

ENVIRONMENTAL  
PROTECTION  
**LEYTON & ASSOCIATES**  
ENVIRONMENTAL CONSULTING

SO JUN 11 PM 2:53

June 6, 1996

Mr. Gary Thompson  
Thompson & Thompson Fence Company  
2584 Grant Avenue  
San Lorenzo, CA 94580

Re: Preliminary Site Assessment Report

Dear Mr. Thompson:

Enclosed is the Preliminary Site Assessment Report prepared for your property by Leyton and Associates. The work performed indicated that benzene is present in a specific soil interval in the monitoring wells adjacent to the office/shop building. In addition, groundwater contains dissolved hydrocarbons as gasoline and associated BTEX components in the same wells.

Recommendations for additional work, if any, will be prepared using Risk-Based Corrective Action guidelines and will be submitted under a separate cover.

We have prepared and submitted an Unauthorized Release Report in addition to a copy of the enclosed report to Ms. Amy Leech of Alameda County Environmental Health Services Agency, as required by local and state regulations.

Please feel free to call should you have any questions about the work performed.

Sincerely,

  
Argy Leyton  
Senior Project Manager

enc

cc: Ms. Amy Leech, Alameda County Environmental Health Service Agency

**316 CASHEW LANE - OAKLEY, CALIFORNIA - 94561 - (510) 625-6909**

**LEYTON & ASSOCIATES  
ENVIRONMENTAL CONSULTING**

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MAY 21 11:32  
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26 May 1996

Ms. Amy Leech  
Alameda County Health Agency  
Environmental Health  
1131 Harbor Bay Parkway - 2nd Floor  
Alameda, CA 94502

Re: Thompson & Thompson Fence Company  
2584 Grant Avenue  
San Lorenzo

Dear Ms. Leech:

As previously discussed, enclosed is the Preliminary Site Assessment Report for the above-referenced site. I apologize that this is not the final report but merely a final draft. The final report is currently being reviewed by a registered geologist for technical accuracies. It is anticipated that the final report will be forwarded to you upon my return. As you are aware, I have been teaching and my time has been quite limited.

Enclosed with the draft report are the tables, figures, lab reports and boring logs. It is anticipated that the final report will contain merely grammatical corrections and minor edits.

Please do not hesitate to call should you have any questions regarding this material. I thank you in advance for understanding the reasons for the lateness of the final report. I will be out of town from late 26 May until 3 June.

Sincerely,

  
Argy Leyton  
Senior Project Manager

enc.

ENVIRONMENTAL  
PROTECTION

96 JUN 11 PM 2:53

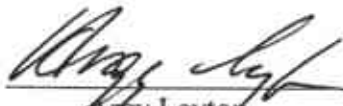
## PRELIMINARY SITE ASSESSMENT REPORT


*Prepared for*

THOMPSON AND THOMPSON FENCE COMPANY  
2584 Grant Avenue  
San Lorenzo, California

*Prepared by*

Leyton & Associates

  
Argy Leyton  
Senior Project Manager

  
Roger Greensfelder  
Registered Geologist #003011

May 31, 1996



**Leyton & Associates**  
**Environmental Consulting**  
**316 Cashew Lane, Oakley, CA 94561**  
**(510) 625-6909**

## EXECUTIVE SUMMARY

Leyton and Associates (L&A) presents this report for the installation of three on-site groundwater monitoring wells at Thompson and Thompson Fence Company located at 2584 Grant Avenue in San Lorenzo, California. The groundwater monitoring wells were installed to assess the absence or presence of dissolved hydrocarbons in soil and groundwater and to assess the groundwater flow direction and gradient beneath the site.

Soil samples collected and analyzed from the well installation activities did not contain hydrocarbons as gasoline at laboratory method detection limits. Three of the five soil samples collected and analyzed did not contain benzene, toluene, ethylbenzene and xylenes (BTEX) at laboratory method detection limits. Benzene was detected in two of the soil samples analyzed at concentrations of 0.041 and 0.050 parts per million. No other BTEX components were detected in these two samples.

Groundwater samples collected and analyzed from one well, MW-3, did not contain hydrocarbons as gasoline or BTEX components at laboratory method detection limits. Groundwater samples from wells MW-1 and MW-2 contained hydrocarbons as gasoline at concentrations of 33,000 and 11,000 parts per billion. Benzene was detected in these two wells at concentrations of 2,200 and 420 parts per billion.

## **INTRODUCTION**

Leyton & Associates (L&A) is pleased to present this report for the drilling and installation of three on-site groundwater monitoring wells at the above-referenced location (Figure 1). The groundwater monitoring wells were installed to assess the absence or presence of dissolved hydrocarbons in soil and groundwater beneath the site.

## **SITE HISTORY**

On November 6, 1992, one 1,000-gallon leaded gasoline underground storage tank (UST) was removed from the site. Tank removal activities were performed by Paradiso Construction of San Leandro, California. Soil samples were collected by Kaprelian Engineering of Concord, California. Soil samples were collected from both ends of the former UST at approximately 8.5 feet below ground surface (bgs). Soil samples collected and analyzed during tank removal activities contained total petroleum hydrocarbons as gasoline [TPH(G)] at concentrations of 960 and 2,000 parts per million (ppm). Benzene was detected in the soil samples at concentrations of 13 and 38 ppm. Analytic results for lead indicated that concentrations of 7.4 and 11 ppm were present. Groundwater was not encountered during tank removal activities.

## **GEOLOGIC SETTING**

The site is located in the town of San Lorenzo, Alameda County, California. The topography in the site vicinity is relatively flat. The closest surface water is the San Francisco Bay located approximately 1/4 mile west of the site. Elevation at the subject site is approximately 20 feet above mean sea level.

The site is situated on the western border of the Coast Ranges of California. Topography in the site vicinity is relatively flat. Regionally, the Hayward Hills lie to the east and the topography grades westerly into low-lands ending at San Francisco Bay. The closest surface water is the San Francisco Bay which is located approximately 1/4 mile west of the site.

The site is located within the California Coast Ranges. The Coast Ranges have a Franciscan basement composed of graywackes, limestone, shale and radiolarian chert.<sup>1</sup> The area is tectonically bounded by the Hayward Fault Zone to the east and the San Andreas Fault Zone to the west.

Locally, the site is generally underlain by silty clays, sandy clays, Bay Mud and sandy silts. Based on groundwater monitoring data, groundwater is encountered approximately 3 to 5 feet below existing grade. Based on monitoring data, groundwater flow direction beneath the subject site is westerly.

### SCOPE OF WORK

To evaluate the absence or presence of hydrocarbons at the subject site, L&A proposed the following scope of work:

1. Prepare a site-specific health and safety plan for the proposed work.
2. Drill three on-site soil borings to a depth of approximately 20 feet below ground surface. Survey the soil samples in the field with an organic vapor meter (OVM) to determine whether volatile hydrocarbons are present in the samples. Use OVM readings and field observations to select soil samples from the monitoring well borings for analysis. Selected samples were analyzed for total purgeable petroleum

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<sup>1</sup> Norris, Robert M. And Webb, Robert W., 1990, *Geology of California*, John Wiley and Sons, 537 pages.

hydrocarbons as gasoline [TPPH(G)], benzene, toluene, ethylbenzene, and xylenes (BTEX) with methyl-tert-butyl-ether (MTBE) distinction.

3. Install one two-inch diameter monitoring well in each boring.
4. Develop the newly installed wells. Sample the newly installed wells and analyze the groundwater samples for TPPH(G), BTEX with MTBE distinction, and total dissolved solids (TDS).
5. Survey the top of casing elevation of the newly installed wells. Measure depth to groundwater and product thickness (if any) in all wells. Use the survey and water level data to verify the groundwater flow direction and gradient beneath the site.
6. Arrange for disposal of the drill cuttings from the borings, the steam-cleaning rinseate and the monitoring well purge water.
7. Report the results and make recommendations for future work.

### SOIL SAMPLING AND SUBSURFACE CONDITIONS

On March 7, 1996, L&A personnel observed and documented the drilling of three on-site soil borings (TW-1, TW-2 and TW-3) by Bay Area Exploration Services, Inc., of Cordelia, California (C57 #522125). The borings were drilled using truck-mounted 8-inch hollow-stem augers driven by a CME-45 drill rig to a maximum depth of 20 feet below ground surface (bgs).

Temporary groundwater monitoring wells were constructed in each of the borings. The wells were constructed using two-inch outer diameter 0.010 machine-slotted schedule 40 PVC casing and #2/12 sand for gravel pack around the well screen. The sand pack was placed throughout the entire screen interval, extending approximately 1 foot above the top of the screen interval. The annular seal of each well was then sealed with one foot of hydrated bentonite chips followed by a neat cement cap.

Soil samples were collected at a minimum of five-foot intervals. The soil cuttings were field screened for the presence of volatile organic compounds during drilling using an OVM. OVM readings were recorded and are presented on the boring logs (Appendix). Soil samples for chemical analysis were collected in new brass sleeves, covered with Teflon squares, capped with plastic end caps and sealed in sealable bags. The samples were placed in a cooler and maintained at 4°C prior to delivery to the analytical laboratory.

Drill cuttings were placed on the soil stockpile from the tank removal activities. They were covered with visqueen and will remain on-site pending disposal.

Sediments encountered in the borings consisted of silty clays, sandy clays, clays (Bay Mud), and silty sand. Groundwater was not encountered during drilling. Groundwater later entered the borings. Detailed descriptions of the subsurface materials encountered during drilling are presented on the boring logs included in the appendix.

### **GROUNDWATER SAMPLING**

On March 7, 1996, L&A personnel collected grab groundwater samples from each of the newly installed temporary monitoring wells. The groundwater samples were collected using new disposable bailers. The groundwater samples were analyzed for TPH(G), BTEX with MTBE distinction and TDS. Results of the initial groundwater sampling are presented on Table 2 (Appendix).



## WELL DEVELOPMENT

Based on the initial groundwater sampling event, the newly installed wells were developed on May 13, 1996 and re-designated as wells MW-1, MW-2 and MW-3. The wells were developed by L&A personnel using a vented surge block and hand-bailing with PVC bailers. The groundwater evacuated during well development activities was placed in 55-gallon DOT-approved drums, labelled and will remain on-site pending appropriate disposal.

## ANALYTIC RESULTS

Selected soil samples from the borings were analyzed for TPH(G) and BTEX with MTBE distinction by EPA Methods 5030/8015 and 8020, respectively. Analytic results for soil samples collected and analyzed are presented on Table 1. Groundwater samples were collected and analyzed for TPH(G), BTEX with MTBE distinction and TDS by EPA Methods 5030/8015, 8020 and 160.1, respectively. Analytic results for groundwater are presented on Table 2. The chain of custody documents and laboratory analytic reports are included in the appendix. Leyton & Associates is not responsible for laboratory omissions or errors.

### Analytic Results for Soil

Hydrocarbons as gasoline were not detected at laboratory method detection limits in any of the soil samples collected and analyzed from the borings. Benzene was detected in the soil samples collected from TW-1 at 9.5-10 feet bgs and from TW-2 at 10-10.5 feet bgs at concentrations of 0.041 and 0.050 ppm, respectively.

### Analytic Results for Groundwater

The groundwater samples collected and analyzed from TW-3 during the initial sampling event did not contain TPPH(G) or BTEX with MTBE distinction at laboratory method detection limits. Total dissolved solids was detected at 2,000 ppm.

The groundwater samples collected and analyzed from TW-1 and TW-2 during the initial sampling event contained TPPH(G) at concentrations of 28,000 and 13,000 ppb, respectively. In addition, benzene was detected from both wells at concentrations of 700 and 410 ppb, respectively. MTBE distinction was not detected at laboratory detection levels of 500 ppb from these two wells. Analytic results for groundwater are presented on Table 2 (Appendix).

Groundwater samples were subsequently collected from the three monitoring wells on May 15, 1996. The groundwater samples collected and analyzed from wells MW-1 and MW-2 contained TPPH(G) at concentrations of 33,000 and 11,000 ppb, respectively. Benzene was also detected in the groundwater samples from these same wells at concentrations of 2,200 and 420 ppb, respectively.

### RECOMMENDATIONS

Recommendations for future work based on Risk-Based Corrective Action (RBCA) calculations will be submitted under a separate cover.

*Added developed  
on 5/13/96*

# APPENDIX

# SAN LEANDRO

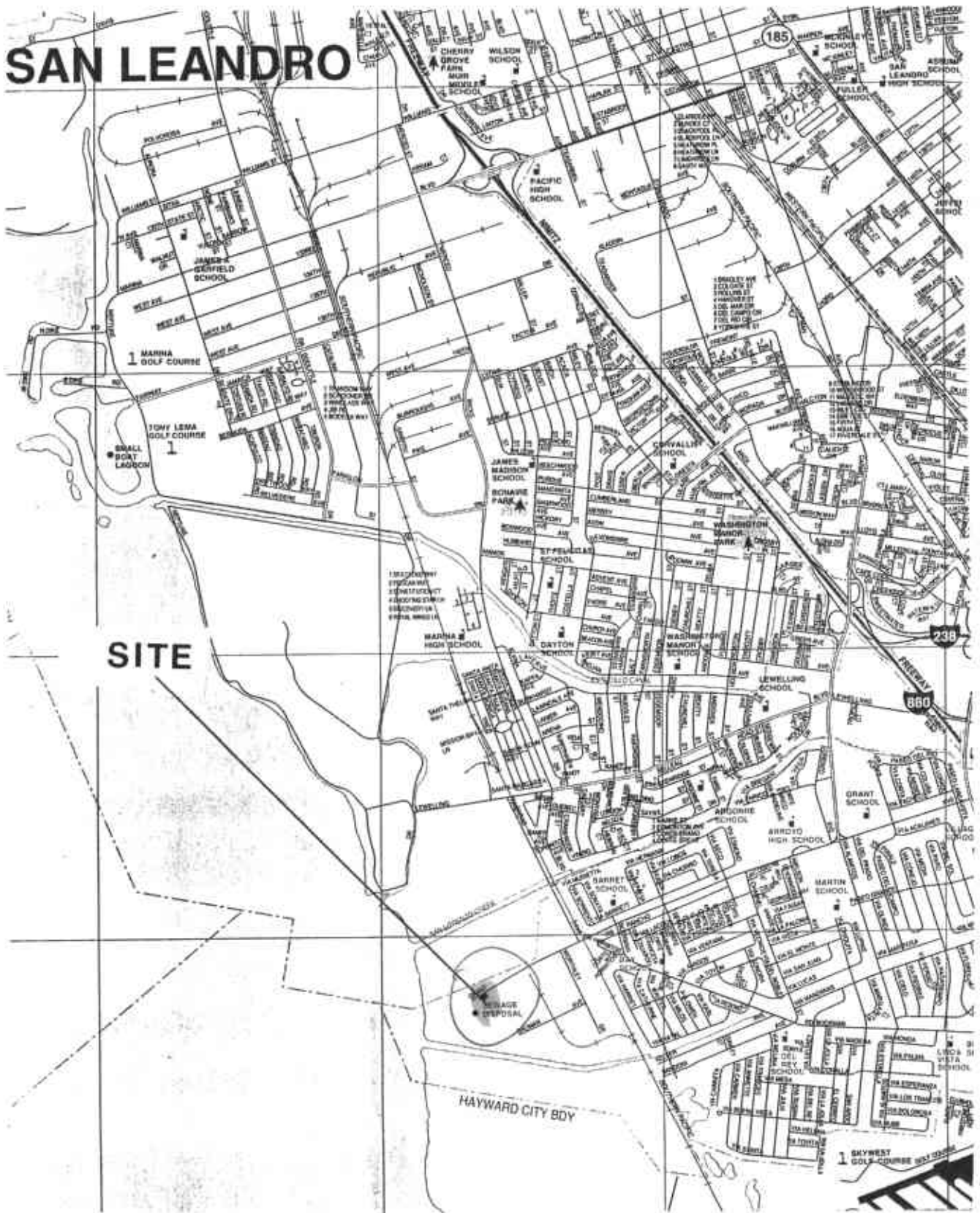


FIGURE 1. SITE LOCATION MAP - 2584 GRANT AVENUE, SAN LORENZO, CALIFORNIA

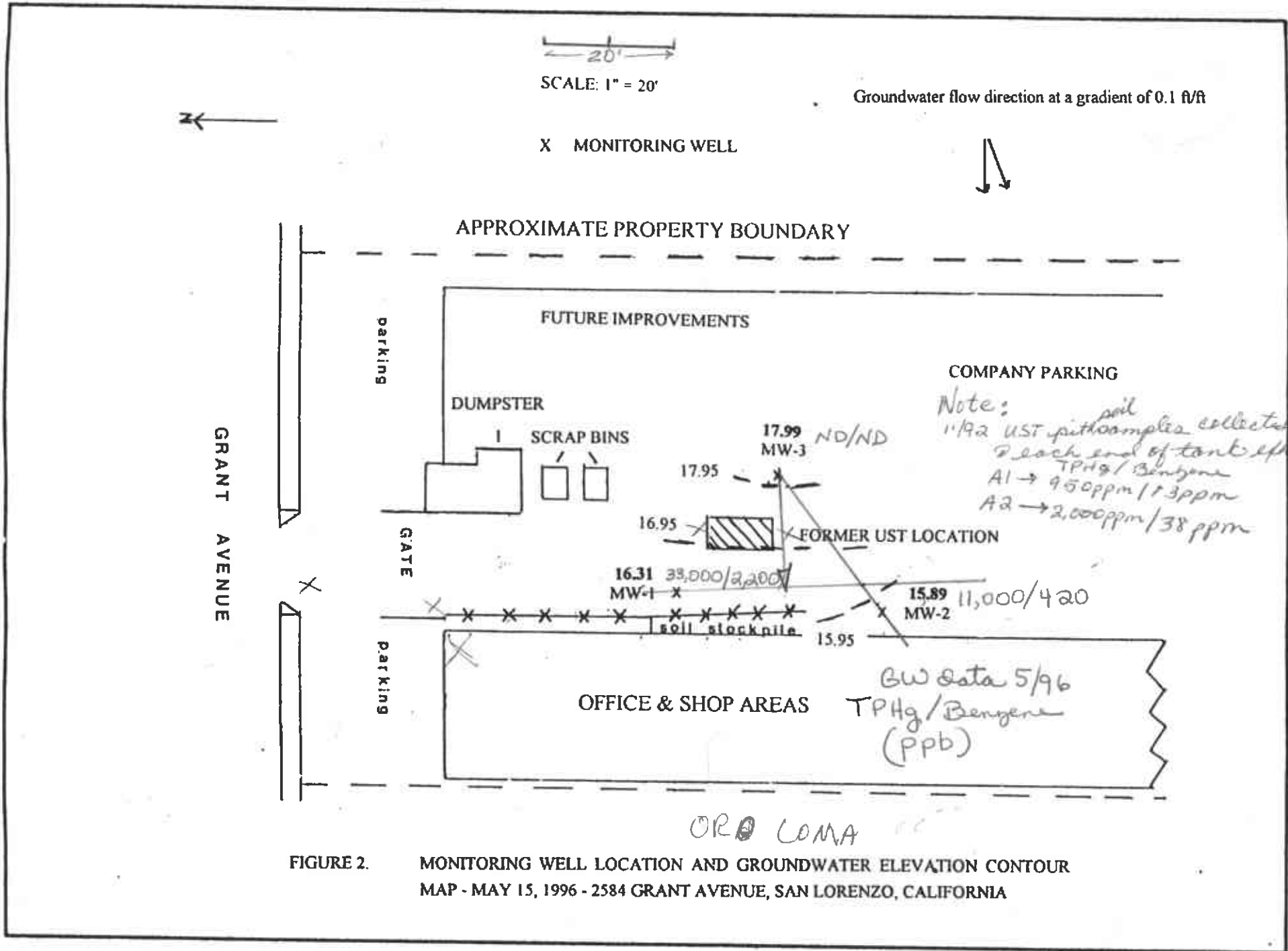


FIGURE 2. MONITORING WELL LOCATION AND GROUNDWATER ELEVATION CONTOUR MAP - MAY 15, 1996 - 2584 GRANT AVENUE, SAN LORENZO, CALIFORNIA



Table 1. Analytic Results for Soil - Thompson & Thompson Fence Company, 2584 Grant Avenue, San Lorenzo, California.

Date	Sample ID	Depth (ft)	Analytic Method	TPPH(G)	←-----ppm-----→				
					B	T	E	X	MTBE
3/7/96	TW-1	9.5-10	8015/8020	<0.005	0.041	<0.005	<0.005	<0.2	<0.050
		15.5-16	8015/8020	<0.005	<0.005	<0.005	<0.005	<0.2	<0.050
3/7/96	TW-2	10-10.5	8015/8020	<0.005	0.050 ppm	<0.005	<0.005	<0.2	<0.050
3/7/96	TW-3	5.5-6	8015/8020	<0.005	<0.005	<0.005	<0.005	<0.2	<0.050
		10-10.5	8015/8020	<0.005	<0.005	<0.005	<0.005	<0.2	<0.050

EXPLANATION:

TPPH(G) = Total Petroleum Hydrocarbons as Gasoline  
 B = Benzene  
 T = Toluene  
 E = Ethylbenzene  
 X = Xylenes  
 MTBE = Methyl-Tert-Butyl-Ether  
 ft = feet below ground surface  
 ppm = parts per million

ANALYTIC METHODS:

8015 = EPA Method 8015/5030 for TPPH(G)  
 8020 = EPA Method 8020 for BTEX with MTBE

ANALYTIC LABORATORY:

All analyses performed by American Environmental Network of Pleasant Hill, California.



Table 2. Analytic Results for Groundwater - Thompson & Thompson Fence Company, 2584 Grant Avenue, San Lorenzo, California.

Date/	Sample ID	DTW (ft)	TOC	GWE (msl)	Analytic Method	TPPH(G)	B	T	E	X	MTBE	TDS
						←-----ppb----->					←-----ppm----->	
3/7/96	TW-1	5.28 <sup>1</sup>		---	8015/8020/160.1 <sup>2</sup>	28,000	700	210	830	4,600	<500	2,100
5/15/96	[REDACTED]	4.69	21.00	16.31	8015/8020 <sup>2</sup>	33,000	2,200	770	1,100	6,500	<1,000	---
3/7/96	TW-2	2.75 <sup>1</sup>		---	8015/8020/160.1 <sup>2</sup>	13,000	410	840	440	1,700	<500	1,800
5/15/96	[REDACTED]	4.25	20.14	15.89	8015/8020 <sup>2</sup>	11,000	420	530	390	1,000	<1,000	---
3/7/96	TW-3	3.28 <sup>1</sup>		---	8015/8020/160.1	<50	<0.5	<0.5	<0.5	<2	<50	2,000
5/15/96	MW-3	4.49	22.48	17.99	8015/8020	<50	<0.5	<0.5	<0.5	<2	<50	---
3/7/96	TB	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<2	---	---
5/15/96					8015/8020	<50	<0.5	<0.5	<0.5	<2	---	---
3/7/96	BB	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<2	---	---
5/15/96					8015/8020	<50	<0.5	<0.5	<0.5	<2	---	---



Table 2. Analytic Results for Groundwater - Thompson & Thompson Fence Company, 2584 Grant Avenue, San Lorenzo, California  
(continued)

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EXPLANATION:

TPPH(G) = Total Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

MTBE = Methyl-Tert-Butyl-Ether

TDS = Total Dissolved Solids

ft = feet below ground surface

msl = referenced to mean sea level

ppb = parts per billion

ppm = parts per million

--- = not analyzed/not applicable

ANALYTIC METHODS:

8015 = EPA Method 8015/5030 for TPPH(G)

8020 = EPA Method 8020 for BTEX with MTBE

160.1 = EPA Method 160.1 for TDS

ANALYTIC LABORATORY:

All analyses performed by American Environmental Network of Pleasant Hill, California.

NOTES:

- 1 DTW data collected for grab groundwater sampling purposes only. Groundwater in wells had not stabilized therefore water level data not used for elevation purposes.
- 2 Laboratory reporting limits raised for gasoline/BTEX with MTBE distinction due to high levels of target compounds. Sample run at dilution.



# UNIFIED SOIL CLASSIFICATION SYSTEM

PRIMARY DIVISIONS					SECONDARY DIVISIONS	
<b>COARSE GRAINED SOILS</b> More than half of material is larger than No. 200 sieve size	<b>GRAVELS</b> More than half of coarse fraction is larger than No. 4 sieve	<b>CLEAN GRAVELS</b> (Less than 5% fines)	GW	Well graded gravels, gravel-sand mixtures, little or no fines.		
		<b>GRAVEL WITH FINES</b>	GP	Poorly graded gravels, gravel-sand mixtures, little or no fines.		
			GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.		
		GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.			
	<b>SANDS</b> More than half of coarse fraction is smaller than No. 4 sieve	<b>CLEAN SANDS</b> (Less than 5% fines)	SW	Well graded sands, gravelly sands, little or no fines		
			SP	Poorly graded sands or gravelly sands, little or no fines.		
		<b>SAND WITH FINES</b>	SM	Silty sands, sand-silt mixtures, non-plastic fines.		
			SC	Clayey sands, sand-clay mixtures, plastic fines.		
<b>FINE GRAINED SOILS</b> More than half of material is smaller than No. 200 sieve size	<b>SILTS AND CLAYS</b> Liquid limit is less than 50%		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.		
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.		
			OL	Organic silts and organic silty clays of low plasticity.		
			<b>SILTS AND CLAYS</b> Liquid limit is greater than 50%		MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.		
			OH	Organic clays of medium to high plasticity, organic silts.		
<b>HIGHLY ORGANIC SOILS</b>			Pt	Peat and other highly organic soils.		

## DEFINITION OF TERMS

U.S. STANDARD SERIES SIEVE			CLEAR SQUARE SIEVE OPENINGS						
			200	40	10	4	3/4"	3"	12"
SILTS AND CLAYS	SAND			GRAVEL		COBBLES	BOULDERS		
	FINE	MEDIUM	COARSE	FINE	COARSE				

## GRAIN SIZES

SANDS & GRAVELS	Std. Pen BLOWS/FT <sup>1</sup>	2" ID SS BLOWS/FT	SILTS & CLAYS	POCKET PENETROMETER <sup>2</sup>	Std. Pen BLOWS/FT <sup>1</sup>	2" ID SS BLOWS/FT
VERY LOOSE	0 - 4	0 - 7	VERY SOFT	0 - 250	0 - 2	0 - 3
LOOSE	4 - 10	7 - 16	SOFT	250 - 500	2 - 4	3 - 6
MEDIUM DENSE	10 - 30	16 - 50	FIRM	500 - 1,000	4 - 8	6 - 13
DENSE	30 - 50	50 - 83	STIFF	1,000 - 2,000	8 - 16	13 - 26
VERY DENSE	OVER 50	OVER 83	VERY STIFF	2,000 - 4,000	16 - 32	26 - 53
			HARD	OVER 4,000	OVER 32	OVER 53

**RELATIVE DENSITY**

**CONSISTENCY**

Correction Factor - .6

<sup>1</sup> Number of blows of 140-pound hammer falling 30 inches to drive a 2-inch O.D. (1-3/8 inch I.D.) split spoon (ASTM D-1586).

<sup>2</sup> Unconfined compressive strength in tons/sq. ft. as determined by laboratory testing or approximated by the standard penetration test (ASTM D-1586), pocket penetrometer, torvane, or visual observation.

**WELL** TWMW-1

**GRAPHIC LOG**

**DESCRIPTION**

	OVM	OVM Interval	Chem analysis	Blows	RECOVERY	WELL CONSTRUCTION
0						AC
1						
2						
3						
4						
5				3	NR	S11
6	1393	X	X	4		
7				3		
8						
9						
10	1167	X	X	0		
11				0		
12				1	NR	
13						
14						CH
15				1		
16	3	X	X	1		
17						
18						
19						
20			X	4		
21	0	X		7		
22				10		

-6" Asphalt

**SILTY SAND (SM)** Brown /Black, moist, very loose.  
 ~15% clay, ~20% silt, ~65% very fine sand, local pebbles to

~ 1/8". Low est K. Oily odor.

Color changes brown to black at 5.5'.

**SILTY SAND (SM)** Black with local brown mottling, damp,  
 very soft, ~15% clay, ~20% silt, ~65% sand. Low est K.

Clay increases to ~65%, sand decreases to ~15% at 10.5'

**SILTY CLAY (CH)** Black, damp, very soft, ~80% clay,  
 ~20% silt, local root fragments, moderate plasticity, oily odor.

Low est K

**SILTY CLAY (CH)** Grey, moist, firm to stiff, ~60% clay,  
 ~25% silt, ~15% fine sand, local medium-grained sands, low  
 plasticity, low est K.

WELL TW/MW-2

DESCRIPTION

GRAPHIC LOG

DEPTH (ft)	OVM	OVM Interval	Chem analysis	Blows	RECOVERY	WELL CONSTRUCTION
0						AC
1						
2						FILL
3						
4						
5				1	NR	
6	0	X	X	3		CL
7						
8						
9						
10			X	0		
11	5	X		2		
12						
13						
14						CL
15			X	0		
16	5	X		1		
17						
18						
19			X	4		
20	5	X		7		CH
21				9		
22						

-1.5' Asphalt, -1.5' black clay base

**SANDY CLAY (CL)** Brown, dry, soft, ~80% clay, ~20% very fine sand, local pebbles to ~1/8". Low est K.

**BAY MUD (CL)** Gray with brown lenses, moist, very soft, 100% clay, slight H<sub>2</sub>S odor, low plasticity, low est K.

**BAY MUD (CL)** Gray, damp.

**BAY MUD (CH)** Grey, wet, firm, ~80% clay, ~10% silt, ~10% very fine sand, low plasticity, low est K.

WELL TW/MW-3

GRAPHIC LOG

DESCRIPTION

DEPTH	OVM	OVM Interval	Chem analysis	Blows	RECOVERY	WELL CONSTRUCTION	DESCRIPTION
0						AC	- 6" Asphalt
1							
2							
3							
4						SM	SILTY SAND (SM) Brown, moist, loose, ~20% clay, ~30% silt, ~50% very fine to fine sand, local pebbles to 1/8".
5				2	NR		Color and lithologic change at 5.5'
6	60	X		5			
7			X	5			Black, moist, loose, ~20% silt, ~80% very fine to medium sand, local coarse pebbles to ~1/8". Low est K.
8						2" SM	
9							SILTY SAND (SM) Brown with black mottling, damp, very loose, ~20% silt, ~80% very fine to fine sand, slight H <sub>2</sub> S odor.
10				0			Color and lithologic change at 10.0'
11	0	X	X	1			Black with brown mottling, ~90% clay, ~10% silt with local root fragments, low est K.
12							
13						SC-SM	
14							CLAYEY-SILTY SAND (SC-SM) Grey with brown mottling, damp, very loose, ~20% clay, ~20% silt, ~60% fine sand.
15			X	1			Clay increases to ~40% and sand decreases to ~40% at 15.5'
16	5	X		1			
17							
18							
19						CL	
20				4	NR		SILTY CLAY (CL) Grey, moist, firm, ~70% clay, ~20% silt, ~10% fine sand, low plasticity, low est K.
21	0	X	X	8			
22							

# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

LEYTON & ASSOCIATES  
316 CASHEW LANE  
OAKLEY, CA 94561

REPORT DATE: 03/21/96

DATE(S) SAMPLED: 03/07/96

DATE RECEIVED: 03/07/96

ATTN: ARGY LEYTON  
CLIENT PROJ. ID: TH.96100

AEN WORK ORDER: 9603097

### PROJECT SUMMARY:

On March 7, 1996, this laboratory received 12 soil sample(s).

Client requested 5 sample(s) be analyzed for chemical parameters; seven samples were placed on hold. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

  
Larry Klein  
Laboratory Director

## LEYTON &amp; ASSOCIATES

SAMPLE ID: TW-2 @ 10-10.5  
 AEN LAB NO: 9603097-02  
 AEN WORK ORDER: 9603097  
 CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 03/07/96  
 DATE RECEIVED: 03/07/96  
 REPORT DATE: 03/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
<b>BTEX &amp; Gasoline HCs</b>	<b>EPA 8020</b>				
Benzene	71-43-2	50 *	5 ug/kg		03/19/96
Toluene	108-88-3	ND	5 ug/kg		03/19/96
Ethylbenzene	100-41-4	ND	5 ug/kg		03/19/96
Xylenes, Total	1330-20-7	ND	5 ug/kg		03/19/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2 mg/kg		03/19/96
<b>Methyl t-Butyl Ether</b>	<b>EPA 8020</b>	ND	50 ug/kg		03/19/96

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## LEYTON &amp; ASSOCIATES

SAMPLE ID: TW-3 @ 5.5-6  
AEN LAB NO: 9603097-05  
AEN WORK ORDER: 9603097  
CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 03/07/96  
DATE RECEIVED: 03/07/96  
REPORT DATE: 03/21/96

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ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	03/19/96
Toluene	108-88-3	ND	5	ug/kg	03/19/96
Ethylbenzene	100-41-4	ND	5	ug/kg	03/19/96
Xylenes, Total	1330-20-7	ND	5	ug/kg	03/19/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	03/19/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/kg	03/19/96

---

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## LEYTON &amp; ASSOCIATES

SAMPLE ID: TW-3 @ 10-10.5  
AEN LAB NO: 9603097-06  
AEN WORK ORDER: 9603097  
CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 03/07/96  
DATE RECEIVED: 03/07/96  
REPORT DATE: 03/21/96

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	03/18/96
Toluene	108-88-3	ND	5	ug/kg	03/18/96
Ethylbenzene	100-41-4	ND	5	ug/kg	03/18/96
Xylenes, Total	1330-20-7	ND	5	ug/kg	03/18/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	03/18/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/kg	03/18/96

---

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit



## LEYTON &amp; ASSOCIATES

SAMPLE ID: Tw-1 @ 9.5-10  
AEN LAB NO: 9603097.10  
AEN WORK ORDER: 9603097  
CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 03/07/96  
DATE RECEIVED: 03/07/96  
REPORT DATE: 03/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	41 *	5	ug/kg	03/18/96
Toluene	108-88-3	ND	5	ug/kg	03/18/96
Ethylbenzene	100-41-4	ND	5	ug/kg	03/18/96
Xylenes, Total	1330-20-7	ND	5	ug/kg	03/18/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	03/18/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/kg	03/18/96

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## LEYTON &amp; ASSOCIATES

SAMPLE ID: TW-1 @ 15.5-16  
AEN LAB NO: 9603097-11  
AEN WORK ORDER: 9603097  
CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 03/07/96  
DATE RECEIVED: 03/07/96  
REPORT DATE: 03/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	03/18/96
Toluene	108-88-3	ND	5	ug/kg	03/18/96
Ethylbenzene	100-41-4	ND	5	ug/kg	03/18/96
Xylenes, Total	1330-20-7	ND	5	ug/kg	03/18/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	03/18/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/kg	03/18/96

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

AEN (CALIFORNIA)  
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9603097

CLIENT PROJECT ID: TH.96100

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all <sup>SR</sup> reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis. - ?

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9603097  
 INSTRUMENT: E  
 MATRIX: SOIL

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery	
			Fluorobenzene	
03/19/96	TW-2 @ 10-10.5	02	103	
03/19/96	TW-3 @ 5.5-6	05	109	
03/18/96	TW-3 @ 10-10.5	06	104	
03/18/96	TW-1 @ 9.5-10	10	104	
03/18/96	TW-1 @ 15.5-16	11	103	
QC Limits:			70-130	

DATE ANALYZED: 03/18/96  
 SAMPLE SPIKED: 9603097-05  
 INSTRUMENT: E

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/kg)	Average Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
Benzene	36.6	105	<1	79-113	26
Toluene	109	104	2	84-110	20
HCs as Gasoline	1000	96	3	60-126	20

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

\*\*\* END OF REPORT \*\*\*

1. Client: LEYTON + ASSOCIATES  
 Address: 316 CASHEN LN  
OAKLEY, CA 94561  
 Contact: ARGY LEYTON  
 Alt. Contact: \_\_\_\_\_

3440 Vincent Road, Pleasant Hill, CA 94523  
 Phone (510) 930-9090  
 FAX (510) 930-0256

REQUEST FOR ANALYSIS / CHAIN OF CUSTODY

Lab Job Number: 9603097  
 Lab Destination: \_\_\_\_\_  
 Date Samples Shipped: \_\_\_\_\_  
 Lab Contact: BILL SWOBODA  
 Date Results Required: \_\_\_\_\_  
 Date Report Required: \_\_\_\_\_  
 Client Phone No.: 510/625-6909  
 Client FAX No.: 510/625-6909 CALL  
FIRST

R-5,5-F

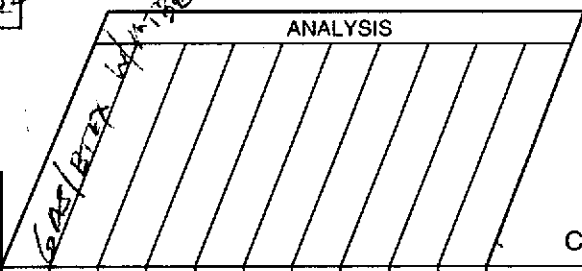
Address Report To:  
 2. ARGY LEYTON  
LEYTON + ASSOC.  
316 CASHEN LN  
OAKLEY, CA 94561

Send Invoice To:  
 3. GARY THOMPSON  
THOMPSON + THOMPSON CONSULTANTS  
2584 GIRANT AVE.  
SAN LORRENZO, CA 94580

Send Report To: 1 or 2 (Circle one)

Client P.O. No.: \_\_\_\_\_ Client Project I.D. No.: TH.96100

Sample Team Member (s) ARGY LEYTON



Lab Number	Client Sample Identification	Air Volume	Date/Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	Comments / Hazards
01A	TW-2 @ 5-5.0		3-7-96	8	-	1	2x6	HOLD
02A	TW-2 @ 10-10.5							HOLD
03A	TW-2 @ 15-15.5							HOLD
04A	TW-2 @ 19-19.5							HOLD
05A	TW-3 @ 5.5-6							
06A	TW-3 @ 10-10.5							
07A	TW-3 @ 15-15.5							HOLD
08A	TW-3 @ 20.5-21							HOLD
09A	TW-1 @ 5.5-6							HOLD
10A	TW-1 @ 9.5-10							
11A	TW-1 @ 15.5-16							
12A	TW-1 @ 20.5-21							HOLD

Relinquished by: (Signature) <u>[Signature]</u>	DATE <u>3-7-96</u>	TIME <u>1550</u>	Received by: (Signature) <u>[Signature]</u>	DATE <u>3-7-96</u>	TIME <u>1730</u>
Relinquished by: (Signature) _____	DATE _____	TIME _____	Received by: (Signature) _____	DATE _____	TIME _____
Relinquished by: (Signature) _____	DATE _____	TIME _____	Received by: (Signature) _____	DATE _____	TIME _____
Method of Shipment			Lab Comments		

\*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter  
 4) PVC filter, diam. \_\_\_\_\_ pore size \_\_\_\_\_ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample  
 10) Other \_\_\_\_\_ 11) Other \_\_\_\_\_

# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

LEYTON & ASSOCIATES  
316 CASHEW LANE  
OAKLEY, CA 94561

REPORT DATE: 03/19/96

DATE(S) SAMPLED: 03/07/96

DATE RECEIVED: 03/07/96

ATTN: ARGY LEYTON  
CLIENT PROJ. ID: TH.96100

AEN WORK ORDER: 9603093

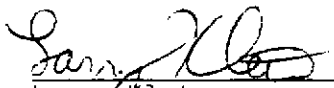
### PROJECT SUMMARY:

On March 7, 1996, this laboratory received 5 water sample(s).

Client requested samples be analyzed for chemical parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

  
Larry Klein  
Laboratory Director

## LEYTON &amp; ASSOCIATES

SAMPLE ID: TB  
AEN LAB NO: 9603093-01  
AEN WORK ORDER: 9603093  
CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 03/07/96  
DATE RECEIVED: 03/07/96  
REPORT DATE: 03/19/96

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	03/15/96
Toluene	108-88-3	ND	0.5	ug/L	03/15/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	03/15/96
Xylenes, Total	1330-20-7	ND	2	ug/L	03/15/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	03/15/96

---

ND = Not detected at or above the reporting limit  
\* = Value at or above reporting limit

## LEYTON &amp; ASSOCIATES

SAMPLE ID: BB  
AEN LAB NO: 9603093-02  
AEN WORK ORDER: 9603093  
CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 03/07/96  
DATE RECEIVED: 03/07/96  
REPORT DATE: 03/19/96

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	03/15/96
Toluene	108-88-3	ND	0.5	ug/L	03/15/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	03/15/96
Xylenes, Total	1330-20-7	ND	2	ug/L	03/15/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	03/15/96

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ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit



## LEYTON &amp; ASSOCIATES

SAMPLE ID: TW-1  
AEN LAB NO: 9603093.03  
AEN WORK ORDER: 9603093  
CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 03/07/96  
DATE RECEIVED: 03/07/96  
REPORT DATE: 03/19/96

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
<hr/>					
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	700 *	5 ug/L		03/15/96
Toluene	108-88-3	210 *	5 ug/L		03/15/96
Ethylbenzene	100-41-4	830 *	5 ug/L		03/15/96
Xylenes, Total	1330-20-7	4,600 *	20 ug/L		03/15/96
Purgeable HCs as Gasoline	5030/GCFID	28 *	0.5 mg/L		03/15/96
Methyl t-Butyl Ether	EPA 8020	ND	500 ug/L		03/15/96
Total Dissolved Solids	EPA 160.1	2,100 *	10 mg/L		03/11/96

RLs elevated for gasoline/BTEX due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## LEYTON &amp; ASSOCIATES

SAMPLE ID: TW-2  
 AEN LAB NO: 9603093-04  
 AEN WORK ORDER: 9603093  
 CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 03/07/96  
 DATE RECEIVED: 03/07/96  
 REPORT DATE: 03/19/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	410 *	5 ug/L		03/18/96
Toluene	108-88-3	840 *	5 ug/L		03/18/96
Ethylbenzene	100-41-4	440 *	5 ug/L		03/18/96
Xylenes, Total	1330-20-7	1,700 *	20 ug/L		03/18/96
Purgeable HCs as Gasoline	5030/GCFID	13 *	0.5 mg/L		03/18/96
Methyl t-Butyl Ether	EPA 8020	ND	500 ug/L		03/18/96
Total Dissolved Solids	EPA 160.1	1,800 *	10 mg/L		03/11/96

RLs elevated for gasoline/BTEX due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## LEYTON &amp; ASSOCIATES

SAMPLE ID: TW-3  
AEN LAB NO: 9603093-05  
AEN WORK ORDER: 9603093  
CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 03/07/96  
DATE RECEIVED: 03/07/96  
REPORT DATE: 03/19/96

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ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	03/18/96
Toluene	108-88-3	ND	0.5	ug/L	03/18/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	03/18/96
Xylenes, Total	1330-20-7	ND	2	ug/L	03/18/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	03/18/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/L	03/18/96
Total Dissolved Solids	EPA 160.1	2,000 *	10	mg/L	03/11/96

---

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

AEN (CALIFORNIA)  
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9603093

CLIENT PROJECT ID: TH.96100

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds, which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9603093  
 INSTRUMENT: F. H  
 MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery	
			Fluorobenzene	
03/15/96	TB	01	94	
03/15/96	BB	02	93	
03/15/96	TW-1	03	90	
03/18/96	TW-2	04	98	
03/18/96	TW-3	05	102	
QC Limits:			70-130	

DATE ANALYZED: 03/17/96  
 SAMPLE SPIKED: 9603134-02  
 INSTRUMENT: H

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
Benzene	22.2	104	2	85-109	17
Toluene	73.9	93	1	87-111	16
Hydrocarbons as Gasoline	500	108	3	66-117	19

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

\*\*\*END OF REPORT\*\*\*

1. Client: LEYTON + ASSOCIATES  
 Address: 316 CASHEN LN  
OKLAHOMA CITY, OK 73106  
 Contact: ARGY LEYTON  
 Alt. Contact: \_\_\_\_\_

3440 Vincent Road, Pleasant Hill, CA 94523  
 Phone (510) 930-9090  
 FAX (510) 930-0256

REQUEST FOR ANALYSIS / CHAIN OF CUSTODY

Lab Job Number: \_\_\_\_\_  
 Lab Destination: \_\_\_\_\_  
 Date Samples Shipped: \_\_\_\_\_  
 Lab Contact: BILL SVOBODA  
 Date Results Required: \_\_\_\_\_  
 Date Report Required: \_\_\_\_\_  
 Client Phone No.: 510/625-6909  
 Client FAX No.: 510/625-6909 CALL FIRST

R-3,S-Z  
 R-7,S-G

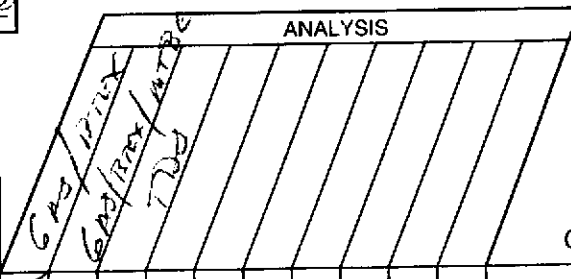
Address Report To:  
 2. ARGY LEYTON  
LEYTON + ASSOCIATES  
316 CASHEN LN  
OKLAHOMA CITY, OK 73106

Send Invoice To:  
 3. ARGY THOMPSON  
THOMPSON + THOMPSON  
2574 GRANT AVE  
SAN LORENZO CA 94582

Send Report To: 1 or 2 (Circle one)

Client P.O. No.: \_\_\_\_\_ Client Project I.D. No.: TH-96100

Sample Team Member (s) ARGY LEYTON



Lab Number	Client Sample Identification	LAB NO	Air Volume	Date/Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	Comments / Hazards
01A-C	T13	01A-C		3.7.96	7	11CL	3	VDA	
02A-C	B3	02A-C				11CL	3	↓	
03A-C	TW-1	03A-C				11CL	3	↓	
04A-C	TW-1	03D				-	1	10	
05A-C	TW-2	04A-C				11CL	3	VDA	
06A-C	TW-2	04D				-	1	10	
07A-C	TW-3	05A-C				11CL	3	VDA	
08A-C	TW-3	05D				-	1	10	

Relinquished by: (Signature) <u>[Signature]</u>	DATE <u>3.7.96</u>	TIME <u>1550</u>	Received by: (Signature) <u>[Signature]</u>	DATE <u>3.7.96</u>	TIME <u>1550</u>
Relinquished by: (Signature) _____	DATE _____	TIME _____	Received by: (Signature) _____	DATE _____	TIME _____
Relinquished by: (Signature) _____	DATE _____	TIME _____	Received by: (Signature) _____	DATE _____	TIME _____
Method of Shipment _____	Lab Comments _____				

\*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter  
 4) PVC filter, diam. \_\_\_\_\_ pore size \_\_\_\_\_ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample  
 10) Other 500 ML PLASTIC 11) Other \_\_\_\_\_

# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

LEYTON & ASSOCIATES  
316 CASHEW LANE  
OAKLEY, CA 94561

ATTN: ARGY LEYTON  
CLIENT PROJ. ID: TH.96100

REPORT DATE: 05/20/96

DATE(S) SAMPLED: 05/15/96

DATE RECEIVED: 05/15/96

AEN WORK ORDER: 9605204

### PROJECT SUMMARY:

On May 15, 1996, this laboratory received 5 water sample(s).

Client requested sample(s) be analyzed for chemical parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

  
Larry Klein  
Laboratory Director

## LEYTON &amp; ASSOCIATES

SAMPLE ID: TB  
AEN LAB NO: 9605204-01  
AEN WORK ORDER: 9605204  
CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 05/15/96  
DATE RECEIVED: 05/15/96  
REPORT DATE: 05/20/96

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	05/15/96
Toluene	108-88-3	ND	0.5	ug/L	05/15/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/15/96
Xylenes, Total	1330-20-7	ND	2	ug/L	05/15/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	05/15/96

---

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit



## LEYTON &amp; ASSOCIATES

SAMPLE ID: BB  
AEN LAB NO: 9605204.02  
AEN WORK ORDER: 9605204  
CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 05/15/96  
DATE RECEIVED: 05/15/96  
REPORT DATE: 05/20/96

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5 ug/L		05/15/96
Toluene	108-88-3	ND	0.5 ug/L		05/15/96
Ethylbenzene	100-41-4	ND	0.5 ug/L		05/15/96
Xylenes, Total	1330-20-7	ND	2 ug/L		05/15/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05 mg/L		05/15/96

---

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## LEYTON &amp; ASSOCIATES

SAMPLE ID: MW-3  
AEN LAB NO: 9605204-03  
AEN WORK ORDER: 9605204  
CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 05/15/96  
DATE RECEIVED: 05/15/96  
REPORT DATE: 05/20/96

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	05/15/96
Toluene	108-88-3	ND	0.5	ug/L	05/15/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/15/96
Xylenes, Total	1330-20-7	ND	2	ug/L	05/15/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	05/15/96
Methyl t-Butyl Ether	EPA 8020	ND	50	ug/L	05/15/96

---

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## LEYTON &amp; ASSOCIATES

SAMPLE ID: MW-2  
 AEN LAB NO: 9605204-04  
 AEN WORK ORDER: 9605204  
 CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 05/15/96  
 DATE RECEIVED: 05/15/96  
 REPORT DATE: 05/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	420 *	10	ug/L	05/15/96
Toluene	108-88-3	530 *	10	ug/L	05/15/96
Ethylbenzene	100-41-4	390 *	10	ug/L	05/15/96
Xylenes, Total	1330-20-7	1,000 *	40	ug/L	05/15/96
Purgeable HCs as Gasoline	5030/GCFID	11 *	1	mg/L	05/15/96
Methyl t-Butyl Ether	EPA 8020	ND	1,000	ug/L	05/15/96

RLs elevated due to high levels of target compounds.  
 Sample run at dilution.

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## LEYTON &amp; ASSOCIATES

SAMPLE ID: MW-1  
 AEN LAB NO: 9605204.05  
 AEN WORK ORDER: 9605204  
 CLIENT PROJ. ID: TH.96100

DATE SAMPLED: 05/15/96  
 DATE RECEIVED: 05/15/96  
 REPORT DATE: 05/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
<b>BTEX &amp; Gasoline HCs</b>	<b>EPA 8020</b>				
Benzene	71-43-2	2,200 *	10	ug/L	05/15/96
Toluene	108-88-3	770 *	10	ug/L	05/15/96
Ethylbenzene	100-41-4	1,100 *	10	ug/L	05/15/96
Xylenes, Total	1330-20-7	6,500 *	40	ug/L	05/15/96
Purgeable HCs as Gasoline	5030/GCFID	33 *	1	mg/L	05/15/96
<b>Methyl t-Butyl Ether</b>	<b>EPA 8020</b>	ND	1,000	ug/L	05/15/96

RLs elevated due to high levels of target compounds.  
 Sample run at dilution.

ND = Not detected at or above the reporting limit  
 \* = Value at or above reporting limit

AEN (CALIFORNIA)  
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9605204

CLIENT PROJECT ID: TH.96100

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

## QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9605204  
 INSTRUMENT: H  
 MATRIX: WATER

## Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery	
			Fluorobenzene	
05/15/96	TB	01	101	
05/15/96	BB	02	101	
05/15/96	MW-3	03	101	
05/15/96	MW-2	04	102	
05/15/96	MW-1	05	96	
QC Limits:			70-130	

DATE ANALYZED: 05/15/96  
 SAMPLE SPIKED: 9605178-01  
 INSTRUMENT: H

## Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
Benzene	22.2	90	17	85-109	17
Toluene	73.9	88	8	87-111	16
Hydrocarbons as Gasoline	500	99	13	66-117	19

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

\*\*\*END OF REPORT\*\*\*

1. Client: LEYTON + ASSOC.  
 Address: 316 CASHEN LN  
OAKLEY, CA 94561  
 Contact: ARGY LEYTON  
 Alt. Contact: \_\_\_\_\_

3440 Vincent Road, Pleasant Hill, CA 94523  
 Phone (510) 930-9090  
 FAX (510) 930-0256

REQUEST FOR ANALYSIS / CHAIN OF CUSTODY

Lab Job Number: 710204  
 Lab Destination: \_\_\_\_\_  
 Date Samples Shipped: \_\_\_\_\_  
 Lab Contact: BILL SUOBODA  
 Date Results Required: 5-18-96  
 Date Report Required: 5-20-96  
 Client Phone No.: 625-6909  
 Client FAX No.: 625-6909 (CALL FIRST)

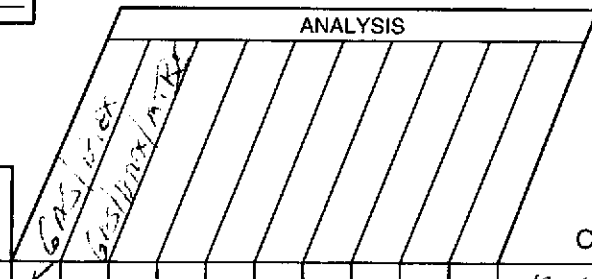
Address Report To:  
 2. LEYTON + ASSOC. #125  
316 CASHEN LN  
OAKLEY, CA 94561  
ATTN: ARGY LEYTON

Send Invoice To:  
 3. THOMPSON + THOMPSON FENCE  
2584 GRANT AVE  
SAN LORENZO

Send Report To: 1 or 2 (Circle one)

Client P.O. No.: \_\_\_\_\_ Client Project I.D. No.: TH 9600

Sample Team Member (s) ARGY LEYTON



Lab Number	Client Sample Identification	Air Volume	Date/Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	ANALYSIS										Comments / Hazards
01AC	TB		5-15-96	7	11AL	3	V2A	GAS/TOX GAS/ION/ATX										ANALYZE IN ORDER
02AC	BB		↓	↓	↓	↓	↓											↓
03AC	MW-3																	
04AC	MW-2																	
05AC	MW-1																	

Relinquished by: (Signature) <u>[Signature]</u>	DATE <u>5-15-96</u>	TIME <u>3:30</u>	Received by: (Signature) <u>[Signature]</u>	DATE <u>5/15/96</u>	TIME <u>16:00</u>
Relinquished by: (Signature) _____	DATE _____	TIME _____	Received by: (Signature) _____	DATE _____	TIME _____
Relinquished by: (Signature) _____	DATE _____	TIME _____	Received by: (Signature) _____	DATE _____	TIME _____
Method of Shipment			Lab Comments		

\*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter  
 4) PVC filter, diam. \_\_\_\_\_ pore size \_\_\_\_\_ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample  
 10) Other \_\_\_\_\_ 11) Other \_\_\_\_\_