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*By loprojectop at 9:25 am, Feb 21, 2006*



76 Broadway  
Sacramento, California 95818

February 10, 2006

Mr. Don Hwang  
Alameda County Health Agency  
1131 Harbor Bay Parkway  
Alameda, California 94502

Re: **Report Transmittal  
Quarterly Report  
Fourth Quarter – 2005  
76 Service Station #0843  
1629 Webster Street  
Alameda, CA**

Dear Mr. Hwang:

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please contact

Shelby S. Lathrop (Contractor)  
ConocoPhillips  
Risk Management & Remediation  
76 Broadway  
Sacramento, CA 95818  
Phone: 916-558-7609  
Fax: 916-558-7639

Sincerely,

A handwritten signature in black ink that reads "Thomas H. Kosel". The signature is written in a cursive, flowing style.

Thomas Kosel  
Risk Management & Remediation

Attachment



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Fax 916.638.8385

February 15, 2006

Mr. Donald Hwang  
Alameda County Health Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

**Re: Quarterly Summary Report – Fourth Quarter 2005**  
Delta Project No. C102349011

Dear Mr. Hwang:

On behalf of ConocoPhillips (COP), Delta Environmental Consultants, Inc. (Delta) is forwarding the quarterly summary report for the following location:

**Service Station**

**Location**

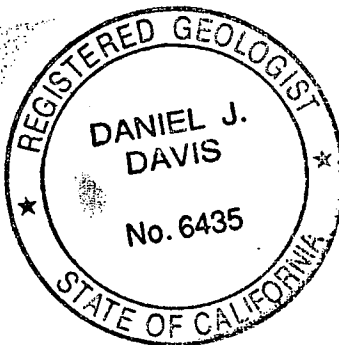
76 Service Station No. 0843

1629 Webster Street  
Alameda, California

Sincerely,  
**Delta Environmental Consultants, Inc.**

Ben Wright  
Staff Geologist

Daniel J. Davis, R.G.  
Senior Project Manager



Forward: TRC - Quarterly Monitoring Report

cc: Ms. Shelby Lathrop, ConocoPhillips (electronic copy)

**QUARTERLY SUMMARY REPORT**  
**Fourth Quarter 2005**  
**76 Service Station No. 0843**  
**1629 Webster Street**  
**Alameda, CA**

**PREVIOUS ASSESSMENT**

June 1998 - Tosco Marketing Company (Tosco, now ConocoPhillips) removed two 10,000-gallon gasoline underground storage tanks (UST)s, one 550-gallon used oil UST, product lines, and dispensers. Two holes approximately ¾-inch in diameter were observed in the used oil tank during removal. Approximately 338 tons of hydrocarbon impacted soil and backfill were removed from beneath the former USTs, dispensers, and product lines during the UST removal activities.

March 1999 - Four soil borings (B1 through B4) were advanced at the site and converted to monitor wells MW-1 through MW-4. Groundwater was encountered from 8 to 15 feet below ground surface (bgs). Static water was observed at between 4 and 6 feet bgs subsequent to well installation.

December 1999 - Two offsite soil borings (B5 and B6) were advanced and subsequently converted to monitor wells MW5 and MW6. Groundwater was encountered at approximately 10 feet below ground surface (bgs). Static water was observed at 7 feet bgs subsequent to well installation.

March 2001 - An underground utility survey was conducted to identify and locate underground utilities beneath and in the vicinity of the site that could provide potential preferential pathways for groundwater flow.

May 2001 - Five direct-push soil borings (GP-1 through GP-5) were installed to evaluate whether underground utilities in the vicinity of the site are providing preferential pathways for groundwater flow and the migration of dissolved hydrocarbons. The results of the investigation indicated that there was insufficient evidence to suggest that underground utility lines were providing preferential pathways for the off-site migration of dissolved petroleum hydrocarbons.

December 2001 - Twelve direct-push soil borings (GP-6 through GP-17) were completed to further assess the extent of residual hydrocarbons in the vadose zone beneath the site. The results of the investigation indicated that the extent of the residual hydrocarbon impact detected in the previous investigations was limited and that remedial action was not warranted.

December 2002 - One on-site monitoring well (MW-2) was destroyed during remedial excavation of hydrocarbon-impacted soil. This well was completed in the vicinity of the former eastern dispenser island and was replaced with on-site backfill monitoring well MW-2A. Approximately 292 tons of hydrocarbon-impacted soil was removed from beneath the former eastern dispenser island.

September 2003 - A *Request and Work Plan for Closure* prepared by ERI was submitted to the Alameda County Health Care Services Agency, dated September 10, 2003. The

report summarized why no further action is needed for the site; the report also included plans to destroy the existing wells upon regulatory acceptance for no further action.

June 2004 – A Work Plan was submitted to install two monitor well down gradient of MW-5.

May 2005 – A Work Plan titled *Work Plan Addendum – Site Assessment Activity* dated May 17, 2005 was prepared by ATC Associates Inc. for the installation of two offsite monitor wells.

September 2005 – A Work Plan was prepared by ATC Associates Inc., titled *Work Plan Subsurface Investigation*, for the installation of one onsite monitor well.

September 2005 – Site environmental consulting responsibilities were transferred to Delta.

### **SENSITIVE RECEPTORS**

June/July 2002 - A groundwater receptor survey was conducted. Three irrigation wells are located within a one-half mile radius of the site. The wells are located approximately 1,980 feet west and 2,245 feet southwest of the site, cross-gradient and upgradient of the site.

### **GROUNDWATER MONITORING AND SAMPLING**

Quarterly groundwater monitoring and sampling was initiated in March 1999. During the most recent groundwater sampling event conducted on November 23, 2005, depth to groundwater ranged from 5.86 feet (MW-5) to 7.28 feet (MW-1) below top of casing (TOC). The groundwater flow direction was northeast at a gradient of 0.003 foot per foot (ft/ft). Maximum dissolved groundwater concentrations were present as follows: total purgeable petroleum hydrocarbons (TPPH) (590 micrograms per liter ( $\mu\text{g/l}$ ) in MW-6), benzene (1.3  $\mu\text{g/l}$  in MW-2A), and MTBE (1,700  $\mu\text{g/l}$  in MW-6).

### **REMEDIATION STATUS**

Approximately 338 tons of hydrocarbon impacted soil and backfill were removed from beneath the former USTs, dispensers, and product lines during UST removal activities. Approximately 292 tons of hydrocarbon-impacted soil was removed from beneath the former eastern island during the December 2002 excavation.

### **CHARACTERIZATION STATUS**

Based on the most current (November 23, 2005) and historic groundwater analytical data, MTBE is not defined offsite cross-gradient (east-west) of MW-6 and downgradient (north) of onsite well MW-4. Upgradient monitor well MW-1, sampled annually, contained 27  $\mu\text{g/l}$  of MTBE on March 11, 2005. Additional assessment is required to define the dissolved MTBE offsite and downgradient of the site. Also, historic Sanborn maps, aerial photographs and record search data indicate the possibility of an offsite hydrocarbon source on the north side of Pacific Street. Additional investigation is warranted to determine the nature and extent of these findings.

**RECENT CORRESPONDENCE**

No recent correspondence was documented during this reporting period.

**THIS QUARTER ACTIVITIES (Fourth Quarter 2005)**

The monitoring well network was sampled by TRC on November 23, 2005.

**WASTE DISPOSAL SUMMARY**

No waste was generated during this reporting period.

**NEXT QUARTER ACTIVITIES (First Quarter 2006)**

1. The well network will be sampled by TRC.
2. A site conceptual model (SCM) will be completed for the site.

**CONSULTANT:** Delta Environmental Consultants, Inc.



January 11, 2006

ConocoPhillips Company  
76 Broadway  
Sacramento, CA 95818

ATTN: MR. THOMAS H. KOSEL

SITE: FORMER 76 STATION 0843  
1629 WEBSTER STREET  
ALAMEDA, CALIFORNIA

RE: QUARTERLY MONITORING REPORT  
OCTOBER THROUGH DECEMBER 2005

Dear Mr. Kosel:

Please find enclosed our Quarterly Monitoring Report for Former 76 Station 0843, located at 1629 Webster Street, Alameda, California. If you have any questions regarding this report, please call us at (949) 753-0101.

Sincerely,

TRC

Anju Farfan  
QMS Operations Manager

CC: Mr. Eric Hetrick, Delta Environmental Consultants, Inc. (3 copies)

Enclosures  
20-0400/0843R10.QMS

21 Technology Drive • Irvine, California 92618  
Main: 949-727-9336 • Fax: 949-727-7399  
[www.trcsolutions.com](http://www.trcsolutions.com)





**QUARTERLY MONITORING REPORT  
OCTOBER THROUGH DECEMBER 2005**

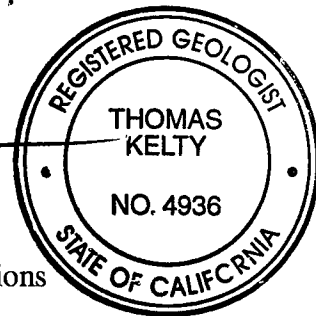
Former 76 Station 0843  
1629 Webster Street  
Alameda, California

Prepared For:

Mr. Thomas H. Kosel  
ConocoPhillips Company  
76 Broadway  
Sacramento, California 95818

By:

A handwritten signature in black ink, appearing to read 'Thomas Kelty', written over a horizontal line.



Senior Project Geologist, Irvine Operations  
December 29, 2005



## LIST OF ATTACHMENTS

Summary Sheet	Summary of Gauging and Sampling Activities
Tables	Table Key Table 1: Current Fluid Levels and Selected Analytical Results Table 2: Historic Fluid Levels and Selected Analytical Results Table 3: Additional Analytical Results
Figures	Figure 1: Vicinity Map Figure 2: Groundwater Elevation Contour Map Figure 3: Dissolved-Phase TPPH Concentration Map Figure 4: Dissolved-Phase Benzene Concentration Map Figure 5: Dissolved-Phase MTBE Concentration Map
Graphs	Groundwater Elevations vs. Time Benzene Concentrations vs. Time
Field Activities	General Field Procedures Groundwater Sampling Field Notes
Laboratory Reports	Official Laboratory Reports Quality Control Reports Chain of Custody Records
Statements	Purge Water Disposal Limitations



**Summary of Gauging and Sampling Activities**  
**October 2005 through December 2005**  
**Former 76 Station 0843**  
**1629 Webster Street**  
**Alameda, CA**

Project Coordinator: **Thomas Kosel**  
Telephone: **916-558-7666**

Water Sampling Contractor: **TRC**  
Compiled by: **Jeremiah Hurn**

Date(s) of Gauging/Sampling Event: **11/23/05**

**Sample Points**

Groundwater wells: **4** onsite, **2** offsite      Wells gauged: **6**      Wells sampled: **5**  
Purging method: **Diaphragm pump**  
Purge water disposal: **Onyx/Rodeo Unit 100**  
Other Sample Points: **0**      Type: **n/a**

**Liquid Phase Hydrocarbons (LPH)**

Wells with LPH: **0**      Maximum thickness (feet): **n/a**  
LPH removal frequency: **n/a**      Method: **n/a**  
Treatment or disposal of water/LPH: **n/a**

**Hydrogeologic Parameters**

Depth to groundwater (below TOC):      Minimum: **5.86 feet**      Maximum: **7.28 feet**  
Average groundwater elevation (relative to available local datum): **8.37 feet**  
Average change in groundwater elevation since previous event: **-0.70 feet**  
Interpreted groundwater gradient and flow direction:  
    Current event: **0.003 ft/ft, northeast**  
    Previous event: **0.004 ft/ft, northeast (07/27/05)**

**Selected Laboratory Results**

Wells with detected **Benzene**: **1**      Wells above MCL (1.0 µg/l): **1**  
    Maximum reported benzene concentration: **1.3 µg/l (MW-2A, MW-2A)**  
Wells with **TPPH 8260B**: **2**      Maximum: **590 µg/l (MW-6)**  
Wells with **MTBE**: **3**      Maximum: **1,700 µg/l (MW-6)**

**Notes:**

MW-1=Sampled annually,

# TABLES

## TABLE KEY

### STANDARD ABBREVIATIONS

--	=	not analyzed, measured, or collected
LPH	=	liquid-phase hydrocarbons
Trace	=	less than 0.01 foot of LPH in well
µg/l	=	micrograms per liter (approx. equivalent to parts per billion, ppb)
mg/l	=	milligrams per liter (approx. equivalent to parts per million, ppm)
ND <	=	not detected at or above laboratory detection limit
TOC	=	top of casing (surveyed reference elevation)

### ANALYTES

BTEX	=	benzene, toluene, ethylbenzene, and (total) xylenes
DIPE	=	di-isopropyl ether
ETBE	=	ethyl tertiary butyl ether
MTBE	=	methyl tertiary butyl ether
PCB	=	polychlorinated biphenyls
PCE	=	tetrachloroethene
TBA	=	tertiary butyl alcohol
TCA	=	trichloroethane
TCE	=	trichloroethene
TPH-G	=	total petroleum hydrocarbons with gasoline distinction
TPH-D	=	total petroleum hydrocarbons with diesel distinction
TPPH	=	total purgeable petroleum hydrocarbons
TRPH	=	total recoverable petroleum hydrocarbons
TAME	=	tertiary amyl methyl ether
1,1-DCA	=	1,1-dichloroethane
1,2-DCA	=	1,2-dichloroethane (same as EDC, ethylene dichloride)
1,1-DCE	=	1,1-dichloroethene
1,2-DCE	=	1,2-dichloroethene (cis- and trans-)

### NOTES

1. Elevations are in feet above mean sea level. Depths are in feet below surveyed top-of-casing.
2. Groundwater elevations for wells with LPH are calculated as:  $\text{Surface Elevation} - \text{Measured Depth to Water} + (\text{Dp} \times \text{LPH Thickness})$ , where Dp is the density of the LPH, if known. A value of 0.75 is used for gasoline and when the density is not known. A value of 0.83 is used for diesel.
3. Wells with LPH are generally not sampled for laboratory analysis (see General Field Procedures).
4. Comments shown on tables are general. Additional explanations may be included in field notes and laboratory reports, both of which are included as part of this report.
5. A "J" flag indicates that a reported analytical result is an estimated concentration value between the method detection limit (MDL) and the practical quantification limit (PQL) specified by the laboratory.
6. Other laboratory flags (qualifiers) may have been reported. See the official laboratory report (attached) for a complete list of laboratory flags.
7. Concentration graphs based on tables (presented following Figures) show non-detect results prior to the Second Quarter 2000 plotted at fixed values for graphical display. Non-detect results reported since that time are plotted at reporting limits stated in the official laboratory report.
8. Groundwater vs. Time graphs may be corrected for apparent level changes due to resurvey.

### REFERENCE

TRC began groundwater monitoring and sampling for Former 76 Station 0843 in October 2003. Historical data compiled prior to that time were provided by Gettler-Ryan Inc.

**Table 1**  
**CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 23, 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-1</b>		<b>(Screen Interval in feet: 4.5-20.5)</b>												
11/23/2005	16.18	7.28	0.00	8.90	-0.76	--	--	--	--	--	--	--	--	Sampled annually
<b>MW-2A</b>		<b>(Screen Interval in feet: 5-11.5)</b>												
11/23/2005	15.56	6.88	0.00	8.68	-0.72	--	120	1.3	2.8	7.8	30	--	10	
<b>MW-3</b>		<b>(Screen Interval in feet: 5.0-20.0)</b>												
11/23/2005	15.11	6.60	0.00	8.51	-0.79	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>MW-4</b>		<b>(Screen Interval in feet: 5.0-20.5)</b>												
11/23/2005	15.17	6.59	0.00	8.58	-0.85	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	23	
<b>MW-5</b>		<b>(Screen Interval in feet: 5-20)</b>												
11/23/2005	13.34	5.86	0.00	7.48	-0.55	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>MW-6</b>		<b>(Screen Interval in feet: 5-20)</b>												
11/23/2005	14.08	6.01	0.00	8.07	-0.53	--	590	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1700	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-1 (Screen Interval in feet: 4.5-20.5)</b>														
3/5/1999	16.18	--	--	--	--	86.6	--	ND	2.04	ND	4.06	--	23.9	
6/3/1999	16.18	6.24	0.00	9.94	--	ND	--	ND	ND	ND	ND	ND	ND	
9/2/1999	16.18	7.19	0.00	8.99	-0.95	ND	--	ND	ND	ND	ND	ND	ND	
12/14/1999	16.18	8.07	0.00	8.11	-0.88	ND	--	ND	ND	ND	ND	ND	--	
3/14/2000	16.18	5.47	0.00	10.71	2.60	ND	--	ND	ND	ND	ND	ND	--	
5/31/2000	16.18	6.22	0.00	9.96	-0.75	ND	--	ND	ND	ND	ND	ND	--	
8/29/2000	16.18	6.82	0.00	9.36	-0.60	ND	--	ND	ND	ND	ND	ND	--	
12/1/2000	16.18	7.54	0.00	8.64	-0.72	ND	--	ND	ND	ND	ND	ND	--	
3/17/2001	16.18	5.73	0.00	10.45	1.81	ND	--	ND	ND	ND	ND	ND	--	
5/23/2001	16.18	6.43	0.00	9.75	-0.70	ND	--	ND	ND	ND	ND	ND	--	
9/24/2001	16.18	7.12	0.00	9.06	-0.69	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
12/10/2001	16.18	6.89	0.00	9.29	0.23	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
3/11/2002	16.18	5.61	0.00	10.57	1.28	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/2002	16.18	5.71	0.00	10.47	-0.10	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
9/3/2002	16.18	--	--	--	--	--	--	--	--	--	--	--	--	Not monitored/sampled
12/12/2002	16.18	7.80	0.00	8.38	--	--	--	--	--	--	--	--	--	No longer sampled
3/13/2003	16.18	5.94	0.00	10.24	1.86	--	--	--	--	--	--	--	--	
6/12/2003	16.18	6.10	0.00	10.08	-0.16	--	--	--	--	--	--	--	--	
9/12/2003	16.18	6.65	0.00	9.53	-0.55	--	--	--	--	--	--	--	--	
12/31/2003	16.18	5.74	0.00	10.44	0.91	--	--	--	--	--	--	--	--	Monitored Only
2/12/2004	16.18	6.02	0.00	10.16	-0.28	--	--	--	--	--	--	--	--	Monitored Only
6/7/2004	16.18	6.61	0.00	9.57	-0.59	--	--	--	--	--	--	--	--	Monitored Only
9/17/2004	16.18	7.58	0.00	8.60	-0.97	--	--	--	--	--	--	--	--	Sampled Annually
12/11/2004	16.18	6.49	0.00	9.69	1.09	--	--	--	--	--	--	--	--	Sampled Annually

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-1 continued</b>														
3/15/2005	16.18	5.28	0.00	10.90	1.21	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	27	
5/17/2005	16.18	5.83	0.00	10.35	-0.55	--	--	--	--	--	--	--	--	Sampled annually
7/27/2005	16.18	6.52	0.00	9.66	-0.69	--	--	--	--	--	--	--	--	Sampled Annually
11/23/2005	16.18	7.28	0.00	8.90	-0.76	--	--	--	--	--	--	--	--	Sampled annually
<b>MW-2 (Screen Interval in feet: 4.5-20.5)</b>														
3/5/1999	15.57	--	0.00	--	--	34400	--	2070	7710	2340	8240	--	8460	
6/3/1999	15.57	5.96	0.00	9.61	--	51200	--	1820	7570	2510	7320	6460	8800	
9/2/1999	15.57	6.85	0.00	8.72	-0.89	17000	--	1000	3100	1400	3700	4000	3720	
12/14/1999	15.57	7.65	0.00	7.92	-0.80	83000	--	3000	22000	4500	17000	9100	11000	
3/14/2000	15.57	5.26	0.00	10.31	2.39	31000	--	1600	4600	2300	7300	5700	8700	
5/31/2000	15.57	5.60	0.00	9.97	-0.34	9970	--	598	1030	487	2060	2500	1670	
8/29/2000	15.57	6.35	0.00	9.22	-0.75	7900	--	390	1500	280	1900	1800	1300	
12/1/2000	15.57	7.06	0.00	8.51	-0.71	87500	--	1860	17400	5590	19400	6220	3790	
3/17/2001	15.57	5.98	0.00	9.59	1.08	4310	--	371	59.0	280	682	321	433	
5/23/2001	15.57	6.97	0.00	8.60	-0.99	45400	--	374	4490	2790	10900	ND	406	
9/24/2001	15.57	7.56	0.00	8.01	-0.59	76000	--	430	13000	4700	18000	ND<2000	480	
12/10/2001	15.57	6.52	0.00	9.05	1.04	82000	--	320	9100	4400	16000	ND<2500	270	
3/11/2002	15.57	5.51	0.00	10.06	1.01	14000	--	75	1400	1100	3600	ND<250	150	
6/7/2002	15.57	5.73	0.00	9.84	-0.22	14000	--	120	1200	1400	4700	540	200	
9/3/2002	15.57	6.81	0.00	8.76	-1.08	10000	--	150	1200	610	2800	510	460	
12/12/2002	15.57	--	--	--	--	--	--	--	--	--	--	--	--	Destroyed, replaced with MW-2A
<b>MW-2a (Screen Interval in feet: 5-11.5)</b>														
12/12/2002	15.56	7.45	0.00	8.11	--	3400	--	80	260	210	1000	380	400	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-2a continued</b>														
3/13/2003	--	5.85	0.00	--	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	1.8	2.4	2.4	
6/12/2003	--	6.08	0.00	--	--	ND<50	--	0.59	0.69	ND<0.50	1.2	6.0	4.7	
9/12/2003	15.56	6.54	0.00	9.02	--	--	120	1.8	4.2	6.1	20	--	6.6	
12/31/2003	15.56	5.63	0.00	9.93	0.91	88	--	0.79	1.8	3.6	14	ND<5.0	2.9	
2/12/2004	15.56	5.68	0.00	9.88	-0.05	160	--	2.6	4.8	13	48	7.2	7.9	
6/7/2004	15.56	6.21	0.00	9.35	-0.53	94	--	0.80	1.2	2.1	9.1	4.5	3.7	
9/17/2004	15.56	7.16	0.00	8.40	-0.95	--	230	3.5	6.1	13	41	--	83	
12/11/2004	15.56	5.84	0.00	9.72	1.32	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.2	
3/15/2005	15.56	5.52	0.00	10.04	0.32	--	92	0.84	1.7	2.4	9.8	--	ND<10	
5/17/2005	15.56	5.55	0.00	10.01	-0.03	--	54	2.1	1.7	1.9	7.0	--	2.9	
7/27/2005	15.56	6.16	0.00	9.40	-0.61	--	ND<50	0.66	1.1	1.3	4.2	--	3.7	
11/23/2005	15.56	6.88	0.00	8.68	-0.72	--	120	1.3	2.8	7.8	30	--	10	
<b>MW-3 (Screen Interval in feet: 5.0-20.0)</b>														
3/5/1999	15.11	--	0.00	--	--	135	--	ND	ND	ND	4.84	--	2.46	
6/3/1999	15.11	5.57	0.00	9.54	--	ND	--	ND	ND	ND	ND	5.23	12.7	
9/2/1999	15.11	6.50	0.00	8.61	-0.93	ND	--	ND	ND	ND	ND	13	11	
12/14/1999	15.11	7.28	0.00	7.83	-0.78	ND	--	ND	ND	ND	ND	ND	--	
3/14/2000	15.11	4.87	0.00	10.24	2.41	ND	--	ND	ND	ND	ND	7.2	6.3	
5/31/2000	15.11	5.58	0.00	9.53	-0.71	ND	--	ND	ND	ND	ND	ND	--	
8/29/2000	15.11	6.06	0.00	9.05	-0.48	ND	--	ND	ND	ND	ND	ND	ND	
12/1/2000	15.11	6.76	0.00	8.35	-0.70	ND	--	ND	ND	ND	ND	ND	--	
3/17/2001	15.11	5.09	0.00	10.02	1.67	ND	--	ND	ND	ND	ND	ND	--	
5/23/2001	15.11	5.72	0.00	9.39	-0.63	ND	--	ND	ND	ND	ND	ND	--	
9/24/2001	15.11	6.34	0.00	8.77	-0.62	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-3 continued</b>														
12/10/2001	15.11	6.31	0.00	8.80	0.03	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
3/11/2002	15.11	5.15	0.00	9.96	1.16	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/2002	15.11	5.45	0.00	9.66	-0.30	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
12/12/2002	15.11	7.15	0.00	7.96	-1.70	--	--	--	--	--	--	--	--	No longer sampled
3/13/2003	15.11	5.37	0.00	9.74	1.78	--	--	--	--	--	--	--	--	
6/12/2003	15.11	5.51	0.00	9.60	-0.14	--	--	--	--	--	--	--	--	
9/12/2003	15.11	6.03	0.00	9.08	-0.52	--	--	--	--	--	--	--	--	
12/31/2003	15.11	5.62	0.00	9.49	0.41	--	--	--	--	--	--	--	--	Monitored Only
2/12/2004	15.11	5.51	0.00	9.60	0.11	--	--	--	--	--	--	--	--	Monitored Only
6/7/2004	15.11	5.92	0.00	9.19	-0.41	--	--	--	--	--	--	--	--	Monitored Only
9/17/2004	15.11	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate
12/11/2004	15.11	5.94	0.00	9.17	--	--	--	--	--	--	--	--	--	Sampled Annually
3/11/2005	15.11	4.76	0.00	10.35	1.18	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/17/2005	15.11	5.23	0.00	9.88	-0.47	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
7/27/2005	15.11	5.81	0.00	9.30	-0.58	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/23/2005	15.11	6.60	0.00	8.51	-0.79	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>MW-4 (Screen Interval in feet: 5.0-20.5)</b>														
3/5/1999	15.17	--	0.00	--	--	ND	--	ND	ND	ND	2.44	--	25.2	
6/3/1999	15.17	5.45	0.00	9.72	--	ND	--	ND	ND	ND	ND	ND	3.96	
9/2/1999	15.17	6.48	0.00	8.69	-1.03	ND	--	ND	ND	ND	ND	23	27	
12/14/1999	15.17	7.27	0.00	7.90	-0.79	ND	--	ND	ND	ND	ND	200	270	
3/14/2000	15.17	4.67	0.00	10.50	2.60	ND	--	ND	ND	ND	ND	46	49	
5/31/2000	15.17	5.48	0.00	9.69	-0.81	ND	--	ND	ND	ND	ND	ND	--	
8/29/2000	15.17	6.10	0.00	9.07	-0.62	ND	--	ND	ND	ND	ND	6.1	3.2	



**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-4 continued</b>														
12/1/2000	15.17	6.79	0.00	8.38	-0.69	ND	--	ND	ND	ND	ND	152	101	
3/17/2001	15.17	5.01	0.00	10.16	1.78	ND	--	ND	ND	ND	ND	ND	--	
5/23/2001	15.17	5.78	0.00	9.39	-0.77	ND	--	ND	ND	ND	ND	ND	--	
9/24/2001	15.17	6.42	0.00	8.75	-0.64	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
12/10/2001	15.17	6.41	0.00	8.76	0.01	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1700	1300	
3/11/2002	15.17	5.05	0.00	10.12	1.36	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/2002	15.17	5.42	0.00	9.75	-0.37	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
9/3/2002	15.17	6.50	0.00	8.67	-1.08	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
12/12/2002	15.17	7.18	0.00	7.99	-0.68	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.9	3.3	
3/13/2003	15.17	5.42	0.00	9.75	1.76	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
6/12/2003	15.17	5.60	0.00	9.57	-0.18	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
9/12/2003	15.17	6.07	0.00	9.10	-0.47	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
12/31/2003	15.17	5.63	0.00	9.54	0.44	750	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	790	--	
2/12/2004	15.17	5.26	0.00	9.91	0.37	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/2004	15.17	5.82	0.00	9.35	-0.56	ND<50	--	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<1	--	
9/17/2004	15.17	6.86	0.00	8.31	-1.04	--	56	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	10	
12/11/2004	15.17	6.01	0.00	9.16	0.85	--	350	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	380	
3/11/2005	15.17	4.61	0.00	10.56	1.40	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/17/2005	15.17	4.93	0.00	10.24	-0.32	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
7/27/2005	15.17	5.74	0.00	9.43	-0.81	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/23/2005	15.17	6.59	0.00	8.58	-0.85	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	23	
<b>MW-5 (Screen Interval in feet: 5-20)</b>														
12/14/1999	13.34	6.45	0.00	6.89	--	ND	--	ND	ND	ND	ND	3.5	3.8	
3/14/2000	13.34	4.46	0.00	8.88	1.99	ND	--	ND	ND	ND	ND	ND	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-5 continued</b>														
5/31/2000	13.34	5.18	0.00	8.16	-0.72	ND	--	ND	ND	ND	ND	ND	--	
8/29/2000	13.34	5.46	0.00	7.88	-0.28	ND	--	ND	ND	ND	ND	ND	--	
12/1/2000	13.34	5.95	0.00	7.39	-0.49	ND	--	ND	ND	ND	ND	ND	--	
3/17/2001	13.34	5.36	0.00	7.98	0.59	ND	--	ND	ND	ND	ND	ND	--	
5/23/2001	13.34	5.09	0.00	8.25	0.27	ND	--	ND	ND	ND	ND	ND	--	
9/24/2001	13.34	5.58	0.00	7.76	-0.49	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
12/10/2001	13.34	5.51	0.00	7.83	0.07	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
3/11/2002	13.34	4.70	0.00	8.64	0.81	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/2002	13.34	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible - paved over
9/3/2002	13.34	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible - paved over
12/12/2002	13.34	6.42	0.00	6.92	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
3/13/2003	13.34	5.12	0.00	8.22	1.30	ND<50	--	ND<0.50	0.54	ND<0.50	ND<0.50	ND<2.0	--	
6/12/2003	13.34	5.24	0.00	8.10	-0.12	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
9/12/2003	13.34	5.53	0.00	7.81	-0.29	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
12/31/2003	13.34	5.11	0.00	8.23	0.42	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
2/12/2004	13.34	5.02	0.00	8.32	0.09	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
6/7/2004	13.34	5.35	0.00	7.99	-0.33	ND<50	--	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<1	--	
9/17/2004	13.34	6.10	0.00	7.24	-0.75	--	--	--	--	--	--	--	--	Sampled Annually
12/11/2004	13.34	5.53	0.00	7.81	0.57	--	--	--	--	--	--	--	--	Sampled Annually
3/11/2005	13.34	4.96	0.00	8.38	0.57	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/17/2005	13.34	5.04	0.00	8.30	-0.08	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
7/27/2005	13.34	5.31	0.00	8.03	-0.27	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
11/23/2005	13.34	5.86	0.00	7.48	-0.55	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	

**MW-6 (Screen Interval in feet: 5-20)**

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**March 1999 Through November 2005**  
**Former 76 Station 0843**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-6 continued</b>														
12/14/1999	14.08	6.64	0.00	7.44	--	ND	--	ND	ND	ND	ND	11000	18000	
3/14/2000	14.08	4.72	0.00	9.36	1.92	ND	--	ND	ND	ND	ND	19000	21000	
5/31/2000	14.08	5.28	0.00	8.80	-0.56	ND	--	ND	ND	ND	ND	13200	--	
8/29/2000	14.08	5.39	0.00	8.69	-0.11	ND	--	ND	ND	ND	ND	270	400	
12/1/2000	14.08	6.11	0.00	7.97	-0.72	ND	--	ND	ND	ND	ND	6330	3640	
3/17/2001	14.08	6.02	0.00	8.06	0.09	18700	--	2950	989	1040	3000	10200	11500	
5/23/2001	14.08	5.82	0.00	8.26	0.20	ND	--	ND	ND	ND	ND	4660	--	
9/24/2001	14.08	6.59	0.00	7.49	-0.77	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	160	190	
12/10/2001	14.08	6.50	0.00	7.58	0.09	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3200	2400	
3/11/2002	14.08	4.81	0.00	9.27	1.69	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	92	120	
6/7/2002	14.08	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible - paved over
9/3/2002	14.08	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible - paved over
12/12/2002	14.08	6.51	0.00	7.57	--	590	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1500	6200	
3/13/2003	14.08	5.20	0.00	8.88	1.31	1600	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	4900	4100	
D 3/13/2003	14.08	5.20	0.00	8.88	1.31	--	--	--	--	--	--	--	5100	
6/12/2003	14.08	5.38	0.00	8.70	-0.18	1600	--	ND<10	ND<10	ND<10	ND<10	5200	3700	
9/12/2003	14.08	6.29	0.00	7.79	-0.91	--	ND<250	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	310	
12/31/2003	14.08	5.38	0.00	8.70	0.91	3300	--	ND<25	ND<25	ND<25	ND<25	3800	--	
2/12/2004	14.08	5.06	0.00	9.02	0.32	1100	--	ND<10	ND<10	ND<10	ND<10	1900	2800	
6/7/2004	14.08	5.45	0.00	8.63	-0.39	2500	--	ND<3	ND<3	ND<3	ND<6	3200	2900	
9/17/2004	14.08	6.20	0.00	7.88	-0.75	--	1300	ND<10	ND<10	ND<10	ND<20	--	2000	
12/11/2004	14.08	5.60	0.00	8.48	0.60	--	1800	ND<10	ND<10	ND<10	ND<20	--	2700	
3/11/2005	14.08	4.71	0.00	9.37	0.89	--	ND<1000	ND<10	ND<10	ND<10	ND<20	--	2500	
5/17/2005	14.08	4.98	0.00	9.10	-0.27	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2200	

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**March 1999 Through November 2005**  
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Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
<b>MW-6 continued</b>														
7/27/2005	14.08	5.48	0.00	8.60	-0.50	--	ND<1000	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1100	
11/23/2005	14.08	6.01	0.00	8.07	-0.53	--	590	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1700	

**Table 3**  
**ADDITIONAL ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	EDC (µg/l)	EDB (µg/l)	TAME 8260B (µg/l)	TBA 8260B (µg/l)	DIPE 8260B (µg/l)	ETBE 8260B (µg/l)	Ethanol 8260B (µg/l)
<b>MW-1</b>							
9/2/99	--	--	ND	ND	ND	ND	ND
3/15/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
<b>MW-2</b>							
9/2/99	--	--	ND	ND	ND	ND	ND
12/14/99	ND	ND	ND	ND	ND	ND	ND
3/14/00	ND	ND	ND	1300	ND	ND	ND
5/31/00	ND	ND	ND	ND	ND	ND	ND
8/29/00	ND	ND	ND	250	ND	ND	ND
12/1/00	ND	ND	ND	ND	ND	ND	ND
3/17/01	ND	ND	ND	ND	14.8	ND	ND
5/23/01	ND	ND	ND	ND	ND	ND	ND
9/24/01	ND<100	ND<100	ND<100	ND<5000	ND<100	ND<100	ND<5000000
12/10/01	ND<25	ND<25	ND<25	ND<500	ND<25	ND<25	ND<1200000
3/11/02	ND<20	ND<20	ND<20	ND<1000	ND<20	ND<20	ND<5000000
6/7/02	ND<25	ND<25	ND<25	ND<1000	ND<25	ND<25	ND<2000000
9/3/02	ND<20	ND<20	ND<20	ND<1000	ND<20	ND<20	ND<5000000
<b>MW-2a</b>							
12/12/02	2.3	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500000
3/13/03	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500000
6/12/03	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500000
9/12/03	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500
12/31/03	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500
2/12/04	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500
6/7/04	ND<0.5	ND<0.5	ND<1	ND<12	ND<1	ND<1	ND<800
9/17/04	--	--	ND<0.50	6.7	ND<1.0	ND<0.50	ND<50
12/11/04	--	--	ND<0.50	ND<5.0	ND<1.0	ND<0.50	ND<50

**Table 3**  
**ADDITIONAL ANALYTICAL RESULTS**  
**Former 76 Station 0843**

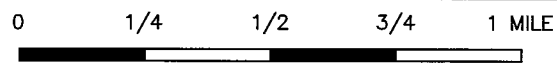
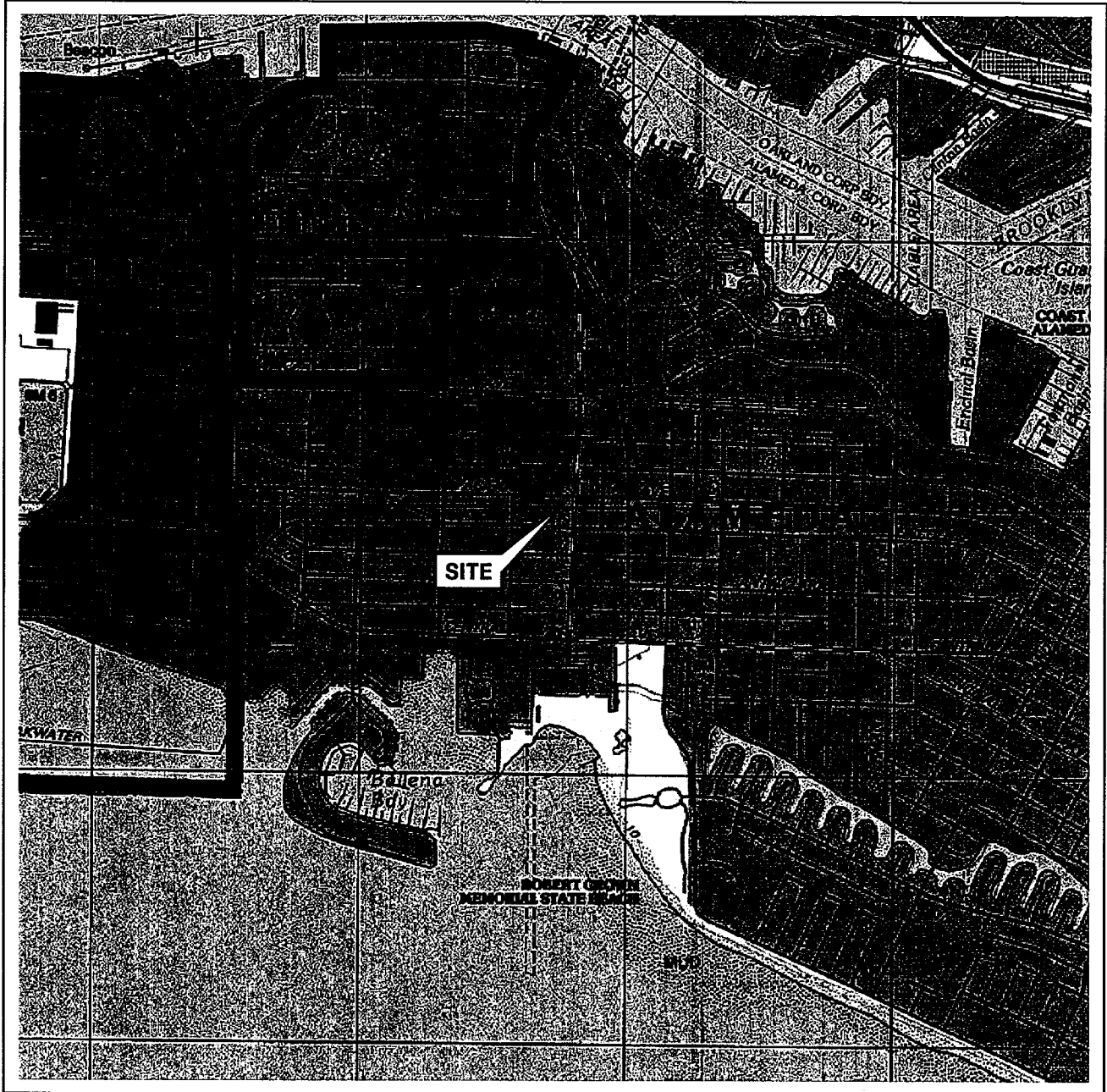
Date Sampled	EDC (µg/l)	EDB (µg/l)	TAME 8260B (µg/l)	TBA 8260B (µg/l)	DIPE 8260B (µg/l)	ETBE 8260B (µg/l)	Ethanol 8260B (µg/l)
<b>MW-2A continued</b>							
3/15/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
5/17/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
7/27/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
11/23/05	--	--	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<250
<b>MW-3</b>							
9/2/99	--	--	ND	ND	ND	ND	ND
3/11/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
5/17/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
7/27/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
11/23/05	--	--	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<250
<b>MW-4</b>							
9/2/99	--	--	ND	ND	ND	ND	ND
12/10/01	ND<14	ND<14	ND<14	ND<290	ND<14	ND<14	ND<7100000
12/12/02	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500000
9/12/03	--	--	--	--	--	--	ND<500
9/17/04	--	--	ND<0.50	ND<5.0	ND<1.0	ND<0.50	ND<50
12/11/04	--	--	ND<2.5	ND<25	ND<5.0	ND<2.5	ND<250
3/11/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
5/17/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
7/27/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
11/23/05	--	--	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<250
<b>MW-5</b>							
9/12/03	--	--	--	--	--	--	ND<500
3/11/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
5/17/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50
7/27/05	--	--	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<50

**Table 3**  
**ADDITIONAL ANALYTICAL RESULTS**  
**Former 76 Station 0843**

Date Sampled	EDC (µg/l)	EDB (µg/l)	TAME 8260B (µg/l)	TBA 8260B (µg/l)	DIPE 8260B (µg/l)	ETBE 8260B (µg/l)	Ethanol 8260B (µg/l)
<b>MW-5 continued</b>							
11/23/05	--	--	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<250
<b>MW-6</b>							
3/17/01	219	ND	ND	ND	ND	ND	ND
9/24/01	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<1000000
12/10/01	ND<25	ND<25	ND<25	ND<500	ND<25	ND<25	ND<12000000
3/11/02	ND<2.0	ND<2.0	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<500000
12/12/02	ND<200	ND<200	ND<200	ND<10000	ND<200	ND<200	ND<50000000
3/13/03	ND<100	ND<100	ND<100	ND<5000	ND<100	ND<100	ND<25000000
6/12/03	ND<40	ND<40	ND<40	ND<2000	ND<40	ND<40	ND<10000000
9/12/03	--	--	--	--	--	--	ND<2500
2/12/04	ND<40	ND<40	ND<40	ND<2000	ND<40	ND<40	ND<10000
6/7/04	ND<5	ND<5	ND<10	ND<200	ND<10	ND<10	ND<8000
9/17/04	--	--	ND<10	ND<100	ND<20	ND<10	ND<1000
12/11/04	--	--	ND<10	ND<100	ND<20	ND<10	ND<1000
3/11/05	--	--	ND<10	ND<100	ND<10	ND<10	ND<1000
5/17/05	--	--	ND<10	ND<100	ND<10	ND<10	ND<1000
7/27/05	--	--	ND<10	ND<100	ND<10	ND<10	ND<1000
11/23/05	--	--	1.0	ND<10	ND<0.50	ND<0.50	ND<250

# FIGURES





SCALE 1: 24,000



**SOURCE:**

United States Geological Survey  
7.5 Minute Topographic Map:  
Oakland West Quadrangle



QUADRANGLE  
LOCATION

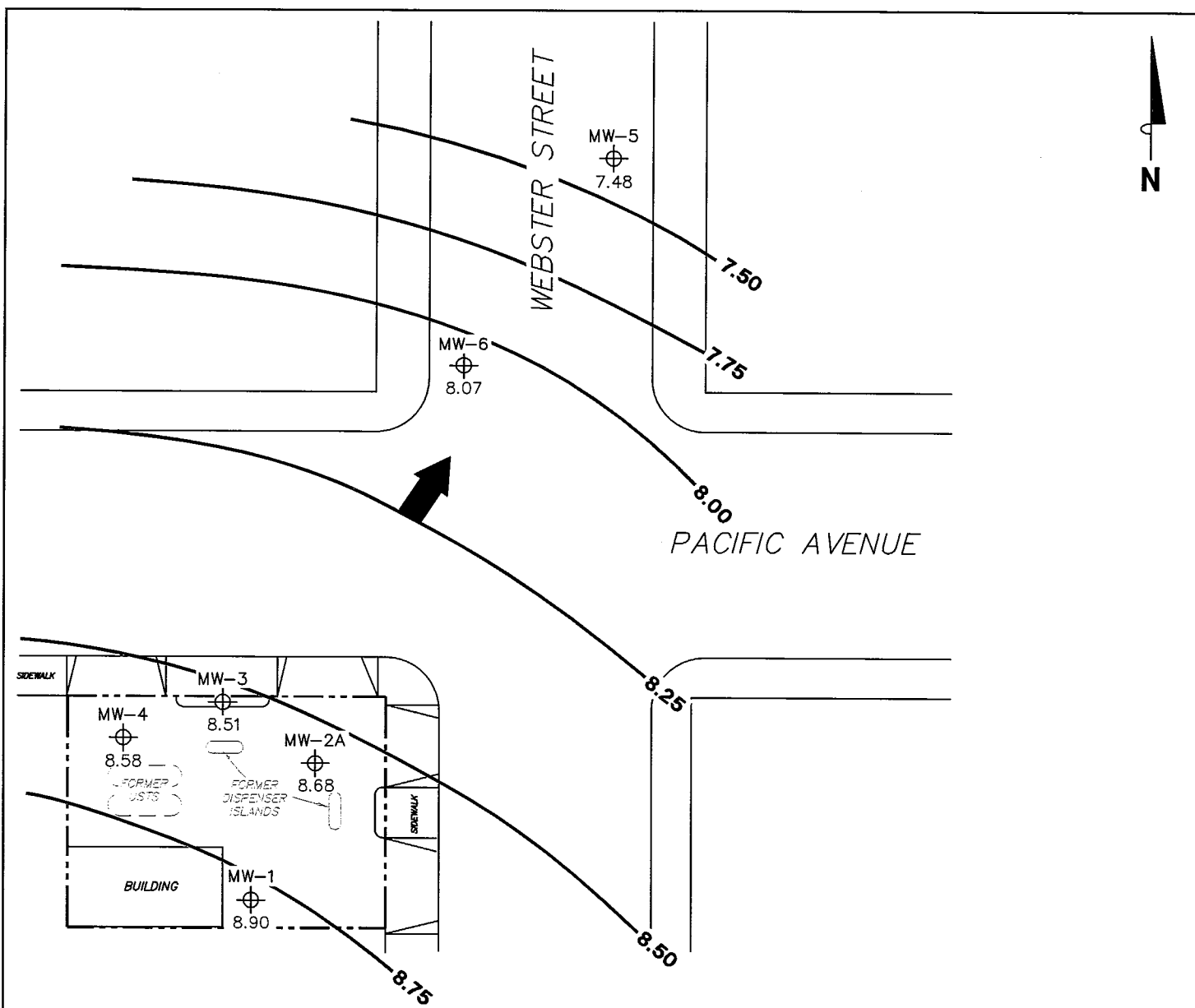
**VICINITY MAP**

Former 76 Station 0843  
1629 Webster Street  
Alameda, California

**FIGURE 1**

**TRC**

PS = 1:1



**NOTES:**

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. UST = underground storage tank.

**LEGEND**

MW-6 Monitoring Well with Groundwater Elevation (feet)

8.75 Groundwater Elevation Contour

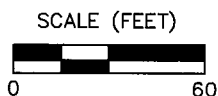
General Direction of Groundwater Flow

**GROUNDWATER ELEVATION  
CONTOUR MAP  
November 23, 2005**

Former 76 Station 0843  
1629 Webster Street  
Alameda, California

**FIGURE 2**

PS=1:1 0843-003



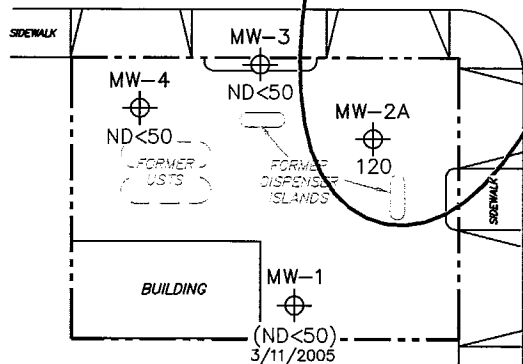
WEBSTER STREET

MW-5  
ND<50



MW-6  
590

PACIFIC AVENUE



**NOTES:**

Contour lines are interpretive and based on laboratory analysis results of groundwater samples.  
 TPPH = total purgeable petroleum hydrocarbons.  
 $\mu\text{g/l}$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report.  
 UST = underground storage tank.  
 ( ) = representative of historical value.  
 Results obtained using EPA Method 8260B.

**LEGEND**

MW-6 Monitoring Well with Dissolved-Phase TPPH Concentration ( $\mu\text{g/l}$ )

Dissolved-Phase TPPH Contour ( $\mu\text{g/l}$ )

**DISSOLVED-PHASE TPPH  
 CONCENTRATIONS MAP  
 November 23, 2005**

Former 76 Station 0843  
 1629 Webster Street  
 Alameda, California

**FIGURE 3**

SCALE (FEET)



PS=1:1 0843-003



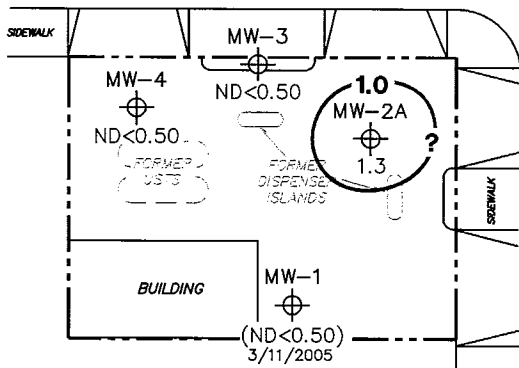
WEBSTER STREET

MW-5  
ND<0.50

MW-6  
ND<0.50



PACIFIC AVENUE



**NOTES:**

Contour lines are interpretive and based on laboratory analysis results of groundwater samples.  
 µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report.  
 UST = underground storage tank.  
 ( ) = representative of historical value.

**LEGEND**

MW-6 Monitoring Well with Dissolved-Phase Benzene Concentrations (µg/l)

Dissolved-Phase Benzene Contour (µg/l)

**DISSOLVED-PHASE BENZENE CONCENTRATIONS MAP**  
**November 23, 2005**

Former 76 Station 0843  
 1629 Webster Street  
 Alameda, California

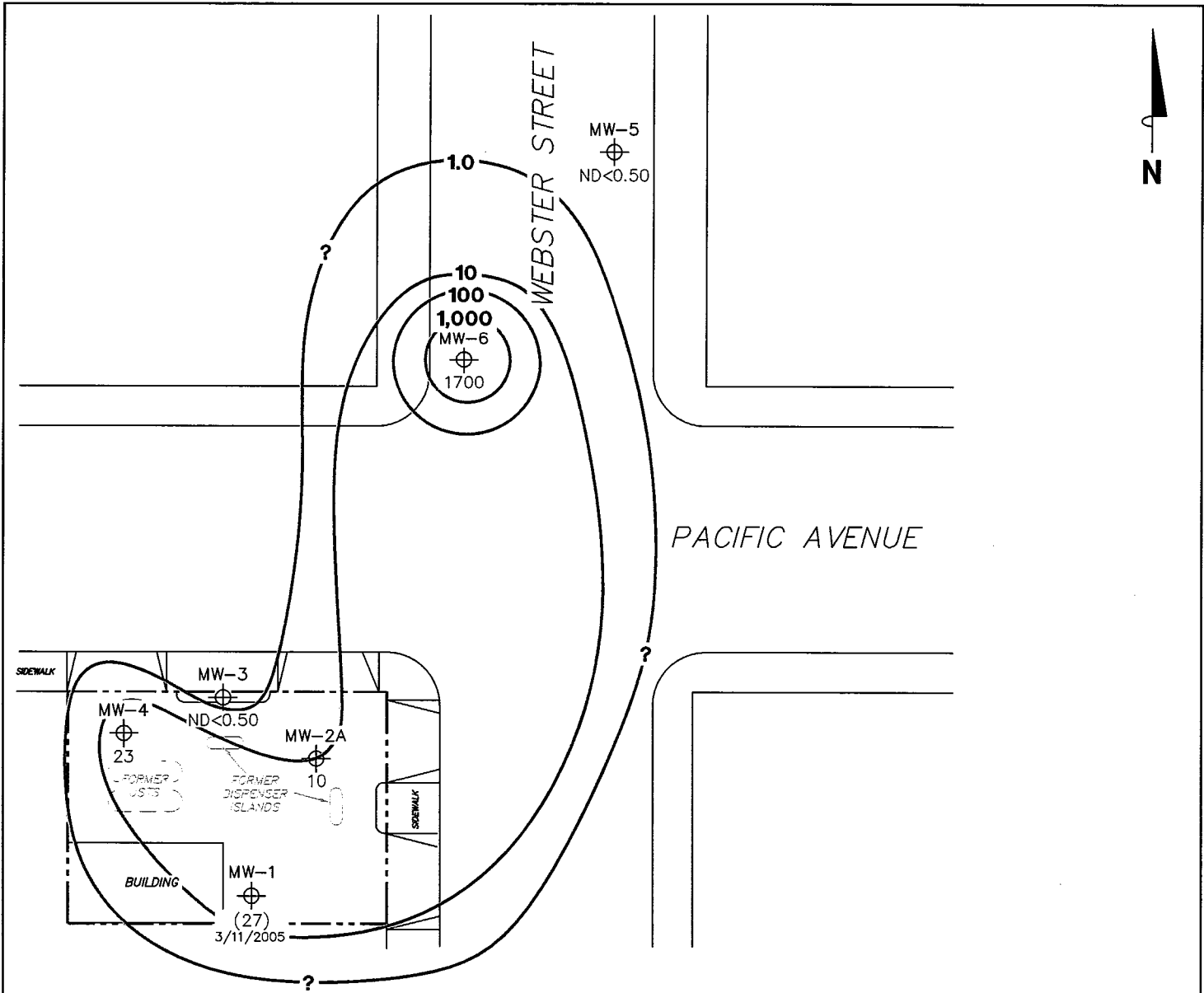
**FIGURE 4**

SCALE (FEET)



**TRC**

PS=1:1 0843-003



**NOTES:**

Contour lines are interpretive and based on laboratory analysis results of groundwater samples. MTBE = methyl tertiary butyl ether.  $\mu\text{g/l}$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report. UST = underground storage tank. ( ) = representative of historical value. MTBE results obtained using EPA Method 8260B.

**LEGEND**

MW-6 Monitoring Well with Dissolved-Phase MTBE Concentration ( $\mu\text{g/l}$ )

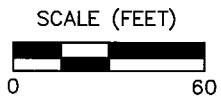
-1,000- Dissolved-Phase MTBE Contour ( $\mu\text{g/l}$ )

**DISSOLVED-PHASE MTBE CONCENTRATIONS MAP**  
**November 23, 2005**

Former 76 Station 0843  
 1629 Webster Street  
 Alameda, California

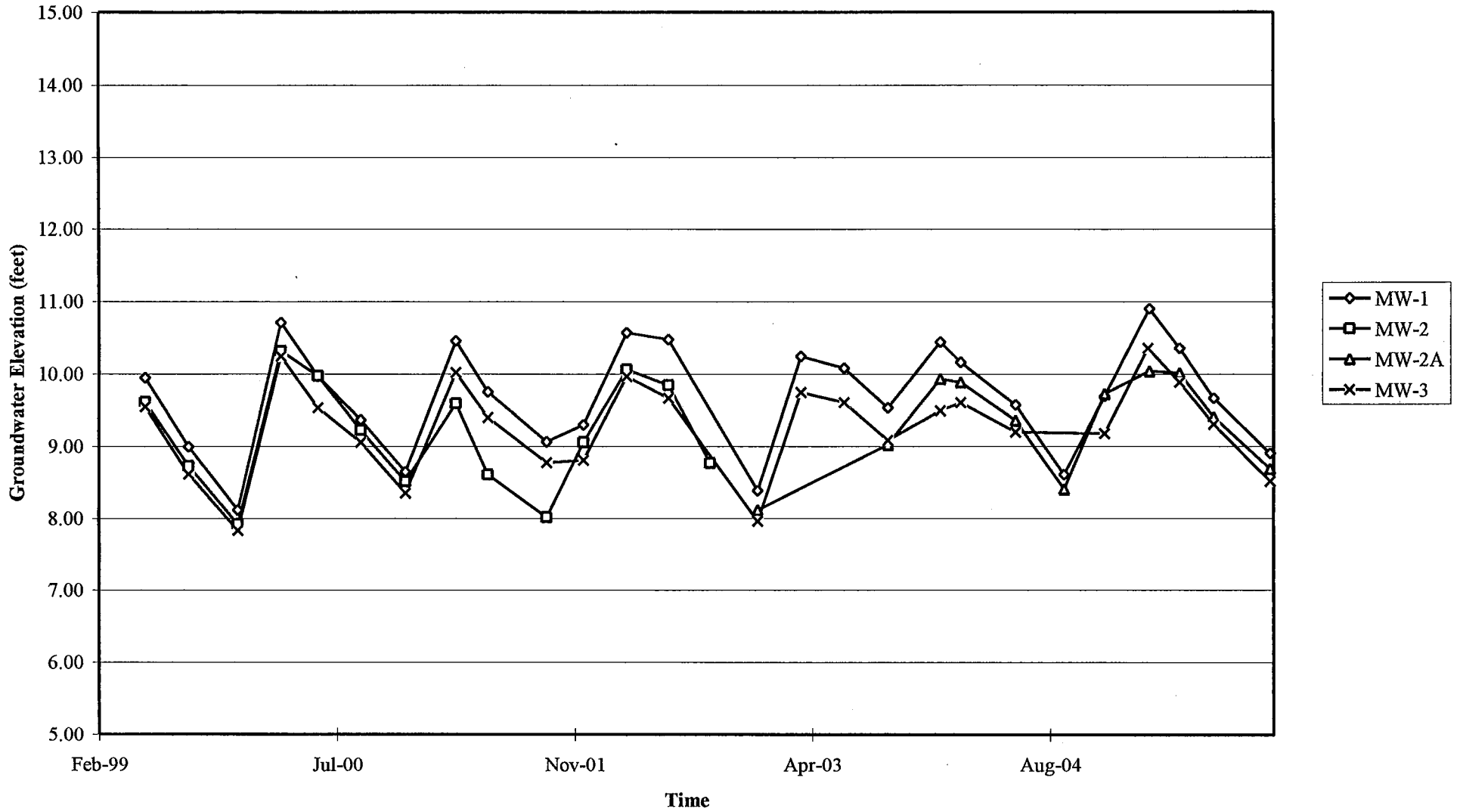
**FIGURE 5**

PS=1:1 0843-003

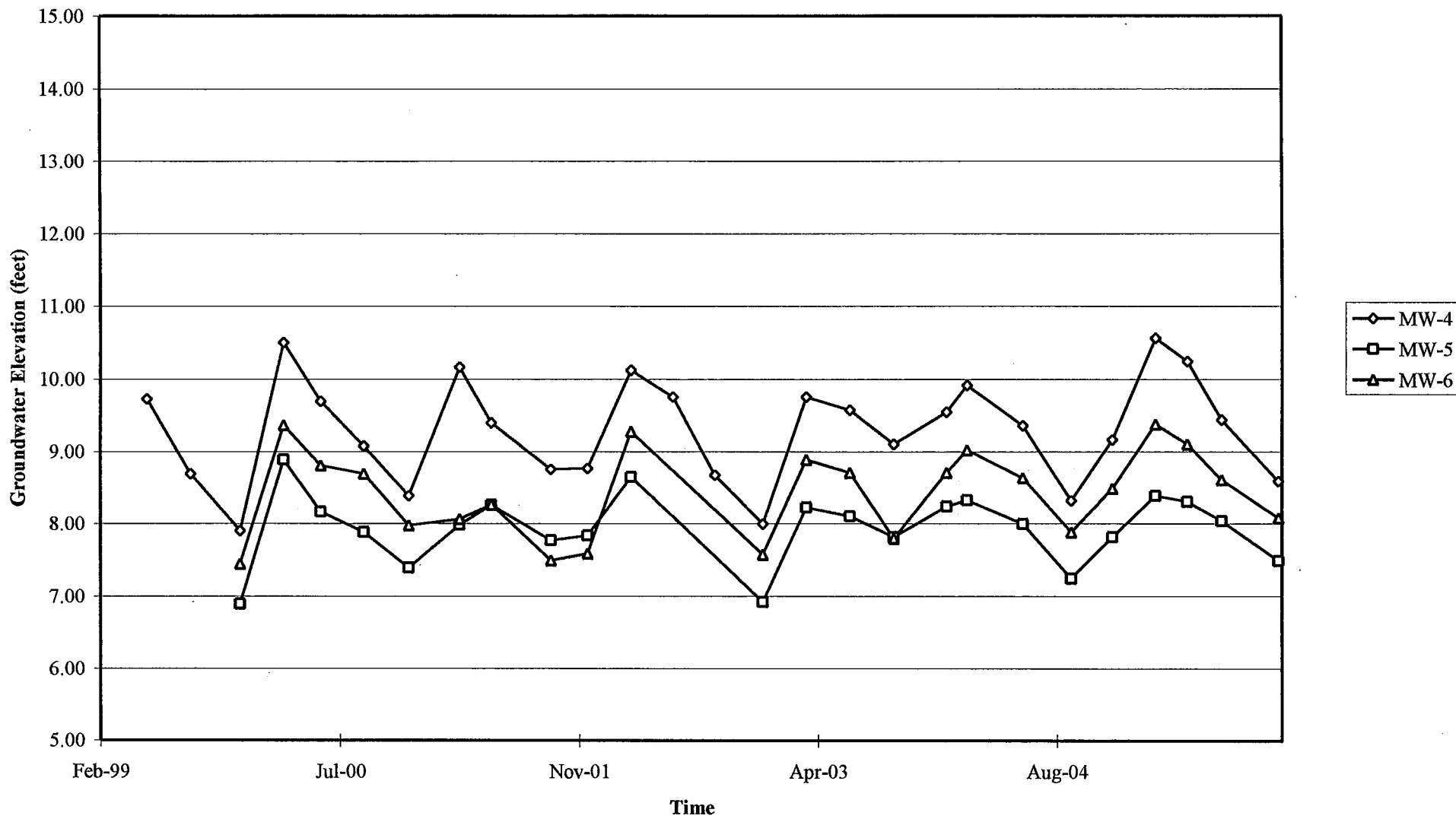


# GRAPHS

Groundwater Elevations vs. Time  
Former 76 Station 0843

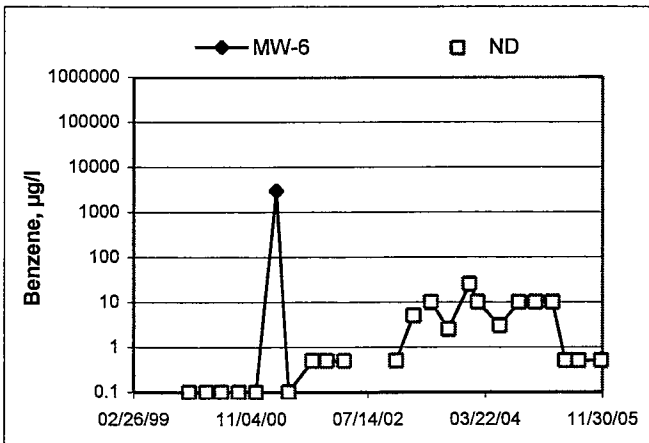
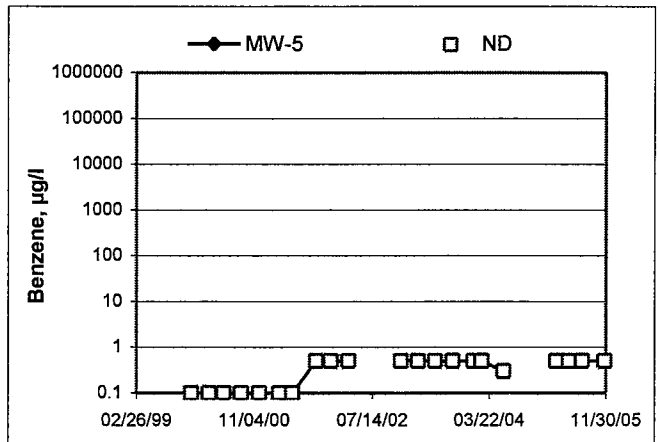
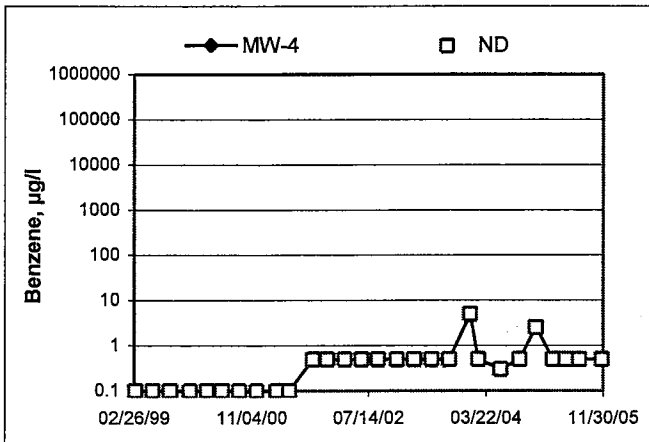
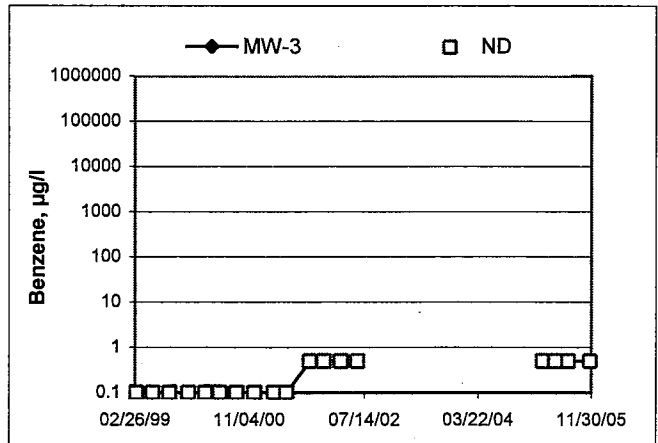
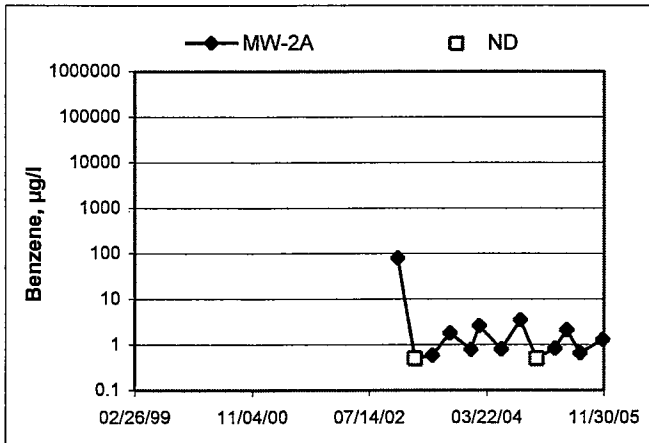
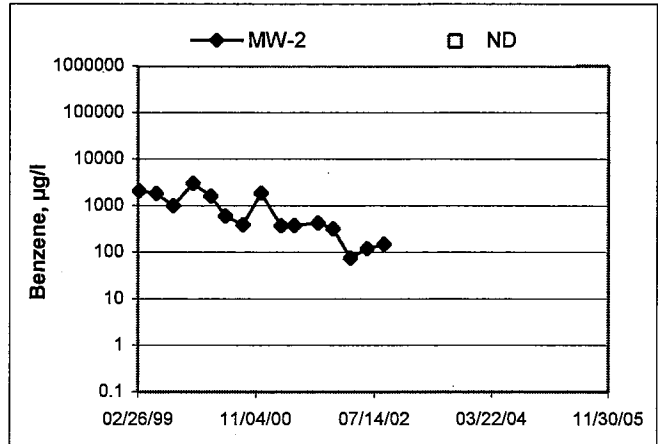
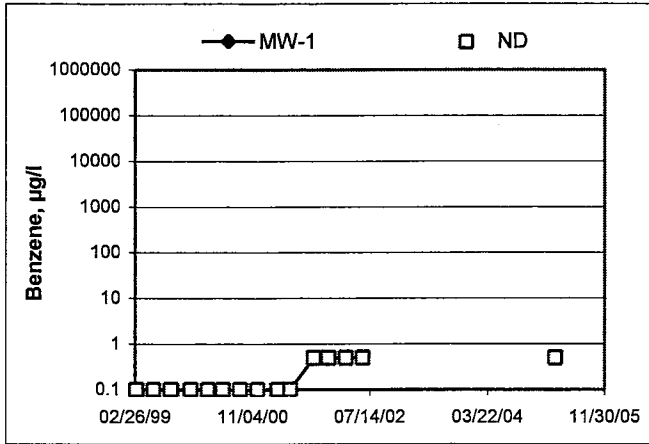


Groundwater Elevations vs. Time  
Former 76 Station 0843





### Benzene Concentrations vs Time Former 76 Station 0843



# GENERAL FIELD PROCEDURES

## **Groundwater Monitoring and Sampling Assignments**

For each site, TRC technicians are provided with a Technical Service Request (TSR) that specifies activities required to complete the groundwater monitoring and sampling assignment for the site. TSRs are based on client directives, instructions from the primary environmental consultant for the site, regulatory requirements, and TRC's previous experience with the site.

## **Fluid Level Measurements**

Initial site activities include determination of well locations based on a site map provided with the TSR. Well boxes are opened and caps are removed. Indications of well or well box damage or of pressure buildup in the well are noted.

Fluid levels in each well are measured using a coated cloth tape equipped with an electronic interface probe, which distinguishes between liquid phase hydrocarbon (LPH) and water. The depth to LPH (if it is present), to water, and to the bottom of the well are measured from the top of the well casing (surveyors mark or notch if present) to the nearest 0.01 foot. Unless otherwise instructed, a well with less than 0.67 foot between the measured top of water and the measured bottom of the well casing is considered dry, and is not sampled. If the well contains 0.67 foot or more of water, an attempt is made to bail and/or sample as specified on the TSR.

Wells that are found to contain LPH are not purged or sampled. Instead, one casing volume of fluid is bailed from the well and the well is re-sealed. Bailed fluids are placed in a container separate from normal purge water, and properly disposed.

## **Purging and Groundwater Parameter Measurement**

TSR instructions may specify that a well not be purged (no-purge sampling), be purged using low-flow methods, or be purged using conventional pump and/or bail methods. Conventional purging generally consists of pumping or bailing until a minimum of three casing volumes of water have been removed or until the well has been pumped dry. Pumping is generally accomplished using submersible electric or pneumatic diaphragm pumps.

During conventional purging, three groundwater parameters (temperature, pH, and conductivity) are measured after removal of each casing volume. Stabilization of these parameters, to within 10 percent, confirm that sufficient purging has been completed. In some cases, the TSR indicates that other parameters are also to be measured during purging. TRC commonly measures dissolved oxygen (DO), oxidation-reduction potential (ORP), and/or turbidity. Instruments used for groundwater parameter measurements are calibrated daily according to manufacturer's instructions.

Low-flow purging utilizes a bladder or peristaltic pump to remove water from the well at a low rate. Groundwater parameters specified by the TSR are measured continuously until they become stable in general accordance with EPA guidelines.

Purge water is generally collected in labeled drums for disposal. Drums may be left on site for disposal by others, or transported to a collection location for eventual transfer to a licensed treatment or recycling facility. In some cases, purge water may be collected directly from the site by a licensed vacuum truck company, or may be treated on site by an active remediation system, if so directed.

## **Groundwater Sample Collection**

After wells are purged, or not purged, according to TSR instructions, samples are collected for laboratory analysis. For wells that have been purged using conventional pump or bail methods, sampling is conducted after the well has recovered to 80 percent of its original volume or after two hours if the well does not recover to at least 80 percent. If there is insufficient recharge of water in the well after two hours, the well is not sampled.

Samples are collected by lowering a new, disposable, ½-inch to 4-inch polyethylene bottom-fill bailer to just below the water level in the well. The bailer is retrieved and the water sample is carefully transferred to containers specified for the laboratory analytical methods indicated by the TSR. Particular care is given to containers for volatile organic analysis (VOAs) which require filling to zero headspace and fitting with Teflon-sealed caps.

After filling, all containers are labeled with project number (or site number), well designation, sample date, sample time, and the sampler's initials, and placed in an insulated chest with ice. Samples remain chilled prior to and during transport to a state-certified laboratory for analysis. Sample container descriptions and requested analyses are entered onto a chain-of-custody form in order to provide instructions to the laboratory. The chain-of-custody form accompanies the samples during transportation to provide a continuous record of possession from the field to the laboratory. If a freight or overnight carrier transports the samples, the carrier is noted on the form.

For wells that have been purged using low-flow methods, sample containers are filled from the effluent stream of the bladder or peristaltic pump. In some cases, if so specified by the TSR, samples are taken from the sample ports of actively pumping remediation wells.

## **Sequence of Gauging, Purging and Sampling**

The sequence in which monitoring activities are conducted are specified on the TSR. In general, wells are gauged beginning with the least affected well and ending with the well that has the highest concentration based on previous analytic results. After all gauging for the site is completed, wells are purged and/or sampled from the least-affected to the most-affected well.

## **Decontamination**

In order to reduce the possibility of cross contamination between wells, strict isolation and decontamination procedures are observed. Portable pumps are not used in wells with LPH. Technicians wear nitrile gloves during all gauging, purging and sampling activities. Gloves are changed between wells and more often if warranted. Any equipment that could come in contact with fluids are either dedicated to a particular wells, decontaminated prior to each use, or discarded after a single use. Decontamination consists of washing in a solution of Liqui-nox and water and rinsing twice. The final rinse is in deionized water.

## **Exceptions**

Additional tasks or non-standard procedures, if any, that may be requested or required for a particular site, and noted on the site TSR, are documented in field notes on the following pages.



GROUNDWATER SAMPLING FIELD NOTES

Site: 0843

Technician: Anthony

Project No.: 41050001

Date: 11-23-05

Well No.: MW-5

Purge Method: D-2

Depth to Water (feet): 5.86

Depth to Product (feet): -

Total Depth (feet): 20.00

LPH & Water Recovered (gallons): -

Water Column (feet): 14.14

Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 8.69

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH	Turbidity	D.O.
1539			2	510	19.7	7.15		
			4	507	19.6	7.18		
	1541		6	550	19.4	7.14		
Static at Time Sampled		Total Gallons Purged			Time Sampled			
8.00		6			1545			
Comments:								

Well No.: MW-4

Purge Method: D-2

Depth to Water (feet): 6.59

Depth to Product (feet): -

Total Depth (feet): 18.77

LPH & Water Recovered (gallons): -

Water Column (feet): 12.18

Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 9.03

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH	Turbidity	D.O.
1625			2	1389	19.4	7.35		
			4	1425	20.0	7.33		
	1628		6	1411	19.6	7.52		
Static at Time Sampled		Total Gallons Purged			Time Sampled			
9.02		6			1633			
Comments:								

GROUNDWATER SAMPLING FIELD NOTES

Site: 0843

Technician: Anthony

Project No.: 41050001

Date: 11-23-05

Well No.: Mw-3

Purge Method: Pur

Depth to Water (feet): 6.60

Depth to Product (feet): -

Total Depth (feet): 19.82

LPH & Water Recovered (gallons): -

Water Column (feet): 13.22

Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 9.24

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH	Turbidity	D.O.
1639			2	613	19.3	6.99		
			4	555	19.5	6.96		
	1641		6	545	19.6	6.97		
Static at Time Sampled		Total Gallons Purged			Time Sampled			
8.51		6			1645			
Comments:								

Well No.: Mw-6

Purge Method: Pur

Depth to Water (feet): 6.01

Depth to Product (feet): -

Total Depth (feet): 19.79

LPH & Water Recovered (gallons): -

Water Column (feet): 13.78

Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 8.77

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH	Turbidity	D.O.
1652			2	505	18.7	6.84		
			4	506	18.8	6.82		
	1655		6	506	18.8	6.77		
Static at Time Sampled		Total Gallons Purged			Time Sampled			
7.87		6			1658			
Comments:								

**GROUNDWATER SAMPLING FIELD NOTES**

Site: 0843

Technician: Anthony

Project No.: 41050001

Date: 11-23-05

Well No.: MW-2A

Purge Method: DM

Depth to Water (feet): 6.88

Depth to Product (feet): —

Total Depth (feet): 10.48

LPH & Water Recovered (gallons): —

Water Column (feet): 3.60

Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 7.60

1 Well Volume (gallons): 1

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH	Turbidity	D.O.
1704			1	800	18.3	11.81		
			2	863	19.1	11.83		
	1766		3	886	19.3	11.85		
Static at Time Sampled		Total Gallons Purged			Time Sampled			
6.91		3			1710			
Comments:								

Well No.: \_\_\_\_\_

Purge Method: \_\_\_\_\_

Depth to Water (feet): \_\_\_\_\_

Depth to Product (feet): \_\_\_\_\_

Total Depth (feet): \_\_\_\_\_

LPH & Water Recovered (gallons): \_\_\_\_\_

Water Column (feet): \_\_\_\_\_

Casing Diameter (Inches): \_\_\_\_\_

80% Recharge Depth (feet): \_\_\_\_\_

1 Well Volume (gallons): \_\_\_\_\_

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH	Turbidity	D.O.
Static at Time Sampled		Total Gallons Purged			Time Sampled			
Comments:								



**Laboratories, Inc**

Date of Report: 12/06/2005

Anju Farfan

TRC Alton Geoscience

21 Technology Drive  
Irvine, CA 92618-2302

RE: 0843

BC Lab Number: 0511699

Enclosed are the results of analyses for samples received by the laboratory on 11/28/05 21:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Vanessa Hooker", written over a horizontal line.

Contact Person: Vanessa Hooker

Client Service Rep

A handwritten signature in cursive script, written over a horizontal line.

Authorized Signature



TRC Alton Geoscience  
 21 Technology Drive  
 Irvine CA, 92618-2302

Project: 0843  
 Project Number: [none]  
 Project Manager: Anju Farfan

Reported: 12/06/05 13:16

## Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
0511699-01	<b>COC Number:</b> --- <b>Project Number:</b> 0843 <b>Sampling Location:</b> MW-5 <b>Sampling Point:</b> MW-5 <b>Sampled By:</b> Anthony of TRCI	<b>Receive Date:</b> 11/28/05 21:30 <b>Sampling Date:</b> 11/23/05 15:45 <b>Sample Depth:</b> --- <b>Sample Matrix:</b> Water	<b>Delivery Work Order (LabW):</b> Global ID: T0600102263 Matrix: W Sample QC Type (SACode): CS Cooler ID:
0511699-02	<b>COC Number:</b> --- <b>Project Number:</b> 0843 <b>Sampling Location:</b> MW-4 <b>Sampling Point:</b> MW-4 <b>Sampled By:</b> Anthony of TRCI	<b>Receive Date:</b> 11/28/05 21:30 <b>Sampling Date:</b> 11/23/05 16:33 <b>Sample Depth:</b> --- <b>Sample Matrix:</b> Water	<b>Delivery Work Order (LabW):</b> Global ID: T0600102263 Matrix: W Sample QC Type (SACode): CS Cooler ID:
0511699-03	<b>COC Number:</b> --- <b>Project Number:</b> 0843 <b>Sampling Location:</b> MW-3 <b>Sampling Point:</b> MW-3 <b>Sampled By:</b> Anthony of TRCI	<b>Receive Date:</b> 11/28/05 21:30 <b>Sampling Date:</b> 11/23/05 16:45 <b>Sample Depth:</b> --- <b>Sample Matrix:</b> Water	<b>Delivery Work Order (LabW):</b> Global ID: T0600102263 Matrix: W Sample QC Type (SACode): CS Cooler ID:
0511699-04	<b>COC Number:</b> --- <b>Project Number:</b> 0843 <b>Sampling Location:</b> MW-6 <b>Sampling Point:</b> MW-6 <b>Sampled By:</b> Anthony of TRCI	<b>Receive Date:</b> 11/28/05 21:30 <b>Sampling Date:</b> 11/23/05 16:58 <b>Sample Depth:</b> --- <b>Sample Matrix:</b> Water	<b>Delivery Work Order (LabW):</b> Global ID: T0600102263 Matrix: W Sample QC Type (SACode): CS Cooler ID:
0511699-05	<b>COC Number:</b> --- <b>Project Number:</b> 0843 <b>Sampling Location:</b> MW-2A <b>Sampling Point:</b> MW-2A <b>Sampled By:</b> Anthony of TRCI	<b>Receive Date:</b> 11/28/05 21:30 <b>Sampling Date:</b> 11/23/05 17:10 <b>Sample Depth:</b> --- <b>Sample Matrix:</b> Water	<b>Delivery Work Order (LabW):</b> Global ID: T0600102263 Matrix: W Sample QC Type (SACode): CS Cooler ID:



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Project: 0843  
Project Number: [none]  
Project Manager: Anju Farfan

Reported: 12/06/05 13:16

### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0511699-01 Client Sample Name: 0843, MW-5, MW-5, 11/23/2005 3:45:00PM, Anthony

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022	ND	
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022	ND	
Toluene	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022	ND	
Total Xylenes	ND	ug/L	1.0		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022	ND	
Ethanol	ND	ug/L	250		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022	ND	
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022	ND	
1,2-Dichloroethane-d4 (Surrogate)	104	%	76 - 114 (LCL - UCL)		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022		
Toluene-d8 (Surrogate)	99.4	%	88 - 110 (LCL - UCL)		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022		
4-Bromofluorobenzene (Surrogate)	96.4	%	86 - 115 (LCL - UCL)		EPA-8260	12/01/05	12/01/05 17:27	sdu	MS-V12	1	BOL0022		

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 Project: 0843  
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## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0511699-02		Client Sample Name: 0843, MW-4, MW-4, 11/23/2005 4:33:00PM, Anthony											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022	ND	
Methyl t-butyl ether	23	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022	ND	
Toluene	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022	ND	
Total Xylenes	ND	ug/L	1.0		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022	ND	
Ethanol	ND	ug/L	250		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022	ND	
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022	ND	
1,2-Dichloroethane-d4 (Surrogate)	105	%	76 - 114 (LCL - UCL)		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022		
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022		
4-Bromofluorobenzene (Surrogate)	96.9	%	86 - 115 (LCL - UCL)		EPA-8260	12/01/05	12/01/05 17:50	sdu	MS-V12	1	BOL0022		

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## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0511699-03		Client Sample Name: 0843, MW-3, MW-3, 11/23/2005 4:45:00PM, Anthony											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022	ND	
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022	ND	
Toluene	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022	ND	
Total Xylenes	ND	ug/L	1.0		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022	ND	
Ethanol	ND	ug/L	250		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022	ND	
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022	ND	
1,2-Dichloroethane-d4 (Surrogate)	101	%	76 - 114 (LCL - UCL)		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022		
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022		
4-Bromofluorobenzene (Surrogate)	94.7	%	86 - 115 (LCL - UCL)		EPA-8260	12/01/05	12/01/05 18:12	sdu	MS-V12	1	BOL0022		

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## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0511699-04		Client Sample Name: 0843, MW-6, MW-6, 11/23/2005 4:58:00PM, Anthony												
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Benzene	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 18:35	sdu	MS-V12	1	BOL0022	ND		
Ethylbenzene	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 18:35	sdu	MS-V12	1	BOL0022	ND		
Methyl t-butyl ether	1700	ug/L	25		EPA-8260	12/01/05	12/02/05 18:32	sdu	MS-V12	50	BOL0022	ND	A01	
Toluene	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 18:35	sdu	MS-V12	1	BOL0022	ND		
Total Xylenes	ND	ug/L	1.0		EPA-8260	12/01/05	12/01/05 18:35	sdu	MS-V12	1	BOL0022	ND		
t-Amyl Methyl ether	1.0	ug/L	0.50		EPA-8260	12/01/05	12/01/05 18:35	sdu	MS-V12	1	BOL0022	ND		
t-Butyl alcohol	ND	ug/L	10		EPA-8260	12/01/05	12/01/05 18:35	sdu	MS-V12	1	BOL0022	ND		
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 18:35	sdu	MS-V12	1	BOL0022	ND		
Ethanol	ND	ug/L	250		EPA-8260	12/01/05	12/01/05 18:35	sdu	MS-V12	1	BOL0022	ND		
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/01/05 18:35	sdu	MS-V12	1	BOL0022	ND		
Total Purgeable Petroleum Hydrocarbons	590	ug/L	50		EPA-8260	12/01/05	12/01/05 18:35	sdu	MS-V12	1	BOL0022	ND	A53	
1,2-Dichloroethane-d4 (Surrogate)	103	%	76 - 114 (LCL - UCL)		EPA-8260	12/01/05	12/02/05 18:32	sdu	MS-V12	50	BOL0022			
1,2-Dichloroethane-d4 (Surrogate)	105	%	76 - 114 (LCL - UCL)		EPA-8260	12/01/05	12/01/05 18:35	sdu	MS-V12	1	BOL0022			
Toluene-d8 (Surrogate)	99.7	%	88 - 110 (LCL - UCL)		EPA-8260	12/01/05	12/02/05 18:32	sdu	MS-V12	50	BOL0022			
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260	12/01/05	12/01/05 18:35	sdu	MS-V12	1	BOL0022			
4-Bromofluorobenzene (Surrogate)	97.6	%	86 - 115 (LCL - UCL)		EPA-8260	12/01/05	12/01/05 18:35	sdu	MS-V12	1	BOL0022			
4-Bromofluorobenzene (Surrogate)	99.0	%	86 - 115 (LCL - UCL)		EPA-8260	12/01/05	12/02/05 18:32	sdu	MS-V12	50	BOL0022			

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 Project Number: [none]  
 Project Manager: Anju Farfan

Reported: 12/06/05 13:16

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0511699-05		Client Sample Name: 0843, MW-2A, MW-2A, 11/23/2005 5:10:00PM, Anthony											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	1.3	ug/L	0.50		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022	ND	
Ethylbenzene	7.8	ug/L	0.50		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022	ND	
Methyl t-butyl ether	10	ug/L	0.50		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022	ND	
Toluene	2.8	ug/L	0.50		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022	ND	
Total Xylenes	30	ug/L	1.0		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022	ND	
Ethanol	ND	ug/L	250		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022	ND	
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022	ND	
Total Purgeable Petroleum Hydrocarbons	120	ug/L	50		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022	ND	
1,2-Dichloroethane-d4 (Surrogate)	104	%	76 - 114 (LCL - UCL)		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022		
Toluene-d8 (Surrogate)	99.8	%	88 - 110 (LCL - UCL)		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022		
4-Bromofluorobenzene (Surrogate)	104	%	86 - 115 (LCL - UCL)		EPA-8260	12/01/05	12/02/05 16:17	sdu	MS-V12	1	BOL0022		

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 Project: 0843  
 Project Number: [none]  
 Project Manager: Anju Farfan

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## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample ID	QC Sample Type	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits	
										RPD	Percent Recovery Lab Quals
Benzene	BOL0022	BOL0022-MS1	Matrix Spike	5.0300	29.280	25.000	ug/L		97.0		70 - 130
		BOL0022-MSD1	Matrix Spike Duplicate	5.0300	28.640	25.000	ug/L	2.72	94.4	20	70 - 130
Toluene	BOL0022	BOL0022-MS1	Matrix Spike	0.51000	25.120	25.000	ug/L		98.4		70 - 130
		BOL0022-MSD1	Matrix Spike Duplicate	0.51000	25.340	25.000	ug/L	0.910	99.3	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BOL0022	BOL0022-MS1	Matrix Spike	ND	9.0100	10.000	ug/L		90.1		76 - 114
		BOL0022-MSD1	Matrix Spike Duplicate	ND	8.7600	10.000	ug/L		87.6		76 - 114
Toluene-d8 (Surrogate)	BOL0022	BOL0022-MS1	Matrix Spike	ND	10.170	10.000	ug/L		102		88 - 110
		BOL0022-MSD1	Matrix Spike Duplicate	ND	10.140	10.000	ug/L		101		88 - 110
4-Bromofluorobenzene (Surrogate)	BOL0022	BOL0022-MS1	Matrix Spike	ND	9.9900	10.000	ug/L		99.9		86 - 115
		BOL0022-MSD1	Matrix Spike Duplicate	ND	10.170	10.000	ug/L		102		86 - 115



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Project: 0843  
Project Number: [none]  
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### Volatile Organic Analysis (EPA Method 8260) Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Control Limits			Lab Quals
								Percent Recovery	RPD	Percent Recovery	
Benzene	BOL0022	BOL0022-BS1	LCS	24.410	25.000	1.0	ug/L	97.6		70 - 130	
Toluene	BOL0022	BOL0022-BS1	LCS	25.420	25.000	0.50	ug/L	102		70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BOL0022	BOL0022-BS1	LCS	8.4800	10.000		ug/L	84.8		76 - 114	
Toluene-d8 (Surrogate)	BOL0022	BOL0022-BS1	LCS	10.110	10.000		ug/L	101		88 - 110	
4-Bromofluorobenzene (Surrogate)	BOL0022	BOL0022-BS1	LCS	10.010	10.000		ug/L	100		86 - 115	



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Project: 0843  
 Project Number: [none]  
 Project Manager: Anju Farfan

Reported: 12/06/05 13:16

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BOL0022	BOL0022-BLK1	ND	ug/L	1.0	0.12	
Ethylbenzene	BOL0022	BOL0022-BLK1	ND	ug/L	1.0	0.13	
Methyl t-butyl ether	BOL0022	BOL0022-BLK1	ND	ug/L	0.50	0.15	
Toluene	BOL0022	BOL0022-BLK1	ND	ug/L	0.50	0.15	
Total Xylenes	BOL0022	BOL0022-BLK1	ND	ug/L	1.0	0.40	
t-Amyl Methyl ether	BOL0022	BOL0022-BLK1	ND	ug/L	0.50	0.31	
t-Butyl alcohol	BOL0022	BOL0022-BLK1	ND	ug/L	10	10	
Diisopropyl ether	BOL0022	BOL0022-BLK1	ND	ug/L	0.50	0.25	
Ethanol	BOL0022	BOL0022-BLK1	ND	ug/L	1000	110	
Ethyl t-butyl ether	BOL0022	BOL0022-BLK1	ND	ug/L	0.50	0.27	
Total Purgeable Petroleum Hydrocarbons	BOL0022	BOL0022-BLK1	ND	ug/L	50	23	
1,2-Dichloroethane-d4 (Surrogate)	BOL0022	BOL0022-BLK1	86.0	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BOL0022	BOL0022-BLK1	102	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BOL0022	BOL0022-BLK1	97.3	%	86 - 115 (LCL - UCL)		

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Project: 0843  
Project Number: [none]  
Project Manager: Anju Farfan

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### Notes and Definitions

J Estimated value  
A53 Chromatogram not typical of gasoline.  
A01 PQL's and MDL's are raised due to sample dilution.  
ND Analyte NOT DETECTED at or above the reporting limit  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference

Submission #: 05-11699 Project Code:                      TB Batch #                     

**SHIPPING INFORMATION**  
 Federal Express  UPS  Hand Delivery   
 IC Lab Field Service  Other  (Specify)                     

**SHIPPING CONTAINER**  
 Ice Chest  None   
 Box  Other  (Specify)                     

Refrigerant: Ice  Blue Ice  None  Other  Comments:                     

custody Seals: Ice Chest  Containers  None  Comments:                       
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

CO<sub>2</sub> Received  YES  NO  
 Ice Chest ID BLW Emissivity 0.97 Date/Time 11/28/05  
 Temperature: 3.7 °C Container 1009 Analyst Init 2132  
 Thermometer ID: #48

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
GENERAL MINERAL/ GENERAL PHYSICAL										
PE UNPRESERVED										
INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS										
CYANIDE										
NITROGEN FORMS										
TOTAL SULFIDE										
NITRATE / NITRITE										
ml TOTAL ORGANIC CARBON										
TOX										
CHEMICAL OXYGEN DEMAND										
PHENOLICS										
ml VOA VIAL TRAVEL BLANK										
ml VOA VIAL	A3	A3	A3	A3	A3					
EPA 413.1, 413.2, 418.1										
ODOR										
BIOLOGICAL										
CTERIOLOGICAL										
ml VOA VIAL- 504										
EPA 508/608/8080										
EPA 515.1/8150										
EPA 525										
EPA 525 TRAVEL BLANK										
ml EPA 547										
ml EPA 531.1										
EPA 548										
EPA 549										
EPA 632										
EPA 8015M										
QA/QC										
AMBER										
2. JAR										
2. JAR										
2. SLEEVE										
VIAL										
STIC BAG										
ROUS IRON										
ORE										

Comments:                       
 Numbering Completed By: ARM Date/Time: 11/28 2345

CHK BY: *ADD* DISTRIBUTION: *JPL* SUB-OUT:

BC LABORATORIES, INC.

4100 Atlas Court □ Bakersfield, CA 93309  
(661) 327-4911 □ FAX (661) 327-1918

**CHAIN OF CUSTODY**

# 05-11699

**Analysis Requested**

Circle one: Phillips 66 / Unocal		Consultant Firm: TRC		MATRIX (GW)															
Address: 1629 Webster St		21 Techology Drive Irvine, CA 92618-2302 Attn: Anju Farfan		Ground-water															
City: Alameda		4-digit site#: 0843		(S) Soil															
State: CA Zip:		Workorder # 2807TRC501		(VW) Waste-water															
Phillips 66 /Unocal Mgr: Thomas Kozel		Project #: 41050001		(SL) Sludge															
		Sampler Name: Anthony																	
Lab#	Sample Description	Field Point Name	Date & Time Sampled		BTEX/MTBE by 8021B, Gas by 8015	TPH GAS by 8015M	TPH DIESEL by 8015	8260 full list w/ MTBE & oxygenates	BTEX/MTBE/OXYS BY 8260B	ETHANOL by 8260B	TPPH by 8260B								Turnaround Time Requested
-1	MW-5		11-23 1545	GW					X	X	X								
-2	MW-4		↓ 1633	↓					↓	↓	↓								
-3	MW-3		↓ 1645	↓					↓	↓	↓								
-4	MW-6		↓ 1658	↓					↓	↓	↓								
-5	MW-2A		↓ 1710	↓					↓	↓	↓								

Comments:  GLOBAL ID: T0600102263	Relinquished by: (Signature) <i>[Signature]</i>	Received by: <i>rebricator</i>	Date & Time 11-23 1805
	Relinquished by: (Signature) <i>[Signature]</i>	Received by: <i>Ross Dickey</i>	Date & Time 11/28/05 1400
	Relinquished by: (Signature) <i>Ross Dickey 11/28/05 1750</i>	Received by: <i>Teri Oatman</i>	Date & Time 11-28-05, 1750

(A) = ANALYSIS (C) = CONTAINER  
Northern CA

(P) = PRESERVATIVE  
*RE: Clean Cl-Mc Pyllie*

*Teri Oatman 11/28/05 2130*

## **STATEMENTS**

### **Purge Water Disposal**

Non-hazardous groundwater produced during purging and sampling of monitoring was accumulated at TRC's groundwater monitoring facility at Concord, California, for transportation by Onyx Transportation, Inc., to the ConocoPhillips Refinery at Rodeo, California. Disposal at the Rodeo facility was authorized by ConocoPhillips in accordance with "ESD Standard Operating Procedures - Water Quality and Compliance", as revised on February 7, 2003. Documentation of compliance with ConocoPhillips requirements is provided by an ESD Form R -149, which is on file at TRC's Concord Office. Purge water containing a significant amount of liquid -phase hydrocarbons was accumulated separately in drums for transportation and disposal by Filter Recycling, Inc.

### **Limitations**

The fluid level monitoring and groundwater sampling activities summarized in this report have been performed under the responsible charge of a California Registered Geologist or Registered Civil Engineer and have been conducted in accordance with current practice and the standard of care exercised by geologists and engineers performing similar tasks in this area. No warranty, express or implied, is made regarding the conclusions and professional opinions presented in this report. The conclusions are based solely upon an analysis of the observed conditions. If actual conditions differ from those described in this report, our office should be notified.