



ENVIRONMENTAL
PROTECTION

99 JAN 27 PM 3:56

January 19, 1999

SEMI-ANNUAL GROUNDWATER MONITORING REPORT
JANUARY 5, 1999 GROUNDWATER SAMPLING

at

Lim Family Property
250 8th Street
Oakland, California

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

1.0 INTRODUCTION

This report outlines the methods and findings of Aqua Science Engineer's, Inc. (ASE) semi-annual groundwater monitoring at the property located at 250 8th Street in Oakland, California (*Figures 1 and 2*).

2.0 SITE HISTORY

A gasoline service station previously occupied the site. In May 1992, ASE removed ten underground fuel storage tanks from the site. The tanks consisted of one (1) 10,000-gallon gasoline tank, one (1) 5,000-gallon diesel tank, three (3) 2,000-gallon gasoline tanks, one (1) 2,000-gallon diesel tank, three (3) 500-gallon gasoline tanks and one (1) 250-gallon waste oil tank. Up to 10,000 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPH-G) and 5,900 ppm total petroleum hydrocarbons as diesel (TPH-D) were detected in soil samples collected during the tank removal.

Between December 1992 and March 1993, All Environmental of Lafayette, California overexcavated 1,762 cubic yards of soil from the site and off-hauled the soil to the BFI Landfill in Livermore, California. Analytical results show that all on-site soil with hydrocarbon concentrations greater than 10 ppm was removed from the site with the exception of soil along the 8th Street shoring. Up to 1,800 ppm TPH-G and 120 ppm TPH-D were detected in soil samples collected along the shoring indicating that contamination likely extends below 8th Street. This contamination left in place may still be a source for groundwater contamination.

In January 1995, ASE installed monitoring wells MW-1 and MW-2 at the site. High hydrocarbon concentrations were detected in monitoring well MW-2, downgradient of the site. Moderate hydrocarbon concentrations were detected in on-site monitoring well MW-1.

Since April 1995, the site has been on a groundwater monitoring program. Analytical results for these sampling periods are presented in Tables Two and Three.

3.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On January 5, 1999, ASE staff geologist Greg Schramm measured the depth to water in each site well using an electric water level sounder. On the same day, All Environmental measured depth to water at their Lum property site, located across the street at 8th and Alice. The surface of the groundwater was also checked for the presence of free-floating hydrocarbons or sheen. No free-floating hydrocarbons or sheen was present on the surface of water in monitoring well MW-1 or MW-2. Groundwater elevation data is presented below in Table One.

TABLE ONE
Groundwater Elevation Data

Well I.D.	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (msl)	Product Thickness (feet)	Groundwater Elevation (feet)
MW-1	01-30-95	25.51	16.21		9.30
	04-12-95		15.71		9.80
	07-14-95		16.71		8.80
	10-17-95		17.72		7.79
	01-12-96		18.03		7.48
	07-25-96		16.82		8.69
	01-06-97		15.60		9.91
	07-08-97		17.31		8.20
	01-26-98		15.21		10.30
	07-23-98		15.38		10.13
	01-05-99		16.82		8.69
MW-2	01-30-95	23.99	15.02		8.97
	04-12-95		14.75		9.24
	07-14-95		16.02		7.97
	10-17-95		16.94		7.05
	01-12-96		17.05		6.94
	07-25-96		16.02		7.97
	01-06-97		14.34		9.65
	07-08-97		16.52		7.47
	01-26-98		14.10		9.89
	07-23-98		14.70		9.29
	01-05-99		16.01		7.98

TABLE ONE (cont'd)
Groundwater Elevation Data

Well I.D.	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation (msl)
LUM-1	07-14-95	23.42	Unknown		Unknown
	10-17-95		18.21	1.53	6.43*
	01-12-96		18.15	1.35	6.35*
	07-25-96		18.08	2.36	7.23*
	01-06-97		Unknown		Unknown
	07-08-97		Unknown		Unknown
	02-20-98		10.03	2.19	15.13*
	01-05-99		16.71	1.09	7.58*
LUM-2	07-14-95	23.98	17.21		6.77
	10-17-95		17.67		6.31
	01-12-96		17.89	0.01	6.10*
	07-25-96		16.94		7.04
	01-06-97		14.35		9.63
	07-08-97		17.32		6.66
	02-20-98		10.84		13.14
	01-05-99		16.51		7.47

* = Adjusted for the presence of free-floating oil by the equation:

$$\text{Top of Casing Elevation} - \text{Depth to Water} + (0.8 \times \text{Floating Hydrocarbon Thickness}) = \text{Groundwater Elevation (Adjusted)}$$

The groundwater flow direction has consistently been to the south beneath the site at an approximate gradient of 0.01-feet/foot.

4.0 MONITORING WELL SAMPLING

On January 5, 1999, ASE sampled monitoring wells MW-1 and MW-2 at the site. Prior to sampling, four well casing volumes of water were removed from each well. The pH, temperature and conductivity were monitored during the purging, and samples were not collected until these parameters stabilized. After the water level in each well recovered to at least 80% of the static pre-purge level, groundwater samples were collected with a dedicated polyethylene bailer. The groundwater samples from each well were decanted from the bailer into 40-ml volatile organic analysis (VOA) vials, pre-preserved with hydrochloric acid, and 1-liter amber glass bottles. The samples were labeled, placed in protective foam sleeves, and stored in coolers with wet ice for transport to Chromalab of Pleasanton, California (ELAP #1094) under appropriate chain of custody

documentation. During sampling there was a strong hydrocarbon odor present in groundwater from monitoring well MW-2. No odors were noted during the sampling of monitoring well MW-1.

Well sampling purge water was contained in a 55-gallon steel drum and stored on-site for handling by the client at a later date. See Appendix A for a copy of the well sampling field logs.

5.0 ANALYTICAL RESULTS FOR GROUNDWATER

The groundwater samples were analyzed for TPH-G by EPA Method 5030/8015M, TPH-D by EPA Method 3510/8015M, benzene, toluene, ethylbenzene, and total xylenes (collectively known as BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8020 and halogenated volatile organic compounds (HVOCs) by EPA Method 8010. The groundwater sample from monitoring well MW-2 was also analyzed for oil and grease (O&G) by Standard Method 5520BF. The analytical results are presented in Tables Two and Three, and the certified analytical report and chain of custody documentation are included in Appendix B.

TABLE TWO
Groundwater Analytical Results
TPH-G, TPH-D, BTEX and MTBE
All results are in parts per billion

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE
<u>MW-1</u>							
01-30-95	740	200	3	5	1	4	--
04-12-95	400	500	<0.5	<0.5	3	<2	--
07-14-95	520	400	1	<0.5	2	3	--
10-17-95	400	200	0.5	1	3	<2	--
01-12-96	120	890	<0.5	<0.5	<0.5	<1.0	<2
07-08-96	320	300	0.52	2.7	1.2	2.3	<5
01-06-97	110	75	<0.5	0.68	<0.5	<0.5	<5
07-08-97	380	290	<0.5	1.5	1.4	1.9	<5
01-26-98	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
07-23-98	190	<50	0.54	2.8	2.0	1.8	<5
01-05-99	200	< 50	1.8	1.6	3.3	1.9	< 5
DTSC MCL	NE	NE	1	150	700	1750	354

TABLE TWO (cont'd)
Groundwater Analytical Results
TPH-G, TPH-D, BTEX and MTBE
All results are in parts per billion

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE
MW-2							
01-30-95	88,000	800	19,000	18,000	2,400	10,000	--
04-12-95	110,000	990	21,000	28,000	2,800	14,000	--
07-14-95	120,000	5,000	20,000	25,000	3,200	15,000	--
10-17-95	190,000	4,000	15,000	26,000	4,900	23,000	--
01-12-96	32,000	2,600	10,000	8,000	1,100	4,800	<2
07-08-96	110,000	2,500	20,000	18,000	2,500	12,000	<500
01-06-97	230,000	37,000	11,000	19,000	4,300	20,000	<1,200
07-08-97	91,000	35,000	16,000	20,000	2,700	13,000	<1,000
01-26-98	50,000	11,000	12,000	12,000	1,600	6,700	<250
07-23-98	50,000	8,100#	11,000	8,300	1,800	7,000	1,100
01-05-99	50,000	7,600#	12,000	12,000	2,300	9,600	1,300
DTSC MCL	NE	NE	1	150	700	1750	350
EPA METHOD	5030/ 8015M	3550/ 8015M	8020	8020	8020	8020	8020

Notes:

- * = Hydrocarbons uncharacteristic of gasoline found in the gasoline range at 76 ppb.
- # = Estimated concentration reported due to overlapping fuel patterns.
- ¥ DTSC interim action level, MCL no established.

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

Most recent data in **bold**.

TABLE THREE
Groundwater Analytical Results
Lead, Oil & Grease and Volatile Organic Compounds
All results are in parts per billion

	<u>MW-1</u>	<u>MW-2</u>
<u>1-30-95</u>		
Dissolved Lead	< 0.04	< 0.04
Total Oil and Grease	< 500	19,000
Hydrocarbon Oil and Grease	< 500	17,000
Chloroform	0.5	< 30
Tetrachloroethene (PCE)	8	< 30
Other VOCs	< 0.5 - < 2	< 30 - < 100
<u>4-12-95</u>		
Dissolved Lead	< 0.04	< 0.04
Hydrocarbon Oil and Grease	< 500	22,000
Tetrachloroethene (PCE)	6	0.9
1,2-Dichloroethane	< 0.5	43
Other VOCs	< 0.5 - < 2	< 30 - < 100
<u>7-14-95</u>		
Total Oil and Grease	< 500	25,000
Hydrocarbon Oil and Grease	< 500	23,000
1,2-Dichloroethane	< 0.5	35
Tetrachloroethene (PCE)	4	< 5
Other VOCs	< 0.5 - < 2	< 5 - < 20
<u>10-17-95</u>		
Total Oil and Grease	< 1,000	15,000
Hydrocarbon Oil and Grease	< 1,000	13,000
Tetrachloroethene (PCE)	5	< 0.5
Trichloroethene (TCE)	< 0.5	1
Other VOCs	< 0.5 - < 2	< 0.5 - < 2
<u>01-12-96</u>		
Hydrocarbon Oil and Grease	< 5,000	< 5,000
<u>07-08-96</u>		
Hydrocarbon Oil and Grease	---	< 1,000
Chloroform	0.8	< 0.5
Tetrachloroethane (PCE)	6.4	< 0.5
Other VOCs	< 0.5 - < 3	< 0.5 - < 3
<u>01-06-97</u>		
Hydrocarbon Oil and Grease	---	4,100

TABLE THREE (Cont'd)
Groundwater Analytical Results
Lead, Oil & Grease and Volatile Organic Compounds
All results are in parts per billion

	<u>MW-1</u>	<u>MW-2</u>
<u>07-08-97</u>		
Hydrocarbon Oil and Grease	---	< 1,000
Tetrachloroethane (PCE)	0.9	< 0.5
Other VOCs	< 0.5 - < 3	< 0.5 - < 3
<u>01-26-98</u>		
Hydrocarbon Oil and Grease	---	< 1,000
Trichloroethene	0.70	< 5.0
Tetrachloroethene	10	< 5.0
1,2-Dichloroethane	< 0.5	11
Other VOCs	< 0.5 - < 50	< 0.5 - < 50
<u>07-23-98</u>		
Hydrocarbon Oil and Grease	---	< 1,000
Tetrachloroethene	4.0	4.6
1,2-Dichloroethane	< 2	9.9
Other VOCs	< 2 - < 10	< 0.5 - < 5.0
<u>01-05-99</u>		
Hydrocarbon Oil and Grease	---	< 1,000
Tetrachloroethene	5.1	< 50
Trichloroethene	0.52	< 50
1,1,2,2-Tetrachloroethane	0.58	< 50
Chloroform	8.2	< 50
Other VOCs	< 0.5 - < 5	< 50 - < 500

6.0 CONCLUSIONS AND RECOMMENDATION

Elevated petroleum hydrocarbon concentrations were detected in groundwater samples collected from monitoring well MW-2. The benzene, toluene, ethylbenzene and total xylenes concentrations in these samples exceeded the California Department of Toxic Substances Control (DTSC) maximum contaminant levels (MCLs) for drinking water. In addition, the MTBE concentration in these samples exceeded the DTSC interim action level for drinking water. Benzene detected in groundwater samples collected from monitoring well MW-1 exceeded the DTSC MCL for drinking water. All other hydrocarbon concentrations detected in groundwater samples collected from monitoring well MW-1 were generally consistent with previous sampling events. 5.1 parts per billion (ppb) tetrachloroethene (PCE) and 8.2 ppb chloroform were detected in groundwater samples collected from well MW-1. No VOCs were detected

in groundwater samples collected from monitoring well MW-2; however, laboratory detection limits were much higher than normal.

Work on the groundwater remediation project outlined in ASE's workplan dated June 5, 1997 will commence on January 20, 1999. The next semi-annual groundwater sampling is scheduled for July 1999.

7.0 REPORT LIMITATIONS

The results of this investigation represent conditions at the time of the groundwater sampling, at the specific locations where the samples were collected, and for the specific parameters analyzed by the laboratory.

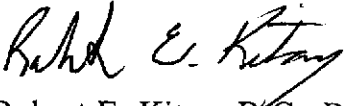
It does not fully characterize the site for contamination resulting from unknown sources, or for parameters not analyzed by the laboratory. All of the laboratory work cited in this report was prepared under the direction of an independent CA-DHS certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

Aqua Science Engineers appreciates the opportunity to assist The Lim Family with their environmental needs. Should you have any questions or comments, please feel free to call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.




Greg Schramm
Staff Geologist


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



Attachments: Figures 1 and 2
Appendices A and B

LEGEND

-  LIM Monitoring Well
-  LUM Monitoring Well
- (7.98') Groundwater elevation



NORTH

SCALE

1" = 30'

8th Street

MW-2
(7.98')

Buildings

SIDEWALK

8.3'

8.5'

CHURCH

PROPERTY LIMITS

BUILDING

LIM Property

Excavation I

MW-1
(8.69')

Excavation II

SIDEWALK

Alice Street

7.7'

SIDEWALK

8.1'

7.5' LUM-1
(7.58')

7.9'

LUM Property

LUM-2
(7.47')

SIDEWALK

**GROUNDWATER ELEVATION
COUNTOUR MAP - 1/5/99**

LIM Property
250 8th Street
Oakland, California

AQUA SCIENCE ENGINEERS

Figure 2

APPENDIX A

Well Sampling Field Log



WELL SAMPLING FIELD LOG

Project Name and Address: Lim Family Property
 Job #: 2808 Date of sampling: 1/5/98
 Well Name: MW-2 Sampled by: GS
 Total depth of well (feet): 26.78 Well diameter (inches): 2
 Depth to water before sampling (feet): 16.01
 Thickness of floating product if any: -
 Depth of well casing in water (feet): 10.77
 Number of gallons per well casing volume (gallons): 1.8
 Number of well casing volumes to be removed: 4
 Req'd volume of groundwater to be purged before sampling (gallons): 7.2
 Equipment used to purge the well: electric pump
 Time Evacuation Began: 11:18 Time Evacuation Finished: 11:25
 Approximate volume of groundwater purged: 9
 Did the well go dry?: no After how many gallons: -
 Time samples were collected: 11:30
 Depth to water at time of sampling: -
 Percent recovery at time of sampling: -
 Samples collected with: dedicated bailer
 Sample color: black Odor: slight HC
 Description of sediment in sample: black

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	64.5	6.30	80
2	66.7	6.18	780
3	66.4	6.06	750
4	66.7	6.01	790

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
MW-2	3	40ml VOA's	✓	✓	TPH-G/BTEX/MTBE
"	2	" "	✓	✓	8010
"	2	1-liter amber	-	✓	TPH-D
"	2	" "	-	✓	O&G



WELL SAMPLING FIELD LOG

Project Name and Address: Lim Family Property
 Job #: 2808 Date of sampling: 1/5/99
 Well Name: MW-1 Sampled by: GS
 Total depth of well (feet): 27.99 Well diameter (inches): 2
 Depth to water before sampling (feet): 16.82
 Thickness of floating product if any: -
 Depth of well casing in water (feet): 11.17
 Number of gallons per well casing volume (gallons): 1.8
 Number of well casing volumes to be removed: 4
 Req'd volume of groundwater to be purged before sampling (gallons): 7.5
 Equipment used to purge the well: electric pump
 Time Evacuation Began: 10:30 Time Evacuation Finished: 10:36
 Approximate volume of groundwater purged: 8
 Did the well go dry?: No After how many gallons: -
 Time samples were collected: 10:42
 Depth to water at time of sampling: -
 Percent recovery at time of sampling: -
 Samples collected with: dedicated bailer
 Sample color: clear/olive Odor: faint HC
 Description of sediment in sample: fine olive

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>66.4</u>	<u>5.80</u>	<u>650</u>
<u>2</u>	<u>66.3</u>	<u>5.83</u>	<u>560</u>
<u>3</u>	<u>66.2</u>	<u>5.81</u>	<u>519</u>
<u>4</u>	<u>66.9</u>	<u>5.77</u>	<u>490</u>

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Leed?	Analysis
<u>MW-1</u>	<u>3</u>	<u>40ml VOA's</u>	<u>✓</u>	<u>✓</u>	<u>TPH-G/BTEX/MTBE</u>
<u>"</u>	<u>2</u>	<u>" "</u>	<u>✓</u>	<u>✓</u>	<u>8010</u>
<u>"</u>	<u>2</u>	<u>1-liter amber</u>	<u>-</u>	<u>✓</u>	<u>TPH-D</u>

APPENDIX B

Certified Analytical Report
and
Chain of Custody Documentation

CHROMALAB, INC.

Environmental Services (SDB)

January 13, 1999

Submission #: 9901045

AQUA SCIENCE ENGINEERS, INC

Atten: GREG SCHRAMM

Project: LIM PROPERTY
Received: January 6, 1999

Project#: 2808

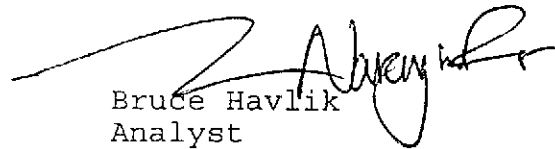
re: 2 samples for TPH - Diesel analysis.
Method: EPA 8015M

Sampled: January 5, 1999 Matrix: WATER Extracted: January 7, 1999
Run#: 16854 Analyzed: January 8, 1999

Spl#	CLIENT SPL ID	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE FACTOR (%)	DILUTION FACTOR
224044	MW-1	N.D.	50	N.D.	94.0	1
224045	MW-2	7600	50	N.D.	94.0	1

Note: Hydrocarbon reported is in the early Diesel Range and does not match our Diesel Standard.


Carolyn House
Analyst


Bruce Havlik
Analyst

CHROMALAB, INC.

Environmental Services (SDB)

January 12, 1999

Submission #: 9901045

AQUA SCIENCE ENGINEERS, INC

Atten: GREG SCHRAMM

Project: LIM PROPERTY
Received: January 6, 1999

Project#: 2808

re: 1 sample for Hydrocarbon Oil and Grease analysis.
Method: 5520 B&F

Sampled: January 5, 1999 Matrix: WATER Extracted: January 12, 1999
Run#: 16905 Analyzed: January 12, 1999

Spl#	CLIENT SPL ID	OIL & GREASE (mg/L)	REPORTING LIMIT (mg/L)	BLANK RESULT (mg/L)	BLANK SPIKE (%)	DILUTION FACTOR
224045	MW-2	N.D.	1.0	N.D.	94.5	1

Jean Mullen for;
Lulu Frazier
Analyst

Michael Verona
Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

January 13, 1999

Submission #: 9901045

AQUA SCIENCE ENGINEERS, INC

Atten: GREG SCHRAMM

Project: LIM PROPERTY
Received: January 6, 1999

Project#: 2808

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-1

Spl#: 224044


Matrix: WATER


Sampled: January 5, 1999

Run#:16895

Analyzed: January 11, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	200	50	N.D.	85	1
MTBE	N.D.	5.0	N.D.	87	1
BENZENE	1.8	0.50	N.D.	101	1
TOLUENE	1.6	0.50	N.D.	100	1
ETHYL BENZENE	3.3	0.50	N.D.	101	1
XYLENES	1.9	0.50	N.D.	96	1


Craig Huntzinger
Analyst


Michael Verona
Laboratory Operations Manager

925-837-4853

1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

PM V132 O: BTEXQC0220
CRAIG 07:53

CHROMALAB, INC.

Environmental Services (SDB)

January 15, 1999

Submission #: 9901045

AQUA SCIENCE ENGINEERS, INC

Atten: GREG SCHRAMM

Project: LIM PROPERTY

Project#: 2808

Received: January 6, 1999

re: One sample for Volatile Halogenated Organics by GC/MS analysis.

Method: 8010 Compounds by Method 8260A Sept 1994

Client Sample ID: MW-2

Spl#: 224045

Matrix: WATER

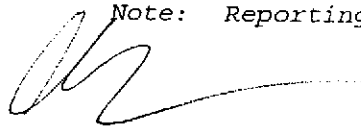
Sampled: January 5, 1999

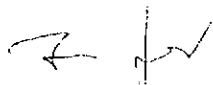
Run#: 16966

Analyzed: January 14, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
BROMODICHLOROMETHANE	N.D.	50	N.D.	--	100
BROMOFORM	N.D.	50	N.D.	--	100
BROMOMETHANE	N.D.	100	N.D.	--	100
CARBON TETRACHLORIDE	N.D.	50	N.D.	--	100
CHLOROETHANE	N.D.	100	N.D.	113	100
2-CHLOROETHYLVINYLEETHER	N.D.	50	N.D.	--	100
CHLOROFORM	N.D.	50	N.D.	--	100
CHLOROMETHANE	N.D.	100	N.D.	--	100
DIBROMOCHLOROMETHANE	N.D.	50	N.D.	--	100
1,2-DICHLOROBENZENE	N.D.	50	N.D.	--	100
1,3-DICHLOROBENZENE	N.D.	50	N.D.	--	100
1,4-DICHLOROBENZENE	N.D.	50	N.D.	--	100
1,2-DIBROMOETHANE	N.D.	50	N.D.	--	100
1,1-DICHLOROETHANE	N.D.	50	N.D.	--	100
1,2-DICHLOROETHANE	N.D.	50	N.D.	--	100
1,1-DICHLOROETHENE	N.D.	50	N.D.	87.6	100
1,2-DICHLOROETHENE (CIS)	N.D.	50	N.D.	--	100
1,2-DICHLOROETHENE (TRANS)	N.D.	50	N.D.	--	100
1,2-DICHLOROPROPANE	N.D.	50	N.D.	--	100
CIS-1,3-DICHLOROPROPENE	N.D.	50	N.D.	--	100
TRANS-1,3-DICHLOROPROPENE	N.D.	50	N.D.	--	100
METHYLENE CHLORIDE	N.D.	500	N.D.	--	100
1,1,2,2-TETRACHLOROETHANE	N.D.	50	N.D.	--	100
TETRACHLOROETHENE	N.D.	50	N.D.	--	100
1,1,1-TRICHLOROETHANE	N.D.	50	N.D.	--	100
1,1,2-TRICHLOROETHANE	N.D.	50	N.D.	--	100
TRICHLOROETHENE	N.D.	50	N.D.	90.7	100
VINYL CHLORIDE	N.D.	50	N.D.	--	100
TRICHLOROTRIFLUOROETHANE	N.D.	50	N.D.	--	100
TRICHLOROFLUOROMETHANE	N.D.	50	N.D.	--	100

Note: Reporting limits raised due to matrix interference.


Alex Tam
Analyst


Michael Verona
Operations Manager

43985

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

SUM # 9901045 REP: PH
CLIENT: ASE
DUE: 6/13/99
REF #: 43985

C

body

PAGE 1 OF 1

SAMPLER (SIGNATURE) *[Signature]*
(PHONE NO.) (925) 820-9391

PROJECT NAME Lim Property JOB NO. 2808
ADDRESS _____ DATE 1/5/99

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:
Attn: Greg Schramm

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-GASOLINE (EPA 5030/8015)	TPH-DIESEL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 601/8010)	PURGEABLE AROMATICS (EPA 602/8020)	VOLATILE ORGANICS (EPA 624/8240)	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)	ORGANOCHLORINE HERBICIDES (EPA 8150)	FUEL OXYGENATES (EPA 8260)				COMPOSITE	
					MW-1	1/5	10:42	water	2			X											
MW-1	1/5	10:48		2				X															
MW-1	1/5	10:52		3	X																		
MW-2	1/5	11:30		2			X					X											
MW-2	1/5	11:30		2																			
MW-2	1/5	11:30		2				X															
MW-2	1/5	11:30		3	X																		

RELINQUISHED BY: *[Signature]* 10:30
(signature) (time)
Greg Schramm 1/6/99
(printed name) (date)
Company- ASE

RECEIVED BY: *[Signature]* 10:30
(signature) (time)
B. Moore 1-6-99
(printed name) (date)
Company- *[Signature]*

RELINQUISHED BY: *[Signature]* 17:15
(signature) (time)
B. Moore 1-6-99
(printed name) (date)
Company- *[Signature]*

RECEIVED BY LABORATORY: *[Signature]* 17:30
(signature) (time)
A. Paredes 1/6/99
(printed name) (date)
Company- *[Signature]*

COMMENTS:
5 DAY T.A.T.
5.3 °C AP
6 Amber
10 VOA's