



Customer-Focused Solutions

January 8, 2004

ConocoPhillips Company
76 Broadway
Sacramento, CA 95818

Alameda County
JAN 8 9 2004
Environmental Health

ATTN: MR. THOMAS H. KOSEL

SITE: 76 STATION 6034
4700 FIRST STREET
LIVERMORE, CALIFORNIA

RE: QUARTERLY MONITORING REPORT
OCTOBER THROUGH DECEMBER 2003

Dear Mr. Koselt:

Please find enclosed our Quarterly Monitoring Report for 76 Station 6034, located at 4700 First Street, Livermore, California. If you have any questions regarding this report, please call us at (949) 753-0101.

Sincerely,

TRC

Anju Farfan
QMS Operations Manager

CC: Alameda County Health Care Services
Barbara Moed, TRC

Enclosures
20-0400/6034R01.QMS





Customer-Focused Solutions

**FOURTH QUARTER 2003
FLUID LEVEL MONITORING AND
GROUNDWATER SAMPLING REPORT**

January 8, 2004

76 Station 6034
4700 First Street
Livermore, California

Prepared For:

Mr. Thomas H. Kosel
CONOCOPHILLIPS COMPANY
76 Broadway
Sacramento, California 95818

By:



Senior Project Geologist, Irvine Operations



GROUNDWATER MONITORING REPORT

LIST OF ATTACHMENTS	
Summary Sheet	Summary of Gauging and Sampling Activities
Tables	Table Key Table 1: Summary of Groundwater Levels and Chemical Analysis Results Table 2: Historic Groundwater Levels and Chemical Analysis Results Table 3: Summary of Additional Chemical Analysis Results
Figures	Figure 1: Vicinity Map Figure 2: Groundwater Elevation Contour Map Figure 3: Dissolved-Phase Hydrocarbon Concentration Map
Graphs	Benzene Concentrations vs. Time Hydrographs
Field Activities	General Field Procedures Groundwater Sampling Field Notes
Laboratory Reports	Official Laboratory Reports Quality Control Reports Chain of Custody Records
Disposal Documents	Statement of Authorized Transportation and Disposal
Statement	Limitations

**Summary of Gauging and Sampling Activities
 October 2003 through March 2003
 76 Station 6034
 4700 First Street
 Livermore, CA**

Site Information:

Site:	76 Station 4700 First Street Livermore, CA
Project Coordinator/Phone Number:	Thomas H. Kosel/916-558-7666
Groundwater wells onsite:	7
Groundwater wells offsite:	0

Field Activity:

Sampling consultant:	TRC
Date(s) sampled:	10/2/2003
Groundwater wells gauged:	7
Groundwater wells sampled:	2
Purging method:	submersible pump
Treatment/disposal method during sampling event:	Onyx/Rodeo Unit 100
Free product pumpouts other than sampling event:	No
Treatment/Disposal method during free product pumpouts:	N/A

Site Hydrogeology:

Minimum depth to groundwater (feet bgs):	14.15
Maximum depth to groundwater (feet bgs):	15.66
Average groundwater elevation (feet relative to mean sea level):	504.96
Average change in groundwater elevations since previous event (feet):	-0.27
Groundwater gradient and flow direction:	0.006 ft/ft, north

Groundwater Condition (Benzene Maximum Contaminant Level [MCL] = 1.0 µg/l)

Wells with benzene concentrations below MCL:	2
Wells with benzene concentrations at or above MCL:	0
Minimum benzene concentration (µg/l):	ND
Maximum benzene concentration (µg/l):	ND
Minimum MTBE concentration (µg/l):	ND
Maximum MTBE concentration (µg/l):	ND
Minimum TPPH concentration (µg/l):	81
Maximum TPPH concentration (µg/l):	15000 (MW-2)
Groundwater wells with free product:	0
Minimum free product thickness (feet):	0
Maximum free product thickness (feet):	0

Additional Information:

MW-1=Monitored Only, MW-3=Monitored Only, MW-5=Monitored Only, MW-6=Inaccessible, MW-7=Monitored Only,

This report presents the results of groundwater monitoring and sampling activities performed by TRC. Please contact the primary consultant for other specific information on this site.

TABLES

TABLE KEY

ABBREVIATIONS / SYMBOLS

LPH	=	liquid-phase hydrocarbons
µg/l	=	micrograms per liter
mg/l	=	milligrams per liter
ND	=	not detected at or above laboratory detection limit
DTSC	=	Department of Toxic Substances Control
N/A	=	not applicable
Trace	=	less than 0.01 foot of LPH in well
USTs	=	underground storage tanks
--	=	not analyzed, measured, or collected
TPH-G	=	total petroleum hydrocarbons with gasoline distinction
BTEX	=	benzene, toluene, ethylbenzene, and total xylenes
TPH-D	=	total petroleum hydrocarbons with diesel distinction
TRPH	=	total recoverable petroleum hydrocarbons
MTBE	=	methyl tertiary butyl ether
TAME	=	tertiary amyl methyl ether
ETBE	=	ethyl tertiary butyl ether
DIPE	=	di-isopropyl ether
TBA	=	tertiary butyl alcohol
1,1-DCA	=	1,1-Dichloroethane
1,2-DCA	=	1,2-Dichloroethane
1,1-DCE	=	1,1-Dichloroethene
1,2-DCE	=	cis- and trans-1,2-Dichloroethene
PCE	=	tetrachloroethene
TCA	=	trichloroethane
TCE	=	trichloroethene
PCB	=	polychlorinated biphenyls
TPPH	=	total purgeable petroleum hydrocarbons

NOTES

Elevations are in feet above mean sea level.

Groundwater elevation for wells with LPH is calculated as follows:

$$\text{Surface elevation} - \text{depth to water} + (0.75 \times \text{LPH thickness}).$$

Concentration Graphs have been modified to plot non-detect results at the reporting limit stated in the official laboratory report. All non-detect results prior to the Second Quarter 2000 were plotted at 0.1 µg/l for graphical display.

J = estimated concentration, value is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL)

REFERENCE

TRC began groundwater monitoring and sampling activities in October 2003. Historical data for 76 Station 6034 was provided by Gettler-Ryan Inc., Dublin, California, in an excel table received in September 2003.

Table 1
SUMMARY OF GROUNDWATER LEVELS AND CHEMICAL ANALYSIS RESULTS
October 2, 2003
76 Station 6034

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
MW-1		(Screen Interval in feet: 11.0-28.5)												
10/2/2003	520.64	15.58	0.00	505.06	-0.17	--	--	--	--	--	--	--	--	Monitored Only
MW-2		(Screen Interval in feet: 11.0-25.0)												
10/2/2003	519.82	15.11	0.00	504.71	-0.15	--	15000	ND<13	ND<13	290	1400	--	ND<50	
MW-3		(Screen Interval in feet: 11.0-25.0)												
10/2/2003	519.66	14.15	0.00	505.51	-0.17	--	--	--	--	--	--	--	--	Monitored Only
MW-4		(Screen Interval in feet: 11.0-25.0)												
10/2/2003	519.61	14.20	0.00	505.41	-0.51	--	81	ND<0.50	0.86	4.1	9.4	--	ND<2.0	
MW-5		(Screen Interval in feet: 10.0-24.0)												
10/2/2003	520.27	15.66	0.00	504.61	-0.52	--	--	--	--	--	--	--	--	Monitored Only
MW-6		(Screen Interval in feet: 10.0-24.0)												
10/2/2003	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
MW-7		(Screen Interval in feet: 10.0-24.0)												
10/2/2003	518.83	14.35	0.00	504.48	-0.08	--	--	--	--	--	--	--	--	Monitored Only

Table 2
HISTORIC GROUNDWATER LEVELS AND CHEMICAL ANALYSIS RESULTS
November 1989 Through October 2003

76 Station 6034

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
MW-1	(Screen Interval in feet: 11.0-28.5)													
3/8/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
6/5/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
9/7/1990	--	--	--	--	--	ND	--	ND	1.2	ND	ND	--	--	
12/24/1990	--	--	--	--	--	ND	--	ND	ND	ND	0.4	--	--	
4/10/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
7/10/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
4/22/1993	520.88	15.47	0.00	505.41	--	--	--	--	--	--	--	--	--	
7/20/1993	520.88	18.04	0.00	502.84	-2.57	--	--	--	--	--	--	--	--	
10/20/1993	520.64	15.69	0.00	504.95	2.11	--	--	--	--	--	--	--	--	
1/20/1994	520.64	15.65	0.00	504.99	0.04	--	--	--	--	--	--	--	--	
4/21/1994	520.64	15.58	0.00	505.06	0.07	ND	--	ND	ND	ND	ND	--	--	
7/21/1994	520.64	15.62	0.00	505.02	-0.04	--	--	--	--	--	--	--	--	
10/19/1994	520.64	15.28	0.00	505.36	0.34	--	--	--	--	--	--	--	--	
1/18/1995	520.64	14.56	0.00	506.08	0.72	--	--	--	--	--	--	--	--	
4/17/1995	520.64	14.82	0.00	505.82	-0.26	ND	--	ND	ND	ND	ND	--	--	
7/18/1995	520.64	14.78	0.00	505.86	0.04	--	--	--	--	--	--	--	--	
10/17/1995	520.64	14.83	0.00	505.81	-0.05	--	--	--	--	--	--	--	--	
1/17/1996	520.64	14.96	0.00	505.68	-0.13	--	--	--	--	--	--	--	--	
4/17/1996	520.64	14.47	0.00	506.17	0.49	ND	--	ND	ND	ND	ND	--	--	
7/16/1996	520.64	14.57	0.00	506.07	-0.10	--	--	--	--	--	--	--	--	
10/16/1996	520.64	14.50	0.00	506.14	0.07	--	--	--	--	--	--	--	--	
4/8/1997	520.64	15.05	0.00	505.59	--	--	--	--	--	--	--	--	--	
10/6/1997	520.64	15.00	0.00	505.64	0.05	--	--	--	--	--	--	--	--	
4/2/1998	520.64	14.80	0.00	505.84	0.20	--	--	--	--	--	--	--	--	
10/7/1998	520.64	14.72	0.00	505.92	0.08	--	--	--	--	--	--	--	--	

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
MW-1 continued														
4/14/1999	520.64	14.89	0.00	505.75	-0.17	--	--	--	--	--	--	--	--	
10/12/1999	520.64	14.79	0.00	505.85	0.10	--	--	--	--	--	--	--	--	
4/10/2000	520.64	14.93	0.00	505.71	-0.14	--	--	--	--	--	--	--	--	
10/2/2000	520.64	15.18	0.00	505.46	-0.25	--	--	--	--	--	--	--	--	
4/2/2001	520.64	--	0.00	--	--	--	--	--	--	--	--	--	--	
10/5/2001	520.64	--	0.00	--	--	--	--	--	--	--	--	--	--	
4/1/2002	520.64	--	0.00	--	--	--	--	--	--	--	--	--	--	
10/16/2002	520.64	15.54	0.00	505.10	--	--	--	--	--	--	--	--	--	
4/3/2003	520.64	15.41	0.00	505.23	0.13	--	--	--	--	--	--	--	--	
10/2/2003	520.64	15.58	0.00	505.06	-0.17	--	--	--	--	--	--	--	--	Monitored Only
MW-2 (Screen Interval in feet: 11.0-25.0)														
11/18/1989	--	--	--	--	--	53000	--	540	500	130	22000	--	--	
3/8/1990	--	--	--	--	--	26000	--	230	410	1300	2100	--	--	
6/5/1990	--	--	--	--	--	31000	--	250	460	950	9200	--	--	
9/7/1990	--	--	--	--	--	ND	--	ND	1.5	ND	ND	--	--	
12/24/1990	--	--	--	--	--	32000	--	440	340	460	13000	--	--	
4/10/1991	--	--	--	--	--	22000	--	170	190	490	6200	--	--	
7/10/1991	--	--	--	--	--	14000	--	70	160	570	5400	--	--	
10/14/1991	--	--	--	--	--	11000	--	79	130	660	4700	--	--	
1/14/1992	--	--	--	--	--	5600	--	36	120	450	2600	--	--	
4/6/1992	--	--	--	--	--	760	--	6.3	2.1	ND	130	--	--	
7/7/1992	--	--	--	--	--	44000	--	160	1100	1000	17000	--	--	
10/16/1992	--	--	--	--	--	290	--	2.3	ND	5.1	15	--	--	
1/14/1993	--	--	--	--	--	19000	--	75	430	900	8400	--	--	
4/22/1993	520.17	14.98	0.00	505.19	--	49000	--	150	1000	3000	18000	--	--	
7/20/1993	520.17	17.41	0.00	502.76	-2.43	25000	--	68	94	1000	6200	--	--	
10/20/1993	519.82	15.08	0.00	504.74	1.98	12000	--	27	10	100	3000	--	--	
1/20/1994	519.82	15.02	0.00	504.80	0.06	20000	--	ND	ND	270	3300	--	--	
4/21/1994	519.82	14.96	0.00	504.86	0.06	27000	--	85	65	880	5300	--	--	

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
MW-2 continued														
7/21/1994	519.82	14.99	0.00	504.83	-0.03	31000	--	58	29	940	6200	--	--	
10/19/1994	519.82	14.80	0.00	505.02	0.19	4100	--	16	3.5	8.6	1100	--	--	
1/18/1995	519.82	14.10	0.00	505.72	0.70	5100	--	6.8	7.3	100	1500	--	--	
4/17/1995	519.82	14.13	0.00	505.69	-0.03	320	--	1.3	0.67	6.6	74	--	--	
7/18/1995	519.82	14.11	0.00	505.71	0.02	12000	--	25	24	550	3700	--	--	
10/17/1995	519.82	14.15	0.00	505.67	-0.04	77000	--	60	58	760	8300	220	--	
1/17/1996	519.82	14.35	0.00	505.47	-0.20	7000	--	15	ND	150	1600	370	--	
4/17/1996	519.82	13.93	0.00	505.89	0.42	19000	--	ND	ND	600	4900	6100	--	
7/16/1996	519.82	14.00	0.00	505.82	-0.07	23000	--	16	22	900	4500	410	--	
10/16/1996	519.82	14.12	0.00	505.70	-0.12	14000	--	28	31	1600	6900	9600	--	
1/13/1997	519.82	--	--	--	--	4300	--	12	5	28	890	1300	--	
4/8/1997	519.82	14.49	0.00	505.33	--	4700	--	ND	6.5	170	830	290	--	
10/6/1997	519.82	14.41	0.00	505.41	0.08	5800	--	14	ND	19	860	570	--	
4/2/1998	519.82	14.26	0.00	505.56	0.15	24000	--	ND	ND	980	5200	6800	--	
10/7/1998	519.82	14.35	0.00	505.47	-0.09	41000	--	ND	ND	2100	7800	3700	2700	
4/14/1999	519.82	14.54	0.00	505.28	-0.19	720	--	1.2	ND	29	260	--	57	
10/12/1999	519.82	14.50	0.00	505.32	0.04	2200	--	ND	ND	78	480	--	11	
4/10/2000	519.82	14.72	0.00	505.10	-0.22	ND	--	ND	ND	0.815	2.99	--	40.1	
10/2/2000	519.82	14.91	0.00	504.91	-0.19	ND	--	ND	ND	0.71	1	--	11	
4/2/2001	519.82	--	0.00	--	--	ND	--	ND	ND	ND	ND	--	ND	
10/5/2001	519.82	--	0.00	--	--	1300	--	4.4	ND<2.5	29	79	--	12	
4/1/2002	519.82	--	0.00	--	--	3500	--	5.1	ND<5	120	460	--	14	
10/16/2002	519.82	15.06	0.00	504.76	--	240	--	ND<0.50	ND<0.50	8.2	15	--	ND<2	
4/3/2003	519.82	14.96	0.00	504.86	0.10	1300	--	1.50	1.8	23	160	--	6.6	
10/2/2003	519.82	15.11	0.00	504.71	-0.15	--	15000	ND<13	ND<13	290	1400	--	ND<50	
MW-3 (Screen Interval in feet: 11.0-25.0)														
11/18/1989	--	--	--	--	--	ND	--	0.35	ND	ND	ND	--	--	
3/8/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
6/5/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	

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
MW-3 continued														
9/7/1990	--	--	--	--	--	1100	--	11	ND	6.6	16	--	--	
12/24/1990	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
4/10/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
7/10/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
10/14/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
1/14/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
4/6/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
7/7/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
10/16/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
1/14/1993	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
4/22/1993	519.91	14.33	0.00	505.58	--	ND	--	ND	ND	ND	ND	--	--	
7/20/1993	519.91	16.90	0.00	503.01	-2.57	ND	--	ND	ND	ND	ND	--	--	
10/20/1993	519.66	14.42	0.00	505.24	2.23	ND	--	ND	ND	ND	ND	--	--	
1/20/1994	519.66	14.37	0.00	505.29	0.05	--	--	--	--	--	--	--	--	
4/21/1994	519.66	14.30	0.00	505.36	0.07	ND	--	ND	ND	ND	ND	--	--	
7/21/1994	519.66	14.34	0.00	505.32	-0.04	--	--	--	--	--	--	--	--	
10/19/1994	519.66	14.08	0.00	505.58	0.26	ND	--	ND	0.61	ND	0.51	--	--	
1/18/1995	519.66	13.23	0.00	506.43	0.85	--	--	--	--	--	--	--	--	
4/17/1995	519.66	13.20	0.00	506.46	0.03	ND	--	ND	ND	ND	ND	--	--	
7/18/1995	519.66	13.19	0.00	506.47	0.01	--	--	--	--	--	--	--	--	
10/17/1995	519.66	13.24	0.00	506.42	-0.05	ND	--	ND	ND	ND	ND	ND	--	
1/17/1996	519.66	13.68	0.00	505.98	-0.44	--	--	--	--	--	--	--	--	
4/17/1996	519.66	13.04	0.00	506.62	0.64	ND	--	ND	ND	ND	ND	ND	--	
7/16/1996	519.66	13.24	0.00	506.42	-0.20	--	--	--	--	--	--	--	--	
10/16/1996	519.66	13.10	0.00	506.56	0.14	--	--	--	--	--	--	--	--	
4/8/1997	519.66	13.73	0.00	505.93	--	--	--	--	--	--	--	--	--	Sampling Discontinued
10/6/1997	519.66	13.70	0.00	505.96	0.03	--	--	--	--	--	--	--	--	
4/2/1998	519.66	13.43	0.00	506.23	0.27	--	--	--	--	--	--	--	--	
10/7/1998	519.66	13.33	0.00	506.33	0.10	--	--	--	--	--	--	--	--	

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
MW-3 continued														
4/14/1999	519.66	13.47	0.00	506.19	-0.14	--	--	--	--	--	--	--	--	
10/12/1999	519.66	13.38	0.00	506.28	0.09	--	--	--	--	--	--	--	--	
4/10/2000	519.66	13.51	0.00	506.15	-0.13	--	--	--	--	--	--	--	--	
10/2/2000	519.66	13.62	0.00	506.04	-0.11	--	--	--	--	--	--	--	--	
4/2/2001	519.66	--	0.00	--	--	--	--	--	--	--	--	--	--	
10/5/2001	519.66	--	0.00	--	--	--	--	--	--	--	--	--	--	
4/1/2002	519.66	--	0.00	--	--	--	--	--	--	--	--	--	--	
10/16/2002	519.66	14.16	0.00	505.50	--	--	--	--	--	--	--	--	--	
4/3/2003	519.66	13.98	0.00	505.68	0.18	--	--	--	--	--	--	--	--	
10/2/2003	519.66	14.15	0.00	505.51	-0.17	--	--	--	--	--	--	--	--	Monitored Only
MW-4 (Screen Interval in feet: 11.0-25.0)														
11/18/1989	--	--	--	--	--	990	--	9.8	10	7.1	4.7	--	--	
3/8/1990	--	--	--	--	--	1200	--	18	8.4	37	28	--	--	
6/5/1990	--	--	--	--	--	1400	--	1.2	4.7	24	12	--	--	
9/7/1990	--	--	--	--	--	15000	--	100	140	210	4600	--	--	
12/24/1990	--	--	--	--	--	1400	--	ND	8.7	15	10	--	--	
4/10/1991	--	--	--	--	--	950	--	0.84	4.3	9.6	5	--	--	
7/10/1991	--	--	--	--	--	830	--	8.4	19	7.7	7.2	--	--	
10/14/1991	--	--	--	--	--	880	--	3.8	2.2	8.6	5.8	--	--	
1/14/1992	--	--	--	--	--	1500	--	4.2	7.1	18	9.2	--	--	
4/6/1992	--	--	--	--	--	660	--	1.3	3.8	2.9	4.1	--	--	
7/7/1992	--	--	--	--	--	340	--	ND	2.2	2.4	2.4	--	--	
10/16/1992	--	--	--	--	--	300	--	2.1	ND	4.8	13	--	--	
1/14/1993	--	--	--	--	--	920	--	ND	6.3	12	3.9	--	--	
4/22/1993	520.12	14.30	0.00	505.82	--	1100	--	8.8	1	7.2	6	--	--	
7/20/1993	520.12	16.35	0.00	503.77	-2.05	--	--	--	--	--	--	--	--	
10/20/1993	519.61	14.16	0.00	505.45	1.68	640	--	ND	2.5	2.3	1.9	--	--	
1/20/1994	519.61	14.15	0.00	505.46	0.01	1200	--	ND	2.6	4.7	7.4	--	--	
4/21/1994	519.61	14.13	0.00	505.48	0.02	380	--	0.83	1.2	1.2	1.7	--	--	

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
MW-4 continued														
7/21/1994	519.61	14.26	0.00	505.35	-0.13	320	--	0.51	1.4	1	1.6	--	--	
10/19/1994	519.61	13.95	0.00	505.66	0.31	750	--	ND	3.6	4.2	3.4	--	--	
1/18/1995	519.61	13.16	0.00	506.45	0.79	790	--	1.5	3.3	1.2	2.6	--	--	
4/17/1995	519.61	13.19	0.00	506.42	-0.03	570	--	2.8	ND	3.3	3.9	--	--	
7/18/1995	519.61	13.21	0.00	506.40	-0.02	340	--	1	1.9	2.8	2.7	--	--	
10/17/1995	519.61	13.22	0.00	506.39	-0.01	260	--	1.1	0.57	0.69	1.6	2	--	
1/17/1996	519.61	13.02	0.00	506.59	0.20	--	--	--	--	--	--	--	--	
4/17/1996	519.61	13.08	0.00	506.53	-0.06	720	--	3	2.6	6.1	6.9	ND	--	
7/16/1996	519.61	12.91	0.00	506.70	0.17	--	--	--	--	--	--	--	--	
10/16/1996	519.61	12.98	0.00	506.63	-0.07	1100	--	6.6	23	24	85	15	--	
1/13/1997	519.61	--	0.00	--	--	--	--	--	--	--	--	--	--	
4/8/1997	519.61	13.36	0.00	506.25	--	470	--	1.2	1.9	1.2	6.9	ND	--	
10/6/1997	519.61	13.42	0.00	506.19	-0.06	240	--	ND	0.85	0.83	2.3	ND	--	
4/2/1998	519.61	12.76	0.00	506.85	0.66	270	--	ND	1.2	ND	4.5	10	--	
10/7/1998	519.61	13.04	0.00	506.57	-0.28	350	--	ND	ND	ND	4.8	ND	--	
4/14/1999	519.61	13.21	0.00	506.40	-0.17	250	--	1.6	ND	3.1	5.6	ND	16	
10/12/1999	519.61	13.16	0.00	506.45	0.05	200	--	1.4	ND	2.3	3.9	ND	--	
4/10/2000	519.61	13.48	0.00	506.13	-0.32	52.8	--	ND	ND	ND	ND	ND	--	
10/2/2000	519.61	13.25	0.00	506.36	0.23	57	--	ND	ND	0.5	0.9	30	--	
4/2/2001	519.61	--	0.00	--	--	ND	--	ND	ND	ND	ND	ND	--	
10/5/2001	519.61	--	0.00	--	--	150	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5	--	
4/1/2002	519.61	--	0.00	--	--	130	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5	--	
10/16/2002	519.61	14.10	0.00	505.51	--	130	--	ND<0.50	ND<0.50	ND<0.50	ND<1	--	3.8	
4/3/2003	519.61	13.69	0.00	505.92	0.41	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<1	--	3.6	
10/2/2003	519.61	14.20	0.00	505.41	-0.51	--	81	ND<0.50	0.86	4.1	9.4	--	ND<2.0	
MW-5 (Screen Interval in feet: 10.0-24.0)														
4/10/1991	--	--	--	--	--	630	--	35	14	47	30	--	--	
7/10/1991	--	--	--	--	--	220	--	5.1	8.7	9.1	9.7	--	--	
10/14/1991	--	--	--	--	--	660	--	55	4.4	50	66	--	--	

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
MW-5 continued														
1/14/1992	--	--	--	--	--	99	--	1	1.2	ND	0.32	1.2	--	
4/6/1992	--	--	--	--	--	240	--	ND	ND	0.35	ND	--	--	
7/7/1992	--	--	--	--	--	76	--	0.48	1.1	0.32	1.3	1.5	--	
10/16/1992	--	--	--	--	--	180	--	7.8	1.1	17	6.4	2	--	
1/14/1993	--	--	--	--	--	91	--	ND	0.53	1.2	11	--	--	
4/22/1993	520.58	15.24	0.00	505.34	--	94	--	1.2	ND	ND	1.3	0.82	--	
7/20/1993	520.58	17.38	0.00	503.20	-2.14	89	--	1.1	0.51	ND	1.8	2.2	--	
10/20/1993	520.27	15.56	0.00	504.71	1.51	110	--	0.8	ND	ND	ND	--	--	
1/20/1994	520.27	15.39	0.00	504.88	0.17	ND	--	ND	ND	ND	ND	--	--	
4/21/1994	520.27	15.41	0.00	504.86	-0.02	ND	--	ND	ND	ND	ND	--	--	
7/21/1994	520.27	15.55	0.00	504.72	-0.14	ND	--	ND	ND	ND	ND	--	--	
10/19/1994	520.27	15.20	0.00	505.07	0.35	ND	--	ND	0.71	ND	0.57	--	--	
1/18/1995	520.27	14.52	0.00	505.75	0.68	ND	--	ND	ND	ND	ND	--	--	
4/17/1995	520.27	14.50	0.00	505.77	0.02	ND	--	ND	ND	ND	ND	--	--	
7/18/1995	520.27	14.41	0.00	505.86	0.09	ND	--	ND	ND	ND	1.1	--	--	
10/17/1995	520.27	14.46	0.00	505.81	-0.05	ND	--	ND	ND	ND	ND	ND	--	
1/17/1996	520.27	14.48	0.00	505.79	-0.02	--	--	--	--	--	--	--	--	
4/17/1996	520.27	14.22	0.00	506.05	0.26	ND	--	ND	ND	ND	ND	ND	--	
7/16/1996	520.27	14.27	0.00	506.00	-0.05	--	--	--	--	--	--	--	--	
10/16/1996	520.27	14.15	0.00	506.12	0.12	--	--	--	--	--	--	--	--	
4/8/1997	520.27	14.71	0.00	505.56	--	--	--	--	--	--	--	--	--	Sampling Discontinued
10/6/1997	520.27	14.71	0.00	505.56	0.00	--	--	--	--	--	--	--	--	
4/2/1998	520.27	14.28	0.00	505.99	0.43	--	--	--	--	--	--	--	--	
10/7/1998	520.27	14.40	0.00	505.87	-0.12	--	--	--	--	--	--	--	--	
4/14/1999	520.27	14.63	0.00	505.64	-0.23	--	--	--	--	--	--	--	--	
10/12/1999	520.27	14.48	0.00	505.79	0.15	--	--	--	--	--	--	--	--	
4/10/2000	520.27	14.76	0.00	505.51	-0.28	--	--	--	--	--	--	--	--	
10/2/2000	520.27	14.65	0.00	505.62	0.11	--	--	--	--	--	--	--	--	
4/2/2001	520.27	--	0.00	--	--	--	--	--	--	--	--	--	--	

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
MW-5 continued														
10/5/2001	520.27	--	0.00	--	--	--	--	--	--	--	--	--	--	
4/1/2002	520.27	--	0.00	--	--	--	--	--	--	--	--	--	--	
10/16/2002	520.27	15.50	0.00	504.77	--	--	--	--	--	--	--	--	--	
4/3/2003	520.27	15.14	0.00	505.13	0.36	--	--	--	--	--	--	--	--	
10/2/2003	520.27	15.66	0.00	504.61	-0.52	--	--	--	--	--	--	--	--	Monitored Only
MW-6 (Screen Interval in feet: 10.0-24.0)														
4/10/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
7/10/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
10/14/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
1/14/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
4/6/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
7/7/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
10/16/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	Obstructed
1/14/1993	--	--	--	--	--	--	--	--	--	--	--	--	--	Obstructed
4/22/1993	519.34	--	0.00	--	--	--	--	--	--	--	--	--	--	Obstructed
7/20/1993	519.34	--	0.00	--	--	--	--	--	--	--	--	--	--	Obstructed
10/20/1993	518.75	14.20	0.00	504.55	--	ND	--	ND	ND	ND	ND	--	--	
1/20/1994	518.75	14.14	0.00	504.61	0.06	ND	--	ND	ND	ND	ND	--	--	
4/21/1994	518.75	14.10	0.00	504.65	0.04	ND	--	ND	ND	ND	ND	--	--	
7/21/1994	518.75	14.12	0.00	504.63	-0.02	ND	--	ND	ND	ND	ND	--	--	
10/19/1994	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Obstructed
1/18/1995	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Obstructed
4/17/1995	518.75	13.82	0.00	504.93	--	ND	--	ND	ND	ND	ND	--	--	
7/18/1995	518.75	13.84	0.00	504.91	-0.02	ND	--	ND	ND	ND	ND	--	--	
10/17/1995	518.75	13.90	0.00	504.85	-0.06	ND	--	ND	ND	ND	ND	2.2	--	
1/17/1996	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Obstructed
4/17/1996	518.75	13.66	0.00	505.09	--	ND	--	ND	ND	ND	ND	ND	--	
7/16/1996	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Obstructed
10/16/1996	518.75	13.72	0.00	505.03	--	--	--	--	--	--	--	--	--	

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
MW-6 continued														
4/8/1997	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Obstructed
10/6/1997	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Obstructed
4/2/1998	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Obstructed
10/7/1998	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Obstructed
4/14/1999	518.75	13.82	0.00	504.93	--	--	--	--	--	--	--	--	--	
10/12/1999	518.75	13.72	0.00	505.03	0.10	--	--	--	--	--	--	--	--	
4/10/2000	518.75	13.40	0.00	505.35	0.32	--	--	--	--	--	--	--	--	
10/2/2000	518.75	13.63	0.00	505.12	-0.23	--	--	--	--	--	--	--	--	
4/2/2001	518.75	--	0.00	--	--	--	--	--	--	--	--	--	--	
10/5/2001	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Obstruction in Well
4/1/2002	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Obstruction in Well
10/16/2002	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Dry
4/3/2003	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Dry
10/2/2003	518.75	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
MW-7 (Screen Interval in feet: 10.0-24.0)														
4/10/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
7/10/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
10/14/1991	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
1/14/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
7/7/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
10/16/1992	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
1/14/1993	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
4/22/1993	519.37	14.25	0.00	505.12	--	ND	--	ND	ND	ND	ND	--	--	
7/20/1993	519.37	16.68	0.00	502.69	-2.43	ND	--	ND	ND	ND	ND	--	--	
10/20/1993	518.83	14.29	0.00	504.54	1.85	ND	--	ND	ND	ND	ND	--	--	
1/20/1994	518.83	14.22	0.00	504.61	0.07	ND	--	ND	ND	ND	ND	--	--	
4/21/1994	518.83	14.17	0.00	504.66	0.05	ND	--	ND	ND	ND	ND	--	--	
7/21/1994	518.83	14.21	0.00	504.62	-0.04	ND	--	ND	ND	ND	ND	--	--	
10/19/1994	518.83	14.05	0.00	504.78	0.16	ND	--	ND	0.87	ND	0.61	--	--	

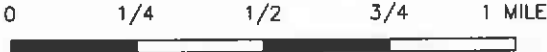
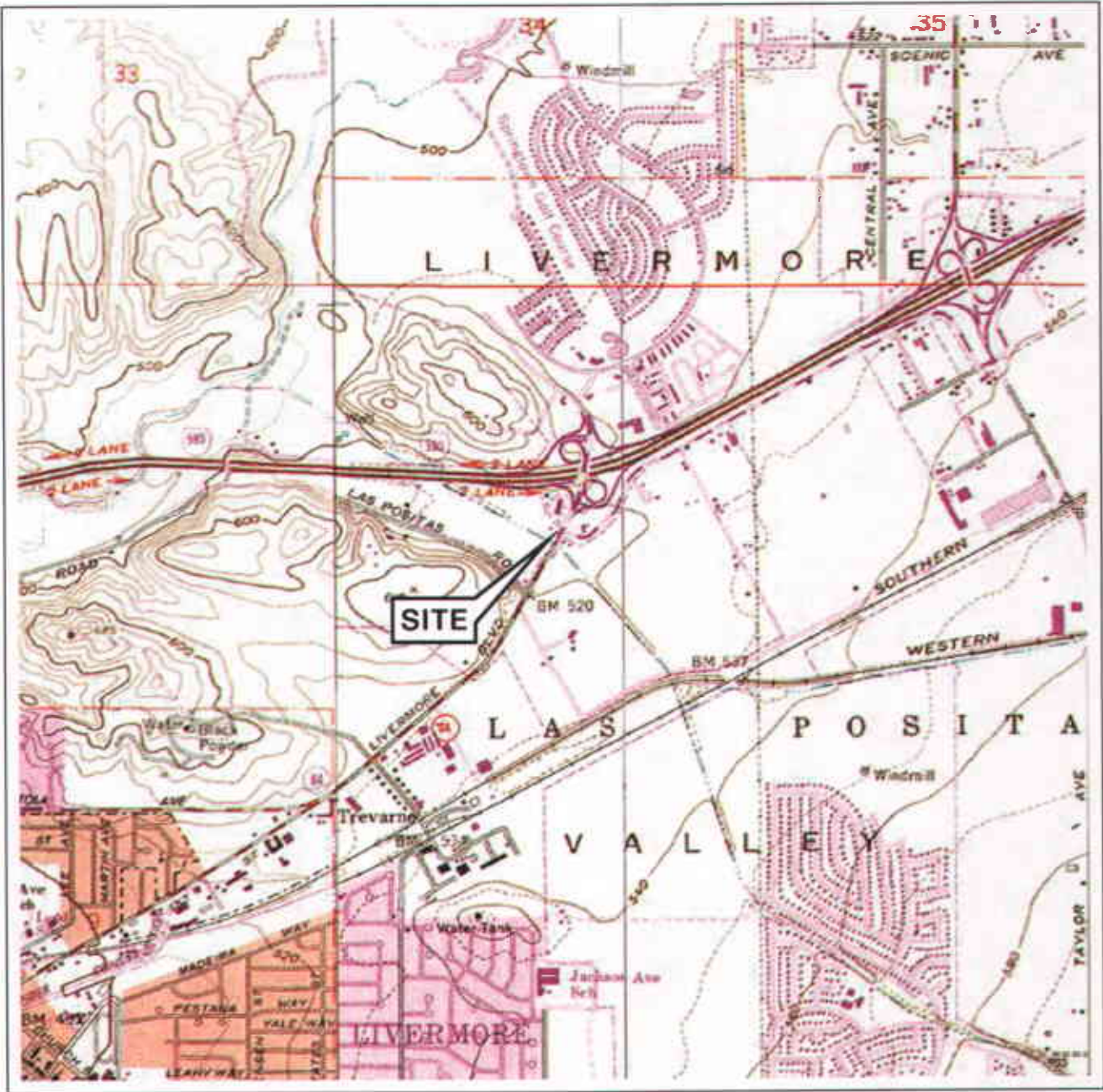
Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
MW-7 continued														
1/18/1995	518.83	13.34	0.00	505.49	0.71	ND	--	ND	ND	ND	ND	--	--	
4/17/1995	518.83	13.38	0.00	505.45	-0.04	ND	--	ND	ND	ND	ND	--	--	
7/18/1995	518.83	13.36	0.00	505.47	0.02	ND	--	ND	ND	ND	ND	--	--	
10/17/1995	518.83	13.41	0.00	505.42	-0.05	ND	--	ND	ND	ND	ND	3.5	--	
1/17/1996	518.83	13.56	0.00	505.27	-0.15	--	--	--	--	--	--	--	--	
4/17/1996	518.83	13.21	0.00	505.62	0.35	ND	--	ND	ND	ND	ND	ND	--	
7/16/1996	518.83	13.22	0.00	505.61	-0.01	--	--	--	--	--	--	--	--	
10/16/1996	518.83	13.58	0.00	505.25	-0.36	--	--	--	--	--	--	--	--	
4/8/1997	518.83	13.73	0.00	505.10	--	--	--	--	--	--	--	--	--	
10/6/1997	518.83	13.65	0.00	505.18	0.08	--	--	--	--	--	--	--	--	
4/2/1998	518.83	13.55	0.00	505.28	0.10	--	--	--	--	--	--	--	--	
10/7/1998	518.83	13.64	0.00	505.19	-0.09	--	--	--	--	--	--	--	--	
4/14/1999	518.83	13.75	0.00	505.08	-0.11	--	--	--	--	--	--	--	--	
10/12/1999	518.83	13.61	0.00	505.22	0.14	--	--	--	--	--	--	--	--	
4/10/2000	518.83	13.85	0.00	504.98	-0.24	--	--	--	--	--	--	--	--	
10/2/2000	518.83	14.19	0.00	504.64	-0.34	--	--	--	--	--	--	--	--	
4/2/2001	518.83	--	0.00	--	--	--	--	--	--	--	--	--	--	
10/5/2001	518.83	--	0.00	--	--	--	--	--	--	--	--	--	--	
4/1/2002	518.83	--	0.00	--	--	--	--	--	--	--	--	--	--	
10/16/2002	518.83	14.30	0.00	504.53	--	--	--	--	--	--	--	--	--	
4/3/2003	518.83	14.27	0.00	504.56	0.03	--	--	--	--	--	--	--	--	
10/2/2003	518.83	14.35	0.00	504.48	-0.08	--	--	--	--	--	--	--	--	Monitored Only

Table 3
SUMMARY OF ADDITIONAL CHEMICAL ANALYSIS RESULTS
76 Station 6034

Date Sampled	Chloroform	TCE	EDB	Pre-Purge DO	Post Purge DO	TAME 8260B	TBA 8260B	DIPE 8260B	ETBE 8260B	Ethanol 8015B	Ethanol 8260B	TOG	1,2 DCE
	(µg/l)	(µg/l)	(µg/l)	(mg/l)	(mg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(mg/l)	(µg/l)	(mg/l)	(µg/l)
MW-1													
3/8/1990	ND	ND	--	--	--	--	--	--	--	--	--	4.7	--
6/5/1990	ND	ND	--	--	--	--	--	--	--	--	--	ND	--
9/7/1990	ND	ND	--	--	--	--	--	--	--	--	--	ND	--
12/24/1990	ND	ND	--	--	--	--	--	--	--	--	--	ND	--
4/10/1991	ND	ND	--	--	--	--	--	--	--	--	--	ND	--
7/10/1991	ND	ND	--	--	--	--	--	--	--	--	--	ND	--
4/21/1994	ND	ND	--	--	--	--	--	--	--	--	--	ND	--
4/17/1995	0.69	ND	--	--	--	--	--	--	--	--	--	ND	--
4/17/1996	ND	ND	--	--	--	--	--	--	--	--	--	ND	--
7/16/1996	--	--	--	4.24	4.28	--	--	--	--	--	--	--	--
MW-2													
7/18/1995	--	--	--	--	4.22	--	--	--	--	--	--	--	--
10/17/1995	--	--	--	--	3.96	--	--	--	--	--	--	--	--
1/17/1996	--	--	--	--	5.25	--	--	--	--	--	--	--	--
4/17/1996	--	--	--	--	2.59	--	--	--	--	--	--	--	--
7/16/1996	--	--	--	4.46	4.35	--	--	--	--	--	--	--	--
10/16/1996	--	--	--	3.87	2.92	--	--	--	--	--	--	--	--
1/13/1997	--	--	--	4.76	--	--	--	--	--	--	--	--	--
4/8/1997	--	--	--	3.76	3.42	--	--	--	--	--	--	--	--
10/6/1997	--	--	--	4.13	3.59	--	--	--	--	--	--	--	--
4/2/1998	--	--	--	6.32	3.16	--	--	--	--	--	--	--	--
10/7/1998	--	--	--	3.85	--	--	--	--	--	--	--	--	--
4/14/1999	--	--	ND	3.14	--	ND	ND	ND	ND	ND	--	--	ND
10/12/1999	--	--	--	2.96	--	ND	ND	ND	ND	ND	--	--	--
4/10/2000	--	--	ND	3.47	--	ND	ND	ND	ND	ND	--	--	ND
10/2/2000	--	--	ND	3.77	--	ND	ND	ND	ND	ND	--	--	ND

Date Sampled	Chloroform (µg/l)	TCE (µg/l)	EDB (µg/l)	Pre-Purge DO (mg/l)	Post Purge DO (mg/l)	TAME 8260B (µg/l)	TBA 8260B (µg/l)	DIPE 8260B (µg/l)	ETBE 8260B (µg/l)	Ethanol 8015B (mg/l)	Ethanol 8260B (µg/l)	TOG (mg/l)	1,2 DCE (µg/l)
MW-2 continued													
4/2/2001	--	--	ND	3.95	--	ND	ND	ND	ND	ND	--	--	ND
10/5/2001	--	--	ND<2	2.89	--	ND<2	ND<100	ND<2	ND<2	ND<1,000	--	--	ND<2
4/1/2002	--	--	ND<2	3.15	--	ND<2	ND<100	ND<2	ND<2	ND<500	--	--	ND<2
10/16/2002	--	--	ND<2	3.08	--	ND<2	ND<100	ND<2	ND<2	ND<500	--	--	ND<2
4/3/2003	--	--	ND<2	2.6	--	ND<2	ND<100	ND<2	ND<2	ND<500	--	--	ND<2
10/2/2003	--	--	ND<50	--	--	ND<50	ND<2500	ND<50	ND<50	--	ND<13000	--	ND<50
MW-3													
7/16/1996	--	--	--	4.19	4.2	--	--	--	--	--	--	--	--
MW-4													
7/16/1996	--	--	--	4.25	4.3	--	--	--	--	--	--	--	--
1/13/1997	--	--	--	4.97	--	--	--	--	--	--	--	--	--
4/14/1999	--	--	ND	--	--	ND	ND	ND	ND	ND	--	--	ND
10/2/2003	--	--	--	--	--	--	--	--	--	--	ND<500	--	--
MW-5													
7/16/1996	--	--	--	4.18	4.21	--	--	--	--	--	--	--	--
MW-7													
7/16/1996	--	--	--	4.2	4.19	--	--	--	--	--	--	--	--

FIGURES



SCALE 1: 24,000



VICINITY MAP

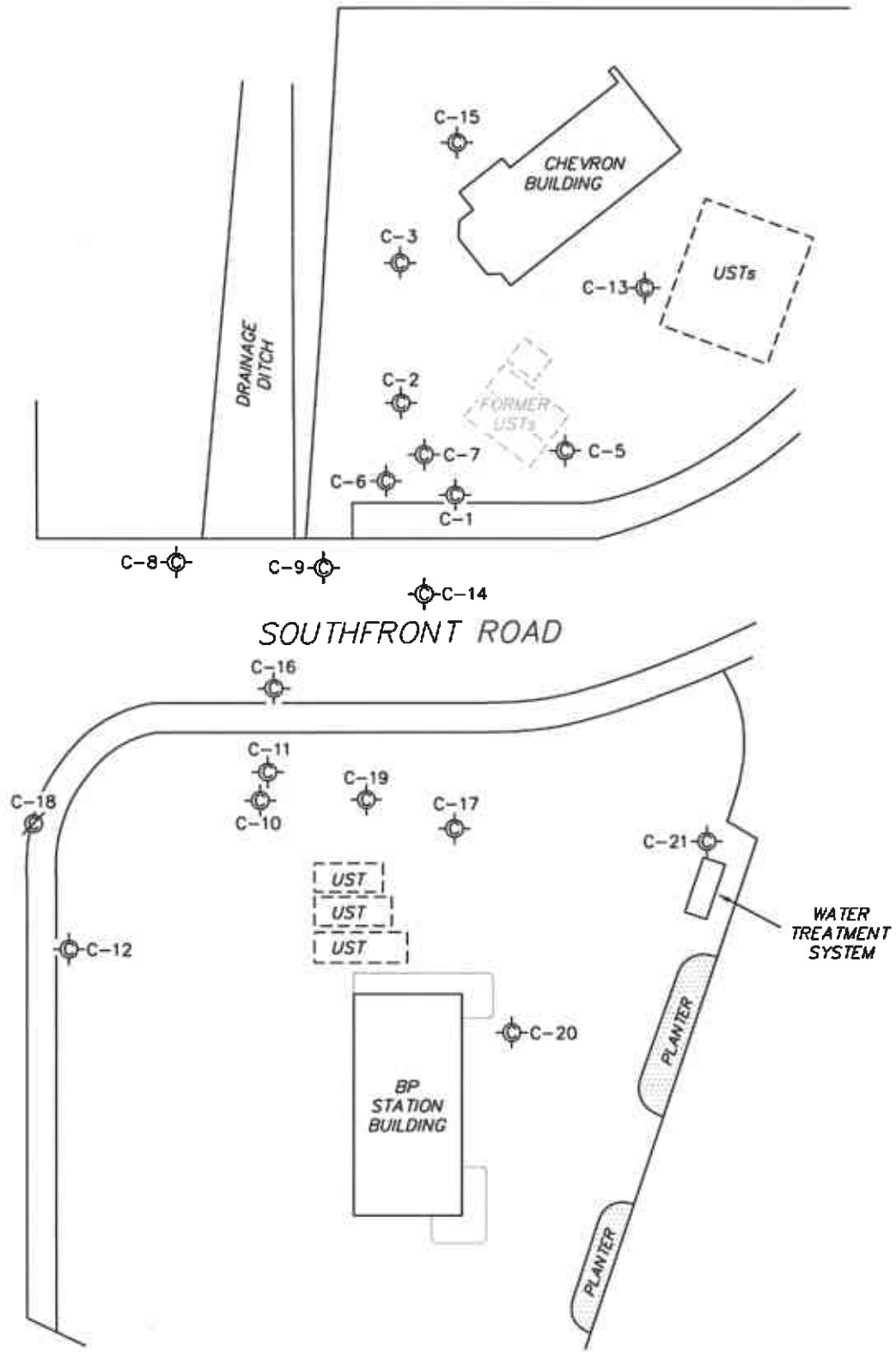
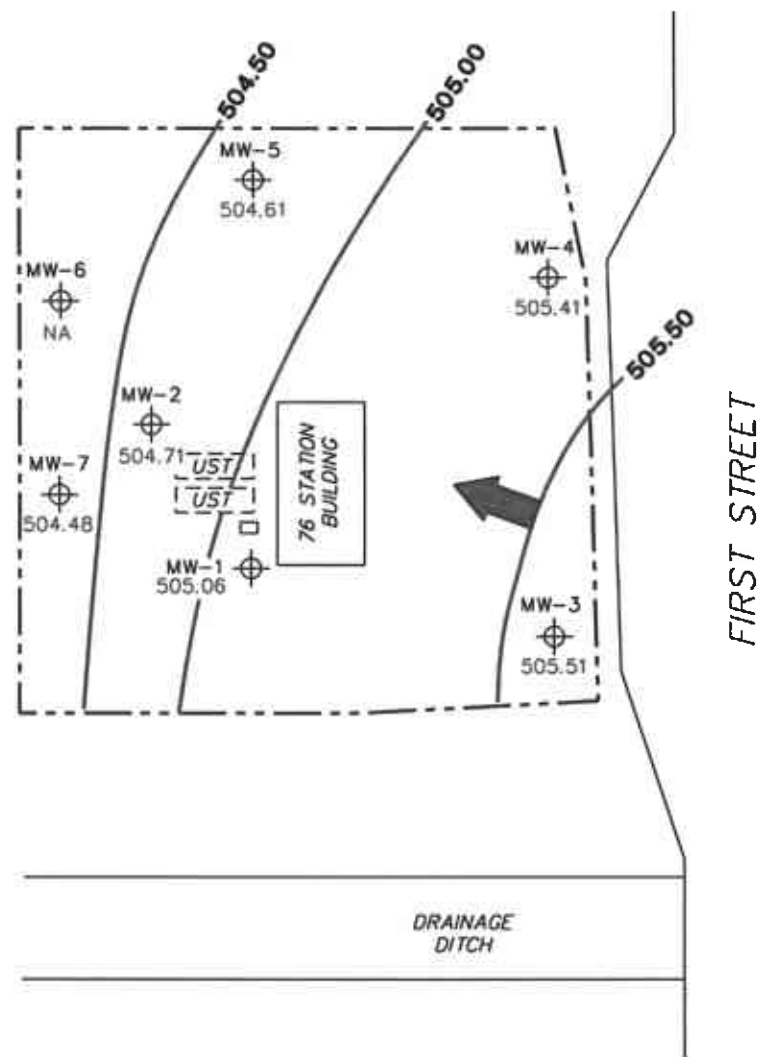
76 Station 6034
 4700 First Street
 Livermore, California

SOURCE:
 United States Geological Survey
 7.5 Minute Topographic Map:
 Livermore & Altamont Quadrangles

FIGURE 1

TRC

PS = 1:1



LEGEND

- MW-7 ⊕ Monitoring Well with Groundwater Elevation (feet)
- C-21 ⊕ Chevron Monitoring Well
- C-18 ⊗ Abandoned Chevron Well
- 505.50 — Groundwater Elevation Contour
- ➔ General Direction of Groundwater Flow

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. NS = not surveyed. NA = not analyzed, measured, or collected.

GROUNDWATER ELEVATION CONTOUR MAP
October 2, 2003

76 Station 6034
 4700 First Street
 Livermore, California

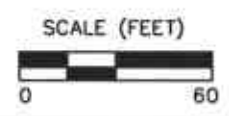
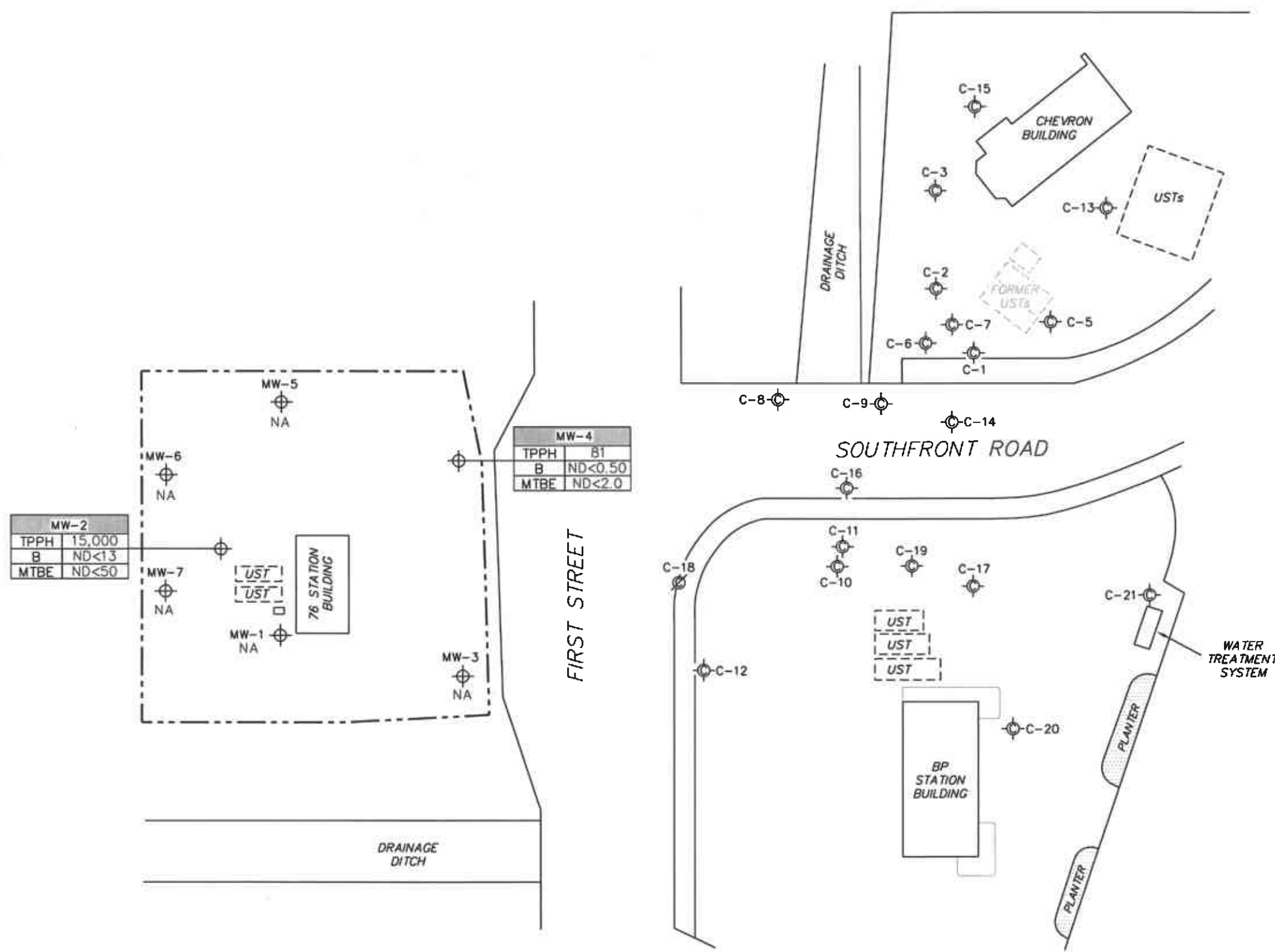


FIGURE 2



LEGEND

MW-4		Monitoring Well with Dissolved-Phase Hydrocarbon Concentrations (µg/l)
TPPH	µg/l	
B	µg/l	
MTBE	µg/l	

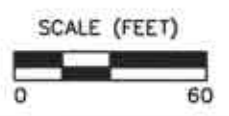
C-21 Chevron Monitoring Well
 C-18 Abandoned Chevron Well

NOTES:

TPPH = total purgeable petroleum hydrocarbons.
 B = benzene. MTBE = methyl tertiary butyl ether. µg/l = micrograms per liter.
 ND = not detected at limit indicated on official laboratory report. NA = not analyzed, measured, or collected. UST = underground storage tank. Results obtained using EPA Method 8260B.

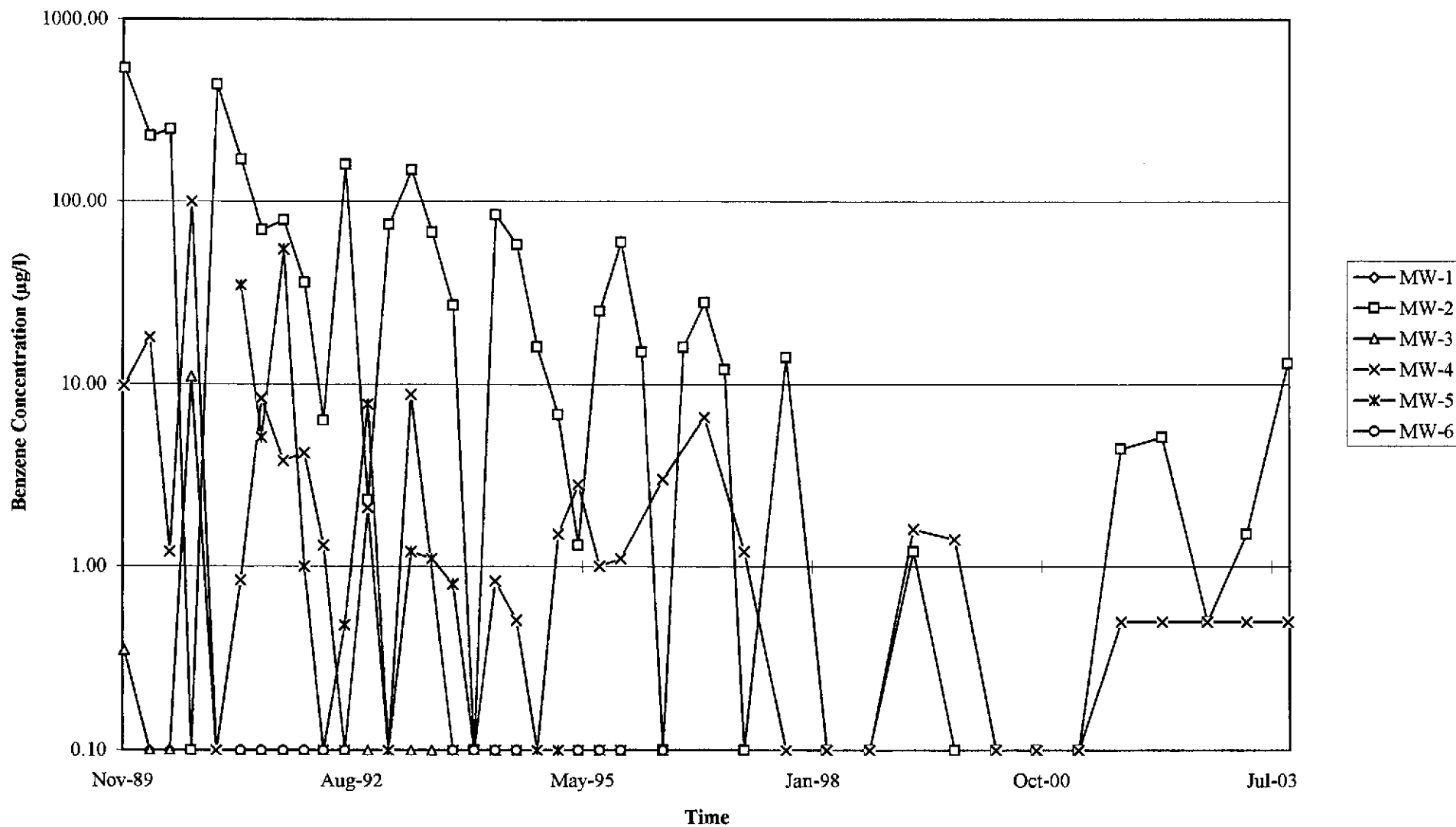
DISSOLVED-PHASE HYDROCARBON CONCENTRATIONS MAP
 October 2, 2003

76 Station 6034
 4700 First Street
 Livermore, California

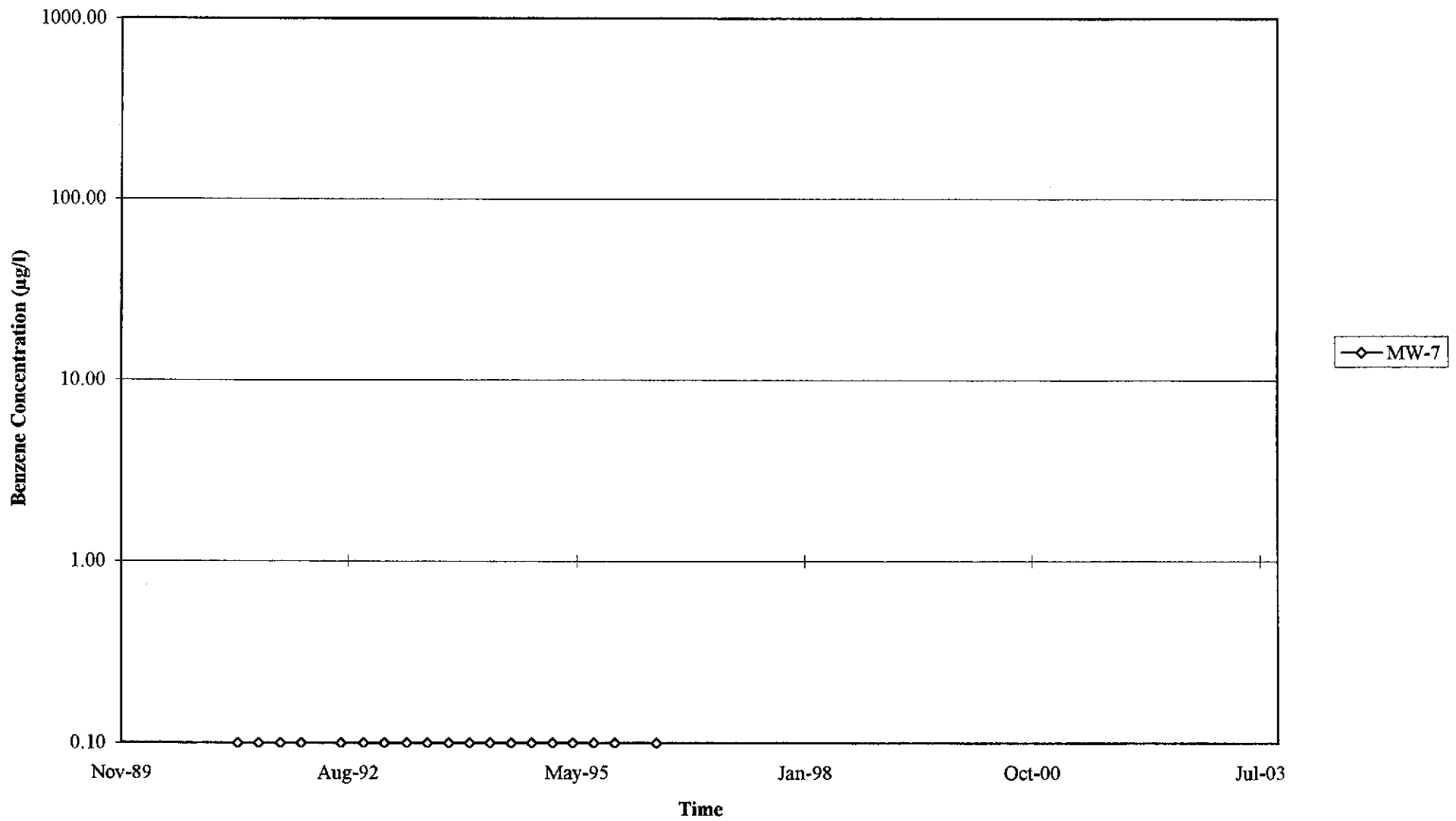


GRAPHS

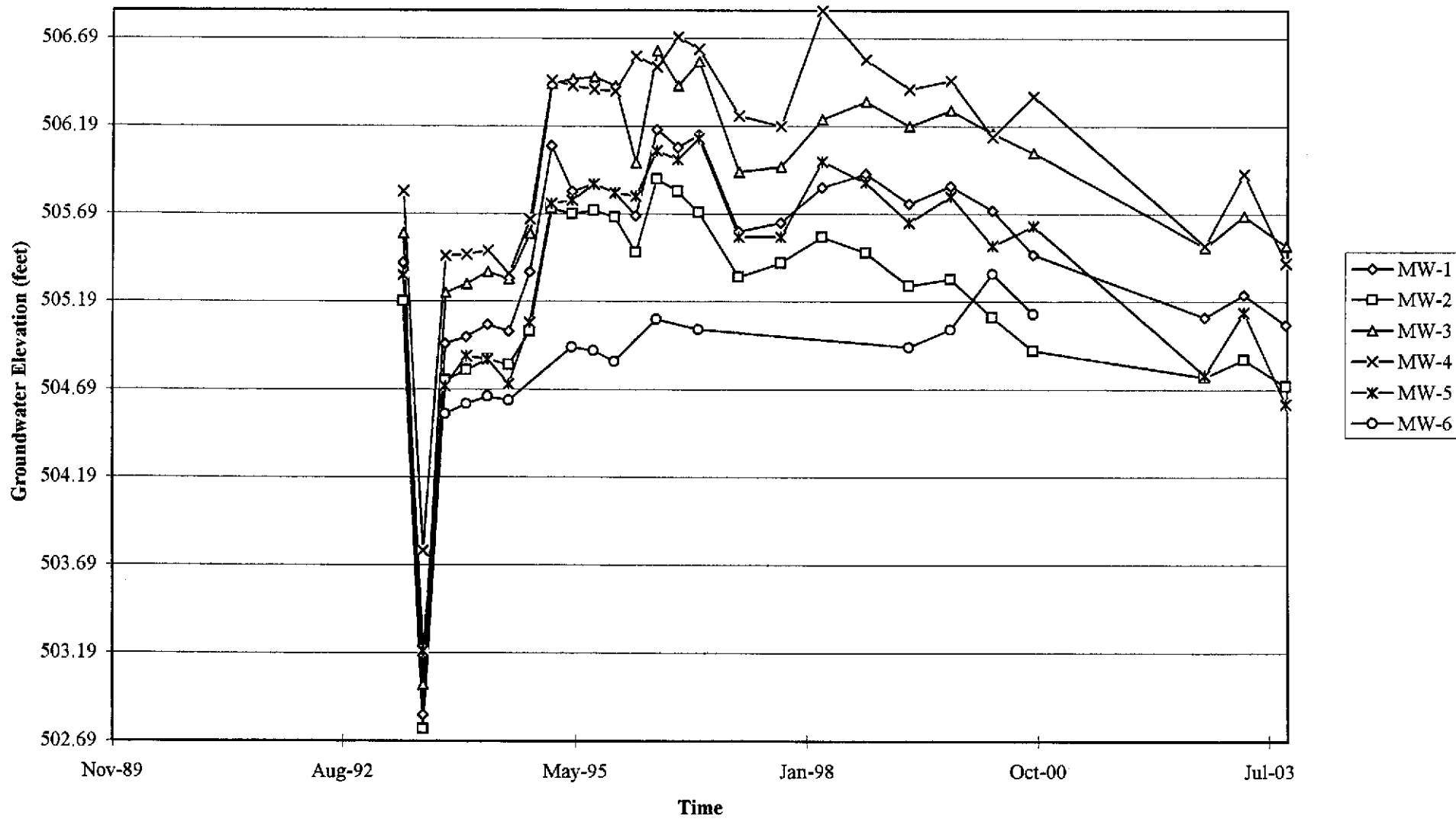
Graph 1
Benzene Concentrations vs. Time
76 Station 6034



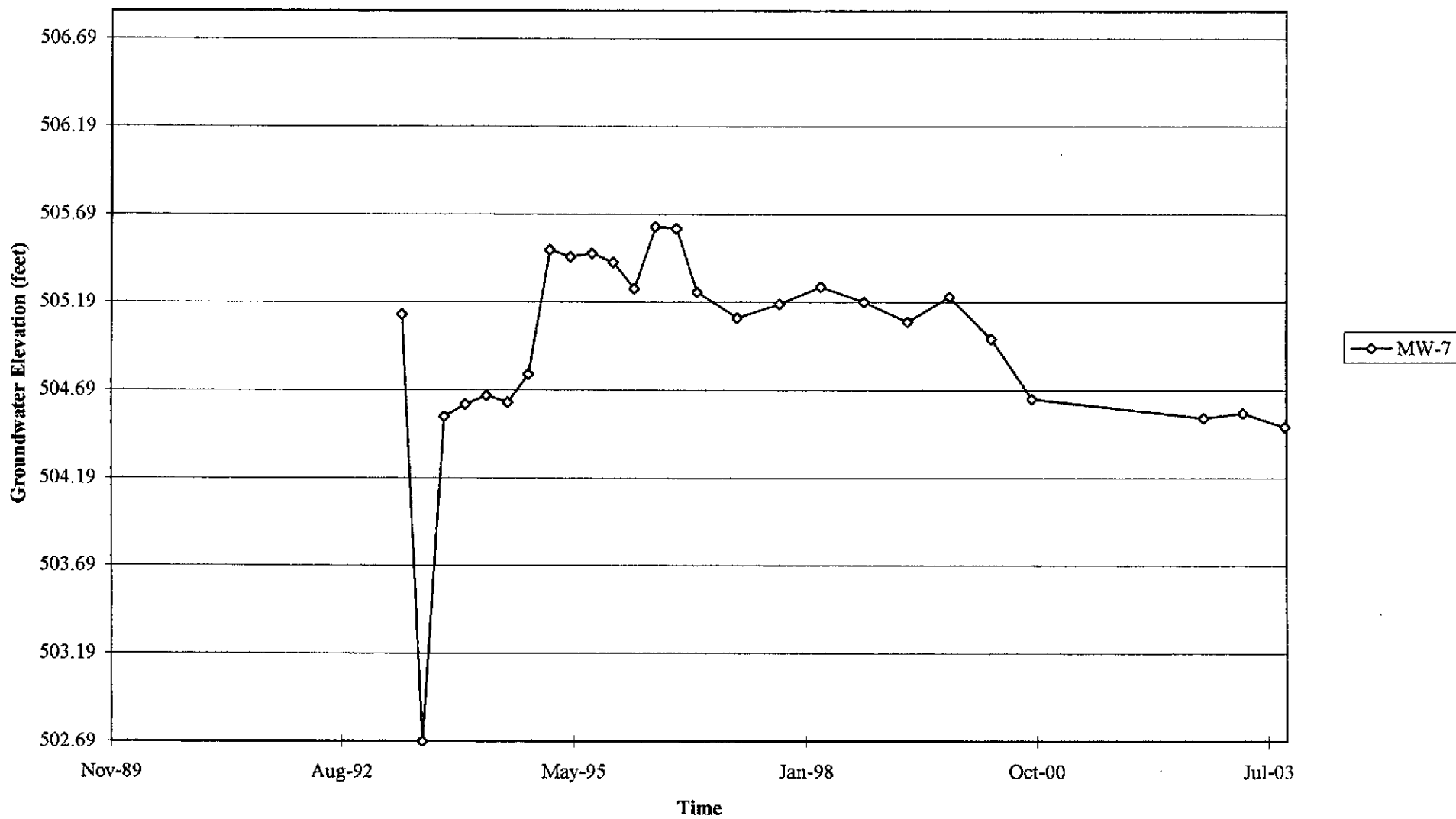
Graph 2
Benzene Concentrations vs. Time
76 Station 6034



Graph 3
Hydrograph
76 Station 6034



Graph 4
Hydrograph
76 Station 6034



GROUNDWATER SAMPLING FIELD NOTES

Technician: HERNANDEZ

Site: 6034

Project No.: 410-500-01/FA20

Date: 10/02/03

Well No. MW-2

Purge Method: SUB

Depth to Water (feet): 15.11

Depth to Product (feet): 0

Total Depth (feet): 25.55

LPH & Water Recovered (gallons): 0

Water Column (feet): 10.44

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 17.19

Borehole Diameter (Inches): _____

1 Borehole Volume (gallons): 2

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH	Turbidity	D.O
1447			2	1421	20.4	7.35		3.53
			4	1443	20.5	7.42		
	1451		6	1400	20.5	7.32		
Static at Time Sampled		Total Gallons Purged			Sample Time			
		<u>15.12</u>			<u>6 gal</u>			<u>1459</u>
Comments:								

Well No. MW-4

Purge Method: SUB

Depth to Water (feet): 14.20

Depth to Product (feet): 0

Total Depth (feet): 25.40

LPH & Water Recovered (gallons): 0

Water Column (feet): 11.20

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 5.00

Borehole Diameter (Inches): _____

1 Borehole Volume (gallons): 2

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH	Turbidity	D.O
1316			2	989	21.4	7.82		
			4	953	21.2	7.61		
	1319		6	966	21.1	7.57		
Static at Time Sampled		Total Gallons Purged			Sample Time			
		<u>1442</u>			<u>6 gal</u>			<u>1335</u>
Comments:								

Borehole Volume Constants	Casing/Borehole Diameter	2"/8"	4"/8"	4"/10"	6"/10"	6"/12"
	Borehole Constant (gal/ft)	0.88	1.19	<u>1.63</u>	2.16	<u>3.07</u>



STL

Submission#: 2003-10-0288

TRC Alton Geoscience

October 16, 2003

21 Technology Drive
Irvine, CA 92718

Attn.: Anju Farfan

Project#: 410500.01

Project: ConocoPhillips #6034

Site: 4700 First St., Livermore

Attached is our report for your samples received on 10/07/2003 16:50

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 11/21/2003 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: asalimpour@stl-inc.com

Sincerely,

Afsaneh Salimpour
Project Manager

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



STL

Submission #: 2003-10-0288

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 410500.01

ConocoPhillips #6034

Received: 10/07/2003 16:50

Site: 4700 First St., Livermore

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-2	10/02/2003 14:59	Water	1
MW-4	10/02/2003 15:35	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

10/15/2003 15:30

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 410500.01

ConocoPhillips #6034

Received: 10/07/2003 16:50

Site: 4700 First St., Livermore

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-2	Lab ID:	2003-10-0288 - 1
Sampled:	10/02/2003 14:59	Extracted:	10/15/2003 12:28
Matrix:	Water	QC Batch#:	2003/10/15-0168
Analysis Flag: o (See Legend and Note Section)			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	15000	1300	ug/L	25.00	10/15/2003 12:28	
Benzene	ND	13	ug/L	25.00	10/15/2003 12:28	
Toluene	ND	13	ug/L	25.00	10/15/2003 12:28	
Ethylbenzene	290	13	ug/L	25.00	10/15/2003 12:28	
Total xylenes	1400	25	ug/L	25.00	10/15/2003 12:28	
tert-Butyl alcohol (TBA)	ND	2500	ug/L	25.00	10/15/2003 12:28	
Methyl tert-butyl ether (MTBE)	ND	50	ug/L	25.00	10/15/2003 12:28	
Di-isopropyl Ether (DIPE)	ND	50	ug/L	25.00	10/15/2003 12:28	
Ethyl tert-butyl ether (ETBE)	ND	50	ug/L	25.00	10/15/2003 12:28	
tert-Amyl methyl ether (TAME)	ND	50	ug/L	25.00	10/15/2003 12:28	
1,2-DCA	ND	50	ug/L	25.00	10/15/2003 12:28	
EDB	ND	50	ug/L	25.00	10/15/2003 12:28	
Ethanol	ND	13000	ug/L	25.00	10/15/2003 12:28	
Surrogate(s)						
1,2-Dichloroethane-d4	102.0	76-114	%	25.00	10/15/2003 12:28	
Toluene-d8	101.3	88-110	%	25.00	10/15/2003 12:28	

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 410500.01

ConocoPhillips #6034

Received: 10/07/2003 16:50

Site: 4700 First St., Livermore

Prep(s):	5030B	Test(s):	8260FAB
Sample ID:	MW-4	Lab ID:	2003-10-0288 - 2
Sampled:	10/02/2003 15:35	Extracted:	10/15/2003 12:50
Matrix:	Water	QC Batch#:	2003/10/15-01.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	81	50	ug/L	1.00	10/15/2003 12:50	
Benzene	ND	0.50	ug/L	1.00	10/15/2003 12:50	
Toluene	0.86	0.50	ug/L	1.00	10/15/2003 12:50	
Ethylbenzene	4.1	0.50	ug/L	1.00	10/15/2003 12:50	
Total xylenes	9.4	1.0	ug/L	1.00	10/15/2003 12:50	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	1.00	10/15/2003 12:50	
Ethanol	ND	500	ug/L	1.00	10/15/2003 12:50	
Surrogate(s)						
1,2-Dichloroethane-d4	94.6	76-114	%	1.00	10/15/2003 12:50	
Toluene-d8	107.8	88-110	%	1.00	10/15/2003 12:50	



STL

Submission #: 2003-10-0288

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 410500.01

ConocoPhillips #6034

Received: 10/07/2003 16:50

Site: 4700 First St., Livermore

Batch QC Report					
Prep(s): 5030B				Test(s): 8260FAB	
Method Blank		Water		QC Batch # 2003/10/15-01.68	
MB: 2003/10/15-01.68-027				Date Extracted: 10/15/2003 09:27	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	10/15/2003 09:27	
Benzene	ND	0.5	ug/L	10/15/2003 09:27	
Toluene	ND	0.5	ug/L	10/15/2003 09:27	
Ethylbenzene	ND	0.5	ug/L	10/15/2003 09:27	
Total xylenes	ND	1.0	ug/L	10/15/2003 09:27	
tert-Butyl alcohol (TBA)	ND	100	ug/L	10/15/2003 09:27	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	10/15/2003 09:27	
Di-isopropyl Ether (DIPE)	ND	2.0	ug/L	10/15/2003 09:27	
Ethyl tert-butyl ether (ETBE)	ND	2.0	ug/L	10/15/2003 09:27	
tert-Amyl methyl ether (TAME)	ND	2.0	ug/L	10/15/2003 09:27	
1,2-DCA	ND	2.0	ug/L	10/15/2003 09:27	
EDB	ND	2.0	ug/L	10/15/2003 09:27	
Ethanol	ND	500	ug/L	10/15/2003 09:27	
Surrogates(s)					
1,2-Dichloroethane-d4	101.7	76-114	%	10/15/2003 09:27	
Toluene-d8	102.4	88-110	%	10/15/2003 09:27	

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

10/15/2003 15:30

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 410500.01

ConocoPhillips #6034

Received: 10/07/2003 16:50

Site: 4700 First St., Livermore

Batch QC Report		
Prep(s): 5030B		Test(s): 8260FAB
Laboratory Control Spike	Water	QC Batch # 2003/10/15-01.68
LCS 2003/10/15-01.68-042	Extracted: 10/15/2003	Analyzed: 10/15/2003 08:42
LCSD 2003/10/15-01.68-005	Extracted: 10/15/2003	Analyzed: 10/15/2003 09:05

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	23.2	22.3	25.0	92.8	89.2	4.0	69-129	20		
Toluene	24.1	23.4	25.0	96.4	93.6	2.9	70-130	20		
Methyl tert-butyl ether (MTBE)	22.6	21.6	25.0	90.4	86.4	4.5	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	482	457	500	96.4	91.4		76-114			
Toluene-d8	516	536	500	103.2	107.2		88-110			



STL

Submission #: 2003-10-0288

Gas/BTEX Fuel Oxygenates by 8260B

TRC Alton Geoscience

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 410500.01

ConocoPhillips #6034

Received: 10/07/2003 16:50

Site: 4700 First St., Livermore

Legend and Notes

Analysis Flag

o

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

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

10/15/2003 15:30



STL San Francisco

Sample Receipt Checklist

Submission #: 2003-10-0288

Checklist completed by: (initials) DSW Date: 10/08/03

Carrier name: STL San Francisco Client

Custody seals intact on shipping container/sample? Yes No Not Present

Chain of custody present? Yes No

Chain of custody signed when relinquished and received? Yes No

Chain of custody agrees with sample labels? Yes No

Samples in proper container/bottle? Yes No

Sample containers intact? Yes No

Sufficient sample volume for indicated test? Yes No

All samples received within holding time? Yes No

Container/Temp Blank temperature in conformance ($4^{\circ}\text{C} \pm 2^{\circ}$)? Temp: 4.1 Yes No

Ice Present? Yes No

Water - VOA Wats have zero headspace? No VOA Wats submitted Yes No

(If bubble is present, refer to approximate bubble size and describe in comments as S (small -) M (medium -) or L (large -)

Water - pH acceptable upon receipt? Yes No

pH adjusted - Preservative used: HNO₃ HCl H₂SO₄ NaOH ZrOAc - Lot # (s)

For any item check-listed, "No", provided detail of discrepancy in comment section below.

Comments:

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: _____/_____/03

Client contacted: Yes No

Summary of discussion:

Corrective Action (per P/M/Client):

TRC Customer Focused Solutions
5052 Commercial Circle
Concord, CA 94520-1248

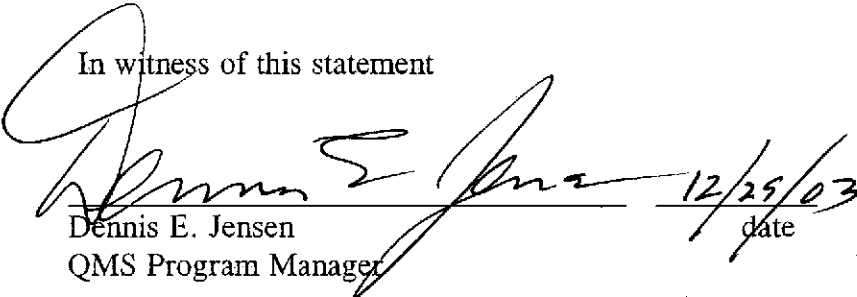
Statement of Authorized Transportation and Disposal

This is to certify that non-hazardous groundwater produced during purging and sampling of monitoring wells at ConocoPhillips site number 6034 was accumulated at TRC's groundwater monitoring facility at Concord, California, for transportation by Onyx Transportation, Inc. to the ConocoPhillips Refinery at Rodeo California for disposal. TRC records indicate that approximately 12 gallons of purge water from the site were transferred to the purge water holding tank on 10/2/03. The contents of the holding tank were transported to the Unit 100 Water Treatment Facility at the Rodeo Refinery on 11/3/03.

Disposal at the facility was authorized by ConocoPhillips in accordance with "ESD Standard Operating Procedures - Water Quality and Compliance", as revised on February 7, 2003. The procedure requires that TRC dispose only of monitoring well purge water from sites for which TRC services are under contract by ConocoPhillips. The non-hazardous nature of the purge water is confirmed quarterly by analysis by an independent certified laboratory of a random sample from the TRC holding facility. The sample is analyzed for all analytes and parameters that might affect the ConocoPhillips NPDES permit for ultimate disposal of the water. Documentation of compliance with ConocoPhillips requirements is provided by an ESD Form R-149, which is on file with ConocoPhillips.

If any purge water collected at the site is suspected of containing potentially hazardous material such as liquid-phase hydrocarbons, that water was accumulated separately in a drum for transportation and disposal by Filter Recycling, Inc.

In witness of this statement


Dennis E. Jensen
QMS Program Manager

12/25/03
date

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.