

September 27, 2000

Larry Seto
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Third Quarter 2000 Monitoring Report**
Shell-branded Service Station
105 Fifth Street
Oakland, California
Incident #98995757
Cambria Project #242-0472-002



Dear Mr. Seto:

On behalf of Equiva Services LLC, Cambria Environmental Technology, Inc. (Cambria) is submitting this groundwater monitoring report in accordance with the reporting requirements of 23 CCR 2652d.

THIRD QUARTER 2000 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled the site wells, calculated groundwater elevations, and compiled the analytical data. Cambria prepared a groundwater elevation contour map (Figure 1). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

Vacuum Tank Truck Operations: Cambria coordinated groundwater extraction from wells MW-2 and MW-3. Groundwater mass removal data is presented in Table 1 and vapor mass removal data is presented in Table 2.

ANTICIPATED FOURTH QUARTER 2000 ACTIVITIES

Groundwater Monitoring: Blaine will gauge and sample all wells and tabulate the data. Cambria will prepare a monitoring report.

Investigation and Monitoring Well Installation: Cambria is currently obtaining an encroachment permit and bond from the City of Oakland to conduct proposed investigation and monitoring well installation.

Oakland, CA
San Ramon, CA
Sonoma, CA
Portland, OR

**Cambria
Environmental
Technology, Inc.**

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

ENVIRONMENTAL
PROTECTION
SEP 28 PM 2:50

Conduit Study and Sensitive Receptor Survey: Cambria will conduct a conduit study in the vicinity of the site and a 2,000-foot radius sensitive receptor survey of the site. The result of the conduit study and sensitive receptor survey will be reported along with the site investigation activities.

Vacuum Tank Truck Operations: Based on evaluation of MTBE concentration trends in wells MW-2 and MW-3, Cambria recommends continuing groundwater extraction at the site.



CLOSING

We appreciate the opportunity to work with you on this project. Please call Darren Croteau at (510) 420-3331 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

Darren Croteau
Project Geologist

Stephan A. Bork, C.E.G., C.HG.
Associate Hydrogeologist

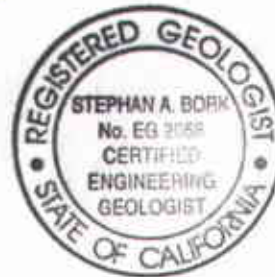


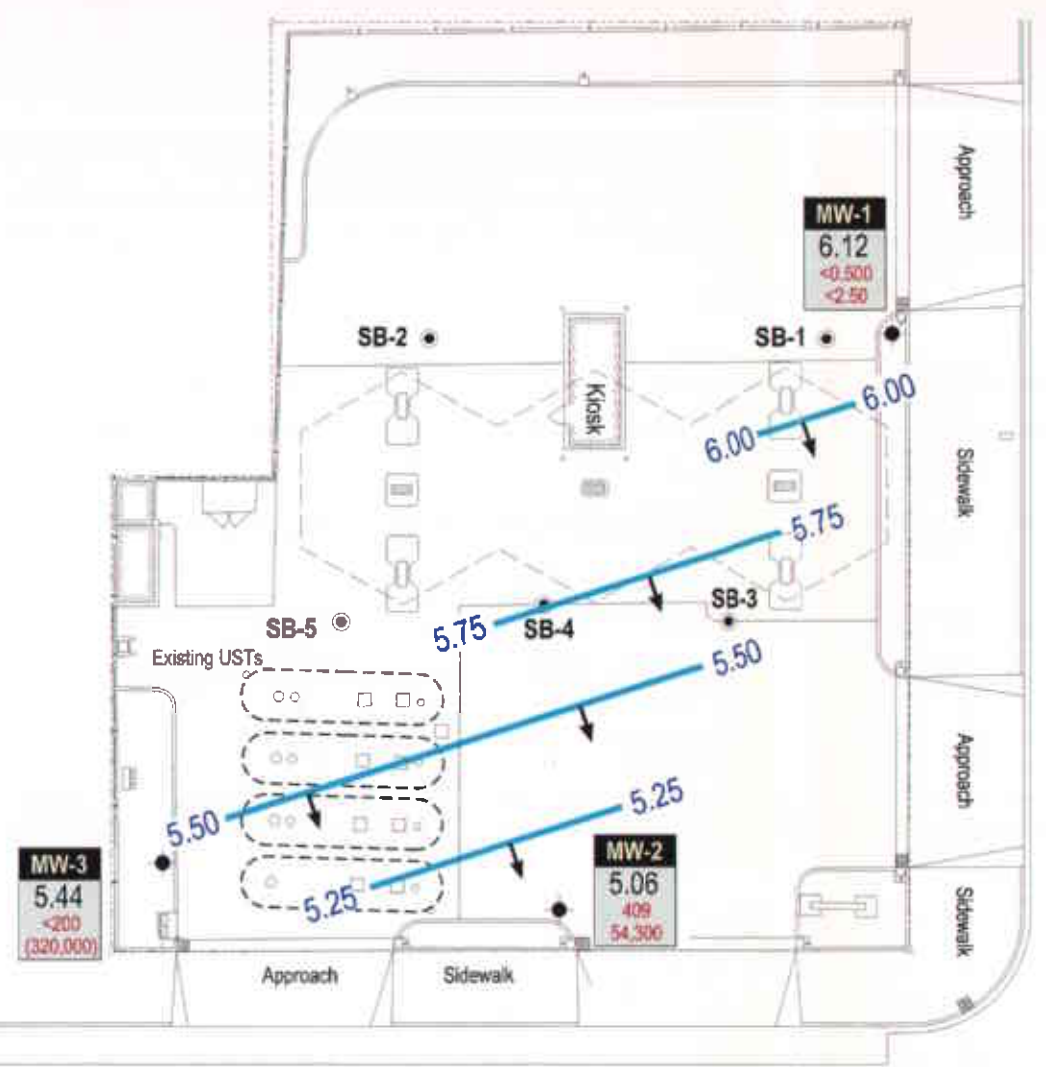
Figure: 1 - Groundwater Elevation Contour Map

Tables: 1 - Groundwater Mass Removal Data
2 - Vapor Mass Removal Data

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, California 91510-7869
Arthur R. and Mary A. Hansen, Trs., et al, 820 Loyola Drive, Los Altos, CA 94024

g:\oakland 105 fifth\qm3q00qm.doc



EXPLANATION

- MW-1 ● Monitoring well location
- SB-1 ● Soil boring location
- MW-4 ◻ Proposed monitoring well location
- SB-5 ◻ Proposed soil boring location
- Groundwater flow direction
- XX.XX — Groundwater elevation contour, in feet above mean sea level (msl), approximately located; dashed where inferred

Well	ELEV	Benzene	MTBE
MW-1	6.12	<0.500	<2.50
MW-2	5.06	409	54,300
MW-3	5.44	<200	(320,000)

Well designation
Groundwater elevation, in feet above msl
Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8020; MTBE results in parentheses are analyzed by EPA Method 8260

FIFTH STREET

OAK STREET

FOURTH STREET

880 ON RAMP

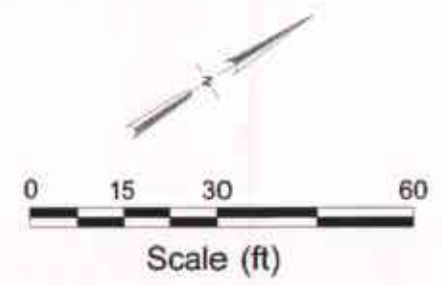


FIGURE 1

U:\CAMBRIA\105 FIFTH STREET\880 ON RAMP.DWG



Table 1: Groundwater Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH	TPPH	TPPH	Benzene	Benzene	Benzene	MTBE	MTBE	MTBE
					Concentration (ppb)	Removed (pounds)	Removed To Date (pounds)	Concentration (ppb)	Removed (pounds)	Removed To Date (pounds)	Concentration (ppb)	Removed (pounds)	Removed To Date (pounds)
04/21/00	MW-2	150	150	04/07/00	4,940	0.00618	0.00618	659	0.00082	0.00082	41,800	0.05232	0.05232
04/28/00	MW-2	100	250	04/07/00	4,940	0.00412	0.01031	659	0.00055	0.00137	41,800	0.03488	0.08720
05/05/00	MW-2	310	560	04/07/00	4,940	0.01278	0.02308	659	0.00170	0.00308	41,800	0.10813	0.19532
05/12/00	MW-2	350	910	04/07/00	4,940	0.01443	0.03751	659	0.00192	0.00500	41,800	0.12208	0.31740
06/02/00	MW-2	257	1,167	04/07/00	4,940	0.01059	0.04811	659	0.00141	0.00642	41,800	0.08964	0.40704
07/06/00	MW-2	334	1,501	04/07/00	4,940	0.01377	0.06187	659	0.00184	0.00825	41,800	0.11650	0.52354
09/12/00	MW-2	312	1,813	07/26/00	5,010	0.01304	0.07492	409	0.00106	0.00932	54,300	0.14137	0.66491
04/21/00	MW-3	100	100	04/07/00	< 1,000	< 0.00083	< 0.00083	85.3	0.00007	0.00007	283,000	0.23615	0.23615
04/28/00	MW-3	100	200	04/07/00	< 1,000	< 0.00083	< 0.00167	85.3	0.00007	0.00014	283,000	0.23615	0.47229
05/05/00	MW-3	50	250	04/07/00	< 1,000	< 0.00042	< 0.00209	85.3	0.00004	0.00018	283,000	0.11807	0.59036
05/12/00	MW-3	150	400	04/07/00	< 1,000	< 0.00125	< 0.00334	85.3	0.00011	0.00028	283,000	0.35422	0.94458
06/02/00	MW-3	550	950	04/07/00	< 1,000	< 0.00459	< 0.00793	85.3	0.00039	0.00068	283,000	1.29880	2.24338
07/06/00	MW-3	528	1,478	04/07/00	< 1,000	< 0.00441	< 0.01233	85.3	0.00038	0.00105	283,000	1.24685	3.49023
08/16/00	MW-3	849	2,327	07/26/00	< 20,000	< 0.14169	< 0.15402	< 200	< 0.00142	< 0.00247	320,000	2.26699	5.75722
09/12/00	MW-3	188	2,515	07/26/00	< 20,000	< 0.03137	< 0.18539	< 200	< 0.00031	< 0.00278	320,000	0.50200	6.25922
Total Gallons Extracted:		4,328		Total Pounds Removed:		< 0.26031			0.01210		6.92413		
				Total Gallons Removed:		< 0.04267			0.00166		1.11679		

Table 1: Groundwater Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California

Date	Well	Cumulative		Date	TPPH		Benzene		Benzene		MTBE		
		Volume Pumped	Volume Pumped		TPPH Concentration	TPPH Removed	Removed To Date	Concentration	Removed	Removed To Date	Concentration	Removed	Removed To Date
Purged	ID	(gal)	(gal)	Sampled	(ppb)	(pounds)	(pounds)	(ppb)	(pounds)	(pounds)	(ppb)	(pounds)	(pounds)

Abbreviations & Notes:

TPPH = Total purgeable hydrocarbons as gasoline

MtBE = Methyl tert-butyl ether

µg/L = Micrograms per liter

ppb = Parts per billion, equivalent to µg/L

L = Liter

gal = Gallon

g = Gram

Mass removed based on the formula: volume extracted (gal) x Concentration (µg/L) x (g/10⁶µg) x (pound/453.6g) x (3.785 L/gal)

Volume removal data based on the formula: density (in gms/cc) x 9.339 (ccxlbs/gmsxgals)

TPPH, benzene analyzed by EPA Method 8015/8020

MTBE analyzed by EPA Method 8260 in bold font, all other MTBE analyzed by EPA Method 8020

Groundwater extracted by vacuum trucks provided by ACTI. Water disposed of at a Martinez Refinery.

Table 2: Vapor Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California

Date	Well ID	Interval Hours of Operation (hours)	System Flow Rate (CFM)	Hydrocarbon Concentrations			TPHg Removal Rate (#/hour)	Cumulative TPHg Removed (#)	Benzene Removal Rate (#/hour)	Cumulative Benzene Removed (#)	MTBE Removal Rate (#/hour)	Cumulative MTBE Removed (#)
				TPHg	Benzene	MTBE						
				(Concentrations in ppmv)								
04/21/00	MW-2	1.00	24.5	1,949	52	836	0.638	0.638	0.015	0.015	0.280	0.280
06/02/00	MW-2	2.08	6	30	6.51	108	0.002	0.643	0.000	0.016	0.009	0.299
07/06/00	MW-2	4.00	4	< 567	< 6.3	647	< 0.030	< 0.765	< 0.000	< 0.018	0.035	0.440
04/21/00	MW-3	1.00	19	< 28	< 0.31	594	< 0.007	< 0.007	< 0.000	< 0.000	0.154	0.154
06/02/00	MW-3	4.25	3	< 14.2	0.36	608	< 0.001	< 0.010	0.000	0.000	0.025	0.260
07/06/00	MW-3	2.00	2	38	4.4	133	0.001	< 0.012	0.000	< 0.000	0.004	0.268
Total Pounds Removed:							TPHg = < 0.776	Benzene = < 0.018	MTBE = 0.708			

Abbreviations and Notes:

CFM = Cubic feet per minute

TPHg = Total petroleum hydrocarbons as gasoline (C6-C12) by modified EPA Method 8015 in 1 liter tedlar bag samples

ppmv = Parts per million by volume

= Pounds

NA = Not available

TPHG, Benzene, and MTBE analyzed by EPA Method 8015/8020 in 1 liter tedlar bag samples

TPHg / Benzene / MTBE removal rate = Rate based on Bay Area Air Quality Management District's Manual of Procedures for Soil Vapor Extraction dated July 17, 1991.

(Rate = Concentration (ppmv) x system flow rate (cfm) x (1lb-mole/386ft3) x molecular weight (86 lb/lb-mole for TPHg, 78 lb/lb-mole for benzene, 88 lb/lb-mole for MTBE) x 60 min/hour x 1/1,000,000)

Cumulative TPHg / Benzene / MTBE removal = Previous removal rate multiplied by the hour-interval of operation plus the previous total

ATTACHMENT A
Blaine Groundwater Monitoring Report
and Field Notes

BLAINE
TECH SERVICES, INC.



1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
(408) 573-7771 FAX
(408) 573-0555 PHONE
CONTRACTOR'S LICENSE #746684
www.blainetech.com

August 28, 2000

Karen Petryna
Equiva Services LLC
P.O. Box 7869
Burbank, CA 91510-7869

Third Quarter 2000 Groundwater Monitoring at
Shell-branded Service Station
105 5th Street
Oakland, CA

Monitoring performed on July 26, 2000

Groundwater Monitoring Report 000726-F-3

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.

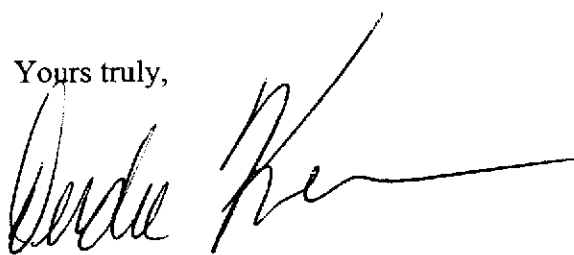
Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

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. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. concentrates on objective data collection and does not participate in the interpretation of analytical results, the definition of geological or hydrological conditions, the formulation of recommendations, or the marketing of remedial systems.

Please call if you have any questions.

Yours truly,

A handwritten signature in black ink, appearing to read "Deidre Kerwin", with a long horizontal flourish extending to the right.

Deidre Kerwin
Operations Manager

DK/jt

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

cc: Anni Kreml
Cambria Environmental Technology, Inc.
1144 65th Street, Suite C
Oakland, CA 94608-2411

WELL CONCENTRATIONS
Shell-branded Service Station
105 5th Street
Oakland, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)	DO Reading (ppm)
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MW-1	7/20/99	NA	NA	NA	NA	NA	NA	NA	NA	12.22	17.56	-5.34	NA
MW-1	7/23/99	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	<2.00	12.22	6.45	5.77	NA
MW-1	11/1/99	100	NA	15.6	3.12	4.04	12.6	6.69	NA	12.22	6.59	5.63	0.5/0.7
MW-1	1/5/00	<50.0	<20.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	12.22	6.38	5.84	1.2/1.4
MW-1	4/7/00	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	12.22	5.83	6.39	1.6/2.4
MW-1	7/26/00	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	12.22	6.10	6.12	1.1/1.4

MW-2	7/20/99	NA	NA	NA	NA	NA	NA	NA	NA	10.87	18.24	-7.37	NA
MW-2	7/23/99	13,800	NA	1,790	<100	<100	682	29,900	29,400	10.87	5.98	4.89	NA
MW-2	11/1/99	2,420	NA	316	10.8	119	44.2	17,000	NA	10.87	6.03	4.84	0.5/0.3
MW-2	1/5/00	2,120a	687	301a	<5.00a	116a	84.4a	14,700	NA	10.87	5.90	4.97	2.1/2.6
MW-2	4/7/00	4,940b	1,300	659b	<25.0b	214b	314b	41,800b	NA	10.87	5.37	5.50	0.4/0.2
MW-2	7/26/00	5,010	1,520	409	<50.0	302	307	54,300	NA	10.87	5.81	5.06	2.1/2.2

MW-3	7/20/99	NA	NA	NA	NA	NA	NA	NA	NA	11.27	19.07	-7.80	NA
MW-3	7/23/99	128	NA	<0.500	<0.500	<0.500	<0.500	404,000	324,000	11.27	6.43	4.84	NA
MW-3	11/1/99	<1,000	NA	<10.0	<10.0	<10.0	<10.0	169,000	224,000	11.27	6.48	4.79	0.5/0.3
MW-3	1/5/00	137	322	<1.00	<1.00	<1.00	<1.00	165,000	219,000	11.27	6.35	4.92	2.4/2.2
MW-3	4/7/00	<1,000	264	853	<10.0	<10.0	<10.0	283,000	196,000a	11.27	5.91	5.36	04/0.2
MW-3	7/26/00	<20,000	585	<200	<200	<200	<200	437,000	320,000	11.27	5.83	5.44	1.9/1.7

WELL CONCENTRATIONS
Shell-branded Service Station
105 5th Street
Oakland, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)	DO Reading (ppm)
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Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

TEPH = Total petroleum hydrocarbons as diesel by modified EPA Method 8015

BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8020

MTBE = methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

GW = Groundwater

DO = Dissolved Oxygen

ug/L = parts per billion

ppm = parts per million

msl = Mean sea level

ft = Feet

<n = Below detection limit

NA = Not applicable

n/n = Pre-purge/Post-purge

Notes:

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

b = Result was generated out of hold time



Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

11 August, 2000

Nick Sudano
Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose, CA 95112

RE: 105 5th St.
Sequoia Report: MJG0797

Enclosed are the results of analyses for samples received by the laboratory on 07/27/00 12:19. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ted Terrasas
Project Manager

CA ELAP Certificate #1210





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 105 5th St.
Project Number: 105 5th St./ Oakland
Project Manager: Nick Sudano

Reported:
08/11/00 10:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MJG0797-01	Water	07/26/00 13:26	07/27/00 12:19
MW-2	MJG0797-02	Water	07/26/00 14:04	07/27/00 12:19
MW-3	MJG0797-03	Water	07/26/00 13:46	07/27/00 12:19





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 105 5th St.
Project Number: 105 5th St./ Oakland
Project Manager: Nick Sudano

Reported:
08/11/00 10:34

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MJG0797-01) Water Sampled: 07/26/00 13:26 Received: 07/27/00 12:19									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	0H04001	08/04/00	08/04/00	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		92.0 %	70-130		"	"	"	"	
MW-2 (MJG0797-02) Water Sampled: 07/26/00 14:04 Received: 07/27/00 12:19									
Purgeable Hydrocarbons	5010	5000	ug/l	100	0H07004	08/07/00	08/07/00	DHS LUFT	P-01
Benzene	409	50.0	"	"	"	"	"	"	
Toluene	ND	50.0	"	"	"	"	"	"	
Ethylbenzene	302	50.0	"	"	"	"	"	"	
Xylenes (total)	307	50.0	"	"	"	"	"	"	
Methyl tert-butyl ether	54300	500	"	200	"	"	08/04/00	"	A-01.M-03
<i>Surrogate: a,a,a-Trifluorotoluene</i>		98.5 %	70-130		"	"	08/07/00	"	
MW-3 (MJG0797-03) Water Sampled: 07/26/00 13:46 Received: 07/27/00 12:19									
Purgeable Hydrocarbons	ND	20000	ug/l	400	0H07004	08/07/00	08/07/00	DHS LUFT	R-05
Benzene	ND	200	"	"	"	"	"	"	R-05
Toluene	ND	200	"	"	"	"	"	"	R-05
Ethylbenzene	ND	200	"	"	"	"	"	"	R-05
Xylenes (total)	ND	200	"	"	"	"	"	"	R-05
Methyl tert-butyl ether	437000	5000	"	2000	"	"	08/07/00	"	M-03
<i>Surrogate: a,a,a-Trifluorotoluene</i>		96.1 %	70-130		"	"	08/07/00	"	





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 105 5th St.
Project Number: 105 5th St./ Oakland
Project Manager: Nick Sudano

Reported:
08/11/00 10:34

Diesel Hydrocarbons (C9-C24) by DHS LUFT Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MJG0797-01) Water Sampled: 07/26/00 13:26 Received: 07/27/00 12:19									
Diesel Range Hydrocarbons	ND	0.0500	mg/l	1	0H04031	08/04/00	08/08/00	DHS LUFT	
Surrogate: n-Pentacosane		97.1 %	50-150		"	"	"	"	
MW-2 (MJG0797-02) Water Sampled: 07/26/00 14:04 Received: 07/27/00 12:19									
Diesel Range Hydrocarbons	1.52	0.0500	mg/l	1	0H04031	08/04/00	08/08/00	DHS LUFT	D-15
Surrogate: n-Pentacosane		100 %	50-150		"	"	"	"	
MW-3 (MJG0797-03) Water Sampled: 07/26/00 13:46 Received: 07/27/00 12:19									
Diesel Range Hydrocarbons	0.585	0.0500	mg/l	1	0H04031	08/04/00	08/08/00	DHS LUFT	D-15
Surrogate: n-Pentacosane		105 %	50-150		"	"	"	"	





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 105 5th St.
Project Number: 105 5th St./ Oakland
Project Manager: Nick Sudano

Reported:
08/11/00 10:34

**MTBE Confirmation by EPA Method 8260A
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (MJG0797-03) Water Sampled: 07/26/00 13:46 Received: 07/27/00 12:19									
Methyl tert-butyl ether	320000	20000	ug/l	20000	0H10024	08/09/00	08/09/00	EPA 8260A	
Surrogate: 1,2-Dichloroethane-d4		93.9 %	70-130		"	"	"	"	





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose CA, 95112	Project: 105 5th St. Project Number: 105 5th St./ Oakland Project Manager: Nick Sudano	Reported: 08/11/00 10:34
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 0H04001 - EPA 5030B [P/T]

Blank (0H04001-BLK1)

Prepared & Analyzed: 08/04/00

Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	9.89		"	10.0		98.9	70-130			

LCS (0H04001-BS1)

Prepared & Analyzed: 08/04/00

Benzene	10.3	0.500	ug/l	10.0		103	70-130			
Toluene	10.5	0.500	"	10.0		105	70-130			
Ethylbenzene	10.6	0.500	"	10.0		106	70-130			
Xylenes (total)	31.7	0.500	"	30.0		106	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.91		"	10.0		99.1	70-130			

Matrix Spike (0H04001-MS1)

Source: MJG0797-01

Prepared & Analyzed: 08/04/00

Benzene	10.3	0.500	ug/l	10.0	ND	103	60-140			
Toluene	10.5	0.500	"	10.0	ND	105	60-140			
Ethylbenzene	10.4	0.500	"	10.0	ND	104	60-140			
Xylenes (total)	31.9	0.500	"	30.0	ND	106	60-140			
Surrogate: a,a,a-Trifluorotoluene	10.0		"	10.0		100	70-130			

Matrix Spike Dup (0H04001-MSD1)

Source: MJG0797-01

Prepared & Analyzed: 08/04/00

Benzene	10.3	0.500	ug/l	10.0	ND	103	60-140	0	25	
Toluene	10.3	0.500	"	10.0	ND	103	60-140	1.92	25	
Ethylbenzene	10.2	0.500	"	10.0	ND	102	60-140	1.94	25	
Xylenes (total)	30.9	0.500	"	30.0	ND	103	60-140	3.18	25	
Surrogate: a,a,a-Trifluorotoluene	9.67		"	10.0		96.7	70-130			





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 105 5th St.
Project Number: 105 5th St./ Oakland
Project Manager: Nick Sudano

Reported:
08/11/00 10:34

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 0H07004 - EPA 5030B [P/T]

Blank (0H07004-BLK1)

Prepared & Analyzed: 08/07/00

Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	9.52		"	10.0		95.2	70-130			

LCS (0H07004-BS1)

Prepared & Analyzed: 08/07/00

Benzene	9.52	0.500	ug/l	10.0		95.2	70-130			
Toluene	10.2	0.500	"	10.0		102	70-130			
Ethylbenzene	8.87	0.500	"	10.0		88.7	70-130			
Xylenes (total)	28.9	0.500	"	30.0		96.3	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.88		"	10.0		98.8	70-130			

Matrix Spike (0H07004-MS1)

Source: MJG0855-10

Prepared & Analyzed: 08/07/00

Benzene	8.51	0.500	ug/l	10.0	ND	85.1	60-140			
Toluene	9.38	0.500	"	10.0	ND	93.8	60-140			
Ethylbenzene	8.20	0.500	"	10.0	ND	82.0	60-140			
Xylenes (total)	25.6	0.500	"	30.0	ND	85.3	60-140			
Surrogate: a,a,a-Trifluorotoluene	9.59		"	10.0		95.9	70-130			

Matrix Spike Dup (0H07004-MSD1)

Source: MJG0855-10

Prepared & Analyzed: 08/07/00

Benzene	9.33	0.500	ug/l	10.0	ND	93.3	60-140	9.19	25	
Toluene	10.1	0.500	"	10.0	ND	101	60-140	7.39	25	
Ethylbenzene	8.92	0.500	"	10.0	ND	89.2	60-140	8.41	25	
Xylenes (total)	27.4	0.500	"	30.0	ND	91.3	60-140	6.79	25	
Surrogate: a,a,a-Trifluorotoluene	9.98		"	10.0		99.8	70-130			





Blaine Tech Services (Shell) 1680 Rogers Avenue San Jose CA, 95112	Project: 105 5th St. Project Number: 105 5th St./ Oakland Project Manager: Nick Sudano	Reported: 08/11/00 10:34
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Diesel Hydrocarbons (C9-C24) by DHS LUFT - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0H04031 - EPA 3510B										
Blank (0H04031-BLK1)				Prepared: 08/04/00 Analyzed: 08/08/00						
Diesel Range Hydrocarbons	ND	0.0500	mg/l							
Surrogate: n-Pentacosane	0.0931		"	0.100		93.1	50-150			
LCS (0H04031-BS1)				Prepared: 08/04/00 Analyzed: 08/08/00						
Diesel Range Hydrocarbons	0.784	0.0500	mg/l	1.00		78.4	60-140			
Surrogate: n-Pentacosane	0.0825		"	0.100		82.5	50-150			
Matrix Spike (0H04031-MS1)				Source: MJG0783-02		Prepared: 08/04/00 Analyzed: 08/08/00				
Diesel Range Hydrocarbons	1.04	0.0500	mg/l	1.00	ND	104	50-150			
Surrogate: n-Pentacosane	0.108		"	0.100		108	50-150			
Matrix Spike Dup (0H04031-MSD1)				Source: MJG0783-02		Prepared: 08/04/00 Analyzed: 08/08/00				
Diesel Range Hydrocarbons	1.06	0.0500	mg/l	1.00	ND	106	50-150	1.90	50	
Surrogate: n-Pentacosane	0.0994		"	0.100		99.4	50-150			





Blaine Tech Services (Shell)
1680 Rogers Avenue
San Jose CA, 95112

Project: 105 5th St.
Project Number: 105 5th St./ Oakland
Project Manager: Nick Sudano

Reported:
08/11/00 10:34

**MTBE Confirmation by EPA Method 8260A - Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0H10024 - EPA 5030B [P/T]										
Blank (0H10024-BLK1)										
Prepared & Analyzed: 08/09/00										
Methyl tert-butyl ether	ND	1.00	ug/l							
Surrogate: 1,2-Dichloroethane-d4	9.11		"	10.0		91.1	70-130			
LCS (0H10024-BS1)										
Prepared & Analyzed: 08/09/00										
Methyl tert-butyl ether	9.12	1.00	ug/l	10.0		91.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	10.1		"	10.0		101	70-130			
Matrix Spike (0H10024-MS1)										
Source: MJG0742-01										
Prepared & Analyzed: 08/09/00										
Methyl tert-butyl ether	8.98	1.00	ug/l	10.0	ND	89.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.21		"	10.0		92.1	70-130			
Matrix Spike Dup (0H10024-MSD1)										
Source: MJG0742-01										
Prepared & Analyzed: 08/09/00										
Methyl tert-butyl ether	8.13	1.00	ug/l	10.0	ND	81.3	70-130	9.94	25	
Surrogate: 1,2-Dichloroethane-d4	8.89		"	10.0		88.9	70-130			





Blaine Tech Services (Shell)
1680 Rogers Avenue
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Project: 105 5th St.
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Reported:
08/11/00 10:34

Notes and Definitions

A-01 MTBE was prepared on 8/4/00,
D-15 Chromatogram Pattern: Unidentified Hydrocarbons C9-C24
M-03 Sample was analyzed at a second dilution per clients request.
P-01 Chromatogram Pattern: Gasoline C6-C12
R-05 The reporting limit(s) for this sample have been raised due to high levels of non-target interferents.
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference



EQUIVA WELL MONITORING DATA SHEET

BTS #: 000726 F3	Site: 98995757
Sampler: MIKE S.	Date: 7-26-00
Well I.D.: MW-1	Well Diameter: 2 3 4 6 8
Total Well Depth: 23.60	Depth to Water: 6.10
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

- Bailer
- Disposable Bailer
- Middleburg
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other _____

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing

Other: _____

10.3 (Gals.) X 3 = 30.6 Gals.
 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.27	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1320	71.8	7.2	418	50	11	clear
1322	71.7	6.8	420	67	22	✓
1324	71.5	6.8	420	64	31	

Did well dewater? Yes **No** Gallons actually evacuated: **31**

Sampling Time: **1326** Sampling Date: **7-26-00**

Sample I.D.: **MW-1** Laboratory: **Sedona** Columbia Other _____

Analyzed for: **TPH** **BTEX** **MTBE** **PH-D** Other: _____

EB I.D. (if applicable): _____ Duplicate I.D. (if applicable): _____

Analyzed for: **TPH** **BTEX** **MTBE** **PH-D** Other: _____

I.O. (if req'd): **Pre-purge** **1.1** **Post-purge** **1.4**

CRP (if req'd): **Pre-purge** **1.1** **Post-purge** **1.4**

EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>000726 F3</u>	Site: <u>98995757</u>
Sampler: <u>MIKE S.</u>	Date: <u>7-26-00</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>23.49</u>	Depth to Water: <u>5.81</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

Purge Method:

- Bailer
 Disposable Bailer
 Middleburg
 Electric Submersible
 Waterra
 Peristaltic
 Extraction Pump
 Other _____

Sampling Method:

- Bailer
 Disposable Bailer
 Extraction Port
 Dedicated Tubing
 Other: _____

$11.4 \text{ (Gals.)} \times 3 = 34.2 \text{ Gals.}$
 1 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.17
3"	0.37	Other:	radius ² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
358	72.1	7.0	370	59	12	cloudy/odor
1400	73.1	6.9	361	60	24	
1402	73.5	6.9	364	60	35	✓ ✓
(Removed stinger to purge & sample)						

Did well dewater? Yes No Gallons actually evacuated: 35

Sampling Time: 1404 Sampling Date: 7-26-00

Sample I.D.: MW-2 Laboratory: Sequoia Columbia Other _____

Analyzed for: TPH BTEX MTBE TPH-D Other: _____

EB I.D. (if applicable): _____ Duplicate I.D. (if applicable): _____

Analyzed for: TPH BTEX MTBE TPH-D Other: _____

D.O. (if req'd): Pre-purge: 2.1 Post-purge: 2.2

ORP (if req'd): Pre-purge: _____ Post-purge: _____

EQUIVA WELL MONITORING DATA SHEET

BTS #: 000726 F3	Site: 98995757
Sampler: MIKE S.	Date: 7-26-00
Well I.D.: MW-3	Well Diameter: 2 3 4 6 8
Total Well Depth: 24.90	Depth to Water: 5.83
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

- | | |
|--|---|
| <input type="checkbox"/> Bailer
<input type="checkbox"/> Disposable Bailer
<input type="checkbox"/> Middleburg
<input checked="" type="checkbox"/> Electric Submersible | <input type="checkbox"/> Waterra
<input type="checkbox"/> Peristaltic
<input type="checkbox"/> Extraction Pump
<input type="checkbox"/> Other: _____ |
|--|---|

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

12.3 (Gals.) X **3** = **36.9** Gals.
 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1339	70.3	7.1	1240	59	13	cloudy/light
1341	70.7	6.8	1310	110	26	↓ odor
1343	70.4	6.8	1349	110	37	↓ odor.

(Removed stinger to purge 2 sample)

Did well dewater? Yes No Gallons actually evacuated: **37**

Sampling Time: **1346** Sampling Date: **7-26-00**

Sample I.D.: **MW-3** Laboratory: **Senior** Columbia Other: _____

Analyzed for: **TPH** **BTEX** **MIBF** **TPH** Other: _____

EB I.D. (if applicable): _____ Duplicate I.D. (if applicable): _____

Analyzed for: **TPH** **BTEX** **MIBF** **TPH** Other: _____

D.O. (if req'd): **Pre-purge** **1.9** **mg/L** **Post-purge** **1.7** **mg/L**

C.R.P. (if req'd): **Pre-purge** **n/A** **mg/L** **Post-purge** **n/A** **mg/L**