

RO 404

Alameda County



Shell Oil Products US

FEB 18 2004

Environmental Health

February 11, 2004

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

Subject: **Former Shell Service Station/Current 24-7 Quick Mart Service Station**  
8930 Bancroft Avenue  
Oakland, California

Dear Mr. Hwang:

Attached for your review and comment is a copy of the *Fourth Quarter 2003 Monitoring Report* for the above referenced site. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

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

Sincerely,

**Shell Oil Products US**

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

Karen Petryna  
Sr. Environmental Engineer

C A M B R I A

Alameda County

FEB 18 2004

February 11, 2004

Don Hwang  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, 2nd Floor  
Alameda, California 94502

Environmental Health

**Re: Fourth Quarter 2003 Monitoring Report**  
Former Shell Service Station/Current 24-7 Quick Mart Service Station  
8930 Bancroft Avenue  
Oakland, California  
Incident #98995742  
Cambria Project #246-1408-002



Dear Mr. Hwang:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), Cambria Environmental Technology, Inc. (Cambria) is submitting this groundwater monitoring report in accordance with the reporting requirements of 23 CCR 2652d. The site is located on the corner of Bancroft Avenue and 90<sup>th</sup> Avenue in Oakland, California (Figures 1 and 2). Shell ceased operations in July 1999 when three 10,000-gallon fiberglass underground storage tanks and associated piping and dispensers were removed and replaced at the site. The site is currently owned and operated by 24-7 Quick-Mart.

#### REMEDIATION SUMMARY

**2000 Mobile Groundwater Extraction (GWE):** Weekly mobile GWE was performed on well MW-4 during March through May 2000. Mobile GWE is the process of extracting groundwater from wells using a vacuum truck. In this process, the vacuum created by the truck is applied to a dedicated extraction "stinger" installed in the extraction well. The extracted water is contained by the truck and removed from the site for disposal. The volume of extracted fluid is recorded and used to calculate the quantity of aqueous-phase constituents removed from the subsurface. Approximately 1,875 gallons of water were extracted from well MW-4, and an estimated total of 0.003 pounds of total petroleum hydrocarbons as gasoline (TPHg) and 0.1 pounds of methyl tertiary butyl ether (MTBE) was removed. GWE was discontinued due to low extraction volumes.

Cambria  
Environmental  
Technology, Inc.

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

FEB 18 2004

Mr. Don Hwang  
February 11, 2004

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**Environmental Health**

**2002 Mobile GWE:** Due to the presence of separate phase hydrocarbons (SPH) in well MW-5 beginning in February 2002, four additional weekly mobile GWE events using well MW-5 were conducted at the site in August 2002. An estimated total of 0.04 pounds of TPHg and 0.10 pounds of MTBE was removed from the subsurface. During the initial extraction event, approximately 0.02 feet of SPH were measured in well MW-5 prior to extraction. No SPH had been detected in MW-5 since the August 2002 extraction events; however, SPH was encountered once again in well MW-5 during the June 30, 2003 sampling event. Cambria reinstated mobile GWE for two semi-weekly events in September 2003. Mass removal data is summarized in Table 1. No SPH was observed in the December 2, 2003 quarterly monitoring event.

**FOURTH QUARTER 2003 ACTIVITIES**

**Groundwater Monitoring:** Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled selected site wells, calculated groundwater elevations, and compiled the analytical data. Cambria prepared a vicinity map that includes previously submitted well survey information (Figure 1) and a groundwater elevation contour map (Figure 2). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

**ANTICIPATED FIRST QUARTER 2004 ACTIVITIES**

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

**Irrigation Well Sampling:** Cambria's September 25, 2001 *Door-to-Door Well Survey Report* identified one likely active irrigation well approximately 1,300 feet downgradient from the site. The Alameda County Health Care Services Agency (ACHCSA) submitted a letter dated August 14, 2002 to the well's property owner requesting access to sample the well. As of this date the ACHCSA has not received a response from the irrigation-well property owner. Shell will obtain and analyze a water sample from the irrigation well once permission is granted. Cambria requests that the ACHCSA submit a second sampling request letter to the irrigation-well property owner.

C A M B R I A

Alameda County

Mr. Don Hwang  
February 11, 2004

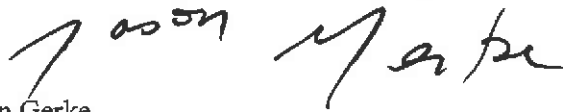
FEB 18 2004

**CLOSING**

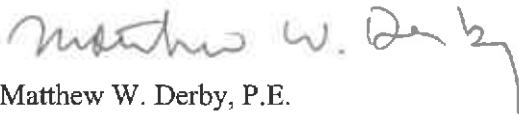
**Environmental Health**

We appreciate the opportunity to work with you on this project. Please call Jason Gerke at (510) 420-3320 if you have any questions or comments.

Sincerely,  
**Cambria Environmental Technology, Inc**



Jason Gerke  
Senior Staff Scientist



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



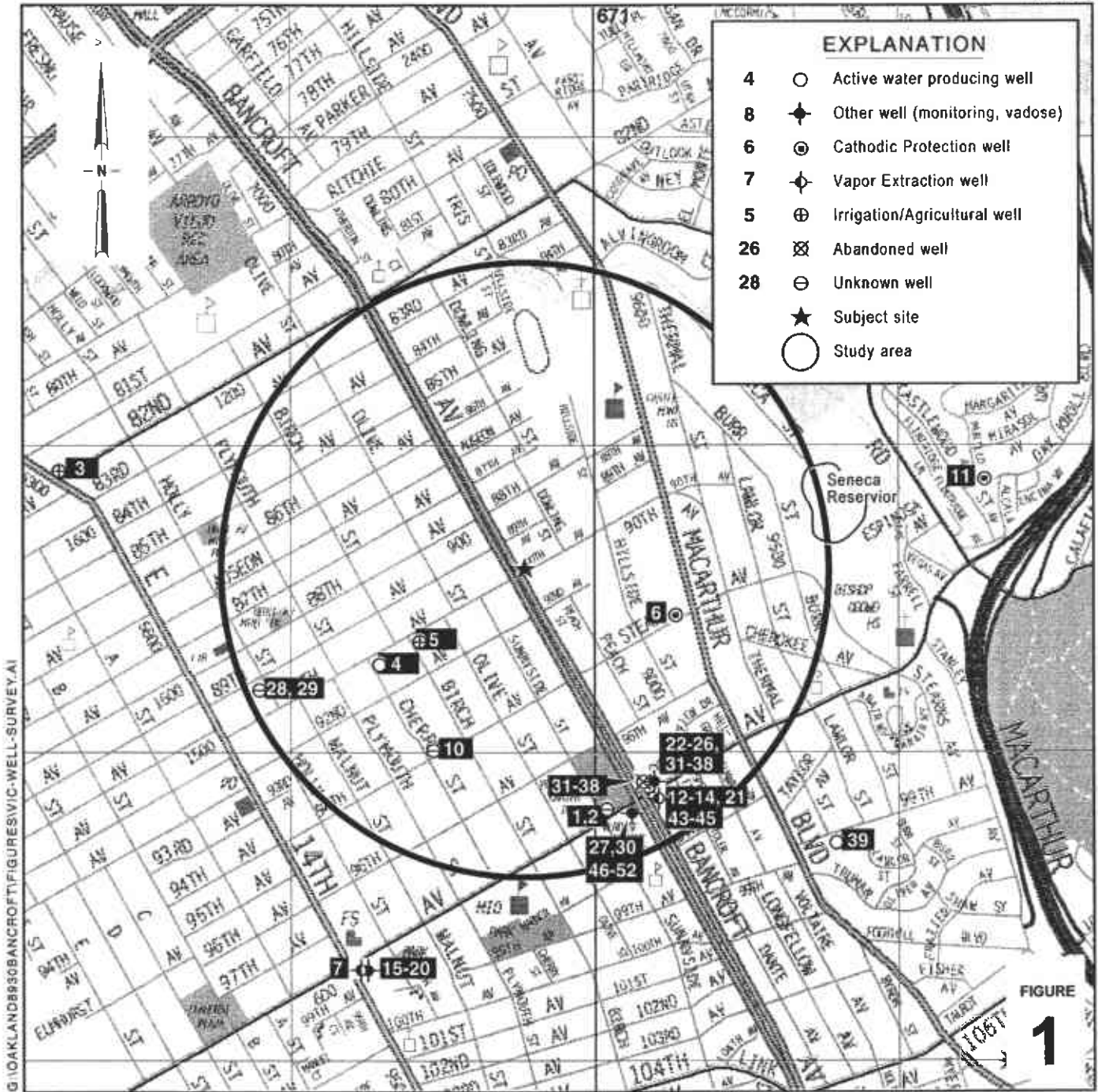
Figures: 1 - Vicinity/Area Well Survey Map  
2 - Groundwater Elevation Contour Map

Table: 1 - Groundwater Extraction - Mass Removal Data

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Shell Oil Products US, 20945 S. Wilmington Ave., Carson, CA 90810  
Leroy Griffin, Fire Prevention Bureau, 250 Frank Ogawa Plaza, 3<sup>rd</sup> Floor, Suite 3341,  
Oakland, CA 94612  
Sidhu Associates, 8930 Bancroft Ave., Oakland, CA 94605

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EXPLANATION	
4	○ Active water producing well
8	⊕ Other well (monitoring, vadose)
6	⊙ Cathodic Protection well
7	⊖ Vapor Extraction well
5	⊕ Irrigation/Agricultural well
26	⊗ Abandoned well
28	⊖ Unknown well
★	★ Subject site
○	○ Study area

0 1/8 1/4 1/2 1  
SCALE 1" = 1/4 MILE

FIGURE  
**1**

**Former Shell-branded Station/  
Current 24-7 Quick Mart  
Service Station**

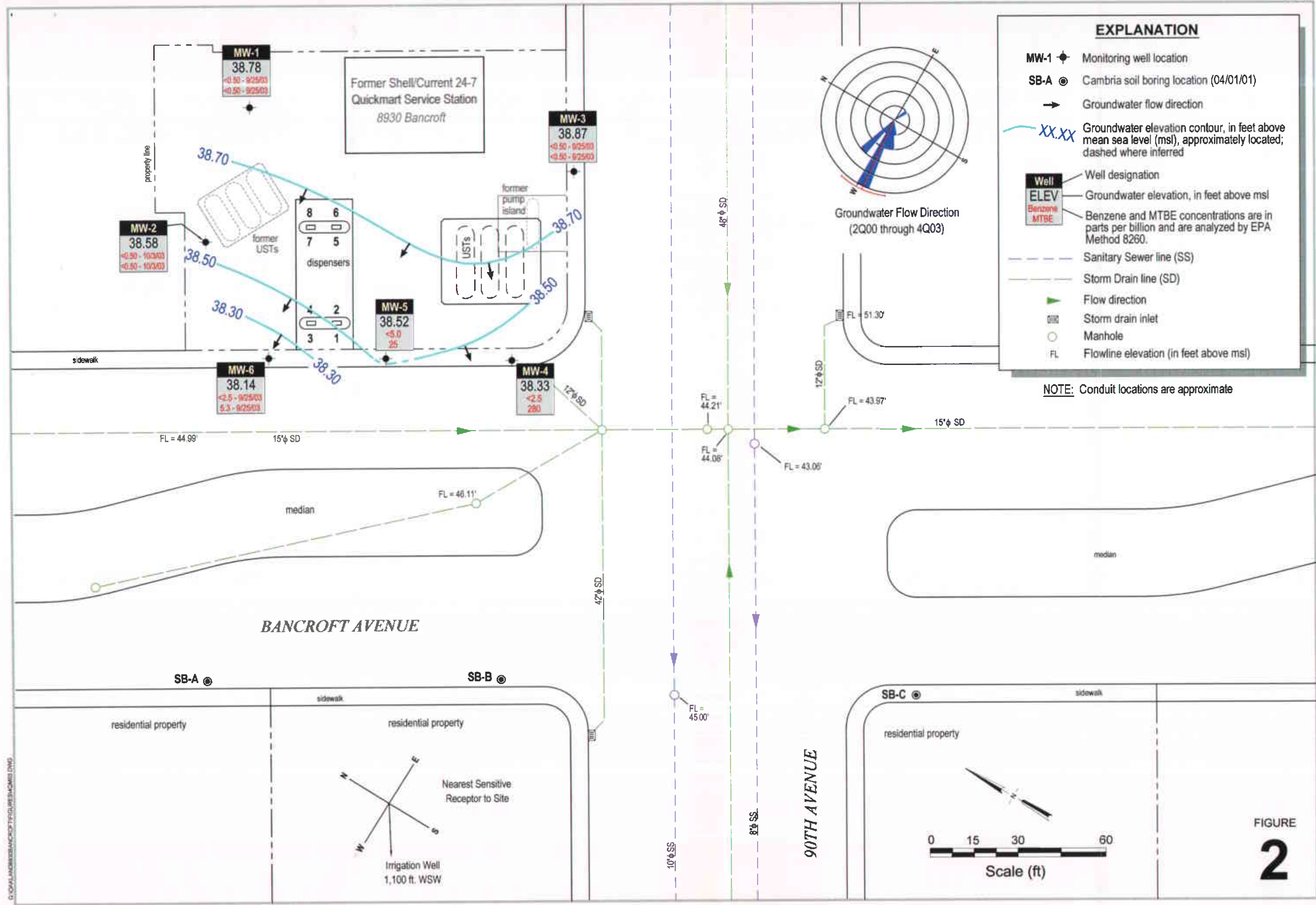
8930 Bancroft Avenue  
Oakland, California  
Incident #98995742



C A M B R I A

**Vicinity/Area Well  
Survey Map**

(1/2 Mile Radius)



**Groundwater Elevation Contour Map**



C A M B R I A

**Former Shell-branded/Current 24-7 Quick Mart Service Station**

8930 Bancroft Avenue  
Oakland, California  
Incident #98995742

December 2, 2003

D:\QUAL\ANDREAS\PROJECTS\FIGURES\CAMBRIA.DWG

**Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995742, 8930 Bancroft Avenue, Oakland, California**

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH			Benzene			MTBE			
					TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE To Date (pounds)	
03/15/00	MW-4	650	650	12/23/99	<100	0.00027	0.00027	<1.0	0.00000	0.00000	8,400	0.04556	0.04556	
03/22/00	MW-4	100	750	03/22/00	<500	0.00021	0.00048	<5.00	0.00000	0.00000	5,020	0.00419	0.04975	
03/27/00	MW-4	75	825	03/22/00	<500	0.00016	0.00064	<5.00	0.00000	0.00001	5,020	0.00314	0.05289	
04/03/00	MW-4	150	975	03/22/00	<500	0.00031	0.00095	<5.00	0.00000	0.00001	5,020	0.00628	0.05917	
04/17/00	MW-4	300	1,275	03/22/00	<500	0.00063	0.00157	<5.00	0.00001	0.00002	5,020	0.01257	0.07174	
04/24/00	MW-4	150	1,425	03/22/00	<500	0.00031	0.00189	<5.00	0.00000	0.00002	5,020	0.00628	0.07802	
05/01/00	MW-4	75	1,500	03/22/00	<500	0.00016	0.00204	<5.00	0.00000	0.00002	5,020	0.00314	0.08117	
05/08/00	MW-4	150	1,650	03/22/00	<500	0.00031	0.00236	<5.00	0.00000	0.00002	5,020	0.00628	0.08745	
05/15/00	MW-4	75	1,725	03/22/00	<500	0.00016	0.00251	<5.00	0.00000	0.00003	5,020	0.00314	0.09059	
05/22/00	MW-4	75	1,800	03/22/00	<500	0.00016	0.00267	<5.00	0.00000	0.00003	5,020	0.00314	0.09373	
05/29/00	MW-4	75	1,875	03/22/00	<500	0.00016	0.00283	<5.00	0.00000	0.00003	5,020	0.00314	0.09687	
08/08/02	MW-5	163	163	08/08/02	350	0.00048	0.00048	<0.50	0.00000	0.00000	65	0.00009	0.00009	
08/16/02	MW-5	218	381	08/16/02	16,000	0.02911	0.02958	<2.5	0.00000	0.00000	310	0.00056	0.00065	
08/16/02	MW-5	0	381	08/16/02	58	0.00000	0.02958	<0.50	0.00000	0.00000	60	0.00000	0.00065	
08/22/02	MW-5	377	758	08/22/02	1,500	0.00472	0.03430	<0.50	0.00000	0.00000	110	0.00035	0.00100	
08/29/02	MW-5	146	904	08/22/02	120	0.00015	0.03445	<0.50	0.00000	0.00000	76	0.00009	0.00109	
09/09/03	MW-5	252	1,156	03/28/03	240	0.00050	0.03495	<0.50	0.00000	0.00000	130	0.00027	0.00136	
09/17/03	MW-5	70	1,226	03/28/03	240	0.00014	0.03509	<0.50	0.00000	0.00000	130	0.00008	0.00144	
<b>Total Gallons Extracted:</b>			<b>3,101</b>	<b>Total Pounds Removed:</b>			<b>0.03792</b>	<b>Total Pounds Removed:</b>			<b>0.00003</b>	<b>Total Pounds Removed:</b>		<b>0.09831</b>
				<b>Total Gallons Removed:</b>			<b>0.00622</b>				<b>0.00000</b>			<b>0.01586</b>

**Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995742, 8930 Bancroft Avenue, Oakland, California**

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

**Abbreviations & Notes:**

TPPH = Total purgeable hydrocarbons as gasoline

MtBE = Methyl tert-butyl ether

ppb = Parts per billion

gal = Gallon

Mass removed based on the formula: volume extracted (gal) x Concentration ( $\mu\text{g/L}$ ) x ( $\text{g}/10^6\mu\text{g}$ ) x (pound/453.6g) x (3.785 L/gal)

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

TPPH, benzene, and MTBE analyzed by EPA Method 8260

Concentrations based on most recent groundwater monitoring results

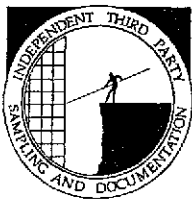
If concentration is less than the laboratory detection limit, one half of the detection limit concentration is used in the mass removal calculation.

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



**ATTACHMENT A**  
**Blaine Groundwater Monitoring Report**  
**and Field Notes**

BLAINE  
TECH SERVICES, INC.



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

December 17, 2003

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

Fourth Quarter 2003 Groundwater Monitoring at  
Former Shell Service Station  
8930 Bancroft Avenue  
Oakland, CA

Monitoring performed on December 2, 2003

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Groundwater Monitoring Report **031202-DW-3**

This report covers the routine monitoring of groundwater wells at this former Shell 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 Technology, Inc.  
5900 Hollis Street, Suite A  
Oakland, CA 94608

**WELL CONCENTRATIONS**  
**Former Shell Service Station**  
**8930 Bancroft Avenue**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (mg/L)
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MW-1	12/17/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	53.19	11.87	NA	41.32	NA	NA
MW-1	03/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	53.19	8.21	NA	44.98	NA	NA
MW-1	06/16/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	53.19	15.04	NA	38.15	NA	NA
MW-1	09/30/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	53.19	16.02	NA	37.17	NA	NA
MW-1	12/23/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	53.19	14.78	NA	38.41	NA	NA
MW-1	03/22/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	53.19	8.44	NA	44.75	NA	NA
MW-1	06/01/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	53.19	13.71	NA	39.48	NA	NA
MW-1	09/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	53.19	14.95	NA	38.24	NA	NA
MW-1	12/04/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	5.82	NA	53.19	13.85	NA	39.34	NA	NA
MW-1	03/09/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	53.19	9.07	NA	44.12	NA	NA
MW-1	06/27/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	53.19	14.90	NA	38.29	NA	NA
MW-1	09/20/2001	NA	NA	NA	NA	NA	NA	NA	NA	53.19	15.53	NA	37.66	NA	NA
MW-1	12/05/2001	NA	NA	NA	NA	NA	NA	NA	NA	53.19	10.41	NA	42.78	NA	3.8
MW-1	02/26/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50	53.19	11.09	NA	42.10	NA	NA
MW-1	06/06/2002	NA	NA	NA	NA	NA	NA	NA	NA	53.19	14.13	NA	39.06	NA	NA
MW-1	09/09/2002	NA	NA	NA	NA	NA	NA	NA	NA	53.20	15.55	NA	37.65	NA	NA
MW-1	12/19/2002	NA	NA	NA	NA	NA	NA	NA	NA	53.20	8.67	NA	44.53	NA	NA
MW-1	03/28/2003	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	53.20	13.33	NA	39.87	NA	NA
MW-1	06/30/2003	NA	NA	NA	NA	NA	NA	NA	NA	53.20	14.71	NA	38.49	NA	NA
MW-1	09/25/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	53.20	15.13	NA	38.07	NA	NA
MW-1	12/02/2003	NA	NA	NA	NA	NA	NA	NA	NA	53.20	14.42	NA	38.78	NA	NA

MW-2	12/17/1998	9,900	NA	<5.0	37	22	47	48	<20	52.66	11.65	NA	41.01	NA	NA
MW-2	03/09/1999	2,760	NA	12.3	7.50	85.4	444	<50.0	NA	52.66	8.07	NA	44.59	NA	NA
MW-2	06/16/1999	2,570	NA	36.3	11.6	6.19	10.8	<50.0	NA	52.66	14.63	NA	38.03	NA	NA
MW-2	09/30/1999	1,960	NA	19.1	3.20	4.55	26.9	<25.0	NA	52.66	15.63	NA	37.03	NA	NA
MW-2	12/23/1999	145	NA	1.30	<0.500	<0.500	0.899	<2.50	NA	52.66	14.42	NA	38.24	NA	NA

**WELL CONCENTRATIONS**  
**Former Shell Service Station**  
**8930 Bancroft Avenue**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (mg/L)
MW-2	03/22/2000	6,060	NA	18.9	<10.0	210	651	<100	NA	52.66	8.19	NA	44.47	NA	NA
MW-2	06/01/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	52.66	11.46	NA	41.20	NA	NA
MW-2	09/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	52.66	14.63	NA	38.03	NA	NA
MW-2	12/04/2000	201	NA	1.35	<0.500	3.39	8.58	<2.50	NA	52.66	13.45	NA	39.21	NA	NA
MW-2	03/09/2001	396	NA	2.82	<0.500	8.69	18.7	<2.50	NA	52.66	8.89	NA	43.77	NA	NA
MW-2	06/27/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	52.66	14.88	NA	37.78	NA	NA
MW-2	09/20/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	52.66	15.19	NA	37.47	NA	NA
MW-2	12/05/2001	NA	NA	NA	NA	NA	NA	NA	NA	52.66	10.02	NA	42.64	NA	2.8
MW-2	02/26/2002	180	NA	<0.50	<0.50	2.7	4.1	NA	<0.50	52.66	10.76	NA	41.90	NA	NA
MW-2	06/06/2002	NA	NA	NA	NA	NA	NA	NA	NA	52.66	13.83	NA	38.83	NA	NA
MW-2	09/09/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	52.66	15.23	NA	37.43	NA	NA
MW-2	12/19/2002	NA	NA	NA	NA	NA	NA	NA	NA	52.66	8.46	NA	44.20	NA	NA
MW-2	03/28/2003	53	NA	<0.50	<0.50	0.51	1.4	NA	<5.0	52.66	12.96	NA	39.70	NA	NA
MW-2	06/30/2003	NA	NA	NA	NA	NA	NA	NA	NA	52.66	14.49	NA	38.17	NA	NA
MW-2	09/25/2003	Well inaccessible		NA	NA	NA	NA	NA	NA	52.66	NA	NA	NA	NA	NA
MW-2	10/03/2003	54 c	NA	<0.50	<0.50	<0.50	<1.0	NA	<0.50	52.66	15.03	NA	37.63	NA	NA
MW-2	12/02/2003	NA	NA	NA	NA	NA	NA	NA	NA	52.66	14.08	NA	38.58	NA	NA
MW-3	12/17/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	10	11	51.30	11.85	NA	39.45	NA	NA
MW-3	03/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	51.30	6.53	NA	44.77	NA	NA
MW-3	06/16/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	51.30	12.71	NA	38.59	NA	NA
MW-3	09/30/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	5.14	NA	51.30	14.07	NA	37.23	NA	NA
MW-3	12/23/1999	<500	NA	<5.00	<5.00	<5.00	<5.00	<25.0	NA	51.30	12.82	NA	38.48	NA	NA
MW-3	03/22/2000	<50.0	NA	<0.500	1.48	<0.500	1.90	<5.00	NA	51.30	6.81	NA	44.49	NA	NA
MW-3	06/01/2000	<50.0	NA	<0.500	0.821	<0.500	<0.500	4.39	NA	51.30	11.85	NA	39.45	NA	NA
MW-3	09/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	3.62	NA	51.30	12.55	NA	38.75	NA	NA
MW-3	12/04/2000	<50.0	NA	<0.500	<0.500	<0.500	0.588	4.74	NA	51.30	11.65	NA	39.65	NA	NA
MW-3	03/09/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	51.30	7.28	NA	44.02	NA	NA

**WELL CONCENTRATIONS**  
**Former Shell Service Station**  
**8930 Bancroft Avenue**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (mg/L)
MW-3	06/27/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	51.30	13.16	NA	38.14	NA	NA
MW-3	09/20/2001	NA	NA	NA	NA	NA	NA	NA	NA	51.30	13.35	NA	37.95	NA	NA
MW-3	12/05/2001	NA	NA	NA	NA	NA	NA	NA	NA	51.30	8.14	NA	43.16	NA	1.2
MW-3	02/26/2002	<50	NA	<0.50	7.2	<0.50	<0.50	NA	1.5	51.30	9.09	NA	42.21	NA	0.6
MW-3	06/06/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.30	12.13	NA	39.17	NA	0.8
MW-3	09/09/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.35	13.54	NA	37.81	NA	1.0
MW-3	12/19/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.35	6.75	NA	44.60	NA	0.6
MW-3	03/28/2003	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	51.35	11.28	NA	40.07	NA	0.7
MW-3	06/30/2003	NA	NA	NA	NA	NA	NA	NA	NA	51.35	12.68	NA	38.67	NA	NA
MW-3	09/25/2003	<50	NA	<0.50	2.0	0.73	<1.0	NA	<0.50	51.35	13.22	NA	38.13	NA	NA
<b>MW-3</b>	<b>12/02/2003</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>51.35</b>	<b>12.48</b>	<b>NA</b>	<b>38.87</b>	<b>NA</b>	<b>NA</b>
MW-4	12/17/1998	700	NA	4.3	0.88	<0.50	<0.50	21,000	26,000	50.73	10.80	NA	39.93	NA	NA
MW-4	03/09/1999	83.9	NA	<0.500	<0.500	<0.500	<0.500	17,900	23,700	50.73	6.91	NA	43.82	NA	NA
MW-4	06/16/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	10,600	19,200	50.73	12.84	NA	37.89	NA	NA
MW-4	09/30/1999	51.2	NA	<0.500	<0.500	<0.500	<0.500	12,200	12,300	50.73	13.74	NA	36.99	NA	NA
MW-4	12/23/1999	<100	NA	<1.00	<1.00	<1.00	<1.00	7,990	8,400	50.73	12.40	NA	38.33	NA	NA
MW-4	03/22/2000	<500	NA	<5.00	<5.00	<5.00	<5.00	4,970	5,020	50.73	7.32	NA	43.41	NA	NA
MW-4	06/01/2000	<100	NA	<1.00	<1.00	<1.00	<1.00	5,260	3,580	50.73	11.50	NA	39.23	NA	NA
MW-4	09/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	3,610	3,300a	50.73	12.55	NA	38.18	NA	NA
MW-4	12/04/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	2,960	3,520a	50.73	11.77	NA	38.96	NA	NA
MW-4	03/09/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	1,930	2,500	50.73	7.48	NA	43.25	NA	NA
MW-4	06/27/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	1,100	1,100	50.73	12.97	NA	37.76	NA	NA
MW-4	09/20/2001	<250	NA	3.8	14	2.6	7.8	NA	940	50.73	13.30	NA	37.43	NA	NA
MW-4	12/05/2001	<200	NA	<2.0	<2.0	<2.0	<2.0	NA	750	50.73	8.41	NA	42.32	NA	1.2
MW-4	02/26/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	320	50.73	9.40	NA	41.33	NA	0.7
MW-4	06/06/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	160	50.73	11.97	NA	38.76	NA	0.6
MW-4	09/09/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	50	50.72	13.23	NA	37.49	NA	3.6

**WELL CONCENTRATIONS**  
**Former Shell Service Station**  
**8930 Bancroft Avenue**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (mg/L)
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MW-4	12/19/2002	Unable to sample		NA	NA	NA	NA	NA	NA	50.72	7.08	NA	43.64	NA	0.8
MW-4	12/26/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	47	50.72	7.23	NA	43.49	NA	1.8
MW-4	03/28/2003	<50	NA	<0.50	1.2	<0.50	<0.50	NA	17	50.72	11.30	NA	39.42	NA	1.7
MW-4	06/30/2003	54 c	NA	<0.50	<0.50	<0.50	<1.0	NA	16	50.72	12.51	NA	38.21	NA	NA
MW-4	09/25/2003	<50	NA	<0.50	<0.50	<0.50	<1.0	NA	110	50.72	13.10	NA	37.62	NA	NA
<b>MW-4</b>	<b>12/02/2003</b>	<b>&lt;250</b>	<b>NA</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;5.0</b>	<b>NA</b>	<b>280</b>	<b>50.72</b>	<b>12.39</b>	<b>NA</b>	<b>38.33</b>	<b>NA</b>	<b>NA</b>

MW-5	12/17/1998	750	NA	<0.50	17	1.8	3.5	33	32	51.43	11.51	NA	39.92	NA	NA
MW-5	03/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	51.43	7.15	NA	44.28	NA	NA
MW-5	06/16/1999	646	NA	9.26	1.05	<1.00	<1.00	<10.0	NA	51.43	13.47	NA	37.96	NA	NA
MW-5	09/30/1999	484	NA	1.93	0.511	<0.500	<0.500	159	NA	51.43	14.41	NA	37.02	NA	NA
MW-5	12/23/1999	944	NA	4.59	17.7	3.79	16.7	214	NA	51.43	14.07	NA	37.36	NA	NA
MW-5	03/22/2000	8,770	NA	197	96.5	<50.0	188	2,450	NA	51.43	7.31	NA	44.12	NA	NA
MW-5	06/01/2000	227	NA	0.565	<0.500	<0.500	<0.500	35.9	NA	51.43	12.15	NA	39.28	NA	NA
MW-5	09/08/2000	159	NA	0.606	<0.500	<0.500	1.74	1,000	NA	51.43	13.30	NA	38.13	NA	NA
MW-5	12/04/2000	1,510	NA	19.2	<10.0	<10.0	134	1,360	NA	51.43	12.19	NA	39.24	NA	NA
MW-5	03/09/2001	3,460	NA	37.9	121	40.6	208	235	NA	51.43	7.79	NA	43.64	NA	NA
MW-5	06/27/2001	310	NA	0.97	<0.50	<0.50	<0.50	14	NA	51.43	13.89	NA	37.54	NA	NA
MW-5	09/20/2001	310	NA	<0.50	<0.50	<0.50	<0.50	NA	21	51.43	13.95	NA	37.48	NA	NA
MW-5	12/05/2001	8,800	NA	14	2.9	33	410	NA	2,300	51.43	8.89	NA	42.54	NA	0.6
MW-5	02/26/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.43	9.87	NA	NA	b	NA
MW-5	03/12/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.43	8.84	8.64	42.75	0.20	NA
MW-5	06/06/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.43	12.59	12.54	38.88	0.05	NA
MW-5	09/09/2002	210	NA	<0.50	<0.50	<0.50	0.90	NA	200	51.44	13.94	NA	37.50	NA	NA
MW-5	12/19/2002	Unable to sample		NA	NA	NA	NA	NA	NA	51.44	7.35	NA	44.09	NA	NA
MW-5	12/26/2002	1,400	NA	<0.50	21	6.9	60	NA	180	51.44	7.13	NA	44.31	NA	NA
MW-5	03/28/2003	240	NA	<0.50	<0.50	<0.50	2.1	NA	130	51.44	11.73	NA	39.71	NA	NA
MW-5	06/30/2003	NA	NA	NA	NA	NA	NA	NA	NA	51.44	13.34	13.30	38.13	0.04	NA

**WELL CONCENTRATIONS**  
**Former Shell Service Station**  
**8930 Bancroft Avenue**  
**Oakland, CA**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (mg/L)
MW-5	09/25/2003	12,000	NA	<5.0	<5.0	24	210	NA	220	51.44	13.60	NA	37.84	NA	NA
MW-5	12/02/2003	2,500	NA	<5.0	14	<5.0	11	NA	25	51.44	12.92	NA	38.52	NA	NA
MW-6	12/17/1998	940	NA	27	0.32	2.4	2.3	3.0	3.2	51.88	11.37	NA	40.51	NA	NA
MW-6	03/09/1999	336	NA	7.78	1.60	2.40	6.36	<10.0	NA	51.88	8.10	NA	43.78	NA	NA
MW-6	06/16/1999	308	NA	2.45	<0.500	<0.500	<0.500	7.39	NA	51.88	14.49	NA	37.39	NA	NA
MW-6	09/30/1999	80.2	NA	<0.500	<0.500	<0.500	<0.500	24.8	NA	51.88	15.30	NA	36.58	NA	NA
MW-6	12/23/1999	149	NA	0.518	<0.500	<0.500	<0.500	6.43	NA	51.88	13.19	NA	38.69	NA	NA
MW-6	03/22/2000	382	NA	3.31	2.18	0.619	2.35	5.61	NA	51.88	8.27	NA	43.61	NA	NA
MW-6	06/01/2000	158	NA	0.830	<0.500	<0.500	1.10	10.9	NA	51.88	11.13	NA	40.75	NA	NA
MW-6	09/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	51.88	14.28	NA	37.60	NA	NA
MW-6	12/04/2000	231	NA	4.93	<0.500	<0.500	<0.500	4.57	NA	51.88	12.62	NA	39.26	NA	NA
MW-6	03/09/2001	789	NA	11.6	2.72	<2.00	<2.00	28.0	NA	51.88	8.65	NA	43.23	NA	NA
MW-6	06/27/2001	140	NA	<0.50	1.1	<0.50	<0.50	<2.5	NA	51.88	14.95	NA	36.93	NA	NA
MW-6	09/20/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	51.88	14.70	NA	37.18	NA	NA
MW-6	12/05/2001	NA	NA	NA	NA	NA	NA	NA	NA	51.88	9.62	NA	42.26	NA	1.8
MW-6	02/26/2002	130	NA	<0.50	2.6	0.69	4.1	NA	6.4	51.88	10.14	NA	41.74	NA	NA
MW-6	06/06/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.88	13.52	NA	38.36	NA	NA
MW-6	09/09/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	51.86	14.92	NA	36.94	NA	NA
MW-6	12/19/2002	NA	NA	NA	NA	NA	NA	NA	NA	51.86	8.22	NA	43.64	NA	NA
MW-6	03/28/2003	740	NA	<0.50	<0.50	<0.50	<0.50	NA	14	51.86	12.57	NA	39.29	NA	NA
MW-6	06/30/2003	NA	NA	NA	NA	NA	NA	NA	NA	51.86	14.14	NA	37.72	NA	NA
MW-6	09/25/2003	<250	NA	<2.5	160	<2.5	<5.0	NA	5.3	51.86	14.30	NA	37.56	NA	NA
MW-6	12/02/2003	NA	NA	NA	NA	NA	NA	NA	NA	51.86	13.72	NA	38.14	NA	NA



**WELL CONCENTRATIONS**  
**Former Shell Service Station**  
**8930 Bancroft Avenue**  
**Oakland, CA**

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

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to September 20, 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 September 20, 2001, analyzed by EPA Method 8020.

MTBE = Methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

SPH = Separate-phase hydrocarbons

GW = Groundwater

ug/L = Parts per billion

MSL = Mean sea level

ft = Feet

<n = Below detection limit

NA = Not applicable

DO = Dissolved oxygen

mg/L = Parts per million

Notes:

a = This sample analyzed outside of EPA recommended holding time.

b = SPH detected in well, but exact thickness could not be measured.

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

When separate-phase hydrocarbons are present, groundwater elevation is adjusted using the relation:

$$\text{Groundwater Elevation} = \text{Top-of-Casing Elevation} - \text{Depth to Water} + (0.8 \times \text{Hydrocarbon Thickness}).$$

Site surveyed February 12 and May 16, 2002, by Virgil Chavez Land Surveying of Vallejo, California.

Blaine Tech Services, Inc.

December 16, 2003

1680 Rogers Avenue  
San Jose, CA 95112-1105  
Attn.: Leon Gearhart  
Project#: 031202-DW3  
Project: 98995742  
Site: 8930 Bancroft Ave., Oakland

Dear Mr. Gearhart,


Attached is our report for your samples received on 12/03/2003 16:40  
This report has been reviewed and approved for release. Reproduction of this report  
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after  
01/17/2004 unless you have requested otherwise.

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

You can also contact me via email. My email address is: [vvancil@stl-inc.com](mailto:vvancil@stl-inc.com)

Sincerely,



Vincent Vancil  
Project Manager

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

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

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

Project: 031202-DW3

98995742

Received: 12/03/2003 16:40

Site: 8930 Bancroft Ave., Oakland

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-4	12/02/2003 14:20	Water	1
MW-5	12/02/2003 14:42	Water	2

Severn Trent Laboratories, Inc.

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

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

12/15/2003 11:59

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

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

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

Project: 031202-DW3

98995742

Received: 12/03/2003 16:40

Site: 8930 Bancroft Ave., Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-4	Lab ID:	2003-12-0124 - 1
Sampled:	12/02/2003 14:20	Extracted:	12/10/2003 14:45
Matrix:	Water	QC Batch#:	2003/12/10-01.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	250	ug/L	5.00	12/10/2003 14:45	
Benzene	ND	2.5	ug/L	5.00	12/10/2003 14:45	
Toluene	ND	2.5	ug/L	5.00	12/10/2003 14:45	
Ethylbenzene	ND	2.5	ug/L	5.00	12/10/2003 14:45	
Total xylenes	ND	5.0	ug/L	5.00	12/10/2003 14:45	
Methyl tert-butyl ether (MTBE)	280	2.5	ug/L	5.00	12/10/2003 14:45	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	106.5	76-130	%	5.00	12/10/2003 14:45	
Toluene-d8	98.2	78-115	%	5.00	12/10/2003 14:45	

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

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 031202-DW3  
98995742

Received: 12/03/2003 16:40

Site: 8930 Bancroft Ave., Oakland

Prep(s): 5030B	Test(s): 8260B
Sample ID: MW-5	Lab ID: 2003-12-0124 - 2
Sampled: 12/02/2003 14:42	Extracted: 12/10/2003 15:03
Matrix: Water	QC Batch#: 2003/12/10-01.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	2500	500	ug/L	10.00	12/10/2003 15:03	
Benzene	ND	5.0	ug/L	10.00	12/10/2003 15:03	
Toluene	14	5.0	ug/L	10.00	12/10/2003 15:03	
Ethylbenzene	ND	5.0	ug/L	10.00	12/10/2003 15:03	
Total xylenes	11	10	ug/L	10.00	12/10/2003 15:03	
Methyl tert-butyl ether (MTBE)	25	5.0	ug/L	10.00	12/10/2003 15:03	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	108.0	76-130	%	10.00	12/10/2003 15:03	
Toluene-d8	95.6	78-115	%	10.00	12/10/2003 15:03	

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

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 031202-DW3  
98995742

Received: 12/03/2003 16:40

Site: 8930 Bancroft Ave., Oakland

Batch QC Report					
Prep(s): 5030B				Test(s): 8260B	
Method Blank		Water		QC Batch # 2003/12/10-01.69	
MB: 2003/12/10-01.69-041				Date Extracted: 12/10/2003 09:41	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/10/2003 09:41	
Benzene	ND	0.5	ug/L	12/10/2003 09:41	
Toluene	ND	0.5	ug/L	12/10/2003 09:41	
Ethylbenzene	ND	0.5	ug/L	12/10/2003 09:41	
Total xylenes	ND	1.0	ug/L	12/10/2003 09:41	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	12/10/2003 09:41	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	89.4	76-130	%	12/10/2003 09:41	
Toluene-d8	99.1	78-115	%	12/10/2003 09:41	

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

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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

Project: 031202-DW3  
98995742

Received: 12/03/2003 16:40

Site: 8930 Bancroft Ave., Oakland

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2003/12/10-01.69**

LCS 2003/12/10-01.69-004

Extracted: 12/10/2003

Analyzed: 12/10/2003 09:04

LCSD 2003/12/10-01.69-022

Extracted: 12/10/2003

Analyzed: 12/10/2003 09:22

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %			Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS	LCSD
Benzene	20.3	20.0	25.0	81.2	80.0	1.5	69-129	20			
Toluene	21.7	21.2	25.0	86.8	84.8	2.3	70-130	20			
Methyl tert-butyl ether (MTBE)	22.0	25.2	25.0	88.0	100.8	13.6	65-165	20			
<b>Surrogates(s)</b>											
1,2-Dichloroethane-d4	446	433	500	89.2	86.6		76-130				
Toluene-d8	448	425	500	89.6	85.0		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

12/15/2003 11:59

LAB: STL

# SHELL Chain Of Custody Record

80790

Lab Identification (if necessary):

Address:

City/State/Zip:

Shell Project Manager to be Invoiced:

- SCIENCE & ENGINEERING
- TECHNICAL SERVICES
- CRATE/HOUSTON

Karen Petryna

2003-12-0124

INCIDENT NUMBER (S&E ONLY)

9 8 9 9 5 7 4 2

SAP or CRMT NUMBER (ITS/GRMT)

DATE: 12-2-03

PAGE: 1 of 1

LABORATORY CONTACT <b>Blaine Tech Services</b>		LAB CODE: <b>BTSS</b>	SITE ADDRESS (Street and City): <b>8930 Bancroft Avenue, Oakland</b>		SECURE NAME:
ADDRESS: <b>1600 Rogers Avenue, San Jose, CA 95112</b>		REPORT RECEIVED TO (Preparer Party or Designer): <b>Anni Kroml</b>	PHONE NO.:	<b>510-420-3335</b>	EMAIL: <b>ShellOaklandEDF@cambridge-env.com</b>
PERMIT CONTACT (Agency or POC Project ID):		SAMPLER NAME (if other): <b>Dave Walter</b>		GENERAL TAG PROJECT ID: <b>031207-0W-3</b>	
TELEPHONE: <b>408-573-0555</b>	FAX: <b>408-573-7771</b>	E-MAIL: <b>kgearhart@blainetech.com</b>		LAB USE ONLY	

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

SPECIAL INSTRUCTIONS OR NOTES:		REQUESTED ANALYSIS										FIELD NOTES: Container/Preservation or PID Readings or Laboratory Notes  3.4
CHECK BOX IF BOD IS NOT NEEDED: <input type="checkbox"/>		TPH - Gas, Purgable	BTEX	MTBE (8021B - 5ppb RL)	MATBE (8200B - 0.5ppb RL)	Oxygenates (ST) by (0.250B)	Ethanol (8200B)	Methanol	1,2-DCA (8200B)	EDB (8200B)	TPH - Diesel, Extractable (8015m)	
LA - PAPER REPORT FORMAT <input type="checkbox"/> DIST AGENCY <input type="checkbox"/>												
TEMPERATURE ON RECEIPT C:												

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPH - Gas, Purgable	BTEX	MTBE (8021B - 5ppb RL)	MATBE (8200B - 0.5ppb RL)	Oxygenates (ST) by (0.250B)	Ethanol (8200B)	Methanol	1,2-DCA (8200B)	EDB (8200B)	TPH - Diesel, Extractable (8015m)
		DATE	TIME												
	MW-4	12-2	1430	W	3	X	X	X							
	MW-5	12-2	1402	W	3	X	X	X							

Prepared by (Signature): <i>David Chalk</i>	Received by (Signature): <i>[Signature]</i>	Date: 12/3/03	Time: 1435
Prepared by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Date: 12/03/03	Time: 1640

USE PENCIL ONLY - Write with Ballpoint, Glass or Pitt, Yellow and Pink or Green.

OXO GRAPHICS 11/21/98 8947 CC





## SHELL WELL MONITORING DATA SHEET

BTS #: 031202-PW-3	Site: 8930 Bancroft Oakland
Sampler: Dave W	Date: 12-2-03
Well I.D.: MW-4	Well Diameter: 2 (3) 4 6 8
Total Well Depth (TD): 19.55	Depth to Water (DTW): 12.39
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.82	

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

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

$2.6 \text{ (Gals.)} \times 3 = 7.8 \text{ Gals.}$ <p>I Case Volume      Specified Volumes      Calculated Volume</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
14:10	69.3	6.6	282	>300	2.6	Brown/Sheen
14:13	90.7	6.5	251	>300	5.2	
14:16	71.2	6.5	260	>300	7.8	

Did well dewater?    Yes     No      Gallons actually evacuated: 7.8

Sampling Date: 12-2    Sampling Time: 14:20    Depth to Water: 12.57

Sample I.D.: MW-4      Laboratory: (STL) Other \_\_\_\_\_

Analyzed for: (TPH-G) (BTEX) (MTBE) <sup>8260</sup> (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 #: 031202-PW-3	Site: 8930 Bancroft Oakland
Sampler: Dave W.	Date: 12-2-03
Well I.D.: MW-5	Well Diameter: 2 (3) 4 6 8
Total Well Depth (TD): 19.63	Depth to Water (DTW): 12.92
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.26	

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

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

<u>2.5</u> (Gals.) X <u>3</u> = <u>7.5</u> Gals.		
I Case Volume	Specified Volumes	Calculated Volume

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

Time	Temp (°F)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	Gals. Removed	Observations
14:30	68.8	6.4	472	>200	2.5	gray/sheen
14:33	70.2	6.4	474	>200	5.0	~
14:36	71.0	6.4	473	>200	2.5	~

Did well dewater? Yes  No  Gallons actually evacuated: 7.5

Sampling Date: 12-2      Sampling Time: 14:32      Depth to Water: 1

Sample I.D.: MW-5      Laboratory: STL Other \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE<sup>3260</sup> 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