ALL ENVIRONMENTAL, INC.
Environmental Engineering & Construction

November 15, 1995
Job No. 1255

Ms. Jennifer Eberle
Alameda County Health Care Services Agency
1131 Harbor Way Parkway, 2nd Floor
Alameda, CA 94502-6577

Subject: **Second Quarterly Groundwater Monitoring and Sampling**
245 8th Street, Oakland, California

Dear Ms. Eberle:

We are enclosing one copy of the referenced report for your review, which presents results of the second episode of quarterly monitoring and sampling at 245 8th Street, Oakland. If you have any questions or comments regarding the findings presented in this report, please call me at (510) 820-3224.

Sincerely,

Jennifer Anderson
Project Manager

Corporate Headquarters:
2641 Crow Canyon Rd., #5
San Ramon, CA 94583
(510) 820-3224

Los Angeles Office:
5031 Pacific Coast Hwy., #178
Torrance, CA 90505
(310) 328-8878

SECOND QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT

245 8th Street
Oakland, California

11-15-95

Prepared For

Mr. Victor Lum
Vic's Automotive
245 8th Street
Oakland, CA 94607

Prepared By

All Environmental, Inc.
2641 Crow Canyon Road, Suite 5
San Ramon, CA 94583

November 15, 1995

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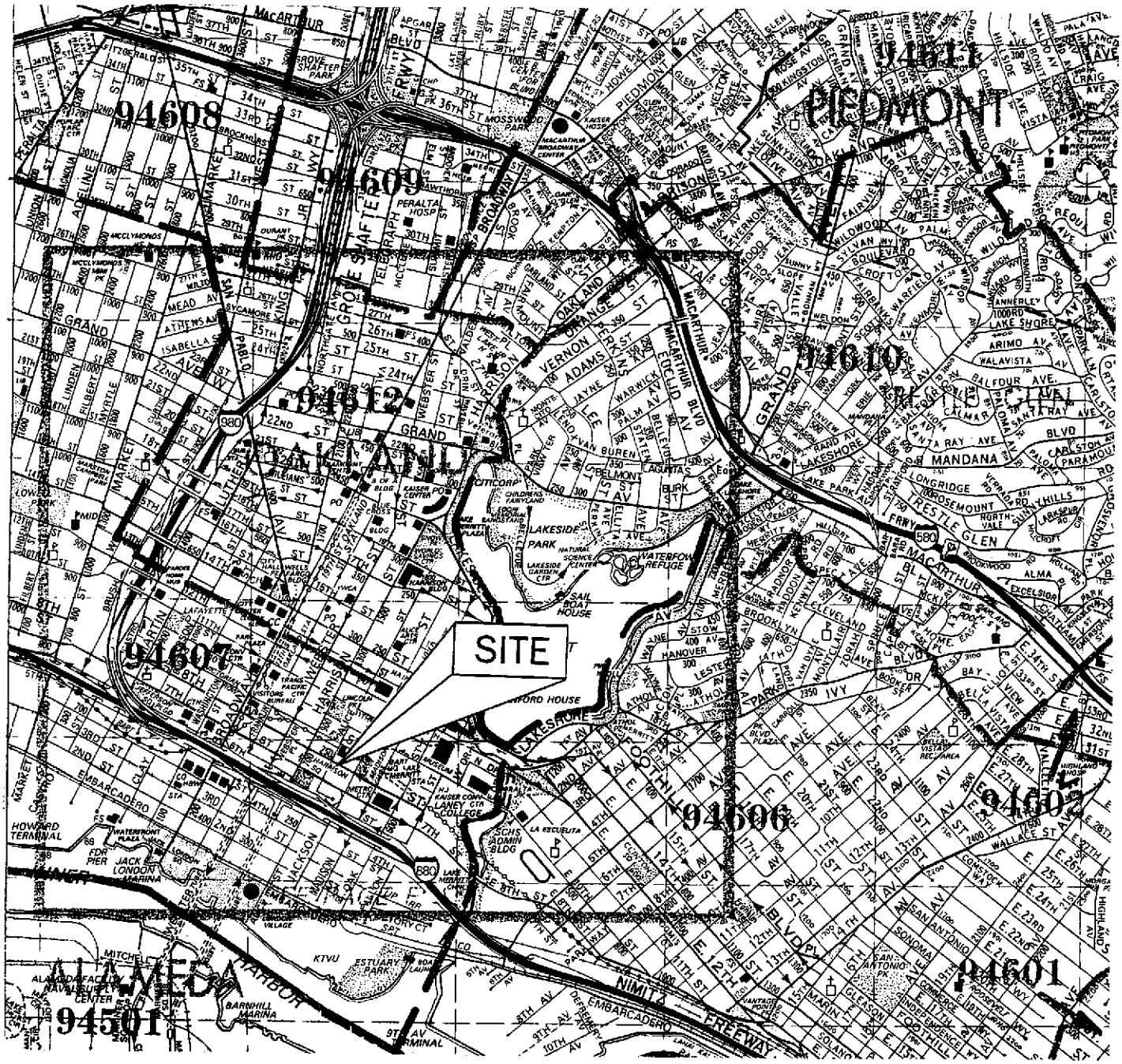
1.0 INTRODUCTION

All Environmental, Inc. (AEI) has prepared this report on behalf of Mr. Victor Lum, in response to his request for quarterly groundwater monitoring at 245 8th Street, Oakland, California (Figure 1: Site Location Map). The investigation, involving the installation of two groundwater monitoring wells and obtaining representative water samples for analyses, was initiated by the property owner in accordance with the requirements of the Alameda County Health Care Services Agency (ACHCSA), Department of Environmental Health. The investigation was conducted to assess contaminant levels in soil and groundwater following the removal of six underground fuel tanks from the property.

AEI drilled two soil borings and converted each boring into a groundwater monitoring well on July 14, 1995 (Ref. 3). This subsurface investigation included logging boreholes under the supervision of a Registered Professional Engineer, soil sampling and analyses, well development, and groundwater sampling and analyses. Prior to drilling, a work plan compiled by AEI was approved by Jennifer Eberle, Hazardous Materials Specialist for ACHCSA. A Drilling Permit was obtained from Zone 7 Water Agency, and the property owners were notified verbally.

AEI performed the first quarterly groundwater monitoring and sampling on July 21, 1995 (Ref. 3). This report summarizes the second episode of quarterly monitoring and sampling. The work involved measuring groundwater levels in order to establish groundwater flow direction and gradient at the site, and obtaining and analyzing well water samples in order to establish contaminant levels.



N

FROM:
THOMAS BROS. MAPS
1995

ALL ENVIRONMENTAL, INC. 2641 CROW CANYON ROAD, SAN RAMON		
SCALE: 1" = 1/4 MI	APPROVED BY:	DRAWN BY:
DATE: 3 OCTOBER 95		REVISED:
SITE LOCATION MAP		
245 8TH STREET, OAKLAND		DRAWING NUMBER: FIGURE 1

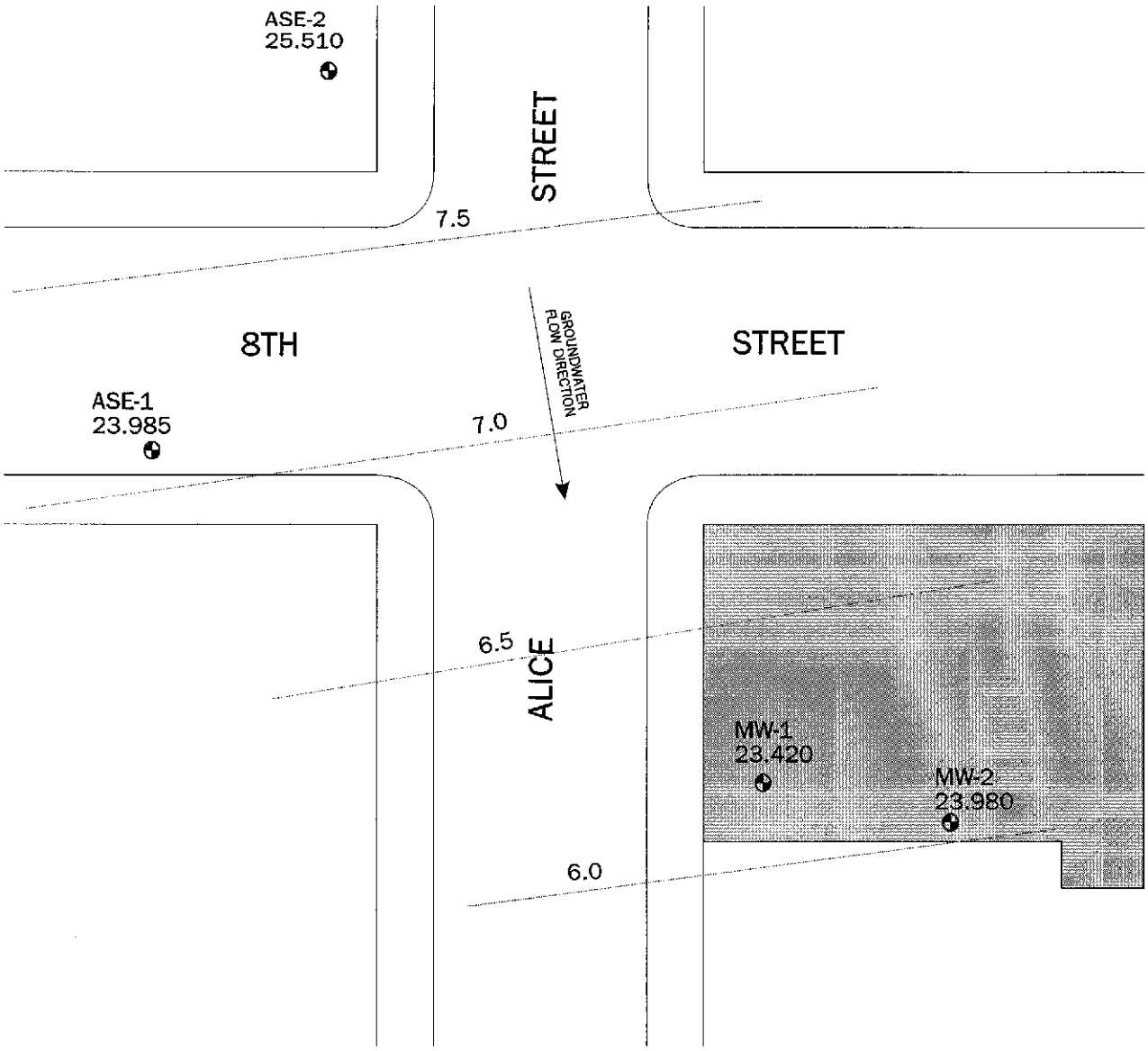
2.0 SITE DESCRIPTION AND BACKGROUND

The site is located in a commercial zone at the corner of 8th Street and Alice Street in Oakland (Figure 1: Site Location Map). The topography of the site is relatively flat, with an elevation of approximately 32 feet above mean sea level. The nearest significant surface water is Lake Merritt, located approximately 2200 feet to the northeast, and the Alameda Inner Harbor located about 2400 feet to the south-southwest. The narrow waterway connecting Lake Merritt with the Inner Harbor lies approximately 2200 feet to the southeast.

One building is located on the property, which contains both an auto repair shop and office for Vic's Automotive. The building is surrounded by an asphalt paved parking lot (Figure 2: Site Plan).

Five underground storage tanks were removed from the site in June, 1993 by AEI (Ref. 1). The tanks consisted of four 1,000-gallon gasoline tanks, and one 250-gallon waste oil tank. Prior to removal, approximately 425 gallons of waste product were pumped from the tanks. Two additional 6,000-gallon gasoline tanks were removed by AEI in August of 1994 (Ref. 2).

Soils taken from the excavations were found to be contaminated, with as much as 3700 ppm Total Petroleum Hydrocarbons (TPH) as gasoline in stockpiled soil, and 160 ppm TPH-gasoline in soils taken from the bottom of one of the excavations. There is a known source of hydrocarbon contamination of groundwater across the intersection from the site, in an upgradient direction. The excavations were backfilled with clean import material.



ALL ENVIRONMENTAL, INC. 2641 CROW CANYON ROAD, SAN RAMON		
SCALE: 1" = 40'	APPROVED BY:	DRAWN BY:
DATE: 15 NOVEMBER 95		REVISED:
SITE PLAN		
245 8TH STREET, OAKLAND		DRAWING NUMBER: FIGURE 2

3.0 GEOLOGY AND HYDROGEOLOGY

Soil boring logs recorded on-site by one of AEI's geologists indicate the near-surface geology of the site consists of gravelly or clayey sand from the surface to about 28 feet below ground surface.

Groundwater was first encountered in sand-bearing soil during drilling at a depth of about 15 feet below ground surface. Water level measurements indicate that the static water is about 7 feet below ground surface in MW-2. These measurements are consistent with previous groundwater levels during the first quarterly monitoring episode. Approximately 1.53 feet of free floating is present in MW-1. Purging of the free floating product in currently underway. Refer to Appendix A for product recovery data. Groundwater level measurements were collected from wells installed by ASE at a neighboring site. The groundwater flow based on these measurements is nearly due south, and the gradient is approximately 0.01 foot per feet. The water level elevations used in arriving at the groundwater gradient and flow direction are shown in Figure 2, Site Plan, and are summarized in the table below:

Table 1 - Water Level Measurements

Date Well Number	Water Depth (feet)	Casing Elevation (feet)	Groundwater Elevation (feet)
July, 1995			
MW-2	17.21	23.980	6.770
ASE-1	16.02	23.985	7.965
ASE-2	16.71	25.510	8.800
Oct, 1995			
MW-2	17.67	23.980	6.310
ASE-1	16.94	23.985	7.045
ASE-2	17.72	25.510	7.790

4.0 WELL SAMPLING

Monitoring well MW-2 was sampled on October 17, 1995. Approximately 10 gallons of well water was bailed into a DOT 17H drum until the water appeared to be reasonably clear. The water was turbid at first, but became nearly clear by the end of the bailing. The water level returned to static level in a few minutes. The Groundwater Well Sampling Field Log is included in Appendix B.

Groundwater was checked for sheen and free product prior to purging and sampling. Floating product was observed in MW-1. The thickness of the product was measured at 1.53 feet using an oil water interface meter. No floating product was observed in MW-2; however, a sheen was present on groundwater samples collected from the well. The MW-2 samples were taken using a

clean disposable bailer. Water was poured from the bailer into amber liter bottles and 40 ml VOA vials and capped so that no head space or visible air bubbles were within the sample containers. The samples were labeled and placed on ice in an ice chest for transportation to Priority Environmental Labs under chain of custody protocol for analysis. No water samples were collected from MW-1 due to the presence of free floating product.

5.0 ANALYTICAL RESULTS OF SAMPLES

A single groundwater sample from MW-2 was analyzed for Total Petoleum Hydrocarbons (TPH) as gasoline, TPH as diesel, Benzene, Toluene, Ethylbenzene and Xylene (BTEX) and Total Oil and Grease (TOG). Laboratory results and chain of custody documents are included in Appendix C. Laboratory results and chain of custody documents from previous sampling episodes are included in Appendix D.

Historic and current analytical results of water sample analyses are presented in the table below:

Table 2 - Water Analyses

Date Well Number	TPHg mg/L	Benzene ug/L	Toluene ug/L	Ethyl- benzene ug/L	Xylene ug/L	Total Lead mg/L	TOG mg/L
July, 1995							
MW-2	68	480	240	110	350	ND	0.6
Oct, 1995							
MW-2	210	720	780	550	1500	NA	1.0

mg/L= ppm
ug/L = ppb
ND = Not Detected
NA = Not analyzed

6.0 CONCLUSIONS AND RECOMMENDATIONS

AEI conducted a soil and groundwater investigation on June 22, 1995, beginning with the advancement of two soil borings in order to determine the presence of contamination in soil and groundwater below the site. The two borings were converted to groundwater monitoring wells. Water samples obtained for this second quarterly groundwater monitoring event indicated that concentrations of TPH gasoline, BTEX and TOG have increased within the groundwater. All Environmental recommends the continued purging of free floating product from MW-1. Quarterly groundwater monitoring of MW-2 should be continued for a period of at least one year. The next quarterly sampling will be conducted in January, 1996.

7.0 REFERENCES

1. Underground Storage Tank Removal - Final Report - dated July 29, 1993, prepared by All Environmental, Inc.
2. Underground Storage Tank Removal - Final Report - dated December 2, 1994, prepared by All Environmental, Inc.
3. Monitoring Well Installation and First Quarterly Groundwater Sampling Report - dated October 3, 1995, prepared by All Environmental, Inc.

8.0 REPORT LIMITATIONS

This report presents a summary of work completed by All Environmental, Inc., including observations and descriptions of site conditions. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide required information, but it cannot be assumed that they are entirely representative of all areas not sampled. All conclusions and recommendations are based on these analyses,

observations, and governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document.

AEI warrants that all services were performed in accordance with the generally accepted practices in the environmental engineering and construction field which existed at the time and location of the work.

Product Recovery Data

Date	Initial Depth to Product (ft)	Initial Depth to Water (ft)	Product Thickness (ft)	Volume Removed (gal)	Final Product Thickness (ft)
7/28/95	15.80	18.02	**2.22**	9	0.03
8/11/95	16.01	18.03	**2.02**	8	0.02
8/28/95	16.25	18.09	**1.84**	5	0.15
9/12/95	16.41	18.13	**1.72**	5	0.10
10/03/95	16.57	18.25	**1.68**	5	0.08
10/17/95	16.68	18.21	**1.53**	5	0.05

ALL ENVIRONMENTAL INC. -- GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
Monitoring Well Number: MW-1	
Project Name	Lum
Job Number	1255
Project Address	245 8th Street
	Oakland, CA
Date of Sampling	10/17/95
Name of Sampler	Mr. Dusty Roy
MONITORING WELL DATA	
Well Casing Diameter (2"/4"/6")	4"
Seal at Grade -- Type and Condition	cement/good
Well Cap & Lock -- OK/Replace	lock & expand/good
Elevation of Top of Casing	23.420
Depth of Well	28.0'
Depth to Water/Product	18.21'/16.68' = 1.53' FP
Water Elevation	-----
Three Well Volumes (gallons)	
2" casing: (TD - DTW)(0.16)(3)	-----
4" casing: (TD - DTW)(0.65)(3)	-----
6" casing: (TD - DTW)(1.44)(3)	-----
Actual Volume Purged (gallons)	-----
Appearance of Purge Water	-----
GROUNDWATER SAMPLES	
Number of Samples/Container Size	-----
Groundwater Temp/pH/Conductivity:	-----
Samples iced and Chain of Custody?	-----
Sampling Equipment	-----
Appearance of Groundwater Samples	free-floating product
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)	
1.53 feet of floating product	

TD - Total Depth of Well
DTW - Depth To Water

ALL ENVIRONMENTAL INC. -- GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
Monitoring Well Number: MW-2	
Project Name	Lum
Job Number	1255
Project Address	245 8th Street
	Oakland, CA
Date of Sampling	10/17/95
Name of Sampler	Mr. Dusty Roy
MONITORING WELL DATA	
Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	cement/good
Well Cap & Lock -- OK/Replace	lock & expand/good
Elevation of Top of Casing	23.980
Depth of Well	28.0'
Depth to Water	17.67'
Water Elevation	6.31'
Three Well Volumes (gallons)	
2" casing: (TD - DTW)(0.16)(3)	4.96
4" casing: (TD - DTW)(0.65)(3)	-----
6" casing: (TD - DTW)(1.44)(3)	-----
Actual Volume Purged (gallons)	12
Appearance of Purge Water	clear
GROUNDWATER SAMPLES	
Number of Samples/Container Size	2 liter / 2-40ml voa's
Groundwater Temp/pH/Conductivity:	75.3 / 7.68 / 825
Samples iced and Chain of Custody?	yes
Sampling Equipment	submersible pump/disposable bailer
Appearance of Groundwater Samples	clear
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)	
Strong Odor, slight sheen	
Fast recharge	

TD - Total Depth of Well
DTW - Depth To Water

PRIORITY ENVIRONMENTAL LABS
Precision Environmental Analytical Laboratory

October 20, 1995 PEL # 9510046

ALL ENVIRONMENTAL, INC.

Attn: Jennifer Anderson

Re: One water samples for Gasoline/BTEX and Oil & Grease analyses.

Project name: LUM
Project number: 1255

Date sampled: Oct 17, 1995
Date extracted: Oct 18-19, 1995
Date submitted: Oct 18, 1995
Date analyzed: Oct 18-19, 1995

RESULTS:

SAMPLE I.D.	Gasoline (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylene (ug/L)	Oil & Grease (mg/L)
MW-2	210	720	780	550	1500	1.0
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	85.6%	99.8%	86.4%	109.7%	94.5%	---
Detection limit	1.0	0.5	0.5	0.5	0.5	0.5
Method of Analysis	5030 / 8015	602	602	602	602	5520 C & F

David Duong
Laboratory Director

RECEIVED OCT 2 4 1995

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

ALL ENVIRONMENTAL, INC.
2641 Crow Canyon Road, Ste. 5
San Ramon, CA 94583
(510) 820-3224 FAX: (510) 838-2687

PEL # 9510046

INV # 26431

Chain of Custody

DATE: 10/17/95 PAGE: 1 OF: 1

AEI PROJECT MANAGER: Jennifer Anderson
PROJECT NAME: Lum
PROJECT NUMBER: 1255
SIGNATURE: J. Anderson
TOTAL # OF CONTAINERS: 4
RECD. GOOD COND./COLD: yes

ANALYSIS REQUEST

SAMPLE I.D.	DATE	TIME	MATRIX	TPH-Gasoline (EPA 5030/8015)	TPH-Gasoline (EPA 5030/8015) w/ BTEX (EPA 602/8020)	TPH-Diesel (EPA 3510/3550/8015)	PURGEABLE AROMATICS BTEX (EPA 602/8020)	TOTAL OIL & GREASE (EPA 5520 E&F)	TOTAL LEAD (AA) (EPA 7420)	VOLATILE ORGANIC COMPOUNDS (EPA 8240)	LUFT Metals (EPA 7130/7190/7420/7520/7950)	STLC CAM 17 (EPA 1310/6010)	RCI REACTIVITY, CORROSIVITY, IGNITABILITY (Title 22, CCR 66261.21-5)			NUMBER OF CONTAINERS
MW-2	10/17/95		WATER		X			X								4

ANALYTICAL LAB: PRIORITY
ADDRESS:
PHONE: (707) 996-9636 FAX: ( ) - -
INSTRUCTIONS/COMMENTS:

RELINQUISHED BY: 1	RECEIVED BY: 1	RELINQUISHED BY: 2	RECEIVED BY: 2
Signature: J. Anderson	Signature: [illegible]	Signature:	Signature:
Printed Name: JENNIFER ANDERSON	Printed Name: DAVID DUONG	Printed Name:	Printed Name:
Company: AEI	Company: PEL	Company:	Company:
Time: 9 AM Date: 10/18	Time: 9 AM Date: 10/18/95	Time: Date:	Time: Date:

PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

July 25, 1995 PEL # 9507052

ALL ENVIRONMENTAL,INC.

Attn: Jennifer Anderson

Re: One water sample for Gasoline/BTEX and Oil & Grease analyses.

Project name: LUM
Project number: 1255

Date sampled: Jul 21, 1995 Date submitted: Jul 24, 1995
Date extracted: Jul 24-25, 1995 Date analyzed: Jul 24-25, 1995

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylene (ug/L)	Oil & Grease (mg/L)
MW-2	68000	480	240	110	350	0.6
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	89.4%	84.3%	80.9%	105.2%	103.8%	---
Detection limit	50	0.5	0.5	0.5	0.5	10
Method of Analysis	5030 / 8015	602	602	602	602	5520 C & F

David Duong
Laboratory Director

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

PRIORITY ENVIRONMENTAL LABS
Precision Environmental Analytical Laboratory

July 25, 1995 PEL # 9507052

ALL ENVIRONMENTAL,INC.

Attn: Jennifer Anderson

Re: One water sample for total Lead analysis.

Project name: LUM
Project number: 1255

Date sampled: Jul 21, 1995
Date extracted: Jul 24-25, 1995
Date submitted: Jul 24, 1995
Date analyzed: Jul 24-25,1995

RESULTS:

SAMPLE I.D.	Lead (mg/L)
MW-2	N.D.
Blank	N.D.
Detection limit	0.10
Method of Analysis	7420

David Duong
Laboratory Director

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

ALL ENVIRONMENTAL, INC.
2641 Crow Canyon Road, Ste. 5
San Ramon, CA 94583
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PEL # 9507052

INV # 26170

Chain of Custody

DATE: 7/21/95 PAGE: 1 OF: 1

AEI PROJECT MANAGER: Jennifer Anderson
PROJECT NAME: Lum
PROJECT NUMBER: 1255
SIGNATURE: Jennifer Anderson
TOTAL # OF CONTAINERS: 4
RECD. GOOD COND./COLD: YES

ANALYSIS REQUEST

SAMPLE I.D.	DATE	TIME	MATRIX	TPH-Gasoline (EPA 5030,8015)	TPH-Gasoline (EPA 5030,8015) w/ BTEX (EPA 602,8020)	TPH-Diesel (EPA 3510/3550,8015)	PURGEABLE AROMATICS BTEX (EPA 602,8020)	TOTAL OIL & GREASE (EPA 5520 E&F)	TOTAL LEAD (AA) (EPA 7420)	VOLATILE ORGANIC COMPOUNDS (EPA 8240)	LUFT Metals (EPA 7130,7190,7420,7580,7950)	STLC CAM 17 (EPA 1310/6010)	RCI REACTIVITY, CORROSIVITY, IGNITABILITY (Title 22, CCR 66261.21-23)				NUMBER OF CONTAINERS
MW-2	7/21/95	11:20	WATER		X			X	X								4

ANALYTICAL LAB: Priority Environmental Lab
ADDRESS:
PHONE: (408) 946-9636 FAX: ( ) - -

INSTRUCTIONS/COMMENTS:

RELINQUISHED BY: 1	RECEIVED BY: 1	RELINQUISHED BY: 2	RECEIVED BY: 2
Signature: Jennifer Anderson	Signature: David Duval	Signature:	Signature:
Printed Name: Jennifer Anderson	Printed Name: DAVID DUVAL	Printed Name:	Printed Name:
Company: AEI	Company: PEL	Company:	Company:
Time: Date: 7/24/95	Time: 11:00 AM Date: 7/24/95	Time: Date:	Time: Date: