

R0436



Customer-Focused Solutions

October 20, 2005

ConocoPhillips Company
76 Broadway
Sacramento, California 95818

OCT 21 2005

ATTN: MS. SHELBY LATHROP

SITE: 76 STATION 4186
1771 FIRST STREET
LIVERMORE, CALIFORNIA

RE: QUARTERLY MONITORING REPORT
JULY THROUGH SEPTEMBER 2005

Alameda County
NOV 16 2005

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

Enclosures
20-0400/4186R08.QMS.doc





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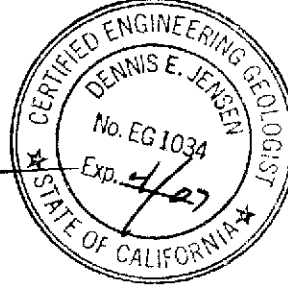

**QUARTERLY MONITORING REPORT
JULY THROUGH SEPTEMBER 2005**

76 STATION 4186
1771 First Street
Livermore, California

Prepared For:

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

By:



Senior Project Geologist, Irvine Operations
October 18, 2005

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Laboratory Reports	Official Laboratory Reports Quality Control Reports Chain of Custody Records
Statements	Purge Water Disposal Limitations

Summary of Gauging and Sampling Activities
July 2005 through September 2005
76 Station 4186
1771 First Street
Livermore, CA

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

Water Sampling Contractor: **TRC**
Compiled by: **Daniel Lee**

Date(s) of Gauging/Sampling Event: **09/23/05**

Sample Points

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

Liquid Phase Hydrocarbons (LPH)

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

Hydrogeologic Parameters

Depth to groundwater (below TOC): Minimum: **27.64 feet** Maximum: **33.01 feet**
Average groundwater elevation (relative to available local datum): **447.10 feet**
Average change in groundwater elevation since previous event: **-3.52 feet**
Interpreted groundwater gradient and flow direction:
 Current event: **0.04 ft/ft, west to south**
 Previous event: **0.06 ft/ft, southwest (06/28/05)**

Selected Laboratory Results

Wells with detected **Benzene**: **3** Wells above MCL (1.0 µg/l): **3**
 Maximum reported benzene concentration: **78 µg/l (U-6)**

Wells with **TPPH 8260B** **3** Maximum: **6,000 µg/l (U-3)**
Wells with **MTBE** **5** Maximum: **8,900 µg/l (U-3)**

Notes:

TABLES

TABLE KEY

STANDARD ABBREVIATIONS

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

ANALYTES

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

NOTES

1. Elevations are in feet above mean sea level. Depths are in feet below surveyed top-of-casing.
2. Groundwater elevations for wells with LPH are calculated as: $\text{Surface Elevation} - \text{Measured Depth to Water} + \frac{(\text{Dp} \times \text{LPH Thickness})}{\text{Density}}$, 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 re-survey.

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
September 23, 2005
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	(Screen Interval in feet: 14.0-34.0)													
09/23/05	478.27	29.15	0.00	449.12	-3.78	--	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)													
09/23/05	477.44	28.25	0.00	449.19	-2.95	--	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)													
09/23/05	478.46	27.64	0.00	450.82	-3.07	--	6000	31	ND<25	150	ND<50	--	8900	
U-4	(Screen Interval in feet: 35.0-45.0)													
09/23/05	476.93	32.25	0.00	444.68	-3.58	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	11	
U-5	(Screen Interval in feet: 37.0-47.0)													
09/23/05	476.51	33.01	0.00	443.50	-4.11	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	53	
U-6	(Screen Interval in feet: DNA)													
09/23/05	478.38	32.38	0.00	446.00	-3.63	--	5200	78	ND<25	540	230	--	34	
U-7	(Screen Interval in feet: DNA)													
09/23/05	478.74	32.35	0.00	446.39	-3.52	--	2400	13	1.3	31	6.9	--	46	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1998 Through September 2005
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 (Screen Interval in feet: 14.0-34.0)														
07/13/98	478.27	23.28	0.00	454.99	--	ND	--	ND	ND	ND	ND	ND	--	
10/07/98	478.27	26.43	0.00	451.84	-3.15	ND	--	ND	ND	ND	ND	ND	--	
01/15/99	478.27	30.42	0.00	447.85	-3.99	ND	--	ND	ND	ND	1.1	7.3	--	
04/14/99	478.27	24.21	0.00	454.06	6.21	ND	--	ND	ND	ND	ND	160	--	
07/19/99	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	--	
01/24/00	478.27	27.90	0.00	450.37	1.50	ND	--	ND	ND	ND	ND	28	--	
04/10/00	478.27	26.16	0.00	452.11	1.74	ND	--	ND	0.930	ND	ND	ND	--	
07/17/00	478.27	28.04	0.00	450.23	-1.88	ND	--	ND	ND	ND	ND	160	--	
10/02/00	478.27	28.41	0.00	449.86	-0.37	ND	--	ND	ND	ND	ND	120	--	
01/08/01	478.27	28.68	0.00	449.59	-0.27	ND	--	ND	ND	ND	ND	103	--	
04/03/01	478.27	25.74	0.00	452.53	2.94	ND	--	ND	ND	ND	ND	55.1	--	
07/02/01	478.27	30.67	0.00	447.60	-4.93	ND	--	ND	ND	ND	ND	ND	--	
10/08/01	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	--	
01/03/02	478.27	27.67	0.00	450.60	5.46	160	--	ND<0.50	0.51	ND<0.50	0.69	31	--	
04/05/02	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	--	
07/02/02	478.27	31.17	0.00	447.10	-1.77	--	1100	ND<0.50	1.7	0.73	130	--	35	
10/01/02	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	
05/02/03	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	
07/01/03	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	
10/03/03	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	
01/08/04	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	
04/15/04	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 September 2005
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														
07/15/04	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	
12/08/04	478.27	31.17	0.00	447.10	-4.70	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
03/23/05	478.27	22.47	0.00	455.80	8.70	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
06/28/05	478.27	25.37	0.00	452.90	-2.90	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
09/23/05	478.27	29.15	0.00	449.12	-3.78	--	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)														
07/13/98	477.44	23.52	0.00	453.92	--	1200	--	130	12	62	180	1100	--	
10/07/98	477.44	25.31	0.00	452.13	-1.79	ND	--	ND	ND	ND	ND	160	--	
01/15/99	477.44	30.22	0.00	447.22	-4.91	ND	--	ND	ND	ND	ND	280	--	
04/14/99	477.44	24.50	0.00	452.94	5.72	ND	--	ND	ND	ND	ND	460	--	
07/19/99	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	--	
01/24/00	477.44	24.52	0.00	452.92	5.96	ND	--	ND	ND	ND	ND	150	--	
04/10/00	477.44	23.68	0.00	453.76	0.84	ND	--	ND	ND	ND	ND	177	--	
07/17/00	477.44	28.35	0.00	449.09	-4.67	ND	--	ND	ND	ND	ND	62.7	--	
10/02/00	477.44	28.72	0.00	448.72	-0.37	ND	--	ND	ND	ND	ND	52	--	
01/08/01	477.44	29.11	0.00	448.33	-0.39	ND	--	ND	ND	ND	ND	57.3	--	
04/03/01	477.44	25.95	0.00	451.49	3.16	ND	--	ND	ND	ND	ND	30.2	--	
07/02/01	477.44	29.01	0.00	448.43	-3.06	ND	--	ND	ND	ND	ND	16	--	
10/08/01	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	--	
01/03/02	477.44	27.33	0.00	450.11	3.61	260	--	7.7	11	1.7	15	42	--	
04/05/02	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	--	
07/02/02	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	
10/01/02	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	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1998 Through September 2005
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)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
U-2 continued														
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	
05/02/03	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	
07/01/03	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	
10/03/03	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	
01/08/04	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	
04/15/04	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	
07/15/04	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	
12/08/04	477.44	29.89	0.00	447.55	-5.44	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
03/23/05	477.44	22.00	0.00	455.44	7.89	--	ND<50	ND<0.50	ND<0.50	ND<0.50	1.1	--	ND<0.50	
06/28/05	477.44	25.30	0.00	452.14	-3.30	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
09/23/05	477.44	28.25	0.00	449.19	-2.95	--	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)														
07/13/98	478.46	23.82	0.00	454.64	--	70000	--	3100	5500	2700	16000	7500	--	
10/07/98	478.46	25.64	0.00	452.82	-1.82	54000	--	5000	1100	3100	14000	6100	--	
01/15/99	478.46	30.92	0.00	447.54	-5.28	41000	--	3100	ND	1800	3800	15000	--	
04/14/99	478.46	24.48	0.00	453.98	6.44	33000	--	86	290	2200	7800	39000	--	
07/19/99	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	
01/24/00	478.46	23.43	0.00	455.03	6.96	13000	--	260	ND	770	3200	53000	42000	
04/10/00	478.46	23.31	0.00	455.15	0.12	35200	--	1070	241	2820	8850	35600	40900	
07/17/00	478.46	27.53	0.00	450.93	-4.22	29000	--	3570	525	3180	5660	22500	21000	
10/02/00	478.46	28.19	0.00	450.27	-0.66	11000	--	2100	31	2000	780	25000	28000	
01/08/01	478.46	29.85	0.00	448.61	-1.66	33600	--	3060	427	3040	4190	24700	30900	
04/03/01	478.46	24.98	0.00	453.48	4.87	5390	--	660	10.8	304	356	15200	19300	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1998 Through September 2005
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-3 continued														
07/02/01	478.46	31.35	0.00	447.11	-6.37	13000	--	1200	58	1300	930	25000	26000	
10/08/01	478.46	32.69	0.00	445.77	-1.34	6100	--	500	ND<10	570	130	23000	22000	
01/03/02	478.46	23.73	0.00	454.73	8.96	9900	--	700	130	24	1000	14000	12000	
04/05/02	477.44	28.27	0.00	449.17	-5.56	9800	--	1100	180	220	1400	16000	30000	
07/02/02	478.46	29.71	0.00	448.75	-0.42	--	ND<25000	ND<250	ND<250	ND<250	ND<500	12000	12000	
10/01/02	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	
05/02/03	478.46	23.11	0.00	455.35	-1.49	--	19000	280	ND<50	880	1500	15000	15000	
07/01/03	478.46	24.89	0.00	453.57	-1.78	--	19000	120	ND<100	180	880	22000	22000	
10/03/03	478.46	26.59	0.00	451.87	-1.70	--	20000	170	ND<50	250	730	--	16000	
01/08/04	478.46	21.92	0.00	456.54	4.67	--	17000	250	ND<100	770	1500	--	9700	
04/15/04	478.46	23.59	0.00	454.87	-1.67	--	4600	ND<25	ND<25	36	100	--	3700	
07/15/04	478.46	24.80	0.00	453.66	-1.21	--	2700	ND<25	ND<25	ND<25	ND<50	--	3400	
12/08/04	478.46	29.13	0.00	449.33	-4.33	--	12000	ND<50	ND<50	250	140	--	13000	
03/23/05	478.46	21.64	0.00	456.82	7.49	--	21000	94	ND<50	630	1200	--	6200	
06/28/05	478.46	24.57	0.00	453.89	-2.93	--	6600	24	0.64	150	70	--	4700	
09/23/05	478.46	27.64	0.00	450.82	-3.07	--	6000	31	ND<25	150	ND<50	--	8900	
U-4 (Screen Interval in feet: 35.0-45.0)														
04/03/01	476.93	31.63	0.00	445.30	--	ND	--	ND	ND	ND	ND	37.8	38.2	
07/02/01	476.93	37.96	0.00	438.97	-6.33	ND	--	ND	ND	ND	ND	ND	5.3	
10/08/01	476.93	44.24	0.00	432.69	-6.28	--	--	--	--	--	--	--	--	Not enough water to sample
01/03/02	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	
04/05/02	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	--	
07/02/02	476.93	36.85	0.00	440.08	0.79	--	67	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	12	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1998 Through September 2005
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-4 continued														
10/01/02	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	
05/02/03	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	
07/01/03	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	
10/03/03	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	
01/08/04	476.93	29.23	0.00	447.70	8.40	--	ND<50	0.55	ND<0.50	1.6	3.7	--	2.5	
04/15/04	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	
07/15/04	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	
12/08/04	476.93	35.10	0.00	441.83	-0.05	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3.0	
03/23/05	476.93	25.38	0.00	451.55	9.72	--	ND<50	ND<0.50	ND<0.50	1.3	1.2	--	0.65	
06/28/05	476.93	28.67	0.00	448.26	-3.29	--	34J	ND<0.50	0.15J	ND<0.50	ND<1.0	--	0.23J	
09/23/05	476.93	32.25	0.00	444.68	-3.58	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	11	
U-5 (Screen Interval in feet: 37.0-47.0)														
04/03/01	476.51	31.75	0.00	444.76	--	ND	--	ND	0.728	ND	0.993	54.8	55.4	
07/02/01	476.51	38.68	0.00	437.83	-6.93	ND	--	ND	ND	ND	ND	88	94	
10/08/01	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	
01/03/02	476.51	36.55	0.00	439.96	9.76	ND<50	--	ND<0.50	0.59	ND<0.50	0.91	51	53	
04/05/02	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	--	
07/02/02	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	
10/01/02	476.51	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible - truck parked over well
12/30/02	476.51	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible - car parked over well
05/02/03	476.51	31.55	0.00	444.96	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	18	
07/01/03	476.51	33.83	0.00	442.68	-2.28	--	73	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	46	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1998 Through September 2005
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														
10/03/03	476.51	37.72	0.00	438.79	-3.89	--	58	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	44	
01/08/04	476.51	29.21	0.00	447.30	8.51	--	ND<50	ND<0.50	ND<0.50	1.1	2.7	--	17	
04/15/04	476.51	30.05	0.00	446.46	-0.84	--	57	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	37	
07/15/04	476.51	35.15	0.00	441.36	-5.10	--	60	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	27	
12/08/04	476.51	35.33	0.00	441.18	-0.18	--	62	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	39	
03/23/05	476.51	25.45	0.00	451.06	9.88	--	ND<50	ND<0.50	ND<0.50	0.51	ND<1.0	--	4.5	
06/28/05	476.51	28.90	0.00	447.61	-3.45	--	73	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	40	
09/23/05	476.51	33.01	0.00	443.50	-4.11	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	53	
U-6 (Screen Interval in feet: DNA)														
01/03/02	478.38	33.99	0.00	444.39	--	5000	--	36	ND<25	260	450	ND<250	ND<10	
04/05/02	478.38	36.18	0.00	442.20	-2.19	1300	--	16	ND<5.0	54	ND<5.0	ND<25	--	
07/02/02	478.38	36.33	0.00	442.05	-0.15	--	1100	1.4	ND<0.50	16	ND<1.0	--	0.94	
10/01/02	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	
05/02/03	478.38	31.49	0.00	446.89	0.14	--	150	ND<0.50	ND<0.50	1.8	1.7	--	82	
07/01/03	478.38	32.88	0.00	445.50	-1.39	--	190	1.8	ND<0.50	9.4	8.7	--	36	
10/03/03	478.38	36.54	0.00	441.84	-3.66	--	ND<10000	140	ND<100	940	560	--	ND<400	
01/08/04	478.38	30.45	0.00	447.93	6.09	--	3500	29	32	90	89	--	27	
04/15/04	478.38	29.48	0.00	448.90	0.97	--	2400	19	ND<2.5	91	53	--	16	
07/15/04	478.38	34.30	0.00	444.08	-4.82	--	8500	150	5.7	970	560	--	24	
12/08/04	478.38	34.80	0.00	443.58	-0.50	--	2700	16	ND<2.5	28	ND<5.0	--	10	
03/23/05	478.38	25.08	0.00	453.30	9.72	--	960	2.7	ND<0.50	9.6	4.8	--	2.5	
06/28/05	478.38	28.75	0.00	449.63	-3.67	--	12000	120	4.9	930	780	--	21	
09/23/05	478.38	32.38	0.00	446.00	-3.63	--	5200	78	ND<25	540	230	--	34	

Table 2
HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
July 1998 Through September 2005
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-7 (Screen Interval in feet: DNA)														
01/03/02	478.74	32.43	0.00	446.31	--	3100	--	93	ND<10	35	73	140	130	
04/05/02	478.74	34.06	0.00	444.68	-1.63	630	--	22	0.53	2.6	ND<0.50	45	--	
07/02/02	478.74	35.28	0.00	443.46	-1.22	--	1100	21	ND<0.50	6.9	ND<1.0	--	60	
10/01/02	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	
05/02/03	478.74	31.81	0.00	446.93	0.12	--	3000	17	2.7	14	5.1	--	42	
07/01/03	478.74	33.47	0.00	445.27	-1.66	--	2300	11	0.53	8.0	1.5	--	35	
10/03/03	478.74	35.84	0.00	442.90	-2.37	--	6500	30	ND<5.0	41	ND<10	--	53	
01/08/04	478.74	30.35	0.00	448.39	5.49	--	1600	4.0	ND<1.0	4.2	8.7	--	56	
04/15/04	478.74	29.03	0.00	449.71	1.32	--	3600	22	1.3	64	40	--	57	
07/15/04	478.74	33.52	0.00	445.22	-4.49	--	4700	15	1.2	59	57	--	50	
12/08/04	478.74	34.68	0.00	444.06	-1.16	--	5800	26	1.9	63	27	--	52	
03/23/05	478.74	24.49	0.00	454.25	10.19	--	5600	18	1.3	42	14	--	39	
06/28/05	478.74	28.83	0.00	449.91	-4.34	--	5400	16	1.1	35	10	--	45	
09/23/05	478.74	32.35	0.00	446.39	-3.52	--	2400	13	1.3	31	6.9	--	46	

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 Purge ORP (mV)
U-1									
10/02/00	--	--	--	--	ND	--	--	--	--
12/30/02	--	--	0.60	--	--	--	--	--	91
05/02/03	--	--	0.50	--	--	--	--	--	90
07/01/03	--	--	0.60	--	--	--	--	ND<500000	110
10/03/03	--	--	3.79	--	--	--	--	ND<500	329
01/08/04	--	--	12.36	--	--	--	--	ND<500	184
04/15/04	--	--	10.56	--	--	--	--	ND<50	213
07/15/04	--	--	6.62	--	--	--	--	ND<50	251
12/08/04	--	--	2.66	--	--	--	--	ND<50	68
03/23/05	--	--	3.12	--	--	--	--	ND<50	091
06/28/05	--	--	8.84	--	--	--	--	ND<1000	153
09/23/05	--	--	2.26	--	--	--	--	ND<1000	187
U-2									
10/02/00	--	--	--	--	ND	--	--	--	--
10/01/02	--	--	1.40	--	--	--	--	--	--
12/30/02	--	--	2.80	--	--	--	--	--	120
05/02/03	--	--	150.00	--	--	--	--	--	120
07/01/03	--	--	1.20	--	--	--	--	ND<500000	110
10/03/03	--	--	5.61	--	--	--	--	ND<500	321
01/08/04	--	--	12.11	--	--	--	--	ND<500	- 6
04/15/04	--	--	11.39	--	--	--	--	ND<50	259
07/15/04	--	--	7.46	--	--	--	--	ND<50	238
12/08/04	--	--	3.57	--	--	--	--	ND<50	132
03/23/05	--	--	4.57	--	--	--	--	730	024
06/28/05	--	--	8.08	--	--	--	--	ND<1000	230
09/23/05	--	--	5.47	--	--	--	--	ND<1000	188

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 Purge ORP (mV)
U-3									
10/02/00	--	--	--	--	63000	--	--	--	--
01/08/01	ND	ND	--	ND	49300	ND	ND	ND	--
04/03/01	ND	ND	--	ND	22200	ND	ND	ND	--
07/02/01	ND	ND	--	ND	27000	ND	ND	ND	--
10/08/01	ND<290	ND<290	--	ND<290	33000	ND<290	ND<290	ND<14000000	--
01/03/02	ND<100	ND<100	--	ND<100	17000	ND<100	ND<100	ND<50000000	--
04/05/02	ND<100	ND<100	--	ND<100	66000	ND<100	ND<100	ND<25000000	--
07/02/02	ND<250	ND<250	--	ND<250	47000	ND<500	ND<250	ND<13000000	--
10/01/02	ND<1000	ND<1000	0.50	ND<1000	ND<50000	ND<1000	ND<1000	ND<25000000	- 47
12/30/02	ND<400	ND<400	0.20	ND<400	23000	ND<400	ND<400	ND<10000000	106
05/02/03	ND<200	ND<200	0.50	ND<200	25000	ND<200	ND<200	ND<50000000	85
07/01/03	ND<400	ND<400	0.50	ND<400	32000	ND<400	ND<400	ND<10000000	90
10/03/03	ND<200	ND<200	3.80	ND<200	39000	ND<2.0	ND<200	ND<50000	- 27
01/08/04	ND<400	ND<400	12.82	ND<400	ND<20000	ND<400	ND<400	ND<100000	133
04/15/04	ND<0.5	ND<0.5	3.11	ND<0.5	18000	ND<1.0	ND<0.5	ND<2500	24
07/15/04	ND<25	ND<25	1.90	ND<25	15000	ND<50	ND<25	ND<2500	53
12/08/04	ND<50	ND<50	1.30	ND<50	34000	ND<100	ND<50	ND<5000	-81
03/23/05	--	--	0.52	--	--	--	--	ND<5000	-087
06/28/05	--	--	1.47	--	--	--	--	ND<1000	-151
09/23/05	--	--	1.40	--	--	--	--	ND<50000	-80
U-4									
04/03/01	ND	ND	--	ND	ND	ND	ND	ND	--
07/02/01	ND	ND	--	ND	ND	ND	ND	ND	--
01/03/02	ND<1.0	ND<1.0	--	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<500000	--
10/01/02	--	--	1.00	--	--	--	--	--	83
12/30/02	--	--	0.40	--	--	--	--	--	126

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 Purge ORP (mV)
U-4 continued									
05/02/03	--	--	0.70	--	--	--	--	--	120
07/01/03	--	--	0.60	--	--	--	--	ND<500000	130
10/03/03	--	--	2.06	--	--	--	--	ND<500	3.05
01/08/04	--	--	11.90	--	--	--	--	ND<500	76
04/15/04	--	--	3.30	--	--	--	--	ND<50	116
07/15/04	--	--	2.50	--	--	--	--	ND<50	32
12/08/04	--	--	2.09	--	--	--	--	ND<50	47
03/23/05	--	--	0.04	--	--	--	--	ND<50	021
06/28/05	--	--	2.24	--	--	--	--	ND<1000	120
09/23/05	--	--	3.01	--	--	--	--	ND<1000	176
U-5									
04/03/01	ND	ND	--	ND	ND	ND	ND	ND	--
07/02/01	ND	ND	--	ND	ND	ND	ND	ND	--
10/08/01	ND<2.0	ND<2.0	--	ND<2.0	ND<100	ND<2.0	ND<2.0	ND<1000000	--
01/03/02	ND<1.0	ND<1.0	--	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<500000	--
05/02/03	--	--	0.60	--	--	--	--	--	120
07/01/03	--	--	0.90	--	--	--	--	ND<500	145
10/03/03	--	--	2.21	--	--	--	--	ND<500	3.13
01/08/04	--	--	11.27	--	--	--	--	ND<500	104
04/15/04	--	--	3.35	--	--	--	--	ND<50	65
07/15/04	--	--	2.87	--	--	--	--	ND<50	66
12/08/04	--	--	1.67	--	--	--	--	ND<50	102
03/23/05	--	--	0.75	--	--	--	--	ND<50	131
06/28/05	--	--	2.29	--	--	--	--	ND<1000	103
09/23/05	--	--	2.05	--	--	--	--	ND<1000	172

U-6

4186

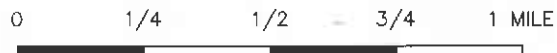
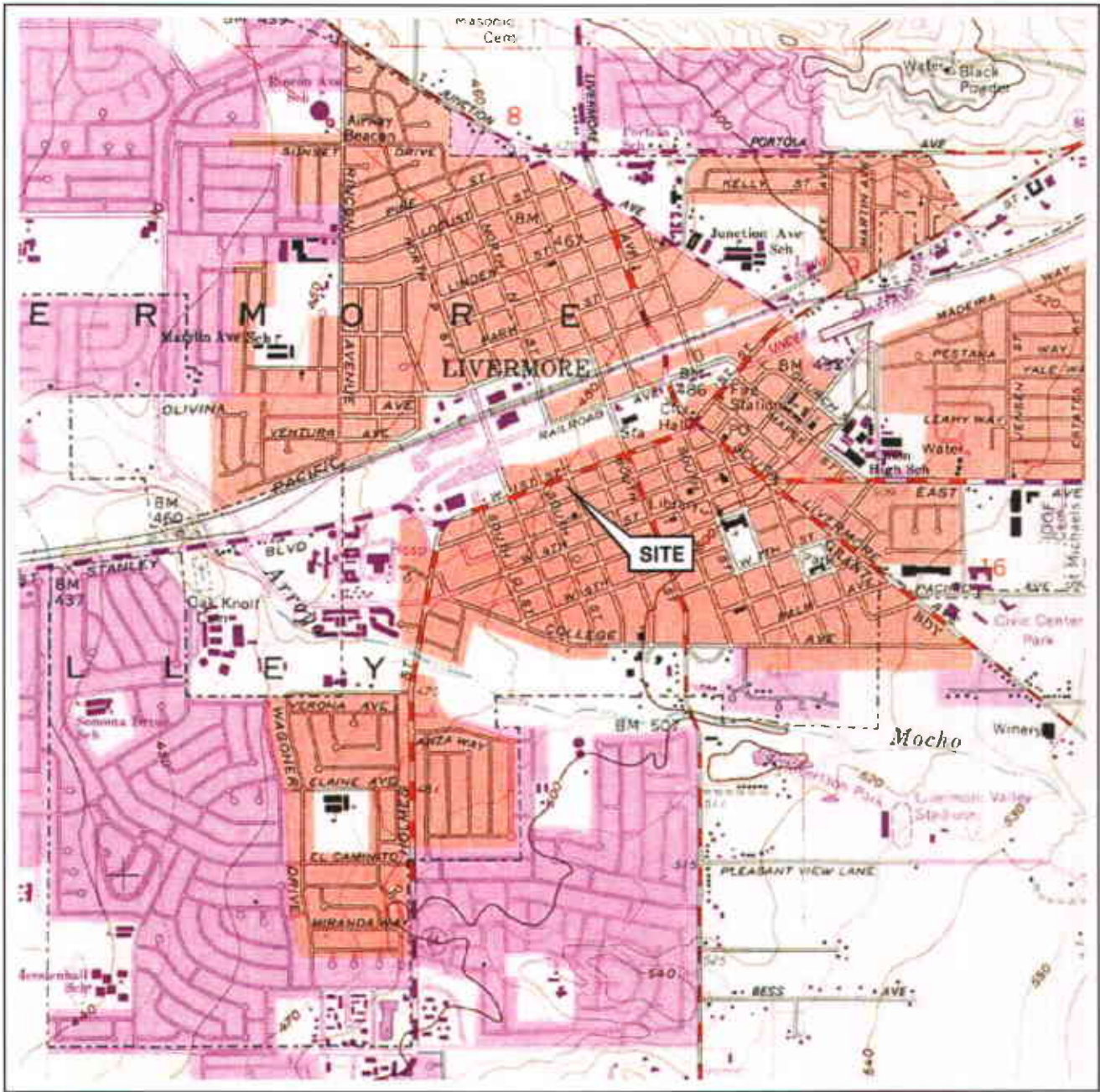
Table 3
ADDITIONAL ANALYTICAL RESULTS
76 Station 4186

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 Purge ORP (mV)
U-6 continued									
01/03/02	ND<10	ND<10	--	ND<10	ND<200	ND<10	ND<10	ND<5000000	--
10/01/02	--	--	0.90	--	--	--	--	--	--
12/30/02	--	--	0.20	--	--	--	--	--	88
05/02/03	--	--	0.90	--	--	--	--	--	145
07/01/03	--	--	0.70	--	--	--	--	ND<500000	120
10/03/03	--	--	2.26	--	--	--	--	ND<100000	12
01/08/04	--	--	11.95	--	--	--	--	ND<5000	-37
04/15/04	--	--	3.47	--	--	--	--	ND<250	-20
07/15/04	--	--	3.25	--	--	--	--	ND<250	-43
12/08/04	--	--	0.94	--	--	--	--	ND<250	-91
03/23/05	--	--	0.55	--	--	--	--	ND<50	-077
06/28/05	--	--	0.86	--	--	--	--	ND<1000	-129
09/23/05	--	--	1.97	--	--	--	--	ND<50000	-82
U-7									
01/03/02	ND<1.0	ND<1.0	--	ND<1.0	30	ND<1.0	ND<1.0	ND<500000	--
10/01/02	--	--	1.80	--	--	--	--	--	-60
12/30/02	--	--	0.10	--	--	--	--	--	121
05/02/03	--	--	0.40	--	--	--	--	--	105
07/01/03	--	--	0.50	--	--	--	--	ND<500000	95
10/03/03	--	--	2.91	--	--	--	--	ND<5000	-21
01/08/04	--	--	11.85	--	--	--	--	ND<1000	-51
04/15/04	--	--	4.68	--	--	--	--	ND<100	-16
07/15/04	--	--	2.55	--	--	--	--	ND<100	-52
12/08/04	--	--	1.20	--	--	--	--	ND<100	-88
03/23/05	--	--	0.21	--	--	--	--	ND<100	-088
06/28/05	--	--	1.32	--	--	--	--	ND<1000	-160

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 Purge ORP (mV)
U-7 continued 09/23/05	--	--	2.25	--	--	--	--	ND<1000	108

FIGURES



SCALE 1:24,000



SOURCE:

United States Geological Survey
7.5 Minute Topographic Map:
Livermore Quadrangle

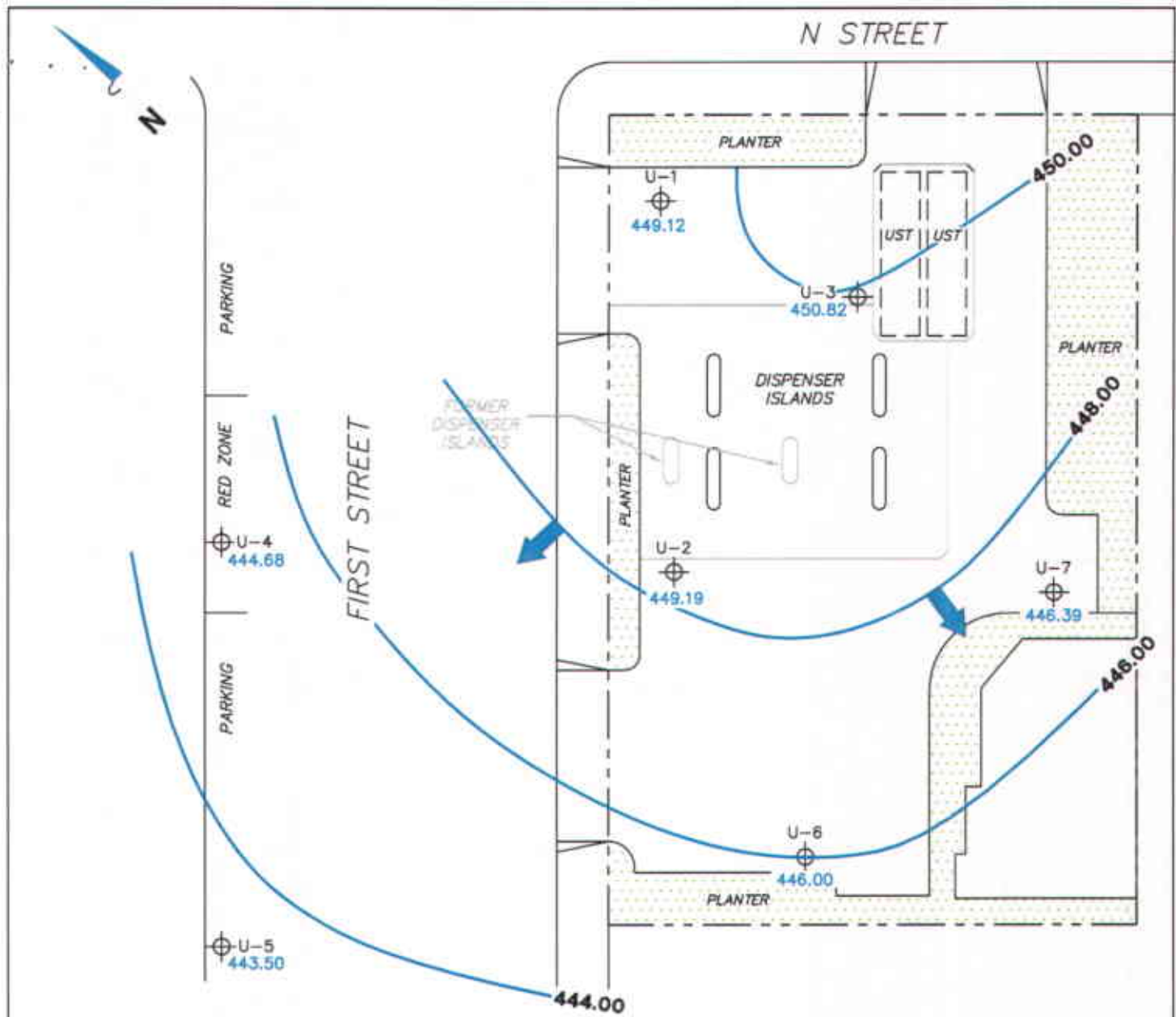


VICINITY MAP

76 Station 4186
1771 First Street
Livermore, California

FIGURE 1

TRC



NOTES:

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

LEGEND

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

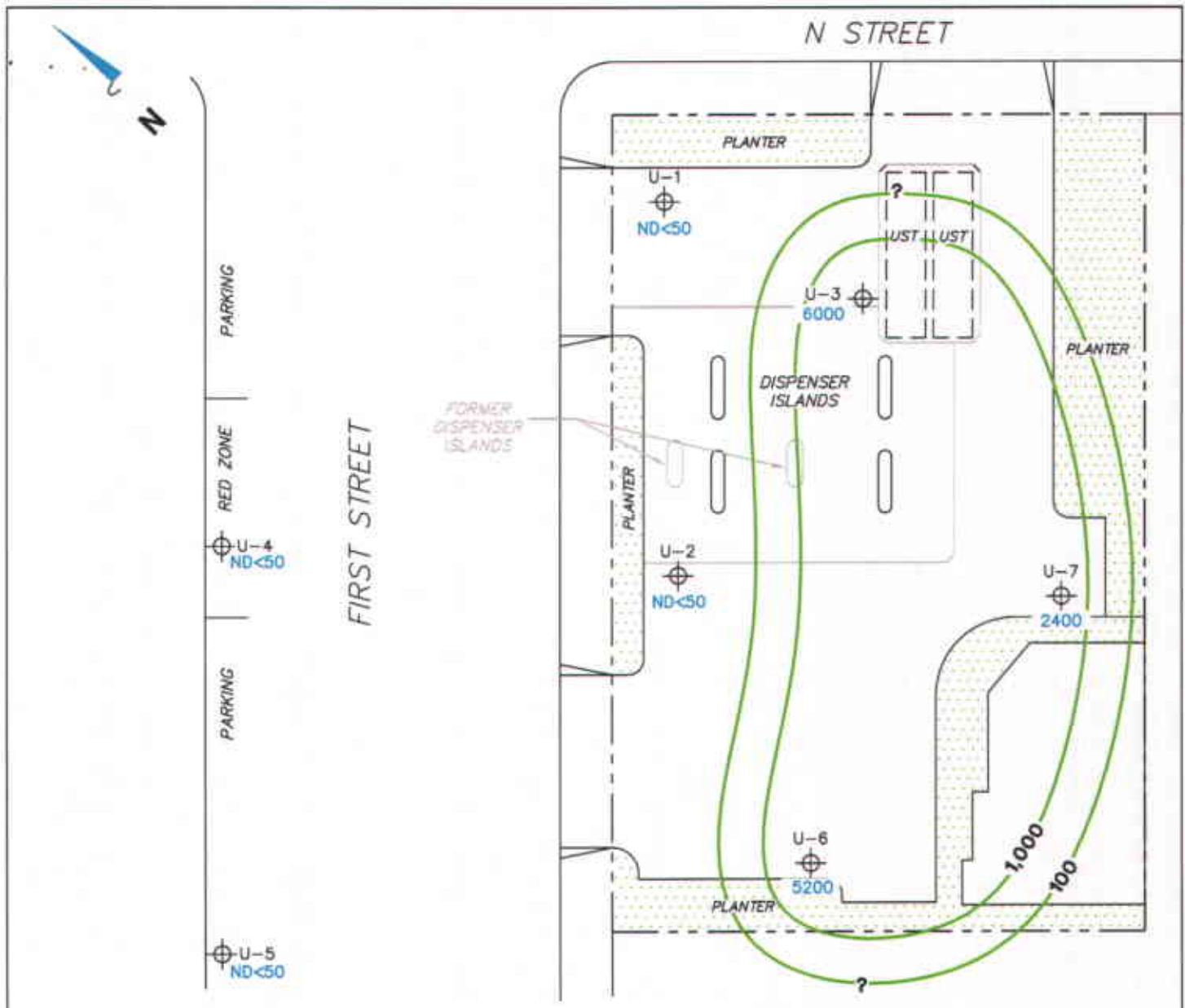
**GROUNDWATER ELEVATION
CONTOUR MAP
September 23, 2005**

76 Station 4186
1771 First Street
Livermore, California



FIGURE 2

PS=1:1 4186-003



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.
 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
September 23, 2005

76 Station 4186
 1771 First Street
 Livermore, California

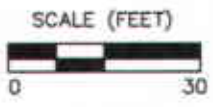
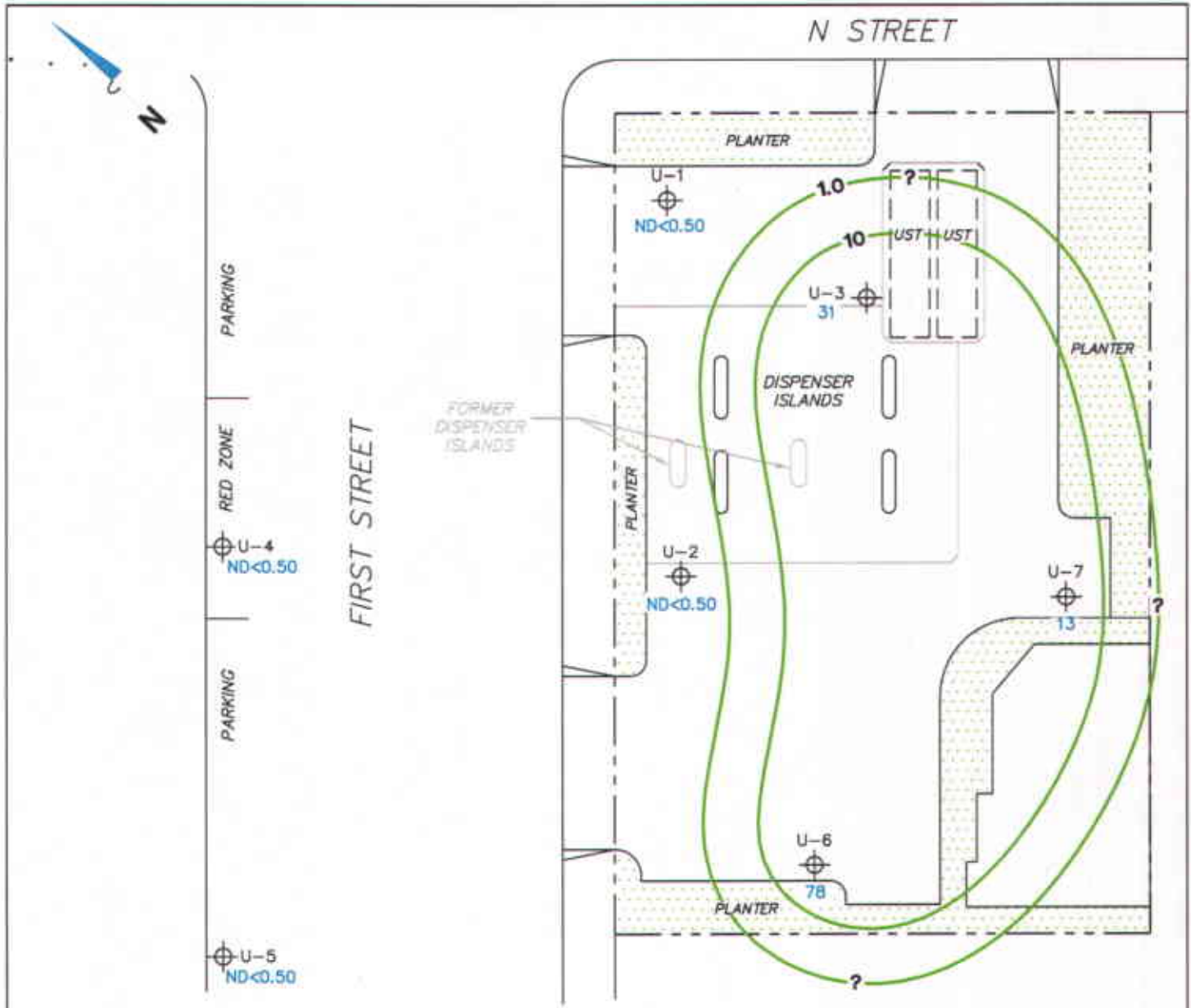


FIGURE 3


PS=1:1 4186-003




NOTES:

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

LEGEND

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

 10 Dissolved-Phase Benzene Contour (µg/l)

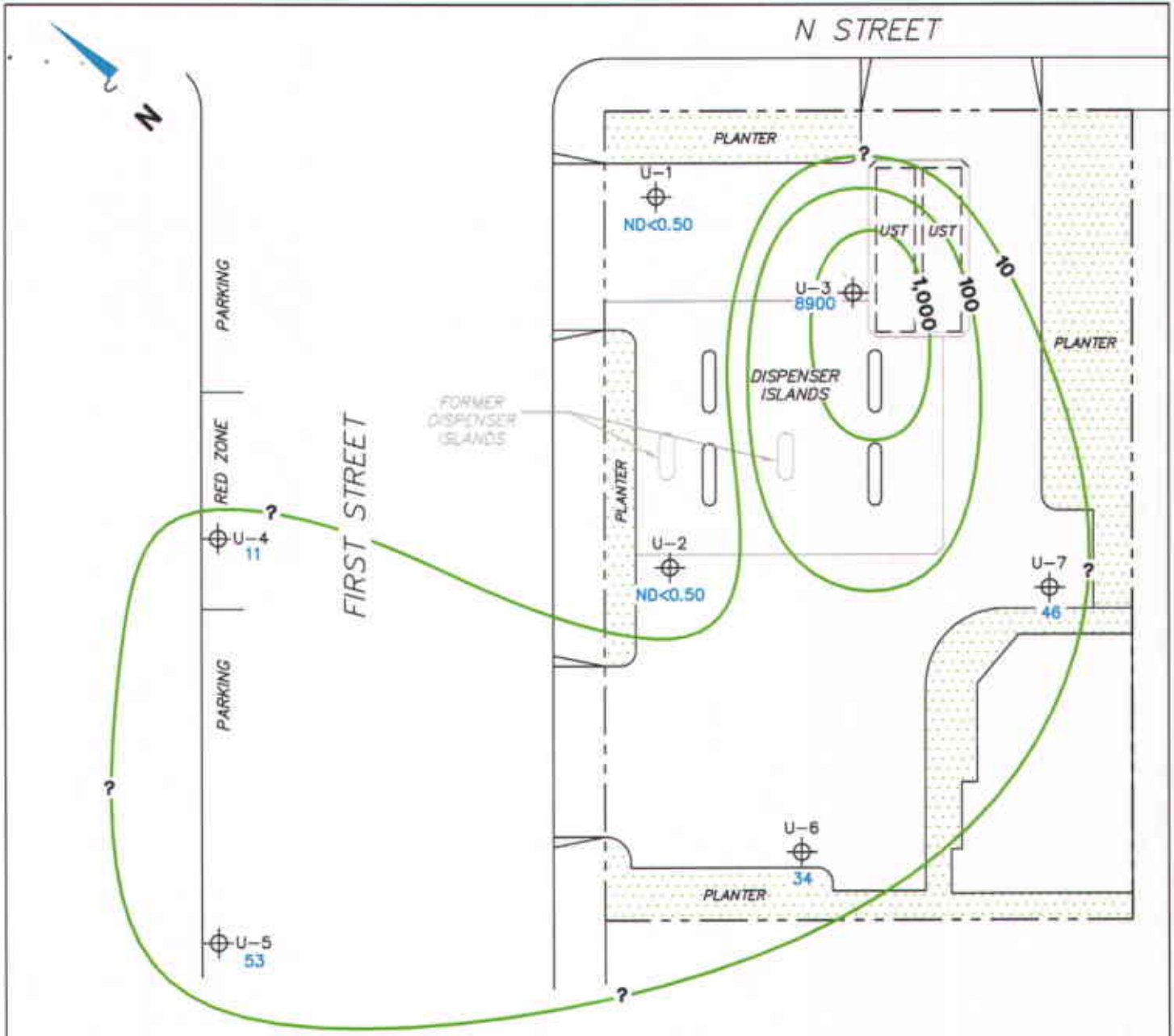
**DISSOLVED-PHASE BENZENE
 CONCENTRATION MAP
 September 23, 2005**

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
September 23, 2005

76 Station 4186
 1771 First Street
 Livermore, California

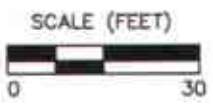
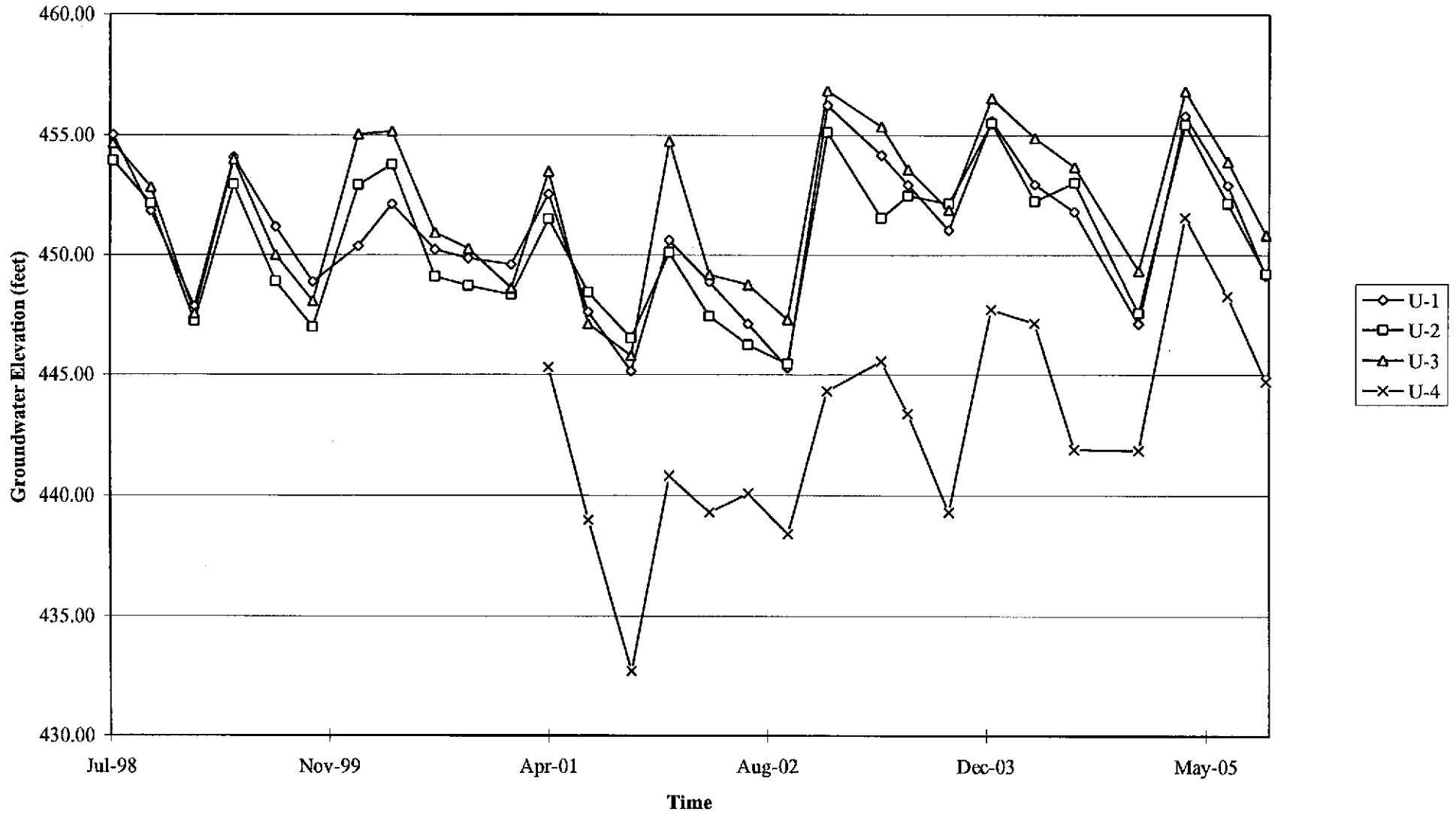


FIGURE 5

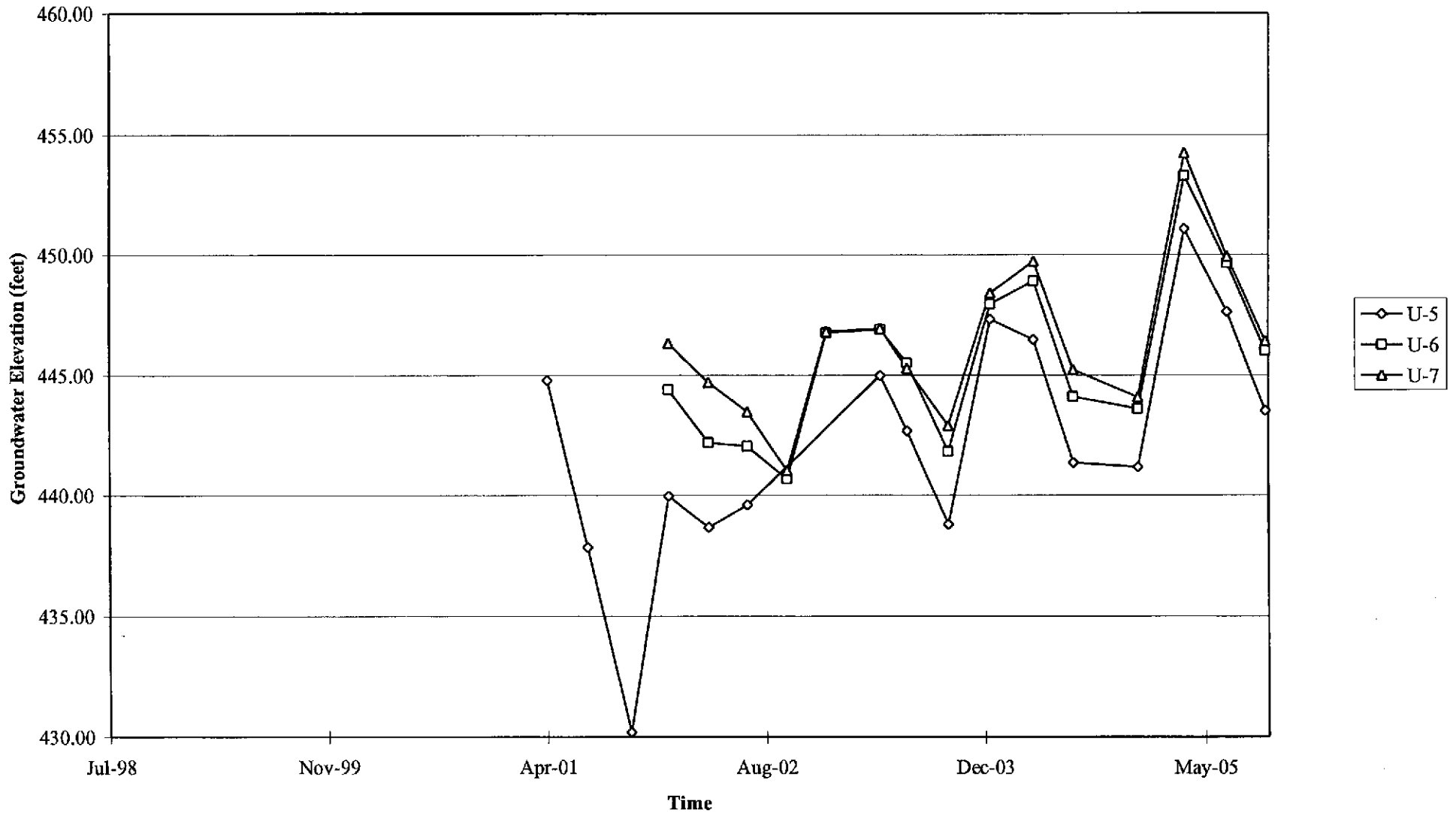
PS=1:1 4186-003

GRAPHS

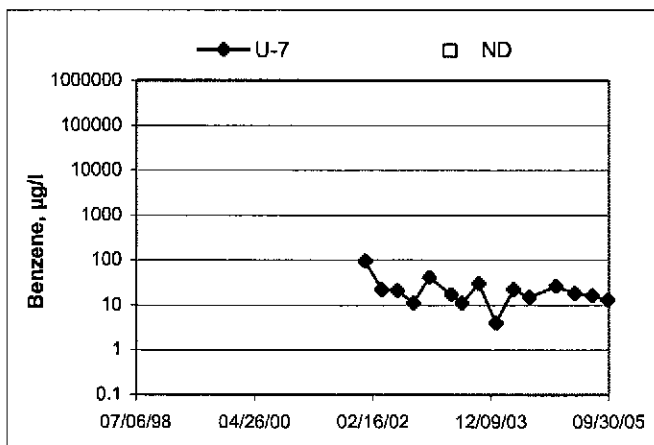
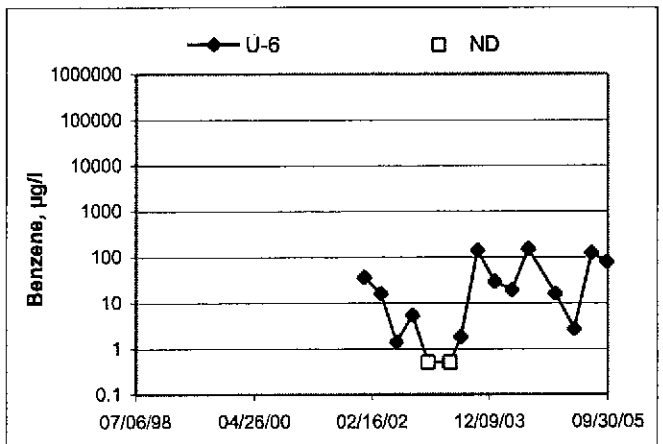
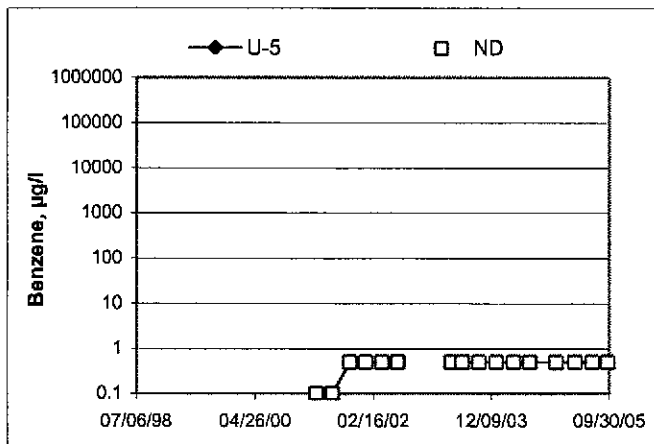
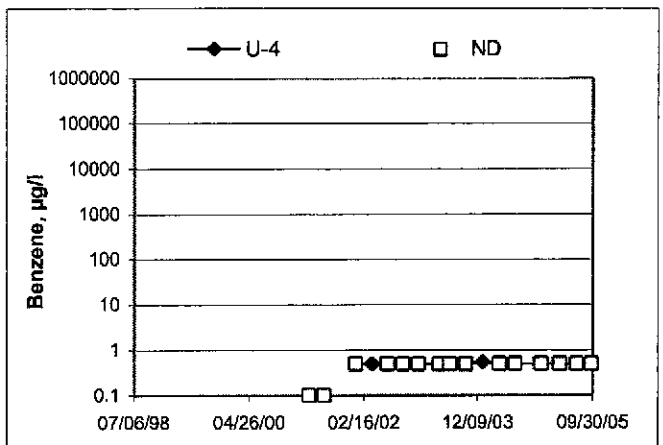
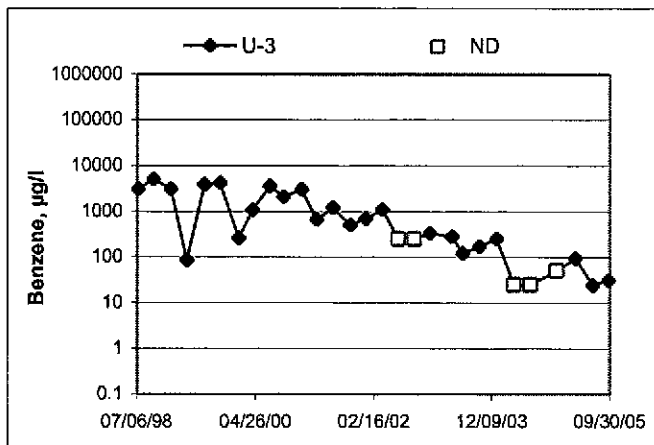
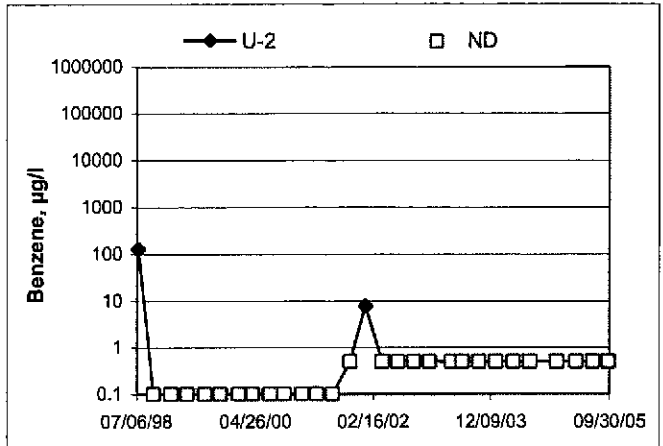
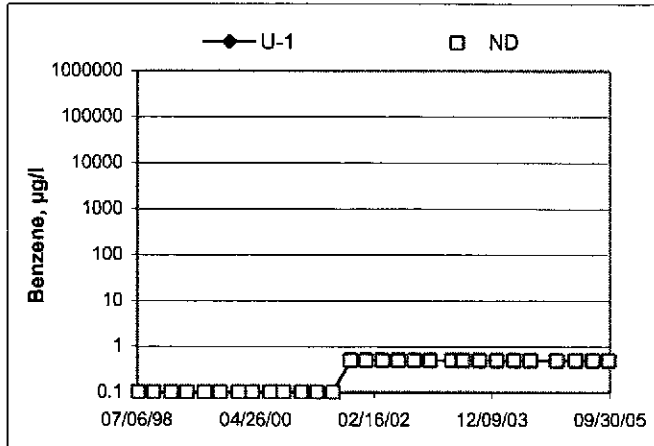
Groundwater Elevations vs. Time
76 Station 4186



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 measurements are calibrated daily according to manufacturer's instructions.

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

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

Groundwater Sample Collection

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

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

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

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

Sequence of Gauging, Purging and Sampling

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

Decontamination

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

Exceptions

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

FIELD MONITORING DATA SHEET

Technician: ALEX

Job #/Task #: 41050001

Date: 09-23-05

Site # 486

Project Manager A. COLLINS

Page 1 of 1

Well #	Time Gauged	TOC	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
U-1	0649	✓	32.60	29.15	6	0	1030	2"
U-2	0656	✓	33.08	29.25	6	0	1037	2"
U-4	0704	✓	45.10	32.25	6	0	1010	2"
U-5	0714	✓	47.05	33.01	6	0	1018	2"
U-7	0719	✓	44.37	32.35	6	0	1045	2"
U-3	0728	✓	33.40	27.64	6	0	1135	2"
U-6	0734	✓	44.50	32.38	6	0	1051	2"
FIELD DATA COMPLETE		QA/QC	COC		WELL BOX CONDITION SHEETS			
WTT CERTIFICATE		MANIFEST	DRUM INVENTORY		TRAFFIC CONTROL			

GROUNDWATER SAMPLING FIELD NOTES

Technician: AUA

Site: 4186

Project No.: 425001

Date: 09-23-05

Well No.: U-1

Purge Method: JRS H.B.

Depth to Water (feet): 29.15

Depth to Product (feet): 0

Total Depth (feet): 53.60

LPH & Water Recovered (gallons): 2

Water Column (feet): 4.45

Casing Diameter (Inches): 21

80% Recharge Depth (feet): 30.04

1 Well Volume (gallons): 1

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F. (C))	pH	Turbidity ORP	D.O.
0808			1	1231	15.4	6.51	170	7.34
			2	1145	16.6	6.48	182	4.37
	0819		3	1182	15.8	6.52	187	2.26
Static at Time Sampled		Total Gallons Purged			Time Sampled			
31.30		3			1030			
Comments: <u>NO NOT RECOVER IN 2HRS</u>								

Well No.: U-2

Purge Method: JRS H.B.

Depth to Water (feet): 28.25

Depth to Product (feet): 0

Total Depth (feet): 33.08

LPH & Water Recovered (gallons): 2

Water Column (feet): 4.23

Casing Diameter (Inches): 21

80% Recharge Depth (feet): 29.21

1 Well Volume (gallons): 1

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F. (C))	pH	Turbidity	D.O.
0824			1	1042	15.0	6.62	185	3.86
			2	1049	15.6	6.65	187	5.24
	0835		3	1046	15.6	6.67	188	5.47
Static at Time Sampled		Total Gallons Purged			Time Sampled			
30.93		3			1037			
Comments: <u>NO NOT RECOVER IN 2HRS</u>								

GROUNDWATER SAMPLING FIELD NOTES

Technician: AUX
 Site: 4186 Project No.: 41650001 Date: 09-28-05
 Well No.: U-4 Purge Method: JOB
 Depth to Water (feet): 32.25 Depth to Product (feet): 6
 Total Depth (feet): 45.10 LPH & Water Recovered (gallons): 6
 Water Column (feet): 12.85 Casing Diameter (Inches): 21
 80% Recharge Depth (feet): 34.82 1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F. C)	pH	Turbidity ORP	D.O.
0842			2	1023	13.0	6.54	185	3.67
			4	1001	14.1	6.58	179	3.30
	1047		6	1032	14.9		170	3.01
Static at Time Sampled			Total Gallons Purged		Time Sampled			
32.27			6		1010			
Comments:								

Well No.: U-5 Purge Method: JOB
 Depth to Water (feet): 33.01 Depth to Product (feet): 6
 Total Depth (feet): 47.05 LPH & Water Recovered (gallons): 6
 Water Column (feet): 14.04 Casing Diameter (Inches): 2"
 80% Recharge Depth (feet): 35.81 1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F. C)	pH	Turbidity	D.O.
0854			2	1016	14.5	6.69	173	1.92
			4	998	15.1	6.67	170	2.08
	0959		6	992	15.5	6.68	172	2.05
Static at Time Sampled			Total Gallons Purged		Time Sampled			
33.10			6		1018			
Comments:								

GROUNDWATER SAMPLING FIELD NOTES

Technician: ANX

Site: 4156

Project No.: 41050001

Date: 09-23-05

Well No.: U-7

Purge Method: JEB

Depth to Water (feet): 32.35

Depth to Product (feet): 6

Total Depth (feet): 44.37

LPH & Water Recovered (gallons): 21

Water Column (feet): 12.02

Casing Diameter (Inches): 2

80% Recharge Depth (feet): 34.75

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH	Turbidity ORP	D.O.
0911			2	1044	14.1	6.76	149	2.85
			4	1225	14.9	6.65	110	2.07
	0916		6	1272	14.7	6.69	108	2.25
Static at Time Sampled		Total Gallons Purged		Time Sampled				
34.65		6		1045				
Comments:								

Well No.: U-3

Purge Method: JEB H-B

Depth to Water (feet): 27.64

Depth to Product (feet): 6

Total Depth (feet): 33.40

LPH & Water Recovered (gallons): 6

Water Column (feet): 5.76

Casing Diameter (Inches): 2

80% Recharge Depth (feet): 28.79

1 Well Volume (gallons): 1

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH	Turbidity ORP	D.O.
0923			1	1109	15.7	6.41	-654	1.47
			2	1158	15.9	6.31	-83	1.58
	0934		3	1157	15.9	6.32	-80	1.40
Static at Time Sampled		Total Gallons Purged		Time Sampled				
29.35		3		1135				
Comments: <u>DID NOT RECOVER IN 2ND</u>								

GROUNDWATER SAMPLING FIELD NOTES

Technician: ALEX

Site: 4186

Project No.: 41050001

Date: 09-23-05

Well No.: H-6

Purge Method: Job

Depth to Water (feet): 32.39

Depth to Product (feet): 1

Total Depth (feet): 44.50

LPH & Water Recovered (gallons): 6

Water Column (feet): 12.12

Casing Diameter (Inches): 2.1

80% Recharge Depth (feet): 34.80

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth To Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F, C)	pH	Turbidity	D.O.
0942			2	1241	14.3	6.44	98	1.89
			4	1242	14.7	6.47	84	1.78
	0947		6	1237	14.2	6.51	82	1.97
Static at Time Sampled			Total Gallons Purged			Time Sampled		
34.15			6			1051		
Comments:								

Well No.: _____

Purge Method: _____

Depth to Water (feet): _____

Depth to Product (feet): _____

Total Depth (feet): _____

LPH & Water Recovered (gallons): _____

Water Column (feet): _____

Casing Diameter (Inches): _____

80% Recharge Depth (feet): _____

1 Well Volume (gallons): _____

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



Laboratories, Inc.

Date of Report: 10/05/2005

Anju Farfan

TRC Alton Geoscience

21 Technology Drive
Irvine, CA 92618-2302

RE: 4186

BC Lab Number: 0509488

Enclosed are the results of analyses for samples received by the laboratory on 09/23/05 22:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Molly Meyers for". The signature is written in black ink and is positioned above a horizontal line.

Contact Person: Vanessa Surratt

Client Service Rep

A handwritten signature in cursive script, which is mostly illegible but appears to be a name. The signature is written in black ink and is positioned above a horizontal line.

Authorized Signature



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

Project: 4186
Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/05/05 08:31

Laboratory / Client Sample Cross Reference

Laboratory Client Sample Information

0509488-01	COC Number: --- Project Number: 4186 Sampling Location: U-1 Sampling Point: U-1 Sampled By: Alex of TRCI	Receive Date: 09/23/05 22:45 Sampling Date: 09/23/05 10:30 Sample Depth: --- Sample Matrix: Water	Delivery Work Order (LabW): Global ID: T0600101777 Matrix: W Sample QC Type (SACode): CS Cooler ID:
0509488-02	COC Number: --- Project Number: 4186 Sampling Location: U-2 Sampling Point: U-2 Sampled By: Alex of TRCI	Receive Date: 09/23/05 22:45 Sampling Date: 09/23/05 10:37 Sample Depth: --- Sample Matrix: Water	Delivery Work Order (LabW): Global ID: T0600101777 Matrix: W Sample QC Type (SACode): CS Cooler ID:
0509488-03	COC Number: --- Project Number: 4186 Sampling Location: U-3 Sampling Point: U-3 Sampled By: Alex of TRCI	Receive Date: 09/23/05 22:45 Sampling Date: 09/23/05 11:35 Sample Depth: --- Sample Matrix: Water	Delivery Work Order (LabW): Global ID: T0600101777 Matrix: W Sample QC Type (SACode): CS Cooler ID:
0509488-04	COC Number: --- Project Number: 4186 Sampling Location: U-4 Sampling Point: U-4 Sampled By: Alex of TRCI	Receive Date: 09/23/05 22:45 Sampling Date: 09/23/05 10:10 Sample Depth: --- Sample Matrix: Water	Delivery Work Order (LabW): Global ID: T0600101777 Matrix: W Sample QC Type (SACode): CS Cooler ID:
0509488-05	COC Number: --- Project Number: 4186 Sampling Location: U-5 Sampling Point: U-5 Sampled By: Alex of TRCI	Receive Date: 09/23/05 22:45 Sampling Date: 09/23/05 10:18 Sample Depth: --- Sample Matrix: Water	Delivery Work Order (LabW): Global ID: T0600101777 Matrix: W Sample QC Type (SACode): CS Cooler ID:



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

Project: 4186
Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/05/05 08:31

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information				
0509488-06	COC Number:	---		Receive Date:	09/23/05 22:45
	Project Number:	4186		Sampling Date:	09/23/05 10:51
	Sampling Location:	U-6		Sample Depth:	---
	Sampling Point:	U-6		Sample Matrix:	Water
	Sampled By:	Alex of TRCI			
				Delivery Work Order (LabW):	
				Global ID:	T0600101777
				Matrix:	W
				Sample QC Type (SACode):	CS
				Cooler ID:	
0509488-07	COC Number:	---		Receive Date:	09/23/05 22:45
	Project Number:	4186		Sampling Date:	09/23/05 10:45
	Sampling Location:	U-7		Sample Depth:	---
	Sampling Point:	U-7		Sample Matrix:	Water
	Sampled By:	Alex of TRCI			
				Delivery Work Order (LabW):	
				Global ID:	T0600101777
				Matrix:	W
				Sample QC Type (SACode):	CS
				Cooler ID:	



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

Project: 4186
Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/05/05 08:31

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0509488-01		Client Sample Name: 4186, U-1, U-1, 9/23/2005 10:30:00AM, Alex											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quais
Benzene	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 21:12	SDU	MS-V12	1	BOJ0064	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 21:12	SDU	MS-V12	1	BOJ0064	ND	
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 21:12	SDU	MS-V12	1	BOJ0064	ND	
Toluene	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 21:12	SDU	MS-V12	1	BOJ0064	ND	
Total Xylenes	ND	ug/L	1.0		EPA-8260	10/02/05	10/02/05 21:12	SDU	MS-V12	1	BOJ0064	ND	
Ethanol	ND	ug/L	1000		EPA-8260	10/02/05	10/02/05 21:12	SDU	MS-V12	1	BOJ0064	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50		EPA-8260	10/02/05	10/02/05 21:12	SDU	MS-V12	1	BOJ0064	ND	
1,2-Dichloroethane-d4 (Surrogate)	103	%	76 - 114 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 21:12	SDU	MS-V12	1	BOJ0064		
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 21:12	SDU	MS-V12	1	BOJ0064		
4-Bromofluorobenzene (Surrogate)	95.0	%	86 - 115 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 21:12	SDU	MS-V12	1	BOJ0064		



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

Project: 4186
Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/05/05 08:31

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0509488-02		Client Sample Name: 4186, U-2, U-2, 9/23/2005 10:37:00AM, Alex											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Blas	Lab Quais
Benzene	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 21:34	SDU	MS-V12	1	BOJ0064	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 21:34	SDU	MS-V12	1	BOJ0064	ND	
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 21:34	SDU	MS-V12	1	BOJ0064	ND	
Toluene	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 21:34	SDU	MS-V12	1	BOJ0064	ND	
Total Xylenes	ND	ug/L	1.0		EPA-8260	10/02/05	10/02/05 21:34	SDU	MS-V12	1	BOJ0064	ND	
Ethanol	ND	ug/L	1000		EPA-8260	10/02/05	10/02/05 21:34	SDU	MS-V12	1	BOJ0064	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50		EPA-8260	10/02/05	10/02/05 21:34	SDU	MS-V12	1	BOJ0064	ND	
1,2-Dichloroethane-d4 (Surrogate)	99.4	%	76 - 114 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 21:34	SDU	MS-V12	1	BOJ0064		
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 21:34	SDU	MS-V12	1	BOJ0064		
4-Bromofluorobenzene (Surrogate)	94.2	%	86 - 115 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 21:34	SDU	MS-V12	1	BOJ0064		



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

Project: 4186
Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/05/05 08:31

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0509488-03		Client Sample Name: 4186, U-3, U-3, 9/23/2005 11:35:00AM, Alex												
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Benzene	31	ug/L	25		EPA-8260	10/02/05	10/03/05 08:25	SDU	MS-V12	50	BOJ0064	ND	A01	
Ethylbenzene	150	ug/L	25		EPA-8260	10/02/05	10/03/05 08:25	SDU	MS-V12	50	BOJ0064	ND	A01	
Methyl t-butyl ether	8900	ug/L	120		EPA-8260	10/02/05	10/03/05 15:04	SDU	MS-V12	250	BOJ0064	ND	A01	
Toluene	ND	ug/L	25		EPA-8260	10/02/05	10/03/05 08:25	SDU	MS-V12	50	BOJ0064	ND	A01	
Total Xylenes	ND	ug/L	50		EPA-8260	10/02/05	10/03/05 08:25	SDU	MS-V12	50	BOJ0064	ND	A01	
Ethanol	ND	ug/L	50000		EPA-8260	10/02/05	10/03/05 08:25	SDU	MS-V12	50	BOJ0064	ND	A01	
Total Purgeable Petroleum Hydrocarbons	6000	ug/L	2500		EPA-8260	10/02/05	10/03/05 08:25	SDU	MS-V12	50	BOJ0064	ND	A01	
1,2-Dichloroethane-d4 (Surrogate)	94.7	%	76 - 114 (LCL - UCL)		EPA-8260	10/02/05	10/03/05 08:25	SDU	MS-V12	50	BOJ0064			
1,2-Dichloroethane-d4 (Surrogate)	98.9	%	76 - 114 (LCL - UCL)		EPA-8260	10/02/05	10/03/05 15:04	SDU	MS-V12	250	BOJ0064			
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260	10/02/05	10/03/05 15:04	SDU	MS-V12	250	BOJ0064			
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)		EPA-8260	10/02/05	10/03/05 08:25	SDU	MS-V12	50	BOJ0064			
4-Bromofluorobenzene (Surrogate)	96.3	%	86 - 115 (LCL - UCL)		EPA-8260	10/02/05	10/03/05 08:25	SDU	MS-V12	50	BOJ0064			
4-Bromofluorobenzene (Surrogate)	98.2	%	86 - 115 (LCL - UCL)		EPA-8260	10/02/05	10/03/05 15:04	SDU	MS-V12	250	BOJ0064			



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

Project: 4186
Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/05/05 08:31

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0509488-04		Client Sample Name: 4186, U-4, U-4, 9/23/2005 10:10:00AM, Alex											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 21:57	SDU	MS-V12	1	BOJ0064	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 21:57	SDU	MS-V12	1	BOJ0064	ND	
Methyl t-butyl ether	11	ug/L	0.50		EPA-8260	10/02/05	10/02/05 21:57	SDU	MS-V12	1	BOJ0064	ND	
Toluene	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 21:57	SDU	MS-V12	1	BOJ0064	ND	
Total Xylenes	ND	ug/L	1.0		EPA-8260	10/02/05	10/02/05 21:57	SDU	MS-V12	1	BOJ0064	ND	
Ethanol	ND	ug/L	1000		EPA-8260	10/02/05	10/02/05 21:57	SDU	MS-V12	1	BOJ0064	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50		EPA-8260	10/02/05	10/02/05 21:57	SDU	MS-V12	1	BOJ0064	ND	
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 21:57	SDU	MS-V12	1	BOJ0064		
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 21:57	SDU	MS-V12	1	BOJ0064		
4-Bromofluorobenzene (Surrogate)	95.9	%	86 - 115 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 21:57	SDU	MS-V12	1	BOJ0064		



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21 Technology Drive
Irvine CA, 92618-2302

Project: 4186
Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/05/05 08:31

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0509488-05		Client Sample Name: 4186, U-5, U-5, 9/23/2005 10:18:00AM, Alex											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 22:19	SDU	MS-V12	1	BOJ0064	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 22:19	SDU	MS-V12	1	BOJ0064	ND	
Methyl t-butyl ether	53	ug/L	0.50		EPA-8260	10/02/05	10/02/05 22:19	SDU	MS-V12	1	BOJ0064	ND	
Toluene	ND	ug/L	0.50		EPA-8260	10/02/05	10/02/05 22:19	SDU	MS-V12	1	BOJ0064	ND	
Total Xylenes	ND	ug/L	1.0		EPA-8260	10/02/05	10/02/05 22:19	SDU	MS-V12	1	BOJ0064	ND	
Ethanol	ND	ug/L	1000		EPA-8260	10/02/05	10/02/05 22:19	SDU	MS-V12	1	BOJ0064	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50		EPA-8260	10/02/05	10/02/05 22:19	SDU	MS-V12	1	BOJ0064	ND	A53
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 22:19	SDU	MS-V12	1	BOJ0064		
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 22:19	SDU	MS-V12	1	BOJ0064		
4-Bromofluorobenzene (Surrogate)	95.6	%	86 - 115 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 22:19	SDU	MS-V12	1	BOJ0064		



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

Project: 4186
Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/05/05 08:31

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0509488-06		Client Sample Name: 4186, U-6, U-6, 9/23/2005 10:51:00AM, Alex											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	78	ug/L	25		EPA-8260	10/02/05	10/03/05 08:47	SDU	MS-V12	50	BOJ0064	ND	A01
Ethylbenzene	540	ug/L	25		EPA-8260	10/02/05	10/03/05 08:47	SDU	MS-V12	50	BOJ0064	ND	A01
Methyl t-butyl ether	34	ug/L	25		EPA-8260	10/02/05	10/03/05 08:47	SDU	MS-V12	50	BOJ0064	ND	A01
Toluene	ND	ug/L	25		EPA-8260	10/02/05	10/03/05 08:47	SDU	MS-V12	50	BOJ0064	ND	A01
Total Xylenes	230	ug/L	50		EPA-8260	10/02/05	10/03/05 08:47	SDU	MS-V12	50	BOJ0064	ND	A01
Ethanol	ND	ug/L	50000		EPA-8260	10/02/05	10/03/05 08:47	SDU	MS-V12	50	BOJ0064	ND	A01
Total Purgeable Petroleum Hydrocarbons	5200	ug/L	2500		EPA-8260	10/02/05	10/03/05 08:47	SDU	MS-V12	50	BOJ0064	ND	A01
1,2-Dichloroethane-d4 (Surrogate)	100	%	76 - 114 (LCL - UCL)		EPA-8260	10/02/05	10/03/05 08:47	SDU	MS-V12	50	BOJ0064		
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)		EPA-8260	10/02/05	10/03/05 08:47	SDU	MS-V12	50	BOJ0064		
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)		EPA-8260	10/02/05	10/03/05 08:47	SDU	MS-V12	50	BOJ0064		



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

Project: 4186
Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/05/05 08:31

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0509488-07 | **Client Sample Name:** 4186, U-7, U-7, 9/23/2005 10:45:00AM, Alex

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	13	ug/L	0.50		EPA-8260	10/02/05	10/02/05 22:42	SDU	MS-V12	1	BOJ0064	ND	
Ethylbenzene	31	ug/L	0.50		EPA-8260	10/02/05	10/02/05 22:42	SDU	MS-V12	1	BOJ0064	ND	
Methyl t-butyl ether	46	ug/L	0.50		EPA-8260	10/02/05	10/02/05 22:42	SDU	MS-V12	1	BOJ0064	ND	
Toluene	1.3	ug/L	0.50		EPA-8260	10/02/05	10/02/05 22:42	SDU	MS-V12	1	BOJ0064	ND	
Total Xylenes	6.9	ug/L	1.0		EPA-8260	10/02/05	10/02/05 22:42	SDU	MS-V12	1	BOJ0064	ND	
Ethanol	ND	ug/L	1000		EPA-8260	10/02/05	10/02/05 22:42	SDU	MS-V12	1	BOJ0064	ND	
Total Purgeable Petroleum Hydrocarbons	2400	ug/L	500		EPA-8260	10/02/05	10/03/05 14:41	SDU	MS-V12	10	BOJ0064	ND	A01
1,2-Dichloroethane-d4 (Surrogate)	101	%	76 - 114 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 22:42	SDU	MS-V12	1	BOJ0064		
1,2-Dichloroethane-d4 (Surrogate)	103	%	76 - 114 (LCL - UCL)		EPA-8260	10/02/05	10/03/05 14:41	SDU	MS-V12	10	BOJ0064		
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 22:42	SDU	MS-V12	1	BOJ0064		
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260	10/02/05	10/03/05 14:41	SDU	MS-V12	10	BOJ0064		
4-Bromofluorobenzene (Surrogate)	104	%	86 - 115 (LCL - UCL)		EPA-8260	10/02/05	10/02/05 22:42	SDU	MS-V12	1	BOJ0064		
4-Bromofluorobenzene (Surrogate)	99.4	%	86 - 115 (LCL - UCL)		EPA-8260	10/02/05	10/03/05 14:41	SDU	MS-V12	10	BOJ0064		



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

Project: 4186
Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/05/05 08:31

Volatile Organic Analysis (EPA Method 8260) Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample ID	QC Sample Type	Source Result	Result	Spike Added	Units	Percent RPD	Percent Recovery	Control Limits	
										RPD	Percent Recovery
Benzene	BOJ0064	BOJ0064-MS1	Matrix Spike	ND	24.740	25.000	ug/L		99.0		70 - 130
		BOJ0064-MSD1	Matrix Spike Duplicate	ND	24.540	25.000	ug/L	0.811	98.2	20	70 - 130
Toluene	BOJ0064	BOJ0064-MS1	Matrix Spike	ND	23.320	25.000	ug/L		93.3		70 - 130
		BOJ0064-MSD1	Matrix Spike Duplicate	ND	23.150	25.000	ug/L	0.753	92.6	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BOJ0064	BOJ0064-MS1	Matrix Spike	ND	10.270	10.000	ug/L		103		76 - 114
		BOJ0064-MSD1	Matrix Spike Duplicate	ND	10.170	10.000	ug/L		102		76 - 114
Toluene-d8 (Surrogate)	BOJ0064	BOJ0064-MS1	Matrix Spike	ND	9.9500	10.000	ug/L		99.5		88 - 110
		BOJ0064-MSD1	Matrix Spike Duplicate	ND	9.9100	10.000	ug/L		99.1		88 - 110
4-Bromofluorobenzene (Surrogate)	BOJ0064	BOJ0064-MS1	Matrix Spike	ND	10.020	10.000	ug/L		100		86 - 115
		BOJ0064-MSD1	Matrix Spike Duplicate	ND	10.190	10.000	ug/L		102		86 - 115



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

Project: 4186
Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/05/05 08:31

Volatile Organic Analysis (EPA Method 8260) Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Benzene	BOJ0064	BOJ0064-BS1	LCS	25.230	25.000	0.50	ug/L	101		70 - 130		
Toluene	BOJ0064	BOJ0064-BS1	LCS	23.490	25.000	0.50	ug/L	94.0		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BOJ0064	BOJ0064-BS1	LCS	10.360	10.000		ug/L	104		76 - 114		
Toluene-d8 (Surrogate)	BOJ0064	BOJ0064-BS1	LCS	9.9900	10.000		ug/L	99.9		88 - 110		
4-Bromofluorobenzene (Surrogate)	BOJ0064	BOJ0064-BS1	LCS	10.030	10.000		ug/L	100		86 - 115		

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

Project: 4186
 Project Number: [none]
 Project Manager: Anju Farfan

Reported: 10/05/05 08:31

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BOJ0064	BOJ0064-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	BOJ0064	BOJ0064-BLK1	ND	ug/L	0.50	0.14	
Methyl t-butyl ether	BOJ0064	BOJ0064-BLK1	ND	ug/L	0.50	0.15	
Toluene	BOJ0064	BOJ0064-BLK1	ND	ug/L	0.50	0.15	
Total Xylenes	BOJ0064	BOJ0064-BLK1	ND	ug/L	1.0	0.40	
Ethanol	BOJ0064	BOJ0064-BLK1	ND	ug/L	1000	110	
Total Purgeable Petroleum Hydrocarbons	BOJ0064	BOJ0064-BLK1	ND	ug/L	50	23	
1,2-Dichloroethane-d4 (Surrogate)	BOJ0064	BOJ0064-BLK1	101	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BOJ0064	BOJ0064-BLK1	99.9	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BOJ0064	BOJ0064-BLK1	95.7	%	86 - 115 (LCL - UCL)		



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

Project: 4186
Project Number: [none]
Project Manager: Anju Farfan

Reported: 10/05/05 08:31

Notes and Definitions

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

Submission #: 05-9488

Project Code:

TB Batch #

SHIPPING INFORMATION

Federal Express UPS Hand Delivery
 BC Lab Field Service Other (Specify)

SHIPPING CONTAINER

Ice Chest None
 Box Other (Specify)

Refrigerant: Ice Blue Ice None Other Comments:

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

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

COC Received
 YES NO

Ice Chest ID B/W
 Temperature: 2.6 °C
 Thermometer ID: 48

Emissivity .97
 Container VOQS

Date/Time 9/23 2245
 Analyst Init ARM

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
100ml TOTAL ORGANIC CARBON										
QT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A.3	A.3	A.3	A.3	A.3	A.3	A.3			
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 515										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT QA/QC										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:
 Sample Numbering Completed By: ARM Date/Time: 9/24 0100

BC LABORATORIES, INC.

4100 Atlas Court | Bakersfield, CA 93308
(861) 327-4911 | FAX (861) 327-1913

CHAIN OF CUSTODY

#05-9488

Analysis Requested

Circle one: Phillips 66 / Unocal		Consultant Firm: TRC		MATRIX <input checked="" type="checkbox"/> (GV) Ground-water <input type="checkbox"/> (S) Soil <input type="checkbox"/> (VW) Wastewater <input type="checkbox"/> (SL) Sludge	BTEX/MTBE by 8021B, Gas by 801B TPH GAS by 8015M TPH DIESEL by 8015 8260 full list w/ MTBE & oxygenates BTEX/MTBE/### BY 8260B ETHANOL by 8260B TPPH by 8260B	3MB W HA Turnaround Time Requested: 5DP	
Address: 1771 FIRST ST. LIVERMORE		21 Technology Drive Irvine, CA 92618-2302 Attn: Anju Farfan					
City: LIVERMORE		4-digit site#: 4186 Workorder #: 125TRC501					
State: CA Zip:		Project #: 41050001					
Phillips 66 / Unocal Mgr: Shelby Lutting		Sampler Name: Alex M.					
Lab#	Sample Description	Field Point Name	Date & Time Sampled				
-1	U-1		09-23-05 / 1030	G.W.		X	
-2	U-2		/ 1037			X	
-3	U-3	CHK BY: [Signature] DISTRIBUTION: [Signature] SUB-OUT: <input type="checkbox"/>	/ 1135			X	
-4	U-4		/ 1010				
-5	U-5		/ 1018				
-6	U-6		/ 1051				
-7	U-7		/ 1045				

Comments: RUN 8 OXYS BY 8260 ON 8260 MTBE HIT, U-3 ONLY GLOBA ID: J0600101777	Released by (Signature): [Signature]	Received by: [Signature]	Date & Time: 09-23-05 / 12:30
	Relinquished by (Signature): [Signature]	Received by: [Signature]	Date & Time: 09-23-05 1451
	Relinquished by (Signature): [Signature]	Received by: [Signature]	Date & Time: 9-23-05 1710

Northern CA

KEH Alex L.M. Duffie
9-23-05 2245

STATEMENTS

Purge Water Disposal

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

Limitations

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