October 6, 1997

GROUNDWATER MONITORING WELL INSTALLATION AND SAMPLING REPORT

1353 E. 14th Street
Oakland, California

OCT 1997

Project No. 1599

Prepared for

Mr. Norman Foss
Foss Lamshade Studios
1340 E. 12th Street
Oakland, CA 94606

Prepared by

All Environmental, Inc.
3364 Mt. Diablo Blvd.
Lafayette, CA 94549
(510) 283-6000

AEI

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1.0 INTRODUCTION

All Environmental, Inc. (AEI) has prepared this report on behalf of Mr. Norman Foss, in response to Alameda County Health Care Services Agency's (ACHCSA) request for a soil and groundwater investigation at 1353 E. 14th Street in Oakland, California (Figure 1: Site Location Map). The investigation was initiated by the property owner in accordance with the requirements of the ACHCSA. The investigation was conducted to assess solvent contamination present in the groundwater beneath the subject property.

2.0 SITE DESCRIPTION AND BACKGROUND

The subject property currently supports the operation of Style Center Cleaners, a dry cleaning facility. The property has reportedly contained a dry cleaning facility for the last 50 years. A closed-loop dry cleaning machine was installed approximately 5 years age by the current tenant. The floor of the building is wooden with a crawl space separating the floor from the ground. A concrete pad foundation supports the current dry cleaning machine. A small driveway runs the length of the dry cleaning building on the south (Figure 1).

On August 26, 1996, Ms. Madhulla Logan of the ACHCSA requested a soil and groundwater investigation be performed on the property. The investigation was requested to determine if the on-site dry cleaning facility was a source of solvent contamination found in the groundwater at the former General Tire site, located adjacent to the subject property. Three groundwater monitoring wells were installed at the former General Tire site between March, 1992 and September, 1993 by Jonas & Associates, Inc. The wells (labeled MW-1, MW-2 and MW-3) were installed to investigate petroleum hydrocarbon contamination. During quarterly monitoring of the wells, solvents were present in groundwater samples collected from MW-2 at concentrations ranging from 14 µg/l to 44 µg/l.

AEI performed a subsurface investigation at the property on December 13, 1996. The investigation included the advancement of five soil borings (BH-1 through BH-5). Concentrations of tetrachloroethene (PCE) were detected in all analyzed soil samples at concentrations ranging from 8.7 µg/l to 150 µg/l. Trichlorothene (TCE) and chloroform were detected in the soil at maximum concentrations of 0.45 µg/kg and 640 µg/kg, respectively. No other volatile halocarbons were detected above the method detection limit. PCE, TCE and chloroform were present in grab groundwater samples collected from four of the soil borings at maximum concentrations of 1100 µg/l, 3.0 µg/l and 4.8 µg/l, respectively.

Due to the presence of PCE, TCE and chloroform in the groundwater, ACHCSA requested the installation of a groundwater monitoring well down-gradient from the dry cleaning machine. In

addition, the ACHCSA requested quarterly monitoring of the well in conjunction with the three off-site wells. The following report describes the methods and findings of the single groundwater monitoring well installation and quarterly monitoring.

3.0 PERMITS

Prior to drilling, a work plan, dated June 19, 1997, was submitted and approved by the ACHCSA. A well construction permit was obtained from the Alameda County Public Works Agency (ACPWA). The property owner and operator were notified of the drilling schedule. A copy of the ACPWA permit to perform the soil boring and monitoring well installation is included in Appendix A.

4.0 GEOLOGY AND HYDROGEOLOGY

According to logs of the soil boring advanced by AEI, the near surface sediments beneath the site consist predominantly of silty and sandy clay to approximately fifteen feet below ground surface (bgs). The water-bearing stratum consists of silty sandy clay beginning at approximately 5 feet bgs and present in the borehole until the termination depth of 15 feet bgs.

Water level measurements made during the current groundwater monitoring and sampling episode on July 31, 1997, indicate that the static water beneath the property and adjacent property is located between 5.47 and 8.83 feet bgs. Elevations of the tops of the well casings were surveyed relative to Mean Sea Level (MSL) by Logan Surveying on August 8, 1997. Refer to Appendix B for the Groundwater Monitoring Well Field Sampling Forms.

The water level measurements were collected in order to calculate the groundwater gradient and flow direction. Based on these measurements, the groundwater flow is southeast at a gradient between 0.05 and 0.08 feet per foot. The groundwater flow direction is depicted in Figure 3. Water elevations to date are summarized in the following table:

TABLE 1 - Water Level Measurements; July 31, 1997

Well Number	AE-1	MW-1*	MW-2*	MW-3*
Depth to Water (feet)	5.47	8.01	6.92	8.83
Depth of Well (feet)	15.0	16.0	16.0	16.0
Well Elevation (top of casing)	20.42	18.29	20.18	19.55
Groundwater Elevation (feet above msl)	14.95	10.28	13.26	10.72

* Well installed by Jonas & Associates

5.0 SOIL BORING

On July 3, 1997, one soil boring was advanced at the site in the location shown on Figure 2. The soil boring was later converted to a groundwater monitoring will labeled AE-1. AE-1 was advanced in the driveway of the subject property, down-gradient from the dry cleaning machine.

A Mobile B-61 rotary drill with 6.25" I.D. by 10.5" O.D. hollow stem augers was used to drill the boring. Drilling proceeded to a depth of 15.0 feet during the advancement of each boring. Soil samples were collected at depths of 3.0, 5.0 and 8.0 feet with a hammer-driven California Modified split spoon sampler. The sampler, containing two-inch diameter brass sample tubes, was advanced ahead of the auger tip by successive hammer blows. Boring logs were maintained during drilling by one of AEI's geologists using the Unified Soil Classification System. The logs are presented in Appendix B. Cuttings generated during drilling were stored on-site in 55 gallon drums for future off-site disposal.

6.0 WELL CONSTRUCTION

The single soil boring was converted to groundwater monitoring well AE-1. The well was constructed with 4.5 feet of 2" flush threaded blank Schedule 40 PVC blank casing, and 14.5 feet of .020" factory-slotted well screen that was installed through the hollow auger. The blank casing extends from 0.5 feet to 4.5 feet bgs. The slotted casing extends from 4.5 feet to near the total depth of the borings, 15.0 feet bgs. The well screens were fitted with a flush-threaded bottom cap. No. 3 Monterey sand was poured through the augers to form a sand pack from the bottom of the wells to 2.5 feet bgs (2 feet above the slotted well screen). Approximately 1 foot of bentonite pellets were placed above the sand and hydrated with tap water. The remainder of the boring was filled to about 0.5 feet below grade with neat cement grout. A flush mounted traffic rated well box was installed over the casing, and an expanding, locking water tight inner cap was placed on the casing top. Refer to the boring logs (Appendix B) for a visual description of the well construction.

7.0 SOIL SAMPLING

Undisturbed soil samples were collected at depths of 3.0, 5.0 and 8.0 feet bgs from the boring during drilling and labeled S-1, S-2 and S-3, respectively. Since groundwater was encountered at approximately 9.0 feet bgs during drilling, no samples were collected from greater than 8.0 feet bgs. The soil samples were screened in the field with a portable organic meter. No significant readings were observed during the soil screening process.

All soil samples were put in a cooler with wet ice and transported under proper chain of custody to McCampbell Analytical, Inc. of Pacheco, California.

8.0 WELL DEVELOPMENT AND SAMPLING

The well was developed on July 25, 1997. The well was developed by bailing water into a 55 gallon drum until the water appeared to be reasonably clear with a minimum of 10 well volumes removed. The bailed water was turbid at first, but became clear by the end of the well development. The water level returned to a static level in approximately 30 minutes. The Groundwater Monitoring Well Field Sampling Form is included in Appendix B.

Groundwater samples were collected from AE-1 and from wells MW-1 and MW-2 on July 31, 1997. Depth to groundwater was measured prior to purging the three wells. Groundwater depth measurements were collected from MW-3, however, groundwater samples were not collected from this well due to its distance from the potential source. AE-1, MW-1 and MW-2 were purged by bailing water into a 55 gallon drum until the groundwater temperature, pH and conductivity stabilized. The groundwater samples were collected using clean disposable bailers. Water was poured from the bailers into 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 a cooler. The samples were transported to McCampbell Analytical, Inc., with chain of custody documents, for analysis.

9.0 ANALYTICAL RESULTS OF SAMPLES

Groundwater and soil samples were analyzed at McCampbell Analytical, Inc. of Pacheco, California (State Certification #1644). Two soil samples from the boring and groundwater samples from the four wells were submitted for chemical analyses for Volatile Halocarbons (EPA method 601/8010)).

Tetrachloroethene (PCE) was detected in the 3 foot soil sample at a concentration of 23 µg/kg. No PCE was detected in the soil sample collected at 8 feet bgs from the boring. No other volatile halocarbons were detected above the laboratory method detection limit of 5.0 µg/kg.

Refer to the following table (Table 2) for a summary of the soil sample analyses.

TABLE 2 - Soil Sample Analytical Data

Sample Number Depth	Volatile Halocarbons* PCE (µg/kg)
AE-1,S-1,3	23
AE-1,S32,8	<5.0

* All unlisted Volatile Halocarbons were not detected above the method detection limit of 5.0 µg/kg
µg/kg = micrograms per kilogram (ppb)
NA = Not Analyzed

No volatile halocarbons were detected in groundwater samples collected from the on-site well, AE-1.

Concentrations of 1,1-dichlorethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), cis- and trans-1,2-dichloroethene (1,2-DCE), tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride were detected in the two off-site wells. Refer to Table 3 for the concentrations of volatile halocarbons present in the off-site wells.

TABLE 3 - Volatile Halocarbon* Groundwater Sample Analytical Data

Well Number	1,1-DCA (µg/l)	1,1-DCE (µg/l)	cis 1,2-DCE (µg/l)	trans 1,2-DCE (µg/l)	PCE (µg/l)	TCE (µg/l)	Vinyl Chloride (µg/l)
AE-1	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5
MW-1	0.63	<0.5	0.80	<0.5	<0.5	<0.5	<0.5
MW-2	<1.0	1.4	46	1.9	27	100	2.3
MW-3	NS	NS	NS	NS	NS	NS	NS
MCLs	5.0	6.0	6.0	10	5.0	5.0	0.5

* All unlisted Volatile Halocarbons (EPA method 601) were not detected above the method detection limit of 0.5 µg/l
µg/l = micrograms per liter (ppb)
NS = Not Sampled

Laboratory results and chain of custody documentation are included in Appendix C.

AEI

10.0 SUMMARY AND RECOMMENDATIONS

AEI installed a single groundwater monitoring well, down-gradient from the on-site drycleaning operations to assess the impact to groundwater. The subsurface investigation included logging the borehole under the supervision of a professional geologist, soil sampling and analyses, well development, and groundwater sampling and analyses.

Minor concentrations of PCE were detected in the soil at 3 feet bgs in the on-site boring. No concentrations of PCE were detected in the soil sample collected at 8 feet bgs.

No volatile halocarbons were detected in the groundwater samples collected from the on-site well. Concentrations of volatile halocarbons were detected in samples collected from both of the off-site wells. The highest concentrations of volatile halocarbons were present in groundwater samples collected from off-site well MW-2. Cis-1,2-DCE, PCE, TCE and vinyl chloride were detected in MW-2 at concentrations exceeding published MCLs.

Based upon the results of the groundwater monitoring installation and sampling, the source of the groundwater contamination does not appear to be the on-site dry cleaning machine. AEI recommends the continued quarterly groundwater monitoring of the on-site well. Groundwater level measurements should be collected from the three off-site wells on a quarterly basis and samples should be analyzed from the off-site wells on a semi-annual basis.

11.0 REPORT LIMITATIONS AND SIGNATURES

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

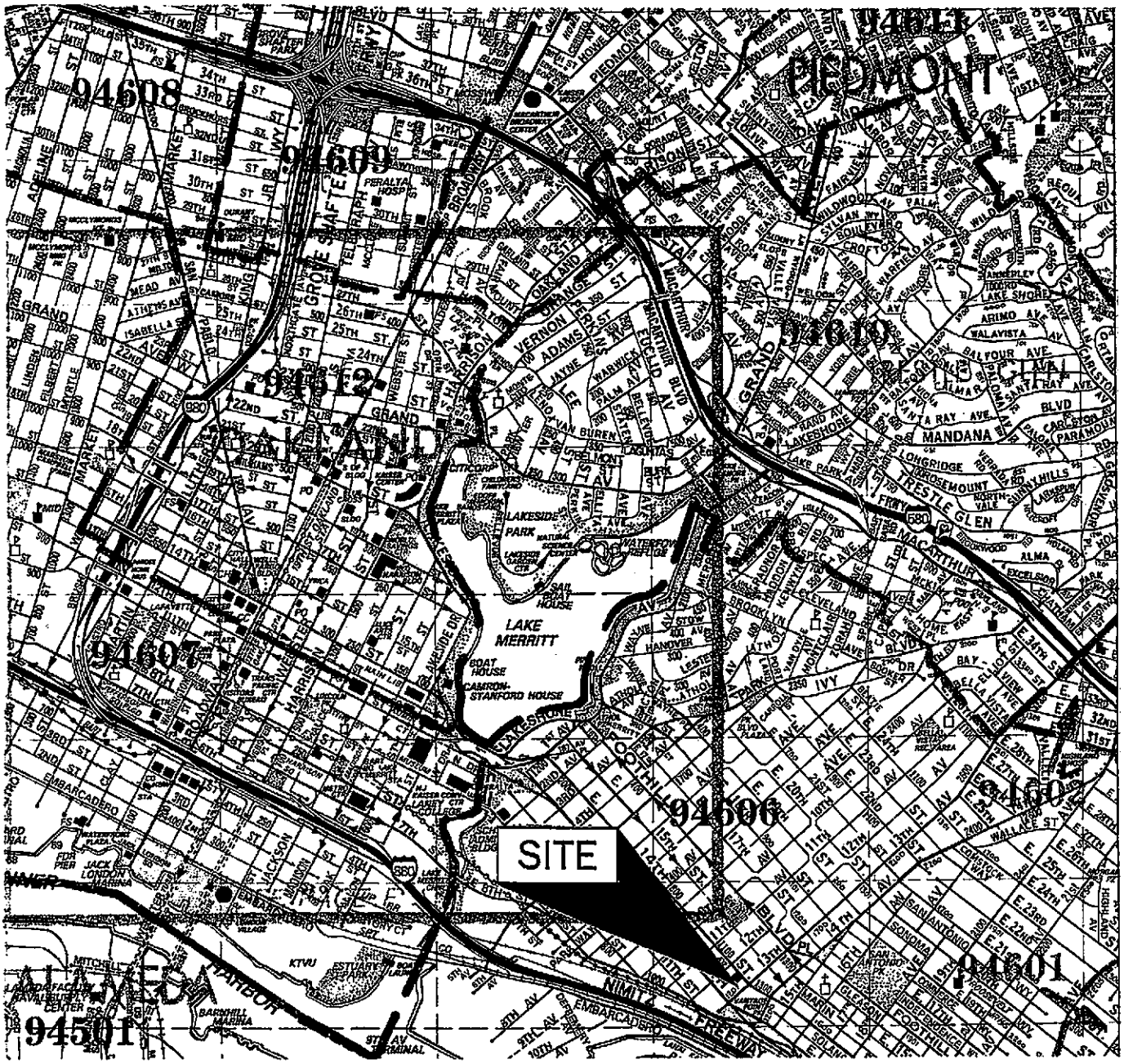
These services were performed in accordance with generally accepted practices in the environmental engineering and construction field which existed at the time and location of the work.

Jennifer Pucci
Project Manager

Michael Carey, CEG
Engineering Geologist

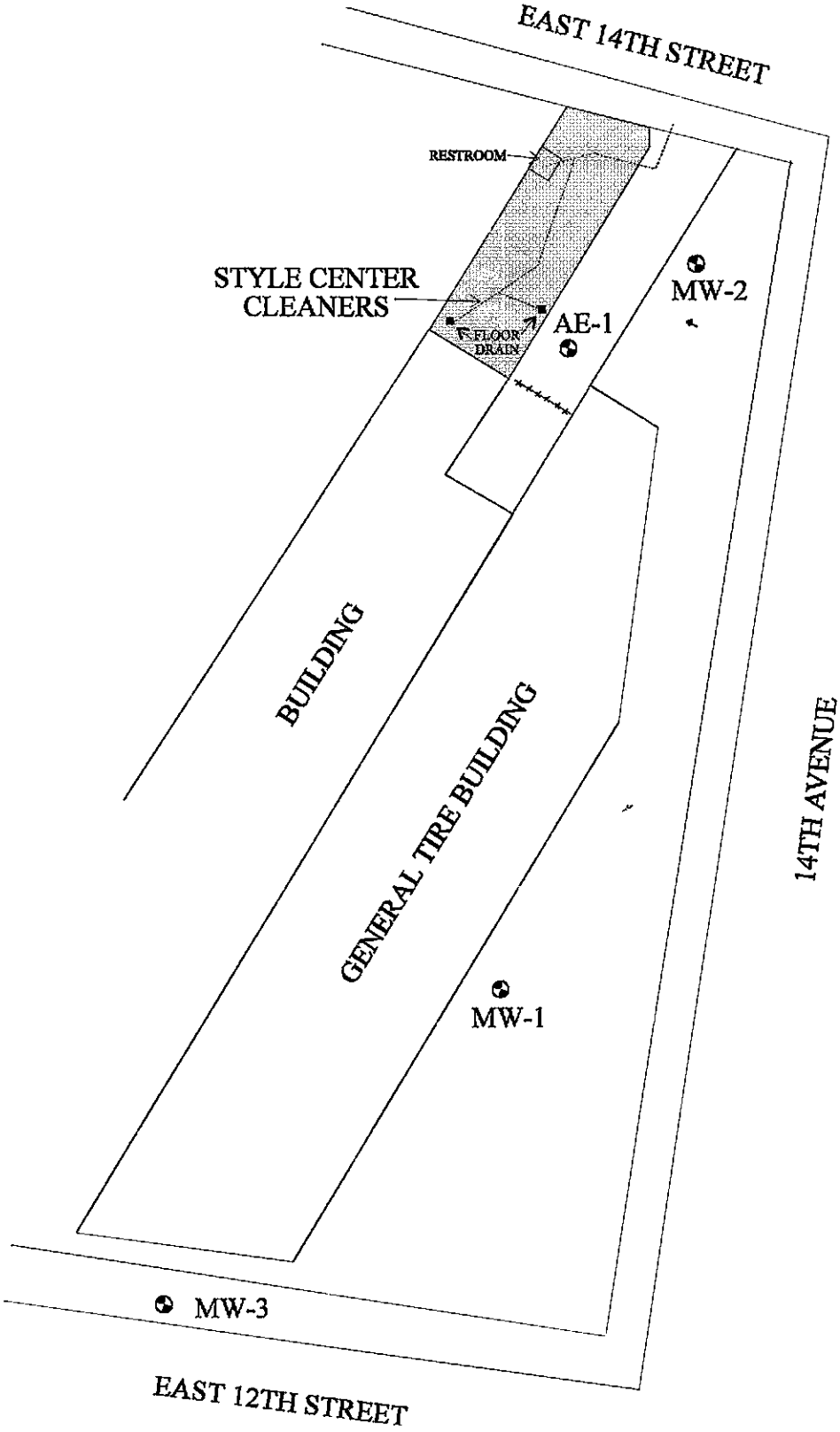
CERTIFIED ENGINEERING GEOLOGIST
MICHAEL G. CAREY
C.E.G. 1351
Exp: 10-29-98
STATE OF CALIFORNIA

AEI



FROM:
THOMAS BROS. MAPS

ALL ENVIRONMENTAL, INC. 3364 MT. DIABLO BOULEVARD, LAFAYETTE		
SCALE: 1 IN = 1/4 MI	APPROVED BY:	DRAWN BY:
DATE: 6 NOVEMBER 97		REVISED:
SITE LOCATION MAP		
1353 E. 14TH STREET OAKLAND, CALIFORNIA		DRAWING NUMBER: FIGURE 1



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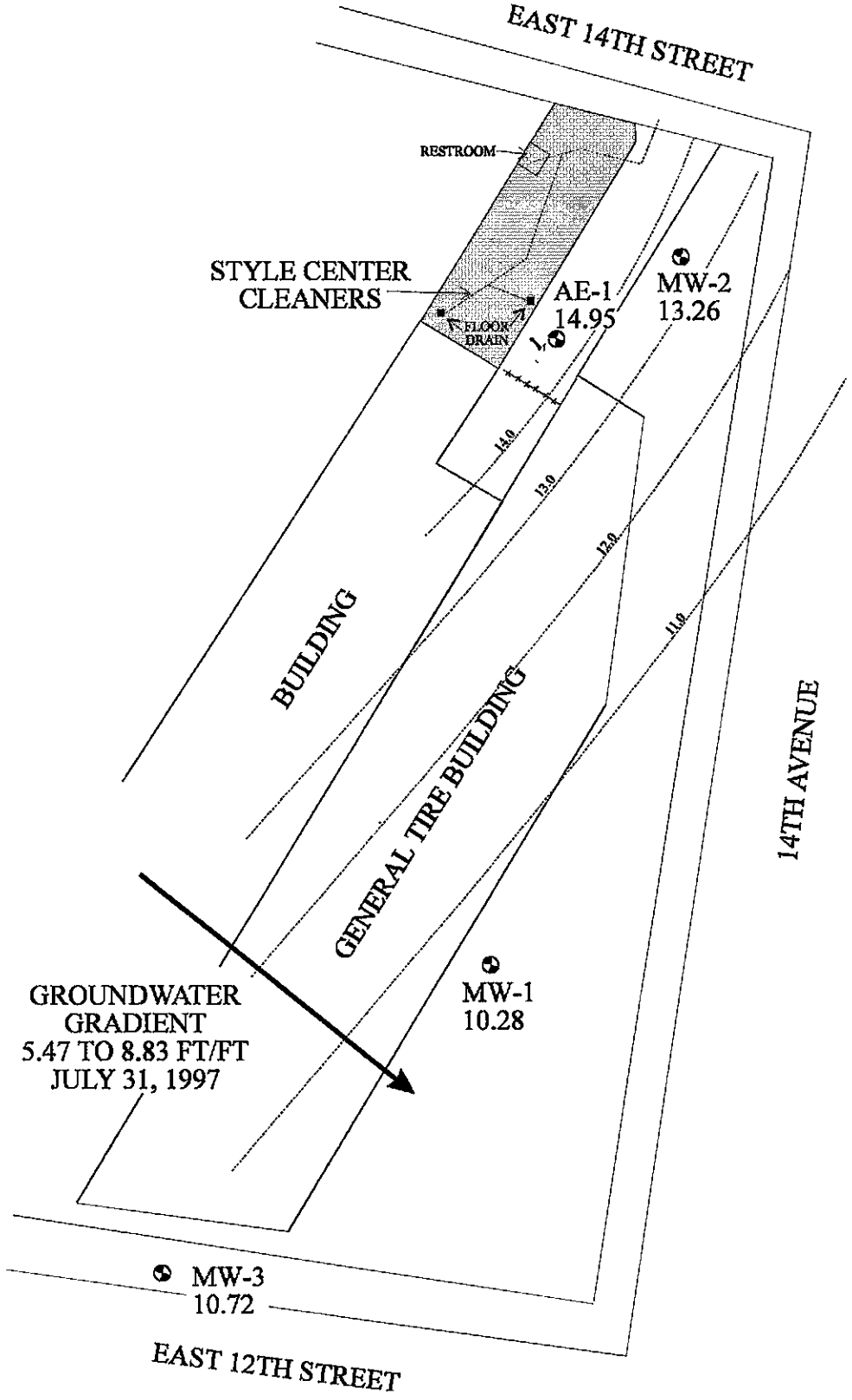
ALL ENVIRONMENTAL, INC.

3364 MT. DIABLO BOULEVARD, LAFAYETTE, CA

SCALE: 1 IN = 40 FT		DATE: 8/8/97

SOIL BORING AND MONITORING WELL LOCATION MAP

1353 E. 14TH STREET OAKLAND, CALIFORNIA	DRAWING NUMBER: FIGURE 2



ALL ENVIRONMENTAL, INC.

3364 MT. DIABLO BOULEVARD, LAFAYETTE, CA

SCALE: 1 IN = 40 FT		DATE: 7/31/97

GROUNDWATER MAP

1353 E. 14TH STREET OAKLAND, CALIFORNIA	DRAWING NUMBER: FIGURE 3

APPENDIX A

PERMITS AND NOTIFICATION DOCUMENTS

COUNTY OF ALAMEDA
PUBLIC WORKS AGENCY
951 Turner Court, Hayward, CA 94545
(510) 670-5543

DATE: 7/3/97

No of Pages (including cover): 3

FAX TRANSMITTAL

TO	
	ALL ENVIRO... INC
	JENNIFER PAGE
	FAX: (510) 2...

FROM	
	ALVIN KAN
	FAX: (510) 670-5262

Should you have problems receiving this FAX transmittal, please call: (510) 670-5248

SUBJECT: WELL PERMIT APPLICATION

TRANSMITTING THE FOLLOWING:

ZONE 7 WATER AGENCY
5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT
1353 E. 14th Street
Oakland, CA 94606

CLIENT
Name Mr. Norman Foss
Address 1340 E 12th Street Voice (510) 534-4133
City Oakland Zip 94606

APPLICANT
Name All Environmental, Inc.
Jennifer Pucci Fax (510) 283-6121
Address 3364 Mt. Diablo B Voice (510) 283-6000
City Lafayette Zip 94549

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection		General	
Water Supply		Contamination	
Monitoring	X	Well Destruction	

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. 485165

WELL PROJECTS
Drill Hole Diameter 6 in. Maximum
Casing Diameter 2 in. Depth 18 ft.
Surface Seal Depth 3 ft. Number 1

GEOTECHNICAL PROJECTS
Number of Borings ___ Maximum
Hole Diameter ___ in. Depth ___ ft.

ESTIMATED STARTING DATE 7/3/97
ESTIMATED COMPLETION DATE 7/3/97

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [signature] Date 7/1/97

FOR OFFICE USE

PERMIT NUMBER 97WR010
LOCATION NUMBER

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

(B) WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved [signature] Date 7/3/97

91992

TOTAL P.01

APPENDIX B

GROUNDWATER MONITORING WELL FIELD SAMPLING FORMS AND BORING LOG

ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: AE-1

Project Name: Foss	Date of Sampling: 7/31/97
Job Number: 1599	Name of Sampler: DR
Project Address: 1353 E. 14th Street	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	good
Well Cap & Lock -- OK/Replace	OK
Elevation of Top of Casing	20.42
Depth of Well (TD)	15.0
Depth to Water (DTW)	5.47
Water Elevation	14.95
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	4.5
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	5.0
Appearance of Purge Water	greenish

GROUNDWATER SAMPLES

Number of Samples/Container Size	2-40ml voas

Time	Vol Remvd (gal)	Temp C	pH	Cond (mS)	Comments
	1	64.9	6.72	891	
	2	64.7	6.80	921	
	3	65.2	7.00	920	
	4	65.2	7.00	924	
	5	65.1	7.00	919	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name: Foss	Date of Sampling: 7/31/97
Job Number: 1599	Name of Sampler: DR
Project Address: 1353 E. 14th Street	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	good
Well Cap & Lock -- OK/Replace	OK
Elevation of Top of Casing	18.29
Depth of Well (TD)	16.0
Depth to Water (DTW)	8.01
Water Elevation	10.28
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	3.8
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	4.0
Appearance of Purge Water	Clear, colorless

GROUNDWATER SAMPLES

Number of Samples/Container Size	2-40ml voas

Time	Vol Remvd (gal)	Temp C	pH	Cond (mS)	Comments
	1	64.6		992	
	2	64.9	6.76	858	
	3	65.7		861	
	4	65.3	6.48	859	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name: Foss	Date of Sampling: 7/31/97
Job Number: 1599	Name of Sampler: DR
Project Address: 1353 E. 14th Street	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4"
Seal at Grade -- Type and Condition	good
Well Cap & Lock -- OK/Replace	OK
Elevation of Top of Casing	20.18
Depth of Well (TD)	16.0
Depth to Water (DTW)	6.92
Water Elevation	13.26
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	17
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	16
Appearance of Purge Water	Clear, colorless

GROUNDWATER SAMPLES

Number of Samples/Container Size	2-40ml voas

Time	Vol Remvd (gal)	Temp C	pH	Cond (mS)	Comments
	1	64.7	6.6	862	
	4	65.9	6.4	8658	
	8	65.9	6.5	876	
	12	64.9	7.0	833	
	16	66.0	6.7	851	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name: Foss	Date of Sampling: 7/31/97
Job Number: 1599	Name of Sampler: DR
Project Address: 1353 E. 14th Street	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	good
Well Cap & Lock -- OK/Replace	OK
Elevation of Top of Casing	19.55
Depth of Well (TD)	16.0
Depth to Water (DTW)	8.83
Water Elevation	10.72
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	NA

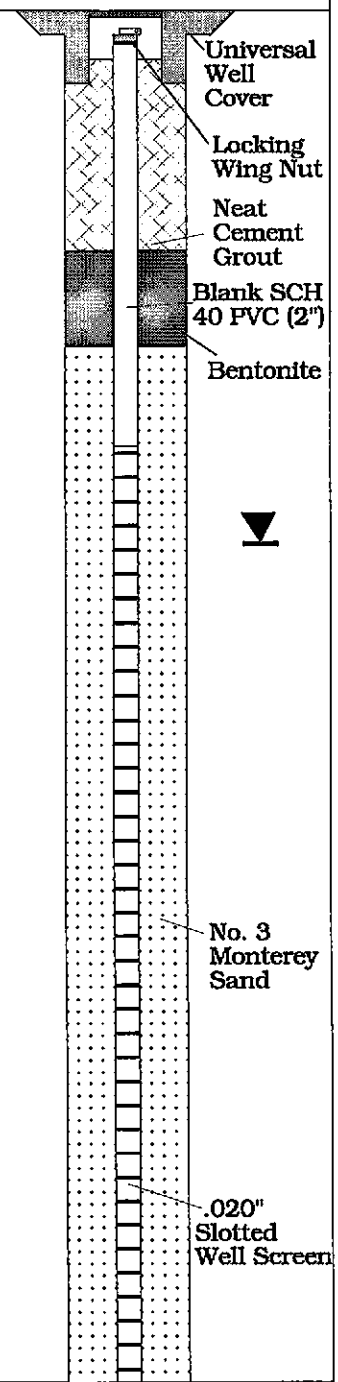
Time	Vol Remvd (gal)	Temp C	pH	Cond (mS)	Comments

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

PROJECT: FOSS #1599	**LOG OF WELL NUMBER:** AE-1
BORING LOC.: DOWNGRADIENT FROM DRY CLEANING MACHINE	ELEVATION, TOC: 23.420
DRILLING CONTRACTOR: GREGG DRILLING	START DATE: 7/3/97 — END DATE: 7/8/97
DRILLING METHOD: HOLLOW STEM AUGER	TOTAL DEPTH: 15' — SCREEN INT: 4.5-15.0'
DRILLING EQUIPMENT: RHINO	DEPTH TO WATER: 5.5 — CASING: 2" PVC
SAMPLING METHOD: 2" DRIVE SAMPLER	LOGGED BY: JSA
HAMMER WEIGHT and FALL: na	RESPONSIBLE PROFESSIONAL: MC

DEPTH (feet)	SOIL SYMBOLS	DESCRIPTION	SAMPLES: SAMPLE NO.	SAMPLES: INTERVAL	SAMPLES: BLOW COUNTS
	AB	0.0 - 0.5; 3" Aggregate Base.			
1					
2					
3		0.5 - 4.5; Silty Clay; mod. yellowish brown (10YR 5/4); gravel up to 1/8".	S-1		
4	CL				
5		4.5 - 15.0; Sandy Silty Clay; mod. yellowish brown, (10YR 5/4); 80% fines, 20% sand; med., some gravel.	S-2		
6					
7					
8		Same; very moist.	S-3		
9					
10					
11					
12					
13					
14		Borehole terminated at 15' bgs.			

WELL CONSTRUCTION DETAILS



APPENDIX C

CURRENT LABORATORY ANALYSES WITH CHAIN OF CUSTODY DOCUMENTS

McCAMPBELL ANALYTICAL INC.
110 Second Avenue South, #D7, Pacheco, CA 94553
Telephone : 510-798-1620 Fax : 510-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc. 3364 Mt. Diablo Blvd. Lafayette, CA 94549	Client Project ID: #1599; Foss	Date Sampled: 07/31/97
		Date Received: 07/31/97
	Client Contact: Jennifer Pucci	Date Extracted: 07/31/97
	Client P.O:	Date Analyzed: 07/31/97

08/07/97

Dear Jennifer:

Enclosed are:

1). the results of **3** samples from your **#1599; Foss** project,

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 Second Avenue South, #D7, Pacheco, CA 94553
Telephone : 510-798-1620 Fax : 510-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc.	Client Project ID: #1599; Foss	Date Sampled: 07/31/97
3364 Mt. Diablo Blvd.		Date Received: 07/31/97
Lafayette, CA 94549	Client Contact: Jennifer Pucci	Date Extracted: 07/31/97
	Client P.O:	Date Analyzed: 08/01-08/04/97

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	79258	79259	79260	
Client ID	MW-1	MW-2	AE-1	
Matrix	W	W	W	
Compound	Concentration*			
Bromodichloromethane	ND	ND<1.0	ND	
Bromoform[b]	ND	ND<1.0	ND	
Bromomethane	ND	ND<1.0	ND	
Carbon Tetrachloride[c]	ND	ND<1.0	ND	
Chlorobenzene	ND	ND<1.0	ND	
Chloroethane	ND	ND<1.0	ND	
2-Chloroethyl Vinyl Ether[d]	ND	ND<1.0	ND	
Chloroform [e]	ND	ND<1.0	ND	
Chloromethane	ND	ND<1.0	ND	
Dibromochloromethane	ND	ND<1.0	ND	
1,2-Dichlorobenzene	ND	ND<1.0	ND	
1,3-Dichlorobenzene	ND	ND<1.0	ND	
1,4-Dichlorobenzene	ND	ND<1.0	ND	
Dichlorodifluoromethane	ND	ND<1.0	ND	
1,1-Dichloroethane	0.63	ND<1.0	ND	
1,2-Dichloroethane	ND	ND<1.0	ND	
1,1-Dichloroethene	ND	1.4	ND	
cis 1,2-Dichloroethene	0.80	46	ND	
trans 1,2-Dichloroethene	ND	1.9	ND	
1,2-Dichloropropane	ND	ND<1.0	ND	
cis 1,3-Dichloropropene	ND	ND<1.0	ND	
trans 1,3-Dichloropropene	ND	ND<1.0	ND	
Methylene Chloride[f]	ND	ND<1.0	ND	
1,1,2,2-Tetrachloroethane	ND	ND<1.0	ND	
Tetrachloroethene	ND	27	ND	
1,1,1-Trichloroethane	ND	ND<1.0	ND	
1,1,2-Trichloroethane	ND	ND<1.0	ND	
Trichloroethene	ND	100	ND	
Trichlorofluoromethane	ND	ND<1.0	ND	
Vinyl Chloride[g]	ND	2.3	ND	
% Recovery Surrogate	103	103	102	
Comments				

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe

Reporting limit unless otherwise stated: water/TCLP/SPLP extracts, ND<0.5ug/L; soils and sludges, ND<5ug/kg; wipes, ND<0.2ug/wipe

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR EPA 8010/8020/EDB

Date: 08/01/97 Matrix: Water

Analyte	Concentration (ug/L) Sample #(78138)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
1,1-DCE	0.0	8.6	8.6	10.0	86	86	0.0
Trichloroethene	0.0	8.6	8.7	10.0	86	87	1.2
EDB	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene	0.0	9.0	9.1	10.0	90	91	1.1
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobz (PID)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

ALL ENVIRONMENTAL, INC.
3364 Mt. Diablo Boulevard
Lafayette, CA 94549
(510) 283-6000 FAX: (510) 283-6121

9154xae179.doc

Chain of Custody

DATE: 7/31/97 PAGE: 1 OF: 1

AEI PROJECT MANAGER: Jennifer Pucci
PROJECT NAME: Foss
PROJECT NUMBER: 1599
SIGNATURE: Dusty Roy
TOTAL # OF CONTAINERS: 6
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)	8010	NUMBER OF CONTAINERS
MW-1	7/31/97		W											X	2
MW-2	"		W											X	2
AE-1	"		W											X	2

79258
79259
79260

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

PRESERVATIVE ✓ APPROPRIATE ✓ CONTAINERS ✓

VOAS | O&G | METALS | OTHER

ANALYTICAL LAB: McCAMPBELL ANALYTICAL INC.
ADDRESS: 110 2nd AVENUE SOUTH, #D7 PACHECO, CA 94553-5502
PHONE: ( ) FAX: ( )

INSTRUCTIONS/COMMENTS:
510-798-1620 phone
510-798-1622 fax

RELINQUISHED BY: 1	RECEIVED BY: 1	RELINQUISHED BY: 2	RECEIVED BY: 2
Dusty Roy	J Milenic		
Signature	Signature	Signature	Signature
DUSTY ROY	J. Milenic		
Printed Name	Printed Name	Printed Name	Printed Name
AEI	MAI		
Company	Company	Company	Company
Time 5:15 pm Date 7/31/97	Time 5:15pm Date 7/31/97	Time Date	Time Date

McCAMPBELL ANALYTICAL INC.
110 Second Avenue South, #D7, Pacheco, CA 94553
Telephone : 510-798-1620 Fax : 510-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc. 3364 Mt. Diablo Blvd. Lafayette, CA 94549	Client Project ID: #1599; Foss	Date Sampled: 07/03/97
		Date Received: 07/03/97
	Client Contact: Jennifer Pucci	Date Extracted: 07/03/97
	Client P.O:	Date Analyzed: 07/03/97

07/10/97

Dear Jennifer:

Enclosed are:

1). the results of **2** samples from your **#1599; Foss** project,

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 Second Avenue South, #D7, Pacheco, CA 94553
Telephone : 510-798-1620 Fax : 510-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc.	Client Project ID: #1599; Foss	Date Sampled: 07/03/97
3364 Mt. Diablo Blvd.		Date Received: 07/03/97
Lafayette, CA 94549	Client Contact: Jennifer Pucci	Date Extracted: 07/03/97
	Client P.O:	Date Analyzed: 07/03/97

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	78308	78310		
Client ID	AE-1, 3'	AE-1, 8'		
Matrix	S	S		
Compound	Concentration*			
Bromodichloromethane	ND	ND		
Bromoform[b]	ND	ND		
Bromomethane	ND	ND		
Carbon Tetrachloride[c]	ND	ND		
Chlorobenzene	ND	ND		
Chloroethane	ND	ND		
2-Chloroethyl Vinyl Ether[d]	ND	ND		
Chloroform [e]	ND	ND		
Chloromethane	ND	ND		
Dibromochloromethane	ND	ND		
1,2-Dichlorobenzene	ND	ND		
1,3-Dichlorobenzene	ND	ND		
1,4-Dichlorobenzene	ND	ND		
Dichlorodifluoromethane	ND	ND		
1,1-Dichloroethane	ND	ND		
1,2-Dichloroethane	ND	ND		
1,1-Dichloroethene	ND	ND		
cis 1,2-Dichloroethene	ND	ND		
trans 1,2-Dichloroethene	ND	ND		
1,2-Dichloropropane	ND	ND		
cis 1,3-Dichloropropene	ND	ND		
trans 1,3-Dichloropropene	ND	ND		
Methylene Chloride[f]	ND	ND		
1,1,2,2-Tetrachloroethane	ND	ND		
Tetrachloroethene	23	ND		
1,1,1-Trichloroethane	ND	ND		
1,1,2-Trichloroethane	ND	ND		
Trichloroethene	ND	ND		
Trichlorofluoromethane	ND	ND		
Vinyl Chloride[g]	ND	ND		
% Recovery Surrogate	96	98		
Comments				

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe

Reporting limit unless otherwise stated: water/TCLP/SPLP extracts, ND<0.5ug/L; soils and sludges, ND<5ug/kg; wipes, ND<0.2ug/wipe

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR EPA 8010/8020/EDB

Date: 07/03/97 Matrix: Soil

Analyte	Concentration (ug/kg)				% Recovery		
	Sample (#75866)	MS	MSD	Amount Spiked	MS	MSD	RPD
1,1-DCE	0	114	111	100	114	111	2.7
Trichloroethene	0	100	97	100	100	97	3.0
EDB	0	80	81	100	80	81	1.2
Chlorobenzene	0	102	101	100	102	101	1.0
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobz (PID)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

ALL ENVIRONMENTAL, INC.
3364 Mt. Diablo Boulevard
Lafayette, CA 94549
(510) 283-6000 FAX: (510) 283-6121

5 DAY TAT

Chain of Custody

DATE: 7/3/97 PAGE: 1 OF: 1

8972XALE169

AEI PROJECT MANAGER: JENNIFER PUCCI
PROJECT NAME: FOSS
PROJECT NUMBER: 1599
SIGNATURE: J. Pucci
TOTAL # OF CONTAINERS: 3
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 and MTBE (EPA 602.8020)	TPH-Diesel (EPA 3510/3550.8015)	PURGEABLE AROMATICS BTEX and MTBE (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 66961.21-3)	8010		NUMBER OF CONTAINERS
AE-1, 3'	7397	905	SOIL											X		1
AE-1, 5'	7397	907	SOIL											X	HOLD	1
AE-1, 8'	7397	915	SOIL											X		1

78308
H 78309
78310

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

VOAS | O&G | METALS | OTHER
PRESERVATIVE APPROPRIATE CONTAINERS ✓

	RELINQUISHED BY: 1	RECEIVED BY: 1	RELINQUISHED BY: 2	RECEIVED BY: 2
Signature	J. Pucci	Luigi Licca		
Printed Name	Jennifer Pucci	MAT H. Licca		
Company	AEI	MAT		
Time / Date	11:35 / 7/3/97	11:35 / 7/3/97	/	/

ANALYTICAL LAB: McCampbell
ADDRESS:
PHONE: ( ) FAX: ( )

INSTRUCTIONS/COMMENTS: