

PO-213



**Shell Oil Products US**

January 24, 2005

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

Alameda County  
JAN 28 2005  
Environmental Health

**Subject: Shell-branded Service Station**  
11989 Dublin Boulevard  
Dublin, California

Dear Mr. Schultz:

Attached for your review and comment is a copy of the *Groundwater Monitoring Report - Fourth Quarter 2004* 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  
Sr. Environmental Engineer

January 24, 2005

Mr. Robert Schultz  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

Re: **Groundwater Monitoring Report – Fourth Quarter 2004**  
Shell-branded Service Station  
11989 Dublin Boulevard  
Dublin, California  
SAP Code 135243  
Incident No. 98995328



Dear Mr. Schultz:

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

## **NOTICE OF CHANGE IN CONSULTANT**

Effective January 10, 2005, Shell is transferring the management of this project from Cambria Environmental Technology, Inc. to Delta Environmental Consultants, Inc., 175 Bernal Road, Suite 200, San Jose, CA 95119. Please remove Cambria from the copy list and forward future correspondence to Mr. Lee Dooley of Delta, at the address listed above. Mr. Dooley can be reached at (408) 224-4724.

## **FOURTH QUARTER 2004 ACTIVITIES**

Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled the site wells and prepared a summary table of field gauging and laboratory analytical data. Well MW-4 was not gauged or sampled because it has been paved over during road work. Cambria prepared a vicinity/area well survey map (Figure 1) and a groundwater contour/chemical concentration map (Figure 2). Blaine's report, presenting the laboratory report, is included as Appendix A.

**Cambria  
Environmental  
Technology, Inc.**

270 Perkins Street  
P.O. Box 259  
Sonoma, CA 95476  
Tel (707) 935-4850  
Fax (707) 935-6649

# C A M B R I A

## ANTICIPATED FIRST QUARTER 2005 ACTIVITIES

Blaine will gauge and sample the site wells according to the existing sampling schedule and tabulate the data. Delta will prepare a groundwater monitoring report.

## HISTORICAL REMEDIATION SUMMARY

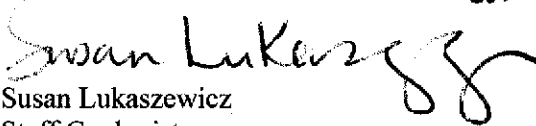
Previous site remediation was performed on a weekly basis from June 30 to August 19, 2003, by periodic groundwater extraction (GWE) from well MW-2. The program removed a total of 1,587 gallons of groundwater for an estimate of 0.079 pounds of total petroleum hydrocarbons as gasoline and 1.159 pounds of MTBE. MTBE concentrations in MW-2 declined from 12,000 parts per billion (ppb) prior to periodic GWE to 4,800 ppb the sample event immediately after. Contaminant concentrations in well MW-2 have been consistently declining ever since the GWE was performed.

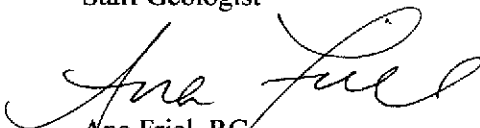
## CLOSING

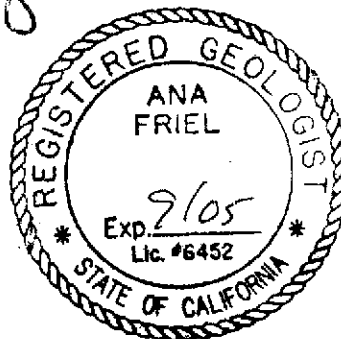
If you have any questions regarding the contents of this document, please call Ana Friel at (707) 442-2700. Any questions or comments concerning future site activities should be directed to Ms. Karen Petryna of Shell, or Mr. Lee Dooley of Delta.

Sincerely,

**Cambria Environmental Technology, Inc.**

  
Susan Lukaszewicz  
Staff Geologist

  
Ana Friel, RG  
Senior Project Geologist  
RG# 6452



# C A M B R I A

Attachments:

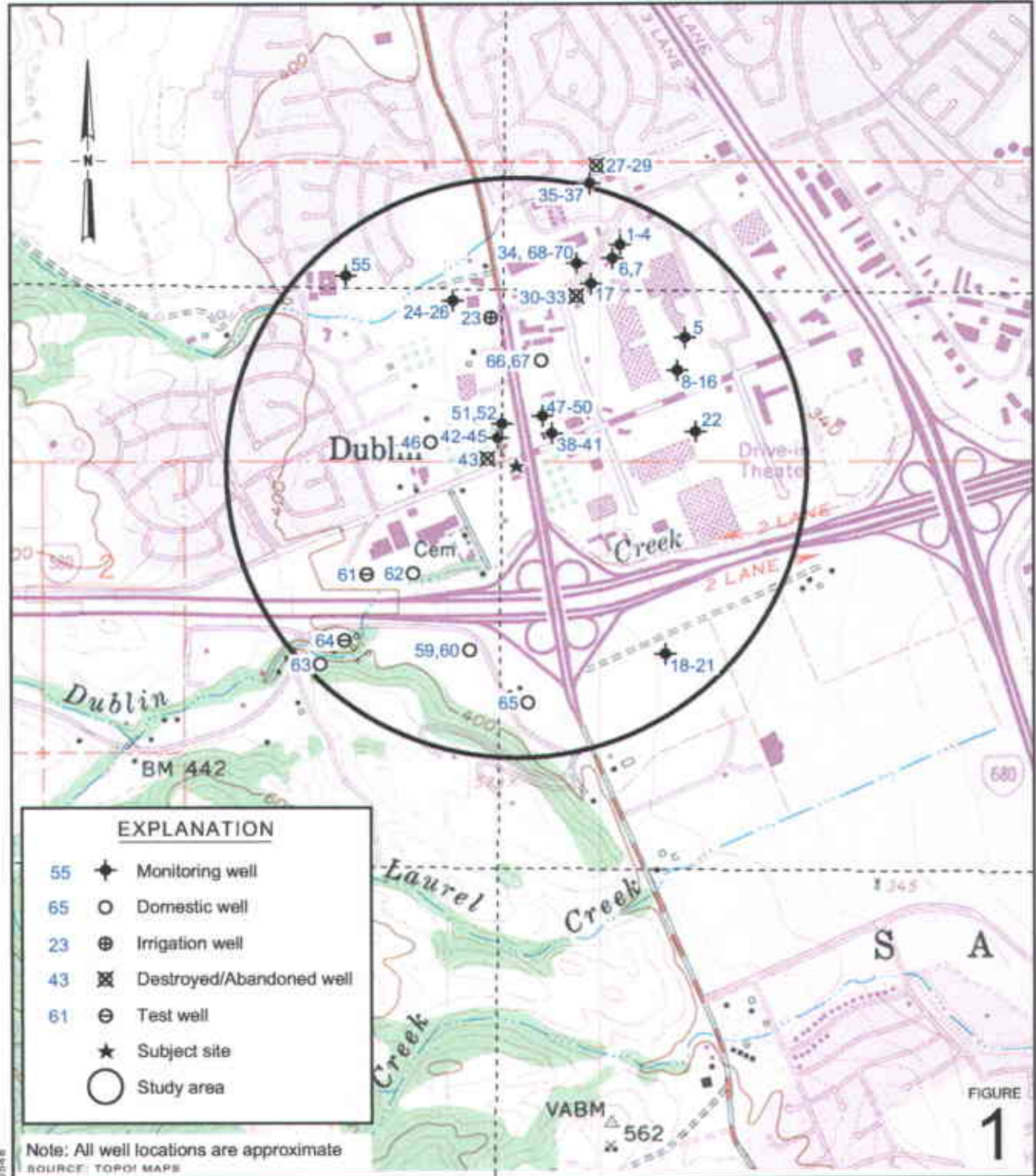
Figure 1. Vicinity/Area Well Survey Map

Figure 2. Groundwater Contour/Chemical Concentration Map

Appendix A. Blaine Tech Services Inc., Groundwater Monitoring Report

cc: Karen Petryna, Shell  
Lee Dooley, Delta Environmental Consultants, Inc.

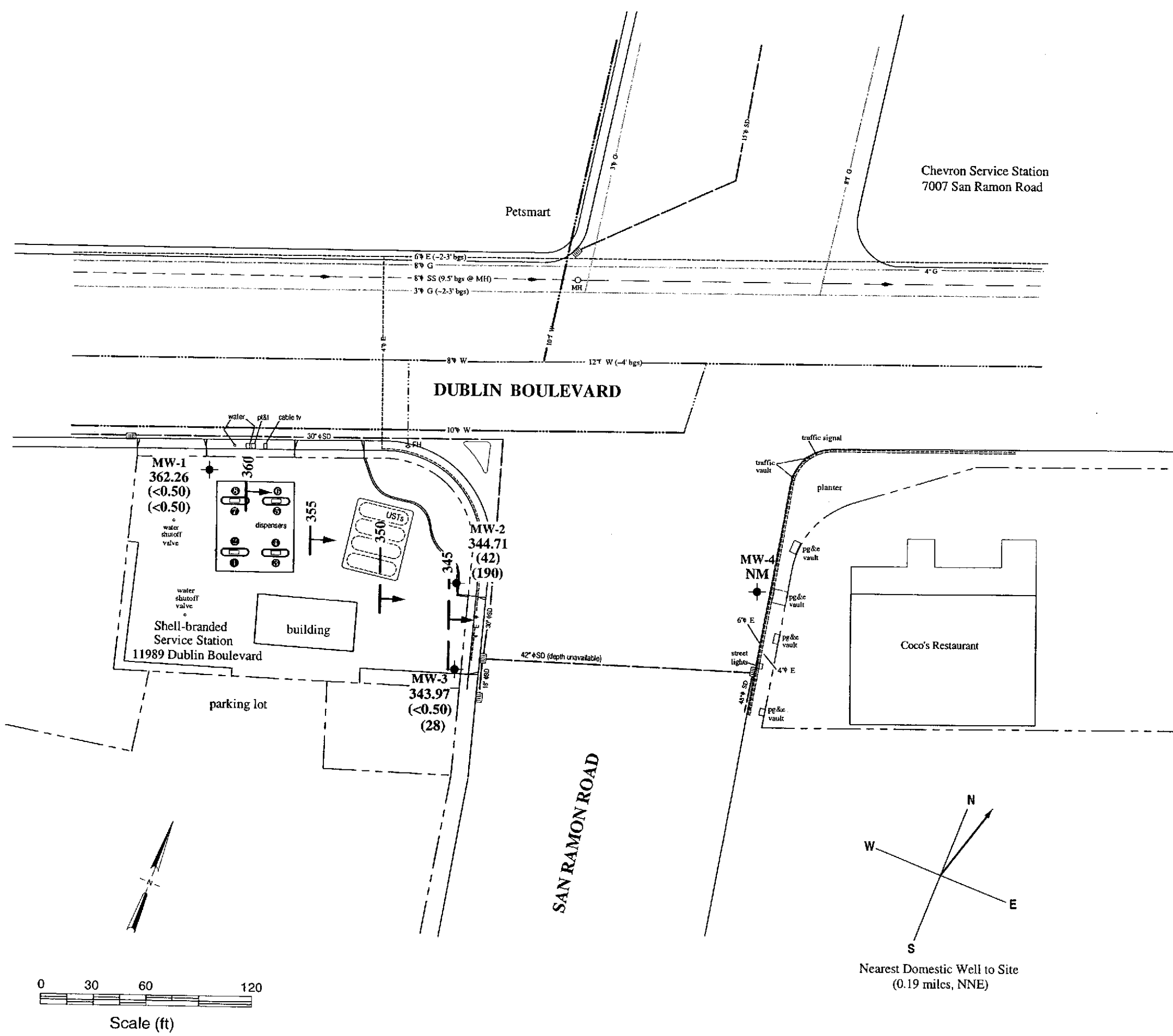





**Shell-branded Service Station**  
 11989 Dublin Boulevard  
 Dublin, California

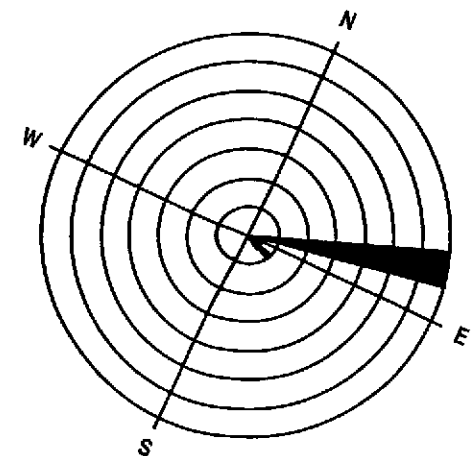


**Vicinity/Area Well  
 Survey Map**  
 (1/2 Mile Radius)



**EXPLANATION**

- ◆ Monitoring well location
  - Product dispenser number
  - FH ○ Fire Hydrant (FH)
  - MH ○ Manhole (MH)
  - ▣ Storm drain inlet
  - 8.28' bgs Utility depth below ground surface
  - ➔ Flow direction indicator
  - Gas line (G)
  - Storm Drain line (SD)
  - Water line (W)
  - Sanitary Sewer line (SS)
  - Electric line (E)
- 
 Groundwater elevation contour in feet referenced to mean sea level (ft msl). Arrows indicate approximate groundwater flow direction
- 343.97** Groundwater elevation in ft msl  
**(<0.50)** Benzene concentration in parts per billions (ppb)  
**(28)** MTBE concentration in ppb  
**<x** Not detected at reporting limit x  
 NM = Not measured, paved over  
 Approximate hydraulic gradient = 0.13

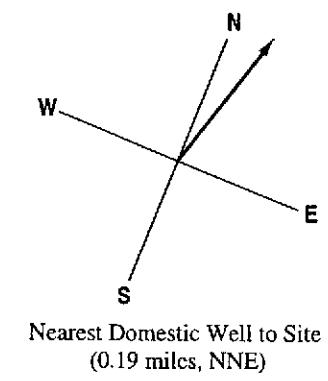


Groundwater Gradient Direction  
(07/20/99 to 01/05/04)

FIGURE  
**2**



Scale (ft)



Nearest Domestic Well to Site  
(0.19 miles, NNE)

**Appendix A**

**Blaine Tech Services Inc.,  
Groundwater Monitoring Report**

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

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**GROUNDWATER SAMPLING SPECIALISTS**  
SINCE 1985

November 19, 2004

Karen Petryna  
Shell Oil Products US  
20945 South Wilmington Avenue  
Carson, CA 90810

Fourth Quarter 2004 Groundwater Monitoring at  
Shell-branded Service Station  
11989 Dublin Boulevard  
Dublin, CA

Monitoring performed on November 1, 2004

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Groundwater Monitoring Report **041101-MB-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 Martinez Refining Company.

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

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



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

Please call if you have any questions.

Yours truly,

Leon Gearhart  
Project Coordinator

LG/ks

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

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

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**11989 Dublin Boulevard**  
**Dublin, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1	07/20/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	NA	NA	NA	NA	NA	367.99	6.24	361.75	NA
MW-1	10/25/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	NA	NA	NA	NA	NA	367.99	6.36	361.63	NA
MW-1	01/27/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	367.99	5.65	362.34	NA
MW-1	04/03/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	367.99	5.68	362.31	1.2/1.6
MW-1	07/27/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	367.99	5.69	362.30	1.0/1.1
MW-1	10/16/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	367.99	5.74	362.25	1.2/0.8
MW-1	01/16/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	367.99	5.71	362.28	0.59/2.8
MW-1	04/19/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	367.99	5.63	362.36	1.4/1.5
MW-1	07/13/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	367.99	5.70	362.29	2.3/3.1
MW-1	08/13/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	367.99	5.72	362.27	NA
MW-1	10/26/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	367.99	5.73	362.26	0.4/0.0
MW-1	01/11/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	367.99	5.55	362.44	5.4/2.0
MW-1	05/22/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	367.99	5.55	362.44	NA
MW-1	07/15/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	367.99	5.70	362.29	NA
MW-1	10/11/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	367.99	5.87	362.12	NA
MW-1	01/17/2003	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	NA	NA	NA	NA	367.99	5.79	362.20	NA
MW-1	05/01/2003	52	NA	<0.50	<0.50	<0.50	<1.0	NA	<5.0	NA	NA	NA	NA	NA	367.99	5.61	362.38	NA
MW-1	08/27/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	367.99	5.84	362.15	NA
MW-1	10/03/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	367.99	5.95	362.04	NA
MW-1	01/05/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	367.99	5.66	362.33	NA
MW-1	04/09/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	367.99	5.55	362.44	NA
MW-1	07/22/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	367.99	5.73	362.26	NA
MW-1	11/01/2004	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	367.99	5.73	362.26	NA
MW-2	07/20/1999	2,600	699	55.0	<2.50	59.5	<2.50	9,370	NA	NA	NA	NA	NA	NA	365.43	20.31	345.12	NA
MW-2	10/25/1999	4,710	761	61.1	<10.0	74.6	<10.0	22,800	NA	NA	NA	NA	NA	NA	365.43	22.80	342.63	NA
MW-2	01/27/2000	3,820	1490	60.8	<10.0	156	<10.0	13,400	15,000a	NA	NA	NA	NA	NA	365.43	19.17	346.26	NA
MW-2	04/03/2000	7,130	NA	184	14.9	238	18.8	34,200	28,000	NA	NA	NA	NA	NA	365.43	19.03	346.40	1.6/1.7

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**11989 Dublin Boulevard**  
**Dublin, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-2	07/27/2000	311	NA	10.0	<0.500	<0.500	<0.500	280	NA	NA	NA	NA	NA	NA	365.43	19.09	346.34	1.9/1.7
MW-2	10/16/2000	3,970	NA	123	<5.00	68.5	<5.00	14,000	15,600	NA	NA	NA	NA	NA	365.43	23.98	341.45	0.5/0.5
MW-2	01/16/2001	5,780	NA	125	9.71	139	6.93	7,660	7,810	NA	NA	NA	NA	NA	365.43	22.12	343.31	0.90/2.61
MW-2	04/19/2001	4,460	NA	114	7.61	115	4.87	15,200	18,400	NA	NA	NA	NA	NA	365.43	20.95	344.48	1.6/1.5
MW-2	07/13/2001	<5,000	NA	<25	<25	110	<25	NA	15,000	NA	NA	NA	NA	NA	365.43	22.62	342.81	2.7/1.8
MW-2	08/13/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	365.43	22.33	343.10	NA
MW-2	10/26/2001	3,700	NA	<20	<20	66	<20	NA	9,200	<20	<20	<20	1,800	<500	365.43	22.32	343.11	0.7/0.8
MW-2	01/11/2002	<5,000	NA	<50	<50	54	<50	NA	15,000	NA	NA	NA	NA	NA	365.43	18.72	346.71	5.1/c
MW-2	05/22/2002	<5,000	NA	53	<50	57	<50	NA	20,000	<50	<50	<50	6,300	NA	365.43	20.59	344.84	NA
MW-2	07/15/2002	<5,000	NA	<50	<50	<50	<50	NA	16,000	<50	<50	<50	3,100	NA	365.43	21.90	343.53	NA
MW-2	10/11/2002	3,600	NA	<20	<20	48	<20	NA	8,200	<20	<20	<20	1,600	NA	365.43	22.45	342.98	NA
MW-2	01/17/2003	4,700	NA	<25	<25	87	<25	NA	13,000	<25	<25	<25	7,700	NA	365.43	19.27	346.16	NA
MW-2	05/01/2003	6,000	NA	<50	<50	110	<100	NA	12,000	<200	<200	<200	6,700	NA	365.43	19.09	346.34	NA
MW-2	08/27/2003	2,500	NA	32	<25	100	<50	NA	4,800	<100	<100	<100	9,100	NA	365.43	22.53	342.90	NA
MW-2	10/03/2003	5,500 d	NA	32	<13	86	<25	NA	2,200	<50	<50	<50	9,900	NA	365.43	23.02	342.41	NA
MW-2	01/05/2004	6,500	NA	22	<13	58	<25	NA	1,200	<50	<50	<50	7,400	NA	365.43	19.08	346.35	NA
MW-2	04/09/2004	6,500	NA	72	<13	30	<25	NA	1,600	<50	<50	<50	11,000	NA	365.43	20.22	345.21	NA
MW-2	07/22/2004	4,900	NA	32	<13	19	<25	NA	180	<50	<50	<50	7,100	NA	365.43	22.14	343.29	NA
MW-2	11/01/2004	5,700	NA	42	<13	13	<25	NA	190	<50	<50	<50	6,100	NA	365.43	20.72	344.71	NA
MW-3	07/20/1999	208	177	4.69	<0.500	<0.500	<0.500	664	NA	NA	NA	NA	NA	NA	364.97	24.23	340.74	NA
MW-3	10/25/1999	378	182	9.49	<0.500	<0.500	<0.500	1,410	NA	NA	NA	NA	NA	NA	364.97	23.26	341.71	NA
MW-3	01/27/2000	428	100	29.4	<0.500	<0.500	<0.500	941	NA	NA	NA	NA	NA	NA	364.97	19.53	345.44	NA
MW-3	04/03/2000	<125	NA	11.4	<1.25	<1.25	<1.25	639	NA	NA	NA	NA	NA	NA	364.97	19.13	345.84	1.4/1.9
MW-3	07/27/2000	4,360	NA	78.4	6.95	85.8	2.61	26,600	25,200b	NA	NA	NA	NA	NA	364.97	19.10	345.87	1.9/2.0
MW-3	10/16/2000	586	NA	21.3	<0.500	<0.500	<0.500	3,310	NA	NA	NA	NA	NA	NA	364.97	24.11	340.86	1.1/0.8
MW-3	01/16/2001	558	NA	14.7	<0.500	<0.500	<0.500	2,210	NA	NA	NA	NA	NA	NA	364.97	22.19	342.78	0.87/3.5
MW-3	04/19/2001	376	NA	9.08	<0.500	<0.500	<0.500	667	NA	NA	NA	NA	NA	NA	364.97	20.96	344.01	1.7/1.4
MW-3	07/13/2001	370	NA	<2.0	<2.0	<2.0	<2.0	NA	670	NA	NA	NA	NA	NA	364.97	22.77	342.20	3.1/4.8

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**11989 Dublin Boulevard**  
**Dublin, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-3	08/13/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	364.97	22.59	342.38	NA
MW-3	10/26/2001	<200	NA	<2.0	<2.0	<2.0	<2.0	NA	680	<2.0	<2.0	<2.0	79	<500	364.97	22.81	342.16	1.0/3.2
MW-3	01/11/2002	480	NA	<2.0	<2.0	<2.0	<2.0	NA	830	NA	NA	NA	NA	NA	364.97	18.88	346.09	1.1/3.2
MW-3	05/22/2002	570	NA	<1.0	<1.0	<1.0	<1.0	NA	680	<2.0	<2.0	<2.0	58	NA	364.97	20.75	344.22	NA
MW-3	07/15/2002	420	NA	1.1	<1.0	<1.0	1.1	NA	520	<2.0	<2.0	<2.0	53	NA	364.97	22.09	342.88	NA
MW-3	10/11/2002	730	NA	<0.50	<0.50	<0.50	<0.50	NA	320	<2.0	<2.0	<2.0	330	NA	364.97	22.68	342.29	NA
MW-3	01/17/2003	740	NA	<0.50	<0.50	<0.50	<0.50	NA	150	<2.0	<2.0	<2.0	440	NA	364.97	19.34	345.63	NA
MW-3	05/01/2003	890	NA	<0.50	<0.50	<0.50	<1.0	NA	78	<2.0	<2.0	<2.0	300	NA	364.97	19.27	345.70	NA
MW-3	08/27/2003	920 d	NA	<0.50	<0.50	<0.50	<1.0	NA	52	<2.0	<2.0	<2.0	330	NA	364.97	22.73	342.24	NA
MW-3	10/03/2003	870 d	NA	<0.50	<0.50	<0.50	<1.0	NA	65	<2.0	<2.0	<2.0	520	NA	364.97	23.15	341.82	NA
MW-3	01/05/2004	860 d	NA	<0.50	<0.50	<0.50	<1.0	NA	40	<2.0	<2.0	<2.0	750	NA	364.97	19.60	345.37	NA
MW-3	04/09/2004	420 d	NA	<0.50	<0.50	<0.50	<1.0	NA	58	<2.0	<2.0	<2.0	280	NA	364.97	20.30	344.67	NA
MW-3	07/22/2004	570 e	NA	<0.50	<0.50	<0.50	<1.0	NA	20	<2.0	<2.0	<2.0	360	NA	364.97	22.42	342.55	NA
<b>MW-3</b>	<b>11/01/2004</b>	<b>430</b>	<b>NA</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>28</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>680</b>	<b>NA</b>	<b>364.97</b>	<b>21.00</b>	<b>343.97</b>	<b>NA</b>
MW-4	08/10/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	364.01	25.63	338.38	NA
MW-4	08/13/2001	2,400	NA	<10	<10	<10	<10	NA	8,300	NA	NA	NA	NA	NA	364.01	26.32	337.69	4.2/2.7
MW-4	10/26/2001	<2,000	NA	<20	<20	<20	<20	NA	8,600	NA	NA	NA	NA	NA	364.01	26.02	337.99	3.1/2.8
MW-4	01/11/2002	<2,000	NA	<20	<20	<20	<20	NA	5,100	NA	NA	NA	NA	NA	364.01	22.25	341.76	7.9/3.0
MW-4	05/22/2002	<500	NA	<5.0	<5.0	<5.0	<5.0	NA	3,200	<5.0	<5.0	<5.0	2,500	NA	364.01	23.96	340.05	NA
MW-4	07/15/2002	<2,500	NA	<20	<20	<20	<20	NA	7,000	<20	<20	<20	2,000	NA	363.97	25.18	338.79	NA
MW-4	10/11/2002	1,900	NA	<5.0	<5.0	<5.0	<5.0	NA	2,900	<5.0	<5.0	<5.0	5,100	NA	363.97	25.91	338.06	NA
MW-4	01/17/2003	580	NA	<2.5	<2.5	<2.5	<2.5	NA	59	<2.5	<2.5	<2.5	7,000	NA	363.97	22.38	341.59	NA
MW-4	05/01/2003	770	NA	<5.0	<5.0	<5.0	<10	NA	73	<20	<20	<20	4,300	NA	363.97	21.92	342.05	NA
MW-4	08/27/2003	<1,000	NA	<10	<10	<10	<20	NA	370	<40	<40	<40	11,000	NA	363.97	25.31	338.66	NA
MW-4	10/03/2003	<1,000	NA	<10	<10	<10	<20	NA	190	<40	<40	<40	11,000	NA	363.97	26.00	337.97	NA
MW-4	01/05/2004	<1,000	NA	<10	<10	<10	<20	NA	<10	<40	<40	<40	7,400	NA	363.97	23.48	340.49	NA
MW-4	04/09/2004	<1,000	NA	<10	<10	<10	<20	NA	<10	<40	<40	<40	5,700	NA	363.97	23.45	340.52	NA
MW-4	07/22/2004	Well inaccessible		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	363.97	NA	NA	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**11989 Dublin Boulevard**  
**Dublin, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-4	11/01/2004	Well inaccessible	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	363.97	NA	NA	NA

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to July 13, 2001, analyzed by EPA Method 8015.

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

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to July 13, 2001, analyzed by EPA Method 8020.

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether, analyzed by EPA Method 8260

ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260

TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260

TBA = Tertiary butyl alcohol, analyzed by EPA Method 8260

TOC = Top of Casing Elevation

GW = Groundwater

DO = Dissolved Oxygen

n/n = Pre-purge/Post-purge DO Readings

ug/L = Parts per billion

ppm = Parts per million

MSL = Mean sea level

ft. = Feet

<n = Below detection limit

NA = Not applicable

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**11989 Dublin Boulevard**  
**Dublin, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
---------	------	----------------	----------------	-------------	-------------	-------------	-------------	------------------------	------------------------	----------------	----------------	----------------	---------------	-------------------	--------------	----------------------------	--------------------------	------------------------

Notes:

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

b = Concentration is an estimate.

c = DO meter malfunctioning.

d = Hydrocarbon does not match pattern of laboratory's standard.

e = Sample contains discrete peak in addition to gasoline.

Wells surveyed June 21, 1999 by Virgil Chavez Land Surveying of Vallejo, CA.

Wells surveyed August 23, 2001 and February 18, 2002 by Virgil Chavez Land Surveying of Vallejo, CA.

**Blaine Tech Services, Inc.**

November 17, 2004

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Attn.: Leon Gearhart  
Project#: 041101-MB1  
Project: 98995328  
Site: 11989 Dublin Boulevard, Dublin

Dear Mr. Gearhart,

Attached is our report for your samples received on 11/02/2004 14:24  
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  
12/17/2004 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 Fuel Oxygenates by 8260B (C6-C12)**

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

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

Project: 041101-MB1  
98995328

Received: 11/02/2004 14:24

Site: 11989 Dublin Boulevard, Dublin

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-1	11/01/2004 15:00	Water	1
MW-2	11/01/2004 15:30	Water	2
MW-3	11/01/2004 15:15	Water	3



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

Blaine Tech Services, Inc.

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1680 Rogers Avenue

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

Project: 041101-MB1

98995328

Received: 11/02/2004 14:24

Site: 11989 Dublin Boulevard, Dublin

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-1	Lab ID:	2004-11-0079-1
Sampled:	11/01/2004 15:00	Extracted:	11/9/2004 20:04
Matrix:	Water	QC Batch#:	2004/11/09-2068

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/09/2004 20:04	Q6
Benzene	ND	0.50	ug/L	1.00	11/09/2004 20:04	
Toluene	ND	0.50	ug/L	1.00	11/09/2004 20:04	
Ethylbenzene	ND	0.50	ug/L	1.00	11/09/2004 20:04	
Total xylenes	ND	1.0	ug/L	1.00	11/09/2004 20:04	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	11/09/2004 20:04	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	104.4	76-130	%	1.00	11/09/2004 20:04	
Toluene-d8	100.8	78-115	%	1.00	11/09/2004 20:04	

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

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

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

Project: 041101-MB1  
98995328

Received: 11/02/2004 14:24

Site: 11989 Dublin Boulevard, Dublin

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-2	Lab ID: 2004-11-0079-2
Sampled: 11/01/2004 15:30	Extracted: 11/9/2004 20:22
Matrix: Water	QC Batch#: 2004/11/09-2C 68
Analysis Flag: L2 ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	5700	1300	ug/L	25.00	11/09/2004 20:22	
Benzene	42	13	ug/L	25.00	11/09/2004 20:22	
Toluene	ND	13	ug/L	25.00	11/09/2004 20:22	
Ethylbenzene	13	13	ug/L	25.00	11/09/2004 20:22	
Total xylenes	ND	25	ug/L	25.00	11/09/2004 20:22	
tert-Butyl alcohol (TBA)	6100	130	ug/L	25.00	11/09/2004 20:22	
Methyl tert-butyl ether (MTBE)	190	13	ug/L	25.00	11/09/2004 20:22	
Di-isopropyl Ether (DIPE)	ND	50	ug/L	25.00	11/09/2004 20:22	
Ethyl tert-butyl ether (ETBE)	ND	50	ug/L	25.00	11/09/2004 20:22	
tert-Amyl methyl ether (TAME)	ND	50	ug/L	25.00	11/09/2004 20:22	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	111.0	76-130	%	25.00	11/09/2004 20:22	
Toluene-d8	101.0	78-115	%	25.00	11/09/2004 20:22	

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

Blaine Tech Services, Inc.

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San Jose, CA 95112-1105

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

Project: 041101-MB1

98995328

Received: 11/02/2004 14:24

Site: 11989 Dublin Boulevard, Dublin

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-3	Lab ID:	2004-11-0079-3
Sampled:	11/01/2004 15:15	Extracted:	11/09/2004 20:40
Matrix:	Water	QC Batch#:	2004/11/09-2C168

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	430	50	ug/L	1.00	11/09/2004 20:40	
Benzene	ND	0.50	ug/L	1.00	11/09/2004 20:40	
Toluene	ND	0.50	ug/L	1.00	11/09/2004 20:40	
Ethylbenzene	ND	0.50	ug/L	1.00	11/09/2004 20:40	
Total xylenes	ND	1.0	ug/L	1.00	11/09/2004 20:40	
tert-Butyl alcohol (TBA)	680	5.0	ug/L	1.00	11/09/2004 20:40	
Methyl tert-butyl ether (MTBE)	28	0.50	ug/L	1.00	11/09/2004 20:40	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	1.00	11/09/2004 20:40	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	1.00	11/09/2004 20:40	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	1.00	11/09/2004 20:40	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	113.5	76-130	%	1.00	11/09/2004 20:40	
Toluene-d8	104.4	78-115	%	1.00	11/09/2004 20:40	

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

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 041101-MB1  
98995328

Received: 11/02/2004 14:24

Site: 11989 Dublin Boulevard, Dublin

Batch QC Report			
Prep(s): 5000B			Test(s): 8260B
Method: Blank		Water	QC Batch #: 2004/11/09-2C-68
MB: 2004/11/09-2C-68-001			Date Extracted: 11/09/2004 18:01

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/09/2004 18:01	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/09/2004 18:01	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/09/2004 18:01	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	11/09/2004 18:01	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	11/09/2004 18:01	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	11/09/2004 18:01	
Benzene	ND	0.5	ug/L	11/09/2004 18:01	
Toluene	ND	0.5	ug/L	11/09/2004 18:01	
Ethylbenzene	ND	0.5	ug/L	11/09/2004 18:01	
Total xylenes	ND	1.0	ug/L	11/09/2004 18:01	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	95.8	76-130	%	11/09/2004 18:01	
Toluene-d8	100.6	78-115	%	11/09/2004 18:01	

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

Blaine Tech Services, Inc.

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San Jose, CA 95112-1105

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

Project: 041101-MB1

98995328

Received: 11/02/2004 14:24

Site: 11989 Dublin Boulevard, Dublin

Batch QC Report			
Prep(s): 5039B			Test(s): 8260B
Laboratory Control Spike	Water		QC Batch # 2004/11/09-2C-68
LCS: 2004/11/09-2C-68-010	Extracted: 11/09/2004		Analyzed: 11/09/2004 17:10
LCSD:			

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	26.0		25	104.0			65-165	20		
Benzene	25.7		25	102.8			69-129	20		
Toluene	23.7		25	94.8			70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	499		500	99.8			76-130			
Toluene-d8	507		500	101.4			78-115			

Severn Trent Laboratories, Inc.

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

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

11/16/2004 16:09

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

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 041101-MB1  
98995328

Received: 11/02/2004 14:24

Site: 11989 Dublin Boulevard, Dublin

Batch QC Report			
Preps:	5030B		Test(s): 8260B
Matrix Spike (MS / MSD)		Water	QC Batch #: 2004/11/09-2C 68
MS/MSD:			Lab ID: 2004-11-0058-008
MS:	2004/11/09-2C 68-050	Extracted: 11/09/2004	Analyzed: 11/09/2004 18:50
			Dilution: 100
MSD:	2004/11/09-2C 68-009	Extracted: 11/09/2004	Analyzed: 11/09/2004 19:09
			Dilution: 100

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	23.7	22.8	0.588	25	92.4	88.8	4.0	65-165	20		
Benzene	24.4	24.6	ND	25	97.6	98.4	0.8	69-129	20		
Toluene	21.9	20.3	ND	25	87.6	81.2	7.6	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	516	531		500	103.2	106.2		76-130			
Toluene-d8	510	518		500	102.0	103.6		78-115			

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

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

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

Project: 041101-MB1  
98995328

Received: 11/02/2004 14:24

Site: 11989 Dublin Boulevard, Dublin

**Legend and Notes**

**Sample Comment**

Lab ID: 2004-11-0079 -1

Siloxane peaks were found in the sample that are not believed to be gasoline related. If they were quantified as gasoline the concentration would be 53ug/L.

**Analysis Flag**

L2

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

**Result Flag**

Q6

The concentration reported reflect(s) individual or discrete unidentified peaks not matching a typical fuel pattern.











## SHELL WELL MONITORING DATA SHEET

BTS #: <u>041101-MT2</u>	Site: <u>98995328</u>
Sampler: <u>MT</u>	Date: <u>11/1/04</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth (TD): <u>32.40</u>	Depth to Water (DTW): <u>20.72</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>23.06</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

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

$\frac{7.6 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{22.8 \text{ Gals.}}{\text{Calculated Volume}}$	<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 µS)	Turbidity (NTUs)	Gals. Removed	Observations
1520	68.9	6.6	1098	20.3	7.6	ODW
1522	68.4	6.5	1090	15.2	15.2	"
1525	68.3	6.5	1082	13.0	22.8	"

Did well dewater? Yes       Gallons actually evacuated: 22.8

Sampling Date: 11/1/04      Sampling Time: 1530      Depth to Water:

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



## SHELL WELL MONITORING DATA SHEET

BTS #: <u>041101-MT2</u>	Site: <u>98995328</u>
Sampler: <u>MT</u>	Date: <u>11/1/04</u>
Well I.D.: <u>MW-4</u>	Well Diameter: 2 3 4 6 8 <u>    </u>
Total Well Depth (TD):	Depth to Water (DTW):
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]:	

Purge Method:  Bailer       Waterra  
 Disposable Bailer       Peristaltic  
 Positive Air Displacement       Extraction Pump  
 Electric Submersible       Other \_\_\_\_\_

Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

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

(Gals.) X 3 = \_\_\_\_\_ Gals.  
 1 Case Volume      Specified Volumes      Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
						<u>PAVED OVER</u>

Did well dewater?    Yes    No      Gallons actually evacuated: \_\_\_\_\_

Sampling Date: 11/1/04      Sampling Time: \_\_\_\_\_      Depth to Water: \_\_\_\_\_

Sample I.D.: MW-A      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**