



ROB5

JUL 08 2002

July 8, 2002

QMR

QUARTERLY GROUNDWATER MONITORING REPORT
JUNE 2002 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

JUL 08 2002

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. Barney Chan
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 June 2002 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 June 6, 2002, ASE measured the depth to water in each site groundwater monitoring well using an electric water level sounder. The surface of the groundwater was also checked for the presence of free-floating hydrocarbons or sheen using an electronic oil/water interface probe. The presence of free-floating hydrocarbons was confirmed with a disposable bailer half-filled for direct observation. Monitoring well MW-1 contained approximately 0.67-feet of free-floating diesel this quarter. ASE has been conducting weekly free-product removal since the previous quarter and will continue free-product removal this quarter. No free-floating hydrocarbons 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 is presented as Figure 2. Groundwater beneath the site flows to the west and northwest with a gradient of approximately 0.005 feet/foot. The groundwater flow direction at the site has been very inconsistent and highly variable.

3.0 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

Prior to sampling, monitoring wells MW-2 through MW-6 were purged of four well casing volumes of groundwater using dedicated polyethylene bailers. Petroleum hydrocarbon odors were present during the purging and sampling of all site groundwater monitoring wells. The parameters pH, temperature, and conductivity were monitored during the well purging. Samples were not collected until these parameters stabilized. Groundwater samples were collected from each well using dedicated polyethylene bailers. Since free-floating hydrocarbons were present in monitoring well MW-1, this well was not sampled.

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 well purge water was placed in 55-gallon steel drums and labeled for temporary storage.

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 by EPA Method 8260. The analytical results are presented in Tables Two. The certified analytical report and chain-of-custody documentation are included as Appendix B.

4.0 CONCLUSIONS

Monitoring well MW-1 contained approximately 0.67-feet of free-floating diesel hydrocarbons. ASE is currently performing weekly product removal from this well until the free-product is substantially decreased.

The benzene concentrations detected in groundwater samples collected from monitoring wells MW-2, MW-3 and MW-6 exceeded the California Department of Health Services (DHS) maximum contaminant level (MCL) for drinking water. The MTBE concentrations detected in groundwater samples collected from all five monitoring wells sampled exceeded the DHS MCL for drinking water. Overall, the analytical results this quarter are very similar to the previous quarter's analytical results.

5.0 RECOMMENDATIONS

ASE recommends that this site remain on a quarterly sampling schedule. The next sampling is scheduled for September 2002. ASE will continue weekly free-product removal from monitoring well MW-1 until free-product is significantly reduced in that well. In addition, ASE will complete the work outlined in ASE's workplan dated February 6, 2001 during the next quarter. The monitoring well installation is scheduled for July 8, 2002.

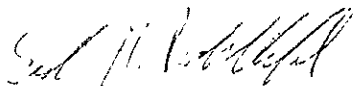
6.0 REPORT LIMITATIONS

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-EPA certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

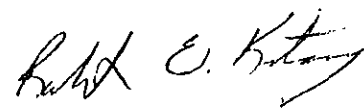
Aqua Science Engineers appreciates the opportunity to provide environmental consulting services for this project, and trust that this report meets your needs. Please feel free to call us at (925) 820-9391 if you have any questions or comments.

Respectfully submitted,

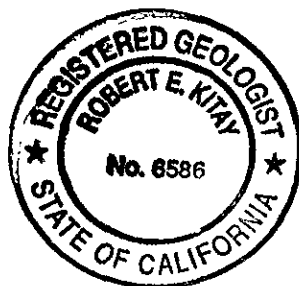
AQUA SCIENCE ENGINEERS, INC.



Erik H. Paddleford
Associate 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. Barney Chan, ACHCSA
Mr. Chuck Headlee, RWQCB, San Francisco Bay Region

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
<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
<u>MW-3</u>				
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

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

Well I.D & Date Sampled	Top of Casing Elevation (msl)	Depth to Water (feet)	Free-Floating Hydrocarbon Thickness (feet)	Groundwater Elevation (msl)
<u>MW-4</u>				
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
<u>MW-5</u>				
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
<u>MW-6</u>				
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

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)

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	DIFE	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												
<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
<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

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-4												
8/16/1999	61***	1,100*	< 500	< 0.5	< 0.5	< 0.5	< 1.0	86	NA	NA	NA	NA
12/6/1999	130***	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
MW-5												
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
MW-6												
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
DHS MCL	NE	NE	NE	150	700	700	1,750	13	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.

NE = DHS MCLs are 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.

= MTBE concentration by EPA Method 8260

TABLE THREE

Summary of Chemical Analysis of **GROUNDWATER** Samples
 HVOCs, SVOCs, PCBs and LUFT 5 Metals

All results are in **parts per billion**

Boring	Isopropyl- benzene	Other VOCs	SVOCs	PCBs	Cd	Cr	Pb	Ni	Zn
<u>MW-2</u>									
8-16-99	1.1	ND	ND	ND	< 2.0	9.0	< 5.0	1.9	< 10
<u>MW-4</u>									
8-16-99	< 0.5	ND	ND	ND	2.7	4.5	260	5.5	320
12-06-99	---	---	---	---	---	---	< 5	---	---
MCL	NE	Various	Various	0.5	5	50	15	100	5,000

Notes:

Non-detectable concentrations are noted by the less than symbol (<) followed by the detection limit or are indicated by ND if various detection limits are used for multiple compounds. Please see the original reports for detection limits for these compounds.

Detectable concentrations are in **bold**.

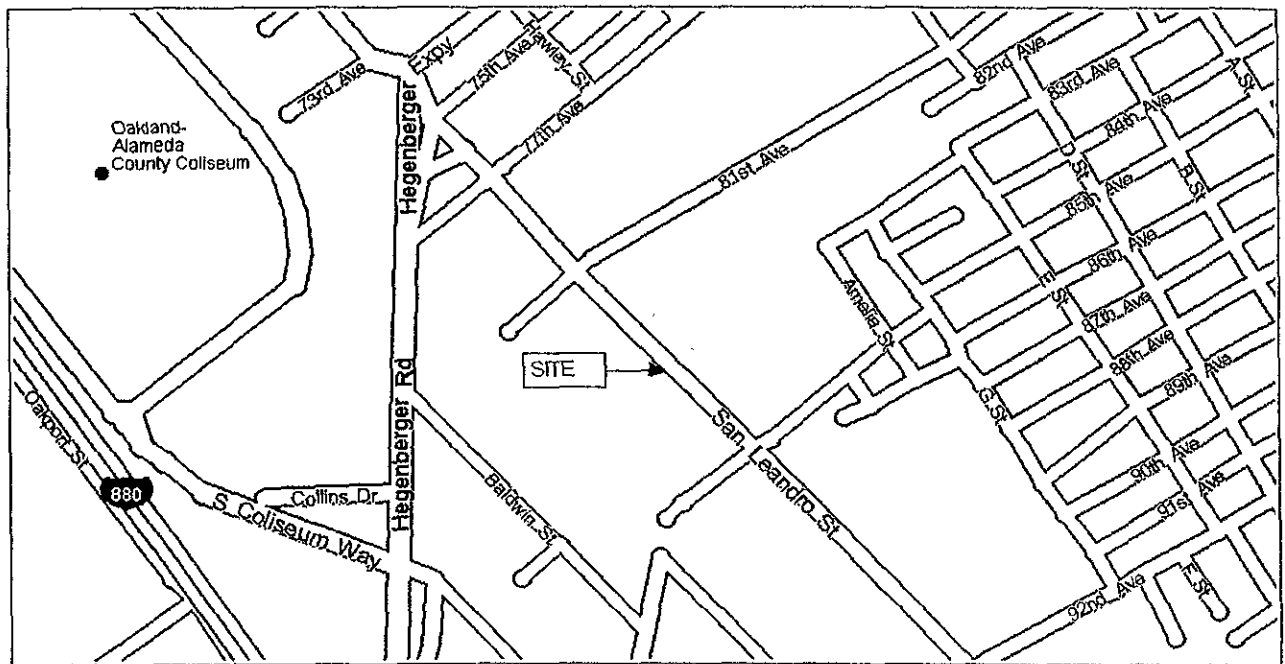
MCL is the California Department of Health Services maximum contaminant level for drinking water.

NE = Not established

FIGURES



NORTH



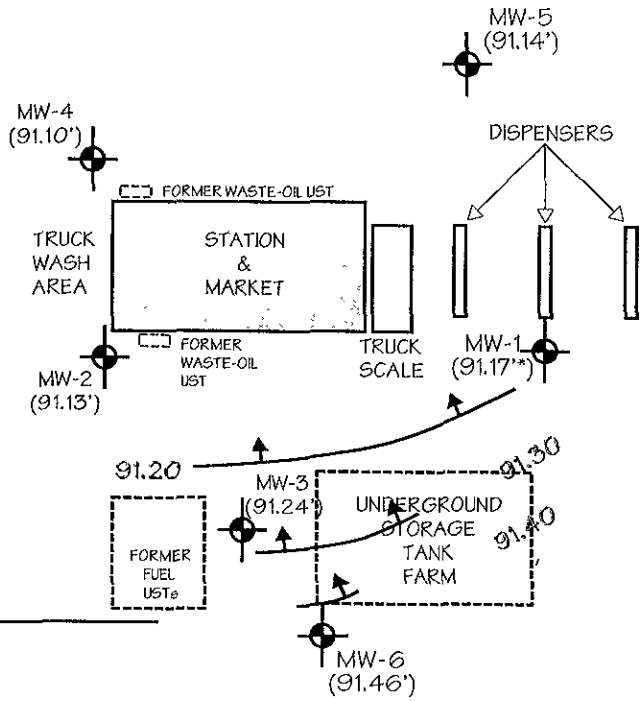
0 mi 0.1 0.2 0.3 0.4 0.5

LOCATION MAP

OAKLAND TRUCK STOP
8255 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

PROPERTY BOUNDARY

CAFE



PROPERTY BOUNDARY

SAN LEANDRO STREET

LEGEND



MONITORING WELL WITH GROUNDWATER ELEVATION IN FEET, ABOVE MEAN SEA LEVEL

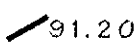
(91.17')

GROUNDWATER ELEVATION ADJUSTED FOR FREE-FLOATING HYDROCARBON THICKNESS



NORTH

SCALE
1" = 50'



91.20 POTENTIOMETRIC SURFACE CONTOUR

POTENTIOMETRIC SURFACE CONTOUR MAP
616102

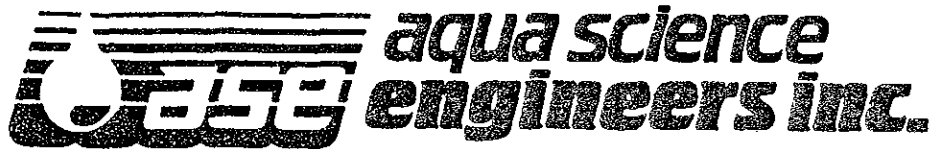
OAKLAND TRUCK STOP
8255 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

Figure 2

APPENDIX A

Well Sampling Field Logs



WELL SAMPLING FIELD LOG

Project Name and Address: Oakland Truck Stop
 Job #: 3540 Date of sampling: 6/6/02
 Well Name: MV-1 Sampled by: EP
 Total depth of well (feet): _____ Well diameter (inches): 2
 Depth to water before sampling (feet): 6.49
 Thickness of floating product if any: 0.67
 Depth of well casing in water (feet): _____
 Number of gallons per well casing volume (gallons): _____
 Number of well casing volumes to be removed: _____
 Req'd 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: _____

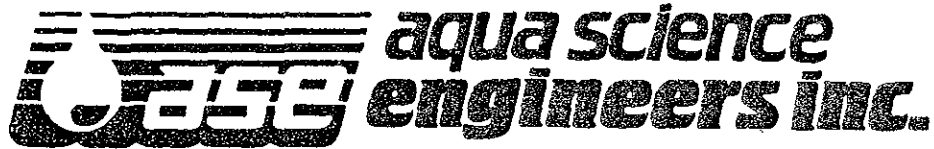
SAMPLED

CHEMICAL DATA

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

SAMPLES COLLECTED

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



WELL SAMPLING FIELD LOG

Project Name and Address: Oakland Truck Stop
 Job #: 3540 Date of sampling: 6/6/02
 Well Name: M4-2 Sampled by: EP
 Total depth of well (feet): 15.50 Well diameter (inches): 2
 Depth to water before sampling (feet): 5.69
 Thickness of floating product if any: _____
 Depth of well casing in water (feet): 9.81
 Number of gallons per well casing volume (gallons): 1.56
 Number of well casing volumes to be removed: 3
 Req'd volume of groundwater to be purged before sampling (gallons): 4.7
 Equipment used to purge the well: bailer
 Time Evacuation Began: 1140 Time Evacuation Finished: 1155
 Approximate volume of groundwater purged: 4.5
 Did the well go dry?: No After how many gallons: -
 Time samples were collected: 1200
 Depth to water at time of sampling: -
 Percent recovery at time of sampling: -
 Samples collected with: bailer
 Sample color: clear/grey Odor: none
 Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>73.6</u>	<u>6.60</u>	<u>2026</u>
<u>2</u>	<u>71.8</u>	<u>6.42</u>	<u>2013</u>
<u>3</u>	<u>70.1</u>	<u>6.35</u>	<u>2008</u>
_____	_____	_____	_____
_____	_____	_____	_____

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>M4-2</u>	<u>5</u>	<u>40 ml VOA</u>	<u>x</u>	<u>x</u>	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____



WELL SAMPLING FIELD LOG

Project Name and Address: Oakland Truck Stop
 Job #: 3540 Date of sampling: 6/6/02
 Well Name: MW-3 Sampled by: EP
 Total depth of well (feet): 15.06 Well diameter (inches): 2
 Depth to water before sampling (feet): 5.19
 Thickness of floating product if any: -
 Depth of well casing in water (feet): 9.87
 Number of gallons per well casing volume (gallons): 1.58
 Number of well casing volumes to be removed: 3
 Req'd volume of groundwater to be purged before sampling (gallons): 4.73
 Equipment used to purge the well: bailer
 Time Evacuation Began: 1055 Time Evacuation Finished: 1110
 Approximate volume of groundwater purged: 4.5
 Did the well go dry?: no After how many gallons: -
 Time samples were collected: 1115
 Depth to water at time of sampling: -
 Percent recovery at time of sampling: -
 Samples collected with: bailer
 Sample color: clear/gray Odor: moderate
 Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>78.2</u>	<u>6.50</u>	<u>1353</u>
<u>2</u>	<u>79.9</u>	<u>6.23</u>	<u>1332</u>
<u>3</u>	<u>73.6</u>	<u>6.19</u>	<u>1320</u>
<u>4</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>x</u>	<u>x</u>	



WELL SAMPLING FIELD LOG

Project Name and Address: Oakland Truck SDD
 Job #: 3540 Date of sampling: 6/6/02
 Well Name: M4-4 Sampled by: EP
 Total depth of well (feet): 14.75 Well diameter (inches): _____
 Depth to water before sampling (feet): 5.50
 Thickness of floating product if any: -
 Depth of well casing in water (feet): 9.25
 Number of gallons per well casing volume (gallons): 1.48
 Number of well casing volumes to be removed: 3
 Req'd volume of groundwater to be purged before sampling (gallons): 4.44
 Equipment used to purge the well: bailer
 Time Evacuation Began: 1210 Time Evacuation Finished: 1225
 Approximate volume of groundwater purged: 4.5
 Did the well go dry?: no After how many gallons: -
 Time samples were collected: 1230
 Depth to water at time of sampling: -
 Percent recovery at time of sampling: -
 Samples collected with: bailer
 Sample color: gray/brown Odor: none
 Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>74.2</u>	<u>6.98</u>	<u>1632</u>
<u>2</u>	<u>73.4</u>	<u>6.90</u>	<u>1634</u>
<u>3</u>	<u>71.2</u>	<u>6.89</u>	<u>1642</u>
_____	_____	_____	_____
_____	_____	_____	_____

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>M4-4</u>	<u>5</u>	<u>40 ml VOA</u>	<u>X</u>	<u>X</u>	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____



WELL SAMPLING FIELD LOG

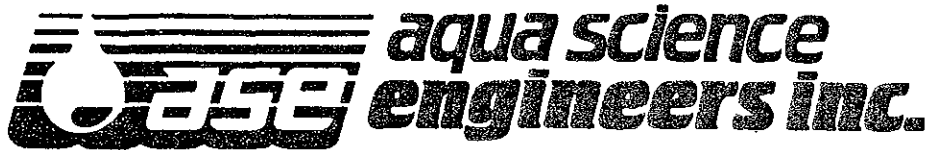
Project Name and Address: Orkland Truck Stop
 Job #: 3590 Date of sampling: 6/6/02
 Well Name: MW-5 Sampled by: EP
 Total depth of well (feet): 13.70 Well diameter (inches): 2
 Depth to water before sampling (feet): 5.16
 Thickness of floating product if any: -
 Depth of well casing in water (feet): 8.54
 Number of gallons per well casing volume (gallons): 1.36
 Number of well casing volumes to be removed: 3
 Req'd volume of groundwater to be purged before sampling (gallons): 4
 Equipment used to purge the well: bailey
 Time Evacuation Began: 1240 Time Evacuation Finished: 1255
 Approximate volume of groundwater purged: 4
 Did the well go dry?: no After how many gallons: -
 Time samples were collected: 1305
 Depth to water at time of sampling: -
 Percent recovery at time of sampling: -
 Samples collected with: -
 Sample color: clear Odor: none
 Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>71.1</u>	<u>6.71</u>	<u>1142</u>
<u>2</u>	<u>70.9</u>	<u>6.64</u>	<u>1133</u>
<u>3</u>	<u>70.8</u>	<u>6.62</u>	<u>1124</u>

SAMPLES COLLECTED

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



WELL SAMPLING FIELD LOG

Project Name and Address: Oakland Truck stop
 Job #: 3540 Date of sampling: 6/6/02
 Well Name: MW-6 Sampled by: EP
 Total depth of well (feet): 14.36 Well diameter (inches): 2
 Depth to water before sampling (feet): 5.33
 Thickness of floating product if any: -
 Depth of well casing in water (feet): 9.03
 Number of gallons per well casing volume (gallons): 1.44
 Number of well casing volumes to be removed: 3
 Req'd volume of groundwater to be purged before sampling (gallons): 4.3
 Equipment used to purge the well: bailer
 Time Evacuation Began: 1030 Time Evacuation Finished: 1045
 Approximate volume of groundwater purged: 4.5
 Did the well go dry?: no After how many gallons: -
 Time samples were collected: 1050
 Depth to water at time of sampling: -
 Percent recovery at time of sampling: -
 Samples collected with: bailer
 Sample color: clear/gray Odor: slight
 Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>76.2</u>	<u>6.54</u>	<u>1001</u>
<u>2</u>	<u>72.2</u>	<u>6.34</u>	<u>981</u>
<u>3</u>	<u>71.6</u>	<u>6.26</u>	<u>952</u>

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>MW-6</u>	<u>5</u>	<u>40 ml VOA</u>	<u>X</u>	<u>X</u>	

APPENDIX B

Certified Analytical Report
and
Chain of Custody Documentation



Report Number : 26831

Date : 6/19/02

Eric Paddleford
Aqua Science Engineers, Inc.
208 West El Pintado Rd.
Danville, CA 94526

Subject : 5 Water Samples
Project Name : Oakland Truck Stop
Project Number : 3540

Dear Mr. Paddleford,

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 "Joel Kiff". The signature is written in a cursive style with a large initial "J".

Joel Kiff



Report Number : 26831

Date : 6/19/02

Subject : 5 Water Samples
Project Name : Oakland Truck Stop
Project Number : 3540

Case Narrative

Matrix Spike/Matrix Spike Duplicate Results associated with samples MW-6, MW-3 for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

Approved By:  Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 916-297-4800



Report Number : 26831

Date : 6/19/02

Project Name : **Oakland Truck Stop**

Project Number : **3540**

Sample : **MW-2**

Matrix : Water

Lab Number : 26831-01

Sample Date :6/7/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	1.2	0.50	ug/L	EPA 8260B	6/12/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Methyl-t-butyl ether (MTBE)	23	0.50	ug/L	EPA 8260B	6/12/02
Diisopropyl ether (DIPE)	2.8	0.50	ug/L	EPA 8260B	6/12/02
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Tert-Butanol	73	5.0	ug/L	EPA 8260B	6/12/02
TPH as Gasoline	900	50	ug/L	EPA 8260B	6/12/02
Toluene - d8 (Surr)	105		% Recovery	EPA 8260B	6/12/02
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	6/12/02
TPH as Diesel	430	50	ug/L	M EPA 8015	6/13/02

Approved By:  Joel Kiff



Report Number : 26831

Date : 6/19/02

Project Name : **Oakland Truck Stop**

Project Number : **3540**


Sample : **MW-3**

Matrix : Water

Lab Number : 26831-02

Sample Date :6/7/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	10000	50	ug/L	EPA 8260B	6/16/02
Toluene	< 50	50	ug/L	EPA 8260B	6/16/02
Ethylbenzene	200	50	ug/L	EPA 8260B	6/16/02
Total Xylenes	51	50	ug/L	EPA 8260B	6/16/02
Methyl-t-butyl ether (MTBE)	2400	50	ug/L	EPA 8260B	6/16/02
Diisopropyl ether (DIPE)	< 50	50	ug/L	EPA 8260B	6/16/02
Ethyl-t-butyl ether (ETBE)	< 50	50	ug/L	EPA 8260B	6/16/02
Tert-amyl methyl ether (TAME)	< 50	50	ug/L	EPA 8260B	6/16/02
Tert-Butanol	1200	500	ug/L	EPA 8260B	6/16/02
TPH as Gasoline	20000	5000	ug/L	EPA 8260B	6/16/02
Toluene - d8 (Surr)	98.7		% Recovery	EPA 8260B	6/16/02
4-Bromofluorobenzene (Surr)	98.0		% Recovery	EPA 8260B	6/16/02
TPH as Diesel	14000	50	ug/L	M EPA 8015	6/13/02

Approved By:  Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800



Report Number : 26831

Date : 6/19/02

Project Name : **Oakland Truck Stop**

Project Number : **3540**

Sample : **MW-4**

Matrix : Water

Lab Number : 26831-03

Sample Date :6/7/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Methyl-t-butyl ether (MTBE)	92	0.50	ug/L	EPA 8260B	6/12/02
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Tert-Butanol	21	5.0	ug/L	EPA 8260B	6/12/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/12/02
Toluene - d8 (Surr)	99.9		% Recovery	EPA 8260B	6/12/02
4-Bromofluorobenzene (Surr)	95.1		% Recovery	EPA 8260B	6/12/02
TPH as Diesel	710	50	ug/L	M EPA 8015	6/13/02

Approved By:  Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800



Report Number : 26831

Date : 6/19/02

Project Name : **Oakland Truck Stop**

Project Number : **3540**

Sample : **MW-5**

Matrix : Water

Lab Number : 26831-04

Sample Date :6/7/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Methyl-t-butyl ether (MTBE)	150	0.50	ug/L	EPA 8260B	6/12/02
Diisopropyl ether (DIPE)	2.9	0.50	ug/L	EPA 8260B	6/12/02
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Tert-Butanol	34	5.0	ug/L	EPA 8260B	6/12/02
TPH as Gasoline	61	50	ug/L	EPA 8260B	6/12/02
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	6/12/02
4-Bromofluorobenzene (Surr)	96.9		% Recovery	EPA 8260B	6/12/02
TPH as Diesel	3500	50	ug/L	M EPA 8015	6/13/02

Approved By:  Joel Kiff



Report Number : 26831

Date : 6/19/02

Project Name : **Oakland Truck Stop**

Project Number : **3540**

Sample : **MW-6**

Matrix : Water

Lab Number : 26831-05

Sample Date :6/7/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	200	50	ug/L	EPA 8260B	6/16/02
Toluene	< 50	50	ug/L	EPA 8260B	6/16/02
Ethylbenzene	< 50	50	ug/L	EPA 8260B	6/16/02
Total Xylenes	< 50	50	ug/L	EPA 8260B	6/16/02
Methyl-t-butyl ether (MTBE)	17000	50	ug/L	EPA 8260B	6/16/02
Diisopropyl ether (DIPE)	< 50	50	ug/L	EPA 8260B	6/16/02
Ethyl-t-butyl ether (ETBE)	< 50	50	ug/L	EPA 8260B	6/16/02
Tert-amyl methyl ether (TAME)	77	50	ug/L	EPA 8260B	6/16/02
Tert-Butanol	8700	500	ug/L	EPA 8260B	6/16/02
TPH as Gasoline	< 5000	5000	ug/L	EPA 8260B	6/16/02
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	6/16/02
4-Bromofluorobenzene (Surr)	98.0		% Recovery	EPA 8260B	6/16/02
TPH as Diesel	14000	50	ug/L	M EPA 8015	6/13/02

Approved By:  Joel Kiff

Report Number : 26831

Date : 6/19/02

QC Report : Method Blank Data

Project Name : **Oakland Truck Stop**

Project Number : **3540**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 50	50	ug/L	M EPA 8015	6/12/02
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/15/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/15/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/15/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/15/02
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	6/15/02
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	6/15/02
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	6/15/02
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	6/15/02
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	6/15/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/15/02
Toluene - d8 (Surr)	98.1		%	EPA 8260B	6/15/02
4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	6/15/02
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	6/12/02
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	6/12/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/12/02
Toluene - d8 (Surr)	99.7		%	EPA 8260B	6/12/02
4-Bromofluorobenzene (Surr)	94.8		%	EPA 8260B	6/12/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
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Approved By: Joel Kiff



KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 26831

Date : 6/19/02

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Oakland Truck Stop**

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	836	868	ug/L	M EPA 8015	6/12/02	83.6	86.8	3.66	70-130	25
Benzene	26846-01	<0.50	19.6	19.6	21.0	21.0	ug/L	EPA 8260B	6/15/02	107	107	0.327	70-130	25
Toluene	26846-01	<0.50	19.6	19.6	19.8	19.8	ug/L	EPA 8260B	6/15/02	101	101	0.0496	70-130	25
Tert-Butanol	26846-01	<5.0	97.9	98.1	110	109	ug/L	EPA 8260B	6/15/02	112	111	0.650	70-130	25
Methyl-t-Butyl Ether	26846-01	110	19.6	19.6	105	105	ug/L	EPA 8260B	6/15/02	0.00	0.00	0.00	70-130	25
Benzene	26831-01	1.2	40.0	40.0	40.8	40.2	ug/L	EPA 8260B	6/12/02	98.9	97.5	1.45	70-130	25
Toluene	26831-01	<0.50	40.0	40.0	39.7	39.2	ug/L	EPA 8260B	6/12/02	99.2	97.9	1.34	70-130	25
Tert-Butanol	26831-01	73	200	200	279	278	ug/L	EPA 8260B	6/12/02	103	103	0.514	70-130	25
Methyl-t-Butyl Ether	26831-01	23	40.0	40.0	60.3	60.6	ug/L	EPA 8260B	6/12/02	92.6	93.4	0.779	70-130	25

Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 26831

Date : 6/19/02

QC Report : Laboratory Control Sample (LCS)

Project Name : **Oakland Truck Stop**

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	6/14/02	107	70-130
Toluene	40.0	ug/L	EPA 8260B	6/14/02	101	70-130
Tert-Butanol	200	ug/L	EPA 8260B	6/14/02	102	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	6/14/02	97.4	70-130
Benzene	40.0	ug/L	EPA 8260B	6/12/02	96.0	70-130
Toluene	40.0	ug/L	EPA 8260B	6/12/02	96.6	70-130
Tert-Butanol	200	ug/L	EPA 8260B	6/12/02	104	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	6/12/02	80.5	70-130

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Approved By:  Joel Kiff

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

Chain of Custody 26831

PAGE 1 OF 1

SAMPLER (SIGNATURE)

E. Paddel

PROJECT NAME

Oakland Truck Stop

JOB NO.

3540

ADDRESS

~~Stanley, CA~~ 8255 San Leandro St. Oakland, CA

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-DIESEL (EPA 3510/8015)	TPH-DIESEL & MOTOR OIL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 6011/8010)	VOLATILE ORGANICS (EPA 624/8240/8260)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	OIL & GREASE (EPA 5520)	LUFT METALS (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 / LEAD SCAYANGERS/ 1,2-DCP (EPA 8260)	TOTAL DISSOLVED SOLIDS (TDS)	HOLD
MW-2	6/7/02	1200	Water	5		X												X			01
MW-3		1115				X												X			02
MW-4		1230				X												X			03
MW-5		1305				X												X			04
MW-6		1050				X												X			05

RELINQUISHED BY:

E. Paddel 9:53
 (signature) (time)

RECEIVED BY:

(signature) (time)

RELINQUISHED BY:

(signature) (time)

RECEIVED BY LABORATORY:

Harold 9:50
 (signature) (time)

COMMENTS:

1,2-DCP = 1,2-dichloropropane

E. Paddel 6/10/02
 (printed name) (date)

(printed name) (date)

(printed name) (date)

Harold
 300 W. R. 061002
 (printed name) (date)

TURN AROUND TIME

STANDARD 24hr 48hr 72hr

Company-

ASE

Company-

Company-

Company-

KFF

OTHER: