



January 5, 2004

Alameda County
JAN 13 2004
Environmental Health

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QUARTERLY GROUNDWATER MONITORING REPORT
DECEMBER 2003 GROUNDWATER SAMPLING
ASE JOB NO. 3540

at
Oakland Truck Stop
8255 San Leandro Street
Oakland, California

Prepared for:
Mr. Nissan Saidian
5733 Medallion Court
Castro Valley, CA 94522

Prepared by:
AQUA SCIENCE ENGINEERS, INC.
208 W. El Pintado
Danville, CA 94526
(925) 820-9391

1.0 INTRODUCTION

Site Location (Site), See Figure 1

Oakland Truck Stop
8255 San Leandro Street
Oakland, California

Responsible Party

Mr. Nissan Saidian
5733 Medallion Court
Castro Valley, CA 94522

Environmental Consulting Firm

Aqua Science Engineers, Inc. (ASE)
208 West El Pintado
Danville, CA 94526
Contact: Robert Kitay, Senior Geologist
(925) 820-9391

Agency Review

Mr. Amir Gholami
Alameda County Health Care Services Agency (ACHCSA)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Mr. Chuck Headlee
California Regional Water Quality Control Board (RWQCB)
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

The following is a report detailing the methods and findings of the December 2003 quarterly groundwater sampling at the above-referenced site. This sampling was conducted as required by the ACHCSA and RWQCB. ASE has prepared this report on behalf of Mr. Nissan Saidian, owner of the property.

2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On December 12, 2003, ASE measured the depth to water in monitoring wells MW-1 through MW-8 using an electric water level sounder. Monitoring well MW-9 could not be accessed and was therefore not gauged. The surface of the groundwater was also checked for the presence of Liquid Phase Hydrocarbons (LPH) or sheen using an electronic oil/water interface probe. The presence of LPH was confirmed with a disposable bailer half-filled for direct observation.

Monitoring well MW-1 contained approximately 0.41-feet of LPH this quarter and a hydrocarbon sheen was observed in monitoring well MW-3. Oakland Truck Stop staff continued weekly bailing of LPH from monitoring well MW-1 this quarter. No LPH or sheen was observed in any of the remaining site monitoring wells. Groundwater elevation data is presented as Table One.

A groundwater potentiometric surface map for December 12, 2003 is presented as Figure 2. Groundwater beneath the site flows to the west and northwest with a gradient of approximately 0.0014 feet/foot. The groundwater flow direction at the site has been very inconsistent and highly variable. The water table rose approximately one foot since last quarter.

3.0 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

Prior to sampling, monitoring wells MW-2 through MW-8 were purged of three well casing volumes of groundwater using dedicated polyethylene bailers. The parameters pH, temperature, and conductivity were monitored during the well purging, and samples were not collected until these parameters stabilized. Groundwater samples were collected from each well using dedicated polyethylene bailers. Monitoring well MW-1 was not sampled due to the presence of LPH.

All samples were decanted from the bailers into 40-ml volatile organic analysis (VOA) vials, pre-preserved with hydrochloric acid, and sealed without headspace. The samples were then labeled and placed in coolers with wet ice for transport to Kiff Analytical, LLC of Davis, California under appropriate chain-of-custody documentation. Well sampling field logs are presented in Appendix A.

The monitoring well purge water was placed in a 55-gallon steel drum, stored temporarily on site, and later removed for proper disposal.

The groundwater samples were analyzed for total petroleum hydrocarbons as diesel (TPH-D) by EPA Method 3550/8015M, and total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethylbenzene, and total xylenes (collectively known as BTEX), and oxygenates including ethanol and methanol by EPA Method 8260B. The analytical results are presented in Table Two. The certified analytical report and chain-of-custody documentation are included as Appendix B.

4.0 CONCLUSIONS

Monitoring well MW-1 contained approximately 0.41-feet of free-floating diesel hydrocarbons and MW-3 contained a hydrocarbon sheen.

In general, concentrations of dissolved diesel related hydrocarbons increased or remained the same across the site. Concentrations of gasoline related hydrocarbons generally increased in monitoring well MW-2, decreased in MW-3, and stayed relatively unchanged in the remaining wells. In addition to the usual analyses, groundwater samples collected this quarter were tested for the presence of ethanol and methanol, which may have indicated a recent hydrocarbon release. Ethanol and methanol were not detected at concentrations above laboratory method reporting limits in any of the samples. However, the reporting limits for the samples collected from monitoring wells MW-3 and MW-6 were elevated due to high concentrations of other hydrocarbons and therefore, the data is inconclusive regarding a potential recent release.

Hydrocarbon concentrations in the groundwater samples collected from monitoring wells MW-2 through MW-6 exceeded Environmental Screening Levels (ESLs) as presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region dated July 2003.

5.0 RECOMMENDATIONS

ASE recommends that this site remain on a quarterly sampling schedule. The next sampling is scheduled for March 2003.

ASE recommends that the sampling frequency for the more outlying monitoring wells, MW-4, MW-5, MW-7 and MW-8, be changed to semi annual based on the relatively consistent hydrocarbon concentrations in these wells. Oakland Truck Stop staff will continue periodic LPH removal

from monitoring well MW-1 during the next quarter. In addition, ASE anticipates conducting a pilot study for ozone sparging remediation at the site once an approval letter is received from the ACHCSA.

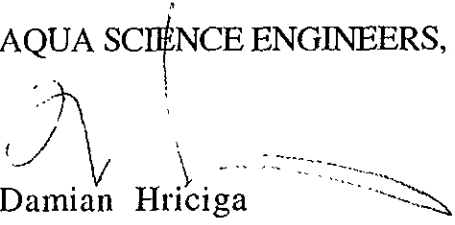
6.0 REPORT LIMITATIONS

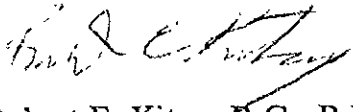
The results presented in this report represent conditions at the time of the groundwater sampling, at the specific locations where the groundwater samples were collected, and for the specific parameters analyzed by the laboratory. It does not fully characterize the site for contamination resulting from sources other than the former underground storage tanks and associated plumbing at the site, or for parameters not analyzed by the laboratory. All of the laboratory work cited in this report was prepared under the direction of independent CAL-DHS certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

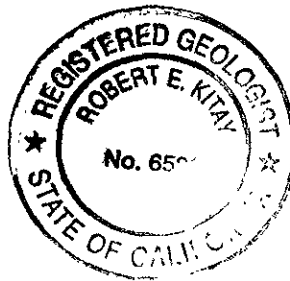
Aqua Science Engineers appreciates the opportunity to provide environmental consulting services for this project, and trust that this report meets your needs. Please feel free to call us at (925) 820-9391 if you have any questions or comments.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.


Damian Hriciga
Project Geologist


Robert E. Kitay, R.G., R.E.A.
Senior Geologist



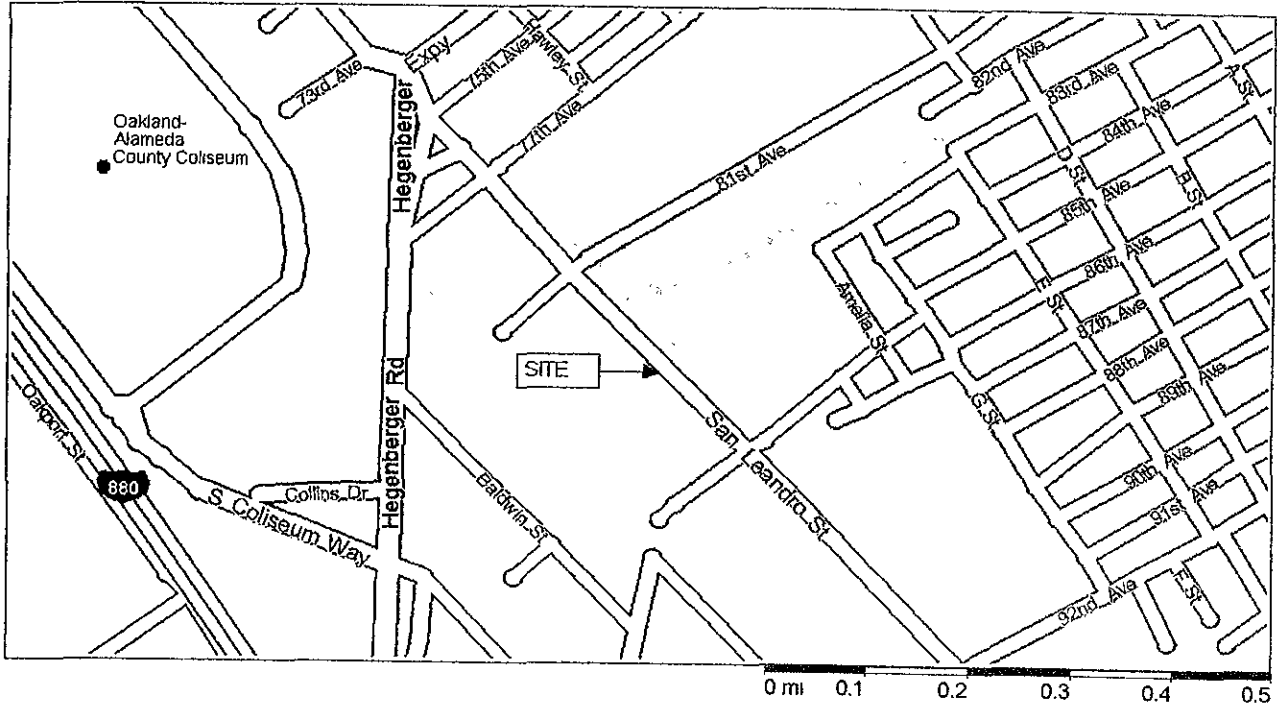
Attachments: Table One through Three
Figures 1 and 2
Appendices A and B

cc: Mr. Nissan Saidian
Mr. Amir Gholami, ACHCSA
Mr. Chuck Headlee, RWQCB, San Francisco Bay Region

FIGURES



NORTH



LOCATION MAP

OAKLAND TRUCK STOP
8255 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

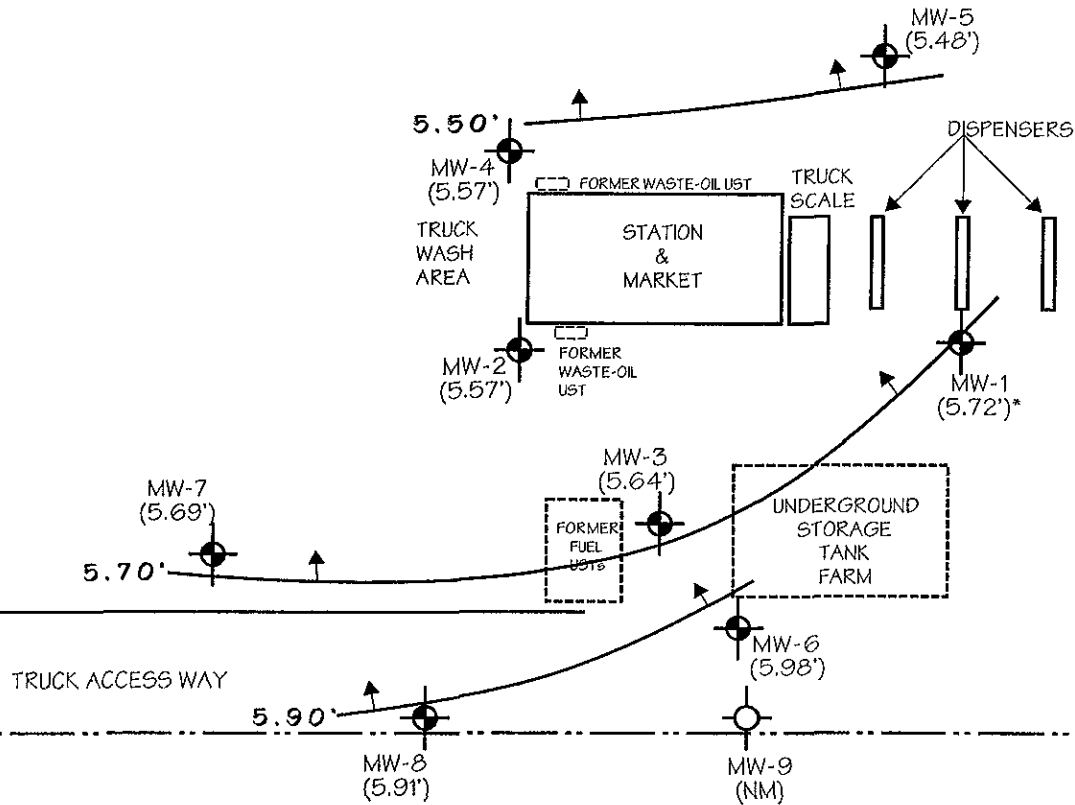
AQUA SCIENCE ENGINEERS, INC.

Figure 1

PROPERTY BOUNDARIES

CAFE

SAN LEANDRO STREET



LEGEND

- NM Not Measured
- Water elevation adjusted for thickness of liquid-phase hydrocarbons
- Potentiometric surface contour with arrow indicating groundwater flow direction
- 4-inch diameter monitoring well
- Monitoring well (with groundwater elevation in feet)
MW-4 (5.57')



NORTH

SCALE
1" = 50'

POTENTIOMETRIC
SURFACE CONTOUR MAP
12/12/03

OAKLAND TRUCK STOP
8255 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

Figure 2

TABLES

TABLE ONE
Groundwater Elevation Data
 Oakland Truck Stop
 8255 San Leandro Street, Oakland, CA

Well ID & Date Sampled	Top of Casing Elevation (msl)	Depth to Water (feet)	Free-Floating Hydrocarbon Thickness (feet)	Groundwater Elevation (msl)
<u>MW-1</u>				
8/16/1999	97.12	Unknown	> 1.0	Unknown
8/27/1999		6.90	0.36	90.51*
9/10/1999		6.85	0.18	90.41*
9/24/1999		6.65	0.08	90.53*
10/8/1999		6.87	0.28	90.47*
10/22/1999		6.81	0.23	90.49*
11/2/1999		6.94	0.31	90.43*
11/19/1999		6.91	0.12	90.31*
12/6/1999		6.93	0.12	90.29*
3/8/2000		5.93	0.21	91.36*
6/14/2000		6.57	0.72	90.41*
12/11/2000		6.70	0.60	90.90*
3/6/2001		5.75	0.40	91.69*
6/6/2001		7.60	1.48	90.70*
9/4/2001		6.80	0.20	90.48*
3/11/2002		approx. 7.47	approx. 3	approx. 92.05*
6/6/2002		6.49	0.67	91.17*
9/4/2002	11.02	6.89	0.54	4.56*
12/17/2002		4.65		6.47*
3/7/2003		6.55	1.19	3.52*
6/5/2003		9.77	4.63	4.95*
9/19/2003		6.56	0.32	4.72*
12/12/2003		5.63	0.41	5.72*
<u>MW-2</u>				
8/16/1999	96.82	6.30	--	90.52
12/6/1999		8.46	--	88.36
3/8/2000		9.12	--	87.70
6/14/2000		8.34	--	88.48
12/11/2000		5.94	--	90.88
3/6/2001		4.70	--	92.12
6/6/2001		6.03	--	90.79
9/4/2001		6.34	--	90.48
3/11/2002		4.89	--	91.93
6/6/2002		5.69	--	91.13
9/4/2002	10.70	6.17	--	4.53
12/17/2002		4.39	--	6.31
3/7/2003		5.44	--	5.26
6/5/2003		5.59	--	5.11
9/19/2003		6.09	--	4.61
12/12/2003		5.13	--	5.57

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8255 San Leandro Street, Oakland, CA

Well ID & Date Sampled	Top of Casing Elevation (msl)	Depth to Water (feet)	Free-Floating Hydrocarbon Thickness (feet)	Groundwater Elevation (msl)
MW-3				
8/16/1999	96.43	5.85	--	90.58
12/6/1999		5.70	--	90.73
3/8/2000		5.32	--	91.11
6/14/2000		6.95	--	89.48
12/11/2000		6.22	--	90.21
3/6/2001		4.83	--	91.60
6/6/2001		5.62	--	90.81
9/4/2001		5.91	--	90.52
3/11/2002		4.42	--	92.01
6/6/2002		5.19	--	91.24
9/4/2002	10.32	5.72	--	4.60
12/17/2002		3.96	--	6.36
3/7/2003		4.88	--	5.44
6/5/2003		5.05	--	5.27
9/19/2003		5.62	--	4.70
12/12/2003		4.68	--	5.64
MW-4				
8/16/1999	96.60	6.12	--	90.48
12/6/1999		5.98	--	90.62
3/8/2000		4.32	--	92.28
6/14/2000		5.58	--	91.02
12/11/2000		5.70	--	90.90
3/6/2001		4.46	--	92.14
6/6/2001		5.89	--	90.71
9/4/2001		6.16	--	90.44
3/11/2002		4.67	--	91.93
6/6/2002		5.50	--	91.10
9/4/2002	10.50	5.97	--	4.53
12/17/2002		4.22	--	6.28
3/7/2003		5.23	--	5.27
6/5/2003		5.38	--	5.12
9/19/2003		5.91	--	4.59
12/12/2003		4.91	--	5.59
MW-5				
12/6/1999	96.30	5.94	--	90.36
3/8/2000		4.06	--	92.24
6/14/2000		5.25	--	91.05
12/11/2000		5.45	--	90.85
3/6/2001		4.12	--	92.18
6/6/2001		5.56	--	90.74
9/4/2001		5.84	--	90.46
3/11/2002		4.38	--	91.92
6/6/2002		5.16	--	91.14
9/4/2002	10.20	5.62	--	4.58
12/17/2002		4.12	--	6.08
3/7/2003		4.89	--	5.31
6/5/2003		5.04	--	5.16
9/19/2003		5.56	--	4.64
12/12/2003		4.72	--	5.48

TABLE ONE
Groundwater Elevation Data
Oakland Truck Stop
8255 San Leandro Street, Oakland, CA

Well ID & Date Sampled	Top of Casing Elevation (msl)	Depth to Water (feet)	Free-Floating Hydrocarbon Thickness (feet)	Groundwater Elevation (msl)
MW-6				
12/6/1999	96.79	5.80	--	90.99
3/8/2000		4.10	--	92.69
6/14/2000		5.64	--	91.15
12/11/2000		5.72	--	91.07
3/6/2001		4.32	--	92.47
6/6/2001		5.81	--	90.98
9/4/2001		6.12	--	90.67
3/11/2002		4.49	--	92.30
6/6/2002		5.33	--	91.46
9/4/2002	10.71	5.92	--	4.79
12/17/2002		3.85	--	6.86
3/7/2003		4.96	--	5.75
6/5/2003		5.18	--	5.53
9/19/2003		5.81	--	4.90
12/12/2003		4.73	--	5.98
MW-7				
9/4/2002	9.17	4.67	--	4.50
12/17/2002		3.11	--	6.06
3/7/2003		3.89	--	5.28
6/5/2003		3.57	--	5.60
9/19/2003		4.57	--	4.60
12/12/2003		3.48	--	5.69
MW-8				
9/4/2002	9.68	4.94	--	4.74
12/17/2002		3.26	--	6.42
3/7/2003		4.01	--	5.67
6/5/2003		4.28	--	5.40
9/19/2003		4.87	--	4.81
12/12/2003		3.77	--	5.91
MW-9				
9/4/2002	11.07	6.26	--	4.81
12/17/2002		4.23	--	6.84
3/7/2003		5.26	--	5.81
6/5/2003		5.56	--	5.51
9/19/2003		6.25	--	4.82
12/12/2003			Truck Parked Over Well	

Notes:

* = Groundwater elevation adjusted for the presence of free-floating hydrocarbons by the equation: Adjusted groundwater elevation = Top of casing elevation - depth to groundwater + (0.8 x free-floating hydrocarbon thickness)

Mid Coast Engineers (MCE) surveyed all site monitoring wells on July 11, 2002 to mean sea level (MSL). The updated elevation data is reflected in the table above.

TABLE TWO
Summary of Chemical Analysis of GROUNDWATER Samples
Petroleum Hydrocarbons
All results are in parts per billion

Well ID DATE	TPH Gasoline	TPH Diesel	TPH Motor Oil	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	DIPE	ETBE	TAME	TBA
<u>MW-1</u>												
8/16/1999												
12/6/1999												
3/8/2000												
6/14/2000												
12/11/2000												
3/6/2001												
6/6/2001												
9/4/2001												
3/11/2002												
6/6/2002												
9/4/2002												
12/17/2002												
3/7/2003												
6/5/2003												
9/19/2003												
12/12/2003												
<u>MW-2</u>												
8/16/1999	2,200	970*	< 500	3.8	< 2.0	3	< 4.0	< 20	NA	NA	NA	NA
12/6/1999	1,900	400*	< 500	16	< 0.5	1.5	< 0.5	5.2	NA	NA	NA	NA
3/8/2000	1,600*	530*	< 500	9.7	< 0.5	2.7	< 0.5	27	NA	NA	NA	NA
6/14/2000	2,000	75	< 100	2.8	< 0.5	3.4	< 0.5	16	3.4	< 0.5	< 0.5	64
12/11/2000	1,000	120	< 100	2.6	< 0.5	< 0.5	< 0.5	15	2.9	< 0.5	< 0.5	62
3/6/2001	1,500	1,400	NA	2.2	< 0.5	1.7	< 0.5	22	3.4	< 0.5	< 0.5	83
6/6/2001	1,700	190	NA	2.6	< 0.5	2.3	< 0.5	26	3.2	< 0.5	< 0.5	83
9/4/2001	2,000	450	NA	2.7	< 0.5	2.1	< 0.5	33	3.4	< 0.5	< 0.5	93
3/11/2002	1,100	410	NA	1.0	< 0.5	0.5	< 0.5	26	2.5	< 0.5	< 0.5	69
6/6/2002	900	430	NA	1.2	< 0.5	< 0.5	< 0.5	23	2.8	< 0.5	< 0.5	73
9/4/2002	910	510	NA	1.6	< 0.5	< 0.5	< 0.5	45	2.5	< 0.5	< 0.5	67
12/17/2002	190	220	NA	0.65	< 0.5	< 0.5	< 0.5	34	1.5	< 0.5	< 0.5	46
3/7/2003	380	300	NA	0.81	< 0.5	< 0.5	< 0.5	50	1.9	< 0.5	< 0.5	73
6/5/2003	2,200	2,200	NA	1.7	< 0.5	1.5	< 0.5	180	4.9	< 0.5	1.3	110
9/19/2003	2,300	520	NA	2.0	< 0.5	2.1	< 0.5	180	3.7	< 0.5	1.1	120
12/12/2003	3,000	2,200	NA	2.1	< 0.5	1.7	< 0.5	250	4.5	< 0.5	1.6	130
<u>MW-3</u>												
8/16/1999	56,000	10,000**	< 500	17,000	2,600	2,600	1,200	6,100	NA	NA	NA	NA
12/6/1999	40,000	9,100*	< 500	16,000	140	1,800	100	2,200/4,000‡	NA	NA	NA	NA
3/8/2000	22,000	4,500*	< 500	11,000	72	1,100	130	3,400	NA	NA	NA	NA
6/14/2000	34,000	16,000	< 100	13,000	94	1,300	160	4,800	31	< 10	21	2,700
12/11/2000	24,000	14,000	< 100	13,000	88	780	120	4,300	< 50	< 50	< 50	2,300
3/6/2001	34,000	12,000	NA	15,000	100	1,100	130	4,000	< 50	< 50	< 50	2,100
6/6/2001	34,000	20,000	NA	14,000	94	550	110	4,400	< 50	< 50	< 50	2,300
9/4/2001	29,000	19,000	NA	13,000	83	480	83	4,100	< 50	< 50	< 50	3,400
3/11/2002	12,000	14,000	NA	2,900	< 20	110	< 20	530	< 20	< 20	< 20	330
6/6/2002	20,000	14,000	NA	10,000	< 50	200	51	2,400	< 50	< 50	< 50	1,200
9/4/2002	24,000	17,000	NA	11,000	< 50	140	< 50	3,200	< 50	< 50	< 50	1,400
12/17/2002	4,900	17,000	NA	2,000	< 10	52	12	360	< 10	< 10	< 10	220
3/7/2003	8,700	16,000	NA	2,300	< 10	43	11	770	< 10	< 10	< 10	360
6/5/2003	27,000	14,000	NA	10,000	53	220	53	5,000	< 50	< 50	< 50	1,600
9/19/2003	120,000	13,000	NA	20,000	170	710	250	6,100	< 25	< 25	< 25	2,600
12/12/2003	29,000	27,000	NA	12,000	74	240	79	5,600	17	< 10	30	2,100

TABLE TWO
Summary of Chemical Analysis of GROUNDWATER Samples
Petroleum Hydrocarbons
All results are in parts per billion

Well ID DATE	TPH Gasoline	TPH Diesel	TPH Motor Oil	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	DIPE	ETBE	TAME	TBA
<u>MW-4</u>												
8/16/1999	61***	1,100*	< 500	< 0.5	< 0.5	< 0.5	< 1.0	86	NA	NA	NA	NA
12/6/1999	150***	220*	< 500	< 1.0	< 1.0	< 1.0	< 1.0	130	NA	NA	NA	NA
3/8/2000	< 50	220*	< 500	< 0.5	< 0.5	< 0.5	< 0.5	130	NA	NA	NA	NA
6/14/2000	< 50	< 50	< 100	< 0.5	< 0.5	< 0.5	< 0.5	100	< 0.5	< 0.5	< 0.5	20
12/11/2000	< 50	< 50	< 100	< 0.5	< 0.5	< 0.5	< 0.5	110	< 0.5	< 0.5	< 0.5	16
3/6/2001	< 50	670	NA	< 0.5	< 0.5	< 0.5	< 0.5	110	< 0.5	< 0.5	< 0.5	9.9
6/6/2001	< 50	790	NA	< 0.5	< 0.5	< 0.5	< 0.5	110	< 0.5	< 0.5	< 0.5	20
9/4/2001	< 50	950	NA	< 0.5	< 0.5	< 0.5	< 0.5	110	< 0.5	< 0.5	< 0.5	26
3/11/2002	< 50	250	NA	< 0.5	< 0.5	< 0.5	< 0.5	84	< 0.5	< 0.5	< 0.5	21
6/6/2002	< 50	710	NA	< 0.5	< 0.5	< 0.5	< 0.5	92	< 0.5	< 0.5	< 0.5	21
9/4/2002	< 50	1,100	NA	< 0.5	< 0.5	< 0.5	< 0.5	150	< 0.5	< 0.5	< 0.5	18
12/17/2002	< 50	470	NA	< 0.5	< 0.5	< 0.5	< 0.5	120	< 0.5	< 0.5	< 0.5	< 5.0
3/7/2003	< 50	470	NA	< 0.5	< 0.5	< 0.5	< 0.5	120	< 0.5	< 0.5	0.52	18
6/5/2003	< 50	2,000	NA	< 0.5	< 0.5	< 0.5	< 0.5	110	< 0.5	< 0.5	0.50	23
9/19/2003	< 50	830	NA	< 0.5	< 0.5	< 0.5	< 0.5	110	< 0.5	< 0.5	< 0.80	23
12/12/2003	< 50	1,700	NA	< 0.5	< 0.5	< 0.5	< 0.5	120	< 0.5	< 0.5	< 0.50	16
<u>MW-5</u>												
12/6/1999	450***	2,000*	< 500	< 1.0	< 1.0	< 1.0	< 1.0	21	NA	NA	NA	NA
3/8/2000	51***	530*	< 500	< 0.5	< 0.5	< 0.5	< 0.5	84	NA	NA	NA	NA
6/14/2000	380	1,400	< 100	< 0.5	< 0.5	< 0.5	< 0.5	160	12	< 0.5	< 0.5	22
12/11/2000	540	590	< 100	< 0.5	< 0.5	< 0.5	< 0.5	240	9.5	< 0.5	< 0.5	32
3/6/2001	510	2,900	NA	< 0.5	< 0.5	< 0.5	< 0.5	140	13	< 0.5	< 0.5	19
6/6/2001	280	2,700	NA	< 0.5	< 0.5	< 0.5	< 0.5	180	13	< 0.5	< 0.5	26
9/4/2001	630	2,600	NA	< 0.5	< 0.5	< 0.5	< 0.5	180	9.4	< 0.5	< 0.5	29
3/11/2002	97	3,500	NA	< 0.5	< 0.5	< 0.5	< 0.5	29	0.79	< 0.5	< 0.5	7.4
6/6/2002	61	3,500	NA	< 0.5	< 0.5	< 0.5	< 0.5	150	2.9	< 0.5	< 0.5	34
9/4/2002	92	6,100	NA	< 0.5	< 0.5	< 0.5	< 0.5	370	3.6	< 0.5	< 0.5	72
12/17/2002	110	2,100	NA	< 0.5	< 0.5	< 0.5	< 0.5	110	4.2	< 0.5	< 0.5	14
3/7/2003	71	1,600	NA	< 0.5	< 0.5	< 0.5	< 0.5	150	2.2	< 0.5	< 0.5	35
6/5/2003	95	3,300	NA	< 0.5	< 0.5	< 0.5	< 0.5	170	4.6	< 0.5	< 0.5	43
9/19/2003	100	1,400	NA	< 0.5	< 0.5	< 0.5	< 0.5	310	5.2	< 0.50	0.68	86
12/12/2003	< 50	7,600	NA	< 0.5	< 0.5	< 0.5	< 0.5	270	5.9	< 0.50	0.70	91
<u>MW-6</u>												
12/6/1999	13,000	< 50	< 500	180	21	11	24	< 100	NA	NA	NA	NA
3/8/2000	< 10,000	4,600*	< 500	230	26	18	39	12,000	NA	NA	NA	NA
6/14/2000	8,400	12,000	< 100	190	12	9.5	22	15,000	< 5.0	< 5.0	70	3,300
12/11/2000	< 5,000	10,000	< 100	190	< 50	< 50	< 50	14,000	< 50	< 50	74	2,900
3/6/2001	5,300	6,700	NA	220	< 50	< 50	< 50	13,000	< 50	< 50	84	2,100
6/6/2001	5,000	23,000	NA	210	< 25	< 25	< 25	12,000	< 25	< 25	84	4,200
9/4/2001	5,400	22,000	NA	190	12	< 10	23	15,000	< 10	< 10	79	4,000
3/11/2002	4,600	11,000	NA	160	< 25	< 25	< 25	15,000	< 25	< 25	39	5,100
6/6/2002	< 5,000	14,000	NA	200	< 50	< 50	< 50	17,000	< 50	< 50	77	8,700
9/4/2002	< 5,000	50,000	NA	140	< 50	< 50	< 50	21,000	< 50	< 50	52	7,500
12/17/2002	< 5,000	9,100	NA	130	< 50	< 50	< 50	16,000	< 50	< 50	64	6,300
3/7/2003	< 5,000	12,000	NA	160	< 50	< 50	< 50	20,000	< 50	< 50	53	7,500
6/5/12003	< 5,000	23,000	NA	230	< 50	< 50	< 50	19,000	< 50	< 50	86	7,100
9/19/2003	8,900	24,000	NA	220	< 25	< 25	< 25	15,000	< 25	< 25	74	8,100
12/12/2003	8,000	24,000	NA	190	< 25	< 25	32	14,000	< 25	< 25	65	7,400

TABLE TWO
Summary of Chemical Analysis of GROUNDWATER Samples
Petroleum Hydrocarbons
All results are in parts per billion

Well ID DATE	TPH Gasoline	TPH Diesel	TPH Motor Oil	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	DIPE	ETBE	TAME	TBA
MW-7												
9/4/2002	< 50	130****	NA	< 0.5	< 0.5	< 0.5	< 0.5	3.4	< 0.5	< 0.5	< 0.5	< 5.0
12/17/2002	< 50	220	NA	< 0.5	< 0.5	< 0.5	< 0.5	2.8	< 0.5	< 0.5	< 0.5	< 5.0
3/7/2003	< 50	140	NA	< 0.5	< 0.5	< 0.5	< 0.5	1.8	< 0.5	< 0.5	< 0.5	< 5.0
6/5/2003	< 50	200	NA	< 0.5	< 0.5	< 0.5	< 0.5	2.5	< 0.5	< 0.5	< 0.5	< 5.0
9/19/2003	< 50	320	NA	< 0.5	< 0.5	< 0.5	< 0.5	5.0	< 0.5	< 0.5	< 0.5	< 5.0
12/12/2003	< 50	380	NA	< 0.5	< 0.5	< 0.5	< 0.5	2.3	< 0.5	< 0.5	< 0.5	< 5.0
MW-8												
9/4/2002	< 50	170	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
12/17/2002	< 50	100	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
3/7/2003	< 50	62	NA	< 0.5	< 0.5	< 0.5	< 0.5	33	< 0.5	< 0.5	< 0.5	< 5.0
6/5/2003	< 50	270	NA	< 0.5	< 0.5	< 0.5	< 0.5	13	< 0.5	< 0.5	< 0.5	< 5.0
9/19/2003	< 50	250	NA	< 0.5	< 0.5	< 0.5	< 0.5	11	< 0.5	< 0.5	< 0.5	< 5.0
12/12/2003	< 50	420	NA	< 0.5	< 0.5	< 0.5	< 0.5	11	< 0.5	< 0.5	< 0.5	< 5.0
MW-9												
9/4/2002	< 2,500	1,000	NA	< 25	< 25	< 25	< 25	12,000	< 25	< 25	70	1,700
12/17/2002	< 2,000	880	NA	< 20	< 20	< 20	< 20	4,500	< 20	< 20	23	2,300
3/7/2003	< 500	450	NA	< 5.0	< 5.0	< 5.0	< 5.0	1,700	< 5.0	< 5.0	8.4	6,600
6/5/2003	< 500	4,500	NA	< 5.0	< 5.0	< 5.0	< 5.0	120	< 5.0	< 5.0	< 5.0	17,000
9/19/2003	< 1000	4,500	NA	< 10	< 10	< 10	< 10	38	< 10	< 10	< 10	15,000
12/12/2003	Not Sampled - Truck Parked Over Well											
DHS MCL	NE	NE	NE	1	150	1,700	1,750	13	NE	NE	NE	NE
ESL	400	500	500	46	130	290	1	1,800	NE	NE	NE	NE

Notes

Non-detectable concentrations are noted by the less than symbol (<) followed by the detection limit.

Most recent concentrations are in bold

DHS MCL is the California Department of Health Services maximum contaminant level for drinking water.

ESL = Environmental screening levels presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (July 2003)" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region.

NE = MCL/ESL not established.

NA = Sample not analyzed for this compound.

* = Non-typical diesel pattern, hydrocarbons in early diesel range.

** = Estimated concentration due to overlapping fuel patterns in the sample.

*** = Non-typical gasoline pattern.

**** = Non-typical diesel pattern.

= MTBE concentration by EPA Method 8260

APPENDIX A

Well Sampling Field Logs



WELL SAMPLING FIELD LOG

Project Name and Address: OTS
Job #: _____ Date of sampling: 12/2/03
Well Name: MLW-1 Sampled by: DH
Total depth of well (feet): _____ Well diameter (inches): 2
Depth to water before sampling (feet): 22 / 26.3
Thickness of floating product if any: 0.1 / 1
Depth of well casing in water (feet): _____
Number of gallons per well casing volume (gallons): _____
Number of well casing volumes to be removed: _____
Required volume of groundwater to be purged before sampling (gallons): _____
Equipment used to purge the well: _____
Time Evacuation Began: _____ Time Evacuation Finished: _____
Approximate volume of groundwater purged: _____
Did the well go dry: _____ After how many gallons: _____
Time samples were collected: _____
Depth to water at time of sampling: _____
Percent recovery at time of sampling: _____
Samples collected with: _____
Sample color: _____ Color: _____
Description of sediment in sample: _____

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	iced?	Analysis
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

NOT SAMPLED THIS QUARTER



WELL SAMPLING FIELD LOG

Project Name and Address: 615
 Job #: _____ Date of sampling: 12/12/05
 Well Name: MW-2 Sampled by: PH
 Total depth of well (feet): 11.9 Well diameter (inches): _____
 Depth to water before sampling (feet): 5.13
 Thickness of floating product if any: _____
 Depth of well casing in water (feet): 9.77
 Number of gallons per well casing volume (gallons): 1.6
 Number of well casing volumes to be removed: 5
 Req'd volume of groundwater to be purged before sampling (gallons): 4.8
 Equipment used to purge the well: BAUER
 Time Evacuation Began: 1155 Time Evacuation Finished: 1205
 Approximate volume of groundwater purged: 4.8
 Did the well go dry?: NO After how many gallons: _____
 Time samples were collected: 1210
 Depth to water at time of sampling: 10.53
 Percent recovery at time of sampling: _____
 Samples collected with: BAUER
 Sample color: CLR Odor: HC
 Description of sediment in sample: _____

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1.6</u>	<u>69.1</u>	<u>5.81</u>	<u>1891</u>
<u>3.2</u>	<u>68.1</u>	<u>5.92</u>	<u>1832</u>
<u>4.8</u>	<u>67.8</u>	<u>6.10</u>	<u>1831</u>
_____	_____	_____	_____
_____	_____	_____	_____

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>MW-2</u>	<u>5</u>	<u>40ml VOA</u>	<u>Yes</u>	<u>Y</u>	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____



WELL SAMPLING FIELD LOG

015

Project Name and Address: _____
 Job #: _____ Date of sampling: 12/2/03
 Well Name: MW-3 Sampled by: PH
 Total depth of well (feet): 15 Well diameter (inches): 2
 Depth to water before sampling (feet): 4.68
 Thickness of floating product if any: _____
 Depth of well casing in water (feet): 10.32
 Number of gallons per well casing volume (gallons): 1.7
 Number of well casing volumes to be removed: 3
 Req'd volume of groundwater to be purged before sampling (gallons): 5.0
 Equipment used to purge the well: BAUER
 Time Evacuation Began: 1255 Time Evacuation Finished: 1312
 Approximate volume of groundwater purged: 5
 Did the well go dry?: NO After how many gallons: -
 Time samples were collected: 1315
 Depth to water at time of sampling: 11.51
 Percent recovery at time of sampling: _____
 Samples collected with: BAUER
 Sample color: GRY Odor: HCL - SHOWN
 Description of sediment in sample: SILT

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1.7</u>	<u>68.9</u>	<u>7.10</u>	<u>991</u>
<u>3.9</u>	<u>68.1</u>	<u>7.12</u>	<u>1103</u>
<u>5.0</u>	<u>67.7</u>	<u>7.15</u>	<u>1098</u>
_____	_____	_____	_____
_____	_____	_____	_____

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>MW-3</u>	<u>5</u>	<u>40 mL VOA</u>	<u>HCC</u>	<u>Y</u>	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____



WELL SAMPLING FIELD LOG

Project Name and Address: 015
 Job #: _____ Date of sampling: 12/12/03
 Well Name: Mw-4 Sampled by: OH
 Total depth of well (feet): 14.0 Well diameter (inches): _____
 Depth to water before sampling (feet): 4.91
 Thickness of floating product if any: 0.09
 Depth of well casing in water (feet): 9.09
 Number of gallons per well casing volume (gallons): 1.5
 Number of well casing volumes to be removed: 3
 Req'd volume of groundwater to be purged before sampling (gallons): 4.5
 Equipment used to purge the well: BAILER
 Time Evacuation Began: 1110 Time Evacuation Finished: 1128
 Approximate volume of groundwater purged: 5
 Did the well go dry?: No After how many gallons: —
 Time samples were collected: 1128
 Depth to water at time of sampling: 6.10
 Percent recovery at time of sampling: _____
 Samples collected with: BAILER
 Sample color: CLR Odor: —
 Description of sediment in sample: _____

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1.5</u>	<u>70.5</u>	<u>5.50</u>	<u>1601</u>
<u>3.0</u>	<u>68.9</u>	<u>6.10</u>	<u>1588</u>
<u>4.5</u>	<u>68.7</u>	<u>6.20</u>	<u>1583</u>
_____	_____	_____	_____
_____	_____	_____	_____

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>Mw-4</u>	<u>5</u>	<u>113ml VOA</u>	<u>1122</u>	<u>Y</u>	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____



WELL SAMPLING FIELD LOG

OTS

Project Name and Address: _____
 Job #: _____ Date of sampling: 12/2/08
 Well Name: MW-5 Sampled by: PH
 Total depth of well (feet): 111.0 Well diameter (inches): 2
 Depth to water before sampling (feet): 41.72
 Thickness of floating product if any: _____
 Depth of well casing in water (feet): 19.28
 Number of gallons per well casing volume (gallons): 1.5
 Number of well casing volumes to be removed: 3
 Req'd volume of groundwater to be purged before sampling (gallons): 4.5
 Equipment used to purge the well: BALCOR
 Time Evacuation Began: 1225 Time Evacuation Finished: 1240
 Approximate volume of groundwater purged: 4.5
 Did the well go dry?: NO After how many gallons: _____
 Time samples were collected: 1242
 Depth to water at time of sampling: 9.98
 Percent recovery at time of sampling: _____
 Samples collected with: BALCOR
 Sample color: CLR Odor: HC
 Description of sediment in sample: _____

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1.5</u>	<u>71.0</u>	<u>6.14</u>	<u>1112</u>
<u>3.0</u>	<u>69.8</u>	<u>6.48</u>	<u>1013</u>
<u>4.5</u>	<u>64.6</u>	<u>6.59</u>	<u>1008</u>
_____	_____	_____	_____
_____	_____	_____	_____

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>MW-5</u>	<u>5</u>	<u>40 ml VOA</u>	<u>ACL</u>	<u>Y</u>	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____



WELL SAMPLING FIELD LOG

Project Name and Address: OT 8
 Job #: _____ Date of sampling: 12/12/03
 Well Name: MW-7 Sampled by: VJ
 Total depth of well (feet): 15.4 Well diameter (inches): _____
 Depth to water before sampling (feet): 3.48
 Thickness of floating product if any: -
 Depth of well casing in water (feet): 11.92
 Number of gallons per well casing volume (gallons): 1.9
 Number of well casing volumes to be removed: 5
 Req'd volume of groundwater to be purged before sampling (gallons): 507
 Equipment used to purge the well: BALLER
 Time Evacuation Began: 1430 Time Evacuation Finished: 1445
 Approximate volume of groundwater purged: 60
 Did the well go dry?: No After how many gallons: -
 Time samples were collected: 1450
 Depth to water at time of sampling: 5.38
 Percent recovery at time of sampling: -
 Samples collected with: BALLER
 Sample color: Clear Odor: -
 Description of sediment in sample: -

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1.9</u>	<u>66.1</u>	<u>6.28</u>	<u>1285</u>
<u>3.8</u>	<u>64.8</u>	<u>6.34</u>	<u>1271</u>
<u>5.7</u>	<u>64.4</u>	<u>6.40</u>	<u>1269</u>
_____	_____	_____	_____
_____	_____	_____	_____

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	ICcd?	Analysis
<u>MW-7</u>	<u>5</u>	<u>400ml VBA</u>	<u>HEC</u>	<u>Y</u>	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____



WELL SAMPLING FIELD LOG

O.T.S

Project Name and Address: _____
 Job #: _____ Date of sampling: 12/12/03
 Well Name: MU-8 Sampled by: DH
 Total depth of well (feet): 15.0 Well diameter (inches): 2
 Depth to water before sampling (feet): 3.77
 Thickness of floating product if any: _____
 Depth of well casing in water (feet): 11.23
 Number of gallons per well casing volume (gallons): 1.8
 Number of well casing volumes to be removed: 3
 Req'd volume of groundwater to be purged before sampling (gallons): 5.4
 Equipment used to purge the well: BALLER
 Time Evacuation Began: 1035 Time Evacuation Finished: 1053
 Approximate volume of groundwater purged: 6
 Did the well go dry?: NO After how many gallons: -
 Time samples were collected: 1055
 Depth to water at time of sampling: 9.48
 Percent recovery at time of sampling: _____
 Samples collected with: _____
 Sample color: BROWN Odor: _____
 Description of sediment in sample: SILT

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1.8</u>	<u>64.9</u>	<u>6.01</u>	<u>1311</u>
<u>3.2</u>	<u>64.1</u>	<u>6.25</u>	<u>1321</u>
<u>5.4</u>	<u>63.9</u>	<u>6.28</u>	<u>1322</u>
_____	_____	_____	_____
_____	_____	_____	_____

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iccd?	Analysis
<u>MU-8</u>	<u>5</u>	<u>4.0 L VOA</u>	<u>Rec</u>	<u>Y</u>	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____



WELL SAMPLING FIELD LOG

Project Name and Address: 015
Job #: _____ Date of sampling: 12/2/03
Well Name: MW-4 Sampled by: PH
Total depth of well (feet): _____ Well diameter (inches): 4
Depth to water before sampling (feet): _____
Thickness of floating product if any: _____
Depth of well casing in water (feet): _____
Number of gallons per well casing volume (gallons): _____
Number of well casing volumes to be removed: _____
Required volume of groundwater to be purged before sampling (gallons): _____
Equipment used to purge the well: _____
Time Evacuation Began: _____ Time Evacuation Finished: _____
Approximate volume of groundwater purged: _____
Did the well go dry: _____ After how many gallons: _____
Time samples were collected: _____
Depth to water at time of sampling: _____
Percent recovery at time of sampling: _____
Samples collected with: _____
Sample color: _____ Odor: _____
Description of sediment in sample: _____

NOT SAMPLED THIS QUARTER

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

TRUCK PARKED ON WELL - NO OWNER

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

APPENDIX B

Certified Analytical Report
and
Chain of Custody Documentation



Report Number : 36291

Date : 12/24/2003

Damian Hriciga
Aqua Science Engineers, Inc.
208 W. El Pintado Road
Danville, CA 94526

Subject : 7 Water Samples
Project Name : OTS
Project Number : 3540

Dear Mr. Hriciga,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink that reads "R. Paul Furry". The signature is written in a cursive style.

R P Furry



Report Number : 36291

Date : 12/24/2003

Project Name : **OTS**

Project Number : **3540**


Sample : **MW-2**

Matrix : Water

Lab Number : 36291-01

Sample Date :12/12/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	2.1	0.50	ug/L	EPA 8260B	12/18/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Ethylbenzene	1.7	0.50	ug/L	EPA 8260B	12/18/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Methyl-t-butyl ether (MTBE)	250	0.50	ug/L	EPA 8260B	12/18/2003
Dilsopropyl ether (DIPE)	4.5	0.50	ug/L	EPA 8260B	12/18/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Tert-amyl methyl ether (TAME)	1.6	0.50	ug/L	EPA 8260B	12/18/2003
Tert-Butanol	130	5.0	ug/L	EPA 8260B	12/18/2003
Methanol	< 50	50	ug/L	EPA 8260B	12/18/2003
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/2003
TPH as Gasoline	3000	50	ug/L	EPA 8260B	12/18/2003
Toluene - d8 (Surr)	94.2		% Recovery	EPA 8260B	12/18/2003
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8260B	12/18/2003
TPH as Diesel	2200	50	ug/L	M EPA 8015	12/21/2003
Octacosane (Diesel Surrogate)	95.7		% Recovery	M EPA 8015	12/21/2003

Approved By:  R P Furry



Report Number : 36291

Date : 12/24/2003

Project Name : **OTS**

Project Number : **3540**

Sample : **MW-3**

Matrix : Water

Lab Number : 36291-02

Sample Date :12/12/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	12000	50	ug/L	EPA 8260B	12/19/2003
Toluene	74	10	ug/L	EPA 8260B	12/18/2003
Ethylbenzene	240	10	ug/L	EPA 8260B	12/18/2003
Total Xylenes	79	10	ug/L	EPA 8260B	12/18/2003
Methyl-t-butyl ether (MTBE)	5600	10	ug/L	EPA 8260B	12/18/2003
Diisopropyl ether (DIPE)	17	10	ug/L	EPA 8260B	12/18/2003
Ethyl-t-butyl ether (ETBE)	< 10	10	ug/L	EPA 8260B	12/18/2003
Tert-amyl methyl ether (TAME)	30	10	ug/L	EPA 8260B	12/18/2003
Tert-Butanol	2100	100	ug/L	EPA 8260B	12/18/2003
Methanol	< 1000	1000	ug/L	EPA 8260B	12/18/2003
Ethanol	< 100	100	ug/L	EPA 8260B	12/18/2003
TPH as Gasoline	29000	1000	ug/L	EPA 8260B	12/18/2003
Toluene - d8 (Surr)	97.2		% Recovery	EPA 8260B	12/18/2003
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	12/18/2003
TPH as Diesel	27000	500	ug/L	M EPA 8015	12/22/2003
Octacosane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	12/22/2003

Approved By:  R P Furry



Report Number : 36291

Date : 12/24/2003

Project Name : **OTS**

Project Number : **3540**

Sample : **MW-4**

Matrix : Water

Lab Number : 36291-03

Sample Date :12/12/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Methyl-t-butyl ether (MTBE)	120	0.50	ug/L	EPA 8260B	12/18/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Tert-Butanol	16	5.0	ug/L	EPA 8260B	12/18/2003
Methanol	< 50	50	ug/L	EPA 8260B	12/18/2003
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/2003
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/18/2003
4-Bromofluorobenzene (Surr)	105		% Recovery	EPA 8260B	12/18/2003
TPH as Diesel	1700	50	ug/L	M EPA 8015	12/21/2003
Octacosane (Diesel Surrogate)	86.3		% Recovery	M EPA 8015	12/21/2003

Approved By:  R P Furry



Report Number : 36291

Date : 12/24/2003

Project Name : **OTS**

Project Number : **3540**

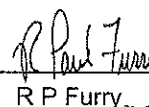
Sample : **MW-5**

Matrix : Water

Lab Number : 36291-04

Sample Date :12/12/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Methyl-t-butyl ether (MTBE)	270	0.50	ug/L	EPA 8260B	12/18/2003
Dilsopropyl ether (DIPE)	5.9	0.50	ug/L	EPA 8260B	12/18/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Tert-amyl methyl ether (TAME)	0.70	0.50	ug/L	EPA 8260B	12/18/2003
Tert-Butanol	91	5.0	ug/L	EPA 8260B	12/18/2003
Methanol	< 50	50	ug/L	EPA 8260B	12/18/2003
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/2003
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/18/2003
4-Bromofluorobenzene (Surr)	105		% Recovery	EPA 8260B	12/18/2003
TPH as Diesel	7600	50	ug/L	M EPA 8015	12/21/2003
Octacosane (Diesel Surrogate)	86.7		% Recovery	M EPA 8015	12/21/2003


Approved By: R P Furry



Report Number : 36291

Date : 12/24/2003

Project Name : **OTS**

Project Number : **3540**

Sample : **MW-6**

Matrix : Water

Lab Number : 36291-05

Sample Date :12/12/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	190	25	ug/L	EPA 8260B	12/19/2003
Toluene	< 25	25	ug/L	EPA 8260B	12/19/2003
Ethylbenzene	< 25	25	ug/L	EPA 8260B	12/19/2003
Total Xylenes	32	25	ug/L	EPA 8260B	12/19/2003
Methyl-t-butyl ether (MTBE)	14000	25	ug/L	EPA 8260B	12/19/2003
Diisopropyl ether (DIPE)	< 25	25	ug/L	EPA 8260B	12/19/2003
Ethyl-t-butyl ether (ETBE)	< 25	25	ug/L	EPA 8260B	12/19/2003
Tert-amyl methyl ether (TAME)	65	25	ug/L	EPA 8260B	12/19/2003
Tert-Butanol	7400	250	ug/L	EPA 8260B	12/19/2003
Methanol	< 2500	2500	ug/L	EPA 8260B	12/19/2003
Ethanol	< 250	250	ug/L	EPA 8260B	12/19/2003
TPH as Gasoline	8000	2500	ug/L	EPA 8260B	12/19/2003
Toluene - d8 (Surr)	97.6		% Recovery	EPA 8260B	12/19/2003
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	12/19/2003
TPH as Diesel	24000	50	ug/L	M EPA 8015	12/21/2003
Octacosane (Diesel Surrogate)	98.2		% Recovery	M EPA 8015	12/21/2003


Approved By: R P Furry



Report Number : 36291

Date : 12/24/2003

Project Name : **OTS**

Project Number : **3540**

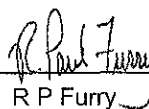
Sample : **MW-7**

Matrix : Water

Lab Number : 36291-06

Sample Date :12/12/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/19/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/19/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/19/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/19/2003
Methyl-t-butyl ether (MTBE)	2.3	0.50	ug/L	EPA 8260B	12/19/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/19/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/19/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/19/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/19/2003
Methanol	< 50	50	ug/L	EPA 8260B	12/19/2003
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/19/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/19/2003
Toluene - d8 (Surr)	98.2		% Recovery	EPA 8260B	12/19/2003
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	12/19/2003
TPH as Diesel	380	50	ug/L	M EPA 8015	12/24/2003
Octacosane (Diesel Surrogate)	86.0		% Recovery	M EPA 8015	12/24/2003

Approved By:  R P Furry



Report Number : 36291

Date : 12/24/2003

Project Name : **OTS**

Project Number : **3540**

Sample : **MW-8**

Matrix : Water

Lab Number : 36291-07

Sample Date :12/12/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Methyl-t-butyl ether (MTBE)	11	0.50	ug/L	EPA 8260B	12/18/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/2003
Methanol	< 50	50	ug/L	EPA 8260B	12/18/2003
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/2003
Toluene - d8 (Surr)	99.7		% Recovery	EPA 8260B	12/18/2003
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	12/18/2003
TPH as Diesel	420	50	ug/L	M EPA 8015	12/21/2003
Octacosane (Diesel Surrogate)	101		% Recovery	M EPA 8015	12/21/2003

Approved By:  R P Furry

Report Number : 36291

Date : 12/24/2003

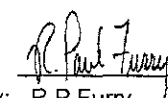
QC Report : Method Blank Data

Project Name : OTS

Project Number : 3540

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 50	50	ug/L	M EPA 8015	12/20/2003
Octacosane (Diesel Surrogate)	88.7		%	M EPA 8015	12/20/2003
TPH as Diesel	< 50	50	ug/L	M EPA 8015	12/23/2003
Octacosane (Diesel Surrogate)	98.2		%	M EPA 8015	12/23/2003
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/2003
Methanol	< 50	50	ug/L	EPA 8260B	12/18/2003
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/2003
Toluene - d8 (Surr)	100		%	EPA 8260B	12/18/2003
4-Bromofluorobenzene (Surr)	92.7		%	EPA 8260B	12/18/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/17/2003
Methanol	< 50	50	ug/L	EPA 8260B	12/17/2003
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/17/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/17/2003
Toluene - d8 (Surr)	98.0		%	EPA 8260B	12/17/2003
4-Bromofluorobenzene (Surr)	102		%	EPA 8260B	12/17/2003
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/18/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/2003
Methanol	< 50	50	ug/L	EPA 8260B	12/18/2003
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/18/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/18/2003
Toluene - d8 (Surr)	98.0		%	EPA 8260B	12/18/2003
4-Bromofluorobenzene (Surr)	100		%	EPA 8260B	12/18/2003



Approved By: R P Furry

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 36291

Date : 12/24/2003

QC Report : Method Blank Data

Project Name : **OTS**

Project Number : **3540**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2003
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/17/2003
Methanol	< 50	50	ug/L	EPA 8260B	12/17/2003
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	12/17/2003
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/17/2003
Toluene - d8 (Surr)	99.6		%	EPA 8260B	12/17/2003
4-Bromofluorobenzene (Surr)	104		%	EPA 8260B	12/17/2003

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
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Approved By:  R P Furry

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 36291

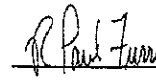
Date : 12/24/2003

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **OTS**

Project Number : **3540**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	36277-03	<0.50	39.5	40.2	38.9	39.6	ug/L	EPA 8260B	12/19/03	98.4	98.3	0.102	70-130	25
Toluene	36277-03	<0.50	39.5	40.2	38.6	39.2	ug/L	EPA 8260B	12/19/03	97.6	97.3	0.257	70-130	25
Tert-Butanol	36277-03	<5.0	198	201	183	191	ug/L	EPA 8260B	12/19/03	92.8	95.1	2.45	70-130	25
Methyl-t-Butyl Ether	36277-03	<0.50	39.5	40.2	39.4	41.1	ug/L	EPA 8260B	12/19/03	99.8	102	2.35	70-130	25
Benzene	36262-05	<0.50	40.0	39.8	37.4	37.2	ug/L	EPA 8260B	12/18/03	93.5	93.6	0.134	70-130	25
Toluene	36262-05	<0.50	40.0	39.8	37.5	37.7	ug/L	EPA 8260B	12/18/03	93.8	94.9	1.19	70-130	25
Tert-Butanol	36262-05	8.8	200	199	193	196	ug/L	EPA 8260B	12/18/03	92.2	94.0	1.95	70-130	25
Methyl-t-Butyl Ether	36262-05	110	40.0	39.8	145	144	ug/L	EPA 8260B	12/18/03	75.2	75.0	0.392	70-130	25
Benzene	36276-09	5.9	40.0	40.0	43.6	43.2	ug/L	EPA 8260B	12/17/03	94.1	93.2	0.988	70-130	25
Toluene	36276-09	<0.50	40.0	40.0	39.0	38.8	ug/L	EPA 8260B	12/17/03	97.6	97.0	0.514	70-130	25
Tert-Butanol	36276-09	<5.0	200	200	199	198	ug/L	EPA 8260B	12/17/03	99.3	98.8	0.570	70-130	25
Methyl-t-Butyl Ether	36276-09	<0.50	40.0	40.0	35.4	35.6	ug/L	EPA 8260B	12/17/03	88.4	89.0	0.676	70-130	25
TPH as Diesel	Blank	<50	1000	1000	1220	1040	ug/L	M EPA 8015	12/20/03	122	104	16.4	70-130	25
Benzene	36314-04	<0.50	40.0	40.0	37.3	35.7	ug/L	EPA 8260B	12/18/03	93.2	89.3	4.30	70-130	25
Toluene	36314-04	<0.50	40.0	40.0	36.7	35.9	ug/L	EPA 8260B	12/18/03	91.6	89.8	2.04	70-130	25
Tert-Butanol	36314-04	<5.0	200	200	203	196	ug/L	EPA 8260B	12/18/03	102	98.0	3.60	70-130	25
Methyl-t-Butyl Ether	36314-04	<0.50	40.0	40.0	42.4	40.8	ug/L	EPA 8260B	12/18/03	106	102	3.82	70-130	25



Approved By: R P Furry

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 36291

Date : 12/24/2003

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **OTS**

Project Number : **3540**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	Blank	<50	1000	1000	1120	1080	ug/L	M EPA 8015	12/23/03	112	108	4.34	70-130	25

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Approved By:  R P Furry

Report Number : 36291

Date : 12/24/2003

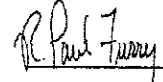
QC Report : Laboratory Control Sample (LCS)

Project Name : **OTS**

Project Number : **3540**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	12/18/03	97.6	70-130
Toluene	40.0	ug/L	EPA 8260B	12/18/03	97.2	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/18/03	96.3	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	12/18/03	101	70-130
Benzene	40.0	ug/L	EPA 8260B	12/17/03	95.0	70-130
Toluene	40.0	ug/L	EPA 8260B	12/17/03	94.8	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/17/03	91.6	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	12/17/03	90.2	70-130
Benzene	40.0	ug/L	EPA 8260B	12/17/03	95.1	70-130
Toluene	40.0	ug/L	EPA 8260B	12/17/03	97.9	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/17/03	99.1	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	12/17/03	93.9	70-130
Benzene	40.0	ug/L	EPA 8260B	12/18/03	88.5	70-130
Toluene	40.0	ug/L	EPA 8260B	12/18/03	86.6	70-130
Tert-Butanol	200	ug/L	EPA 8260B	12/18/03	93.8	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	12/18/03	100	70-130

KIFF ANALYTICAL, LLC

Approved By:  R P Furry

Aqua Science Engineers, Inc.
 208 W. El Pintado Road
 Danville, CA 94526
 (925) 820-9391
 FAX (925) 837-4853

Chain of Custody

36291

PAGE 1 OF 1

SAMPLER SIGNATURE

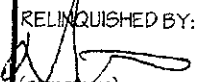

PROJECT NAME OTS JOB NO. 3540
 ADDRESS 8255 SAN LEANDRO, OAKLAND

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:
SEND EDF
 10600 101 487

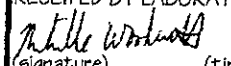
SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-DIESEL (EPA 3510/8016)	TPH-DIESEL & MOTOR OIL (EPA 3510/8016)	PURGEABLE HALOCARBONS (EPA 601/8010)	VOLATILE ORGANICS (EPA 624/8240/8260)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	OIL & GREASE (EPA 5620)	LIFT METALS (5) (EPA 6010+7000)	CAM 17 METALS (EPA 6010+7000)	PCBs & PESTICIDES (EPA 608/8080)	ORGANOPHOSPHORUS PESTICIDES (EPA 8140 EPA 608/8080)	FUEL OXYGENATES (EPA 8260)	Pb (TOTAL or DISSOLVED) (EPA 6010)	TPH-G/BTEX/5 OXY'S (EPA 8260)	TPH-G/BTEX/7 OXY'S/ 8 (EPA 8260)	
MW-2	12/2/03	1210	W	5		X													X	
MW-3		1315	W	5 2		X													X	
MW-4		1128	W	5		X													X	
MW-5		1242	V	5 4		X													X	
MW-6		1350	W	5		X													X	
MW-7		1450	W	5		X													X	
MW-8	✓	1055	W	5 4		X													X	

01
02
03
04
05
06
07

RELINQUISHED BY:
 1643
 (signature) (time)
 DAMIAN HICKS
 (printed name) (date)
 Company- ASE

RECEIVED BY:
 (signature) (time)
 (printed name) (date)
 Company-

RELINQUISHED BY:
 (signature) (time)
 (printed name) (date)
 Company-

RECEIVED BY LABORATORY:
 0855
 (signature) (time)
 michelle workman
 (printed name) (date)
 Company- Kiff Analytical

COMMENTS:
 4,2-DGP - 1,2-dichloropropane
 FOR MW-3, RUN VOLATILES
 FIRST, THEN DIESEL IF
 ENOUGH WATER.
 TURN AROUND TIME
 STANDARD 24hr 48hr 72hr
 OTHER: