

R0173



Shell Oil Products US

November 21, 2003

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

Alameda County

NOV 25 2003

Environmental Health

Subject: Shell-branded Service Station
2120 Montana Street
Oakland, California

Dear Mr. Gholami:

Attached for your review and comment is a copy of the *Third Quarter 2003 Monitoring Report* 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.

As always, please feel free to contact me directly at (559) 645-9306 with any questions or concerns.

Sincerely,

Shell Oil Products US

A handwritten signature in cursive script that reads "Karen Petryna".

Karen Petryna
Sr. Environmental Engineer

November 21, 2003

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

Re: **Third Quarter 2003 Monitoring Report**
Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident #98995740
Cambria Project #245-0733-002

Alameda County
NOV 25 2003
Environmental Health



Dear Mr. Gholami:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), Cambria Environmental Technology, Inc. (Cambria) is submitting this groundwater monitoring report in accordance with the reporting requirements of 23 CCR 2652d. The site is located at the northwest corner of Montana Street and Fruitvale Avenue in Oakland, California (Figures 1 and 2).

REMEDIATION SUMMARY

Mobile Groundwater Extraction (GWE): As recommended in our August 15, 2001 *Agency Response*, Cambria began weekly GWE in August 2001 from wells MW-1 and TBW-N using a vacuum truck. Mobile GWE ended on March 5, 2003 due to construction of the fixed GWE system. As discussed below, weekly mobile GWE from wells MW-1 and TBW-N resumed on August 19, 2003. The cumulative estimated mass of total petroleum hydrocarbons as gasoline (TPHg) and methyl tertiary butyl ether (MTBE) removed by mobile GWE at the site is 14.3 pounds and 7.57 pounds, respectively. Additionally, approximately 2.68 pounds of separate-phase hydrocarbons (SPH) have been removed at the site through manual bailing and GWE.

Fixed GWE System Installation: Our September 4, 2002 work plan proposed the installation of a fixed GWE system at the site. This work plan was approved in a September 19, 2002 Alameda County Health Care Services Agency letter. System construction began in early February 2003, and system start-up occurred on April 2, 2003.

**Cambria
Environmental
Technology, Inc.**

5900 Hollis Street
Suite A
Emeryville, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

THIRD QUARTER 2003 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 vicinity map that includes previously submitted well survey information (Figure 1) and a groundwater elevation contour map (Figure 2). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

Remedial Activities: Cambria started operation of the fixed GWE system on April 2, 2003. Wells MW-1 and TBW-N are used as extraction wells. System analytical data are summarized in Table 1. Groundwater level measurements and flow meter readings have been recorded at various times of operation to assess system production. Table 2 summarizes the field data and system operation and calculates mass removal. As discussed below, the GWE system has not operated since July 18, 2003.

As of July 18, 2003, a total of 68,706 gallons of groundwater has been extracted. A total of 12.5 pounds of TPHg, 0.455 pounds of benzene, and 2.48 pounds of MTBE has been recovered. Mass removal data are presented in Table 2.

On July 23, 2003, Cambria observed SPH within the GWE system. The GWE system was not operating at that time. Cambria measured approximately 2 feet of SPH in the GWE system's transfer tank. Cambria also measured approximately 0.15 feet of SPH in tank backfill well TBW-N, and 2.25 feet in monitoring well MW-1. SPH was removed from the wells TBW-N and MW-1 on August 8, 2003 by means of a vacuum truck. Once the SPH was removed, the GWE system was cleaned, flushed, and rinsed. The SPH and groundwater mixture was off-hauled to the Martinez Refining Company in Martinez, California for disposal. Weekly mobile GWE (VacOps) resumed on August 19, 2003 to further address SPH. Table 3 summarizes the VacOps data.

Cambria has monitored SPH thickness prior to the VacOps events. No measurable SPH was present in these wells from the most recent monitoring event on November 10, 2003. Shell Maintenance is currently inspecting the regular grade UST.

ANTICIPATED FOURTH QUARTER 2003 ACTIVITIES

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

Remedial Activities: Cambria will prepare a quarterly discharge compliance report in accordance with the East Bay Municipal Utility District wastewater discharge permit. Weekly VacOps will continue. Cambria will continue to monitor SPH thickness prior to the VacOps events. The GWE system will remain off as Shell Maintenance completes their inspection and possible repairs. Cambria is evaluating supplementing the groundwater treatment system with an oil/water separator.

CLOSING

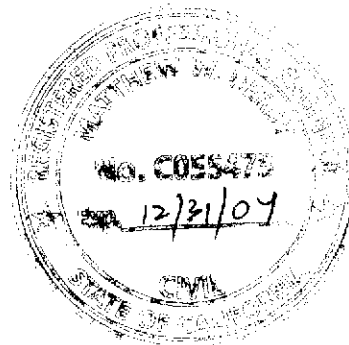


We appreciate the opportunity to work with you on this project. Please call Dan Lescure at (510) 420-3306 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

Dan Lescure
Senior Project Engineer

Matthew W. Derby, P.E.
Senior Project Engineer



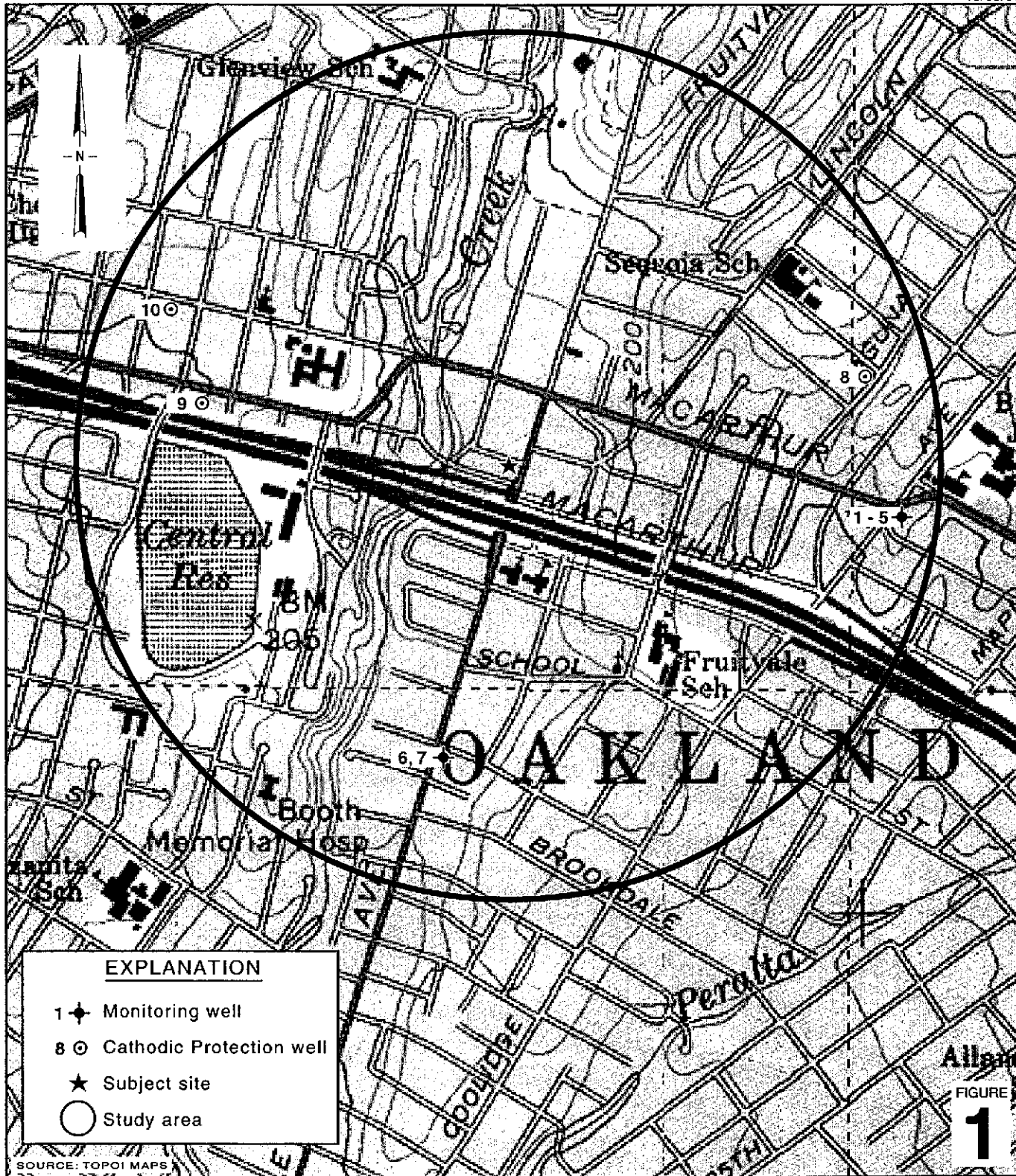
- Figures: 1 - Vicinity/Area Well Survey Map
- 2 - Groundwater Elevation Contour Map

- Tables: 1 - Groundwater Extraction – System Analytical Data
- 2 - Groundwater Extraction – Operation and Mass Removal Data
- 3 - Groundwater Extraction – Mass Removal Data

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869

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SOURCE: TOPOI MAPS

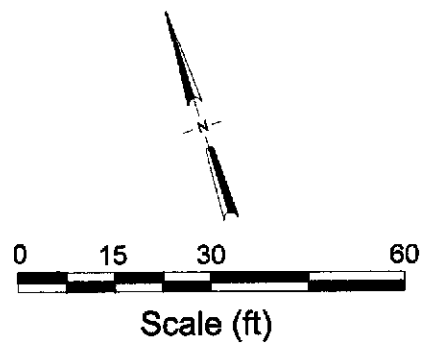
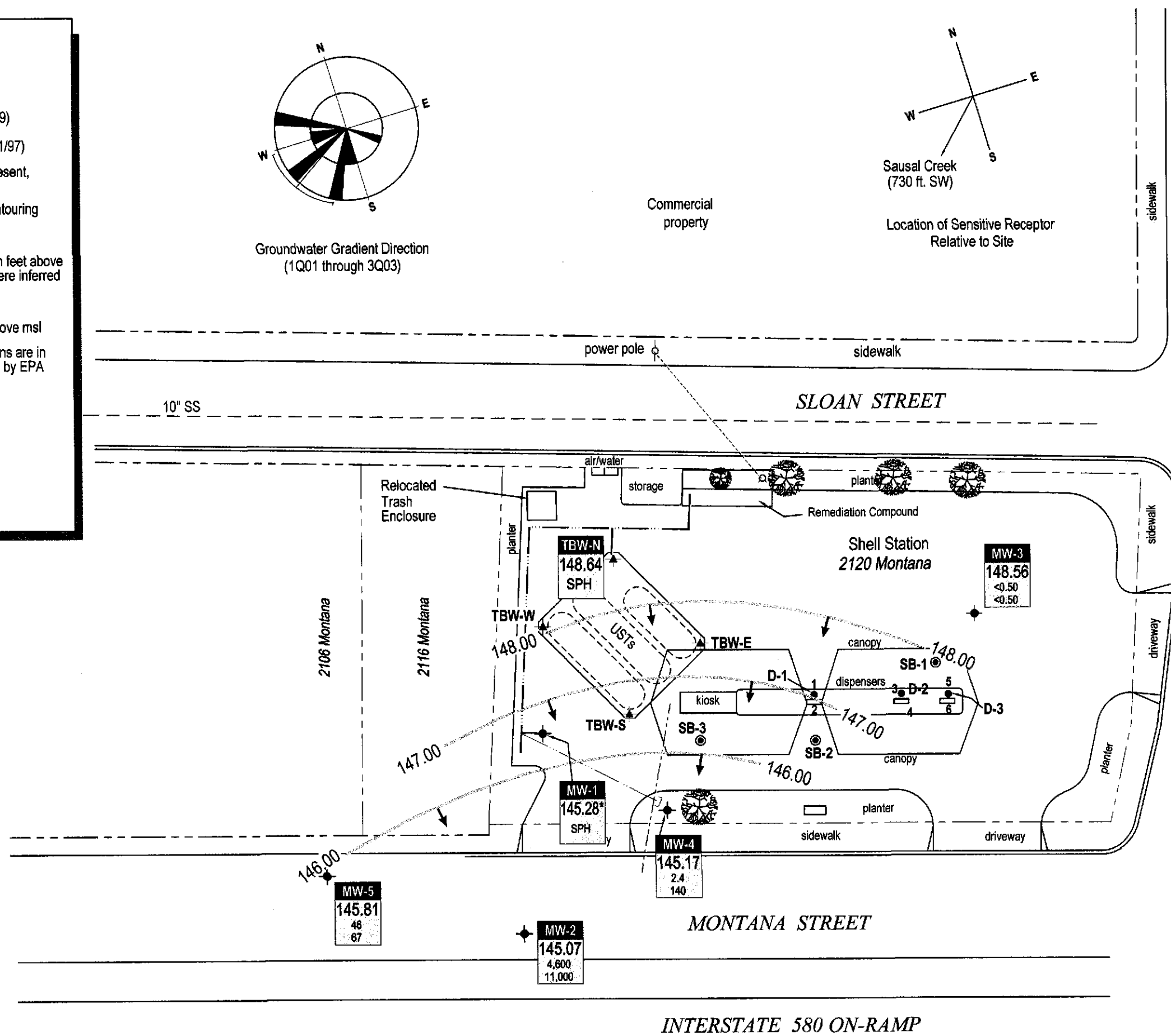
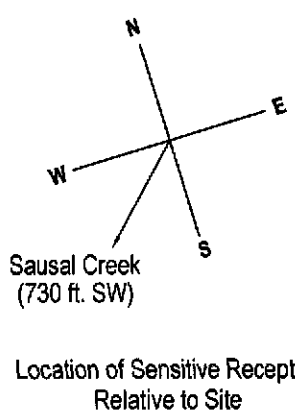
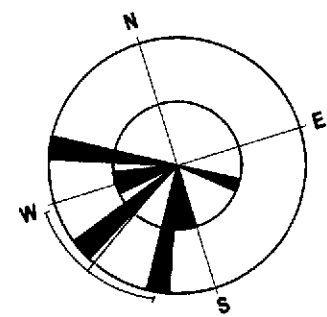
Shell-branded Service Station
 2120 Montana Street
 Oakland, California
 Incident #98995740



**Vicinity / Area Well
 Survey Map**
 (1/2-Mile Radius)

EXPLANATION

- MW-1 ◆ Monitoring well location
 - TBW-N ◆ Tank backfill well location
 - SB-1 ● Cambria soil boring location (10/99)
 - D-1 ● Cambria soil sampling location (11/97)
 - SPH ● Separate-phase hydrocarbons present, well not sampled
 - * Data anomalous, not used for contouring
 - Groundwater flow direction
 - XX.XX Groundwater elevation contour, in feet above mean sea level (msl), dashed where inferred
- | | |
|-----------------|---|
| Well | Well designation |
| ELEV | Groundwater elevation, in feet above msl |
| Benzene
MTBE | Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8260. |
- Overhead electrical service
 - Remediation piping
 - - - Existing 10" Sanitary sewer (SS)
 - - - Discharge Pipe



Groundwater Elevation Contour Map

September 9, 2003



C A M B R I A

FRUITVALE AVENUE

FIGURE
2

Shell-branded Service Station
2120 Montana Street
Oakland, California
Incident #98995740

G:\OAKLAND\2120MONTANA\FIGURES\98995740-MP.DWG

Table 1: Groundwater Extraction - System Analytical Data
 Shell-branded Service Station, Incident #98995740, 2120 Montana St, Oakland, California

Sample Date (mm/dd/yy)	Influent			Midfluent 1			Midfluent 2			Effluent		
	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)
04/02/2003	51,000	1,300	7,100	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
04/08/2003	45,000	1,200	8,600	1,600	5.3	3.2	220	<0.50	<0.50	<50	<0.50	<0.50
04/22/2003	<50	<25	1,700	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
05/01/2003	45,000	1,600	8,300	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
05/21/2003	12,000	370	1,500	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
06/03/2003	10,000	470	1,900	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
06/17/2003	1,200	42	29	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50

Abbreviations & Notes:

TPHg = Total purgeable hydrocarbons as gasoline

MTBE = Methyl tert-butyl ether

Conc. = Concentration

ppb = parts per billion, equivalent to µg/l

TPHg, benzene, and MTBE analyzed by EPA Method 8260B

Table 2: Groundwater Extraction - Operation and Mass Removal Data
Shell-branded Service Station, Incident #98995740, 2120 Montana Street, Oakland, California

Site Visit (mm/dd/yy)	Hour Meter hours	Flow Meter Reading (gal)	Period			TPHg			Benzene			MTBE				
			Period Volume (gal)	Operational Flow Rate (gpm)	Cumulative Volume (gal)	TPHg Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)	Benzene Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)	MTBE Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)		
04/02/2003	0.0	393	0	0	0		0.000	0.000		0.000	0.000		0.000	0.000		
04/02/2003	5.3	1,006	613	1.93	613	51,000	0.261	0.261	1,300	0.007	0.007	7,100	0.036	0.036		
04/08/2003	11.4	2,010	1,004	2.74	1,617	45,000	0.377	0.638	1,200	0.010	0.017	8,600	0.072	0.108		
04/22/2003	303.0	15,640	13,630	0.78	15,247	<50	0.003	0.641	<25	0.001	0.018	1,700	0.193	0.302		
05/01/2003	399.0	17,840	2,200	0.38	17,447	45,000	0.826	1.47	1,600	0.029	0.047	8,300	0.152	0.454		
05/20/2003	784.0	43,320	25,480	1.10	42,927		9.568	11.0		0.340	0.388		1.765	2.22		
05/21/2003	808.5	44,639	1,319	0.90	44,246	12,000	0.132	11.2	370	0.004	0.392	1,500	0.017	2.24		
06/03/2003	1116.9	59,813	15,174	0.82	59,420	10,000	1.266	12.4	470	0.060	0.451	1,900	0.241	2.48		
06/17/2003	1455.5	64,741	4,928	0.24	64,348	1,200	0.049	12.5	42	0.002	0.453	29	0.001	2.48		
07/01/2003	1697.4	68,668	3,927	0.27	68,275		0.039	12.5		0.001	0.454		0.001	2.48		
07/18/2003	1867.0	69,099	431	0.04	68,706		0.004	12.5		0.000	0.455		0.000	2.48		
System Shutdown due to presence of SPH																
Total Extracted Volume=					68,706	Total Pounds Removed:			12.5	Total Pounds Removed:			0.455	Total Pounds Removed:		2.48
Average Period Operational Flow Rate=					0.45	Total Gallons Removed:			2.06	Total Gallons Removed:			0.063	Total Gallons Removed:		0.401

Abbreviations & Notes:

TPHg = Total purgeable hydrocarbons as gasoline

MTBE = Methyl tert-butyl ether

Conc. = Concentration

ppb = Parts per billion, equivalent to µg/L

µg/L = Micrograms per liter

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)

When constituents are not detected, the concentration is assumed to be equal to half the detection limit in subsequent calculations.

Volume removal data based on the formula: mass (pounds) x (density)⁻¹ (cc/g) x 453.6 (g/pound) x (L/1000 cc) * (gal/3.785 L)

Density inputs: TPHg = 0.73 g/cc, TPHd = 0.87 g/cc, MTBE = 0.74 g/cc

TPHg, BTEX, and MTBE analyzed by EPA Method 8260B

Table 3: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995740, 2120 Montana St., Oakland, California

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH			Benzene			MTBE		
					TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE To Date (pounds)
08/23/01	MW-1	100	100	03/23/01	16,600	0.01385	0.01385	753	0.00063	0.00063	27,500	0.02295	0.02295
08/30/01	MW-1	40	140	03/23/01	16,600	0.00554	0.01939	753	0.00025	0.00088	27,500	0.00918	0.03213
09/09/01	MW-1	500	640	03/23/01	16,600	0.06926	0.08865	753	0.00314	0.00402	27,500	0.11473	0.14686
09/21/01	MW-1	320	960	03/23/01	16,600	0.04433	0.13298	753	0.00201	0.00603	27,500	0.07343	0.22029
09/29/01	MW-1	600	1,560	03/23/01	16,600	0.08311	0.21609	753	0.00377	0.00980	27,500	0.13768	0.35797
10/05/01	MW-1	362	1,922	03/23/01	16,600	0.05014	0.26623	753	0.00227	0.01208	27,500	0.08307	0.44104
10/12/01	MW-1	700	2,622	03/23/01	16,600	0.09696	0.36319	753	0.00440	0.01647	27,500	0.16063	0.60167
10/19/01	MW-1	350	2,972	03/23/01	16,600	0.04848	0.41167	753	0.00220	0.01867	27,500	0.08031	0.68198
10/29/01	MW-1	1,995	4,967	03/23/01	16,600	0.27634	0.68801	753	0.01254	0.03121	27,500	0.45779	1.13978
11/02/01	MW-1	700	5,667	03/23/01	16,600	0.09696	0.78497	753	0.00440	0.03561	27,500	0.16063	1.30041
11/16/01	MW-1	800	6,467	03/23/01	16,600	0.11081	0.89579	753	0.00503	0.04063	27,500	0.18358	1.48398
11/30/01	MW-1	900	7,367	03/23/01	16,600	0.12466	1.02045	753	0.00565	0.04629	27,500	0.20652	1.69050
12/14/01	MW-1	300	7,667	03/23/01	16,600	0.04155	1.06200	753	0.00188	0.04817	27,500	0.06884	1.75934
12/28/01	MW-1	250	7,917	03/23/01	16,600	0.03463	1.09663	753	0.00157	0.04974	27,500	0.05737	1.81671
01/12/02	MW-1	1,300	9,217	03/23/01	16,600	0.18007	1.27670	753	0.00817	0.05791	27,500	0.29831	2.11502
02/14/02	MW-1	950	10,167	03/23/01	16,600	0.13159	1.40830	753	0.00597	0.06388	27,500	0.21800	2.33302
03/11/02*	MW-1	1,258	11,425	03/23/01	16,600	0.17425	1.58255	753	0.00790	0.07179	27,500	0.28867	2.62169
04/01/02	MW-1	791	12,216	03/23/01	16,600	0.10957	1.69212	753	0.00497	0.07676	27,500	0.18151	2.80320
05/01/02	MW-1	60	12,276	03/23/01	16,600	0.00831	1.70043	753	0.00038	0.07713	27,500	0.01377	2.81697
06/05/02	MW-1	643	12,919	03/23/01	16,600	0.08907	1.78949	753	0.00404	0.08117	27,500	0.14755	2.96452
07/11/02	MW-1	400	13,319	03/23/01	16,600	0.05541	1.84490	753	0.00251	0.08369	27,500	0.09179	3.05631
08/12/02	MW-1	1,300	14,619	03/23/01	16,600	0.18007	2.02497	753	0.00817	0.09186	27,500	0.29831	3.35462
09/09/02	MW-1	500	15,119	03/23/01	16,600	0.06926	2.09423	753	0.00314	0.09500	27,500	0.11473	3.46935
10/08/02	MW-1	117	15,236	03/23/01	16,600	0.01621	2.11043	753	0.00074	0.09573	27,500	0.02685	3.49620
11/09/02	MW-1	173	15,409	03/23/01	16,600	0.02396	2.13440	753	0.00109	0.09682	27,500	0.03970	3.53590
12/13/02	MW-1	885	16,294	03/23/01	16,600	0.12259	2.25698	753	0.00556	0.10238	27,500	0.20308	3.73898
01/08/03	MW-1	1,151	17,445	03/23/01	16,600	0.15943	2.41642	753	0.00723	0.10961	27,500	0.26412	4.00310
02/05/03	MW-1	0	17,445	03/23/01	16,600	0.00000	2.41642	753	0.00000	0.10961	27,500	0.00000	4.00310

Table 3: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995740, 2120 Montana St., Oakland, California

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH			Benzene			MTBE		
					TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE To Date (pounds)
02/19/03	MW-1	1,130	18,575	03/23/01	16,600	0.15652	2.57294	753	0.00710	0.11671	27,500	0.25930	4.26240
03/05/03	MW-1	600	19,175	03/23/01	16,600	0.08311	2.65605	753	0.00377	0.12048	27,500	0.13768	4.40008
08/19/03	MW-1	750	19,925	06/30/03	7,800	0.04881	2.70486	<25	0.00008	0.12056	2,000	0.01252	4.41260
08/26/03	MW-1	700	20,625	06/30/03	7,800	0.04556	2.75042	<25	0.00007	0.12063	2,000	0.01168	4.42428
09/02/03	MW-1	600	21,225	06/30/03	7,800	0.03905	2.78948	<25	0.00006	0.12070	2,000	0.01001	4.43430
09/09/03	MW-1	600	21,825	06/30/03	7,800	0.03905	2.82853	<25	0.00006	0.12076	2,000	0.01001	4.44431
09/16/03	MW-1	300	22,125	06/30/03	7,800	0.01953	2.84805	<25	0.00003	0.12079	2,000	0.00501	4.44932
09/23/03	MW-1	550	22,675	06/30/03	7,800	0.03580	2.88385	<25	0.00006	0.12085	2,000	0.00918	4.45849
08/23/01	TBW-N	85	85	09/25/01	120,000	0.08511	0.08511	3,200	0.00227	0.00227	31,000	0.02199	0.02199
08/30/01	TBW-N	0	85	09/25/01	120,000	0.00000	0.08511	3,200	0.00000	0.00227	31,000	0.00000	0.02199
09/09/01	TBW-N	0	85	09/25/01	120,000	0.00000	0.08511	3,200	0.00000	0.00227	31,000	0.00000	0.02199
09/21/01	TBW-N	200	285	09/25/01	120,000	0.20026	0.28538	3,200	0.00534	0.00761	31,000	0.05174	0.07372
09/29/01	TBW-N	0	285	09/25/01	120,000	0.00000	0.28538	3,200	0.00000	0.00761	31,000	0.00000	0.07372
10/05/01	TBW-N	0	285	09/25/01	120,000	0.00000	0.28538	3,200	0.00000	0.00761	31,000	0.00000	0.07372
10/12/01	TBW-N	100	385	09/25/01	120,000	0.10013	0.38551	3,200	0.00267	0.01028	31,000	0.02587	0.09959
10/19/01	TBW-N	0	385	09/25/01	120,000	0.00000	0.38551	3,200	0.00000	0.01028	31,000	0.00000	0.09959
10/29/01	TBW-N	5	390	09/25/01	120,000	0.00501	0.39052	3,200	0.00013	0.01041	31,000	0.00129	0.10088
11/02/01	TBW-N	10	400	09/25/01	120,000	0.01001	0.40053	3,200	0.00027	0.01068	31,000	0.00259	0.10347
11/16/01	TBW-N	400	800	09/25/01	120,000	0.40053	0.80106	3,200	0.01068	0.02136	31,000	0.10347	0.20694
11/30/01	TBW-N	1,100	1,900	11/20/01	72,000	0.66087	1.46193	2,200	0.02019	0.04155	35,000	0.32126	0.52820
12/14/01	TBW-N	2,000	3,900	12/05/01	76,000	1.26834	2.73027	1,600	0.02670	0.06826	30,000	0.50066	1.02886
12/28/01	TBW-N	800	4,700	12/05/01	76,000	0.50734	3.23761	1,600	0.01068	0.07894	30,000	0.20026	1.22912
01/12/02	TBW-N	1,300	6,000	12/05/01	76,000	0.82442	4.06203	1,600	0.01736	0.09629	30,000	0.32543	1.55455
02/14/02	TBW-N	582	6,582	12/05/01	76,000	0.36909	4.43112	1,600	0.00777	0.10406	30,000	0.14569	1.70025
03/11/02*	TBW-N	838	7,420	03/01/02	91,000	0.63632	5.06744	1,200	0.00839	0.11246	29,000	0.20278	1.90303
04/01/02	TBW-N	700	8,120	03/01/02	91,000	0.53154	5.59898	1,200	0.00701	0.11946	29,000	0.16939	2.07242
05/01/02	TBW-N	801	8,921	03/01/02	91,000	0.60823	6.20721	1,200	0.00802	0.12749	29,000	0.19383	2.26625

Table 3: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995740, 2120 Montana St., Oakland, California

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH			Benzene			MTBE			
					TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE To Date (pounds)	
06/05/02	TBW-N	400	9,321	06/06/02	100,000	0.33377	6.54098	2,100	0.00701	0.13449	18,000	0.06008	2.32633	
07/11/02	TBW-N	672	9,993	06/06/02	100,000	0.56074	7.10172	2,100	0.01178	0.14627	18,000	0.10093	2.42726	
08/12/02	TBW-N	165	10,158	06/06/02	100,000	0.13768	7.23940	2,100	0.00289	0.14916	18,000	0.02478	2.45205	
09/09/02	TBW-N	272	10,430	09/06/02	69,000	0.15661	7.39601	870	0.00197	0.15114	17,000	0.03858	2.49063	
10/08/02	TBW-N	272	10,702	09/06/02	69,000	0.15661	7.55262	870	0.00197	0.15311	17,000	0.03858	2.52922	
11/09/02	TBW-N	800	11,502	09/06/02	69,000	0.46061	8.01323	870	0.00581	0.15892	17,000	0.11348	2.64270	
12/13/02	TBW-N	700	12,202	12/19/02	110,000	0.64252	8.65574	1,900	0.01110	0.17002	19,000	0.11098	2.75368	
01/08/03	TBW-N	1,000	13,202	12/19/02	110,000	0.91788	9.57362	1,900	0.01585	0.18587	19,000	0.15854	2.91222	
02/05/03	TBW-N	0	13,202	12/19/02	110,000	0.00000	9.57362	1,900	0.00000	0.18587	19,000	0.00000	2.91222	
02/19/03	TBW-N	0	13,202	12/19/02	110,000	0.00000	9.57362	1,900	0.00000	0.18587	19,000	0.00000	2.91222	
03/05/03	TBW-N	1,122	14,324	12/19/02	110,000	1.02986	10.60348	1,900	0.01779	0.20366	19,000	0.17788	3.09011	
08/19/03	TBW-N	44	14,368	06/30/03	260,000	0.09546	10.69894	7,700	0.00283	0.20649	8,400	0.00308	3.09319	
08/26/03	TBW-N	53	14,421	06/30/03	260,000	0.11499	10.81393	7,700	0.00341	0.20989	8,400	0.00371	3.09691	
09/02/03	TBW-N	71	14,492	06/30/03	260,000	0.15404	10.96796	7,700	0.00456	0.21445	8,400	0.00498	3.10188	
09/09/03	TBW-N	38	14,530	06/30/03	260,000	0.08244	11.05041	7,700	0.00244	0.21689	8,400	0.00266	3.10455	
09/16/03	TBW-N	67	14,597	06/30/03	260,000	0.14536	11.19576	7,700	0.00430	0.22120	8,400	0.00470	3.10924	
09/23/03	TBW-N	77	14,674	06/30/03	260,000	0.16705	11.36282	7,700	0.00495	0.22615	8,400	0.00540	3.11464	
Total Gallons Extracted:		37,349			Total Pounds Removed:			14.24667			0.34699			7.57313
					Total Gallons Removed:			2.33552			0.04753			1.22147

Table 3: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995740, 2120 Montana St., Oakland, California

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

Abbreviations & Notes:

TPPH = Total purgeable hydrocarbons as gasoline

MtBE = Methyl tert-butyl ether

ppb = Parts per billion

gal = Gallons

* = Volume pumped estimated.

Mass removed based on the formula: volume extracted (gal) x concentration ($\mu\text{g/L}$) x ($\text{g}/10^6\mu\text{g}$) 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, and MTBE analyzed by EPA Method 8260

Concentrations based on most recent groundwater monitoring results

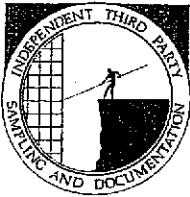
If concentration is less than the laboratory detection limit, one half of the detection limit concentration is used in the mass removal calculation.

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

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

October 6, 2003

Karen Petryna
Shell Oil Products US
P.O. Box 7869
Burbank, CA 91510-7869

Third Quarter 2003 Groundwater Monitoring at
Shell-branded Service Station
2120 Montana Street
Oakland, CA

Monitoring performed on September 9, 2003

Groundwater Monitoring Report **030909-MM-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/jt

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

cc: Anni Kreml
Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Oakland, CA 94608

WELL CONCENTRATIONS
Shell-branded Service Station
2120 Montana Street
Oakland, CA

Well ID	Date	TPPH (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)	SPH Thickness (ft)
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MW-1	03/19/2001	NA	NA	NA	NA	NA	NA	NA	159.59	12.14	147.45	ND
MW-1	03/23/2001	16,600	753	1,720	407	2,330	NA	27,500	159.59	12.25	147.34	ND
MW-1	05/31/2001	<20,000d	1,000d	920d	490d	2,000d	NA	54,000d	161.13	12.22	148.91	ND
MW-1	06/27/2001	NA	NA	NA	NA	NA	NA	NA	159.59	13.00b	NA	ND
MW-1	07/09/2001	NA	NA	NA	NA	NA	NA	NA	159.59	13.17	146.67	0.31
MW-1	09/25/2001	NA	NA	NA	NA	NA	NA	NA	159.59	14.27	145.66	0.43
MW-1	11/20/2001	NA	NA	NA	NA	NA	NA	NA	159.59	13.49	146.14	0.05
MW-1	12/05/2001	NA	NA	NA	NA	NA	NA	NA	159.59	11.32	148.31	0.05
MW-1	03/01/2002	NA	NA	NA	NA	NA	NA	NA	159.59	13.22	146.56	0.24
MW-1	06/06/2002	NA	NA	NA	NA	NA	NA	NA	159.59	12.99	147.00	0.50
MW-1	07/16/2002	NA	NA	NA	NA	NA	NA	NA	159.59	13.37	146.22	ND
MW-1	09/06/2002	NA	NA	NA	NA	NA	NA	NA	159.57	13.30	146.70	0.54
MW-1	12/12/2002	NA	NA	NA	NA	NA	NA	NA	159.57	13.78	146.61	1.03
MW-1	03/31/2003	NA	NA	NA	NA	NA	NA	NA	159.57	11.21	148.38	0.03
MW-1	06/30/2003	7,800	<25	37	<25	380	NA	2,000	159.57	12.20	147.37	ND
MW-1	09/09/2003	NA	NA	NA	NA	NA	NA	NA	159.08	15.70	145.28	2.38

MW-2	03/19/2001	NA	NA	NA	NA	NA	NA	NA	158.03	11.60	146.43	ND
MW-2	03/23/2001	4,450	280	41.0	62.1	63.0	NA	16,600	158.03	11.76	146.27	ND
MW-2	05/31/2001	<20,000a	820a	<200a	<200a	<200a	NA	63,000a	158.03	11.40	146.63	ND
MW-2	06/27/2001	<50,000	610	4.0	13	9.2	NA	47,000	158.03	12.65	145.38	ND
MW-2	09/25/2001	<2,000	41	<20	<20	<20	NA	6,400	158.03	12.89	145.14	ND
MW-2	12/05/2001	<2,000	74	<20	<20	<20	NA	8,400	158.03	10.40	147.63	ND
MW-2	03/01/2002	<1,000	<10	<10	<10	<10	NA	2,900	158.03	11.52	146.51	ND
MW-2	06/06/2002	<5,000	210	<50	<50	<50	NA	23,000	158.03	12.15	145.88	ND
MW-2	07/16/2002	NA	NA	NA	NA	NA	NA	NA	158.03	12.25	145.78	ND
MW-2	09/06/2002	<2,000	56	<20	<20	<20	NA	11,000	158.01	12.44	145.57	ND
MW-2	12/12/2002	<2,500	80	<25	<25	<25	NA	13,000	158.01	12.53	145.48	ND

WELL CONCENTRATIONS
Shell-branded Service Station
2120 Montana Street
Oakland, CA

Well ID	Date	TPPH (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)	SPH Thickness (ft.)
MW-2	03/31/2003	<5,000	230	1,200	95	150	NA	13,000	158.01	11.98	146.03	ND
MW-2	06/30/2003	<12,000	780	<120	170	250	NA	9,000	158.01	12.10	145.91	ND
MW-2	09/09/2003	140,000	4,600	40,000	4,800	32,000	NA	11,000	158.01	12.94	145.07	ND
MW-3	03/19/2001	NA	NA	NA	NA	NA	NA	NA	161.13	11.42	149.71	ND
MW-3	03/23/2001	<50.0	<0.500	<0.500	<0.500	<0.500	NA	1.26	161.13	11.42	149.71	ND
MW-3	05/31/2001	<50e	<0.50e	<0.50e	<0.50e	<0.50e	NA	<5.0e	159.59	13.00	146.59	ND
MW-3	06/27/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	161.13	12.32	148.81	ND
MW-3	09/25/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	161.13	12.50	148.63	ND
MW-3	12/05/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	161.13	10.13	151.00	ND
MW-3	03/01/2002	<50	<0.50	<0.50	<0.50	0.73	NA	<5.0	161.13	11.63	149.50	ND
MW-3	06/08/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	161.13	11.55	149.58	ND
MW-3	07/16/2002	NA	NA	NA	NA	NA	NA	NA	161.13	11.72	149.41	ND
MW-3	09/06/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	161.11	12.24	148.87	ND
MW-3	12/12/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	161.11	12.18	148.93	ND
MW-3	03/31/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	0.78	161.11	11.94	149.17	ND
MW-3	06/30/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	161.11	12.50	148.61	ND
MW-3	09/09/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	161.11	12.55	148.56	ND
MW-4	07/10/2002	NA	NA	NA	NA	NA	NA	NA	NM	13.19	NA	ND
MW-4	07/16/2002	800	1.1	1.1	2.6	2.4	NA	450	NM	13.56	NA	ND
MW-4	09/06/2002	1,100	3.0	1.8	8.0	4.6	NA	110	160.09	13.67	146.42	ND
MW-4	12/12/2002	130	<0.50	<0.50	<0.50	<0.50	NA	940	160.09	14.06	146.03	ND
MW-4	03/31/2003	<250	<2.5	<2.5	<2.5	<5.0	NA	500	160.09	13.69	146.40	ND
MW-4	06/30/2003	3,100	5.3	<5.0	7.1	<10	NA	420	160.09	14.12	145.97	ND
MW-4	09/09/2003	1,400	2.4	2.0	2.6	3.2	NA	140	160.09	14.92	145.17	ND
MW-5	07/10/2002	NA	NA	NA	NA	NA	NA	NA	NM	12.22	NA	ND

WELL CONCENTRATIONS
Shell-branded Service Station
2120 Montana Street
Oakland, CA

Well ID	Date	TPPH (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)	SPH Thickness (ft)
MW-5	07/16/2002	6,100	65	7.2	100	130	NA	410	NM	12.50	NA	ND
MW-5	09/06/2002	5,900	100	8.1	41	32	NA	230	158.25	12.77	145.48	ND
MW-5	12/12/2002	4,900	70	5.7	25	17	NA	280	158.25	12.71	145.54	ND
MW-5	03/31/2003	6,400	61	4.9	23	13	NA	330	158.25	11.93	146.32	ND
MW-5	06/30/2003	3,400	18	<2.5	17	5.5	NA	47	158.25	11.97	146.28	ND
MW-5	09/09/2003	6,800	46	23	39	42	NA	67	158.25	12.44	145.81	ND
TBW-N	09/25/2001 c	120,000	3,200	2,800	4,000	18,000	NA	31,000	NM	12.25	NM	ND
TBW-N	11/20/2001	72,000	2,200	3,600	2,600	14,000	NA	35,000	NM	12.13	NM	ND
TBW-N	12/05/2001	76,000	1,600	3,200	2,900	15,000	NA	30,000	NM	11.51	NM	ND
TBW-N	03/01/2002	91,000	1,200	4,200	2,800	14,000	NA	29,000	NM	11.88	NM	ND
TBW-N	06/06/2002	100,000	2,100	8,200	3,400	17,000	NA	18,000	NM	12.48	NM	ND
TBW-N	07/16/2002	NA	NA	NA	NA	NA	NA	NA	NM	12.39	NM	ND
TBW-N	09/06/2002	69,000	870	4,800	2,300	11,000	NA	17,000	161.26	12.36	148.90	ND
TBW-N	12/12/2002	Well inaccessible		NA	NA	NA	NA	NA	161.26	NA	NA	NA
TBW-N	12/19/2002	110,000	1,900	13,000	3,100	18,000	NA	19,000	161.26	10.82	150.44	ND
TBW-N	03/31/2003	62,000	1,600	6,500	2,200	11,000	NA	11,000	161.26	10.63	150.63	ND
TBW-N	06/30/2003	260,000	7,700	<120	5,800	40,000	NA	8,400	161.26	11.51	149.75	ND
TBW-N	09/09/2003	NA	NA	NA	NA	NA	NA	NA	159.92	11.37	148.64	0.11

WELL CONCENTRATIONS
Shell-branded Service Station
2120 Montana Street
Oakland, CA

Well ID	Date	TPPH (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)	SPH Thickness (ft.)
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Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to May 31, 2001, analyzed by EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to May 31, 2001, analyzed by EPA Method 8020.

MTBE = Methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

GW = Groundwater

TBW-N = tank backfill well-north

NA = Not analyzed

ND = Not detected

NM = Not measured

ug/L = parts per billion

MSL = Mean sea level

ft = Feet

<n = Below detection limit

Notes:

a = Resampled on June 27, 2001, due to possible mislabeling.

b = Separate phase hydrocarbons encountered during purge; groundwater elevation may not be accurate.

c = Sample TBW-N was analyzed once within hold time, but the analyte concentrations all exceeded the instrument working ranges. The sample was diluted and re-analyzed out of hold time. The diluted analysis is reported because it more accurately reflects the concentrations present.

d = These results are listed as MW-3 on analytical report due to possible mislabeling in field or laboratory. Resampled on June 27, 2001, to confirm mislabeling.

e = These results are listed as MW-1 on analytical report due to possible mislabeling in field or laboratory. Resampled on June 27, 2001, to confirm mislabeling.

Survey data provided by Cambria Environmental Technology, May 2001.

Site surveyed February 12 and June 26, 2002, by Virgil Chavez Land Surveying of Vallejo, California.

Wells MW-1 and TBW-N surveyed September 23, 2003, by Virgil Chavez Land Surveying of Vallejo, California.

When separate phase hydrocarbons are present, ground water elevation is adjusted using the relation:

corrected ground water elevation = Top-of-casing elevation - depth to water + (0.8 x hydrocarbon thickness).

Blaine Tech Services, Inc.

September 22, 2003

1680 Rogers Avenue
San Jose, CA 95112-1105
Attn.: Leon Gearhart
Project#: 030909-MM2
Project: 98995740
Site: 2120 Montana Street, Oakland

Dear Mr. Gearhart,

Attached is our report for your samples received on 09/10/2003 15:01
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
10/25/2003 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,
please call me at (925) 484-1919.

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

Sincerely,



Vincent Vancil
Project Manager

Gas/BTEX/MTBE 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: 030909-MM2

98995740

Received: 09/10/2003 15:01

Site: 2120 Montana Street, Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-2	09/09/2003 14:11	Water	1
MW-3	09/09/2003 15:05	Water	2
MW-4	09/09/2003 16:30	Water	3
MW-5	09/09/2003 14:45	Water	4

Severn Trent Laboratories, Inc.

STL San Francisco * 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 * www.stl-inc.com * CA DHS ELAP# 2496

09/22/2003 15:47

Page 1 of 12

Gas/BTEX/MTBE 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: 030909-MM2
98995740

Received: 09/10/2003 15:01

Site: 2120 Montana Street, Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-2	Lab ID:	2003-09-0347 - 1
Sampled:	09/09/2003 14:11	Extracted:	9/18/2003 21:51
Matrix:	Water	QC Batch#:	2003/09/18-1B.62
Analysis Flag: o (See Legend and Note Section)			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	140000	10000	ug/L	200.00	09/18/2003 21:51	
Benzene	4600	100	ug/L	200.00	09/18/2003 21:51	
Toluene	40000	100	ug/L	200.00	09/18/2003 21:51	
Ethylbenzene	4800	100	ug/L	200.00	09/18/2003 21:51	
Total xylenes	32000	200	ug/L	200.00	09/18/2003 21:51	
Methyl tert-butyl ether (MTBE)	11000	100	ug/L	200.00	09/18/2003 21:51	
Surrogate(s)						
1,2-Dichloroethane-d4	101.1	76-130	%	200.00	09/18/2003 21:51	
Toluene-d8	104.4	78-115	%	200.00	09/18/2003 21:51	

Gas/BTEX/MTBE 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: 030909-MM2

98995740

Received: 09/10/2003 15:01

Site: 2120 Montana Street, Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-3	Lab ID:	2003-09-0347 - 2
Sampled:	09/09/2003 15:05	Extracted:	9/19/2003 12:01
Matrix:	Water	QC Batch#:	2003/09/19-1C.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	09/19/2003 12:01	
Benzene	ND	0.50	ug/L	1.00	09/19/2003 12:01	
Toluene	ND	0.50	ug/L	1.00	09/19/2003 12:01	
Ethylbenzene	ND	0.50	ug/L	1.00	09/19/2003 12:01	
Total xylenes	ND	1.0	ug/L	1.00	09/19/2003 12:01	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	09/19/2003 12:01	
Surrogate(s)						
1,2-Dichloroethane-d4	91.0	76-130	%	1.00	09/19/2003 12:01	
Toluene-d8	101.4	78-115	%	1.00	09/19/2003 12:01	

Gas/BTEX/MTBE 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: 030909-MM2
98995740

Received: 09/10/2003 15:01

Site: 2120 Montana Street, Oakland

Prep(s): 5030B	Test(s): 8260FAB
Sample ID: MW-4	Lab ID: 2003-09-0347 - 3
Sampled: 09/09/2003 16:30	Extracted: 9/19/2003 12:23
Matrix: Water	QC Batch#: 2003/09/19-1C.65
Analysis Flag: o (See Legend and Note Section)	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1400	100	ug/L	2.00	09/19/2003 12:23	
Benzene	2.4	1.0	ug/L	2.00	09/19/2003 12:23	
Toluene	2.0	1.0	ug/L	2.00	09/19/2003 12:23	
Ethylbenzene	2.6	1.0	ug/L	2.00	09/19/2003 12:23	
Total xylenes	3.2	2.0	ug/L	2.00	09/19/2003 12:23	
Methyl tert-butyl ether (MTBE)	140	1.0	ug/L	2.00	09/19/2003 12:23	
Surrogate(s)						
1,2-Dichloroethane-d4	107.5	76-130	%	2.00	09/19/2003 12:23	
Toluene-d8	102.1	78-115	%	2.00	09/19/2003 12:23	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 030909-MM2

98995740

Received: 09/10/2003 15:01

Site: 2120 Montana Street, Oakland

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-5	Lab ID:	2003-09-0347 -4
Sampled:	09/09/2003 14:45	Extracted:	9/19/2003 00:05
Matrix:	Water	QC Batch#:	2003/09/18-3A.62
Analysis Flag: 0 (See Legend and Note Section)			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	6800	500	ug/L	10.00	09/19/2003 00:05	
Benzene	46	5.0	ug/L	10.00	09/19/2003 00:05	
Toluene	23	5.0	ug/L	10.00	09/19/2003 00:05	
Ethylbenzene	39	5.0	ug/L	10.00	09/19/2003 00:05	
Total xylenes	42	10	ug/L	10.00	09/19/2003 00:05	
Methyl tert-butyl ether (MTBE)	67	5.0	ug/L	10.00	09/19/2003 00:05	
Surrogate(s)						
1,2-Dichloroethane-d4	100.9	76-130	%	10.00	09/19/2003 00:05	
Toluene-d8	103.3	78-115	%	10.00	09/19/2003 00:05	

Gas/BTEX/MTBE 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: 030909-MM2

98995740

Received: 09/10/2003 15:01

Site: 2120 Montana Street, Oakland

Batch QC Report

Prep(s): 5030B

Method Blank

MB: 2003/09/18-1B.62-012

Water

Test(s): 8260FAB

QC Batch # 2003/09/18-1B.62

Date Extracted: 09/18/2003 10:12

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/18/2003 10:12	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	09/18/2003 10:12	
Benzene	ND	0.5	ug/L	09/18/2003 10:12	
Toluene	ND	0.5	ug/L	09/18/2003 10:12	
Ethylbenzene	ND	0.5	ug/L	09/18/2003 10:12	
Total xylenes	ND	1.0	ug/L	09/18/2003 10:12	
Surrogates(s)					
1,2-Dichloroethane-d4	97.2	76-130	%	09/18/2003 10:12	
Toluene-d8	102.7	78-115	%	09/18/2003 10:12	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 030909-MM2
98995740

Received: 09/10/2003 15:01

Site: 2120 Montana Street, Oakland

Batch QC Report					
Prep(s): 5030B				Test(s): 8260FAB	
Method Blank		Water		QC Batch # 2003/09/18-3A.62	
MB: 2003/09/18-3A.62-058				Date Extracted: 09/18/2003 22:58	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/18/2003 22:58	
Benzene	ND	0.5	ug/L	09/18/2003 22:58	
Toluene	ND	0.5	ug/L	09/18/2003 22:58	
Ethylbenzene	ND	0.5	ug/L	09/18/2003 22:58	
Total xylenes	ND	1.0	ug/L	09/18/2003 22:58	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	09/18/2003 22:58	
Surrogates(s)					
1,2-Dichloroethane-d4	95.6	76-130	%	09/18/2003 22:58	
Toluene-d8	104.6	78-115	%	09/18/2003 22:58	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

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San Jose, CA 95112-1105

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Project: 030909-MM2

98995740

Received: 09/10/2003 15:01

Site: 2120 Montana Street, Oakland

Batch QC Report					
Prep(s): 5030B				Test(s): 8260FAB	
Method Blank		Water		QC Batch # 2003/09/19-1C.65	
MB: 2003/09/19-1C.65-045				Date Extracted: 09/19/2003 10:45	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/19/2003 10:45	
Benzene	ND	0.5	ug/L	09/19/2003 10:45	
Toluene	ND	0.5	ug/L	09/19/2003 10:45	
Ethylbenzene	ND	0.5	ug/L	09/19/2003 10:45	
Total xylenes	ND	1.0	ug/L	09/19/2003 10:45	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	09/19/2003 10:45	
Surrogates(s)					
1,2-Dichloroethane-d4	91.3	76-130	%	09/19/2003 10:45	
Toluene-d8	100.0	78-115	%	09/19/2003 10:45	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Project: 030909-MM2

98995740

Received: 09/10/2003 15:01

Site: 2120 Montana Street, Oakland

Batch QC Report										
Prep(s): 5030B					Test(s): 8260FAB					
Laboratory Control Spike			Water			QC Batch # 2003/09/18-1B.62				
LCS	2003/09/18-1B.62-027		Extracted: 09/18/2003			Analyzed: 09/18/2003 09:27				
LCSD	2003/09/18-1B.62-050		Extracted: 09/18/2003			Analyzed: 09/18/2003 09:50				
Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	25.3	23.7	25	101.2	94.8	6.5	65-165	20		
Benzene	24.4	23.9	25	97.6	95.6	2.1	69-129	20		
Toluene	23.6	24.7	25	94.4	98.8	4.6	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	486	460	500	97.2	92.0		76-130			
Toluene-d8	515	518	500	103.0	103.6		78-115			

Severn Trent Laboratories, Inc.

STL San Francisco * 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 * www.stl-inc.com * CA DHS ELAP# 2496

09/22/2003 15:47

Page 9 of 12

Gas/BTEX/MTBE 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: 030909-MM2
98995740

Received: 09/10/2003 15:01

Site: 2120 Montana Street, Oakland

Batch QC Report									
Prep(s): 5030B					Test(s): 8260FAB				
Laboratory Control Spike			Water			QC Batch # 2003/09/18-3A.62			
LCS	2003/09/18-3A.62-013		Extracted: 09/18/2003			Analyzed: 09/18/2003 22:13			
LCSD	2003/09/18-3A.62-035		Extracted: 09/18/2003			Analyzed: 09/18/2003 22:35			

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD %	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Benzene	29.0	28.8	25	116.0	115.2	0.7	69-129	20		
Toluene	27.5	27.0	25	110.0	108.0	1.8	70-130	20		
Methyl tert-butyl ether (MTBE)	29.5	29.7	25	118.0	118.8	0.7	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	478	491	500	95.6	98.2		76-130			
Toluene-d8	512	531	500	102.4	106.2		78-115			

Gas/BTEX/MTBE by 8260B (C6-C12)

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Project: 030909-MM2

98995740

Received: 09/10/2003 15:01

Site: 2120 Montana Street, Oakland

Batch QC Report			
Prep(s): 5030B		Test(s): 8260FAB	
Laboratory Control Spike		Water	
QC Batch # 2003/09/19-1C.65			
LCS	2003/09/19-1C.65-000	Extracted: 09/19/2003	Analyzed: 09/19/2003 10:00
LCSD	2003/09/19-1C.65-022	Extracted: 09/19/2003	Analyzed: 09/19/2003 10:22

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	23.7	25.3	25	94.8	101.2	6.5	69-129	20		
Toluene	23.1	24.7	25	92.4	98.8	6.7	70-130	20		
Methyl tert-butyl ether (MTBE)	18.9	20.2	25	75.6	80.8	6.6	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	432	439	500	86.4	87.8		76-130			
Toluene-d8	515	520	500	103.0	104.0		78-115			

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Project: 030909-MM2

98995740

Received: 09/10/2003 15:01

Site: 2120 Montana Street, Oakland

Legend and Notes

Analysis Flag

o

Reporting limits were raised due to high level of analyte present in the sample.

(Job Identification (if necessary))

Address:

City, State, Zip:

Shell Project Manager to be invoiced:
 Karen Petryna
2003.09.0347

INCIDENT NUMBER (S&E ONLY)
 9 8 9 9 5 7 4 0
 SAP or CRMT NUMBER (TS/CRMT)

DATE: 9/9/03
 PAGE: 1 of 1

Blaine Tech Services
 1680 Rogers Avenue, San Jose, CA 95112
 Leon Gearhart
 408-573-0555
 408-573-7771
 gearhart@blainetech.com

BTSS
 2120 Montana Street, Oakland
 Anni Kreml
 510-420-3333
 ShellOaklandEDF@cambridia-env.com
 Mike McNamara

T0600101805
 ShellOaklandEDF@cambridia-env.com
 BTS# 030901-442

REQUIREMENT TIME (BUSINESS DAYS):
 10 DAYS 5 DAYS 72 HOURS 48 HOURS 24 HOURS LESS THAN 24 HOURS

LA - RWQCB REPORT FORMAT USE AGENCY

ADAMS MTBE CONFIRMATION: HIGHEST _____ HIGHEST per BORING _____ ALL _____

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF ADD IS NOT NEEDED

REQUESTED ANALYSIS

Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8241B) - 5ppb RL	MATBE (V250B) - 0.5ppb RL	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)	TPH - Diesel Extractable (8015m)
Mw-2	9/9/03	1411	G/W	3	X	X	X	X						
Mw-3	↓	1505	↓	3	X	X	X	X						
Mw-4	↓	1630	↓	3	X	X	X	X						
Mw-5	↓	1445	↓	3	X	X	X	X						

FIELD NOTES:
 Container/Preservative
 or PID Readings
 or Laboratory Notes
 3.2 °C
 TEMPERATURE ON RECEIPT C:

Requested by (Signature): *[Signature]* Date: 9/10/03 Time: 1501
 Received by (Signature): *[Signature]* Date: 9/16/03 Time: 1753
 Re-requested by (Signature): *[Signature]* Date: _____ Time: _____

DISTRIBUTION: White with field report; Green to file; Yellow and Pink to Client

12/000-Rev/08

CERO, Gearhart (714) 955-5732

WELL GAUGING DATA

Project # D30909-MK2 Date 9/9/03 Client Shell

Site 2120 Montez St., Oakland

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOS	
MW-1	2	SPH ⊗	13.32	2.38	⊗	15.70	27.44	TOB	⊗ SPH
MW-2	2	Sheen				12.94	20.00	↓	
MW-3	2					12.55	20.11		
MW-4	4					14.92	19.95		
MW-5	2					12.44	20.00		
TDW-1	4	⊗ ^{SPH}	11.26	0.11	⊗	11.37	13.23		
<p>⊗ MW-1: Stinger removed to gauge well ⇒ Stinger cracked at connection points (Brought back to base)</p>									

SHELL WELL MONITORING DATA SHEET

BTS #: <u>030909-MW2</u>	Site: <u>2120 Monte St., Oakland</u>
Sampler: <u>MM</u>	Date: <u>9/9/03</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>3</u> 4 6 8
Total Well Depth (TD): <u>27.44</u>	Depth to Water (DTW): <u>15.70</u>
Depth to Free Product: <u>13.32</u>	Thickness of Free Product (feet): <u>2.38</u>
Referenced to: <u>RVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: ~~Bailer~~
~~Disposable Bailer~~
~~Positive Air Displacement~~
~~Electric Submersible~~

Water
~~Peristaltic~~
~~Extraction Pump~~
~~Other~~

Sampling Method: Bailer
~~Disposable Bailer~~
~~Extraction Port~~
~~Dedicated Tubing~~

Other:

(Gals.) X <u>3</u> = _____ Gals.	<table border="1" style="font-size: small;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </table>	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
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														
I Case Volume	Specified Volumes Calculated Volume																

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
						<p style="font-size: 1.5em; margin: 0;">SPIT in well (Free product) (NO sample)</p>

Did well dewater? Yes No Gallons actually evacuated: _____

Sampling Date: 9/9/03 Sampling Time: _____ Depth to Water: _____

Sample I.D.: MW-1 Laboratory: STL Other: _____

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

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

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

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: <u>030909-MW</u>	Site: <u>2120 Montana St., Oakland</u>
Sampler: <u>MM</u>	Date: <u>9/9/03</u>
Well I.D.: <u>MW-2</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>20.00</u>	Depth to Water (DTW): <u>12.94</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water ^{7.0'} Column x 0.20) + DTW]: <u>14.35</u>	

Purge Method: Bailer Waterra Sampling Method: Bailer
~~Disposable Bailer~~ Peristaltic Disposable Bailer
Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing

$1.1 \text{ (Gals.)} \times 3 = 3.3 \text{ Gals.}$ 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	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
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. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1402</u>	<u>68.3</u>	<u>7.0</u>	<u>1011</u>	<u>>200</u>	<u>1.1</u>	<u>Strong odor, STEEN, cloud</u>
<u>1404</u>	<u>67.8</u>	<u>7.0</u>	<u>1046</u>	<u>>200</u>	<u>2.2</u>	<u>Strong odor, STEEN, cloud</u>
<u>1406</u>	<u>67.0</u>	<u>7.0</u>	<u>1075</u>	<u>>200</u>	<u>3.3</u>	<u>slightly cloudy, STEEN</u>

Did well dewater? Yes No Gallons actually evacuated: 3.3

Sampling Date: 9/9/03 Sampling Time: 1411 Depth to Water: 14.97 (raffie)

Sample I.D.: MW-2 Laboratory: STL Other _____

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

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

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

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: <u>D 30909-MM2</u>	Site: <u>2120 Monte St., Oakland</u>
Sampler: <u>MM</u>	Date: <u>9/2/03</u>
Well I.D.: <u>MM-4</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth (TD): <u>19.85</u>	Depth to Water (DTW): <u>14.92</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(RVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>15.91</u>	

Surge Method: Bailer Disposable Bailer Positive Air Displacement <u>(Electric Submersible)</u>	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: <u>(Bailer)</u> Disposable Bailer Extraction Port Dedicated Tubing Other: _____
---	--	--

$$3.3 \text{ (Gals.)} \times 3 = 9.9 \text{ Gals.}$$
 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multplier	Well Diameter	Multplier
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. (mS or <u>AS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
1558	68.4	7.0	1369	56	3.3	clear, odor
1559	68.3	6.9	716	11	6.6	clear, odor
1600	68.1	7.0	710	18	9.9	clear, odor

Did well dewater? Yes No Gallons actually evacuated: 9.9

Sampling Date: 9/2/03 Sampling Time: 1630 Depth to Water: 15.63

Sample I.D.: MM-4 Laboratory: (STL) Other _____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Other: _____

IB I.D. (if applicable): _____ @ _____ Time Duplicate I.D. (if applicable): _____

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

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
D.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 070909-MM2	Site: 2120 Montano St., Oak Land
Sampler: MM	Date: 9/9/03
Well I.D.: TBW-N	Well Diameter: 2 3 (4) 6 8
Total Well Depth (TD): 13.23	Depth to Water (DTW): 11.37
Depth to Free Product: 11.26	Thickness of Free Product (feet): 11.26 0.11
Referenced to: (RVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: ~~Bailer~~ ~~Disposable Bailer~~ ~~Positive Air Displacement~~ ~~Electric Submersible~~ ~~Water~~ ~~Peristaltic~~ ~~Extraction Pump~~ ~~Other~~

Sampling Method: **(Disposable Bailer)** ~~Extraction Port~~ ~~Dedicated Tubing~~ ~~Other:~~

(Gals.) X 3 = _____ Gals. I Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	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
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. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
						SPH detected in well (Free product)
						NO SAMPLE

Did well dewater? Yes No Gallons actually evacuated: _____

Sampling Date: **9/9/03** Sampling Time: _____ Depth to Water: _____

Sample I.D.: **TDW-N** Laboratory: **(STL)** Other _____

Analyzed for: **(TPH-C)** **(BTEX)** **(MTBE)** TPH-D Other _____

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

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

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV