1085

July 12, 2001

(UL 7 8 2007

QUARTERLY GROUNDWATER MONITORING REPORT JUNE 2001 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. 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 2001 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.

- 1 -

2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

į

On June 6, 2001, ASE associate geologist Erik Paddleford 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 product level meter. The presence of free-floating hydrocarbons was confirmed with a disposable bailer half-filled for direct observation. Monitoring well MW-1 contained 1.48-feet of free-floating diesel. 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 for June 6, 2001 is presented as Figure 2. Groundwater beneath the site flows to the north and northwest with a gradient of approximately 0.0006 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) and motor oil (TPH-MO) 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 and Three. The certified analytical report and chain-of-custody documentation are included as Appendix B.

4.0 CONCLUSIONS

Monitoring well MW-1 contained 1.48-feet of free-floating diesel hydrocarbons, which is an increase of over 1-foot from last quarter.

The groundwater samples collected from monitoring well MW-2 contained 1,700 parts per billion (ppb) TPH-G, 190 ppb TPH-D, 2.6 ppb benzene, 2.3 ppb ethyl-benzene, 26 ppb methyl-t-butyl ether (MTBE), 3.2 ppb disopropyl ether (DIPE), and 83 ppb tert-butanol (TBA). The groundwater samples collected from monitoring well MW-3 contained 34,000 ppb TPH-G, 20,000 ppb TPH-D, 14,000 ppb benzene, 94 ppb toluene, 550 ppb ethyl-benzene, 110 ppb total xylenes, 4,400 ppb MTBE, and 2,300 ppb TBA. The groundwater samples collected from monitoring well MW-4 contained 790 ppb TPH-D, 110 ppb MTBE, and 20 ppb TBA. The groundwater samples collected from monitoring well MW-5 contained 280 ppb TPH-G, 2,700 ppb TPH-D, 180 ppb MTBE, 13 ppb DIPE, and 26 ppb TBA. The groundwater samples collected from monitoring well MW-6 contained 5,000 TPH-G, 23,000 ppb TPH-D, 210 ppb benzene, 12,000 ppb MTBE, 84 ppb TAME, and 4,200 ppb TBA.

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 were similar to previous sampling results with the exception of TPH-D, which increased in monitoring wells MW-3 and MW-6 and decreased in monitoring well MW-2.

5.0 RECOMMENDATIONS

ASE recommends that this site remain on a quarterly sampling schedule. The next sampling is scheduled for September 2001. In addition, ASE anticipates completing the work outlined in ASE's workplan dated February 6, 2001 during the next quarter. ASE will begin work once the costs are pre-approved by the Underground Storage Tank Clean-up Fund.

6.0 REPORT LIMITATIONS

The results of this report represent the 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

held E. Kil

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

	,	Free-Floating						
Well I.D	Top of Casing	Depth to	Hydrocarbon	Groundwater				
& Date	Elevation	Water	Thickness	Elevation				
Sampled	(møl)	(feet)	(feet)	(møl)				
MW-1								
08/16/1999	97.12	l tralera accus	. 1.0					
08/27/1999	97.12	Unknown 6.90	> 1.0	Unknown				
09/10/1999			0.36	90.51*				
09/24/1999		6.85	0.18	90.41*				
10/08/1999		6.65	0.08	90.53*				
		6.87	0.28	90.47*				
10/22/1999		6.81	0.23	90.49*				
11/02/1999		6.94	0.31	90.43*				
11/19/1999		6.91	0.12	<i>90.</i> 31*				
12/06/1999		6.93	<i>O</i> .12	90.29*				
03/08/2000		5.93	0.21	91.36*				
06/14/2000		6.57	0.72	90.41*				
12/11/2000		6.70	0.60	90.90*				
03/06/2001		5.75	0.40	91.69*				
06/06/2001		7.60	1.48	90.70*				
MW-2								
08/16/1999	96.82	6.30		90.52				
12/06/1999		8.46		88.36				
03/08/2000		9.12		87.70				
06/14/2000		8.34		88.48				
12/11/2000		5.94		90.88				
03/06/2001		4.70		92.12				
06/06/2001		6.03		90.79				
LKI/ 72								
<u>MW-3</u> 08/16/1999	96.43	5.85		0050				
12/06/1999	00.40	5.70		90.58				
03/08/2000		5.70 5.32		90.73				
06/14/2000				91.11				
12/11/2000		6.95	+40 -440	89.48				
03/06/2001		6.22 4.83	pad gade	90.21				
06/06/2001		4.83	~ =	91.60				
0010012001		5.62	***	90.81				

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 (mel)
MW-4				
08/16/1999	96.60	6.12		90.48
12/06/1999		5.98		90.62
03/08/2000		4.32		92.28
06/14/2000		5.58		91.02
12/11/2000		5.7 <i>0</i>		90.90
03/06/2001		4.46		92.14
06/06/2001		5.89	pris pri	<i>90.</i> 71
<u>MW-5</u>				
12/06/1999	96.30	5.94	ari pa	90.36
03/08/2000		4.06		92.24
06/14/2000		5.25		91.05
12/11/2000		5.45		90.85
03/06/2001		4.12	- 1-	92.18
06/06/2001		5.56		90.74
<u>MW-6</u>				
12/06/1999	96.79	5.80		90.99
03/08/2000		4.10	 -	92.69
06/14/2000		5.64		91,15
12/11/2000		5.72		91.07
03/06/2001		4.32	gan and	92.47
06/06/2001		5. <i>8</i> 1		90.98

Notes:

^{* =} Groundwater elevation adjusted for the presence of free-floating hydrocarbons by the equation: Adjusted groundwater elevation = Top of 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	124	(PH	1PH		· · · · · · · · · · · · · · · · · · ·	Ethyl	Total					
DATE	Gasohre	Desei	Motor Oil	Benzene	Toluene	Benzene	Xylenes	MTBE	DIPE	ETBE	TAME	TBA
MW-1 8/16/1999												
		Not Sampled Due to Free-Floating Hydrocarbors										
12/6/1999		Not Sampled Due to Free-Floating Hydrocarbons										
3/8/2000)ue to Free-Float						
6/14/2000		Not Sampled Due to Free-Floating Hydrocarbons										
12/11/2000		Not Sampled Due to Free-Floating Hydrocarbons										
3/6/2001		Not Sampled Due to Free-Floating Hydrocarbons										
6/6/2001		Not Sampled Due to Free-Floating Hydrocarbons										
MW-2												
8/16/1999	2,200	970*	< 500	3.8	< 2.0	3	< 40	< 20	NΛ	NA	NΑ	NΛ
12/6/1999	1,900	400	< 500	16	< 0.5	1.5	<05	5.2	NΛ	NA.	NΑ	NΛ
3/8/2000	1,600*	53 <i>0*</i>	< 500	9.7	< 0.5	27	<05	27	NA.	NA	NA.	NΛ
6/14/2000	2,000	75	< 100	28	<05	34	< 0.5	16	3.4	< 0.5	< 0.5	64
12/11/2000	1,000	120	< 100	26	<05	< 0.5	<05	15	2.9	< 0.5	<05	
3/6/2001	1,500	1,400	NA.	2.2		17						62
6/6/2001	1,700	190	NA NA		< 0.5		<0.5	22	34	< 0.5	<0.5	83
0/0/2001	1,700	190	N/A	2.6	< 0.5	2.3	<0.5	26	3.2	<0.5	<0.5	83
MW-3												
8/16/1999	56,000	10,000**	< 500	17,000	2,600	2,600	1,200	6.100	NA	NA	NΛ	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	NA
6/14/2000	34.000	16,000	< 100	13.000	94	1,300	160	4,800				2.700
12/11/2000	24,000	14,000	< 100	13,000	88	780			31	< 10	21	
3/6/2001	34,000	12,000	NA.				120	4.300	< 50	< 50	< 50	2,300
6/6/2001	34,000	20,000	NA NA	15,000	100	1,100	130	4,000	< 50	< 50	< 50	2,100
0,0,2001	34,000	20,000	(4/)	14,000	94	55 <i>0</i>	110	4,400	< 50	< 50	< 5 <i>0</i>	2,300
MW-4	_											
8/16/1999	61***	1,100*	< 5 <i>00</i>	< 0.5	< 05	< 0.5	< 10	86	NA	NΛ	NA	NA
12/6/1999	130***	220*	< 5 <i>00</i>	< 1. <i>O</i>	< 1. <i>O</i>	< 1.0	<10	13 <i>0</i>	NΛ	NΑ	NΛ	NA
3/8/2000	< 50	220*	< 500	< 0.5	< 0.5	< 0.5	< 0.5	130	NA	NA	NΑ	NA
6/14/2000	< 50	< 50	< 100	< 0.5	< 05	< 05	< 0.5	100	< 05	< 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	< 05	< 0.5	< 0.5	110	<05	< 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
<u>MW-5</u>												
12/6/1999	450***	2,000*	< 500	< 1.0	< 1. <i>O</i>	< 1.0	<10	21	NA	NA	NA	NA
3/8/2000	51***	53 <i>0</i> *	< 500	< 0.5	< 0.5	< 0.5	<0.5	84	NA	NA	NA	NA
6/14/2000	380	1,400	< 100	< 05	< 0.5	< 0.5	< 0.5	160	12	< 0.5	< 0.5	22
12/11/2000	540	59 <i>0</i>	< 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	< 05	< 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
MW-6												
12/6/1999	13,000	< 50	< 500	180	21	11	24	-100	\$14	614	\$14	414
3/8/2000	< 10.000	4.600*	< 500	230	26	18	24 39	< 100	NA	NA	NA	NA NA
6/14/2000	8,400	12,000	< 100	230 190				12.000	NA F O	NΛ	NA 70	NA 7 700
12/11/2000	< 5,000	10,000	< 100		12	9.5	22	15,000	< 5.0	<50	70	3.300
3/6/2001	5,300	6,700	< 100 NA	190	< 50	<50	< 5 <i>0</i>	14,000	< 50	< 50	74	2,900
6/6/2001	5,000	23,000	NV.	220	< 50	< 50	< 50	13.000	< 5 <i>0</i>	< 5 <i>0</i>	84	2,100
}				210	< 25	< 25	< 25	12,000	<25	< 25	84	4,200
DHS MCL	NE	NE"	NE	1	160	700	1750	13	NE	NE	NE	NE

Notes:

Non-detectable concentrations are noted by the less than symbol (ς) 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

	Isopropyl	- Other							
Boring	benzene	VOCs	SVOCs	PCBs	Cd	Cr	Рb	Ni	Zn
				~					
<u>MW-2</u>									
8-16-99	1 1	ND	ND	ND	< 2.0	9.0	< 5.0	19	< 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	5 0	1.5	100	5,000

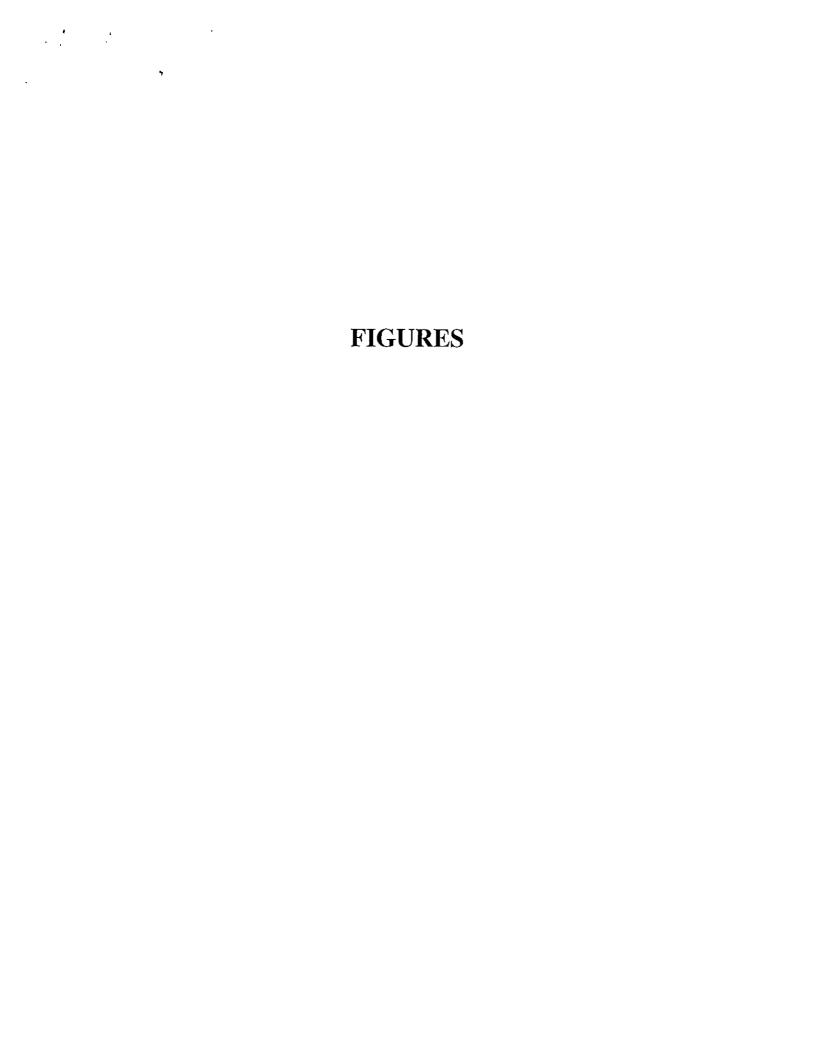
Notes:

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.

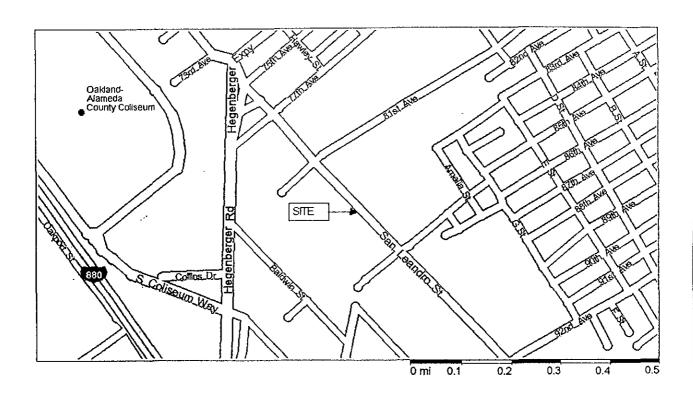
Detectable concentrations are in bold.

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

NE = Not established







LOCATION MAP

OAKLAND TRUCK STOP 8255 SAN LEANDRO STREET OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

PROPERTY BOUNDARIES CAFE MW-5 (90.74') MW-4 DISPENSERS (90.71')FORMER WASTE-OIL UST STATION TRUCK WASH AREA MARKET FORMER TRUCK MW-2* WASTE-OIL SCALE (90.79') (90.70**) UNDERGROUND STORAGE - TANK 90/9, FORMER MW-3 FUEL FARM (90.81) MW-6 (90.98)

SAN LEANDRO STREET

LEGEND



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

(91.70'*)

GROUNDWATER ELEVATION ADJUSTED FOR FREE-FLOATING HYDROCARBON THICKNESS

90.9 POTENTIOMETRIC SURFACE CONTOUR



<u>SCALE</u> 1" = 50" POTENTIOMETRIC SURFACE CONTOUR MAP JUNE 6, 2001

> OAKLAND TRUCK STOP 8255 SAN LEANDRO STREET OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

Figure 2

APPENDIX A

Well Sampling Field Logs



Project Name and Address:	Oakland TS
Joh #: 3580	Date of sampling: b/6/01
Job #: 3586 Well Name:	Sampled by: Well diameter (inches): _Z ing (feet): 7.60 H,0
Total depth of well (feet): _	Well diameter (inches): 2
Depth to water before sampl	ing (feet): 7.60 4,0 6.12 prod
Thickness of floating product	if any: 1.48
Depth of well casing in water	er (feet):
Number of gallons per well	casing volume (gallons):
Number of well casing volur	nes to be removed:
Req'd volume of groundwater	to be purged before sampling (gallons):
Equipment used to purge the	e well:
Time Evacuation Began:	Time Evacuation Finished:
Approximate volume of grou	undwater purged:
Did the well go dry?:	After how many gallons:
Time samples were collected	1:
Depth to water at time of sa	ampli ng>
Percent recovery at time of	sampling
Samples collected with:	Odor:
Sample color:	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Description of sediment in s	
	656
CHEMICAL DATA	ample:
	· 🗴 🔪
Volume Purged Temp	pH Conductivity
	-
	-
OARANT EG GOTT EGENN	
SAMPLES COLLECTED	
Samula # of anning N. I.	
Sample # of containers volume {	& type container Pres Iced? Analysis
•	\



Project Name and Address: Oatland TS
Project Name and Address.
Job #: 3540 Date of sampling:
Well Name: MW-Z Sampled by: Ef
Total depth of well (feet): 15.5 Well diameter (inches): 2
Depth to water before sampling (feet): 6.03
Thickness of floating product if any:
Depth of well casing in water (feet): 9.47
Number of gallons per well casing volume (gallons): 1.6
Number of well casing volumes to be removed:
Req'd volume of groundwater to be purged before sampling (gallons): 6.4
Equipment used to purge the well: bailer
Time Evacuation Began: 1035 Time Evacuation Finished: 1100
Approximate volume of groundwater purged: _6.5
Did the well go dry?: After how many gallons:
Time samples were collected: //05
Depth to water at time of sampling: —
Percent recovery at time of sampling: 2%
Samples collected with: baiker
Sample color: [lear square Odor: 1000]
Description of sediment in sample: Si/+
Description of sediment in sample.
CHEMICAL DATA
CHEWICAL DATA
Volume Purged Temp pH Conductivity
Volume Purged Temp pH Conductivity 73.1 L78 2.194
73.0 6.77 2200
3 72.6 10.76 192Y
(V)
1.0 1.16 1.00
CAMPI EC COLLECTED
SAMPLES COLLECTED
Sample # of containers Volume & type container Pres Iced? Analysis
116-2 5 10ml VOA x x
77.804000 000.



	a 41. 1	Toutcha	
Project Name and Add	iress:	THE STOP	
Job #: <u>3570</u>	Date	e of sampling: 6/0/01	
Well Name: MW-3	Sam	ipled by: EP	
Total depth of well (fe	et): <u>15.30</u>	Well diameter (inches)):
Depth to water before	sampling (feet):	3.62	
Thickness of floating p	product if any: _	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	
Depth of well casing i	n water (feet): _	9.88	· · · · · · · · · · · · · · · · · · ·
Number of gallons per	well casing vol	ume (gallons): 1.66	
Number of well casing			
		rged before sampling (gallor	is): 6.7
Equipment used to pu	rge the well:_ <i>b</i> a	iler	···
		Time Evacuation Finished	: 1020
Approximate volume of	of groundwater p	ourged:	
Did the well go dry?:_		After how many gallons:	
Time samples were co			
Depth to water at time			
		790%	,
Samples collected with	i: bailer		
Sample color: c/e/	9/47	Odor: Mederate HC oder.	
Description of sedimen	it in sample: 5	ilt to fre Sand	
- 7 % • ,	, *		
CHEMICAL DATA			
Volume Purged	Temp pH	Conductivity	
	76.3 6.9	5 228/	
2	75.7 6.90	2242	
3,	72.1 6.91	1879	
4	70.4 6.97	1632	
	<u> </u>		
			
SAMPLES COLLECTE	D C		
Comple : # of containers	Statum 0		
Sample # of containers	YO A. VOA	iner Pres Iced? Analysis	
*9			
			· · · · · · · · ·



Project Name and Address: Ookland TS	
Job #: Date of sampling:	
Well Name: Mw-Y Sampled by: EP	
Total depth of well (feet): 14.75 Well diameter (inches): 2	
Depth to water before sampling (feet): 589	
Thickness of floating product if any:	
Depth of well casing in water (feet): 8.86	
Number of gallons per well casing volume (gallons): 1.5	
Number of well casing volumes to be removed: \(\frac{y}{} \)	·
Req'd volume of groundwater to be purged before sampling (gallons):	2
Equipment used to purge the well: beiler	
Time Evacuation Began: 12-1150 Time Evacuation Finished: 12/6	
Approximate volume of groundwater purged:	
Did the well go dry?: 10 After how many gallons:	
Time samples were collected: 1215	
Depth to water at time of sampling:	
Percent recovery at time of sampling: > 70 %	
Samples collected with: bailer	
	,÷
Description of sediment in sample: 51/4	<u>. </u>
CHEMICAL DATA	
Yolume Purged Temp pH Conductivity 71.7 7.89	
73.6 7.18 7.19	
72.8 7.16 16.91	
72.1 7.14 1672	
70.	
SAMPLES COLLECTED	
Sample # of containers Volume & type container Pres Iced? Analysis	
AND A LOCAL CONTRACTOR OF THE	_
2014-1	
	
	
	<u>· · · </u>

Project Name and Address:	Catland TS
Job #: 3540	Date of sampling: 6/6/01
Well Name: <u>MW-5</u>	Sampled by: EP
Total depth of well (feet):	13.7 Well diameter (inches): z
Depth to water before sampling	(feet): <u>5.56</u>
Thickness of floating product if	any:
Depth of well casing in water (feet): 8.14
Number of gallons per well cas	sing volume (gallons): 1.38
Number of well casing volumes	to be removed: <u>4</u>
Req'd volume of groundwater to	be purged before sampling (gallons): 5.5
Equipment used to purge the v	vell: <u>bgi/er</u>
Time Evacuation Began: 1225	Time Evacuation Finished: 1645
Approximate volume of ground	lwater purged: <u>5.5</u>
Did the well go dry?:	After how many gallons:
Time samples were collected:	1255
Double to restor of time of come	aliana ama
Percent recovery at time of sa	mpling: 79%
Samples collected with: kaile	<u>// </u>
Sample color:	Odor: Now
Description of sediment in same	ple: <i>\$?/†</i>
CHEMICAL DATA	
Volume Purged Temp	pH Conductivity
79.0	6.71 2072
77.8	6.89 19.47
<u>-10.89-</u> 76.	8 629 1894
Y	6.85 173/
	- · · · · · · · · · · · · · · · · · · ·
SAMPLES COLLECTED	
Sample # of containers Volume & t	ype container Pres Iced? Analysis
MV-5 5 YOM	VOA x x
·	
	<u> </u>

and the state of t
Project Name and Address: Ockland Twek Stap
Job #:
Well Name: MW-6 Sampled by: EP
Total depth of well (feet): Well diameter (inches):
Depth to water before sampling (feet): 5.8/
Thickness of floating product if any:
Depth of well casing in water (feet): 8./9
Number of gallons per well casing volume (gallons): 1.37
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 5.6
Equipment used to purge the well: <u>bailer</u>
Time Evacuation Began: 1120 Time Evacuation Finished: 1140
Approximate volume of groundwater purged: 5.5
Did the well go dry?: No After how many gallons:
Time samples were collected: //45
Depth to water at time of sampling:
Percent recovery at time of sampling: 790%
Samples collected with; bailer
Sample color: dear gray Odor: slight He odor
Description of sediment in sample: silt
CHEMICAL DATA
Volume Purged Temp pH Conductivity
72.3 7.21
70.1 7.09 1009
3 70.2 6.87 1026
4 69.9 6.91 981
976
SAMPLES COLLECTED
OMINI DES COMPONDO
Sample # of containers Volume & type container Pres Iced? Analysis
MUSCO S TOM VIA Y X
The state of the s

APPENDIX B

Certified Analytical Report and Chain of Custody Documentation



Date: 6/27/2001

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

Subject: 5 Water Samples

Project Name: Oakland Truck Stop (OTS)

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,

oel Kiff



Date: 6/27/2001

Project Name: Oakland Truck Stop (OTS)

Project Number: 3540

Sample: MW-2

Matrix: Water

Lab Number : 20654-01

Sample Date :6/6/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	2.6	0.50	ug/L	EPA 8260B	6/15/2001
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/15/2001
Ethylbenzene	2.3	0.50	ug/L	EPA 8260B	6/15/2001
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/15/2001
Methyl-t-butyl ether (MTBE)	26	0.50	ug/L	EPA 8260B	6/15/2001
Diisopropyl ether (DIPE)	3.2	0.50	ug/L	EPA 8260B	6/15/2001
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	6/15/2001
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	6/15/2001
Tert-Butanol	83	5.0	ug/L	EPA 8260B	6/15/2001
TPH as Gasoline	1700	50	ug/L	EPA 8260B	6/15/2001
Toluene - d8 (Surr)	95.9		% Recovery	EPA 8260B	6/15/2001
4-Bromofluorobenzene (Surr)	117		% Recovery	EPA 8260B	6/15/2001
TPH as Diesel	190	50	ug/L	M EPA 8015	6/24/2001

Approved By: Joel Kiff



Date: 6/27/2001

Project Name: Oakland Truck Stop (OTS)

Project Number: 3540

Sample: MW-3

Matrix : Water

Lab Number: 20654-02

Sample Date :6/6/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	14000	50	ug/L	EPA 8260B	6/20/2001
Toluene	94	50	ug/L	EPA 8260B	6/20/2001
Ethylbenzene	550	50	ug/L	EPA 8260B	6/20/2001
Total Xylenes	110	50	ug/L	EPA 8260B	6/20/2001
Methyl-t-butyl ether (MTBE)	4400	50	ug/L	EPA 8260B	6/20/2001
Diisopropyl ether (DIPE)	< 50	50	ug/L	EPA 8260B	6/20/2001
Ethyl-t-butyl ether (ETBE)	< 50	50	ug/L	EPA 8260B	6/20/2001
Tert-amyl methyl ether (TAME)	< 50	50	ug/L	EPA 8260B	6/20/2001
Tert-Butanol	2300	500	ug/L	EPA 8260B	6/20/2001
TPH as Gasoline	34000	5000	ug/L	EPA 8260B	6/20/2001
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	6/20/2001
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	6/20/2001
TPH as Diesel	20000	50	ug/L	M EPA 8015	6/24/2001

Approved By: Joel Kiff



Date: 6/27/2001

Project Name: Oakland Truck Stop (OTS)

Project Number: 3540

Sample: MW-4

Matrix: Water

Lab Number: 20654-03

Samble	Date	:0/0/2001	

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/15/2001
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/15/2001
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/15/2001
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/15/2001
Methyl-t-butyl ether (MTBE)	110	0.50	ug/L	EPA 8260B	6/15/2001
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	6/15/2001
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	6/15/2001
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	6/15/2001
Tert-Butanol	20	5.0	ug/L	EPA 8260B	6/15/2001
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/15/2001
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	6/15/2001
4-Bromofluorobenzene (Surr)	115		% Recovery	EPA 8260B	6/15/2001
TPH as Diesel	790	50	ug/L	M EPA 8015	6/24/2001

Approved By: Joel Kiff



Date: 6/27/2001

Project Name: Oakland Truck Stop (OTS)

Project Number: 3540

Sample: MW-5

Matrix: Water

Lab Number : 20654-04

Sample	Date	:6/6/2001	

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed	
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001	
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001	
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001	
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001	
Methyl-t-butyl ether (MTBE)	180	0.50	ug/L	EPA 8260B	6/16/2001	
Diisopropyl ether (DIPE)	13	0.50	ug/L	EPA 8260B	6/16/2001	
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001	
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001	
Tert-Butanol	26	5.0	ug/L	EPA 8260B	6/16/2001	
TPH as Gasoline	280	50	ug/L	EPA 8260B	6/16/2001	
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	6/16/2001	
4-Bromofluorobenzene (Surr)	109		% Recovery	EPA 8260B	6/16/2001	
TPH as Diesel	2700	50	ug/L	M EPA 8015	6/24/2001	

Approved By: Joel:Kiff



Date: 6/27/2001

Project Name: Oakland Truck Stop (OTS)

Project Number: 3540

Sample: MW-6

Matrix: Water

Lab Number: 20654-05

Sample Date :6/6/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed	
Benzene	210	25	ug/L	EPA 8260B	6/20/2001	
Toluene	< 25	25	ug/L	EPA 8260B	6/20/2001	
Ethylbenzene	< 25	25	ug/L	EPA 8260B	6/20/2001	
Total Xylenes	< 25	25	ug/L	EPA 8260B	6/20/2001	
Methyl-t-butyl ether (MTBE)	12000	25	ug/L	EPA 8260B	6/20/2001	
Diisopropyl ether (DIPE)	< 25	25	ug/L	EPA 8260B	6/20/2001	
Ethyl-t-butyl ether (ETBE)	< 25	25	ug/L	EPA 8260B	6/20/2001	
Tert-amyl methyl ether (TAME)	84	25	ug/L	EPA 8260B	6/20/2001	
Tert-Butanol	4200	250	ug/L	EPA 8260B	6/20/2001	
TPH as Gasoline	5000	5000	ug/L	EPA 8260B	6/20/2001	
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	6/20/2001	
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	6/20/2001	
TPH as Diesei	23000	100	ug/L	M EPA 8015	6/26/2001	

Approved By: Joel Kiff

Aqua Science 208 W. ElPir Darrille, CA S (925) 820- FAX (925) 8	itado Ro 34526 9391	ad			C	h	ait	1	01	A (Cu	15	ţ(D0	ly			PAG		1 (of <u>1</u>		نور
SAMPLER (SIG			/		ONE NO.)		JECT N RESS			Klan San		ruck do		Och	OTS) , (A			359		_	•
SPECIAL INSTI	RUCTIONS TA	2	QUES I	NO OF	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-DIESEL (EPA 3510/8015)	TPH DIESEL & MOTOR OIL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 601/8010)	VOLATILE ORGANICS (EPÁ 624/8240/8260)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	OIL & GREASE (EPÅ 5520)	LUFT METALS (8) (EPA 6010+7000)	CAM 17 METALS (EPA 6010+7000)	PCBa & PESTICIDES (EPA 608/8080)	ORGANOPHOSPHORUS PESTICIDES (EPA 8)40 EPA 608/8080)	FUEL OXYGENATES (EPA 8260)	PP (TOTAL or DISSOLVED) (EPA 6010)	TPH-GIBTEX/5 0XY'S (EPA 8260)	TPH-G/BTEX! 7 0XY'S / HVGCS (EPA 8260)			самгоѕие	
SAMPLEID.	DATE	TIME	<u> </u>	SAMPLES	EPA APP	智	EPA TP	PUR (EPA	YOY FPA	SENI (EPA	GEPA	(EPA	S S	EP.	882	FUE (EP.	E 2	1	±42±			8	
M4-3	196	1005	N	5	 -	X								ļ <u>.</u>				\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	 				-01
MW-4		DR								<u> </u>		·							<u> </u>				-03
MW-5		1255																					۲۵۔
mw-lo	V	1145	4	V		V												V				_	-05
																		:					
																				-			
																	Ico	J. Jr. S.					
RELINQUISHED E S. B. J. J. (signature)	Y: (tim	o)	RECEIVI (signatu		(time)		RELIN (signa	iQUISHE	DBY:	(time)		RECE Or (signs		YLABO	RATOR DS (time)	Y: 320		MMENT	: :				
E. Pudleta (printed name)	(dat	e)	(printed	name)	(date)			ed name)	(date)		Jo			LE O					OUND T			
Company-	·		Compan	y-			Comp	any-				Compa	•	AM	4 <u>)</u> (1	rical	OTI	ANDAR ER:	0)24	H 4	9H 72	'Hr	