di-isopropyl Ether (DIPE)	ND	200	ug/L	100.00	09/09/2005 11:46	
Ethyl tert-butyl ether (ETBE)	ND	200	ug/L	100.00	09/09/2005 11:46	
tert-Amyl methyl ether (TAME)	ND	200	ug/L	100.00	09/09/2005 11:46	
1,2-DCA	ND	50	ug/L	100.00	09/09/2005 11:46	
EDB	ND	50	ug/L	100.00	09/09/2005 11:46	
Ethanol	ND	5000	ug/L	100.00	09/09/2005 11:46	
Surrogate(s)						
1,2-Dichloroethane-d4	98.6	73-130	%	100.00	09/09/2005 11:46	
Toluene-d8	107.3	81-114	%	100.00	09/09/2005 11:46	

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Batch QC Report

Prep(s): 5030B
Test(s): 8260B

Method Blank | **Water** | **QC Batch # 2005/09/09-1C.64**

MB: 2005/09/09-1C.64-028 | Date Extracted: 09/09/2005 08:28

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	09/09/2005 08:28	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	09/09/2005 08:28	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	09/09/2005 08:28	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	09/09/2005 08:28	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	09/09/2005 08:28	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	09/09/2005 08:28	
1,2-DCA	ND	0.5	ug/L	09/09/2005 08:28	
EDB	ND	0.5	ug/L	09/09/2005 08:28	
Benzene	ND	0.5	ug/L	09/09/2005 08:28	
Toluene	ND	0.5	ug/L	09/09/2005 08:28	
Ethylbenzene	ND	0.5	ug/L	09/09/2005 08:28	
Total xylenes	ND	1.0	ug/L	09/09/2005 08:28	
Ethanol	ND	50	ug/L	09/09/2005 08:28	
Surrogates(s)					
1,2-Dichloroethane-d4	93.2	73-130	%	09/09/2005 08:28	
Toluene-d8	106.5	81-114	%	09/09/2005 08:28	

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Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Laboratory Control Spike — Water — QC Batch #: 2005/09/09-1C.64

LCS: 2005/09/09-1C.64-007 — Extracted: 09/09/2005 — Analyzed: 09/09/2005 08:07

LCSD:

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	23.5		25	94.0			65-165	20		
Benzene	27.2		25	108.8			69-129	20		
Toluene	27.3		25	109.2			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	433		500	86.6			73-130			
Toluene-d8	538		500	107.6			81-114			

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Batch QC Report

Prep(s): 5030B Test(s): 8260B

Matrix Spike (MS / MSD) Water QC Batch # 2005/09/09-1C.64

MS/MSD Lab ID: 2005-08-0833 001

MS: 2005/09/09-1C.64-051 Extracted: 09/09/2005 Analyzed: 09/09/2005 12:51

Dilution: 100

MSD: 2005/09/09-1C.64-012 Extracted: 09/09/2005 Analyzed: 09/09/2005 13:12

Dilution: 100

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	40.7	46.5	18.1	25	90.4	186.0	69.2	65-165	20		M4,R1
Benzene	22.7	24.1	ND	25	90.8	96.4	6.0	69-129	20		
Toluene	22.9	24.4	ND	25	91.6	97.6	6.3	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	502	523		500	100.4	104.6		73-130			
Toluene-d8	522	526		500	104.4	105.2		81-114			

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Legend and Notes

Report Comment

Due to instrumentation issues the sample was extracted and analyzed approximately 23 hours past the 14 day holding time as prescribed in EPA SW-846-8260B.

"If technical holding times are grossly exceeded (e.g., by greater than two times the required time for volatiles) either on the first analysis or upon re-analysis, the reviewer must use professional judgment to determine the reliability of the data and the effects of additional storage on the sample results. Should the reviewer determine that qualification is necessary, non-detected volatile target compounds may be qualified unusable (R). Positive results are considered approximates and are qualified with .J"

As an aid to interpreting the data for sample SS-4-13 the United States Geological Survey (USGS) published method (http://nwql.usgs.gov/Public/pubs/MTBE.fact.sheet.html) for analysis of MTBE an other fuel oxygenates includes stability data for oxygenates in preserved waters that indicates that there is negligible (<3%) degradation of MTBE, ETBE, and TAME after 14 days. In addition, a preservation study conducted at the National Water Quality Laboratory (NWQL) for 216 days at pH 2 in ground- and surface-water samples has shown that MTBE, TAME, DIPE, and ETBE are stable at pH 2 for at least 216 days.

Analysis Flag

H1

Extracted out of holding time.

Result Flag

M4

MS/MSD spike recoveries were above acceptance limits.
See blank spike (LCS).

R1

Analyte RPD was out of QC limits.

LAB: STL

Lab Identification (if necessary):

Address:

City, State, Zip:

SHELL Chain Of Custody Record

117254

Shell Project Manager to be invoiced:

☒ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☐ CRMT HOUSTON

Denis Brown

2005-08-0615

INCIDENT NUMBER (S&E ONLY): 9 7 5 6 4 7 0 1

SAP or CRMT NUMBER (TS/CRMT):

DATE: 8-17-05

PAGE: 1 of 1

SAMPLING COMPANY: Blaine Tech Services	LOG CODE: BTSS	SITE ADDRESS (Street and City): 1601 Webster St., Alameda
GLOBAL ID NO.: T0600137103		
ADDRESS: 1680 Rogers Avenue, San Jose, CA 95112	EDF DELIVERABLE TO (Responsible Party or Designee): Ana Friel	PHONE NO.: (707) 268-3812
E-MAIL: sonomaedf@cambria-env.com	CONSULTANT PROJECT NO.: 050817-DW-2	BTS #
PROJECT CONTACT (Hardcopy or PDF Report to): Leon Gearhart	SAMPLER NAME(S) (Print): Dave Walter	LAB USE ONLY
TELEPHONE: 408-573-0555	FAX: 408-573-7771	E-MAIL: lgearhart@blainetech.com

TURNAROUND TIME (BUSINESS DAYS): ☒ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

GC/MS MTBE CONFIRMATION: HIGHEST ____ HIGHEST per BORING ____ ALL ____

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED ☐

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	TBW-N	8-17	0940	W	3	X	X			X	X		X	X	

TEMPERATURE ON RECEIPT C°: 3

Relinquished by: (Signature) David C. Walt	Received by: (Signature) [signature] Sample Custodian	Date: 8/17/05	Time: 1625
Relinquished by: (Signature) [signature] SAMPLE CUSTODIAN	Received by: (Signature) [signature]	Date: 8/18/05	Time: 1330
Relinquished by: (Signature) [signature] 8/18/05	Received by: (Signature) [signature]	Date: 8/18/05	Time: 1800

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

10/16/00 Revision