Shell Oil Products US

November 11, 2002

Alameda County
NOV 15 2002
Environmental Health

Mr. Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: **Shell-branded Service Station**
610 Market Street
Oakland, California 94607

Dear Mr. Chan:

Attached for your review and comment is a copy of the *Third Quarter 2002 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

Karen Petryna

Karen Petryna
Sr. Environmental Engineer

P.O. Box 7869 Burbank, CA 91510-7869 Phone (559) 645-9306 Facsimile (559) 645-5643

CAMBRIA

November 12, 2002

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

Re: **Third Quarter 2002 Monitoring Report**
Shell-branded Service Station
610 Market Street
Oakland, California
Incident #99895750
Cambria Project #244-0594-002

Dear Mr. Chan:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US, 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 on Market Street between Sixth and Seventh Streets in Oakland, California (Figures 1 and 2).

REMEDIATION SUMMARY

Mobile Dual-Phase Vacuum Extraction Treatment (DVE): From March to October 2000, Cambria coordinated mobile DVE from wells MW-2 and MW-3. Mobile DVE is the process of applying high vacuum through an airtight well seal to simultaneously extract soil vapors from the vadose zone and enhance groundwater extraction from the saturated zone. Mobile DVE uses a vacuum truck to create the vacuum and contain extracted fluids. Mobile DVE equipment consists of a dedicated extraction "stinger" installed in the extraction well, a vacuum truck, and a carbon-vapor treatment system. DVE was discontinued in October 2000 due to low groundwater-extraction volumes. The estimated mass of total petroleum hydrocarbons as gasoline (TPHg) and methyl tertiary butyl ether (MTBE) removed by groundwater extraction during DVE events is summarized in Table 1, and the estimated mass removed by vapor extraction is summarized in Table 2.

DVE and Soil Vapor Extraction (SVE) Pilot Test: On March 22, 2001, Cambria performed a short-term (1 day) DVE test on well MW-3 and a short-term (1 day) SVE test on tank backfill well T-1. The tests were conducted using an internal combustion engine for vapor abatement, as

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opposed to the carbon treatment system used during mobile DVE. The estimated mass of TPHg and MTBE removed by groundwater extraction during the DVE test on well MW-3 is included in Table 1. The estimated mass of TPHg and MTBE removal removed by vapor extraction during the DVE pilot test on well MW-3 and the SVE pilot test on well T-1 is included in Table 2.

SVE Pilot Test: Between October 8 and 12, 2001, Cambria conducted a long-term (5 day) SVE pilot test on tank backfill well T-1. The cumulative mass removal of TPHg and MTBE during the SVE pilot test was approximately 14.7 pounds and 32.8 pounds, respectively. The estimated total mass removed by vapor extraction at the site is included on Table 2.

Mobile Groundwater Extraction (GWE): As recommended in the August 29, 2001 *Site Conceptual Model and Pilot Test Report*, Cambria began coordinating weekly GWE from well MW-3 using a vacuum truck in August 2001. Well MW-2 was added to the weekly GWE schedule at the site beginning in January 2002, as recommended in our December 19, 2001 *Soil Vapor Extraction Pilot Test Report and Investigation Work Plan*. The recommendation to extract from well MW-2 was approved in a January 2, 2002 Alameda County Health Care Services Agency (ACHCSA) letter.

Cumulative groundwater purge volume by GWE and previous DVE, and estimated mass removal data are presented in Table 1. The estimated mass of TPHg and MTBE removed through GWE during mobile GWE and previous DVE through the third quarter 2002 is 2.79 pounds and 63.66 pounds, respectively. Figure 3 shows MTBE concentrations and mass removal estimates over time for well MW-2. MTBE concentrations in well MW-2 show a decreasing trend over time, likely due to the combination of SVE and GWE completed at the site. Figure 4 shows MTBE concentrations and mass removal estimates over time for well MW-3. MTBE concentrations in well MW-3 have shown a decreasing trend since GWE was initiated at the site. The mass removal estimates shown on Figures 3 and 4 include liquid-phase and vapor-phase MTBE mass removed by GWE and by previous DVE. The total cumulative estimated mass of TPHg and MTBE removed to date at the site, including that removed by GWE, DVE and SVE, is 55.35 pounds and 106.72 pounds, respectively.

THIRD QUARTER 2002 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, gauged and sampled the site wells, calculated groundwater elevations, and compiled the analytical data. Cambria prepared a vicinity map which 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.

Monthly Vapor Sampling: As described in our December 19, 2001 *Soil Vapor Extraction Pilot Test Report and Investigation Work Plan*, Cambria coordinated monthly vapor measurements in the tank backfill wells using a photo-ionization detector (PID). Due to the elevated concentrations detected on February 7, 2002, Cambria began collecting monthly samples from well T-2 to be submitted to an analytical laboratory in addition to collecting PID readings. Results of the vapor sampling are summarized on Table 3. Analytical laboratory reports for the vapor samples are included as Attachment B.

ANTICIPATED FOURTH QUARTER 2002 ACTIVITIES

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

Monthly Vapor Sampling: Cambria will continue with monthly field measurements in tank backfill wells T-1 and T-2 using a PID and collection of a laboratory sample from well T-2.

Investigation and Interim Remediation Work Plan: On August 19, 2002, Cambria submitted an *Investigation and Interim Remediation Work Plan* proposing further investigation and the installation of a fixed GWE system at the site. This work plan was approved in an August 23, 2002 ACHCSA letter. The proposed onsite extraction/monitoring wells are currently scheduled to be installed on November 14 and 15, 2002. In addition, Cambria has begun the final design and permitting for the proposed GWE system, and system installation is currently scheduled to begin in the fourth quarter 2002.

Mobile GWE: Weekly GWE is scheduled to continue pending fixed GWE system installation.

CLOSING

We appreciate the opportunity to work with you on this project. Please call Jacquelyn Jones at (510) 420-3316 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

Jacquelyn L. Jones
Project Geologist

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

Figures:
1 - Vicinity/Area Well Survey Map
2 - Groundwater Elevation Contour Map
3 - MTBE and Mass Removal – Well MW-2
4 - MTBE and Mass Removal – Well MW-3

Tables:
1 - Groundwater Extraction – Mass Removal Data
2 - Vapor Extraction – Mass Removal Data
3 - Tank Backfill Well Vapor Concentrations

Attachments:
A - Blaine Groundwater Monitoring Report and Field Notes
B - Vapor Sampling Analytical Laboratory Reports

cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869
Virginia R. Rawson, Tr., 1860 Tice Creek Drive #1353, Walnut Creek, CA 94595

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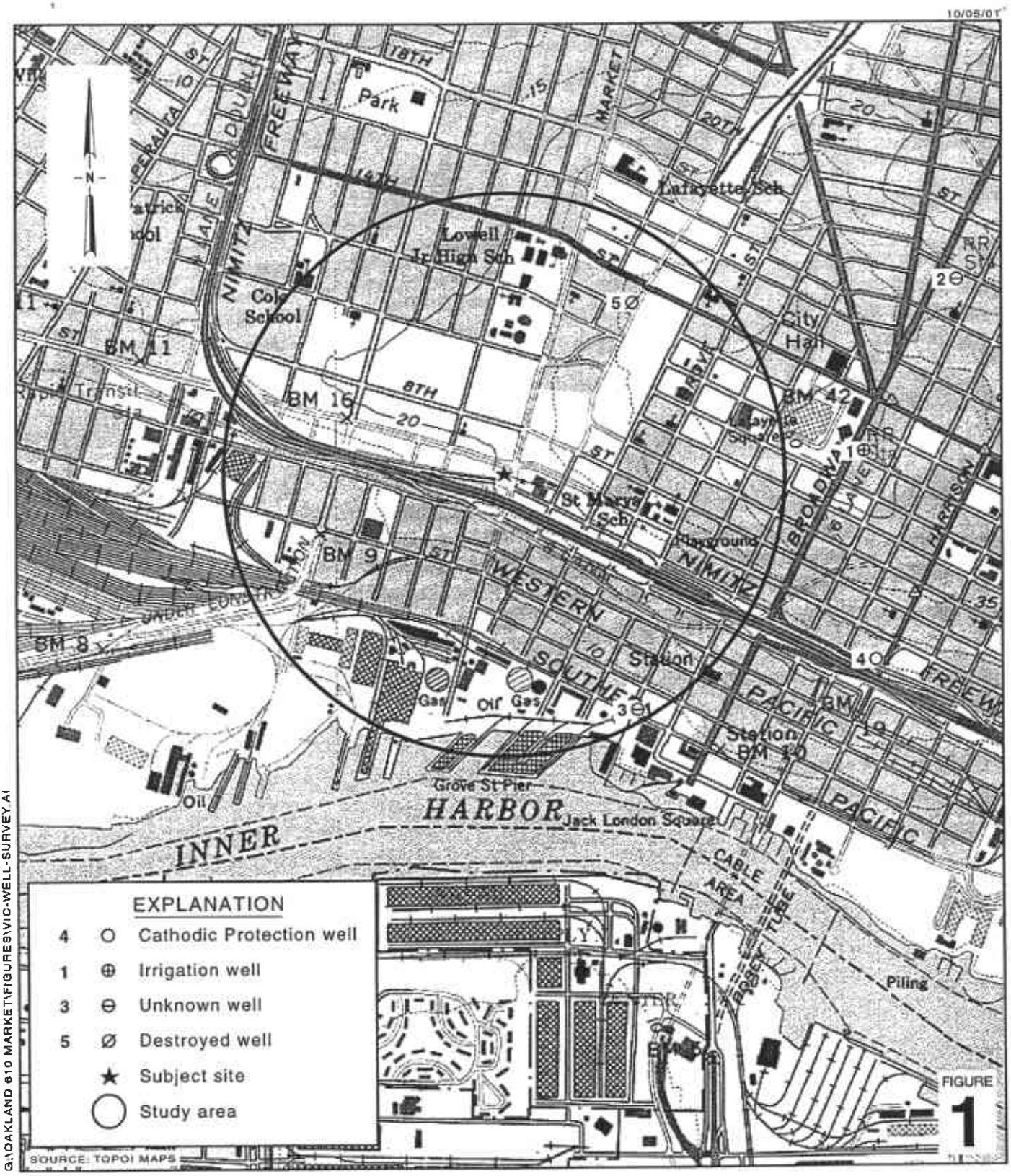

Shell-branded Service Station
610 Market Street
Oakland, California
Incident #98995750

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Vicinity / Area Well Survey Map

1/2 Mile Radius

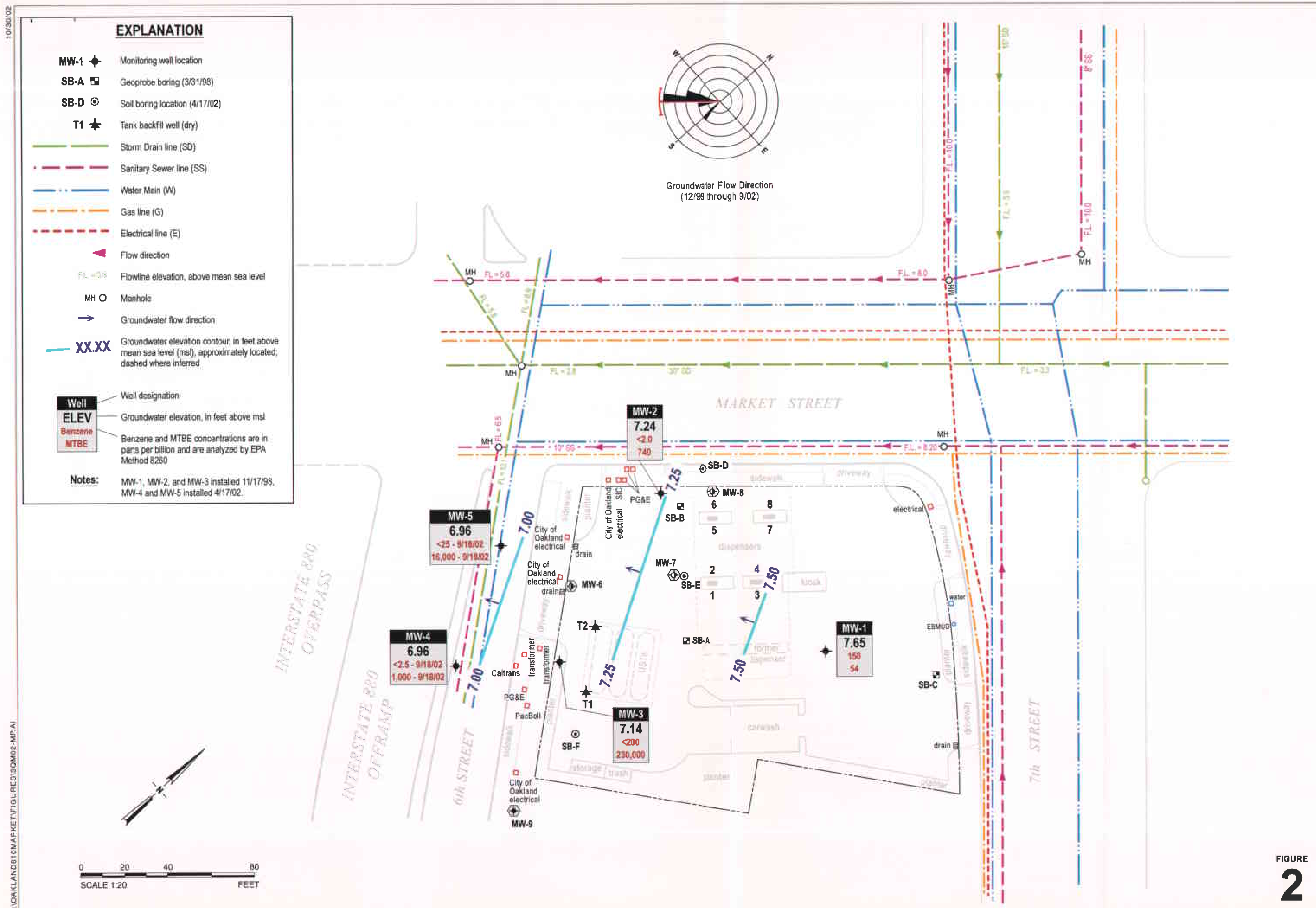
EXPLANATION
MW-1 Monitoring well location
SB-A Geoprobe boring (3/31/98)
SB-D Soil boring location (4/17/02)
T1 Tank backfill well (dry)
Storm Drain line (SD)
Sanitary Sewer line (SS)
Water Main (W)
Gas line (G)
Electrical line (E)
Flow direction
Flowline elevation, above mean sea level
MH Manhole
Groundwater flow direction
XX.XX Groundwater elevation contour, in feet above mean sea level (msl), approximately located; 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
Notes: MW-1, MW-2, and MW-3 installed 11/17/98, MW-4 and MW-5 installed 4/17/02.
Groundwater Flow Direction
(12/99 through 9/02)
MARKET STREET
6th STREET
7th STREET
INTERSTATE 880 OVERPASS
INTERSTATE 880 OFFRAMP
MW-2
7.24
<2.0
740
MW-5
6.96
<25 - 9/18/02
16,000 - 9/18/02
MW-4
6.96
<2.5 - 9/18/02
1,000 - 9/18/02
MW-3
7.14
<200
230,000
MW-1
7.65
150
54
7.00
7.25
7.50
MW-6
MW-7
MW-8
MW-9
SB-A
SB-B
SB-C
SB-D
SB-E
SB-F
T1
T2
Caltrans
PG&E
PacBell
City of Oakland electrical
transformer
drain
water
EBMUD
electrical
0 20 40 80
SCALE 1:20 FEET
G:\OAKLAND610MARKET\FIGURES\3Q02-MP.AI
10/30/02

FIGURE
2

Groundwater Elevation Contour Map

September 9, 2002

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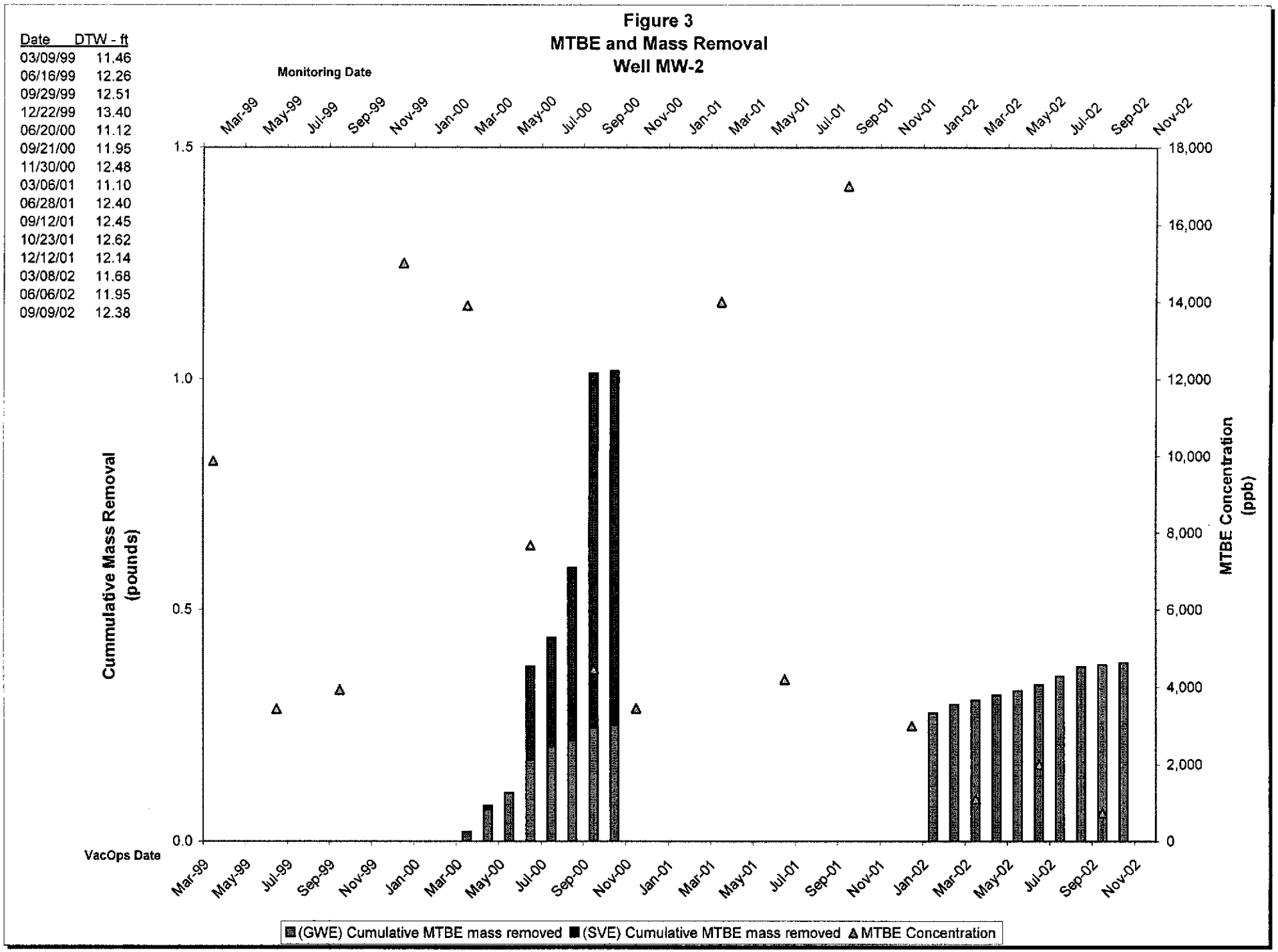
Shell-branded Service Station
610 Market Street
Oakland, California
Incident #98995750

Figure 3
MTBE and Mass Removal
Well MW-2

Date	DTW - ft
03/09/99	11.46
06/16/99	12.26
09/29/99	12.51
12/22/99	13.40
06/20/00	11.12
09/21/00	11.95
11/30/00	12.48
03/06/01	11.10
06/28/01	12.40
09/12/01	12.45
10/23/01	12.62
12/12/01	12.14
03/08/02	11.68
06/06/02	11.95
09/09/02	12.38



610 Market Street, Oakland

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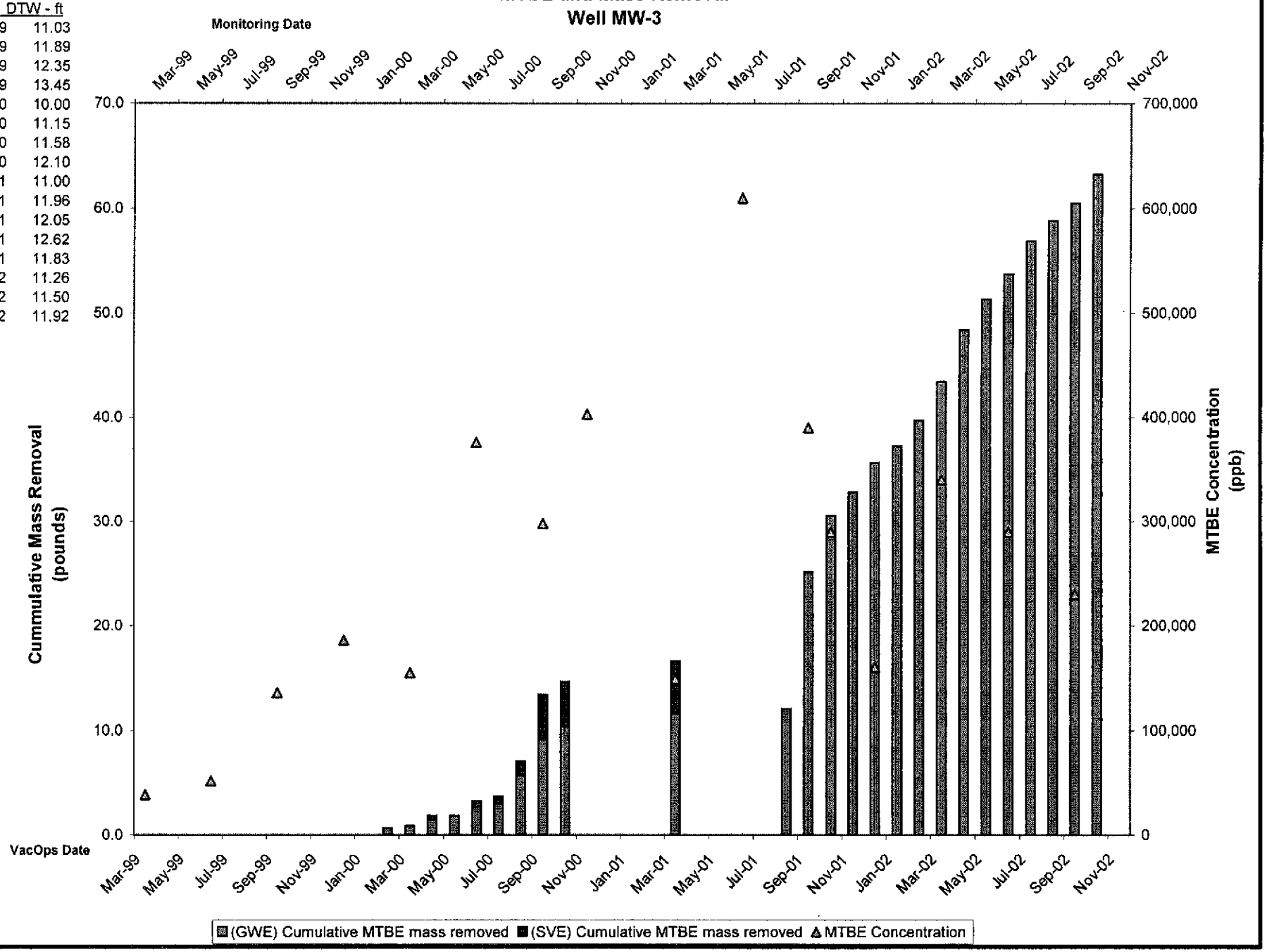
Figure 4
MTBE and Mass Removal
Well MW-3

Date	DTW - ft
03/09/99	11.03
06/16/99	11.89
09/29/99	12.35
12/22/99	13.45
03/21/00	10.00
06/20/00	11.15
09/21/00	11.58
11/30/00	12.10
03/06/01	11.00
06/28/01	11.96
09/12/01	12.05
10/23/01	12.62
12/12/01	11.83
03/08/02	11.26
06/06/02	11.50
09/09/02	11.92



610 Market Street, Oakland

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Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995750, 610 Market Street, Oakland, California

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH Concentration (ppb)	TPPH Removed (lb)	TPPH Removed To Date (lb)	Benzene Concentration (ppb)	Benzene Removed (lb)	Benzene Removed to Date (lb)	MTBE Concentration (ppb)	MTBE Removed (lb)	MTBE Removed To Date (lb)
					TPPH			**Benzene**			**MTBE**		
03/15/00	MW-2	0	0	03/21/00	<5,000	0.00000	0.00000	94.7	0.00000	0.00000	13,900	0.00000	0.00000
03/22/00	MW-2	100	100	03/21/00	<5,000	0.00209	0.00209	94.7	0.00008	0.00008	13,900	0.01160	0.01160
03/27/00	MW-2	75	175	03/21/00	<5,000	0.00156	0.00365	94.7	0.00006	0.00014	13,900	0.00870	0.02030
04/03/00	MW-2	100	275	03/21/00	<5,000	0.00209	0.00574	94.7	0.00008	0.00022	13,900	0.01160	0.03190
04/17/00	MW-2	200	475	03/21/00	<5,000	0.00417	0.00991	94.7	0.00016	0.00038	13,900	0.02320	0.05509
04/24/00	MW-2	125	600	03/21/00	<5,000	0.00261	0.01252	94.7	0.00010	0.00047	13,900	0.01450	0.06959
05/01/00	MW-2	50	650	03/21/00	<5,000	0.00104	0.01356	94.7	0.00004	0.00051	13,900	0.00580	0.07539
05/15/00	MW-2	75	725	03/21/00	<5,000	0.00156	0.01512	94.7	0.00006	0.00057	13,900	0.00870	0.08409
05/22/00	MW-2	100	825	03/21/00	<5,000	0.00209	0.01721	94.7	0.00008	0.00065	13,900	0.01160	0.09569
05/29/00	MW-2	75	900	03/21/00	<5,000	0.00156	0.01877	94.7	0.00006	0.00071	13,900	0.00870	0.10439
06/05/00	MW-2	617	1,517	03/21/00	<5,000	0.01287	0.03165	94.7	0.00049	0.00120	13,900	0.07156	0.17595
07/07/00	MW-2	460	1,977	06/20/00	101	0.00039	0.03203	5.95	0.00002	0.00122	7,670	0.02944	0.20539
08/17/00	MW-2	665	2,642	06/20/00	101	0.00056	0.03259	5.95	0.00003	0.00123	7,670	0.04256	0.21851
09/13/00	MW-2	429	3,071	06/20/00	101	0.00036	0.03296	5.95	0.00002	0.00125	7,670	0.02746	0.24597
10/27/00*	MW-2	75	3,146	06/20/00	101	0.00006	0.03302	5.95	0.00000	0.00126	7,670	0.00480	0.25077
01/16/02*	MW-2	230	3,376	12/12/01	**<1,000**	0.00096	0.03398	**<10**	0.00001	0.00127	**3,000**	0.00576	0.25653
01/23/02	MW-2	535	3,911	12/12/01	**<1,000**	0.00223	0.03621	**<10**	0.00002	0.00129	**3,000**	0.01339	0.26992
01/30/02	MW-2	300	4,211	12/12/01	**<1,000**	0.00125	0.03746	**<10**	0.00001	0.00130	**3,000**	0.00751	0.27743
02/05/02	MW-2	175	4,386	12/12/01	**<1,000**	0.00073	0.03819	**<10**	0.00001	0.00131	**3,000**	0.00438	0.28181
02/12/02	MW-2	289	4,675	12/12/01	**<1,000**	0.00121	0.03940	**<10**	0.00001	0.00132	**3,000**	0.00723	0.28904
02/19/02	MW-2	461	5,136	03/08/02	**<250**	0.00048	0.03988	**<2.5**	0.00000	0.00133	**1,100**	0.00423	0.29328
02/26/02	MW-2	250	5,386	03/08/02	**<250**	0.00026	0.04014	**<2.5**	0.00000	0.00133	**1,100**	0.00229	0.29557
03/05/02	MW-2	250	5,636	03/08/02	**<250**	0.00026	0.04040	**<2.5**	0.00000	0.00133	**1,100**	0.00229	0.29787
03/12/02	MW-2	300	5,936	03/08/02	**<250**	0.00031	0.04071	**<2.5**	0.00000	0.00133	**1,100**	0.00275	0.30062
03/19/02	MW-2	400	6,336	03/08/02	**<250**	0.00042	0.04113	**<2.5**	0.00000	0.00134	**1,100**	0.00367	0.30429
03/26/02	MW-2	100	6,436	03/08/02	**<250**	0.00010	0.04123	**<2.5**	0.00000	0.00134	**1,100**	0.00092	0.30521

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995750, 610 Market Street, Oakland, California

					TPPH			Benzene			MTBE		
Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH Concentration (ppb)	TPPH Removed (lb)	TPPH Removed To Date (lb)	Benzene Concentration (ppb)	Benzene Removed (lb)	Benzene Removed to Date (lb)	MTBE Concentration (ppb)	MTBE Removed (lb)	MTBE Removed To Date (lb)
04/02/02	MW-2	200	6,636	03/08/02	<250	0.00021	0.04144	<2.5	0.00000	0.00134	1,100	0.00184	0.30704
04/09/02	MW-2	179	6,815	03/08/02	<250	0.00019	0.04163	<2.5	0.00000	0.00134	1,100	0.00164	0.30869
04/17/02	MW-2	250	7,065	03/08/02	<250	0.00026	0.04189	<2.5	0.00000	0.00135	1,100	0.00229	0.31098
04/23/02	MW-2	242	7,307	03/08/02	<250	0.00025	0.04214	<2.5	0.00000	0.00135	1,100	0.00222	0.31320
04/30/02	MW-2	250	7,557	03/08/02	<250	0.00026	0.04240	<2.5	0.00000	0.00135	1,100	0.00229	0.31550
05/07/02	MW-2	150	7,707	03/08/02	<250	0.00016	0.04256	<2.5	0.00000	0.00135	1,100	0.00138	0.31687
05/19/02	MW-2	272	7,979	03/08/02	<250	0.00028	0.04284	<2.5	0.00000	0.00136	1,100	0.00250	0.31937
05/21/02	MW-2	400	8,379	03/08/02	<250	0.00042	0.04326	<2.5	0.00000	0.00136	1,100	0.00367	0.32304
05/28/02	MW-2	250	8,629	03/08/02	<250	0.00026	0.04352	<2.5	0.00000	0.00136	1,100	0.00229	0.32534
06/03/02	MW-2	250	8,879	03/08/02	<250	0.00026	0.04378	<2.5	0.00000	0.00136	1,100	0.00229	0.32763
06/11/02	MW-2	189	9,068	06/06/02	<500	0.00039	0.04418	<5.0	0.00000	0.00137	2,000	0.00315	0.33079
06/18/02	MW-2	200	9,268	06/06/02	<500	0.00042	0.04459	<5.0	0.00000	0.00137	2,000	0.00334	0.33412
06/25/02	MW-2	241	9,509	06/06/02	<500	0.00050	0.04510	<5.0	0.00001	0.00138	2,000	0.00402	0.33815
07/02/02	MW-2	250	9,759	06/06/02	<500	0.00052	0.04562	<5.0	0.00001	0.00138	2,000	0.00417	0.34232
07/09/02	MW-2	200	9,959	06/06/02	<500	0.00042	0.04604	<5.0	0.00000	0.00139	2,000	0.00334	0.34566
07/16/02	MW-2	225	10,184	06/06/02	<500	0.00047	0.04651	<5.0	0.00000	0.00139	2,000	0.00375	0.34941
07/23/02	MW-2	256	10,440	06/06/02	<500	0.00053	0.04704	<5.0	0.00001	0.00140	2,000	0.00427	0.35368
07/30/02	MW-2	182	10,622	06/06/02	<500	0.00038	0.04742	<5.0	0.00000	0.00140	2,000	0.00304	0.35672
08/06/02	MW-2	300	10,922	06/06/02	<500	0.00063	0.04804	<5.0	0.00001	0.00141	2,000	0.00501	0.36173
08/13/02	MW-2	300	11,222	06/06/02	<500	0.00063	0.04867	<5.0	0.00001	0.00141	2,000	0.00501	0.36673
08/20/02	MW-2	300	11,522	06/06/02	<500	0.00063	0.04930	<5.0	0.00001	0.00142	2,000	0.00501	0.37174
08/27/02	MW-2	344	11,866	06/06/02	<500	0.00072	0.05001	<5.0	0.00001	0.00143	2,000	0.00574	0.37748
09/09/02	MW-2	181	12,047	09/09/02	<200	0.00015	0.05017	<2.0	0.00000	0.00143	740	0.00112	0.37860
09/11/02	MW-2	300	12,347	09/09/02	<200	0.00025	0.05042	<2.0	0.00000	0.00143	740	0.00185	0.38045
09/24/02	MW-2	149	12,496	09/09/02	<200	0.00012	0.05054	<2.0	0.00000	0.00143	740	0.00092	0.38137
10/02/02	MW-2	150	12,646	09/09/02	<200	0.00013	0.05067	<2.0	0.00000	0.00143	740	0.00093	0.38230

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995750, 610 Market Street, Oakland, California

					TPPH			Benzene			MTBE		
Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH Concentration (ppb)	TPPH Removed (lb)	TPPH Removed To Date (lb)	Benzene Concentration (ppb)	Benzene Removed (lb)	Benzene Removed to Date (lb)	MTBE Concentration (ppb)	MTBE Removed (lb)	MTBE Removed To Date (lb)
10/09/02	MW-2	200	12,846	09/09/02	**<200**	0.00017	0.05083	**<2.0**	0.00000	0.00143	**740**	0.00123	0.38353
10/16/02	MW-2	290	13,136	09/09/02	**<200**	0.00024	0.05107	**<2.0**	0.00000	0.00144	**740**	0.00179	0.38532
10/23/02	MW-2	150	13,286	09/09/02	**<200**	0.00013	0.05120	**<2.0**	0.00000	0.00144	**740**	0.00093	0.38625
03/15/00	MW-3	500	500	03/21/00	<25,000	0.01043	0.01043	466	0.00194	0.00194	**155,000**	0.64669	0.64669
03/22/00	MW-3	100	600	03/21/00	<25,000	0.00782	0.01825	466	0.00039	0.00233	**155,000**	0.12934	0.77603
03/27/00	MW-3	75	675	03/21/00	<25,000	0.01043	0.02868	466	0.00029	0.00262	**155,000**	0.09700	0.87303
04/03/00	MW-3	100	775	03/21/00	<25,000	0.02086	0.04954	466	0.00039	0.00301	**155,000**	0.12934	1.00237
04/17/00	MW-3	200	975	03/21/00	<25,000	0.01304	0.06258	466	0.00078	0.00379	**155,000**	0.25868	1.26104
04/24/00	MW-3	125	1,100	03/21/00	<25,000	0.01043	0.07301	466	0.00049	0.00428	**155,000**	0.16167	1.42271
05/01/00	MW-3	100	1,200	03/21/00	<25,000	0.00782	0.08084	466	0.00039	0.00467	**155,000**	0.12934	1.55205
05/15/00	MW-3	75	1,275	03/21/00	<25,000	0.00522	0.08605	466	0.00029	0.00496	**155,000**	0.09700	1.64905
05/22/00	MW-3	50	1,325	03/21/00	<25,000	0.00782	0.09387	466	0.00019	0.00515	**155,000**	0.06467	1.71372
05/29/00	MW-3	75	1,400	03/21/00	<25,000	0.07041	0.16428	466	0.00029	0.00544	**155,000**	0.09700	1.81073
06/05/00	MW-3	675	2,075	03/21/00	<25,000	0.03744	0.20172	466	0.00262	0.00807	**155,000**	0.87303	2.68375
07/07/00	MW-3	68	2,143	06/20/00	16,200	0.09679	0.29851	1,140	0.00065	0.00872	579,000	0.32853	3.01229
08/17/00	MW-3	554	2,697	06/20/00	16,200	0.07489	0.37340	1,140	0.00527	0.01399	579,000	2.67659	5.68887
09/13/00	MW-3	716	3,413	06/20/00	16,200	0.09679	0.47019	1,140	0.00681	0.02080	579,000	3.45927	9.14814
10/27/00*	MW-3	250	3,663	06/20/00	16,200	0.03379	0.50398	1,140	0.00238	0.02317	579,000	1.20785	10.35599
03/22/01	MW-3	383	4,046	03/22/01	<20,000	0.03196	0.53594	<200	0.00032	0.02349	**390,000**	1.24640	11.60239
08/22/01	MW-3	90	4,136	06/28/01	<50,000	0.01877	0.55472	1,200	0.00090	0.02440	**610,000**	0.45811	12.06049
08/28/01	MW-3	600	4,736	06/28/01	<50,000	0.12517	0.67988	1,200	0.00601	0.03040	**610,000**	3.05403	15.11452
09/05/01	MW-3	750	5,486	06/28/01	<50,000	0.15646	0.83634	1,200	0.00751	0.03791	**610,000**	3.81754	18.93207
09/18/01	MW-3	1,900	7,386	09/12/01	**<20,000**	0.15854	0.99488	**430**	0.00682	0.04473	**390,000**	6.18317	25.11524
10/10/01	MW-3	500	7,886	09/12/01	**<20,000**	0.04172	1.03660	**430**	0.00179	0.04652	**390,000**	1.62715	26.74239
10/16/01	MW-3	200	8,086	09/12/01	**<20,000**	0.01669	1.05329	**430**	0.00072	0.04724	**390,000**	0.65086	27.39324

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995750, 610 Market Street, Oakland, California

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH Concentration (ppb)	TPPH Removed (lb)	TPPH Removed To Date (lb)	Benzene Concentration (ppb)	Benzene Removed (lb)	Benzene Removed to Date (lb)	MTBE Concentration (ppb)	MTBE Removed (lb)	MTBE Removed To Date (lb)
					TPPH			**Benzene**			**MTBE**		
10/26/01	MW-3	1,300	9,386	10/23/01	**11,000**	0.11932	1.17262	**350**	0.00380	0.05104	**290,000**	3.14582	30.53907
10/31/01	MW-3	150	9,536	10/23/01	**11,000**	0.01377	1.18638	**350**	0.00044	0.05148	**290,000**	0.36298	30.90205
11/07/01	MW-3	280	9,816	10/23/01	**11,000**	0.02570	1.21209	**350**	0.00082	0.05229	**290,000**	0.67756	31.57961
11/17/01	MW-3	100	9,916	10/23/01	**11,000**	0.00918	1.22126	**350**	0.00029	0.05259	**290,000**	0.24199	31.82159
11/21/01	MW-3	400	10,316	10/23/01	**11,000**	0.03672	1.25798	**350**	0.00117	0.05375	**290,000**	0.96795	32.78954
12/01/01	MW-3	300	10,616	10/23/01	**11,000**	0.02754	1.28552	**350**	0.00088	0.05463	**290,000**	0.72596	33.51550
12/05/01	MW-3	350	10,966	10/23/01	**11,000**	0.03213	1.31764	**350**	0.00102	0.05565	**290,000**	0.84695	34.36245
12/12/01	MW-3	500	11,466	12/12/01	**<20,000**	0.04172	1.35936	**280**	0.00117	0.05682	**160,000**	0.66755	35.03000
12/19/01	MW-3	450	11,916	12/12/01	**<20,000**	0.03755	1.39691	**280**	0.00105	0.05787	**160,000**	0.60079	35.63079
01/09/02	MW-3	190	12,106	12/12/01	**<20,000**	0.01585	1.41277	**280**	0.00044	0.05832	**160,000**	0.25367	35.88446
01/16/02*	MW-3	450	12,556	12/12/01	**<20,000**	0.03755	1.45032	**280**	0.00105	0.05937	**160,000**	0.60079	36.48526
01/23/02	MW-3	300	12,856	12/12/01	**<20,000**	0.02503	1.47535	**280**	0.00070	0.06007	**160,000**	0.40053	36.88578
01/30/02	MW-3	278	13,134	12/12/01	**<20,000**	0.02320	1.49855	**280**	0.00065	0.06072	**160,000**	0.37116	37.25694
02/05/02	MW-3	347	13,481	12/12/01	**<20,000**	0.02895	1.52750	**280**	0.00081	0.06153	**160,000**	0.46328	37.72022
02/12/02	MW-3	300	13,781	12/12/01	**<20,000**	0.02503	1.55254	**280**	0.00070	0.06223	**160,000**	0.40053	38.12075
02/19/02	MW-3	250	14,031	03/08/02	**<20,000**	0.02086	1.57340	**270**	0.00056	0.06279	**340,000**	0.70927	38.83002
02/26/02	MW-3	299	14,330	03/08/02	**<20,000**	0.02495	1.59835	**270**	0.00067	0.06347	**340,000**	0.84829	39.67831
03/05/02	MW-3	462	14,792	03/08/02	**<20,000**	0.03855	1.63690	**270**	0.00104	0.06451	**340,000**	1.31073	40.98904
03/12/02	MW-3	194	14,986	03/08/02	**<20,000**	0.01619	1.65308	**270**	0.00044	0.06495	**340,000**	0.55039	41.53943
03/19/02	MW-3	213	15,199	03/08/02	**<20,000**	0.01777	1.67086	**270**	0.00048	0.06543	**340,000**	0.60430	42.14373
03/26/02	MW-3	447	15,646	03/08/02	**<20,000**	0.03730	1.70816	**270**	0.00101	0.06643	**340,000**	1.26818	43.41191
04/02/02	MW-3	437	16,083	03/08/02	**<20,000**	0.03646	1.74462	**270**	0.00098	0.06742	**340,000**	1.23980	44.65171
04/09/02	MW-3	358	16,441	03/08/02	**<20,000**	0.02987	1.77449	**270**	0.00081	0.06822	**340,000**	1.01568	45.66739
04/17/02	MW-3	352	16,793	03/08/02	**<20,000**	0.02937	1.80387	**270**	0.00079	0.06902	**340,000**	0.99865	46.66604
04/23/02	MW-3	300	17,093	03/08/02	**<20,000**	0.02503	1.82890	**270**	0.00068	0.06969	**340,000**	0.85112	47.51716
04/30/02	MW-3	309	17,402	03/08/02	**<20,000**	0.02578	1.85468	**270**	0.00070	0.07039	**340,000**	0.87666	48.39382

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995750, 610 Market Street, Oakland, California

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH Concentration (ppb)	TPPH Removed (lb)	TPPH Removed To Date (lb)	Benzene Concentration (ppb)	Benzene Removed (lb)	Benzene Removed to Date (lb)	MTBE Concentration (ppb)	MTBE Removed (lb)	MTBE Removed To Date (lb)
					TPPH			**Benzene**			**MTBE**		
05/07/02	MW-3	198	17,600	03/08/02	**<20,000**	0.01652	1.87121	**270**	0.00045	0.07083	**340,000**	0.56174	48.95556
05/19/02	MW-3	200	17,800	03/08/02	**<20,000**	0.01669	1.88789	**270**	0.00045	0.07129	**340,000**	0.56742	49.52298
05/21/02	MW-3	400	18,200	03/08/02	**<20,000**	0.03338	1.92127	**270**	0.00090	0.07219	**340,000**	1.13483	50.65781
05/28/02	MW-3	237	18,437	03/08/02	**<20,000**	0.01978	1.94105	**270**	0.00053	0.07272	**340,000**	0.67239	51.33020
06/03/02	MW-3	270	18,707	03/08/02	**<20,000**	0.02253	1.96358	**270**	0.00061	0.07333	**340,000**	0.76601	52.09621
06/11/02	MW-3	300	19,007	06/06/02	**<50,000**	0.06258	2.02616	**290**	0.00073	0.07405	**290,000**	0.72596	52.82217
06/18/02	MW-3	179	19,186	06/06/02	**<50,000**	0.03734	2.06350	**290**	0.00043	0.07449	**290,000**	0.43316	53.25533
06/25/02	MW-3	200	19,386	06/06/02	**<50,000**	0.04172	2.10522	**290**	0.00048	0.07497	**290,000**	0.48397	53.73930
07/02/02	MW-3	270	19,656	06/06/02	**<50,000**	0.05632	2.16155	**290**	0.00065	0.07562	**290,000**	0.65336	54.39266
07/09/02	MW-3	287	19,943	06/06/02	**<50,000**	0.05987	2.22142	**290**	0.00069	0.07632	**290,000**	0.69450	55.08716
07/16/02	MW-3	233	20,176	06/06/02	**<50,000**	0.04861	2.27002	**290**	0.00056	0.07688	**290,000**	0.56383	55.65099
07/23/02	MW-3	300	20,476	06/06/02	**<50,000**	0.06258	2.33261	**290**	0.00073	0.07761	**290,000**	0.72596	56.37695
07/30/02	MW-3	221	20,697	06/06/02	**<50,000**	0.04610	2.37871	**290**	0.00053	0.07814	**290,000**	0.53479	56.91174
08/06/02	MW-3	237	20,934	06/06/02	**<50,000**	0.04944	2.42815	**290**	0.00057	0.07872	**290,000**	0.57351	57.48525
08/13/02	MW-3	146	21,080	06/06/02	**<50,000**	0.03046	2.45861	**290**	0.00035	0.07907	**290,000**	0.35330	57.83855
08/20/02	MW-3	276	21,356	06/06/02	**<50,000**	0.05758	2.51618	**290**	0.00067	0.07974	**290,000**	0.66788	58.50643
08/27/02	MW-3	150	21,506	06/06/02	**<50,000**	0.03129	2.54747	**290**	0.00036	0.08010	**290,000**	0.36298	58.86941
09/09/02	MW-3	200	21,706	09/09/02	**<20,000**	0.01669	2.56416	**<200**	0.00033	0.08044	**230,000**	0.38384	59.25325
09/11/02	MW-3	256	21,962	09/09/02	**<20,000**	0.02136	2.58552	**<200**	0.00043	0.08086	**230,000**	0.49132	59.74456
09/24/02	MW-3	400	22,362	09/09/02	**<20,000**	0.03338	2.61890	**<200**	0.00067	0.08153	**230,000**	0.76768	60.51225
10/02/02	MW-3	311	22,673	09/09/02	**<20,000**	0.02595	2.64485	**<200**	0.00052	0.08205	**230,000**	0.59687	61.10912
10/09/02	MW-3	656	23,329	09/09/02	**<20,000**	0.05474	2.69959	**<200**	0.00109	0.08314	**230,000**	1.25900	62.36811
10/16/02	MW-3	208	23,537	09/09/02	**<20,000**	0.01736	2.71695	**<200**	0.00035	0.08349	**230,000**	0.39919	62.76731
10/23/02	MW-3	246	23,783	09/09/02	**<20,000**	0.02053	2.73748	**<200**	0.00041	0.08390	**230,000**	0.47212	63.23943
Total Gallons Extracted:			**37,069**		**Total Pounds Removed:**		**2.78867**			**0.08536**			**63.65512**

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995750, 610 Market Street, Oakland, California

					TPPH			Benzene			MTBE		
Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH Concentration (ppb)	TPPH Removed (lb)	TPPH Removed To Date (lb)	Benzene Concentration (ppb)	Benzene Removed (lb)	Benzene Removed to Date (lb)	MTBE Concentration (ppb)	MTBE Removed (lb)	MTBE Removed To Date (lb)
					Total Gallons Removed:		**0.45716**			**0.01169**			**10.26696**

Abbreviations & Notes:

TPPH = Total purgeable hydrocarbons as gasoline
MtBE = Methyl tert-butyl ether
ppb = Parts per billion
lb = Pound
gal = Gallon
* = Groundwater volume pumped estimated; data not available
a = Dual-phase Vacuum Extraction (DVE) Pilot test using a RSI V3 Internal Combustion Engine with Bioslurp Tank on well MW-3 on March 22, 2001.
Details of mass removal estimates reported in Cambria's August 29, 2001 *Site Conceptual Model and Pilot Test Report*, Table 2.
Mass removed based on the formula: volume extracted (gal) x Concentration (µg/L) x (g/10^6µg) 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 and benzene analyzed by EPA Method 8015/8020
Data in bold font analyzed by EPA Method 8260, all others analyzed by EPA Method 8020
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 Industrial; water disposed of at a Martinez refinery

Table 2: Vapor Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995750, 610 Market Street, Oakland, California

Date	Well ID	Interval Hours of Operation (hours)	System Flow Rate (CFM)	Hydrocarbon Concentrations (Concentrations in ppmv) TPHg	Benzene	MTBE	TPHg Removal Rate (#/hour)	TPHg Cumulative TPHg Removed (#)	Benzene Removal Rate (#/hour)	Benzene Cumulative Benzene Removed (#)	MTBE Removal Rate (#/hour)	MTBE Cumulative MTBE Removed (#)	Notes:
							TPHg		**Benzene**		**MTBE**		
03/15/00	MW-2	0	0	NA	NA	NA	0.000	0.000	0.000	0.000	0.000	0.000	
04/17/00	MW-2	1.25	0.86	15.9	0.340	519	0.000	0.000	0.000	0.000	0.006	0.008	
06/05/00	MW-2	4.00	9.8	1,910	62.7	363	0.250	1.001	0.007	0.030	0.049	0.202	
07/07/00	MW-2	4.00	13.7	473	<3.1	42	0.087	1.348	0.000	0.031	0.008	0.234	
08/17/00	MW-2	4.00	17	1,799	61	149	0.409	2.983	0.013	0.081	0.035	0.372	
09/13/00	MW-2	1.20	38	3,300	<15.7	631	1.676	4.995	0.004	0.085	0.328	0.766	
10/27/00	MW-2	1.75	5.8	16.8	0.229	9.29	0.001	4.997	0.000	0.085	0.001	0.767	
03/15/00	MW-3	0.22	0.87	3,400	50	410	0.040	0.009	0.001	0.000	0.005	0.001	
03/15/00	MW-3	2.75	0.74	3,700	47	410	0.037	0.109	0.000	0.001	0.004	0.012	
04/17/00	MW-3	1.25	7.8	246	8.05	2,850	0.026	0.141	0.001	0.002	0.304	0.393	
06/05/00	MW-3	4.00	5	2,130	23.0	529	0.142	0.711	0.001	0.008	0.036	0.537	
07/07/00	MW-3	4.00	0.8	<2,833	57	3,861	0.015	0.771	0.001	0.010	0.042	0.706	
08/17/00	MW-3	4.00	2.8	22,833	346	4,222	0.855	4.190	0.012	0.057	0.162	1.353	
09/13/00	MW-3	3.75	34	15,200	<31.4	1,670	6.909	30.097	0.006	0.081	0.777	4.266	
10/27/00	MW-3	1.50	6.4	11.7	0.215	9.27	0.001	30.098	0.000	0.081	0.001	4.267	
03/22/01	MW-3	0.583	3.0	2,800	10	2,100	0.112	30.164	0.000	0.082	0.086	4.317	a
03/22/01	MW-3	3.333	8.9	3,000	10	2,600	0.357	31.354	0.001	0.085	0.317	5.372	a
03/22/01	T-1	1.000	3	6,300	42	4,400	0.253	0.253	0.002	0.002	0.181	0.181	a
03/22/01	T-1	1.667	4.04	5,000	39	8,700	0.270	0.703	0.002	0.005	0.481	0.982	a
10/08/01	T-1	2.000	2	1,100	11	340	0.029	0.762	0.000	0.005	0.009	1.001	b
10/08/01	T-1	2.800	2	15,000	140	2,600	0.401	1.885	0.003	0.015	0.071	1.200	b
10/09/01	T-1	12.800	70.8	900	90	2,300	0.852	12.788	0.077	1.004	2.227	29.711	b
10/10/01	T-1	8.300	22	550	55	2,200	0.162	14.130	0.015	1.125	0.662	35.206	b

Table 2: Vapor Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995750, 610 Market Street, Oakland, California

Date	Well ID	Interval Hours of Operation (hours)	System Flow Rate (CFM)	Hydrocarbon Concentrations (Concentrations in ppmv) TPHg	Benzene	MTBE	TPHg Removal Rate (#/hour)	TPHg Cumulative TPHg Removed (#)	Benzene Removal Rate (#/hour)	Benzene Cumulative Benzene Removed (#)	MTBE Removal Rate (#/hour)	MTBE Cumulative MTBE Removed (#)	Notes:
							TPHg		**Benzene**		**MTBE**		
10/11/01	T-1	6.900	22	630	63	82	0.185	15.409	0.017	1.241	0.025	35.376	b
10/12/01	T-1	4.200	2	510	51	610	0.014	15.466	0.001	1.247	0.017	35.447	b
10/12/01	T-1	5.000	80	140	14	270	0.150	16.214	0.014	1.314	0.295	36.924	b
Total Pounds Removed:							**TPHg =**	**52.565**	**Benzene =**	**1.485**	**MTBE =**	**43.063**	

Abbreviations and Notes:

CFM = Cubic feet per minute

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

ppmv = Parts per million by volume

= Pounds

NA = Not available

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

TPHg / Benzene / MTBE removal rate = Rate based on Bay Area Air Quality Management District's Manual of Procedures for Soil Vapor Extraction dated July 17, 1991.
(Rate = Concentration (ppmv) x system flow rate (cfm) x (1lb-mole/386ft3) x molecular weight (86 lb/lb-mole for TPHg, 78 lb/lb-mole for benzene, 88 lb/lb-mole for MTBE) x 60 min/hour x 1/1,000,000)

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

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

a = Dual-phase Vacuum Extraction (DVE) Pilot test using a RSI V3 Internal Combustion Engine with Bioslurp Tank on wells MW-3 and T-1 on March 22, 2001; details of mass removal estimates reported in Cambria's August 29, 2001 *Site Conceptual Model and Pilot Test Report*, Table 3; daily averages included herein.

b = 5-day SVE test on well T-1; details of mass removal estimates reported in Cambria's *Soil Vapor Extraction Pilot Test Report and Investigation Work Plan*, Table 1; daily averages included herein.

Table 3. Tank Backfill Well Vapor Concentrations -
Shell-branded Service Station, Incident # 98995750, 610 Market Street, Oakland, California.

Well I.D.	Date	OVA Reading	Laboratory Results (ppmv)					
			TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
T-1	11/19/01	**240**	--	--	--	--	--	--
	02/07/02	**63,890**	--	--	--	--	--	--
	02/12/02	--	--	--	--	--	--	--
	02/25/02	**128**	--	--	--	--	--	--
	03/01/02*	**195**	--	--	--	--	--	--
	04/19/02	**1,024**	--	--	--	--	--	--
	05/09/02	--	--	--	--	--	--	--
	06/05/02	**400**	--	--	--	--	--	--
	07/12/02	**714**	--	--	--	--	--	--
	08/02/02	**982**	--	--	--	--	--	--
	09/06/02	**920**	--	--	--	--	--	--
	10/05/02	**>3,000**	--	--	--	--	--	--
T-2	11/19/01	**459**	--	--	--	--	--	--
	02/07/02	**63,930**	--	--	--	--	--	--
	02/12/02	--	**4,800**	**990**	**24**	**4.3**	<3.3	<3.3
	02/25/02	**154**	--	--	--	--	--	--
	03/01/02*	**650**	**2,600**	**1,100**	**15**	<3.3	<3.3	**5.0**
	04/19/02	**6,922**	**2,600**	**1,600**	**8.6**	<4.0	<4.0	<4.0
	05/09/02	--	**1,300**	**600**	**2.3**	<2.0	<2.0	<2.0
	06/05/02	**2,487**	**11**	**2.2**	**0.11**	**0.31**	**0.16**	**0.75**
	07/12/02	**1,889**	**51**	**87**	**0.098**	**0.070**	**0.17**	**0.60**
	08/02/02	**> 3,000**	**5,400**	**2,200**	**21**	**140**	**22**	**100**
	09/06/02	**> 3,000**	**710**	**500**	**14**	**53**	**3.8**	**17**
	10/05/02	**>3,000**	**200**	**160**	**4.1**	**12**	**0.78**	**3.7**

Abbreviations and Notes:

Note: Five-day SVE test conducted 10/8/01 through 10/12/01

OVA = Organic Vapor Analyzer, typically Horiba model MEXA554JU

TPHg = Total petroleum hydrocarbons as gasoline, analyzed by modified EPA Method 8260B

Benzene, toluene, ethylbenzene and total xylenes, analyzed by EPA Method 8260B

MTBE = Methyl tertiary butyl ether, analyzed by EPA Method 8020 or EPA Method 8260B.

-- = measurements were not taken

* = On 3/1/02 sealant applied around outside edge of fill port spill bucket.

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 4, 2002

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

Third Quarter 2002 Groundwater Monitoring at
Shell-branded Service Station
610 Market Street
Oakland, CA

Monitoring performed on September 9 and 18, 2002

Groundwater Monitoring Report **020909-EM-1**

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 Shell Martinez Manufacturing Complex.

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 Sheet

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

WELL CONCENTRATIONS
Shell-branded Service Station
610 Market 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)
MW-1	12/17/1998	2,200	20	<10	110	420	<50	NA	21.70	13.71	7.99
MW-1	03/09/1999	4,320	25.8	<10.0	338	474	<100	NA	21.70	13.03	8.67
MW-1	06/16/1999	6,150	107	84.0	615	1,050	<250	NA	21.70	13.82	7.88
MW-1	09/29/1999	3,440	97.3	58.7	433	578	89.1	NA	21.70	14.45	7.25
MW-1	12/22/1999	1,370	34.5	4.38	196	49.1	29.3	NA	21.70	15.39	6.31
MW-1	03/21/2000	2,550	10.3	3.36	164	312	65.6	NA	21.70	11.94	9.76
MW-1	06/20/2000	4,770	64.3	18.6	387	732	51.3	NA	21.70	13.15	8.55
MW-1	09/21/2000	7,490	350	229	690	1,490	160	NA	21.70	13.65	8.05
MW-1	11/30/2000	5,410	420	168	494	1,170	167	NA	21.70	14.20	7.50
MW-1	03/06/2001	965	25.7	9.14	13.3	9.12	<25.0	NA	21.70	12.99	8.71
MW-1	06/28/2001	5,900	190	71	360	910	NA	110	21.70	13.98	7.72
MW-1	09/12/2001	7,400	240	110	460	1,300	NA	130	21.70	14.15	7.55
MW-1	12/12/2001	1,700	100	30	120	300	NA	98	21.70	13.75	7.95
MW-1	03/08/2002	1,100	63	12	74	83	NA	50	21.70	13.22	8.48
MW-1	06/06/2002	2,300	95	31	130	290	NA	49	21.70	13.57	8.13
MW-1	**09/09/2002**	**3,600**	**150**	**44**	**200**	**590**	**NA**	**54**	**21.70**	**14.05**	**7.65**
MW-2	12/17/1998	<5,000	<50	<50	<50	<50	11,000	NA	19.61	12.07	7.54
MW-2	03/09/1999	<250	5.20	<2.50	<2.50	<2.50	9,870	NA	19.61	11.46	8.15
MW-2	06/16/1999	<50.0	0.569	<0.500	<0.500	<0.500	3,440	NA	19.61	12.26	7.35
MW-2	09/29/1999	58.6	2.51	0.978	<0.500	<0.500	3,930	NA	19.61	12.51	7.10
MW-2	12/22/1999	<2,000	50.4	<20.0	<20.0	<20.0	15,000	NA	19.61	13.40	6.21
MW-2	03/21/2000	<5,000	94.7	<50.0	<50.0	<50.0	13,900	NA	19.61	10.36	9.25
MW-2	06/20/2000	101	5.95	<0.500	<0.500	0.552	7,670	NA	19.61	11.12	8.49
MW-2	09/21/2000	<2,000	<20.0	<20.0	<20.0	<20.0	4,460	NA	19.61	11.95	7.66
MW-2	11/30/2000	81.1	4.46	0.924	0.841	3.23	3,450	NA	19.61	12.48	7.13

WELL CONCENTRATIONS
Shell-branded Service Station
610 Market 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)
MW-2	03/06/2001	<500	183	<5.00	<5.00	<5.00	14,000	NA	19.61	11.10	8.51
MW-2	06/28/2001	<1,000	<10	<10	<10	<10	NA	4,200	19.61	12.40	7.21
MW-2	09/12/2001	<2,000	120	<20	<20	<20	NA	17,000	19.61	12.45	7.16
MW-2	12/12/2001	<1,000	<10	<10	<10	<10	NA	3,000	19.61	12.14	7.47
MW-2	03/08/2002	<250	<2.5	<2.5	<2.5	<2.5	NA	1,100	19.61	11.68	7.93
MW-2	06/06/2002	<500	<5.0	<5.0	<5.0	<5.0	NA	2,000	19.61	11.95	7.66
MW-2	**09/09/2002**	**<200**	**<2.0**	**<2.0**	**<2.0**	**<2.0**	**NA**	**740**	**19.62**	**12.38**	**7.24**
MW-3	12/17/1998	30,000	890	110	2,100	4,300	42,000	43,000	19.05	11.65	7.40
MW-3	03/09/1999	22,700	536	<200	1,030	1,510	35,400	38,500	19.05	11.03	8.02
MW-3	06/16/1999	19,300	625	129	805	1,210	42,400	51,600	19.05	11.89	7.16
MW-3	09/29/1999	20,200	727	155	1,000	1,180	84,100	136,000a	19.05	12.35	6.70
MW-3	12/22/1999	44,500	767	64.4	1,810	2,090	191,000	186,000a	19.05	13.45	5.60
MW-3	03/21/2000	<25,000	466	<250	727	2,280	126,000	155,000	19.05	10.00	9.05
MW-3	06/20/2000	16,200	1,140	98.8	1,140	1,410	579,000	376,000a	19.05	11.15	7.90
MW-3	09/21/2000	<50,000	712	<500	520	795	293,000	298,000	19.05	11.58	7.47
MW-3	11/30/2000	18,000	1,050	124	1,120	2,010	543,000a	403,000a	19.05	12.10	6.95
MW-3	03/06/2001	19,900	1,290	115	1,450	1,760	706,000	149,000	19.05	11.00	8.05
MW-3	06/28/2001	<50,000	1,200	<250	1,100	1,300	NA	610,000	19.05	11.96	7.09
MW-3	09/12/2001	<20,000	430	<200	230	480	NA	390,000	19.05	12.05	7.00
MW-3	10/23/2001	11,000	350	<100	210	440	NA	290,000	19.05	12.62	6.43
MW-3	12/12/2001	<20,000	280	<200	<200	<200	NA	160,000	19.05	11.83	7.22
MW-3	03/08/2002	<20,000	270	<200	<200	<200	NA	340,000	19.05	11.26	7.79
MW-3	06/06/2002	<50,000	290	<250	<250	<250	NA	290,000	19.05	11.50	7.55
MW-3	**09/09/2002**	**<20,000**	**<200**	**<200**	**<200**	**<200**	**NA**	**230,000**	**19.06**	**11.92**	**7.14**

WELL CONCENTRATIONS
Shell-branded Service Station
610 Market 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)
MW-4	05/13/2002	NA	NA	NA	NA	NA	NA	NA	NA	10.64	NA
MW-4	05/20/2002	<1,000	<10	<10	<10	<10	NA	4,600	NA	10.64	NA
MW-4	06/06/2002	<1,000	<10	<10	<10	<10	NA	4,800	NA	10.61	NA
MW-4	**09/09/2002**	**Unable to sample**		**NA**	**NA**	**NA**	**NA**	**NA**	**18.03**	**11.07**	**6.96**
MW-4	**09/18/2002**	**<250**	**<2.5**	**<2.5**	**<2.5**	**<2.5**	**NA**	**1,000**	**18.03**	**11.15**	**6.88**
MW-5	05/13/2002	NA	NA	NA	NA	NA	NA	NA	NA	10.40	NA
MW-5	05/20/2002	<2,500	<25	<25	<25	<25	NA	17,000	NA	10.41	NA
MW-5	06/06/2002	<5,000	<50	<50	<50	<50	NA	15,000	NA	10.36	NA
MW-5	**09/09/2002**	**Unable to sample**		**NA**	**NA**	**NA**	**NA**	**NA**	**17.78**	**10.82**	**6.96**
MW-5	**09/18/2002**	**<2,500**	**<25**	**<25**	**<25**	**<25**	**NA**	**16,000**	**17.78**	**10.81**	**6.97**

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to June 28, 2001, analyzed by EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to June 28, 2001, analyzed by EPA Method 8020.

MTBE = Methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

GW = Groundwater

ug/L = Parts per billion

MSL = Mean sea level

ft = Feet

<n = Below detection limit

NA = Not applicable

WELL CONCENTRATIONS
Shell-branded Service Station
610 Market 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)

Notes:

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

Wells MW-1, MW-2, and MW-3 surveyed December 9, 1998, by Virgil Chavez Land Surveying of Vallejo, California.

KIFF ANALYTICAL LLC

Report Number : 28720
Date : 10/1/02

Leon Gearhart
Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112-1105

Subject : 2 Water Samples
Project Name : 610 Market Street, Oakland
Project Number : 020918-EM1
P.O. Number : 98995750

Dear Mr. Gearhart,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 28720
Date : 10/1/02

Project Name : **610 Market Street, Oakland**
Project Number : **020918-EM1**

Sample : **MW-4** Matrix : Water Lab Number : 28720-01
Sample Date :9/18/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 2.5**	2.5	ug/L	EPA 8260B	9/28/02
Toluene	**< 2.5**	2.5	ug/L	EPA 8260B	9/28/02
Ethylbenzene	**< 2.5**	2.5	ug/L	EPA 8260B	9/28/02
Total Xylenes	**< 2.5**	2.5	ug/L	EPA 8260B	9/28/02
Methyl-t-butyl ether (MTBE)	**1000**	25	ug/L	EPA 8260B	9/28/02
TPH as Gasoline	**< 250**	250	ug/L	EPA 8260B	9/28/02
Toluene - d8 (Surr)	99.8		% Recovery	EPA 8260B	9/28/02
4-Bromofluorobenzene (Surr)	96.2		% Recovery	EPA 8260B	9/28/02

Sample : **MW-5** Matrix : Water Lab Number : 28720-02
Sample Date :9/18/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 25**	25	ug/L	EPA 8260B	9/29/02
Toluene	**< 25**	25	ug/L	EPA 8260B	9/29/02
Ethylbenzene	**< 25**	25	ug/L	EPA 8260B	9/29/02
Total Xylenes	**< 25**	25	ug/L	EPA 8260B	9/29/02
Methyl-t-butyl ether (MTBE)	**16000**	250	ug/L	EPA 8260B	9/29/02
TPH as Gasoline	**< 2500**	2500	ug/L	EPA 8260B	9/29/02
Toluene - d8 (Surr)	97.1		% Recovery	EPA 8260B	9/29/02
4-Bromofluorobenzene (Surr)	98.7		% Recovery	EPA 8260B	9/29/02

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 28720

Date : 10/1/02

QC Report : Method Blank Data

Project Name : **610 Market Street, Oakland**

Project Number : **020918-EM1**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	9/27/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	9/27/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	9/27/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	9/27/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	9/27/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	9/27/02
Toluene - d8 (Surr)	101		%	EPA 8260B	9/27/02
4-Bromofluorobenzene (Surr)	102		%	EPA 8260B	9/27/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive. Suite D Davis. CA 95616 530-297-4800

Report Number : 28720

Date : 10/1/02

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **610 Market Street, Oakland**

Project Number : **020918-EM1**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	28714-07	46	99.5	98.5	122	115	ug/L	EPA 8260B	9/27/02	75.8	70.0	8.00	70-130	25
Toluene	28714-07	<0.50	99.5	98.5	90.0	82.5	ug/L	EPA 8260B	9/27/02	90.5	83.7	7.75	70-130	25
Tert-Butanol	28714-07	<5.0	498	493	465	421	ug/L	EPA 8260B	9/27/02	93.5	85.5	8.95	70-130	25
Methyl-t-Butyl Ether	28714-07	<0.50	99.5	98.5	88.8	78.6	ug/L	EPA 8260B	9/27/02	89.2	79.8	11.1	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 28720

Date : 10/1/02

QC Report : Laboratory Control Sample (LCS)

Project Name : **610 Market Street, Oakland**

Project Number : **020918-EM1**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	9/27/02	89.6	70-130
Toluene	40.0	ug/L	EPA 8260B	9/27/02	91.0	70-130
Tert-Butanol	200	ug/L	EPA 8260B	9/27/02	88.1	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	9/27/02	83.8	70-130

KIFF ANALYTICAL, LLC

Approved By: Joel Kiff

SHELL Chain Of Custody Record

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be invoiced: Karen Petryna

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ CRMT HOUSTON

28720

INCIDENT NUMBER (S&E ONLY): 98995750

SAP or CRMT NUMBER (TS/CRMT):

DATE: 9/18/02

PAGE: 1 of 1

SAMPLING COMPANY: Blaine Tech Services	LOG CODE: BTSS	SITE ADDRESS (Street and City): 610 Market Street, Oakland	GLOBAL ID NO.: T0600102121
ADDRESS: 1680 Rogers Avenue, San Jose, CA 95112		EDF DELIVERABLE TO (Responsible Party or Designee): Anni Kreml	PHONE NO.: 510-420-3335
PROJECT CONTACT (Hardcopy or PDF Report to): Leon Gearhart		E-MAIL: ShellOaklandEDF@cambria-env.com	CONSULTANT PROJECT NO.: BTS # 020918-EM1
TELEPHONE: 408-573-0555	FAX: 408-573-7771	E-MAIL: lgearhart@blainetech.com	SAMPLER NAME(S) (Print): Eric McReynolds

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

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

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

LAB USE ONLY

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)		TPH - Diesel, Extractable (8015m)	TEMPERATURE ON RECEIPT C°
	MW-4	9/18	9:25	GW	3	X	X	X									-01
	MW-5	9/18	9:50	GW	3	X	X	X									-02

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

Relinquished by: (Signature) Eric McReynolds	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) John Cuttle/Kiff Analytical	Date: 091902	Time: 1140

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

10/16/00 Revision

Q&Q Graphic (714) 898-9702

KIFF ANALYTICAL LLC

Report Number : 28513
Date : 9/23/2002

Leon Gearhart
Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112-1105

Subject : 3 Water Samples
Project Name : 610 Market Street, Oakland
Project Number : 020909-EM1
P.O. Number : 98995750

Dear Mr. Gearhart,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 28513
Date : 9/23/2002

Project Name : **610 Market Street, Oakland**
Project Number : **020909-EM1**

Sample : **MW-1** Matrix : Water Lab Number : 28513-01
Sample Date :9/9/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**150**	0.50	ug/L	EPA 8260B	9/14/2002
Toluene	**44**	0.50	ug/L	EPA 8260B	9/14/2002
Ethylbenzene	**200**	0.50	ug/L	EPA 8260B	9/14/2002
Total Xylenes	**590**	1.0	ug/L	EPA 8260B	9/19/2002
Methyl-t-butyl ether (MTBE)	**54**	5.0	ug/L	EPA 8260B	9/14/2002
TPH as Gasoline	**3600**	50	ug/L	EPA 8260B	9/14/2002
Toluene - d8 (Surr)	96.4		% Recovery	EPA 8260B	9/14/2002
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8260B	9/14/2002

Sample : **MW-2** Matrix : Water Lab Number : 28513-02
Sample Date :9/9/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 2.0**	2.0	ug/L	EPA 8260B	9/21/2002
Toluene	**< 2.0**	2.0	ug/L	EPA 8260B	9/21/2002
Ethylbenzene	**< 2.0**	2.0	ug/L	EPA 8260B	9/21/2002
Total Xylenes	**< 2.0**	2.0	ug/L	EPA 8260B	9/21/2002
Methyl-t-butyl ether (MTBE)	**740**	20	ug/L	EPA 8260B	9/21/2002
TPH as Gasoline	**< 200**	200	ug/L	EPA 8260B	9/21/2002
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	9/21/2002
4-Bromofluorobenzene (Surr)	99.7		% Recovery	EPA 8260B	9/21/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 28513
Date : 9/23/2002

Project Name : **610 Market Street, Oakland**
Project Number : **020909-EM1**

Sample : **MW-3** Matrix : Water Lab Number : 28513-03
Sample Date :9/9/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 200**	200	ug/L	EPA 8260B	9/21/2002
Toluene	**< 200**	200	ug/L	EPA 8260B	9/21/2002
Ethylbenzene	**< 200**	200	ug/L	EPA 8260B	9/21/2002
Total Xylenes	**< 200**	200	ug/L	EPA 8260B	9/21/2002
Methyl-t-butyl ether (MTBE)	**230000**	5000	ug/L	EPA 8260B	9/21/2002
TPH as Gasoline	**< 20000**	20000	ug/L	EPA 8260B	9/21/2002
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	9/21/2002
4-Bromofluorobenzene (Surr)	99.0		% Recovery	EPA 8260B	9/21/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 28513

Date : 9/23/2002

QC Report : Method Blank Data

Project Name : **610 Market Street, Oakland**

Project Number : **020909-EM1**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	9/20/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	9/20/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	9/20/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	9/20/2002
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	9/20/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	9/20/2002
Toluene - d8 (Surr)	98.1		%	EPA 8260B	9/20/2002
4-Bromofluorobenzene (Surr)	98.4		%	EPA 8260B	9/20/2002
Benzene	< 0.50	0.50	ug/L	EPA 8260B	9/14/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	9/14/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	9/14/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	9/14/2002
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	9/14/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	9/14/2002
Toluene - d8 (Surr)	96.8		%	EPA 8260B	9/14/2002
4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	9/14/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 28513

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 9/23/2002

Project Name : **610 Market Street, Oakland**

Project Number : **020909-EM1**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	28647-04	<0.50	40.0	40.0	41.7	40.2	ug/L	EPA 8260B	9/20/02	104	100	3.69	70-130	25
Toluene	28647-04	<0.50	40.0	40.0	40.7	39.4	ug/L	EPA 8260B	9/20/02	102	98.4	3.40	70-130	25
Tert-Butanol	28647-04	7.7	200	200	216	217	ug/L	EPA 8260B	9/20/02	104	104	0.0718	70-130	25
Methyl-t-Butyl Ether	28647-04	<0.50	40.0	40.0	36.3	36.1	ug/L	EPA 8260B	9/20/02	90.8	90.2	0.690	70-130	25
Benzene	28556-02	<0.50	40.0	40.0	41.3	41.2	ug/L	EPA 8260B	9/14/02	103	103	0.412	70-130	25
Toluene	28556-02	<0.50	40.0	40.0	39.2	39.3	ug/L	EPA 8260B	9/14/02	98.1	98.3	0.178	70-130	25
Tert-Butanol	28556-02	660	200	200	867	890	ug/L	EPA 8260B	9/14/02	102	113	10.5	70-130	25
Methyl-t-Butyl Ether	28556-02	<0.50	40.0	40.0	41.6	43.0	ug/L	EPA 8260B	9/14/02	104	107	3.14	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 28513

QC Report : Laboratory Control Sample (LCS)

Date : 9/23/2002

Project Name : **610 Market Street, Oakland**

Project Number : **020909-EM1**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	9/20/02	98.8	70-130
Toluene	40.0	ug/L	EPA 8260B	9/20/02	99.9	70-130
Tert-Butanol	200	ug/L	EPA 8260B	9/20/02	106	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	9/20/02	85.5	70-130
Benzene	40.0	ug/L	EPA 8260B	9/14/02	101	70-130
Toluene	40.0	ug/L	EPA 8260B	9/14/02	100	70-130
Tert-Butanol	200	ug/L	EPA 8260B	9/14/02	96.0	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	9/14/02	93.3	70-130

KIFF ANALYTICAL, LLC

Approved By: Joel Kiff

SHELL Chain Of Custody Record

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be Invoiced: Karen Petryna

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ CRMT HOUSTON

28513

INCIDENT NUMBER (S&E ONLY): 9 8 9 9 5 7 5 0

SAP or CRMT NUMBER (TS/CRMT):

DATE: 9/9/02

PAGE: 1 of 1

SAMPLING COMPANY:	LOG CODE:	SITE ADDRESS (Street and City):	GLOBAL ID NO.:
Blaine Tech Services	BTSS	610 Market Street, Oakland	T0600102121

ADDRESS: 1680 Rogers Avenue, San Jose, CA 95112

PROJECT CONTACT (Hardcopy or PDF Report to): Leon Gearhart

TELEPHONE:	FAX:	E-MAIL:
408-573-0555	408-573-7771	lgearhart@blainetech.com

EDF DELIVERABLE TO (Responsible Party or Designee): Anni Kreml

PHONE NO.: 510-420-3335

E-MAIL: ShellOaklandEDF@cambria-env.com

CONSULTANT PROJECT NO.: BTS #020909-EM1

SAMPLER NAME(S) (Print): Eric McReynolds

LAB USE ONLY

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

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

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

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)		TPH - Diesel, Extractable (8015m)									TEMPERATURE ON RECEIPT C°
	MW-1	9/9	10:50	GW	3	X	X	X																	-01
	MW-2	"	10:35	"	"	X	X	X																	-02
	MW-3	"	11:05	"	"	X	X	X																	-03

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

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Eric McReynolds			
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) John Cunliffe/Kiff Analytical	Date: 091002	Time: 1148

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

10/16/00 Revision

Q&Q Graphic (714) 898-9702

WELL GAUGING DATA

Project # 020918-EM1 Date 9/18/02 Client Shell

Site 610 Market St Oakland CA

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 (TOC)	
MW-4	4"					11.15	19.80		
MW-5	4					10.91	20.15		

SHELL WELL MONITORING DATA SHEET

BTS #: 020918-EM1	Site: 610 Market St
Sampler: EM	Date: 9/18/02
Well I.D.: MW-4	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 19.80	Depth to Water: 11.15
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer; Disposable Bailer; Middleburg; X Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: X Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

5.6 (Gals.) X 3 = 16.8 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
9:05	72.1	6.4	840	40	5.6	clear
9:07	71.6	6.6	955	51	11.2	"
9:09	70.9	6.7	919	47	16.8	"
9:20	DTW = 12.51					80% recharge = 12.88

Did well dewater? Yes (No) Gallons actually evacuated: 17

Sampling Time: 9:25 Sampling Date: 9/18/02

Sample I.D.: MW-4 Laboratory: (Kiff) SPL 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 #: 020918-EM1	Site: 610 Market St
Sampler: EM	Date: 9/18/02
Well I.D.: MW-5	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 20.15	Depth to Water: 10.81
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer; Disposable Bailer; Middleburg; X Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: X Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

6 (Gals.) X	3	=	18 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
9:31	71.9	6.8	1355	20	6	clear
9:33	72.1	6.8	1401	52	12	"
9:35	72.2	6.8	1360	83	18	"
9:45	DTW = 12.32					80% recharge = 12.67

Did well dewater? Yes (No)		Gallons actually evacuated:	18
Sampling Time:	9:50	Sampling Date:	9/18/02
Sample I.D.:	MW-5	Laboratory: (Kiff) SPL 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

WELL GAUGING DATA

Project # 020909-EM1 Date 9/9/02 Client Shell

Site 610 Market 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 TOC	
MW-1	4					14.05	24.70		
MW-2	4	Gauged w/ stinger in well				12.38	19.79		
MW-3	4	Gauged w/ stinger in well				11.92	19.70		
MW-4	4					11.07	19.80		
MW-5	4					10.82	20.15		

SHELL WELL MONITORING DATA SHEET

BTS #: 020909-EM1	Site: 610 Market St. Oakland
Sampler: EM	Date: 9/9/02
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 24.70	Depth to Water: 14.05
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer; Disposable Bailer; Middleburg; X Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: (Bailer); X Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

6.9 (Gals.) X 3 = 20.7 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (uS))	Turbidity (NTUs)	Gals. Removed	Observations
9:30	71.5	6.7	888	16	7	clear
9:33	70.9	6.7	912	18	14	clear
9:36	71.0	6.7	921	10	21	clear
		80% Recharge = 16.18				
10:45	DTW = 14.23					

Did well dewater? Yes (No) Gallons actually evacuated: 21

Sampling Time: 10:50 Sampling Date: 9/9/02

Sample I.D.: MW-1 Laboratory: (Kiff) SPL 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 #: 020909-EM1	Site: 610 Market St. Oakland
Sampler: EM	Date: 9/9/02
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 19.79	Depth to Water: 12.38
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer; Disposable Bailer; Middleburg; X Electric Submersible; Waterra Peristaltic; Extraction Pump; Other_____

Sampling Method: (Bailer); X Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

4.9 (Gals.) X 3 = 14.4 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
9:15	~~22.5~~ 72.4	6.6	961.0	150	5	clear
9:17	71.9	6.6	877	20	10	"
9:19	71.4	6.7	873	10	15	"
	80%	recharge = 13.86				
10:30	DTW = 12.41					

Did well dewater? Yes (No) Gallons actually evacuated: 15

Sampling Time: 10:55 Sampling Date: 9/9/02

Sample I.D.: MW-2 Laboratory: (Kiff) SPL 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 #: 020909-EM1	Site: 610 Market St. Oakland
Sampler: EM	Date: 9/9/02
Well I.D.: MW-3	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 19.70	Depth to Water: 11.92
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer; Disposable Bailer; Middleburg; X Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: (Bailer); X Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

5.0 (Gals.) X 3 = 15 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
9:45	73.4	6.7	556	8	5	clear
9:47	73.2	6.7	624	8	10	clear
9:50	73.3	6.7	621	9	15	clear
↓	80%	recharge = 13.48				
11:00	DTW	12.05				

Did well dewater? Yes (No) Gallons actually evacuated: 15

Sampling Time: 11:05 Sampling Date: 9/9/02

Sample I.D.: MW-3 Laboratory: (Kiff) SPL 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 #: 020909-EM1	Site: 610 Market St. Oakland
Sampler: EM	Date: 9/9/02
Well I.D.: MW-4	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 19.80	Depth to Water: 11.07
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method: Bailer; Disposable Bailer; Middleburg; X Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: (Bailer); X Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

5.6 (Gals.) X 3 = 16.8 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
	Inaccessible - tractor trailer parked on 6th St.					

Did well dewater? Yes No — Gallons actually evacuated:

Sampling Time: — Sampling Date: 9/9/02

Sample I.D.: MW-4 — Laboratory: (Kiff) SPL 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 #: 020909-EM1	Site: 610 Market St. Oakland
Sampler: EM	Date: 9/9/02
Well I.D.: MW-5	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 20.15	Depth to Water: 10.82
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:
- Bailer
- Disposable Bailer
- Middleburg
- X Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other ____

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

6.1 (Gals.) X 3 = 18.3 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
	Inaccessable - Tractor trailer parked on 6th St					

Did well dewater? Yes No		Gallons actually evacuated:	
Sampling Time:		Sampling Date: 9/9/02	
Sample I.D.: MW-5		Laboratory: (Kiff) SPL 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

ATTACHMENT B

Vapor Sample Analytical Laboratory Reports

KIFF ANALYTICAL LLC

Report Number : 27473
Date : 7/15/2002

Jacquelyn Jones
Cambria Environmental Technology, Inc.
1144 65th Street, Suite B
Oakland, CA 94608

Subject : 1 Air Sample
Project Name : 610 Market St. Oakland, Ca
Project Number : 244-0594-006
P.O. Number : 98995750

Dear Ms. Jones,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 27473
Date : 7/15/2002

Project Name : **610 Market St. Oakland, Ca**
Project Number : **244-0594-006**

Sample : **T-2** Matrix : Air Lab Number : 27473-01
Sample Date :7/12/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.098**	0.050	ppmv	EPA 8260B	7/13/2002
Toluene	**0.070**	0.050	ppmv	EPA 8260B	7/13/2002
Ethylbenzene	**0.17**	0.050	ppmv	EPA 8260B	7/13/2002
Total Xylenes	**0.60**	0.050	ppmv	EPA 8260B	7/13/2002
Methyl-t-butyl ether	**87**	0.40	ppmv	EPA 8260B	7/14/2002
TPH as Gasoline	**51**	5.0	ppmv	EPA 8260B	7/13/2002
Toluene - d8 (Surr)	99.7		% Recovery	EPA 8260B	7/13/2002
4-Bromofluorobenzene (Surr)	98.0		% Recovery	EPA 8260B	7/13/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL

720 Olive Drive, Suite D

Davis, CA 95616

(530) 297-4800 (530) 297-4803 fax

EQUIVA Services LLC Chain Of Custody Record 27473

Equiva Project Manager to be Invoiced:

☒ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☐ CRMT HOUSTON

Karen Petryna

INCIDENT NUMBER (S&E ONLY): 98995750

SAP or CRMT NUMBER (TS/CRMT):

DATE: 7-12-02

PAGE: 1 of 1

SAMPLING COMPANY: Cambria Environmental Technology

LOG CODE:

SITE ADDRESS (Street and City): 610 Market St. Oakland, Ca

GLOBAL ID NO.:

ADDRESS: 1144 65th St Oakland, Ca

EDF DELIVERABLE TO (Responsible Party or Designee):

PHONE NO.:

E-MAIL:

CONSULTANT PROJECT NO.: 244-0594-006

PROJECT CONTACT (Hardcopy or PDF Report to): Jacquelyn Jones

SAMPLER NAME(S) (Print): Sanjiv Gill

TELEPHONE: 510-420-3316

FAX: 510-420-9170

E-MAIL:

LAB USE ONLY

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

REQUESTED ANALYSIS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

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

SPECIAL INSTRUCTIONS OR NOTES:

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (48-____)		TPH - Diesel, Extractable (8015m)		MTBE (8260B) Confirmation, See Note	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes / UST REPORTING REQUIRED
	T-2	7-12-02	5:45	air	1	X	X	X																		-01

Relinquished by: (Signature)	Received by: (Signature)	Date: 7-12-02	Time: 7:45
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kiff Analytical	Date: 071202	Time: 1945

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10/16/00 Revision

Q&Q Graphics (714) 898-9702

KIFF ANALYTICAL LLC

Report Number : 27841
Date : 8/9/02

Jacquelyn Jones
Cambria Environmental Technology, Inc.
1144 65th Street, Suite B
Oakland, CA 94608

Subject : 1 Air Sample
Project Name : 610 Market St. Oakland, Ca
Project Number : 244-0594-006
P.O. Number : 98995756

Dear Ms. Jones,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 27841
Date : 8/9/02

Project Name : **610 Market St. Oakland, Ca**
Project Number : **244-0594-006**

Sample : **T-2** Matrix : Air Lab Number : 27841-01
Sample Date :8/2/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**21**	0.20	ppmv	EPA 8260B	8/3/02
Toluene	**140**	5.0	ppmv	EPA 8260B	8/4/02
Ethylbenzene	**22**	0.20	ppmv	EPA 8260B	8/3/02
Total Xylenes	**100**	0.20	ppmv	EPA 8260B	8/3/02
Methyl-t-butyl ether	**2200**	13	ppmv	EPA 8260B	8/5/02
TPH as Gasoline	**5400**	500	ppmv	EPA 8260B	8/4/02
Toluene - d8 (Surr)	91.2		% Recovery	EPA 8260B	8/3/02
4-Bromofluorobenzene (Surr)	86.4		% Recovery	EPA 8260B	8/3/02

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL

720 Olive Drive, Suite D
Davis, CA 95616
(530) 297-4800 (530) 297-4803 fax

SHELL Chain Of Custody Record

27841

Shell Project Manager to be Invoiced:

- [X] SCIENCE & ENGINEERING
- [ ] TECHNICAL SERVICES
- [ ] GMRT HOUSTON

Karen Petryna

INCIDENT NUMBER (S&E ONLY): 98995756

SAP or CRMT NUMBER (TS/CRMT):

DATE: 8-2-02

PAGE: 1 of 1

SAMPLING COMPANY: Cambria Env. Tech

LOG CODE:

SITE ADDRESS (Street and City): 610 Market St - Oakland, Ca

GLOBAL ID NO.:

ADDRESS: 1144 65th St. Oakland, Ca

EDF DELIVERABLE TO (Responsible Party or Designee):

PHONE NO.: 510-420-0700

E-MAIL:

CONSULTANT PROJECT NO.: 244-0594-006

PROJECT CONTACT (Hardcopy or PDF Report to): Jacquelin Jones

SAMPLER NAME(S) (Print): Sanjiv Gill

LAB USE ONLY

TELEPHONE: 510-420-0700 FAX: 510-420-9170 E-MAIL:

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

[ ] LA - RWQCB REPORT FORMAT [ ] UST AGENCY:

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

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

Report results in PPMV

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (48-_____)		TPH - Diesel, Extractable (8015m)		MTBE (8260B) Confirmation, See Note	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	T-2	8-2-02	6:00	air	1	X	X	X																		-01

TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature)	Received by: (Signature)	Date: 8-2-02	Time: 12:10
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Kris A. Kiniyo / KIFF ANALYTICAL	Date: 080302	Time: 1210

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10/15/00 Revision

Q&Q Graphic (714) 898-9702

KIFF ANALYTICAL LLC

Report Number : 28472
Date : 9/16/2002

Jacquelyn Jones
Cambria Environmental Technology, Inc.
1144 65th Street, Suite B
Oakland, CA 94608

Subject : 1 Air Sample
Project Name : 610 Market St. Oakland, Ca
Project Number : 244-0594-006
P.O. Number : 98995750

Dear Ms. Jones,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 28472
Date : 9/16/2002

Project Name : **610 Market St. Oakland, Ca**
Project Number : **244-0594-006**

Sample : **T-2** Matrix : Air Lab Number : 28472-01
Sample Date :9/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**14**	1.0	ppmv	EPA 8260B	9/8/2002
Toluene	**53**	1.0	ppmv	EPA 8260B	9/8/2002
Ethylbenzene	**3.8**	1.0	ppmv	EPA 8260B	9/8/2002
Total Xylenes	**17**	1.0	ppmv	EPA 8260B	9/8/2002
Methyl-t-butyl ether	**500**	2.0	ppmv	EPA 8260B	9/8/2002
TPH as Gasoline	**710**	100	ppmv	EPA 8260B	9/8/2002
Toluene - d8 (Surr)	107		% Recovery	EPA 8260B	9/8/2002
4-Bromofluorobenzene (Surr)	97.2		% Recovery	EPA 8260B	9/8/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL

720 Olive Drive, Suite D

Davis, CA 95616

(530) 297-4800 (530) 297-4803 fax

EQUIVA Services LLC Chain Of Custody Record 28472

Equiva Project Manager to be invoiced:

☒ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ CRMT HOUSTON — Karen Petryna

INCIDENT NUMBER (S&E ONLY): 98995750

SAP or CRMT NUMBER (TS/CRMT):

DATE: 9-6-02

PAGE: 1 of 1

SAMPLING COMPANY: Cambria Environmental Technology

LOG CODE:

SITE ADDRESS (Street and City): 610 Market St. Oakland, Ca

GLOBAL ID NO.:

ADDRESS: 1144 65th St. Oakland, Ca.

EDF DELIVERABLE TO (Responsible Party or Designee):

PHONE NO.:

E-MAIL:

CONSULTANT PROJECT NO.: 244-0594-006

PROJECT CONTACT (Hardcopy or PDF Report to): Jacquelyn Jones

TELEPHONE: 510-420-3316

FAX: 510-420-9170

E-MAIL:

SAMPLER NAME(S) (Print): Sanjiv Gill

(LAB USE ONLY)

TURNAROUND TIME (BUSINESS DAYS):

☒ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

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

SPECIAL INSTRUCTIONS OR NOTES:

TEMPERATURE ON RECEIPT C°:

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (4B-____)		TPH - Diesel, Extractable (8015m)		MTBE (8260B) Confirmation, See Note	UST REPORTING REQUIRED
	T-2	9-602	6:15	air	1	X	X	X																		-01

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

Relinquished by: (Signature)	Received by: (Signature)	Date: 090702	Time: 1545
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Luis A. Zuniga / KIFF ANALYTICAL	Date: 090702	Time: 1545

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10/16/00 Fluvision