



Denis L. Brown

Shell Oil Products US

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April 7, 2005

Roseanna Garcia-La Grille  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY  
APR 16 2005  
DENIS L. BROWN

Re: Fourth Quarter 2004 Monitoring Report  
Shell-branded Service Station  
2120 Montana Street  
Oakland, California  
SAP Code 135675  
Incident No. 98995740  
ACHCSA # 4022

Dear Ms. Garcia-La Grille:

Attached for your review and comment is a copy of the *Fourth Quarter 2004 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.

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

Sincerely,

Denis L. Brown  
Sr. Environmental Engineer

April 7, 2005

Roseanna Garcia-La Grille  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Re: **Fourth Quarter 2004 Monitoring Report**  
Shell-branded Service Station  
2120 Montana Street  
Oakland, California  
Incident #98995740  
Cambria Project #247-0733-002

RECEIVED  
APR 13 2005  
ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY



Dear Ms. Garcia-La Grille:

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 and stopped on January 6, 2004. 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 25.3 pounds and 8.13 pounds, respectively, from a total of approximately 55,711 gallons of extracted groundwater. 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 installing a fixed GWE system at the site. A September 19, 2002 Alameda County Health Care Services Agency (ACHCSA) letter approved this work plan. 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

On July 23, 2003, Cambria observed SPH within the GWE system. The GWE system was not operating at that time and had not operated since July 18, 2003. 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. On August 8, 2003, a vacuum truck removed SPH from wells TBW-N and MW-1. 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 1 summarizes the VacOps data. Weekly VacOps was stopped on January 6, 2004.



Cambria monitored SPH thickness in wells TBW-N and MW-1 prior to several VacOps events. SPH has not been detected in backfill well TBW-N as of December 8, 2003, although 3.49 feet of SPH were measured in well MW-1 on that day. Blaine Tech Services, Inc. (Blaine) of San Jose, California also measured no SPH in TBW-N and 0.07 feet of SPH in MW-1 during the quarterly sampling event on December 29, 2003.

In November 2003, Able Maintenance of Santa Rosa, California exposed the regular grade underground storage tank for inspection by the tank manufacturer (Xerxes Company). Xerxes Company found a small crack on the bottom of the tank. The crack was investigated, repaired with fiberglass resin, and then air tested for the City of Oakland Fire department by the Xerxes Company. After the Xerxes Company completed their air test, Able Maintenance called in a third-party tank tester to precision test the tank. Afford-a-Test completed that test, and the tank was certified as tight. Able has monitored the tank through Shell's Veeder-Root monitoring system since the repair, and it has passed the associated pressure tests.

#### **FOURTH QUARTER 2004 ACTIVITIES**

**Groundwater Monitoring:** Blaine 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:** As discussed, Cambria started operating the fixed GWE system on April 2, 2003. The system was shut down on July 18, 2003 due to the presence of SPH. Cambria supplemented the GWE system with an oil-water separator (OWS) in March 2004. The system was restarted on April 21, 2004 to collect samples to verify discharge compliance. The system's

effluent was not discharged, but was instead captured in a storage tank. The results of this sampling event demonstrated compliance with the discharge permit. On May 25, 2004, following completion of a fuel system upgrade for this site, Cambria restarted the GWE system to operate continuously.

Table 2 summarizes system analytical data. Table 3 summarizes the field data and system operation and calculates mass removal. As of March 17, 2005, a total of 298,609 gallons of groundwater has been extracted. A total of 16.0 pounds of TPHg, 0.633 pounds of benzene, and 3.82 pounds of MTBE has been recovered.



Cambria submitted an *Interim Remediation Report* on January 18, 2005 to document soil vapor extraction from monitoring well MW-1 conducted from July 26 through July 30, 2004. This report also recommended installation of five additional soil borings and five soil vapor sampling probes, and a survey of the neighboring residences building structures. The purposes of the proposed investigation are to further assess the lateral extent of SPH in the source area and to assess the potential risks posed by the site conditions to the surrounding properties.

#### **ANTICIPATED FIRST QUARTER 2005 ACTIVITIES**

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

***Remedial Activities:*** Per Cambria's standard operating procedures and East Bay Municipal Utilities District (EBMUD) treatment-system monitoring requirements, Cambria will perform routine operation and maintenance of the GWE system. Cambria will monitor concentration trends and GWE system effectiveness. Cambria will prepare a semi-annual discharge compliance report in accordance with the EBMUD wastewater discharge permit. Operational data will be provided in the second quarter 2005 quarterly monitoring report.

***Site Investigation Activities:*** Since the CHCSA has not responded to our January 18, 2005 *Interim Remediation Report* in over 60 days, Cambria plans to implement the proposed site investigation activities.

**CLOSING**

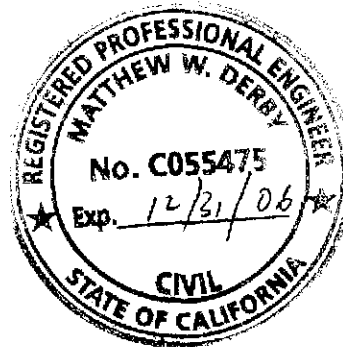
We appreciate the opportunity to work with you on this project. Please call Cynthia Vasko at (510) 420-3344 if you have any questions or comments.

Sincerely,  
**Cambria Environmental Technology, Inc**



Cynthia Vasko  
Project Engineer

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



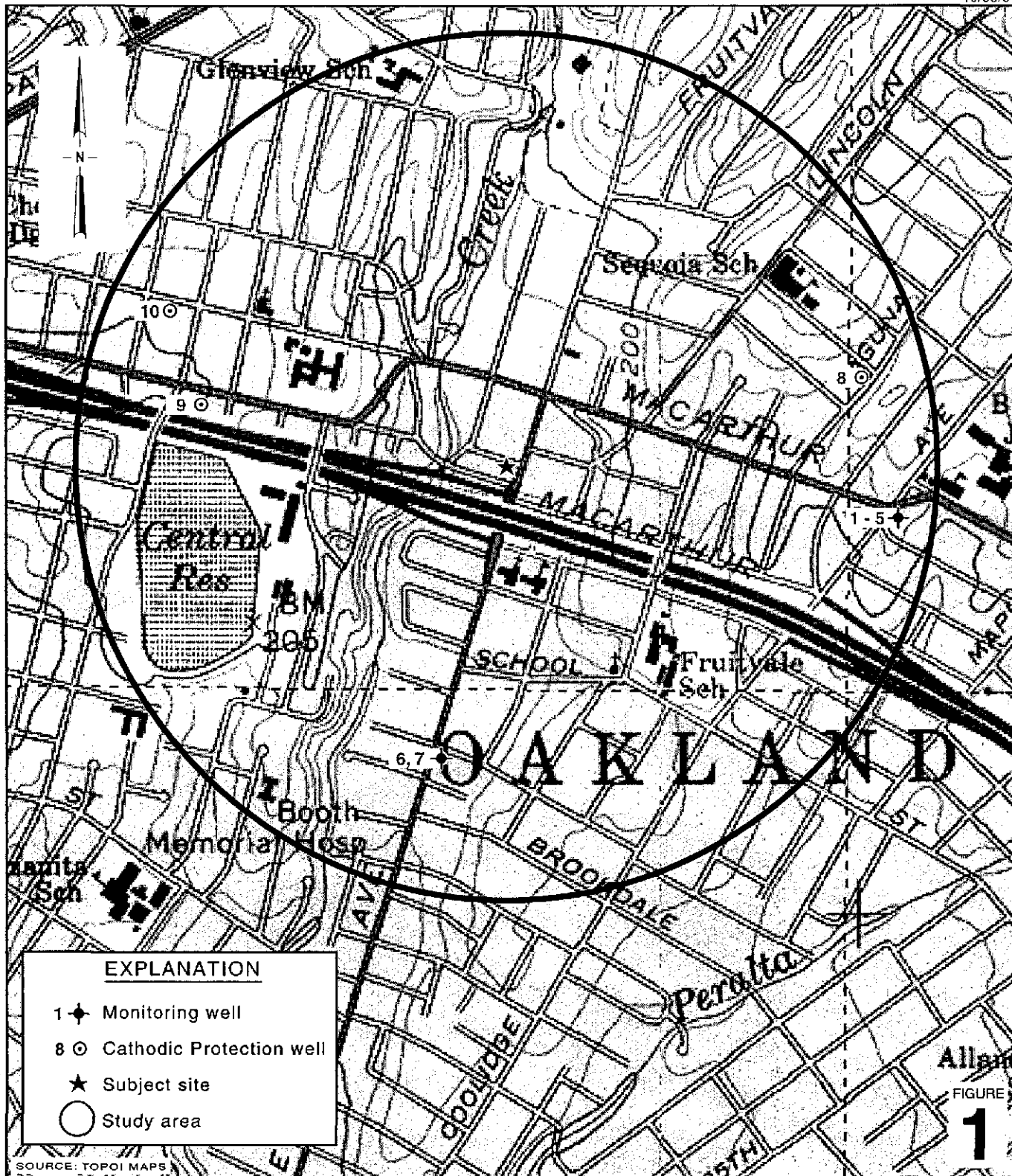
Figures: 1 - Vicinity/Area Well Survey Map  
2 - Groundwater Elevation Contour Map

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

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Denis Brown, Shell Oil Products US, 20945 S. Wilmington Ave., Carson, CA 90810

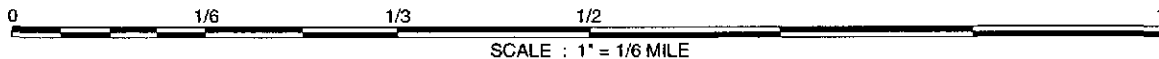
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SOURCE: TOPOI MAPS

Allard  
FIGURE  
**1**



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



C A M B R I A

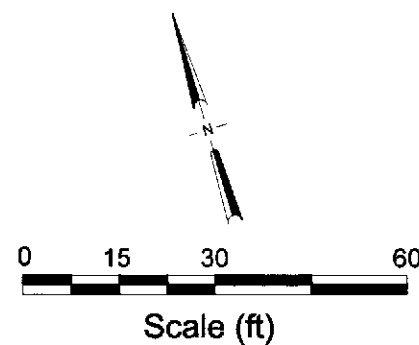
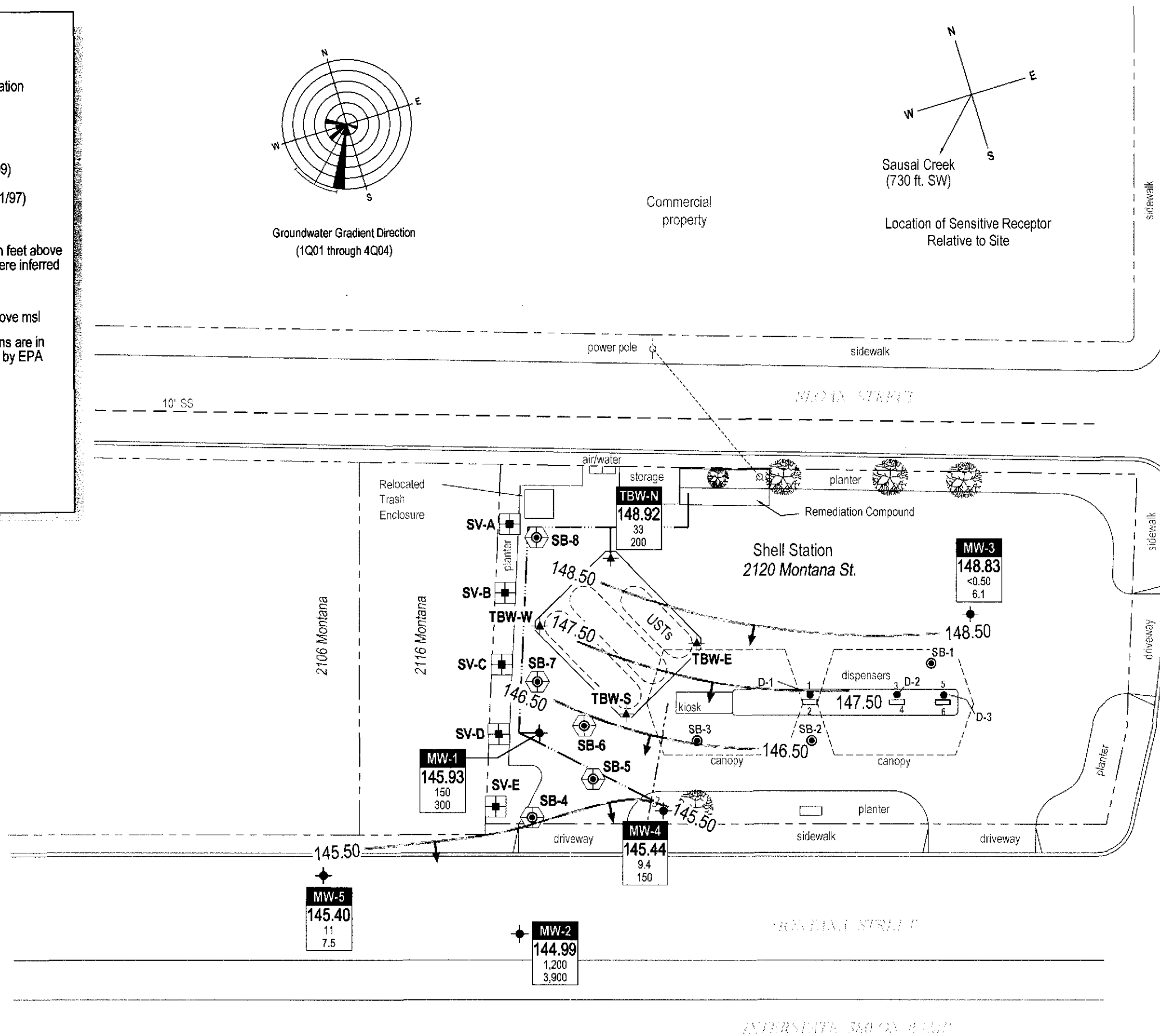
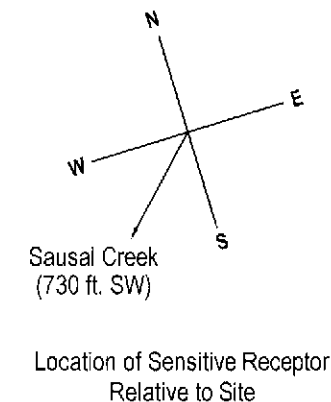
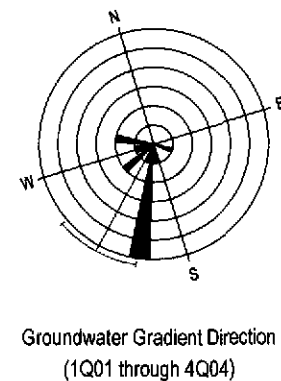
**Vicinity / Area Well  
 Survey Map**  
 (1/2-Mile Radius)

**EXPLANATION**

- SB-4 Proposed soil boring location
- SV-A Proposed soil vapor sampling location
- 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)
- 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	Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8260.
MTBE	

- Overhead electrical service
- Remediation piping
- Existing 10" Sanitary sewer (SS)
- Discharge Pipe



Groundwater Elevation Contour Map

December 6, 2004



C A M B R I A

**FIGURE 2**  
**Shell-branded Service Station**  
 2120 Montana Street  
 Oakland, California  
 Incident #98995740

**Table 1: 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 1: 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
09/30/03	MW-1	689	23,364	06/30/03	7,800	0.04484	2.92870	<25	0.00007	0.12092	2,000	0.01150	4.46999
10/07/03	MW-1	650	24,014	06/30/03	7,800	0.04231	2.97100	<25	0.00007	0.12099	2,000	0.01085	4.48084
10/14/03	MW-1	780	24,794	06/30/03	7,800	0.05077	3.02177	<25	0.00008	0.12107	2,000	0.01302	4.49386
10/21/03	MW-1	650	25,444	06/30/03	7,800	0.04231	3.06407	<25	0.00007	0.12114	2,000	0.01085	4.50470
10/28/03	MW-1	600	26,044	06/30/03	7,800	0.03905	3.10313	<25	0.00006	0.12120	2,000	0.01001	4.51472
11/04/03	MW-1	414	26,458	06/30/03	7,800	0.02695	3.13007	<25	0.00004	0.12124	2,000	0.00691	4.52163
11/11/03	MW-1	800	27,258	06/30/03	7,800	0.05207	3.18214	<25	0.00008	0.12133	2,000	0.01335	4.53498
11/18/03	MW-1	750	28,008	06/30/03	7,800	0.04881	3.23095	<25	0.00008	0.12140	2,000	0.01252	4.54749
11/25/03	MW-1	1,159	29,167	06/30/03	7,800	0.07543	3.30639	<25	0.00012	0.12152	2,000	0.01934	4.56684
12/02/03	MW-1	1,248	30,415	06/30/03	7,800	0.08123	3.38762	<25	0.00013	0.12165	2,000	0.02083	4.58766
12/09/03	MW-1	1,295	31,710	06/30/03	7,800	0.08429	3.47190	<25	0.00014	0.12179	2,000	0.02161	4.60928
12/17/03	MW-1	1,380	33,090	06/30/03	7,800	0.08982	3.56172	<25	0.00014	0.12193	2,000	0.02303	4.63231
12/23/03	MW-1	505	33,595	06/30/03	7,800	0.03287	3.59459	<25	0.00005	0.12199	2,000	0.00843	4.64073
12/30/03	MW-1	1,000	34,595	06/30/03	7,800	0.06509	3.65968	<25	0.00010	0.12209	2,000	0.01669	4.65742
01/06/04	MW-1	1,205	35,800	06/30/03	7,800	0.07843	3.73810	<25	0.00013	0.12222	2,000	0.02011	4.67753
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

**Table 1: 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 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)
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
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

**Table 1: 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 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)
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
09/30/03	TBW-N	50	14,724	06/30/03	260,000	0.10848	11.47130	7,700	0.00321	0.22936	8,400	0.00350	3.11814
10/07/03	TBW-N	69	14,793	06/30/03	260,000	0.14970	11.62099	7,700	0.00443	0.23379	8,400	0.00484	3.12298
10/14/03	TBW-N	55	14,848	06/30/03	260,000	0.11932	11.74032	7,700	0.00353	0.23733	8,400	0.00386	3.12684
10/21/03	TBW-N	86	14,934	06/30/03	260,000	0.18658	11.92690	7,700	0.00553	0.24285	8,400	0.00603	3.13286
10/28/03	TBW-N	91	15,025	06/30/03	260,000	0.19743	12.12432	7,700	0.00585	0.24870	8,400	0.00638	3.13924
11/04/03	TBW-N	200	15,225	06/30/03	260,000	0.43391	12.55823	7,700	0.01285	0.26155	8,400	0.01402	3.15326
11/11/03	TBW-N	71	15,296	06/30/03	260,000	0.15404	12.71227	7,700	0.00456	0.26611	8,400	0.00498	3.15824
11/18/03	TBW-N	473	15,769	06/30/03	260,000	1.02619	13.73846	7,700	0.03039	0.29650	8,400	0.03315	3.19139
11/25/03	TBW-N	150	15,919	06/30/03	260,000	0.32543	14.06389	7,700	0.00964	0.30614	8,400	0.01051	3.20190
12/02/03	TBW-N	150	16,069	06/30/03	260,000	0.32543	14.38932	7,700	0.00964	0.31578	8,400	0.01051	3.21242
12/09/03	TBW-N	700	16,769	06/30/03	260,000	1.51867	15.90799	7,700	0.04498	0.36075	8,400	0.04906	3.26148
12/17/03	TBW-N	750	17,519	06/30/03	260,000	1.62715	17.53514	7,700	0.04819	0.40894	8,400	0.05257	3.31405
12/23/03	TBW-N	505	18,024	06/30/03	260,000	1.09561	18.63075	7,700	0.03245	0.44139	8,400	0.03540	3.34945
12/30/03	TBW-N	787	18,811	06/30/03	260,000	1.70742	20.33818	7,700	0.05057	0.49196	8,400	0.05516	3.40461
01/06/04	TBW-N	1,100	19,911	12/29/03	130,000	1.19324	21.53142	840	0.00771	0.49967	5,400	0.04957	3.45418
<b>Total Gallons Extracted:</b>		<b>55,711</b>		<b>Total Pounds Removed:</b>		<b>25.26952</b>		<b>0.62188</b>		<b>8.13171</b>		<b>1.31157</b>	
				<b>Total Gallons Removed:</b>		<b>4.14254</b>		<b>0.08519</b>					

**Table 1: 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)

**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 (µg/L) x (g/10<sup>6</sup>µg) 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.

**Table 2: 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
04/21/2004	10,000	540	950	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
06/08/2004	970	26	290	<50	<0.50	<0.50	<50	<0.50	<0.50	94	<0.50	<0.50
06/30/2004	NS	NS	NS	NS	NS	NS	NS	NS	NS	<50	<0.50	<0.50
07/07/2004	1,700	71	500	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
08/03/2004	1,000	52	390	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
09/14/2004	4,100	230	1,100	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
10/12/2004	140	3.9	140	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
11/12/2004	2,600	180	680	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
12/02/2004	690	41	340	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
01/03/2005	<500	17	1,500	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50
02/14/2005	<100	<1.0	120	<50	<0.50	<0.50	<50	<0.50	<0.50	150 a	<0.50	<0.50
03/02/2005	4,900	190	1,000	<50	<0.50	<0.50	<50 b	<0.50	<0.50	<50 b	<0.50	<0.50

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**Table 2: Groundwater Extraction - System Analytical Data**  
Shell-branded Service Station, Incident #98995740, 2120 Montana St, Oakland, California

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**Abbreviations & Notes:**

TPHg = Total purgeable hydrocarbons as gasoline

MTBE = Methyl tertiary butyl ether

Conc. = Concentration

ppb = parts per billion, equivalent to  $\mu\text{g/l}$

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

a = TPHg contains a discreet peak of ethylhexanol, which are not believed to be gasoline related

b = Siloxane peaks were found in sample which are not believed to be gasoline related

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**Table 3: 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	Period				TPHg			Benzene			MTBE		
		Flow Meter Reading (gal)	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														
04/21/2004	1984.4	1,516.3	0	0.00	68,706	10,000	0.000	12.5	540	0.000	0.455	950	0.000	2.48
05/25/2004	1984.4	1,516.3	0	0.00	68,706		0.000	12.5		0.000	0.455		0.000	2.48
06/08/2004	2,107.5	4,798.2	3,282	0.44	71,988	970	0.027	12.6	26	0.001	0.455	290	0.008	2.49
06/22/2004	2280.6	10,108	5,310	0.51	77,298		0.043	12.6		0.001	0.456		0.013	2.50
06/30/2004	2475.2	18,527.5	8,420	0.72	85,717		0.068	12.7		0.002	0.458		0.020	2.52
07/07/2004	2494.5	19,377	850	0.73	86,567	1,700	0.012	12.7	71	0.001	0.459	500	0.004	2.52
07/22/2004	2861.5	34,214	14,837	0.67	101,404		0.210	12.9		0.009	0.468		0.062	2.58
08/03/2004	3142.1	59,767	25,553	1.52	126,957	1,000	0.213	13.1	52	0.011	0.479	390	0.083	2.67
08/17/2004	3501.3	81,350	21,583	1.00	148,540		0.180	13.3		0.009	0.488		0.070	2.74
08/31/2004	3813.2	81,571	221	0.01	148,761		0.002	13.3		0.000	0.488		0.001	2.74
09/14/2004	4153.4	101,123	19,552	0.96	168,313	4,100	0.669	13.9	230	0.038	0.526	1,100	0.179	2.92
09/29/2004	4513.1	120,885	19,762	0.92	188,075		0.676	14.6		0.038	0.564		0.181	3.10
10/12/2004	4824.1	134,612	13,727	0.74	201,802	140	0.016	14.6	3.9	0.000	0.564	140	0.016	3.12
10/22/2004	4990.6	145,220	10,608	1.06	212,410		0.012	14.7		0.000	0.564		0.012	3.13
11/02/2004	5021.0	147,500	2,280	1.25	214,690		0.003	14.7		0.000	0.564		0.003	3.13
11/12/2004	5263.0	163,212	15,712	1.08	230,402	2,600	0.341	15.0	180	0.024	0.588	680	0.089	3.22
11/22/2004	5498.2	164,899	1,687	0.12	232,089		0.037	15.0		0.003	0.590		0.010	3.23
12/02/2004	5734.9	172,940	8,041	0.57	240,130	690	0.046	15.1	41	0.003	0.593	340	0.023	3.25
12/13/2004	6001.6	178,400	5,460	0.34	245,590		0.031	15.1		0.002	0.595		0.015	3.27
12/27/2004	6338.4	180,207	1,807	0.09	247,397		0.010	15.1		0.001	0.596		0.005	3.27
01/03/2005	6501.9	182,474	2,267	0.23	249,664	<500	0.005	15.1	17	0.000	0.596	1,500	0.028	3.30
01/21/2005	6941.6	197,770	15,296	0.58	264,960		0.032	15.2		0.002	0.598		0.191	3.49
01/31/2005	7172.4	209,951	12,181	0.88	277,141		0.025	15.2		0.002	0.600		0.152	3.65
02/14/2005	7512.9	210,719	768	0.04	277,909	<100	0.000	15.2	<1.0	0.000	0.600	120	0.001	3.65
03/02/2005	7897.9	231,103	20,384	0.88	298,293	4,900	0.833	16.0	190	0.032	0.632	1,000	0.170	3.82
03/17/2005	7901.2	231,419	316	1.60	298,609		0.013	16.0		0.001	0.633		0.003	3.82
		<b>Total Extracted Volume = 298,609</b>				<b>Total Pounds Removed: 16.0</b>			<b>Total Pounds Removed: 0.633</b>			<b>Total Pounds Removed: 3.82</b>		
		<b>Average Operational Flow Rate = 0.630</b>				<b>Total Gallons Removed: 2.63</b>			<b>Total Gallons Removed: 0.086</b>			<b>Total Gallons Removed: 0.618</b>		

**Table 3: Groundwater Extraction - Operation and Mass Removal Data**  
Shell-branded Service Station, Incident #98995740, 2120 Montana Street, Oakland, California

**Abbreviations & Notes:**

TPHg = Total purgeable hydrocarbons as gasoline

MTBE = Methyl tert-butyl ether

Conc. = Concentration

ppb = Parts per billion, equivalent to  $\mu\text{g/L}$

$\mu\text{g/L}$  = Micrograms per liter

L = Liter gal = Gallon g = Gram

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)

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)<sup>-1</sup> (cc/g) x 453.6 (g/pound) x (L/1000 cc) \* (gal/3.785 L)

Density inputs: TPHg = 0.73 g/cc, benzene = 0.88 g/cc, MTBE = 0.74 g/cc

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



**ATTACHMENT A**

Blaine Groundwater Monitoring Report  
and Field Notes

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**BLAINE**  
**TECH SERVICES** INC.

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GROUNDWATER SAMPLING SPECIALISTS  
SINCE 1985

December 29, 2004

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

Fourth Quarter 2004 Groundwater Monitoring at  
Shell-branded Service Station  
2120 Montana Street  
Oakland, CA

Monitoring performed on December 6, 2004

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Groundwater Monitoring Report **041206-SS-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: Anni Kreml  
Cambria Environmental Technology, Inc.  
5900 Hollis Street, Suite A  
Emeryville, 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)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
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MW-1	3/19/3001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	159.59	12.14	147.45	ND
MW-1	3/23/2001	16,600	753	1,720	407	2,330	NA	27,500	NA	NA	NA	NA	159.59	12.25	147.34	ND
MW-1	5/31/2001	<20,000d	1,000d	920d	490d	2,000d	NA	54,000d	NA	NA	NA	NA	161.13	12.22	148.91	ND
MW-1	6/27/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	159.59	13.00b	NA	ND
MW-1	7/9/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	159.59	13.17	146.67	0.31
MW-1	9/25/2001	NA	NA	NA	NA	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	NA	NA	NA	NA	159.59	13.49	146.14	0.05
MW-1	12/5/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	159.59	11.32	148.31	0.05
MW-1	3/1/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	159.59	13.22	146.56	0.24
MW-1	6/6/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	159.59	12.99	147.00	0.50
MW-1	7/16/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	159.59	13.37	146.22	ND
MW-1	9/6/2002	NA	NA	NA	NA	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	NA	NA	NA	NA	159.57	13.78	146.61	1.03
MW-1	3/31/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	159.57	11.21	148.38	0.03
MW-1	6/30/2003	7,800	<25	37	<25	380	NA	2,000	NA	NA	NA	NA	159.57	12.20	147.37	ND
MW-1	9/9/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	159.08	15.70	145.28	2.38
MW-1	12/29/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	159.08	11.25	147.89	0.07
MW-1	3/17/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	159.08	11.80	147.40	0.15
MW-1	5/24/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	159.08	12.42	146.71	0.06
MW-1	9/17/2004	8,000	530	380	330	960	NA	1,100	<20	<20	<20	4,100	159.08	15.95	143.13	NA
MW-1	12/6/2004	2,800	150	<5.0	120	120	NA	300	NA	NA	NA	NA	159.08	13.15	145.93	NA

MW-2	3/19/3001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	158.03	11.60	146.43	ND
MW-2	3/23/2001	4,450	280	41.0	62.1	63.0	NA	16,600	NA	NA	NA	NA	158.03	11.76	146.27	ND
MW-2	5/31/2001	<20,000a	820a	<200a	<200a	<200a	NA	63,000a	NA	NA	NA	NA	158.03	11.40	146.63	ND
MW-2	6/27/2001	<50,000	610	4.0	13	9.2	NA	47,000	NA	NA	NA	NA	158.03	12.65	145.38	ND
MW-2	9/25/2001	<2,000	41	<20	<20	<20	NA	6,400	NA	NA	NA	NA	158.03	12.89	145.14	ND
MW-2	12/5/2001	<2,000	74	<20	<20	<20	NA	8,400	NA	NA	NA	NA	158.03	10.40	147.63	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)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
MW-2	3/1/2002	<1,000	<10	<10	<10	<10	NA	2,900	NA	NA	NA	NA	158.03	11.52	146.51	ND
MW-2	6/6/2002	<5,000	210	<50	<50	<50	NA	23,000	NA	NA	NA	NA	158.03	12.15	145.88	ND
MW-2	7/16/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	158.03	12.25	145.78	ND
MW-2	9/6/2002	<2,000	56	<20	<20	<20	NA	11,000	NA	NA	NA	NA	158.01	12.44	145.57	ND
MW-2	12/12/2002	<2,500	80	<25	<25	<25	NA	13,000	NA	NA	NA	NA	158.01	12.53	145.48	ND
MW-2	3/31/2003	<5,000	230	1,200	95	150	NA	13,000	NA	NA	NA	NA	158.01	11.98	146.03	ND
MW-2	6/30/2003	<12,000	780	<120	170	250	NA	9,000	NA	NA	NA	NA	158.01	12.10	145.91	ND
MW-2	9/9/2003	140,000	4,600	40,000	4,800	32,000	NA	11,000	NA	NA	NA	NA	158.01	12.94	145.07	ND
MW-2	12/29/2003	220,000	240	4,800	2,900	19,000	NA	1,000	NA	NA	NA	NA	158.01	11.20	146.81	ND
MW-2	3/17/2004	25,000	170	390	280	1,400	NA	1,500	NA	NA	NA	NA	158.01	11.40	146.61	ND
MW-2	5/24/2004	140,000	<25	220	1,200	6,800	NA	320	NA	NA	NA	NA	158.01	12.28	145.73	ND
MW-2	9/17/2004	64,000	2,900	230	2,300	9,700	NA	6,300	<100	<100	<100	4,100	158.01	12.90	145.11	ND
MW-2	12/6/2004	47,000	1,200	46	1,300	6,000	NA	3,900	NA	NA	NA	NA	158.01	13.02	144.99	ND
MW-3	3/19/3001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	161.13	11.42	149.71	ND
MW-3	3/23/2001	<50.0	<0.500	<0.500	<0.500	<0.500	NA	1.26	NA	NA	NA	NA	161.13	11.42	149.71	ND
MW-3	5/31/2001	<50e	<0.50e	<0.50e	<0.50e	<0.50e	NA	<5.0e	NA	NA	NA	NA	159.59	13.00	146.59	ND
MW-3	6/27/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	NA	NA	NA	NA	161.13	12.32	148.81	ND
MW-3	9/25/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	NA	NA	NA	NA	161.13	12.50	148.63	ND
MW-3	12/5/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	161.13	10.13	151.00	ND
MW-3	3/1/2002	<50	<0.50	<0.50	<0.50	0.73	NA	<5.0	NA	NA	NA	NA	161.13	11.63	149.50	ND
MW-3	6/6/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	161.13	11.55	149.58	ND
MW-3	7/16/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	161.13	11.72	149.41	ND
MW-3	9/6/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	161.11	12.24	148.87	ND
MW-3	12/12/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	161.11	12.18	148.93	ND
MW-3	3/31/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	0.78	NA	NA	NA	NA	161.11	11.94	149.17	ND
MW-3	6/30/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	161.11	12.50	148.61	ND
MW-3	9/9/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	161.11	12.55	148.56	ND
MW-3	12/29/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	0.70	NA	NA	NA	NA	161.11	10.90	150.21	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)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
MW-3	3/17/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	2.1	NA	NA	NA	NA	161.11	11.63	149.48	ND
MW-3	5/24/2004	<50	<0.50	<0.50	<0.50	1.0	NA	0.96	NA	NA	NA	NA	161.11	11.32	149.79	ND
MW-3	9/17/2004	<50	<0.50	<0.50	<0.50	1.0	NA	2.6	<2.0	<2.0	<2.0	<5.0	161.11	12.13	148.98	ND
<b>MW-3</b>	<b>12/6/2004</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>NA</b>	<b>6.1</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>161.11</b>	<b>12.28</b>	<b>148.83</b>	<b>ND</b>
MW-4	7/10/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NM	13.19	NA	ND
MW-4	7/16/2002	800	1.1	1.1	2.6	2.4	NA	450	NA	NA	NA	NA	NM	13.56	NA	ND
MW-4	9/6/2002	1,100	3.0	1.8	8.0	4.6	NA	110	NA	NA	NA	NA	160.09	13.67	146.42	ND
MW-4	12/12/2002	130	<0.50	<0.50	<0.50	<0.50	NA	940	NA	NA	NA	NA	160.09	14.06	146.03	ND
MW-4	3/31/2003	<250	<2.5	<2.5	<2.5	<5.0	NA	500	NA	NA	NA	NA	160.09	13.69	146.40	ND
MW-4	6/30/2003	3,100	5.3	<5.0	7.1	<10	NA	420	NA	NA	NA	NA	160.09	14.12	145.97	ND
MW-4	9/9/2003	1,400	2.4	2.0	2.6	3.2	NA	140	NA	NA	NA	NA	160.09	14.92	145.17	ND
MW-4	12/29/2003	2,700	10	6.2	20	11	NA	420	NA	NA	NA	NA	160.09	12.71	147.38	ND
MW-4	3/17/2004	1,900	6.9	3.0	33	22	NA	290	NA	NA	NA	NA	160.09	13.24	146.85	ND
MW-4	5/24/2004	1,800	<2.5	<2.5	<2.5	11	NA	44	NA	NA	NA	NA	160.09	14.03	146.06	ND
MW-4	9/17/2004	3,300	57	10	47	32	NA	310	<10	<10	<10	700	160.09	13.58	146.51	ND
<b>MW-4</b>	<b>12/6/2004</b>	<b>4,700</b>	<b>9.4</b>	<b>3.8</b>	<b>34</b>	<b>12</b>	<b>NA</b>	<b>150</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>160.09</b>	<b>14.65</b>	<b>145.44</b>	<b>ND</b>
MW-5	7/10/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NM	12.22	NA	ND
MW-5	7/16/2002	6,100	65	7.2	100	130	NA	410	NA	NA	NA	NA	NM	12.50	NA	ND
MW-5	9/6/2002	5,900	100	8.1	41	32	NA	230	NA	NA	NA	NA	158.25	12.77	145.48	ND
MW-5	12/12/2002	4,900	70	5.7	25	17	NA	280	NA	NA	NA	NA	158.25	12.71	145.54	ND
MW-5	3/31/2003	6,400	61	4.9	23	13	NA	330	NA	NA	NA	NA	158.25	11.93	146.32	ND
MW-5	6/30/2003	3,400	18	<2.5	17	5.5	NA	47	NA	NA	NA	NA	158.25	11.97	146.28	ND
MW-5	9/9/2003	6,800	46	23	39	42	NA	67	NA	NA	NA	NA	158.25	12.44	145.81	ND
MW-5	12/29/2003	8,400	44	6.2	36	16	NA	60	NA	NA	NA	NA	158.25	11.38	146.87	ND
MW-5	3/17/2004	7,100	120	22	42	27	NA	300	NA	NA	NA	NA	158.25	11.68	146.57	ND
MW-5	5/24/2004	6,100	72	17	34	23	NA	110	NA	NA	NA	NA	158.25	12.30	145.95	ND
MW-5	9/17/2004	5,700	27	5.3	35	<10	NA	28	<20	<20	<20	<50	158.25	12.15	146.10	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)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
MW-5	12/6/2004	4,500	11	<5.0	22	<10	NA	7.5	NA	NA	NA	NA	158.25	12.85	145.40	ND
TBW-N	09/25/2001 c	120,000	3,200	2,800	4,000	18,000	NA	31,000	NA	NA	NA	NA	NM	12.25	NM	ND
TBW-N	11/20/2001	72,000	2,200	3,600	2,600	14,000	NA	35,000	NA	NA	NA	NA	NM	12.13	NM	ND
TBW-N	12/5/2001	76,000	1,600	3,200	2,900	15,000	NA	30,000	NA	NA	NA	NA	NM	11.51	NM	ND
TBW-N	3/1/2002	91,000	1,200	4,200	2,800	14,000	NA	29,000	NA	NA	NA	NA	NM	11.88	NM	ND
TBW-N	6/6/2002	100,000	2,100	8,200	3,400	17,000	NA	18,000	NA	NA	NA	NA	NM	12.48	NM	ND
TBW-N	7/16/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NM	12.39	NM	ND
TBW-N	9/6/2002	69,000	870	4,800	2,300	11,000	NA	17,000	NA	NA	NA	NA	161.26	12.36	148.90	ND
TBW-N	12/12/2002	Well inaccessible		NA	NA	NA	NA	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	NA	NA	NA	NA	161.26	10.82	150.44	ND
TBW-N	3/31/2003	62,000	1,600	6,500	2,200	11,000	NA	11,000	NA	NA	NA	NA	161.26	10.63	150.63	ND
TBW-N	6/30/2003	260,000	7,700	<120	5,800	40,000	NA	8,400	NA	NA	NA	NA	161.26	11.51	149.75	ND
TBW-N	9/9/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	159.92	11.37	148.64	0.11
TBW-N	12/29/2003	130,000	840	8,200	2,400	18,000	NA	5,400	NA	NA	NA	NA	159.92	10.40	149.52	ND
TBW-N	3/17/2004	32,000	440	1,500	580	4,500	NA	3,700	NA	NA	NA	NA	159.92	10.49	149.44	0.01
TBW-N	5/24/2004	110,000	380	2,600	1,600	11,000	NA	3,100	NA	NA	NA	NA	159.92	10.72	149.20	ND
TBW-N	9/17/2004	25,000	120	490	570	3,900	NA	490	<200	<200	<200	4,500	159.92	10.80	149.12	ND
TBW-N	12/6/2004	15,000	33	11	410	1,500	NA	200	NA	NA	NA	NA	159.92	11.00	148.92	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)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (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

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, analyzed by EPA Method 8260B

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



**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)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
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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, 2002 and June 26, 2002 by Virgil Chavez Land Surveying of Vallejo, CA.

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

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

$$\text{Corrected groundwater elevation} = \text{Top-of-casing elevation} - \text{Depth to water} + (0.8 \times \text{Hydrocarbon thickness}).$$

**Blaine Tech Services, Inc.**

December 21, 2004

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Attn.: Leon Gearhart  
Project#: BTS#041206-SS2  
Project: 98995740  
Site: 2120 Montana Street, Oakland

Dear Mr. Gearhart,

Attached is our report for your samples received on 12/07/2004 15:10

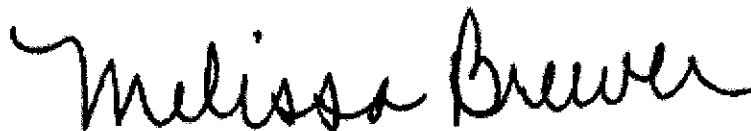
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 01/21/2005 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](mailto:mbrewer@stl-inc.com)

Sincerely,



Melissa Brewer  
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: BTS#041206-SS2

98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-1	12/06/2004 12:10	Water	1
MW-2	12/06/2004 12:46	Water	2
MW-3	12/06/2004 13:15	Water	3
MW-4	12/06/2004 13:45	Water	4
MW-5	12/06/2004 12:30	Water	5
TBW-N	12/06/2004 13:34	Water	6

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

12/20/2004 16:16

**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: BTS#041206-SS2  
98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

Prep(s): 5030B Test(s): 8260B  
Sample ID: **MW-1** Lab ID: 2004-12-0403 - 1  
Sampled: 12/06/2004 12:10 Extracted: 12/19/2004 02:54  
Matrix: Water QC Batch#: 2004/12/18-2A.68  
Analysis Flag: L2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	2800	500	ug/L	10.00	12/19/2004 02:54	
Benzene	150	5.0	ug/L	10.00	12/19/2004 02:54	
Toluene	ND	5.0	ug/L	10.00	12/19/2004 02:54	
Ethylbenzene	120	5.0	ug/L	10.00	12/19/2004 02:54	
Total xylenes	120	10	ug/L	10.00	12/19/2004 02:54	
Methyl tert-butyl ether (MTBE)	300	5.0	ug/L	10.00	12/19/2004 02:54	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	103.9	73-130	%	10.00	12/19/2004 02:54	
Toluene-d8	94.0	81-114	%	10.00	12/19/2004 02:54	

**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: BTS#041206-SS2  
 98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

---

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-2	Lab ID: 2004-12-0403 - 2
Sampled: 12/06/2004 12:46	Extracted: 12/19/2004 03:11
Matrix: Water	QC Batch#: 2004/12/18-2A.68
Analysis Flag: L2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	47000	2500	ug/L	50.00	12/19/2004 03:11	
Benzene	1200	25	ug/L	50.00	12/19/2004 03:11	
Toluene	46	25	ug/L	50.00	12/19/2004 03:11	
Ethylbenzene	1300	25	ug/L	50.00	12/19/2004 03:11	
Total xylenes	6000	50	ug/L	50.00	12/19/2004 03:11	
Methyl tert-butyl ether (MTBE)	3900	25	ug/L	50.00	12/19/2004 03:11	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	106.4	73-130	%	50.00	12/19/2004 03:11	
Toluene-d8	91.4	81-114	%	50.00	12/19/2004 03:11	

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

**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: BTS#041206-SS2  
98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-3	Lab ID: 2004-12-0403 - 3
Sampled: 12/06/2004 13:15	Extracted: 12/19/2004 03:29
Matrix: Water	QC Batch#: 2004/12/18-2A.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	12/19/2004 03:29	
Benzene	ND	0.50	ug/L	1.00	12/19/2004 03:29	
Toluene	ND	0.50	ug/L	1.00	12/19/2004 03:29	
Ethylbenzene	ND	0.50	ug/L	1.00	12/19/2004 03:29	
Total xylenes	ND	1.0	ug/L	1.00	12/19/2004 03:29	
Methyl tert-butyl ether (MTBE)	6.1	0.50	ug/L	1.00	12/19/2004 03:29	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	116.6	73-130	%	1.00	12/19/2004 03:29	
Toluene-d8	91.1	81-114	%	1.00	12/19/2004 03:29	

## 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: BTS#041206-SS2  
98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

Prep(s): 5030B Test(s): 8260B  
Sample ID: MW-4 Lab ID: 2004-12-0403 - 4  
Sampled: 12/06/2004 13:45 Extracted: 12/19/2004 03:46  
Matrix: Water QC Batch#: 2004/12/18-2A.68  
Analysis Flag: L2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	4700	250	ug/L	5.00	12/19/2004 03:46	
Benzene	9.4	2.5	ug/L	5.00	12/19/2004 03:46	
Toluene	3.8	2.5	ug/L	5.00	12/19/2004 03:46	
Ethylbenzene	34	2.5	ug/L	5.00	12/19/2004 03:46	
Total xylenes	12	5.0	ug/L	5.00	12/19/2004 03:46	
Methyl tert-butyl ether (MTBE)	150	2.5	ug/L	5.00	12/19/2004 03:46	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	103.8	73-130	%	5.00	12/19/2004 03:46	
Toluene-d8	94.2	81-114	%	5.00	12/19/2004 03:46	

**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: BTS#041206-SS2  
98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>MW-5</b>	Lab ID: 2004-12-0403 - 5
Sampled: 12/06/2004 12:30	Extracted: 12/19/2004 04:03
Matrix: Water	QC Batch#: 2004/12/18-2A.68
Analysis Flag: L2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	4500	500	ug/L	10.00	12/19/2004 04:03	
Benzene	11	5.0	ug/L	10.00	12/19/2004 04:03	
Toluene	ND	5.0	ug/L	10.00	12/19/2004 04:03	
Ethylbenzene	22	5.0	ug/L	10.00	12/19/2004 04:03	
Total xylenes	ND	10	ug/L	10.00	12/19/2004 04:03	
Methyl tert-butyl ether (MTBE)	7.5	5.0	ug/L	10.00	12/19/2004 04:03	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	104.8	73-130	%	10.00	12/19/2004 04:03	
Toluene-d8	90.2	81-114	%	10.00	12/19/2004 04:03	



**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: BTS#041206-SS2

98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

Prep(s): 5030B Test(s): 8260B  
 Sample ID: **TBW-N** Lab ID: 2004-12-0403 - 6  
 Sampled: 12/06/2004 13:34 Extracted: 12/19/2004 21:11  
 Matrix: Water QC Batch#: 2004/12/19-2B.68  
 Analysis Flag: L2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	15000	1000	ug/L	20.00	12/19/2004 21:11	
Benzene	33	10	ug/L	20.00	12/19/2004 21:11	
Toluene	11	10	ug/L	20.00	12/19/2004 21:11	
Ethylbenzene	410	10	ug/L	20.00	12/19/2004 21:11	
Total xylenes	1500	20	ug/L	20.00	12/19/2004 21:11	
Methyl tert-butyl ether (MTBE)	200	10	ug/L	20.00	12/19/2004 21:11	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	88.1	73-130	%	20.00	12/19/2004 21:11	
Toluene-d8	88.7	81-114	%	20.00	12/19/2004 21:11	

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

12/20/2004 16:16

**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: BTS#041206-SS2  
98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/12/18-2A.68-000

Water

Test(s): 8260B

QC Batch # 2004/12/18-2A.68

Date Extracted: 12/18/2004 20:00

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	12/18/2004 20:00	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	12/18/2004 20:00	
Benzene	ND	0.5	ug/L	12/18/2004 20:00	
Toluene	ND	0.5	ug/L	12/18/2004 20:00	
Ethylbenzene	ND	0.5	ug/L	12/18/2004 20:00	
Total xylenes	ND	1.0	ug/L	12/18/2004 20:00	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	79.8	73-130	%	12/18/2004 20:00	
Toluene-d8	81.2	81-114	%	12/18/2004 20:00	

**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: BTS#041206-SS2

98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/12/19-2B.68-015

Water

Test(s): 8260B

QC Batch # 2004/12/19-2B.68

Date Extracted: 12/19/2004 17:15

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	12/19/2004 17:15	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	12/19/2004 17:15	
Benzene	ND	0.5	ug/L	12/19/2004 17:15	
Toluene	ND	0.5	ug/L	12/19/2004 17:15	
Ethylbenzene	ND	0.5	ug/L	12/19/2004 17:15	
Total xylenes	ND	1.0	ug/L	12/19/2004 17:15	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	84.8	73-130	%	12/19/2004 17:15	
Toluene-d8	88.2	81-114	%	12/19/2004 17:15	

Severn Trent Laboratories, Inc.

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

12/20/2004 16:16

**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: BTS#041206-SS2  
98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/12/18-2A.68**

LCS 2004/12/18-2A.68-001  
LCSD

Extracted: 12/18/2004

Analyzed: 12/18/2004 22:01

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	27.8		25	111.2			65-165	20		
Benzene	25.4		25	101.6			69-129	20		
Toluene	27.5		25	110.0			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	371		500	74.2			73-130			
Toluene-d8	444		500	88.8			81-114			

**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: BTS#041206-SS2

98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/12/19-2B.68**

LCS 2004/12/19-2B.68-057

Extracted: 12/19/2004

Analyzed: 12/19/2004 16:57

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	27.9		25	111.6			65-165	20		
Benzene	27.1		25	108.4			69-129	20		
Toluene	29.0		25	116.0			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	365		500	73.0			73-130			
Toluene-d8	446		500	89.2			81-114			

**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: BTS#041206-SS2  
98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2004/12/18-2A.68**

MS/MSD

Lab ID: 2004-12-0299 - 003

MS: 2004/12/18-2A.68-003

Extracted: 12/18/2004

Analyzed: 12/18/2004 23:03

Dilution: 1.00

MSD: 2004/12/18-2A.68-020

Extracted: 12/18/2004

Analyzed: 12/18/2004 23:20

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	21.5	19.7	ND	25	86.0	78.8	8.7	65-165	20		
Benzene	19.4	18.1	ND	25	77.6	72.4	6.9	69-129	20		
Toluene	20.9	19.8	ND	25	83.6	79.2	5.4	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	356	363		500	71.2	72.6		73-130		S8	S8
Toluene-d8	410	423		500	82.0	84.6		81-114			

**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: BTS#041206-SS2

98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2004/12/19-2B.68**

MS/MSD

Lab ID: 2004-12-0464 - 001

MS: 2004/12/19-2B.68-044

Extracted: 12/19/2004

Analyzed: 12/19/2004 19:44

Dilution: 1.00

MSD: 2004/12/19-2B.68-002

Extracted: 12/19/2004

Analyzed: 12/19/2004 20:02

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	31.5	30.8	ND	25	126.0	123.2	2.2	69-129	20		
Toluene	33.2	32.4	ND	25	132.8	129.6	2.4	70-130	20	M4	
Methyl tert-butyl ether	79.5	82.1	41.4	25	152.4	162.8	6.6	65-165	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	407	417		500	81.4	83.4		73-130			
Toluene-d8	443	450		500	88.6	90.0		81-114			

Severn Trent Laboratories, Inc.

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

12/20/2004 16:16

**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: BTS#041206-SS2  
98995740

Received: 12/07/2004 15:10

Site: 2120 Montana Street, Oakland

---

**Legend and Notes**

---

**Analysis Flag**

L2

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

**Result Flag**

M4

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

S8

Surrogate recoveries lower than acceptance limits.



Lab Participation (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be involved:

- SCIENCE & ENGINEERING
- TECHNICAL SERVICES
- CRMT HOUSTON

Karen Petryna

2004-12-0403

INCIDENT NUMBER (S&E ONLY)

9 8 9 9 5 7 4 0

SAP or CRMT NUMBER (TS/CRMT)

DATE: 12/6/04

PAGE: 1 of 1

SHIPPING CONTRACT

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

SITE ADDRESS (Street and City):  
2120 Montana Street, Oakland

LEGAL UNIT:  
T0600101805

CONTRACT PROJECT NO:  
041206.552

ANALYST:  
Anni Krell

PHONE NO:  
510-420-3335

E-MAIL:  
ShellOaklandEDF@cambria-dnv.com

SAMPLER NAME(S) (P/N):  
SUCKER ON SUNB

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

LA - RWCB REPORT FORMAT  UST AGENCY

GC/MS MTBE CONFIRMATION: HIGHEST \_\_\_\_\_ HIGHEST per BORING \_\_\_\_\_ ALL \_\_\_\_\_

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

REQUESTED ANALYSIS

TPH - Gas, Purgeable	BTEX	MTBE (8261B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (9) by (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)	TPH - Diesel, Extractable (6015m)
X	X	X	X						
X	X		X						
X	X		X						
X	X		X						
X	X		X						
X	X		X						

FIELD NOTES:  
Container/Preservative  
or PID Readings  
or Laboratory Notes

3°C

TEMPERATURE ON RECEIPT °C

Requested by (Signature):	Received by (Signature):	Date: 12/7/04	Time: 1510
Requested by (Signature):	Received by (Signature):	Date: 12/7/04	Time: 1850

# WELL GAUGING DATA

Project # 041206-552 Date 12/6/04 Client 98995740

Site 2120 Montano 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 of POC
NW-1	2	no spilt.				13.15	27.45	
NW-2	2					13.02	19.90	
NW-3	2					12.78	19.98	
NW-4	4					14.65	19.75	
NW-5	2					12.85	19.70	
TBW-N	4					11.00	13.25	
<p>pulled pump to gauge.</p>								

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>041206-SS2</u>	Site: <u>98995740</u>
Sampler: <u>500ch</u>	Date: <u>12/6/04</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>27.45</u>	Depth to Water (DTW): <u>13.15</u>
Depth to Free Product: <u>NO SPH</u>	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 Column x 0.20) + DTW]: <u>16.01</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  
 Other: \_\_\_\_\_

$\frac{2.2 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = 6.6 \text{ Gals.}$ <p>I Case Volume      Specified Volumes      Calculated Volume</p>	<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>radius<sup>2</sup> * 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 <sup>2</sup> * 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 <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1158</u>	<u>65.5</u>	<u>7.6</u>	<u>768</u>	<u>76</u>	<u>2.2</u>	<u>light, silty</u>
<u>1202</u>	<u>65.8</u>	<u>7.8</u>	<u>771</u>	<u>73</u>	<u>4.4</u>	"
<u>1207</u>	<u>66.3</u>	<u>7.8</u>	<u>772</u>	<u>67</u>	<u>6.6</u>	"

Did well dewater?    Yes    No      Gallons actually evacuated:    6.6

Sampling Date: 12/6/04    Sampling Time: 1210    Depth to Water: 13.30

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>041206-552</u>	Site: <u>98995740</u>
Sampler: <u>500dh</u>	Date: <u>12/6/04</u>
Well I.D.: <u>MW-2</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>19.90</u>	Depth to Water (DTW): <u>13.02</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 Column x 0.20) + DTW]: <u>14.40</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

Other: \_\_\_\_\_

1.1 (Gals.) X 3 = 3.3 Gals.  
 1 Case Volume      Specified Volumes      Calculated Volume

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

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
1238	64.8	7.5	1038	23	1.1	STEAM GAS DOWN
1240	65.5	7.5	1089	15	2.2	" "
1242	65.6	7.6	1087	44	3.3	" "

Did well dewater? Yes  No  Gallons actually evacuated: 3.3

Sampling Date: 12/6/04      Sampling Time: 1246      Depth to Water: 15.50 (traffic)

Sample I.D.: MW-2      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

*replaced lock*

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>041206-552</u>	Site: <u>98995740</u>
Sampler: <u>500ch</u>	Date: <u>12/6/04</u>
Well I.D.: <u>4W-3</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth (TD): <u>19.48</u>	Depth to Water (DTW): <u>12.28</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 Column x 0.20) + DTW]: <u>13.82</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

$1.2 \text{ (Gals.)} \times 3 = 3.6 \text{ Gals.}$ 1 Case Volume      Specified Volumes      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <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>radius<sup>2</sup> * 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 <sup>2</sup> * 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 <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
<u>1302</u>	<u>67.9</u>	<u>7.8</u>	<u>618</u>	<u>102</u>	<u>1.2</u>	<u>almost clear</u>
<u>1304</u>	<u>68.5</u>	<u>7.8</u>	<u>642</u>	<u>86</u>	<u>2.4</u>	<u>"</u>
<u>1306</u>	<u>68.1</u>	<u>7.8</u>	<u>646</u>	<u>142</u>	<u>3.6</u>	<u>meas. 0</u>

Did well dewater? Yes  No  Gallons actually evacuated: 3.6

Sampling Date: 12/6/04 Sampling Time: 1315 Depth to Water: 13.82

Sample I.D.: 4W-3 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>041206-SS2</u>	Site: <u>98995740</u>
Sampler: <u>sooch</u>	Date: <u>12/6/04</u>
Well I.D.: <u>MW-4</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth (TD): <u>19.75</u>	Depth to Water (DTW): <u>14.65</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 Column x 0.20) + DTW]: <u>15.67</u>	

Purge Method: Bailer      Water      Sampling Method: Bailer  
 Disposable Bailer      Peristaltic      Disposable Bailer  
 Positive Air Displacement      Extraction Pump      Extraction Port  
 Electric Submersible      Other \_\_\_\_\_      Dedicated Tubing

$3.3 \text{ (Gals.)} \times 3 = 9.9 \text{ Gals.}$	<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>radius<sup>2</sup> * 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 <sup>2</sup> * 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 <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
1255	66.0	7.6	645	37	3.5	clear
well	dewatered		3.5 sal.			DTW = 17.10
1345	66.5	7.7	602	15	—	clear

Did well dewater? (Yes) No      Gallons actually evacuated: 3.5

Sampling Date: 12/6/04      Sampling Time: 1345      Depth to Water: 17.10 → 15.85 @ Depth

Sample I.D.: MW-4      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

*Umm*

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>041206-552</u>	Site: <u>98995740</u>
Sampler: <u>goodh</u>	Date: <u>12/6/04</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>19.70</u>	Depth to Water (DTW): <u>12.85</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 Column x 0.20) + DTW]: <u>14.22</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 (Gals.) X 3 = 3.3 Gals.  
 I 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 <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS or <u>(µS)</u> )	Turbidity (NTUs)	Gals. Removed	Observations
<u>1222</u>	<u>64.0</u>	<u>7.2</u>	<u>567</u>	<u>&gt;200</u>	<u>1.1</u>	<u>gross cloudy</u>
<u>1224</u>	<u>64.3</u>	<u>7.3</u>	<u>569</u>	<u>&gt;200</u>	<u>2.2</u>	"
<u>1226</u>	<u>64.4</u>	<u>7.3</u>	<u>570</u>	<u>&gt;200</u>	<u>3.3</u>	"

Did well dewater? Yes (No)      Gallons actually evacuated: 3.3

Sampling Date: 12/6/04      Sampling Time: 1230      Depth to Water: 12.90

Sample I.D.: MW-5      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

**Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (800) 545-7558**

## SHELL WELL MONITORING DATA SHEET

BTS #: <u>041206-552</u>	Site: <u>98995740</u>
Sampler: <u>500ch</u>	Date: <u>12/6/04</u>
Well I.D.: <u>TBW-N</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth (TD): <u>13.25</u>	Depth to Water (DTW): <u>11.00</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 Column x 0.20) + DTW]: <u>11.45</u>	

Purge Method:  Bailor       Waterra      Sampling Method:  Bailor  
 Disposable Bailor       Peristaltic       Disposable Bailor  
 Positive Air Displacement       Extraction Pump       Extraction Port  
 Electric Submersible       Other \_\_\_\_\_       Dedicated Tubing

Other: \_\_\_\_\_

<u>1.5</u> (Gals.) X <u>3</u> = <u>4.5</u> 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>radius<sup>2</sup> * 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 <sup>2</sup> * 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 <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
<u>1325</u>	<u>66.3</u>	<u>7.2</u>	<u>1306</u>	<u>57</u>	<u>1.5</u>	<u>light sheen, gas odor</u>
<u>1328</u>	<u>67.0</u>	<u>7.3</u>	<u>1338</u>	<u>111</u>	<u>3.0</u>	"
<u>1331</u>	<u>67.1</u>	<u>7.4</u>	<u>1343</u>	<u>148</u>	<u>4.5</u>	<u>TURBID</u>

Did well dewater? Yes  No  Gallons actually evacuated: 4.5

Sampling Date: 12/6/04 Sampling Time: 1334 Depth to Water: 10.95

Sample I.D.: TBW-N 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: