



OCT 03 2001

September 28, 2001

QMR

ST10 559

QUARTERLY GROUNDWATER MONITORING REPORT
SEPTEMBER 2001 GROUNDWATER SAMPLING
ASE JOB NO. 3540

at
Oakland Truck Stop
8255 San Leandro Street
Oakland, California

- Waiting for pre-approval for off-site invest w/p*
- FP still found in New 1 - some are in line w/past*

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 September 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.

2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On September 4, 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 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 0.20 feet of free-floating diesel 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 for September 4, 2001 is presented as Figure 2. Groundwater beneath the site flows to the west and northwest with a gradient of approximately 0.01 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 0.20 feet of free floating diesel hydrocarbons, which is a decrease in thickness from the last several quarters.

The groundwater samples collected from monitoring well MW-2 contained 2,000 parts per billion (ppb) TPH-G, 450 ppb TPH-D, 2.7 ppb benzene, 2.1 ppb ethyl-benzene, 33 ppb methyl-t-butyl ether (MTBE), 3.4 ppb diisopropyl ether (DIPE), and 93 ppb tert-butanol (TBA). The groundwater samples collected from monitoring well MW-3 contained 29,000 ppb TPH-G, 19,000 ppb TPH-D, 13,000 ppb benzene, 83 ppb toluene, 480 ppb ethyl-benzene, 83 ppb total xylenes, 4,100 ppb MTBE, and 3,400 ppb TBA. The groundwater samples collected from monitoring well MW-4 contained 950 ppb TPH-D, 110 ppb MTBE, and 26 ppb TBA. The groundwater samples collected from monitoring well MW-5 contained 630 ppb TPH-G, 2,600 ppb TPH-D, 180 ppb MTBE, 9.4 ppb DIPE, and 29 ppb TBA. The groundwater samples collected from monitoring well MW-6 contained 5,400 ppb TPH-G, 22,000 ppb TPH-D, 190 ppb benzene, 12 ppb toluene, 23 ppb total xylenes, 15,000 ppb MTBE, 79 ppb TAME, and 4,000 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 remain elevated and are similar to previous sampling results.

5.0 RECOMMENDATIONS

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

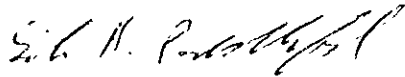
6.0 REPORT LIMITATIONS

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.

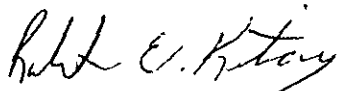
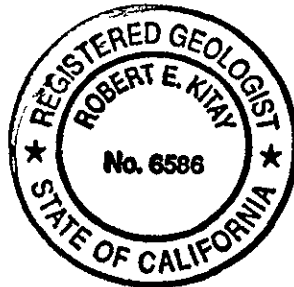
Aqua Science Engineers appreciates the opportunity to provide environmental consulting services for this project, and trust that this report meets your needs. Please feel free to call us at (925) 820-9391 if you have any questions or comments.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.



Erik H. Paddleford
Associate Geologist



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

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 I.D & Date Sampled	Top of Casing Elevation (msl)	Depth to Water (feet)	Free-Floating Hydrocarbon Thickness (feet)	Groundwater Elevation (msl)
<u>MW-1</u>				
08/16/1999	97.12	Unknown	> 1.0	Unknown
08/27/1999		6.90	0.36	90.51*
09/10/1999		6.85	0.18	90.41*
09/24/1999		6.65	0.08	90.53*
10/08/1999		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	90.31*
12/06/1999		6.93	0.12	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*
09/04/2001		6.80	0.20	90.48*
<u>MW-2</u>				
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
09/04/2001		6.34	--	90.48
<u>MW-3</u>				
08/16/1999	96.43	5.85	--	90.58
12/06/1999		5.70	--	90.73
03/08/2000		5.32	--	91.11
06/14/2000		6.95	--	89.48
12/11/2000		6.22	--	90.21
03/06/2001		4.83	--	91.60
06/06/2001		5.62	--	90.81
09/04/2001		5.91	--	90.52

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-4</u>				
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		5.70	--	90.90
03/06/2001		4.46	--	92.14
06/06/2001		5.89	--	90.71
09/04/2001		6.16	--	90.44
<u>MW-5</u>				
12/06/1999	96.30	5.94	--	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	--	92.18
06/06/2001		5.56	--	90.74
09/04/2001		5.84	--	90.46
<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	--	92.47
06/06/2001		5.81	--	90.98
09/04/2001		6.12	--	90.67

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	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												
<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
<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

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
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
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
DHS MCL	NE	NE	NE	1	150	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	2.60	5.5	3.20
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**.

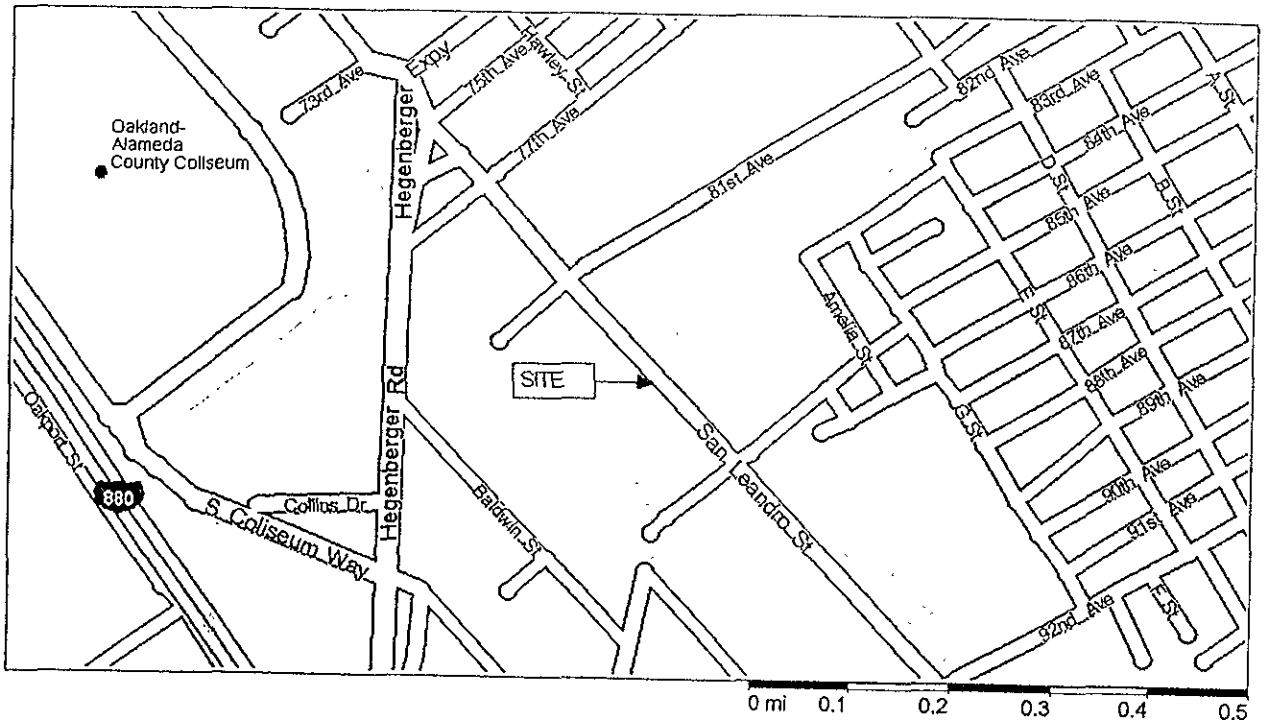
MCL is the California Department of Health Services maximum contaminant level for drinking water.

NE = Not established

FIGURES



NORTH



LOCATION MAP

OAKLAND TRUCK STOP
8255 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

Figure 1

PROPERTY BOUNDARIES

CAFE

9/21/MTBE

ND/950/110

630/2600/180

MW-5
(90.46')

MW-4
(90.44')

DISPENSERS

TRUCK
WASH
AREA

STATION
&
MARKET

TRUCK
SCALE

MW-1
(90.48'*)
FP

2000/450/33

MW-2
(90.48')

90.5'

MW-3
(90.52')

MW-6
(90.67')

4100/22,000/15,000

FORMER
FUEL
USTs

UNDERGROUND
STORAGE
TANK
FARM

90.6'

SAN LEANDRO STREET

LEGEND



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

(91.48'*)

GROUNDWATER ELEVATION
ADJUSTED FOR FREE-FLOATING
HYDROCARBON THICKNESS



NORTH

SCALE
1" = 50'

90.6'

POTENTIOMETRIC SURFACE
CONTOUR

POTENTIOMETRIC
SURFACE CONTOUR MAP
SEPTEMBER 4, 2001

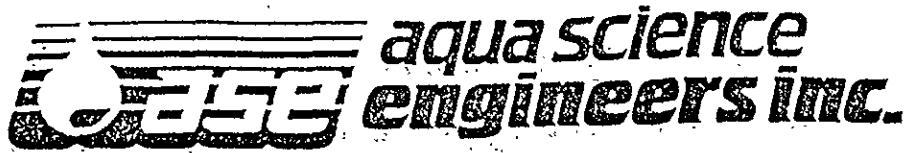
OAKLAND TRUCK STOP
8255 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

Figure 2

APPENDIX A

Well Sampling Field Logs



WELL SAMPLING FIELD LOG

Project Name and Address: OTS
Job #: 3540 Date of sampling: 9/4/01
Well Name: M4-1 Sampled by: EP
Total depth of well (feet): _____ Well diameter (inches): 2
Depth to water before sampling (feet): prod = 6.60 H₂O = 6.80
Thickness of floating product if any: 0.20"
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? Yes 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: _____

CHEMICAL DATA

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

SAMPLED

SAMPLES COLLECTED

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



WELL SAMPLING FIELD LOG

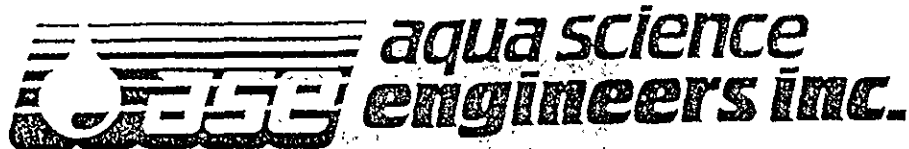
Project Name and Address: Oakland Truckstop
 Job #: 3540 Date of sampling: 9/4/01
 Well Name: MW-2 Sampled by: EP
 Total depth of well (feet): 15.5 Well diameter (inches): 2
 Depth to water before sampling (feet): 6.34
 Thickness of floating product if any: -
 Depth of well casing in water (feet): 9.16
 Number of gallons per well casing volume (gallons): 1.47
 Number of well casing volumes to be removed: 4
 Req'd volume of groundwater to be purged before sampling (gallons): 5.86
 Equipment used to purge the well: bailer
 Time Evacuation Began: 1105 Time Evacuation Finished: 1120
 Approximate volume of groundwater purged: 6
 Did the well go dry?: NO After how many gallons: -
 Time samples were collected: 1130
 Depth to water at time of sampling: -
 Percent recovery at time of sampling: -
 Samples collected with: bailer
 Sample color: clear/gray Odor: None
 Description of sediment in sample: Silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>75.6</u>	<u>6.91</u>	<u>1832</u>
<u>2</u>			
<u>3</u>			
<u>4</u>			

SAMPLES COLLECTED

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



WELL SAMPLING FIELD LOG

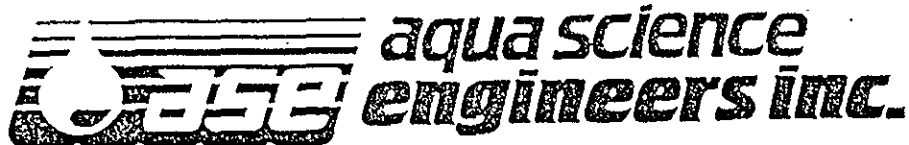
Project Name and Address: OTS
 Job #: 3540 Date of sampling: 9/14/01
 Well Name: MW-3 Sampled by: EP
 Total depth of well (feet): 15.06 Well diameter (inches): 2
 Depth to water before sampling (feet): 5.91
 Thickness of floating product if any: —
 Depth of well casing in water (feet): 9.15
 Number of gallons per well casing volume (gallons): 1.46
 Number of well casing volumes to be removed: 4
 Req'd volume of groundwater to be purged before sampling (gallons): 5.9
 Equipment used to purge the well: bailer
 Time Evacuation Began: 1035 Time Evacuation Finished: 1050
 Approximate volume of groundwater purged: 6
 Did the well go dry?: no After how many gallons: —
 Time samples were collected: 1100
 Depth to water at time of sampling: —
 Percent recovery at time of sampling: —
 Samples collected with: bailer
 Sample color: clear/grey Odor: moderate
 Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	75.7	7.02	1422
2	74.8	7.04	1408
3	73.5	7.06	1381
4	73.0	7.08	1376

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>MW-3</u>	<u>5</u>	<u>40ml VOA</u>	<u>X</u>	<u>X</u>	



WELL SAMPLING FIELD LOG

Project Name and Address: Oakland Truckstop
 Job #: 3540 Date of sampling: 9/4/01
 Well Name: MW-4 Sampled by: EP
 Total depth of well (feet): 14.75 Well diameter (inches): 2
 Depth to water before sampling (feet): 6.16
 Thickness of floating product if any: —
 Depth of well casing in water (feet): 8.59
 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): 5.5
 Equipment used to purge the well: bailler
 Time Evacuation Began: 1140 Time Evacuation Finished: 1200
 Approximate volume of groundwater purged: 5.5
 Did the well go dry?: no After how many gallons: —
 Time samples were collected: 1205
 Depth to water at time of sampling: —
 Percent recovery at time of sampling: —
 Samples collected with: bailler
 Sample color: gray/brown Odor: none
 Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>77.1</u>	<u>7.23</u>	<u>1425</u>
<u>2</u>	<u>76.7</u>	<u>7.25</u>	<u>1408</u>
<u>3</u>	<u>75.8</u>	<u>7.26</u>	<u>1394</u>
<u>4</u>	<u>75.2</u>	<u>7.27</u>	<u>1389</u>

SAMPLES COLLECTED

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



WELL SAMPLING FIELD LOG

Project Name and Address: Oakland Truckstop
 Job #: 3510 Date of sampling: 9/4/01
 Well Name: MW-5 Sampled by: EP
 Total depth of well (feet): 13.70 Well diameter (inches): 2
 Depth to water before sampling (feet): 5.84
 Thickness of floating product if any: -
 Depth of well casing in water (feet): 7.86
 Number of gallons per well casing volume (gallons): 1.26
 Number of well casing volumes to be removed: 4
 Req'd volume of groundwater to be purged before sampling (gallons): 5
 Equipment used to purge the well: bailer
 Time Evacuation Began: 1215 Time Evacuation Finished: 1235
 Approximate volume of groundwater purged: 5
 Did the well go dry?: no After how many gallons: -
 Time samples were collected: 1245
 Depth to water at time of sampling: -
 Percent recovery at time of sampling: -
 Samples collected with: bailer
 Sample color: clear Odor: None
 Description of sediment in sample: Silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>74.2</u>	<u>7.17</u>	<u>1489</u>
<u>2</u>	<u>73.8</u>	<u>7.15</u>	<u>1482</u>
<u>3</u>	<u>72.7</u>	<u>7.14</u>	<u>1478</u>
<u>4</u>	<u>72.0</u>	<u>7.13</u>	<u>1472</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>x</u>	<u>x</u>	



WELL SAMPLING FIELD LOG

Project Name and Address: Oakland Truck Stop
 Job #: 3540 Date of sampling: 9/4/01
 Well Name: MW-6 Sampled by: EP
 Total depth of well (feet): 14.36 Well diameter (inches): 2
 Depth to water before sampling (feet): 6.12
 Thickness of floating product if any: -
 Depth of well casing in water (feet): 8.24
 Number of gallons per well casing volume (gallons): 1.32
 Number of well casing volumes to be removed: 4
 Req'd volume of groundwater to be purged before sampling (gallons): 5.3
 Equipment used to purge the well: bailer
 Time Evacuation Began: 1000 Time Evacuation Finished: 1020
 Approximate volume of groundwater purged: 5
 Did the well go dry?: NO After how many gallons: -
 Time samples were collected: 1030
 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>77.5</u>	<u>7.66</u>	<u>965</u>
<u>2</u>	<u>75.2</u>	<u>7.64</u>	<u>947</u>
<u>3</u>	<u>74.8</u>	<u>7.62</u>	<u>928</u>
<u>4</u>	<u>73.9</u>	<u>7.59</u>	<u>901</u>

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iccd?	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 : 22123

Date : 9/24/2001

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

Subject : 5 Water Samples
Project Name : Oakland Truckstop (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,



Joel Kiff



Report Number : 22123

Date : 9/24/2001

Project Name : Oakland Truckstop (OTS)

Project Number : 3540

Sample : MW-2

Matrix : Water

Lab Number : 22123-01

Sample Date :9/4/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	2.7	0.50	ug/L	EPA 8260B	9/8/2001
Toluene	< 0.50	0.50	ug/L	EPA 8260B	9/8/2001
Ethylbenzene	2.1	0.50	ug/L	EPA 8260B	9/8/2001
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	9/8/2001
Methyl-t-butyl ether (MTBE)	33	0.50	ug/L	EPA 8260B	9/8/2001
Diisopropyl ether (DIPE)	3.4	0.50	ug/L	EPA 8260B	9/8/2001
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	9/8/2001
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	9/8/2001
Tert-Butanol	93	5.0	ug/L	EPA 8260B	9/8/2001
TPH as Gasoline	2000	50	ug/L	EPA 8260B	9/8/2001
Toluene - d8 (Surr)	94.5		% Recovery	EPA 8260B	9/8/2001
4-Bromofluorobenzene (Surr)	96.3		% Recovery	EPA 8260B	9/8/2001
TPH as Diesel	450	50	ug/L	M EPA 8015	9/12/2001

Approved By:  Joel Kiff



Report Number : 22123

Date : 9/24/2001

Project Name : Oakland Truckstop (OTS)

Project Number : 3540

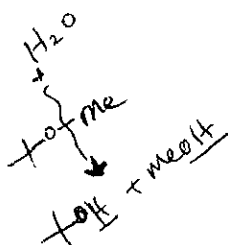
Sample : MW-3

Matrix : Water

Lab Number : 22123-02

Sample Date : 9/4/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	13000	50	ug/L	EPA 8260B	9/15/2001
Toluene	83	50	ug/L	EPA 8260B	9/15/2001
Ethylbenzene	480	50	ug/L	EPA 8260B	9/15/2001
Total Xylenes	83	50	ug/L	EPA 8260B	9/15/2001
Methyl-t-butyl ether (MTBE)	4100	50	ug/L	EPA 8260B	9/15/2001
Diisopropyl ether (DIPE)	< 50	50	ug/L	EPA 8260B	9/15/2001
Ethyl-t-butyl ether (ETBE)	< 50	50	ug/L	EPA 8260B	9/15/2001
Tert-amyl methyl ether (TAME)	< 50	50	ug/L	EPA 8260B	9/15/2001
Tert-Butanol	3400	500	ug/L	EPA 8260B	9/15/2001
TPH as Gasoline	29000	5000	ug/L	EPA 8260B	9/15/2001
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	9/15/2001
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8260B	9/15/2001
TPH as Diesel	19000	50	ug/L	M EPA 8015	9/12/2001



Approved By:  Joel Kiff



Report Number : 22123

Date : 9/24/2001

Project Name : **Oakland Truckstop (OTS)**

Project Number : **3540**

Sample : **MW-4**

Matrix : **Water**

Lab Number : **22123-03**

Sample Date : **9/4/2001**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	9/12/2001
Toluene	< 0.50	0.50	ug/L	EPA 8260B	9/12/2001
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	9/12/2001
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	9/12/2001
Methyl-t-butyl ether (MTBE)	110	0.50	ug/L	EPA 8260B	9/12/2001
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	9/12/2001
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	9/12/2001
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	9/12/2001
Tert-Butanol	26	5.0	ug/L	EPA 8260B	9/12/2001
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	9/12/2001
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	9/12/2001
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8260B	9/12/2001
TPH as Diesel	950	50	ug/L	M EPA 8015	9/12/2001

Approved By:  Joel Kiff



Report Number : 22123

Date : 9/24/2001

Project Name : Oakland Truckstop (OTS)

Project Number : 3540

Sample : MW-5

Matrix : Water

Lab Number : 22123-04

Sample Date :9/4/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	9/16/2001
Toluene	< 0.50	0.50	ug/L	EPA 8260B	9/16/2001
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	9/16/2001
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	9/16/2001
Methyl-t-butyl ether (MTBE)	180	0.50	ug/L	EPA 8260B	9/16/2001
Diisopropyl ether (DIPE)	9.4	0.50	ug/L	EPA 8260B	9/16/2001
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	9/16/2001
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	9/16/2001
Tert-Butanol	29	5.0	ug/L	EPA 8260B	9/16/2001
TPH as Gasoline	630	50	ug/L	EPA 8260B	9/16/2001
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	9/16/2001
4-Bromofluorobenzene (Surr)	91.6		% Recovery	EPA 8260B	9/16/2001
TPH as Diesel	2600	50	ug/L	M EPA 8015	9/14/2001

Approved By:  Joel Kiff



Report Number : 22123

Date : 9/24/2001

Project Name : Oakland Truckstop (OTS)

Project Number : 3540

Sample : MW-6

Matrix : Water

Lab Number : 22123-05

Sample Date :9/4/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	190	10	ug/L	EPA 8260B	9/12/2001
Toluene	12	10	ug/L	EPA 8260B	9/12/2001
Ethylbenzene	< 10	10	ug/L	EPA 8260B	9/12/2001
Total Xylenes	23	10	ug/L	EPA 8260B	9/12/2001
Methyl-t-butyl ether (MTBE)	15000	25	ug/L	EPA 8260B	9/14/2001
Diisopropyl ether (DIPE)	< 10	10	ug/L	EPA 8260B	9/12/2001
Ethyl-t-butyl ether (ETBE)	< 10	10	ug/L	EPA 8260B	9/12/2001
Tert-amyl methyl ether (TAME)	79	10	ug/L	EPA 8260B	9/12/2001
Tert-Butanol	4000	100	ug/L	EPA 8260B	9/12/2001
TPH as Gasoline	5400	1000	ug/L	EPA 8260B	9/12/2001
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	9/12/2001
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	9/12/2001
TPH as Diesel	22000	100	ug/L	M EPA 8015	9/17/2001

Approved By:  Joel Kiff

Report Number : 22123

Date : 9/24/2001

Project Name : **Oakland Truckstop (OTS)**

Project Number : **3540**

22123 Quality Control Data - Method Blank

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 50	50	ug/L	M EPA 8015	9/11/2001

Approved By:  _____
Joel Kiff

Report Number : 22123

Date : 9/24/2001

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Oakland Truckstop (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
Spike Recovery Data														
TPH as Diesel	Blank	<50	1000	1000	987	1080	ug/L	M EPA 8015	9/11/2001	98.7	108	8.95	70-130	25

KIFF ANALYTICAL, LLC

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

Approved By: Joel Kiff



Report Number : 22123


Date : 9/24/2001

Project Name : **Oakland Truckstop (OTS)**

Project Number : **3540**

22123 Quality Control Data - Method Blank

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	9/8/2001
Toluene	< 0.50	0.50	ug/L	EPA 8260B	9/8/2001
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	9/8/2001
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	9/8/2001
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	9/8/2001
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	9/8/2001
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	9/8/2001
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	9/8/2001
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	9/8/2001
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	9/8/2001
Toluene - d8 (Surr)	99.2		% Recovery	EPA 8260B	9/8/2001
4-Bromofluorobenzene (Surr)	92.3		% Recovery	EPA 8260B	9/8/2001

Approved By:  Joel Kiff

Report Number : 22123

Date : 9/24/2001

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Oakland Truckstop (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
Spike Recovery Data														
Benzene	22123-03	<0.50	18.6	19.3	16.6	17.6	ug/L	EPA 8260B	9/12/2001	89.3	91.2	2.08	70-130	25
Toluene	22123-03	<0.50	18.6	19.3	17.6	18.3	ug/L	EPA 8260B	9/12/2001	194.6	95.0	0.395	70-130	25
Tert-Butanol	22123-03	26	93.2	96.5	117	121	ug/L	EPA 8260B	9/12/2001	197.1	98.5	1.46	70-130	25
Methyl-t-Butyl Ether	22123-03	110	18.6	19.3	127	126	ug/L	EPA 8260B	9/12/2001	195.6	90.2	5.86	70-130	25

KIFF ANALYTICAL, LLC

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

Approved By:  Joel Kiff

Report Number : 22123

Date : 9/24/2001

QC Report : Laboratory Control Sample (LCS)

Project Name : **Oakland Truckstop (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	9/8/2001	103	70-130
Toluene	40.0	ug/L	EPA 8260B	9/8/2001	106	70-130
Tert-Butanol	200	ug/L	EPA 8260B	9/8/2001	112	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	9/8/2001	87.4	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

22123

PAGE 1 OF 1

SAMPLER (SIGNATURE) [Signature] (PHONE NO.) _____

PROJECT NAME Oakland Trussop (OTS) JOB NO. 3540
 ADDRESS 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 601/8010)	VOLATILE ORGANICS (EPA 624/8240/8260)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	OIL & GREASE (EPA 5520)	LUFT 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-GIBTEX/5 OXY'S (EPA 8260)	TPH-GIBTEX/7 OXY'S / HYDROCS (EPA 8260)	COMPOSITE	
					MW-2	9/4/01		Water	5		X										
MW-3	↓		↓	↓		X												X			02
MW-4	↓		↓	↓		X												X			03
MW-5	↓		↓	↓		X												X			04
MW-6	↓		↓	↓		X												X			05

RELINQUISHED BY:
[Signature]
 (signature) (time) 11:35
E Padden
 (printed name) (date) 9/5/01
 Company- ASE

RECEIVED BY:

 (signature) (time)

 (printed name) (date)
 Company- _____

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

RECEIVED BY LABORATORY:
[Signature]
 (signature) (time) 11:35
Harold Brewer
 (printed name) (date) 09/05/01
 Company- KIFF

COMMENTS:

 TURN AROUND TIME
 STANDARD 24hr 48hr 72hr
 OTHER:
