

Ro-436

# TRC

Customer-Focused Solutions

September 21, 2004

ConocoPhillips Company  
76 Broadway  
Sacramento, California 95818

Alameda County  
SEP 28 2004  
Environmental Health

ATTN: MS. SHELBY LATHROP  
  
SITE: 76 STATION 4186  
1771 FIRST STREET  
LIVERMORE, CALIFORNIA  
  
RE: QUARTERLY MONITORING REPORT  
JULY THROUGH SEPTEMBER 2004

Dear Ms. Lathrop:

Please find enclosed our Quarterly Monitoring Report for 76 Station 4186, located 1771 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: Ms. Donna Dragos, Alameda County Health Care Services  
Ms. Carol Mahoney, Zone 7 Water Zone  
Mr. Roger Batra, TRC

Enclosures  
20-0400/4186R04.QMS.doc



Customer-Focused Solutions

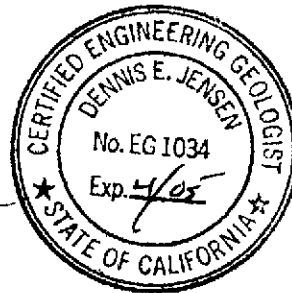
**QUARTERLY MONITORING REPORT  
JULY THROUGH SEPTEMBER 2004**

76 STATION 4186  
1771 First Street  
Livermore, California

Prepared For:

Ms. Shelby Lathrop  
CONOCOPHILLIPS COMPANY  
76 Broadway  
Sacramento, California 95818

By:



Alameda County  
SEP 28 2004  
Environmental Health

Senior Project Geologist, Irvine Operations  
August 18, 2004

### 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**  
**July 2004 through September 2004**  
**76 Station 4186**  
**1771 First Street**  
**Livermore, CA**

Project Coordinator: **Shelby Lathrop**  
Telephone: **916-558-7609**

Water Sampling Contractor: **TRC**  
Compiled by: **Valentina Tobon**

Date(s) of Gauging/Sampling Event: **7/15/04**

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**Sample Points**

Groundwater wells: **5** onsite, **2** offsite      Wells gauged: **7**      Wells sampled: **7**  
Purging method: **Bailer/submersible pump**  
Purge water disposal: **Onyx/ Rodeo Unit 100**  
Other Sample Points: **0**      Type: **n/a**

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**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**

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**Hydrogeologic Parameters**

Depth to groundwater (below TOC):      Minimum: **24.45 feet**      Maximum: **35.15 feet**  
Average groundwater elevation (relative to available local datum): **447.28 feet**  
Average change in groundwater elevation since previous event: **-3.04 feet**  
Interpreted groundwater gradient and flow direction:  
    Current event: **0.07 ft/ft, southwest**  
    Previous event: **0.05 ft/ft, Southwest (4/15/04)**

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**Selected Laboratory Results**

Wells with detected **Benzene**: **2**      Wells above MCL (1.0 µg/l): **2**  
    Maximum reported benzene concentration: **150 µg/l (U-7)**

Wells with **TPPH 8260B**      **4**      Maximum: **8,500 µg/l (U-6)**  
Wells with **MTBE**      **5**      Maximum: **3,400 µg/l (U-3)**

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**Notes:**

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# 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:  $\frac{\text{Surface Elevation} - \text{Measured Depth to Water} + (\text{Dp} \times \text{LPH Thickness})}{1}$ , 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.
9. Historical data has been validated for this report. Values presented in the following tables supersede those from previous reports.

### REFERENCE

TRC began groundwater monitoring and sampling for 76 Station 4186 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**  
**July 15, 2004**  
**76 Station 4186**

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
U-1	<b>(Screen Interval in feet: 14.0-34.0)</b>													
7/15/04	478.27	26.47	0.00	451.80	-1.14	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
U-2	<b>(Screen Interval in feet: 13.0-34.0)</b>													
7/15/04	477.44	24.45	0.00	452.99	0.75	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
U-3	<b>(Screen Interval in feet: 14.0-34.0)</b>													
7/15/04	478.46	24.80	0.00	453.66	-1.21	--	2700	ND<25	ND<25	ND<25	ND<50	--	3400	
U-4	<b>(Screen Interval in feet: 35.0-45.0)</b>													
7/15/04	476.93	35.05	0.00	441.88	-5.25	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.1	
U-5	<b>(Screen Interval in feet: 37.0-47.0)</b>													
7/15/04	476.51	35.15	0.00	441.36	-5.10	--	60	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	27	
U-6	<b>(Screen Interval in feet: DNA)</b>													
7/15/04	478.38	34.30	0.00	444.08	-4.82	--	8500	150	5.7	970	560	--	24	
U-7	<b>(Screen Interval in feet: DNA)</b>													
7/15/04	478.74	33.52	0.00	445.22	-4.49	--	4700	15	1.2	59	57	--	50	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**July 1998 Through July 2004**  
**76 Station 4186**

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>U-1 (Screen Interval in feet: 14.0-34.0)</b>														
7/13/98	478.27	23.28	0.00	454.99	--	ND	--	ND	ND	ND	ND	ND	--	
10/7/98	478.27	26.43	0.00	451.84	-3.15	ND	--	ND	ND	ND	ND	ND	--	
1/15/99	478.27	30.42	0.00	447.85	-3.99	ND	--	ND	ND	ND	1.1	7.3	--	
4/14/99	478.27	24.21	0.00	454.06	6.21	ND	--	ND	ND	ND	ND	160	--	
7/19/99	478.27	27.10	0.00	451.17	-2.89	ND	--	ND	ND	ND	ND	92	--	
10/12/99	478.27	29.40	0.00	448.87	-2.30	ND	--	ND	ND	ND	ND	37	--	
1/24/00	478.27	27.90	0.00	450.37	1.50	ND	--	ND	ND	ND	ND	28	--	
4/10/00	478.27	26.16	0.00	452.11	1.74	ND	--	ND	0.930	ND	ND	ND	--	
7/17/00	478.27	28.04	0.00	450.23	-1.88	ND	--	ND	ND	ND	ND	160	--	
10/2/00	478.27	28.41	0.00	449.86	-0.37	ND	--	ND	ND	ND	ND	120	--	
1/8/01	478.27	28.68	0.00	449.59	-0.27	ND	--	ND	ND	ND	ND	103	--	
4/3/01	478.27	25.74	0.00	452.53	2.94	ND	--	ND	ND	ND	ND	55.1	--	
7/2/01	478.27	30.67	0.00	447.60	-4.93	ND	--	ND	ND	ND	ND	ND	--	
10/8/01	478.27	33.13	0.00	445.14	-2.46	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
1/3/02	478.27	27.67	0.00	450.60	5.46	160	--	ND<0.50	0.51	ND<0.50	0.69	31	--	
4/5/02	478.27	29.40	0.00	448.87	-1.73	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	60	--	
7/2/02	478.27	31.17	0.00	447.10	-1.77	--	1100	ND<0.50	1.7	0.73	130	--	35	
10/1/02	478.27	33.00	0.00	445.27	-1.83	--	120	ND<0.50	ND<0.50	ND<0.50	8.8	--	28	
12/30/02	478.27	22.03	0.00	456.24	10.97	--	ND<50	ND<0.50	ND<0.50	ND<0.50	1.2	--	90	
5/2/03	478.27	24.13	0.00	454.14	-2.10	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	50	
7/1/03	478.27	25.35	0.00	452.92	-1.22	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
10/3/03	478.27	27.24	0.00	451.03	-1.89	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
1/8/04	478.27	22.67	0.00	455.60	4.57	--	54	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.5	
4/15/04	478.27	25.33	0.00	452.94	-2.66	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	



**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**July 1998 Through July 2004**  
**76 Station 4186**

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
U-1 continued														
7/15/04	478.27	26.47	0.00	451.80	-1.14	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
U-2 (Screen Interval in feet: 13.0-34.0)														
7/13/98	477.44	23.52	0.00	453.92	--	1200	--	130	12	62	180	1100	--	
10/7/98	477.44	25.31	0.00	452.13	-1.79	ND	--	ND	ND	ND	ND	160	--	
1/15/99	477.44	30.22	0.00	447.22	-4.91	ND	--	ND	ND	ND	ND	280	--	
4/14/99	477.44	24.50	0.00	452.94	5.72	ND	--	ND	ND	ND	ND	460	--	
7/19/99	477.44	28.54	0.00	448.90	-4.04	ND	--	ND	ND	ND	ND	220	--	
10/12/99	477.44	30.48	0.00	446.96	-1.94	ND	--	ND	ND	ND	ND	160	--	
1/24/00	477.44	24.52	0.00	452.92	5.96	ND	--	ND	ND	ND	ND	150	--	
4/10/00	477.44	23.68	0.00	453.76	0.84	ND	--	ND	ND	ND	ND	177	--	
7/17/00	477.44	28.35	0.00	449.09	-4.67	ND	--	ND	ND	ND	ND	62.7	--	
10/2/00	477.44	28.72	0.00	448.72	-0.37	ND	--	ND	ND	ND	ND	52	--	
1/8/01	477.44	29.11	0.00	448.33	-0.39	ND	--	ND	ND	ND	ND	57.3	--	
4/3/01	477.44	25.95	0.00	451.49	3.16	ND	--	ND	ND	ND	ND	30.2	--	
7/2/01	477.44	29.01	0.00	448.43	-3.06	ND	--	ND	ND	ND	ND	16	--	
10/8/01	477.44	30.94	0.00	446.50	-1.93	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	82	--	
1/3/02	477.44	27.33	0.00	450.11	3.61	260	--	7.7	11	1.7	15	42	--	
4/5/02	477.44	30.02	0.00	447.42	-2.69	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	25	--	
7/2/02	477.44	31.23	0.00	446.21	-1.21	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
10/1/02	477.44	32.00	0.00	445.44	-0.77	--	ND<50	ND<0.50	0.62	ND<0.50	ND<1.0	--	ND<2.0	
12/30/02	477.44	22.32	0.00	455.12	9.68	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
5/2/03	477.44	25.92	0.00	451.52	-3.60	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
7/1/03	477.44	24.99	0.00	452.45	0.93	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
10/3/03	477.44	25.31	0.00	452.13	-0.32	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**July 1998 Through July 2004**  
**76 Station 4186**

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
U-2 continued														
1/8/04	477.44	21.94	0.00	455.50	3.37	--	ND<50	ND<0.50	ND<0.50	0.51	ND<1.0	--	ND<2.0	
4/15/04	477.44	25.20	0.00	452.24	-3.26	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
7/15/04	477.44	24.45	0.00	452.99	0.75	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
U-3 (Screen Interval in feet: 14.0-34.0)														
7/13/98	478.46	23.82	0.00	454.64	--	70000	--	3100	5500	2700	16000	7500	--	
10/7/98	478.46	25.64	0.00	452.82	-1.82	54000	--	5000	1100	3100	14000	6100	--	
1/15/99	478.46	30.92	0.00	447.54	-5.28	41000	--	3100	ND	1800	3800	15000	--	
4/14/99	478.46	24.48	0.00	453.98	6.44	33000	--	86	290	2200	7800	39000	--	
7/19/99	478.46	28.46	0.00	450.00	-3.98	48000	--	3900	2500	3600	14000	12000	16000	
10/12/99	478.46	30.39	0.00	448.07	-1.93	35000	--	4200	ND	2300	1800	22000	8300	
1/24/00	478.46	23.43	0.00	455.03	6.96	13000	--	260	ND	770	3200	53000	42000	
4/10/00	478.46	23.31	0.00	455.15	0.12	35200	--	1070	241	2820	8850	35600	40900	
7/17/00	478.46	27.53	0.00	450.93	-4.22	29000	--	3570	525	3180	5660	22500	21000	
10/2/00	478.46	28.19	0.00	450.27	-0.66	11000	--	2100	31	2000	780	25000	28000	
1/8/01	478.46	29.85	0.00	448.61	-1.66	33600	--	3060	427	3040	4190	24700	30900	
4/3/01	478.46	24.98	0.00	453.48	4.87	5390	--	660	10.8	304	356	15200	19300	
7/2/01	478.46	31.35	0.00	447.11	-6.37	13000	--	1200	58	1300	930	25000	26000	
10/8/01	478.46	32.69	0.00	445.77	-1.34	6100	--	500	ND<10	570	130	23000	22000	
1/3/02	478.46	23.73	0.00	454.73	8.96	9900	--	700	130	24	1000	14000	12000	
4/5/02	477.44	28.27	0.00	449.17	-5.56	9800	--	1100	180	220	1400	16000	30000	
7/2/02	478.46	29.71	0.00	448.75	-0.42	--	ND<25000	ND<250	ND<250	ND<250	ND<500	12000	12000	
10/1/02	478.46	31.18	0.00	447.28	-1.47	--	ND<25000	ND<250	ND<250	ND<250	ND<500	12000	12000	
12/30/02	478.46	21.62	0.00	456.84	9.56	--	23000	330	170	870	4900	18000	18000	
5/2/03	478.46	23.11	0.00	455.35	-1.49	--	19000	280	ND<50	880	1500	15000	15000	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**July 1998 Through July 2004**  
**76 Station 4186**

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>U-3 continued</b>														
7/1/03	478.46	24.89	0.00	453.57	-1.78	--	19000	120	ND<100	180	880	22000	22000	
10/3/03	478.46	26.59	0.00	451.87	-1.70	--	20000	170	ND<50	250	730	--	16000	
1/8/04	478.46	21.92	0.00	456.54	4.67	--	17000	250	ND<100	770	1500	--	9700	
4/15/04	478.46	23.59	0.00	454.87	-1.67	--	4600	ND<25	ND<25	36	100	--	3700	
7/15/04	478.46	24.80	0.00	453.66	-1.21	--	2700	ND<25	ND<25	ND<25	ND<50	--	3400	
<b>U-4 (Screen Interval in feet: 35.0-45.0)</b>														
4/3/01	476.93	31.63	0.00	445.30	--	ND	--	ND	ND	ND	ND	37.8	38.2	
7/2/01	476.93	37.96	0.00	438.97	-6.33	ND	--	ND	ND	ND	ND	ND	5.3	
10/8/01	476.93	44.24	0.00	432.69	-6.28	--	--	--	--	--	--	--	--	Not enough water to sample
1/3/02	476.93	36.15	0.00	440.78	8.09	100	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	10	8.5	
4/5/02	476.93	37.64	0.00	439.29	-1.49	ND<50	--	0.50	ND<0.50	ND<0.50	ND<0.50	4.1	--	
7/2/02	476.93	36.85	0.00	440.08	0.79	--	67	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	12	
10/1/02	476.93	38.54	0.00	438.39	-1.69	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	9.8	
12/30/02	476.93	32.64	0.00	444.29	5.90	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	25	
5/2/03	476.93	31.40	0.00	445.53	1.24	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	4.1	
7/1/03	476.93	33.60	0.00	443.33	-2.20	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.1	
10/3/03	476.93	37.63	0.00	439.30	-4.03	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	9.1	
1/8/04	476.93	29.23	0.00	447.70	8.40	--	ND<50	0.55	ND<0.50	1.6	3.7	--	2.5	
4/15/04	476.93	29.80	0.00	447.13	-0.57	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.2	
7/15/04	476.93	35.05	0.00	441.88	-5.25	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.1	
<b>U-5 (Screen Interval in feet: 37.0-47.0)</b>														
4/3/01	476.51	31.75	0.00	444.76	--	ND	--	ND	0.728	ND	0.993	54.8	55.4	
7/2/01	476.51	38.68	0.00	437.83	-6.93	ND	--	ND	ND	ND	ND	88	94	
10/8/01	476.51	46.31	0.00	430.20	-7.63	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	37	54	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**July 1998 Through July 2004**  
**76 Station 4186**

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
U-5 continued														
1/3/02	476.51	36.55	0.00	439.96	9.76	ND<50	--	ND<0.50	0.59	ND<0.50	0.91	51	53	
4/5/02	476.51	37.83	0.00	438.68	-1.28	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	37	--	
7/2/02	476.51	36.92	0.00	439.59	0.91	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	43	
10/1/02	476.51	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible - truck parked over well
12/30/02	476.51	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible - car parked over well
5/2/03	476.51	31.55	0.00	444.96	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	18	
7/1/03	476.51	33.83	0.00	442.68	-2.28	--	73	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	46	
10/3/03	476.51	37.72	0.00	438.79	-3.89	--	58	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	44	
1/8/04	476.51	29.21	0.00	447.30	8.51	--	ND<50	ND<0.50	ND<0.50	1.1	2.7	--	17	
4/15/04	476.51	30.05	0.00	446.46	-0.84	--	57	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	37	
7/15/04	476.51	35.15	0.00	441.36	-5.10	--	60	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	27	
U-6 (Screen Interval in feet: DNA)														
1/3/02	478.38	33.99	0.00	444.39	--	5000	--	36	ND<25	260	450	ND<250	ND<10	
4/5/02	478.38	36.18	0.00	442.20	-2.19	1300	--	16	ND<5.0	54	ND<5.0	ND<25	--	
7/2/02	478.38	36.33	0.00	442.05	-0.15	--	1100	1.4	ND<0.50	16	ND<1.0	--	0.94	
10/1/02	478.38	37.70	0.00	440.68	-1.37	--	2000	5.4	ND<0.50	62	ND<1.0	--	2.6	
12/30/02	478.38	31.63	0.00	446.75	6.07	--	130	ND<0.50	ND<0.50	2.3	ND<1.0	--	ND<2.0	
5/2/03	478.38	31.49	0.00	446.89	0.14	--	150	ND<0.50	ND<0.50	1.8	1.7	--	82	
7/1/03	478.38	32.88	0.00	445.50	-1.39	--	190	1.8	ND<0.50	9.4	8.7	--	36	
10/3/03	478.38	36.54	0.00	441.84	-3.66	--	ND<10000	140	ND<100	940	560	--	ND<400	
1/8/04	478.38	30.45	0.00	447.93	6.09	--	3500	29	32	90	89	--	27	
4/15/04	478.38	29.48	0.00	448.90	0.97	--	2400	19	ND<2.5	91	53	--	16	
7/15/04	478.38	34.30	0.00	444.08	-4.82	--	8500	150	5.7	970	560	--	24	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**July 1998 Through July 2004**  
**76 Station 4186**

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>U-7</b>														
<b>(Screen Interval in feet: DNA)</b>														
1/3/02	478.74	32.43	0.00	446.31	--	3100	--	93	ND<10	35	73	140	130	
4/5/02	478.74	34.06	0.00	444.68	-1.63	630	--	22	0.53	2.6	ND<0.50	45	--	
7/2/02	478.74	35.28	0.00	443.46	-1.22	--	1100	21	ND<0.50	6.9	ND<1.0	--	60	
10/1/02	478.74	37.70	0.00	441.04	-2.42	--	1700	11	ND<0.50	3.1	ND<1.0	--	25	
12/30/02	478.74	31.93	0.00	446.81	5.77	--	4600	41	5.3	32	13	--	34	
5/2/03	478.74	31.81	0.00	446.93	0.12	--	3000	17	2.7	14	5.1	--	42	
7/1/03	478.74	33.47	0.00	445.27	-1.66	--	2300	11	0.53	8.0	1.5	--	35	
10/3/03	478.74	35.84	0.00	442.90	-2.37	--	6500	30	ND<5.0	41	ND<10	--	53	
1/8/04	478.74	30.35	0.00	448.39	5.49	--	1600	4.0	ND<1.0	4.2	8.7	--	56	
4/15/04	478.74	29.03	0.00	449.71	1.32	--	3600	22	1.3	64	40	--	57	
7/15/04	478.74	33.52	0.00	445.22	-4.49	--	4700	15	1.2	59	57	--	50	

**Table 3**  
**ADDITIONAL ANALYTICAL RESULTS**  
**76 Station 4186**

Date Sampled	EDC (µg/l)	EDB (µg/l)	Post Purge DO (mg/l)	TAME 8260B (µg/l)	TBA 8260B (µg/l)	DIPE 8260B (µg/l)	ETBE 8260B (µg/l)	Ethanol 8260B (µg/l)	Post ORP (mV)
<b>U-1</b>									
10/2/00	--	--	--	--	ND	--	--	--	--
12/30/02	--	--	0.60	--	--	--	--	--	91
5/2/03	--	--	0.50	--	--	--	--	--	90
7/1/03	--	--	0.60	--	--	--	--	ND<500000	110
10/3/03	--	--	3.79	--	--	--	--	ND<500	329
1/8/04	--	--	12.36	--	--	--	--	ND<500	184
4/15/04	--	--	10.56	--	--	--	--	ND<50	213
7/15/04	--	--	6.62	--	--	--	--	ND<50	251
<b>U-2</b>									
10/2/00	--	--	--	--	ND	--	--	--	--
10/1/02	--	--	1.40	--	--	--	--	--	--
12/30/02	--	--	2.80	--	--	--	--	--	120
5/2/03	--	--	150.00	--	--	--	--	--	120
7/1/03	--	--	1.20	--	--	--	--	ND<500000	110
10/3/03	--	--	5.61	--	--	--	--	ND<500	321
1/8/04	--	--	12.11	--	--	--	--	ND<500	-6
4/15/04	--	--	11.39	--	--	--	--	ND<50	259
7/15/04	--	--	7.46	--	--	--	--	ND<50	238
<b>U-3</b>									
10/2/00	--	--	--	--	63000	--	--	--	--
1/8/01	ND	ND	--	ND	49300	ND	ND	ND	--
4/3/01	ND	ND	--	ND	22200	ND	ND	ND	--
7/2/01	ND	ND	--	ND	27000	ND	ND	ND	--
10/8/01	ND<290	ND<290	--	ND<290	33000	ND<290	ND<290	ND<140000000	--
1/3/02	ND<100	ND<100	--	ND<100	17000	ND<100	ND<100	ND<50000000	--
4/5/02	ND<100	ND<100	--	ND<100	66000	ND<100	ND<100	ND<25000000	--

**Table 3**  
**ADDITIONAL ANALYTICAL RESULTS**  
**76 Station 4186**

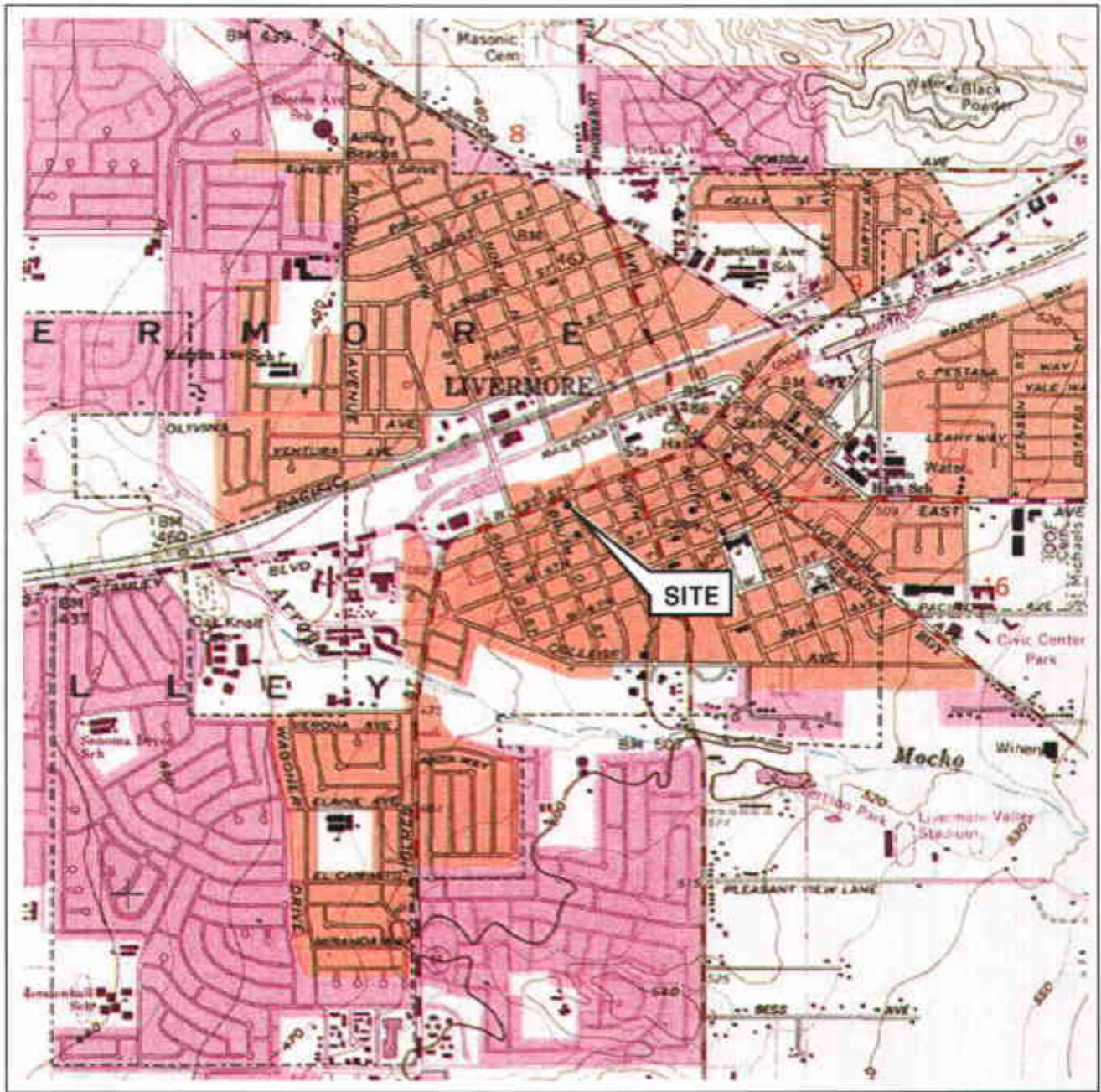
Date Sampled	EDC (µg/l)	EDB (µg/l)	Post Purge DO (mg/l)	TAME 8260B (µg/l)	TBA 8260B (µg/l)	DIPE 8260B (µg/l)	ETBE 8260B (µg/l)	Ethanol 8260B (µg/l)	Post ORP (mV)
<b>U-3 continued</b>									
7/2/02	ND<250	ND<250	--	ND<250	47000	ND<500	ND<250	ND<13000000	--
10/1/02	ND<1000	ND<1000	0.50	ND<1000	ND<50000	ND<1000	ND<1000	ND<250000000	- 47
12/30/02	ND<400	ND<400	0.20	ND<400	23000	ND<400	ND<400	ND<100000000	106
5/2/03	ND<200	ND<200	0.50	ND<200	25000	ND<200	ND<200	ND<50000000	85
7/1/03	ND<400	ND<400	0.50	ND<400	32000	ND<400	ND<400	ND<100000000	90
10/3/03	ND<200	ND<200	3.80	ND<200	39000	ND<2.0	ND<200	ND<50000	- 27
1/8/04	ND<400	ND<400	12.82	ND<400	ND<20000	ND<400	ND<400	ND<100000	133
4/15/04	ND<0.5	ND<0.5	3.11	ND<0.5	18000	ND<1.0	ND<0.5	ND<2500	24
7/15/04	ND<25	ND<25	1.90	ND<25	15000	ND<50	ND<25	ND<2500	53
<b>U-4</b>									
4/3/01	ND	ND	--	ND	ND	ND	ND	ND	--
7/2/01	ND	ND	--	ND	ND	ND	ND	ND	--
1/3/02	ND<1.0	ND<1.0	--	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<500000	--
10/1/02	--	--	1.00	--	--	--	--	--	83
12/30/02	--	--	0.40	--	--	--	--	--	126
5/2/03	--	--	0.70	--	--	--	--	--	120
7/1/03	--	--	0.60	--	--	--	--	ND<500000	130
10/3/03	--	--	2.06	--	--	--	--	ND<500	3.05
1/8/04	--	--	11.90	--	--	--	--	ND<500	76
4/15/04	--	--	3.30	--	--	--	--	ND<50	116
7/15/04	--	--	2.50	--	--	--	--	ND<50	32
<b>U-5</b>									
4/3/01	ND	ND	--	ND	ND	ND	ND	ND	--
7/2/01	ND	ND	--	ND	ND	ND	ND	ND	--
10/8/01	ND<2.0	ND<2.0	--	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<1000000	--
1/3/02	ND<1.0	ND<1.0	--	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<500000	--

**Table 3**  
**ADDITIONAL ANALYTICAL RESULTS**  
**76 Station 4186**

Date Sampled	EDC (µg/l)	EDB (µg/l)	Post Purge DO (mg/l)	TAME 8260B (µg/l)	TBA 8260B (µg/l)	DIPE 8260B (µg/l)	ETBE 8260B (µg/l)	Ethanol 8260B (µg/l)	Post ORP (mV)
<b>U-5 continued</b>									
5/2/03	--	--	0.60	--	--	--	--	--	120
7/1/03	--	--	0.90	--	--	--	--	ND<500	145
10/3/03	--	--	2.21	--	--	--	--	ND<500	3.13
1/8/04	--	--	11.27	--	--	--	--	ND<500	104
4/15/04	--	--	3.35	--	--	--	--	ND<50	65
7/15/04	--	--	2.87	--	--	--	--	ND<50	66
<b>U-6</b>									
1/3/02	ND<10	ND<10	--	ND<10	ND<200	ND<10	ND<10	ND<5000000	--
10/1/02	--	--	0.90	--	--	--	--	--	--
12/30/02	--	--	0.20	--	--	--	--	--	88
5/2/03	--	--	0.90	--	--	--	--	--	145
7/1/03	--	--	0.70	--	--	--	--	ND<500000	120
10/3/03	--	--	2.26	--	--	--	--	ND<100000	12
1/8/04	--	--	11.95	--	--	--	--	ND<5000	- 37
4/15/04	--	--	3.47	--	--	--	--	ND<250	- 20
7/15/04	--	--	3.25	--	--	--	--	ND<250	- 43
<b>U-7</b>									
1/3/02	ND<1.0	ND<1.0	--	ND<1.0	30	ND<1.0	ND<1.0	ND<500000	--
10/1/02	--	--	1.80	--	--	--	--	--	- 60
12/30/02	--	--	0.10	--	--	--	--	--	121
5/2/03	--	--	0.40	--	--	--	--	--	105
7/1/03	--	--	0.50	--	--	--	--	ND<500000	95
10/3/03	--	--	2.91	--	--	--	--	ND<5000	- 21
1/8/04	--	--	11.85	--	--	--	--	ND<1000	- 51
4/15/04	--	--	4.68	--	--	--	--	ND<100	- 16
7/15/04	--	--	2.55	--	--	--	--	ND<100	- 52



# FIGURES



0 1/4 1/2 3/4 1 MILE



SCALE 1:24,000



SOURCE:

United States Geological Survey  
7.5 Minute Topographic Maps:  
Livermore Quadrangle



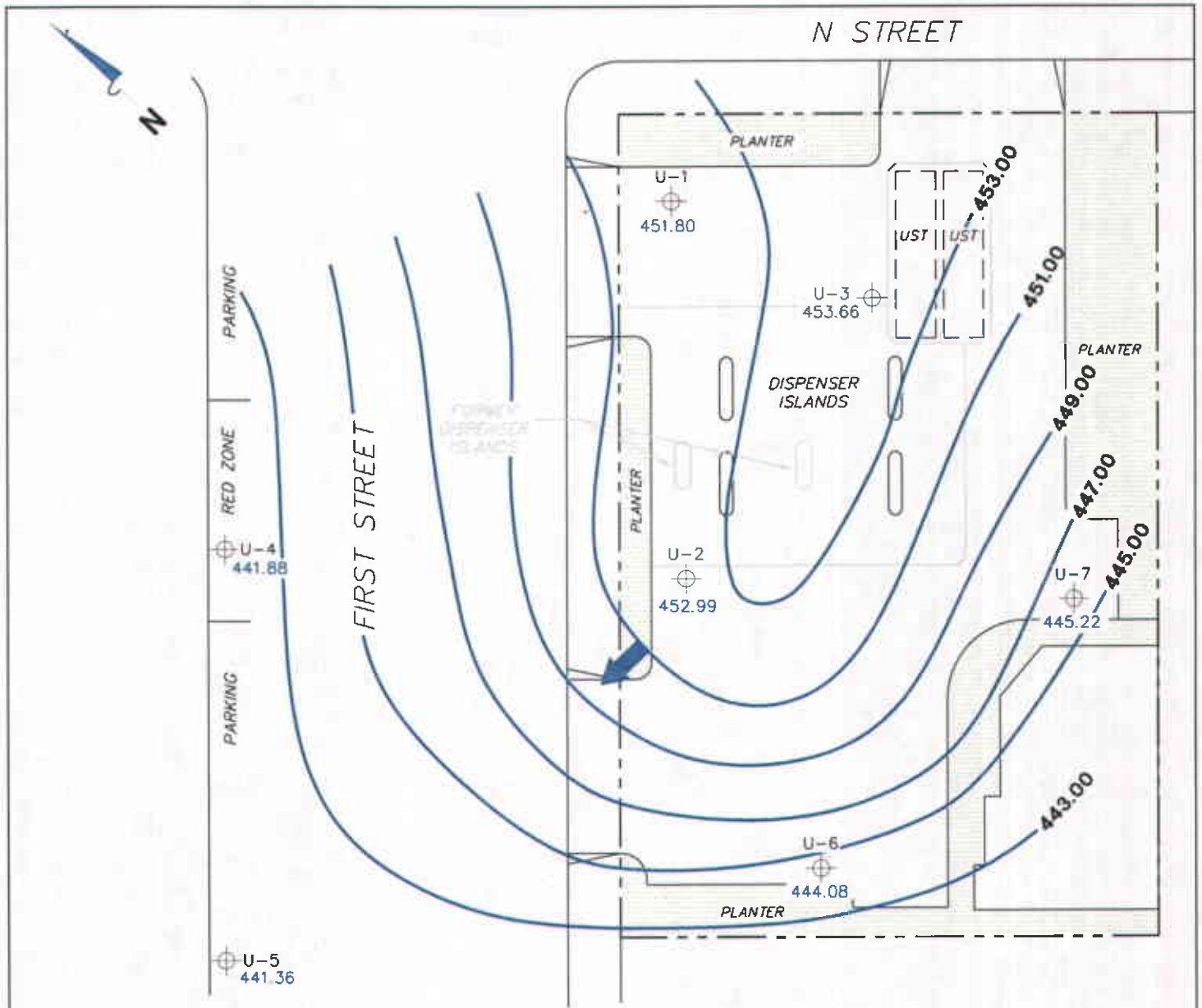
VICINITY MAP

76 Station 4186  
1771 First Street  
Livermore, California

FIGURE 1

PS = 1:1

**TRC**



**NOTES:**

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

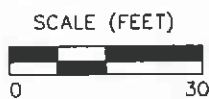
**LEGEND**

- U-7 Monitoring Well with Groundwater Elevation (feet)
- 453.00 Groundwater Elevation Contour
- General Direction of Groundwater Flow

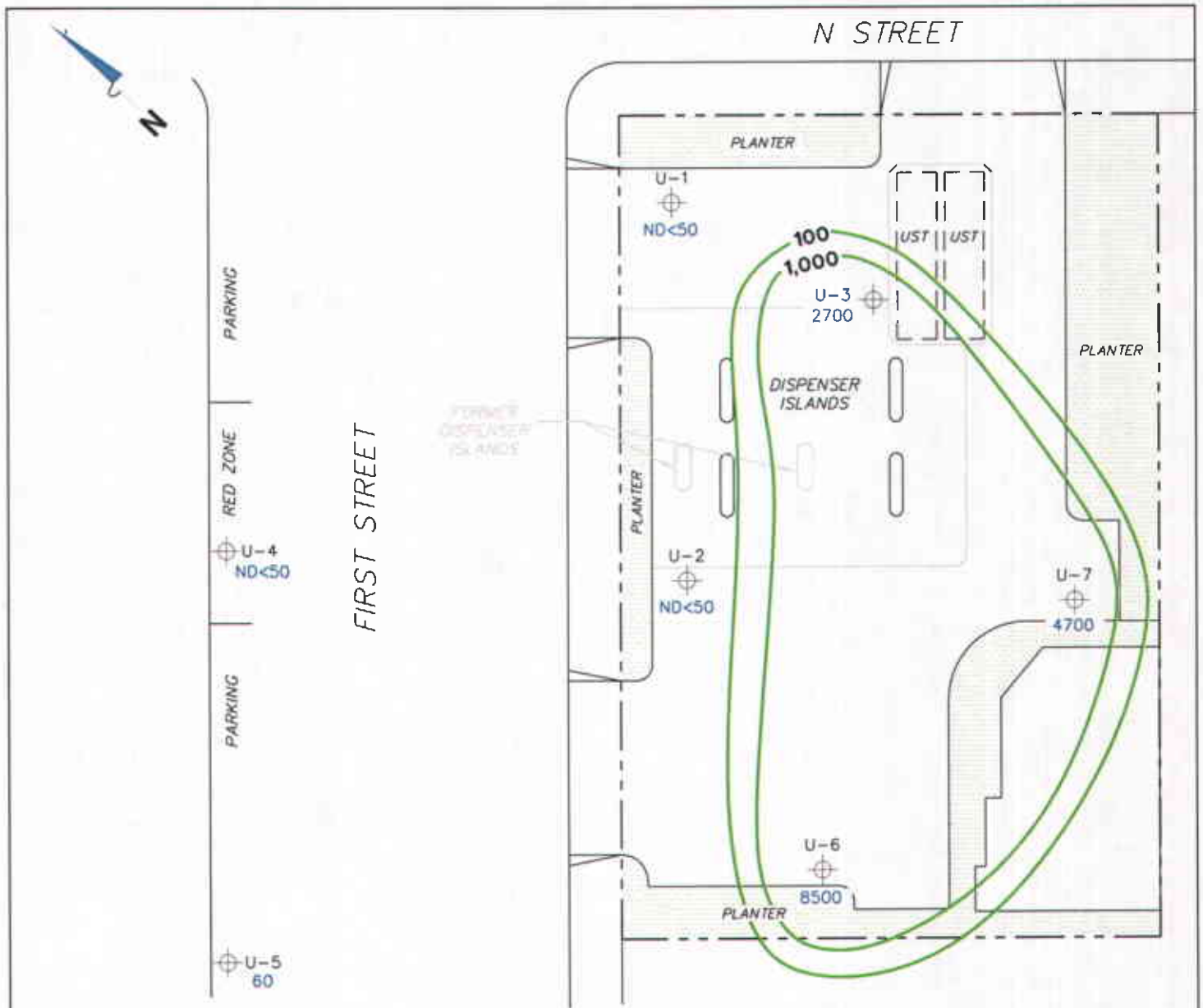
**GROUNDWATER ELEVATION  
CONTOUR MAP  
July 15, 2004**

76 Station 4186  
1771 First Street  
Livermore, California

PS=1:1 4186-003



**FIGURE 2**



**NOTES:**

Contour lines are interpretive and based on laboratory analysis of groundwater samples.  
 TPPH = total purgeable petroleum hydrocarbons.  
 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. TPPH results obtained using EPA Method 8260B.

**LEGEND**

U-7 ⊕ Monitoring Well with Dissolved-Phase TPPH Concentrations (µg/l)

—1,000— Dissolved-Phase TPPH Contour (µg/l)

**DISSOLVED PAHSE TPPH CONCENTRATION MAP  
 July 15, 2004**

76 Station 4186  
 1771 First Street  
 Livermore, California

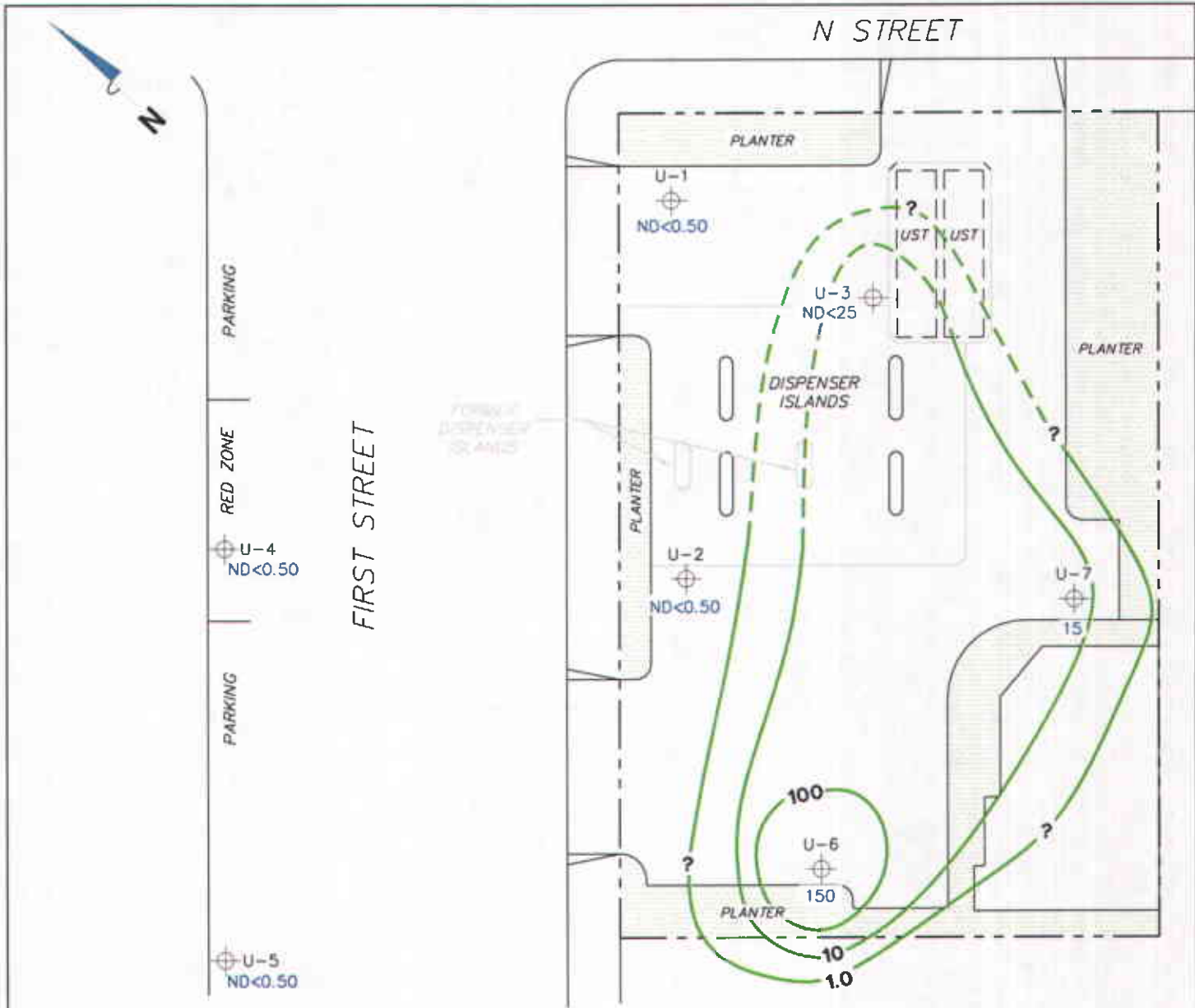
PS=1:1 4186-003



SCALE (FEET)



**FIGURE 3**



FIRST STREET

PARKING

RED ZONE

PARKING

**NOTES:**

Contour lines are interpretive and based on laboratory analysis of groundwater samples. B = benzene. 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. Dashes indicate contour based on non-detect at elevated detection limit.

**LEGEND**

- U-7 ⊕ Monitoring Well with Dissolved-Phase Benzene Concentrations (µg/l)
- 100- Dissolved-Phase Benzene Contour (µg/l)

**DISSOLVED-PHASE BENZENE CONCENTRATION MAP  
July 15, 2004**

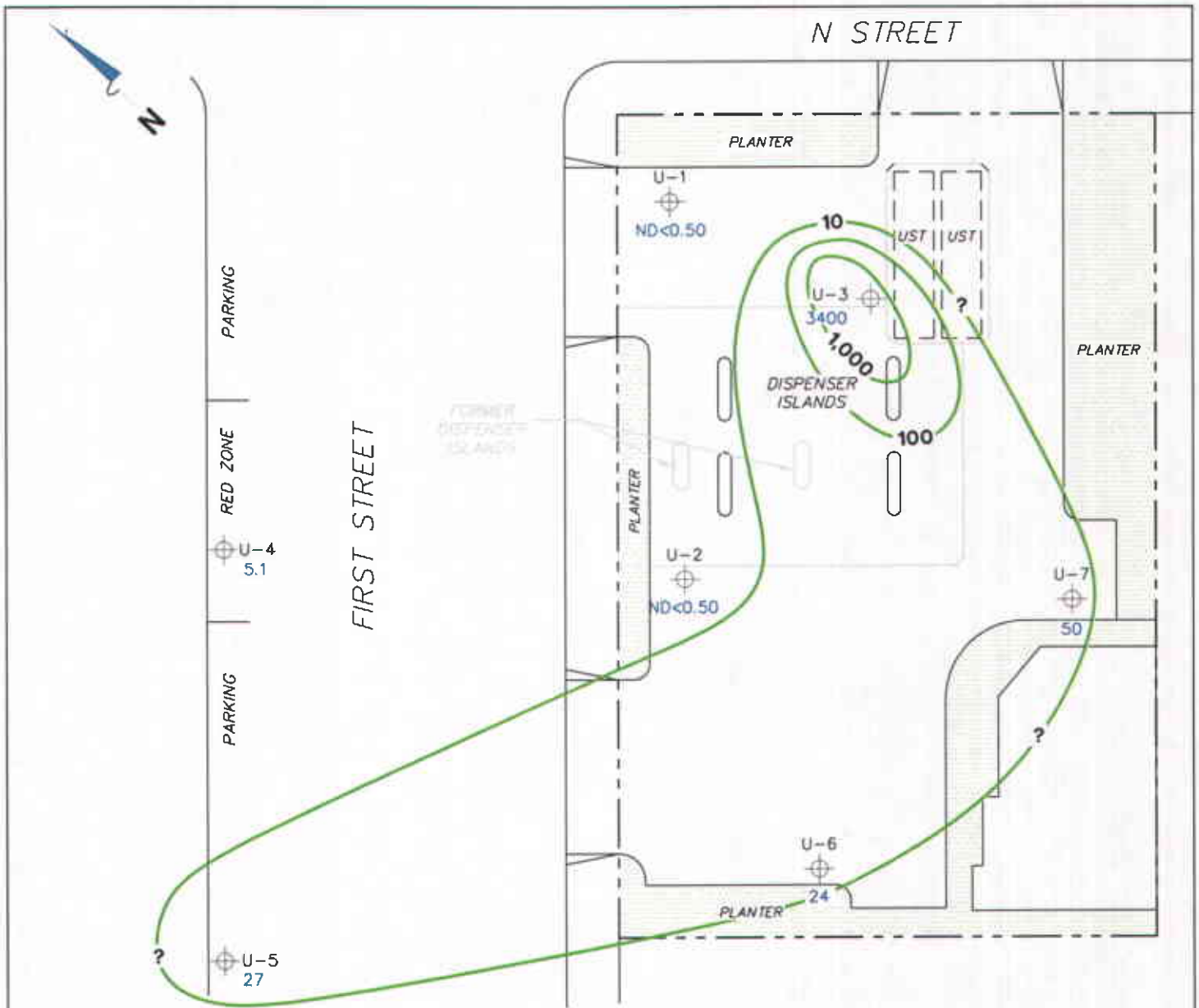
76 Station 4186  
1771 First Street  
Livermore, California



**FIGURE 4**



PS=1:1 4186-003



**NOTES:**

Contour lines are interpretive and based on laboratory analysis of groundwater samples. MTBE = methyl tertiary butyl ether. µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. UST = underground storage tank. MTBE results obtained using EPA Method 8260B.

**LEGEND**

U-7 ⊕ Monitoring Well with Dissolved-Phase MTBE Concentrations (µg/l)

—1,000— Dissolved-Phase MTBE Contour (µg/l)

**DISSOLVED PHASE MTBE CONCENTRATION MAP  
July 15, 2004**

76 Station 4186  
1771 First Street  
Livermore, California



SCALE (FEET)

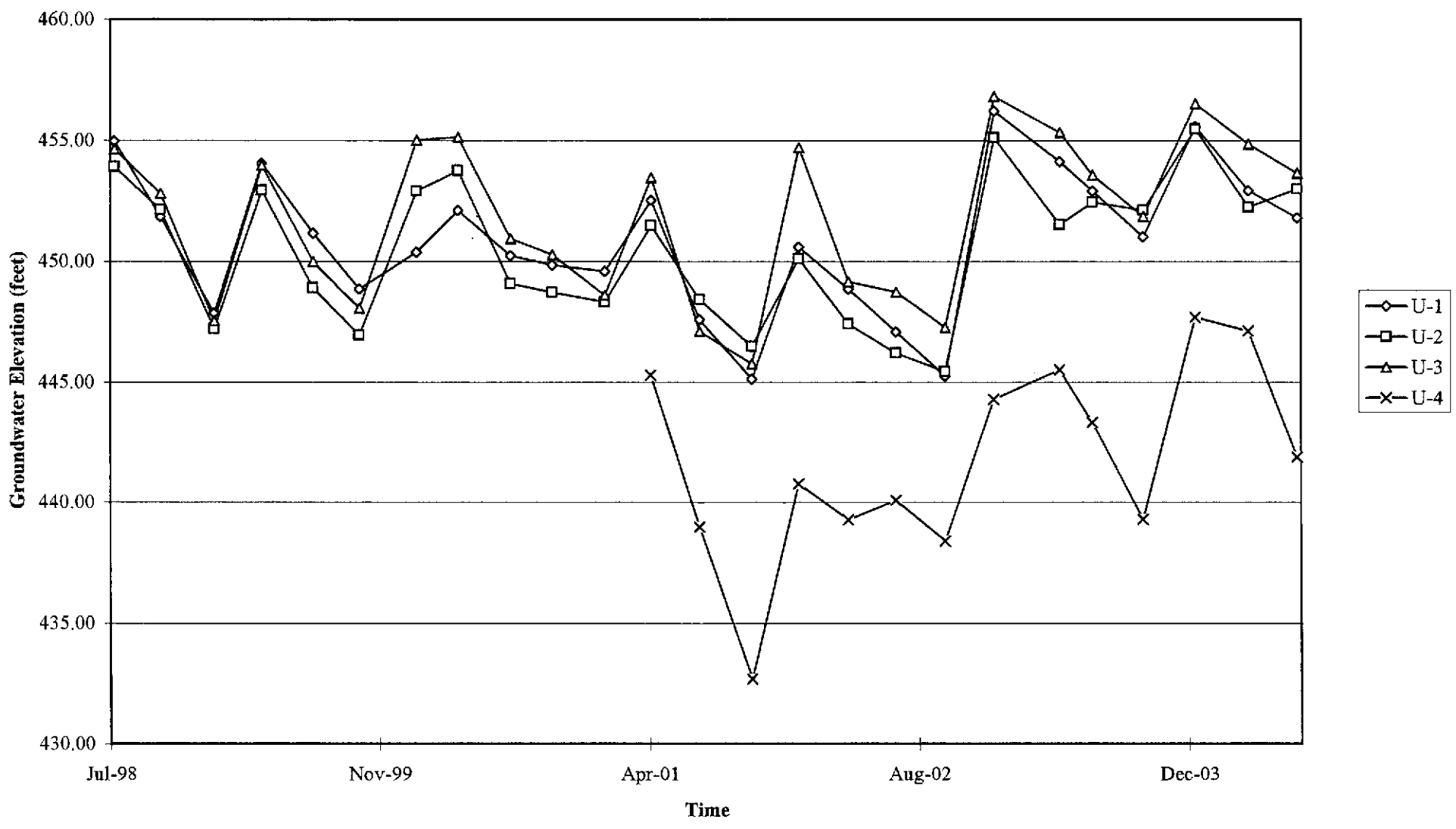


**FIGURE 5**

PS=1:1 4186-003

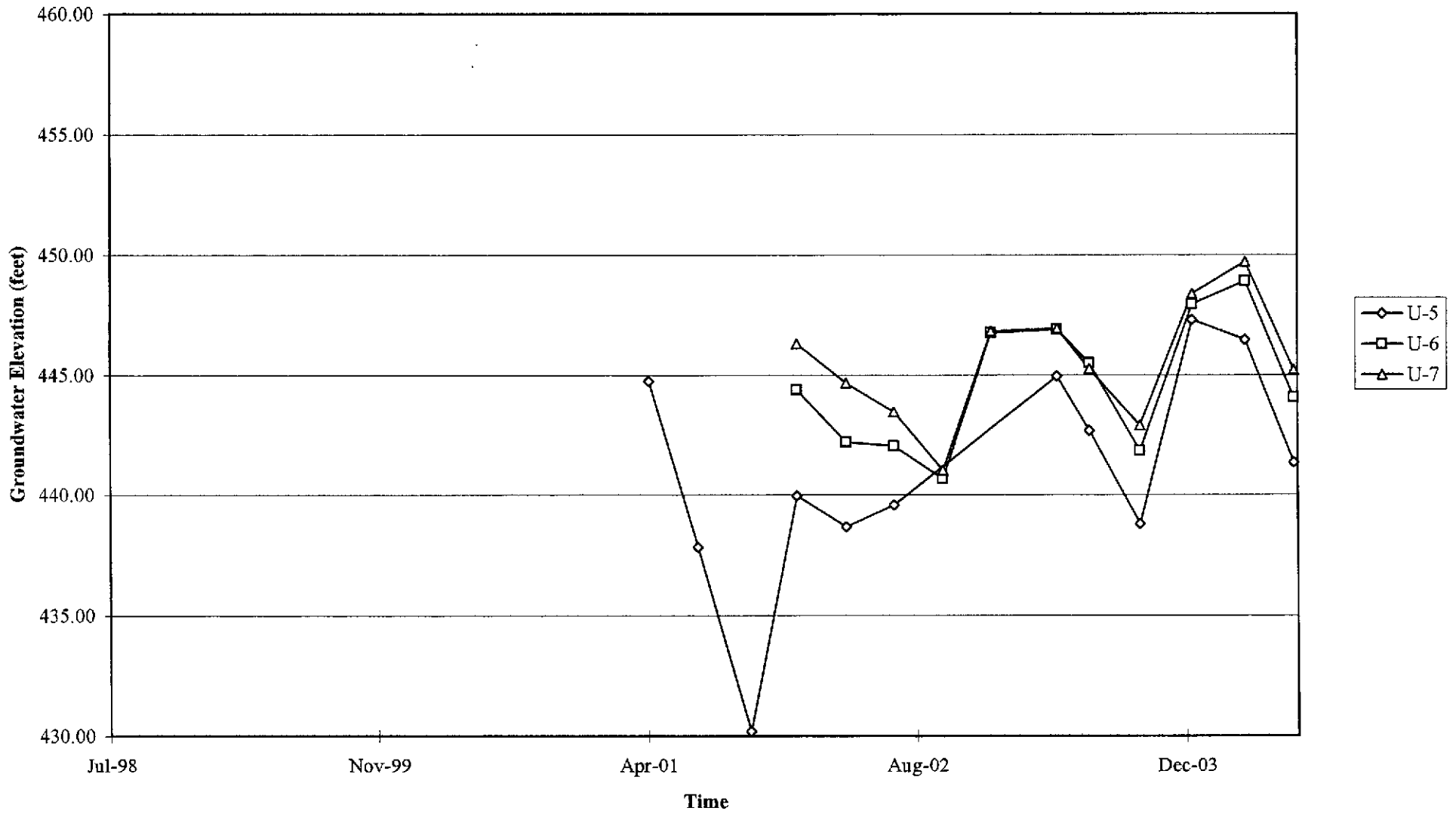
# GRAPHS

Groundwater Elevations vs. Time  
76 Station 4186

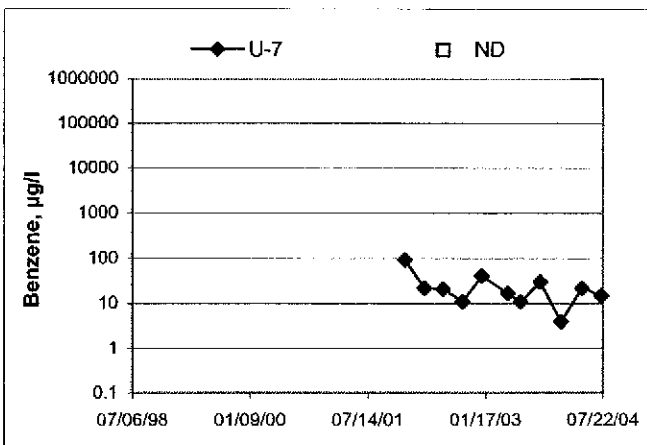
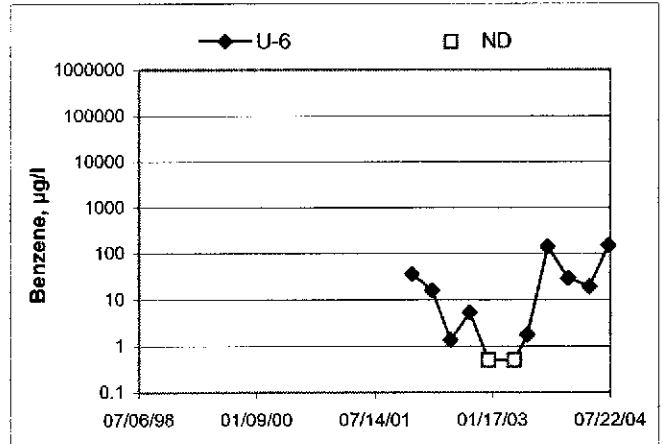
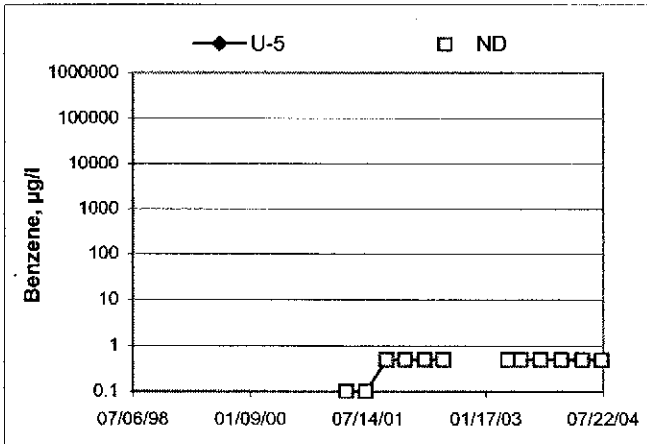
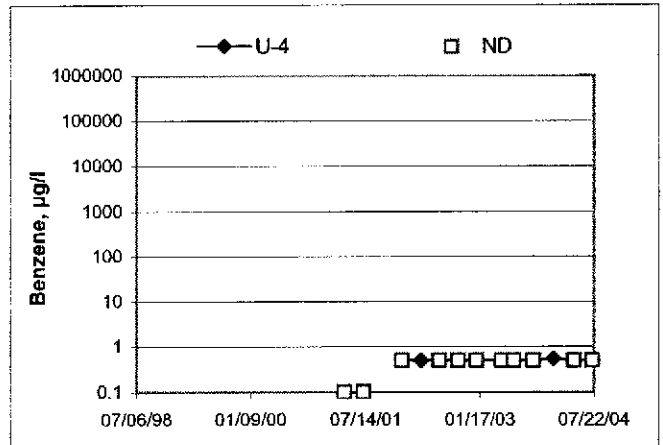
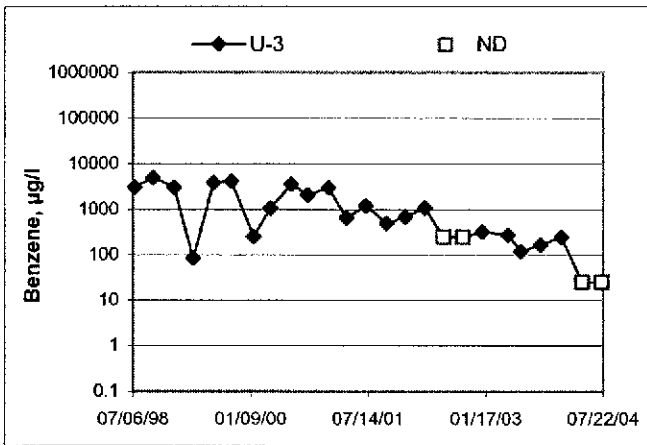
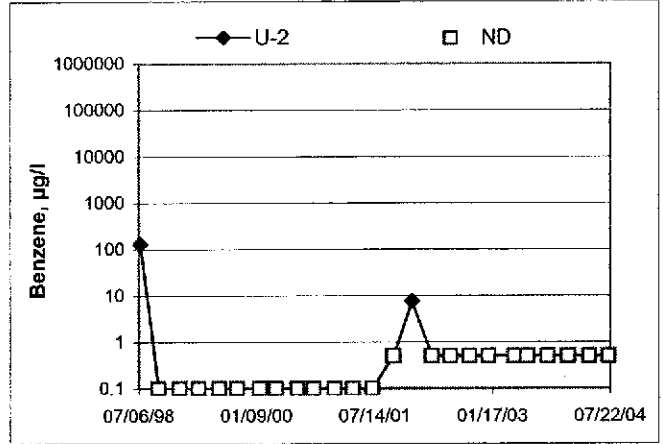
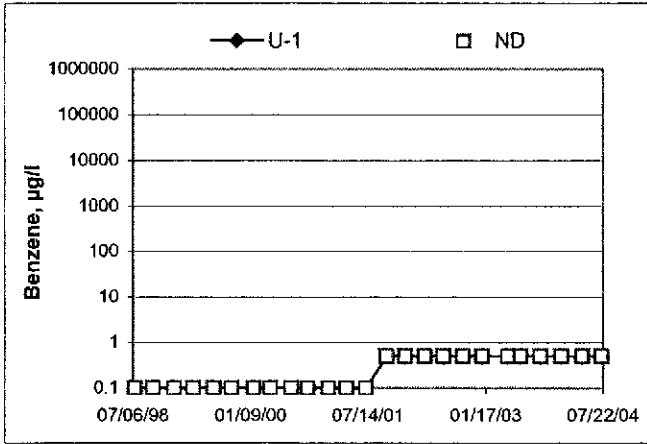




Groundwater Elevations vs. Time  
76 Station 4186



### Benzene Concentrations vs Time 76 Station 4186



## 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 measurement 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, and the samplers 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 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 well 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 well, 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.

# FIELD MONITORING DATA SHEET

Technician: ALAN J. BENNY      Job #/Task #: 4105001 / FAZC      Date: 7-15-04  
 Site # 4184      Project Manager BARBARA MOED      Page 1 of 1

Well #	TOC	Time Gauged	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
U-1	✓	0510	33.59	26.47	ε	ε	0759	2"
U-2	✓	0515	33.08	24.45	ε	ε	0820	2"
U-6	✓	0522	41.55	34.30	ε	ε	0814	2"
U-7	✓	0527	44.36	33.52	ε	ε	0825	2"
U-3	✓	0507	33.40	24.80	ε	ε	0759	2"
U-4	✓	0518	44.90	35.05	ε	ε	0633	2"
U-5	✓	0524	47.08	35.15	ε	ε	0705	2"
<del>FIELD DATA COMPLETE</del>		<del>QA/QC</del>		<del>COC</del>		<del>WELL BOX CONDITION SHEETS</del>		
<del>WTT CERTIFICATE</del>		<del>MANIFEST</del>		<del>DRUM INVENTORY</del>		<del>TRAFFIC CONTROL</del>		

## GROUNDWATER SAMPLING FIELD NOTES

Technician: AMEX  
 Site: 4186 Project No.: 4052001 Date: 7-15-04  
 Well No.: U-6 Purge Method: SEE HANDPAUL  
 Depth to Water (feet): 34.30 Depth to Product (feet): 0  
 Total Depth (feet): 44.55 LPH & Water Recovered (gallons): 0  
 Water Column (feet): 10.25 Casing Diameter (Inches): 2"  
 80% Recharge Depth (feet): 30.35 1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temperature (F. C)	pH	Turbidity <small>ORP</small>	D.O.
0627			2	573	19.7	7.46	20	7.02
			4	578	20.0	7.08	-29	5.79
	0649		6	547	20.5	6.98	-43	3.25
Static at Time Sampled		Total Gallons Purged			Time Sampled			
35.74		6			0814			
Comments:								

Well No.: U-7 Purge Method: SUE  
 Depth to Water (feet): 33.52 Depth to Product (feet): 0  
 Total Depth (feet): 44.36 LPH & Water Recovered (gallons): 0  
 Water Column (feet): 10.84 Casing Diameter (Inches): 2"  
 80% Recharge Depth (feet): 35.68 1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temperature (F. C)	pH	Turbidity <small>ORP</small>	D.O.
0656			2	549	19.7	7.52	<del>2.45</del> -41	2.95
			4	540	20.0	7.27	-51	1.64
	0717		6	549	20.1	7.36	-52	2.55
Static at Time Sampled		Total Gallons Purged			Time Sampled			
35.60		6			0825			
Comments:								

## GROUNDWATER SAMPLING FIELD NOTES

Technician: ALBY  
 Site: 418C Project No.: 4105001 Date: 7-15-04  
 Well No.: U-1 Purge Method: SUB HANDPUMP  
 Depth to Water (feet): 24.47 Depth to Product (feet): 0  
 Total Depth (feet): 33.59 LPH & Water Recovered (gallons): 0  
 Water Column (feet): 7.12 Casing Diameter (Inches): 2"  
 80% Recharge Depth (feet): 27.89 1 Well Volume (gallons): 1

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temperature (F. C)	pH	Turbidity ORP	D.O.
0542			1	688	20.5	6.97	215	6.19
			2	644	20.7	7.29	267	6.44
	0554		3	611	20.6	7.35	251	6.62
Static at Time Sampled		Total Gallons Purged			Time Sampled			
29.05		3			07:59			
Comments: <u>WELL NOT CHARGE IN 2 HRS</u>								

Well No.: U-2 Purge Method: SUB  
 Depth to Water (feet): 24.45 Depth to Product (feet): 0  
 Total Depth (feet): 33.08 LPH & Water Recovered (gallons): 0  
 Water Column (feet): 8.63 Casing Diameter (Inches): 2"  
 80% Recharge Depth (feet): 26.17 1 Well Volume (gallons): 1

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temperature (F. C)	pH	Turbidity ORP	D.O.
0602			1	557	20.3	7.92	230	8.05
			2	551	20.6	7.74	237	7.55
	0617		3	549	20.7	7.75	238	7.46
Static at Time Sampled		Total Gallons Purged			Time Sampled			
27.80		3			0820			
Comments: <u>NOT CHARGE IN 2 HRS.</u>								

## GROUNDWATER SAMPLING FIELD NOTES

Technician: J. KEARNS

Site: 4186

Project No.: 41050001

Date: 4/15/04

Well No.: AW-4

Purge Method: AB

Depth to Water (feet): 24.80

Depth to Product (feet): 0

Total Depth (feet): 33.40

LPH & Water Recovered (gallons): 0

Water Column (feet): 8.60

Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 26.52

1 Well Volume (gallons): 1

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temperature (F. °C)	pH	Turbidity <del>OFF</del>	D.O.
0548			1	667	20.2	7.13	61	<del>2.09</del>
			2	659	20.4	7.09	59	2.01
	0558		3	661	20.7	7.07	53	1.93
Static at Time Sampled		Total Gallons Purged			Time Sampled			
28.62		8			0759			
Comments: <u>DIDNT RECOVER 80% IN 2 HRS</u>								

Well No.: AW-4

Purge Method: H.S.

Depth to Water (feet): 35.05

Depth to Product (feet): 0

Total Depth (feet): 44.90

LPH & Water Recovered (gallons): 0

Water Column (feet): 9.85

Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 37.32

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conduc-tivity (uS/cm)	Temperature (F. °C)	pH	Turbidity <del>OFF</del>	D.O.
0608			2	562	19.9	6.50	45	2.57
			4	554	20.1	6.47	22	2.75
	0628		6	52	20.4	6.41	32	2.50
Static at Time Sampled		Total Gallons Purged			Time Sampled			
37.00		6			0633			
Comments:								



## GROUNDWATER SAMPLING FIELD NOTES

Technician: J. KEARNS

Site: 4186

Project No.: 41050001

Date: 4/15/84

Well No.: 4186-1-5

Purge Method: H.B.

Depth to Water (feet): 35.15

Depth to Product (feet): 0

Total Depth (feet): 47.08

LPH & Water Recovered (gallons): 0

Water Column (feet): 11.93

Casing Diameter (Inches): 2"

80% Recharge Depth (feet): 37.54

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F. C)	pH	<del>Turbidity</del> COP	D.O.
0643			2	545	20.1	7.36	64	2.81
			4	552	20.2	7.36	68	2.97
	0700		6	552	20.3	7.32	66	2.87
Static at Time Sampled			Total Gallons Purged			Time Sampled		
3695			6			0705		
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:								

TRC Alton Geoscience- Irvine

July 30, 2004

21 Technology Drive  
Irvine, CA 92718

Attn.: Anju Farfan

Project#: 41050001FA20

Project: Conoco Phillips # 4186

Site: 1771 First St. Livermore

Attached is our report for your samples received on 07/15/2004 09:50

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 08/29/2004 unless you have requested otherwise.

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

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

Sincerely,



Dimple Sharma  
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](http://www.stl-inc.com) \* CA DHS ELAP# 2496

**Gas/BTEX Fuel Oxygenates by 8260B**

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 4186

Received: 07/15/2004 09:50

Site: 1771 First St. Livermore

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
U-1	07/15/2004 07:59	Water	1
U-2	07/15/2004 08:20	Water	2
U-3	07/15/2004 07:59	Water	3
U-4	07/15/2004 06:33	Water	4
U-5	07/15/2004 07:05	Water	5
U-6	07/15/2004 08:14	Water	6
U-7	07/15/2004 08:25	Water	7

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

07/30/2004 12:48

**Gas/BTEX Fuel Oxygenates by 8260B**

TRC Alton Geoscience- Irvine  
Attn.: Anju Farfan

21 Technology Drive  
Irvine, CA 92718  
Phone: (949) 341-7440 Fax: (949) 753-0111  
Project: 41050001FA20  
Conoco Phillips # 4186

Received: 07/15/2004 09:50

Site: 1771 First St. Livermore

Prep(s): 5030B Test(s): 8260FAB  
Sample ID: U-1 Lab ID: 2004-07-0493 - 1  
Sampled: 07/15/2004 07:59 Extracted: 7/27/2004 16:16  
Matrix: Water QC Batch#: 2004/07/27-1B.62  
Analysis Flag: ,gs ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/27/2004 16:16	
Benzene	ND	0.50	ug/L	1.00	07/27/2004 16:16	
Toluene	ND	0.50	ug/L	1.00	07/27/2004 16:16	
Ethylbenzene	ND	0.50	ug/L	1.00	07/27/2004 16:16	
Total xylenes	ND	1.0	ug/L	1.00	07/27/2004 16:16	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/27/2004 16:16	
Ethanol	ND	50	ug/L	1.00	07/27/2004 16:16	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	111.7	72-128	%	1.00	07/27/2004 16:16	
Toluene-d8	100.9	80-113	%	1.00	07/27/2004 16:16	





**Gas/BTEX Fuel Oxygenates by 8260B**

TRC Alton Geoscience- Irvine  
Attn.: Anju Farfan

21 Technology Drive  
Irvine, CA 92718  
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20  
Conoco Phillips # 4186

Received: 07/15/2004 09:50

Site: 1771 First St. Livermore

Prep(s): 5030B Test(s): 8260FAB  
Sample ID: U-4 Lab ID: 2004-07-0493 - 4  
Sampled: 07/15/2004 06:33 Extracted: 7/27/2004 17:22  
Matrix: Water QC Batch#: 2004/07/27-1B.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/27/2004 17:22	
Benzene	ND	0.50	ug/L	1.00	07/27/2004 17:22	
Toluene	ND	0.50	ug/L	1.00	07/27/2004 17:22	
Ethylbenzene	ND	0.50	ug/L	1.00	07/27/2004 17:22	
Total xylenes	ND	1.0	ug/L	1.00	07/27/2004 17:22	
Methyl tert-butyl ether (MTBE)	5.1	0.50	ug/L	1.00	07/27/2004 17:22	
Ethanol	ND	50	ug/L	1.00	07/27/2004 17:22	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	111.0	72-128	%	1.00	07/27/2004 17:22	
Toluene-d8	103.1	80-113	%	1.00	07/27/2004 17:22	

**Gas/BTEX Fuel Oxygenates by 8260B**

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 4186

Received: 07/15/2004 09:50

Site: 1771 First St. Livermore

Prep(s): 5030B	Test(s): 8260FAB
Sample ID: U-5	Lab ID: 2004-07-0493 - 5
Sampled: 07/15/2004 07:05	Extracted: 7/27/2004 17:44
Matrix: Water	QC Batch#: 2004/07/27-1B.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	60	50	ug/L	1.00	07/27/2004 17:44	g
Benzene	ND	0.50	ug/L	1.00	07/27/2004 17:44	
Toluene	ND	0.50	ug/L	1.00	07/27/2004 17:44	
Ethylbenzene	ND	0.50	ug/L	1.00	07/27/2004 17:44	
Total xylenes	ND	1.0	ug/L	1.00	07/27/2004 17:44	
Methyl tert-butyl ether (MTBE)	27	0.50	ug/L	1.00	07/27/2004 17:44	
Ethanol	ND	50	ug/L	1.00	07/27/2004 17:44	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	111.7	72-128	%	1.00	07/27/2004 17:44	
Toluene-d8	105.6	80-113	%	1.00	07/27/2004 17:44	



**Gas/BTEX Fuel Oxygenates by 8260B**

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 4186

Received: 07/15/2004 09:50

Site: 1771 First St. Livermore

Prep(s): 5030B Test(s): 8260FAB  
 Sample ID: U-6 Lab ID: 2004-07-0493 - 6  
 Sampled: 07/15/2004 08:14 Extracted: 7/27/2004 18:06  
 Matrix: Water QC Batch#: 2004/07/27-1B.62  
 Analysis Flag: o ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	8500	250	ug/L	5.00	07/27/2004 18:06	
Benzene	150	2.5	ug/L	5.00	07/27/2004 18:06	
Toluene	5.7	2.5	ug/L	5.00	07/27/2004 18:06	
Ethylbenzene	970	2.5	ug/L	5.00	07/27/2004 18:06	
Total xylenes	560	5.0	ug/L	5.00	07/27/2004 18:06	
Methyl tert-butyl ether (MTBE)	24	2.5	ug/L	5.00	07/27/2004 18:06	
Ethanol	ND	250	ug/L	5.00	07/27/2004 18:06	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	112.2	72-128	%	5.00	07/27/2004 18:06	
Toluene-d8	95.5	80-113	%	5.00	07/27/2004 18:06	

**Gas/BTEX Fuel Oxygenates by 8260B**

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 4186

Received: 07/15/2004 09:50

Site: 1771 First St. Livermore

Prep(s): 5030B Test(s): 8260FAB  
 Sample ID: U-7 Lab ID: 2004-07-0493 - 7  
 Sampled: 07/15/2004 08:25 Extracted: 7/27/2004 18:29  
 Matrix: Water QC Batch#: 2004/07/27-1B.62  
 Analysis Flag: o ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	4700	100	ug/L	2.00	07/27/2004 18:29	
Benzene	15	1.0	ug/L	2.00	07/27/2004 18:29	
Toluene	1.2	1.0	ug/L	2.00	07/27/2004 18:29	
Ethylbenzene	59	1.0	ug/L	2.00	07/27/2004 18:29	
Total xylenes	57	2.0	ug/L	2.00	07/27/2004 18:29	
Methyl tert-butyl ether (MTBE)	50	1.0	ug/L	2.00	07/27/2004 18:29	
Ethanol	ND	100	ug/L	2.00	07/27/2004 18:29	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	112.9	72-128	%	2.00	07/27/2004 18:29	
Toluene-d8	91.6	80-113	%	2.00	07/27/2004 18:29	

**Gas/BTEX Fuel Oxygenates by 8260B**

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 4186

Received: 07/15/2004 09:50

Site: 1771 First St. Livermore

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/07/27-1B.62-038

Water

Test(s): 8260FAB

QC Batch # 2004/07/27-1B.62

Date Extracted: 07/27/2004 12:38

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/27/2004 12:38	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/27/2004 12:38	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/27/2004 12:38	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	07/27/2004 12:38	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	07/27/2004 12:38	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	07/27/2004 12:38	
1,2-DCA	ND	0.5	ug/L	07/27/2004 12:38	
EDB	ND	0.5	ug/L	07/27/2004 12:38	
Benzene	ND	0.5	ug/L	07/27/2004 12:38	
Toluene	ND	0.5	ug/L	07/27/2004 12:38	
Ethylbenzene	ND	0.5	ug/L	07/27/2004 12:38	
Total xylenes	ND	1.0	ug/L	07/27/2004 12:38	
Ethanol	ND	50	ug/L	07/27/2004 12:38	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	106.2	72-128	%	07/27/2004 12:38	
Toluene-d8	95.4	80-113	%	07/27/2004 12:38	

**Gas/BTEX Fuel Oxygenates by 8260B**

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 4186

Received: 07/15/2004 09:50

Site: 1771 First St. Livermore

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/07/29-1C.64-025

Water

Test(s): 8260FAB

QC Batch # 2004/07/29-1C.64

Date Extracted: 07/29/2004 08:25

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/29/2004 08:25	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	07/29/2004 08:25	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/29/2004 08:25	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	07/29/2004 08:25	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	07/29/2004 08:25	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	07/29/2004 08:25	
1,2-DCA	ND	0.5	ug/L	07/29/2004 08:25	
EDB	ND	0.5	ug/L	07/29/2004 08:25	
Benzene	ND	0.5	ug/L	07/29/2004 08:25	
Toluene	ND	0.5	ug/L	07/29/2004 08:25	
Ethylbenzene	ND	0.5	ug/L	07/29/2004 08:25	
Total xylenes	ND	1.0	ug/L	07/29/2004 08:25	
Ethanol	ND	50	ug/L	07/29/2004 08:25	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	104.4	72-128	%	07/29/2004 08:25	
Toluene-d8	112.2	80-113	%	07/29/2004 08:25	

**Gas/BTEX Fuel Oxygenates by 8260B**

TRC Alton Geoscience- Irvine  
Attn.: Anju Farfan

21 Technology Drive  
Irvine, CA 92718  
Phone: (949) 341-7440 Fax: (949) 753-0111

Project: 41050001FA20  
Conoco Phillips # 4186

Received: 07/15/2004 09:50

Site: 1771 First St. Livermore

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260FAB

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/07/27-1B.62**

LCS 2004/07/27-1B.62-000

Extracted: 07/27/2004

Analyzed: 07/27/2004 13:00

LCSD 2004/07/27-1B.62-035

Extracted: 07/27/2004

Analyzed: 07/27/2004 13:35

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	22.0	24.3	25	88.0	97.2	9.9	65-165	20		
Benzene	28.4	25.4	25	113.6	101.6	11.2	69-129	20		
Toluene	29.3	28.1	25	117.2	112.4	4.2	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	502	477	500	100.4	95.4		72-128			
Toluene-d8	549	530	500	109.8	106.0		80-113			

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

07/30/2004 12:48

Page 11 of 13

**Gas/BTEX Fuel Oxygenates by 8260B**

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 4186

Received: 07/15/2004 09:50

Site: 1771 First St. Livermore

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260FAB

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/07/29-1C.64**

LCS 2004/07/29-1C.64-040

Extracted: 07/29/2004

Analyzed: 07/29/2004 07:40

LCSD 2004/07/29-1C.64-059

Extracted: 07/29/2004

Analyzed: 07/29/2004 08:59

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	29.7	29.8	25	118.8	119.2	0.3	65-165	20		
Benzene	25.1	25.9	25	100.4	103.6	3.1	69-129	20		
Toluene	25.9	25.1	25	103.6	100.4	3.1	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	594	571	500	118.8	114.2		72-128			
Toluene-d8	507	494	500	101.4	98.8		80-113			

Severn Trent Laboratories, Inc.

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

Tel 925 484 1919 Fax 925 484 1086 \* www.stl-inc.com \* CA DHS ELAP# 2496

07/30/2004 12:48

**Gas/BTEX Fuel Oxygenates by 8260B**

TRC Alton Geoscience- Irvine

Attn.: Anju Farfan

21 Technology Drive

Irvine, CA 92718

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

Project: 41050001FA20

Conoco Phillips # 4186

Received: 07/15/2004 09:50

Site: 1771 First St. Livermore

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**Legend and Notes**

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**Sample Comment**

Lab ID: 2004-07-0493 -1

gs-Siloxane peaks were found in the sample which are not believed to be gasoline related. If quantified as gasoline, concentration would be 69 ug/L.

Lab ID: 2004-07-0493 -2

gs-Siloxane peaks were found in the sample which are not believed to be gasoline related. If quantified as gasoline, concentration would be 59 ug/L.

**Analysis Flag**

o

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

**Result Flag**

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

# ConocoPhillips Chain Of Custody Record

87838

STL-San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

(925) 484-1919 (925) 484-1096 fax

ConocoPhillips Site Manager:

INVOICE REMITTANCE ADDRESS:

2004-07-0495

CONOCOPHILLIPS  
Attn: Dee Hutchinson  
3611 South Harbor, Suite 200  
Santa Ana, CA. 92704

ConocoPhillips Work Order Number

12377126500

ConocoPhillips Cost Object

DATE: 7/15/04

PAGE: 1 of 1

SAMPLING COMPANY: <b>TRC</b>		Field Value ID:	CONOCOPHILLIPS SITE NUMBER: <b>1156</b>		GLOBAL ID NO.: <b>TC60012177</b>																								
ADDRESS: 21 Technology Drive, Irvine CA 92618		SITE ADDRESS (Street and City): <b>1771 FIRST ST, LIVERMORE</b>		CONOCOPHILLIPS SITE MANAGER: <b>THOMAS KUSEL</b>																									
PROJECT CONTACT (Name, Title or POC Report To): <b>Anju Farfan</b>		VENDOR DELIVERABLE TO (PO or Designee): <b>Peter Thomson, TRC pthomson@trcsolutions.com</b>		PHONE NO.: <b>949.341-7408</b>	EMAIL: <b>pkusel@trcsolutions.com</b>																								
TELEPHONE: <b>949-341-7440</b>	FAX: <b>949-753-0111</b>	E-MAIL: <b>afarfan@trcsolutions.com</b>	CONSULTANT PROJECT NUMBER: <b>41050001/FA20</b>																										
SAMPLER NAME(S) (Print): <b>JEROME / ALEX</b>		REQUESTED ANALYSES																											
TURNAROUND TIME (CALENDAR DAYS): <input type="checkbox"/> 14 DAYS <input type="checkbox"/> 7 DAYS <input type="checkbox"/> 72 HOURS <input type="checkbox"/> 48 HOURS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> LESS THAN 24 HOURS		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="width: 10%;">8015m - TPHd Extractable</td> <td style="width: 10%;">8250B - TPHg/BTEX/MBE</td> <td style="width: 10%;">8250B - TPHg / BTEX / 8 Oxygenates</td> <td style="width: 10%;">8250B - TPHg / BTEX / 8 oxygenates + methanol (8015M)</td> <td style="width: 10%;">8250B - Full Scan VOCs (does not include oxygenates)</td> <td style="width: 10%;">8270C - Semi-Volatiles</td> <td style="width: 10%;">8015M / 8021B - TPHg/BTEX/MBE</td> <td style="width: 10%;">Lead <input type="checkbox"/> Total DISTLG DTCLP</td> <td style="width: 10%;">TPPH by 8250B</td> <td style="width: 10%;">BTEX / MTHOL by 8250B</td> <td style="width: 10%;">ETHANOL by 8250B</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> </table>					8015m - TPHd Extractable	8250B - TPHg/BTEX/MBE	8250B - TPHg / BTEX / 8 Oxygenates	8250B - TPHg / BTEX / 8 oxygenates + methanol (8015M)	8250B - Full Scan VOCs (does not include oxygenates)	8270C - Semi-Volatiles	8015M / 8021B - TPHg/BTEX/MBE	Lead <input type="checkbox"/> Total DISTLG DTCLP	TPPH by 8250B	BTEX / MTHOL by 8250B	ETHANOL by 8250B										X	X	X
	8015m - TPHd Extractable					8250B - TPHg/BTEX/MBE	8250B - TPHg / BTEX / 8 Oxygenates	8250B - TPHg / BTEX / 8 oxygenates + methanol (8015M)	8250B - Full Scan VOCs (does not include oxygenates)	8270C - Semi-Volatiles	8015M / 8021B - TPHg/BTEX/MBE	Lead <input type="checkbox"/> Total DISTLG DTCLP	TPPH by 8250B	BTEX / MTHOL by 8250B	ETHANOL by 8250B														
									X	X	X																		
SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF ESO IS NEEDED <input checked="" type="checkbox"/> <b>"FWD 3 DATE by 8260 ON 8260 MTRC HIT, U-3 ONLY."</b>		FIELD NOTES: Container/Preservation or PID Readings or Laboratory Notes <b>301</b>																											
*Field Point name only required if different from Sample ID		TEMPERATURE ON RECEIPT C°																											
LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	8015m - TPHd Extractable	8250B - TPHg/BTEX/MBE	8250B - TPHg / BTEX / 8 Oxygenates	8250B - TPHg / BTEX / 8 oxygenates + methanol (8015M)	8250B - Full Scan VOCs (does not include oxygenates)	8270C - Semi-Volatiles	8015M / 8021B - TPHg/BTEX/MBE	Lead <input type="checkbox"/> Total DISTLG DTCLP	TPPH by 8250B	BTEX / MTHOL by 8250B	ETHANOL by 8250B	TEMPERATURE ON RECEIPT C°												
	U-1	7/15	0759	G.W	3									X	X	X	300MS +/- HCC												
	U-2		0820																										
	U-3		0759																										
	U-4		0638																										
	U-5		0703																										
	U-6		0814																										
	U-7		0825																										
Requested by (Signature):	[Signature]		Received by (Signature):		[Signature]		Date:	7/15/04	Time:	0930																			
Requested by (Signature):	[Signature]		Received by (Signature):		[Signature]		Date:	7/15/04	Time:	0950																			
Requested by (Signature):	[Signature]		Received by (Signature):		[Signature]		Date:	7/15/04	Time:	1450																			



## **STATEMENTS**

### **Purge Water Disposal**

Non-hazardous groundwater produced during purging and sampling 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 suspected of containing potentially hazardous material, such as liquid-phase hydrocarbons, was accumulated separately in a drum 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.