April 15, 1998

QUARTERLY GROUNDWATER MONITORING REPORT

First Quarter, 1998

1353 E. 14th Street
Oakland, CA

Project No. 1599

Prepared For

Foss Lampshade Studios, Inc.
1340 E. 12th Street
Oakland, CA 94606

Prepared By

All Environmental, Inc.
3364 Mt. Diablo Boulevard
Lafayette, CA 94583
(800) 801-3224

AEI

April 15, 1998

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

Re: Quarterly Groundwater Monitoring and Sampling Report
First Quarter 1998
1353 E. 14th Street
Oakland, CA 94606
Project No. 1599

Dear Mr. Foss:

All Environmental, Inc. (AEI) has prepared this report to document the third monitoring episode of the on-site groundwater monitoring well at the above referenced site (Figure 1: Site Location Map). The investigation was initiated by the property owner in accordance with requirements from the Alameda County Health Care Service Agency (ACHCSA). The purpose of this activity is to monitor groundwater quality in the vicinity of the dry cleaning operation. This report presents the findings of the second episode of groundwater monitoring and sampling conducted in the first quarter of 1998 on March 3, 1998.

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 ago 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 2: Site Plan).

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 advancing 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.

On July 3, 1997, AEI installed a single groundwater monitoring well (AE-1) located approximately 10 feet down-gradient from the dry cleaning machine (Figure 2). Groundwater samples were collected from the well on July 31, 1997. Groundwater samples were also collected from MW-1 and MW-2 located on the adjacent site. MW-3 was not sampled. The four wells were surveyed in order to determine groundwater flow direction and gradient. No volatile halocarbons were detected in groundwater samples collected from AE-1, the on-site well. Refer to Table 2 for a summary of the analytical results from the first and subsequent groundwater monitoring episodes.

Summary of Activities

AEI measured the depth to groundwater in all four of the wells and collected water samples from AE-1 and from wells MW-1 and MW-2 on March 3, 1998. The well locations are shown on Figure 2. The water levels from the top of the well casings were measured prior to sampling using an electric water level indicator.

AE-1, MW-1 and MW-2 were purged using a battery powered submersible pump and groundwater samples were collected using clean disposable Teflon bailers. Temperature, pH, and turbidity were measured during the purging of the wells (refer to Attachment A). AEI removed at least 3 well volumes from each well. Once the temperature, pH, and turbidity stabilized, water samples were collected.

Water was poured from the bailer into 40 ml VOA vials and capped so that there was no head space or visible air bubbles within the sample containers. Samples were shipped on ice under proper chain of custody protocol to McCampbell Analytical, Inc. of Pacheco, California (State Certification #1644).

Groundwater samples were analyzed for Volatile Halocarbons (EPA method 60/8010).

Field Results

Groundwater levels for the current monitoring episode ranged from 14.04 to 16.65 feet above Mean Sea Level (MSL). The groundwater elevation rose an average of 3 feet from the last sampling episode. The direction of the groundwater flow at the time of measurement was to the south-southeast, which is consistent with previous monitoring episodes. The latest estimated groundwater gradient is approximately 0.023 feet per foot.

Groundwater elevation data is summarized in Table 1. The groundwater elevation contours and the groundwater flow direction are shown in Figure 2. Refer to Attachment A for the Groundwater Monitoring Well Field Sampling Forms.

Groundwater Quality

Volatile halocarbons were not detected in groundwater samples collected from AE-1. The non-detect results are consistent with the previous monitoring episode. Concentrations of volatile halocarbons significantly decreased in MW-2, however, concentrations increased slightly in MW-1 from the last sampling episode. Concentrations detected in MW-1 continue to be well below the maximum contaminant levels (MCLs) for drinking water set forth by the California EPA. Cis-1,2-dichloroethene, tetrachloroethene and vinyl chloride were the only constituents detected in MW-2 over the MCLs.

A summary of groundwater quality data is presented in Table 2. Laboratory results and chain of custody documents are included in Attachment B.

Recommendations

If concentrations of volatile halocarbons remain the same or decrease during the final groundwater monitoring episode, AEI recommends discontinuing quarterly groundwater monitoring and sampling of the on-site well based on the following observations:

- No significant concentrations of volatile halocarbons were found in the soil on-site during previous soil sampling activities.

- No concentrations of volatile halocarbons have been detected in the on-site well, AE-1, for the last three consecutive quarterly monitoring episodes.

- Concentrations of volatile halocarbons have decreased in the off-site well MW-2. Concentrations increased slightly in MW-1, however, the concentrations remain below the established MCLs.

- The water beneath the site is not used for potable purposes.

The next monitoring and sampling episode is scheduled for June 3, 1998. Groundwater samples from AE-1 will be collected and analyzed during the next monitoring episode.

References

- AEI, Phase II Subsurface Investigation Report, issued January 31, 1997
- AEI, Groundwater Monitoring Well Installation and Sampling Report, issued October 6, 1997
- AEI, Quarterly Groundwater Monitoring Report, Fourth Quarter, 1997, issued January 9, 1998

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 that existed at the time and location of the work.

Sincerely,
All Environmental, Inc.

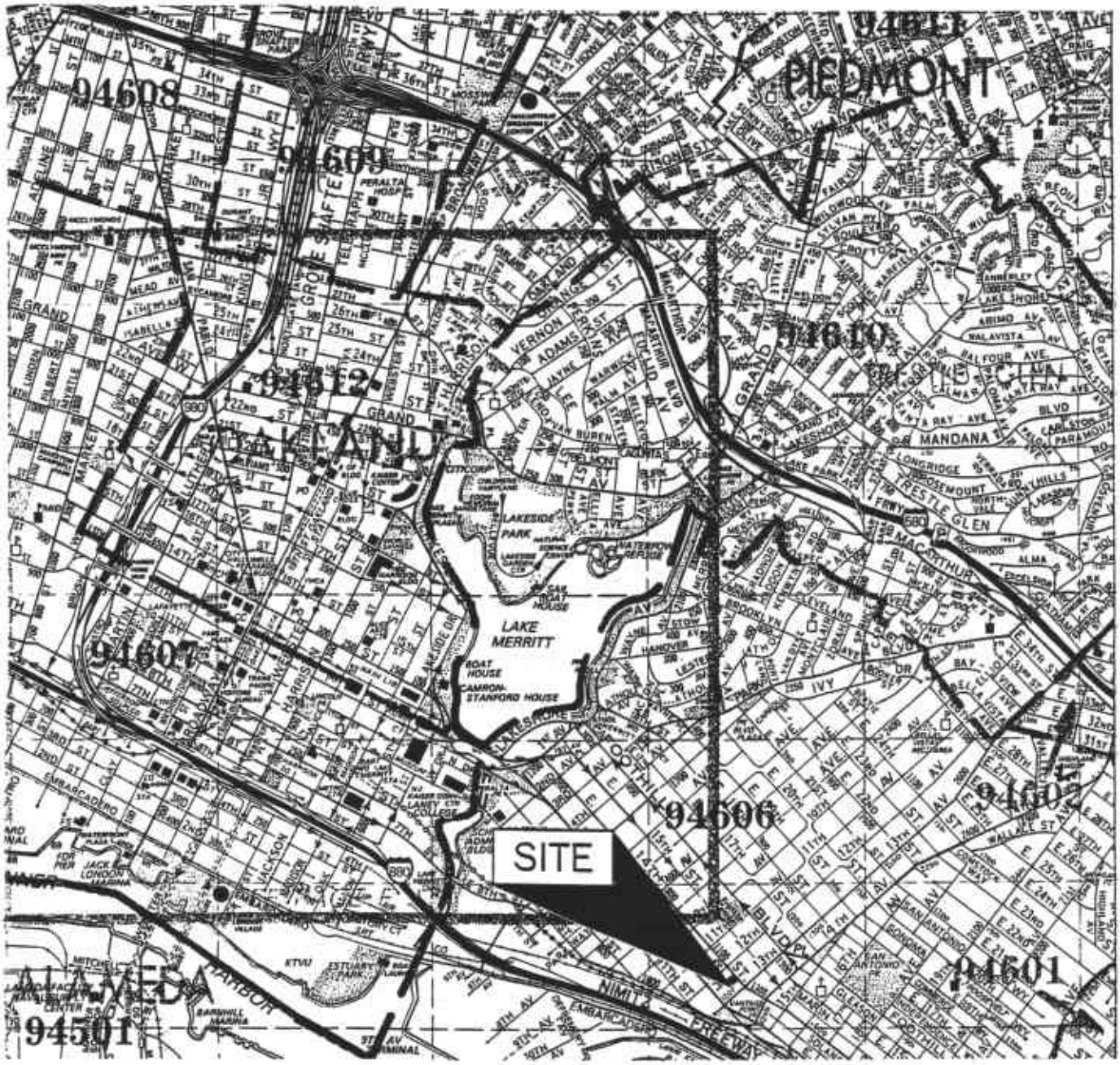
Jennifer Pucci
Project Manager

Michael Carey, C.E.G.
Senior Author

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

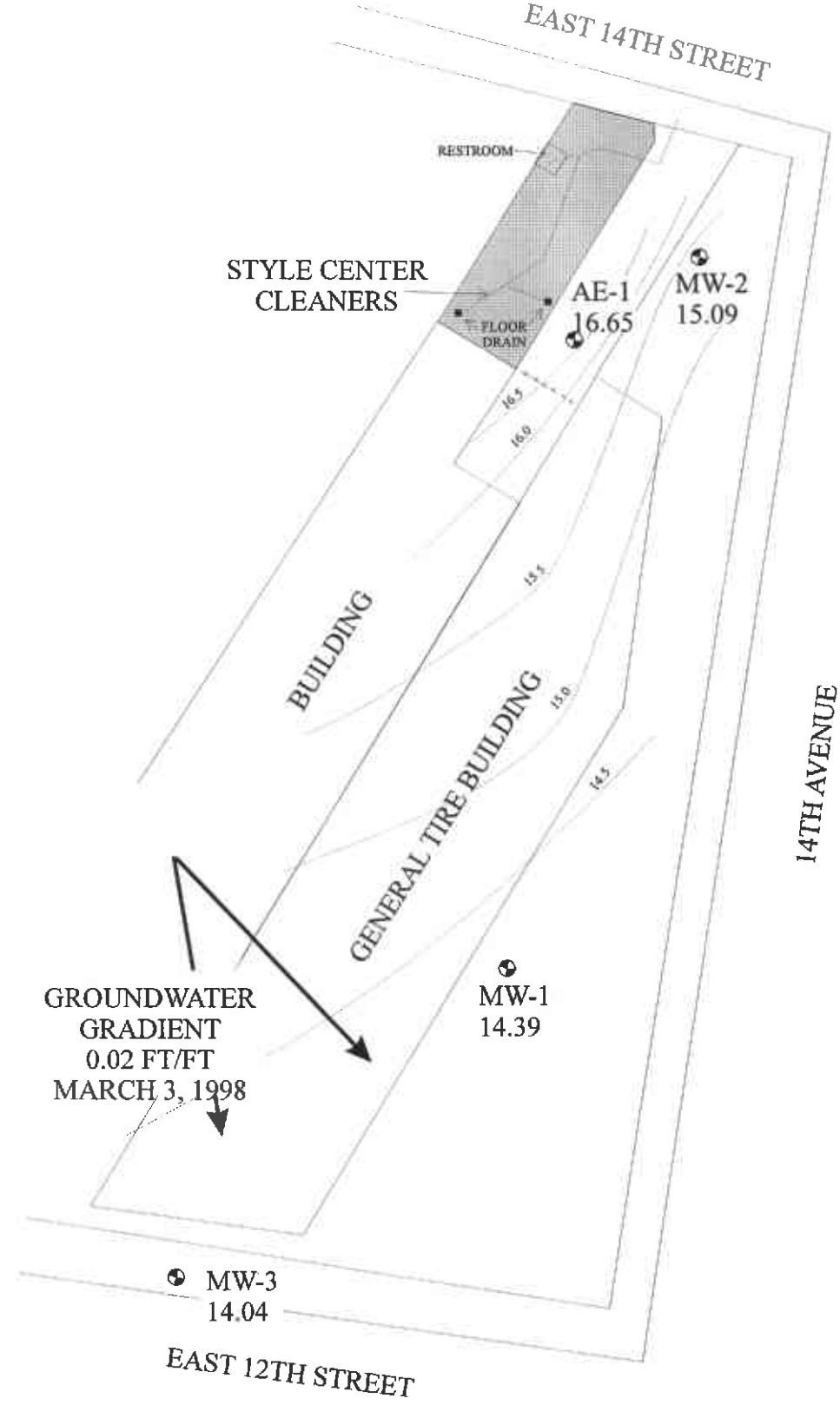
Figures
Tables
Attachment A
Attachment B

cc: Ms. Madhulla Logan, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577.



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: 3/3/98

SITE PLAN

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

TABLE 1

Water Level Measurements

Well Number	Date	Depth to Water (feet)	Well Elevation (toc)	Groundwater Elevation (feet amsl)
AE-1	7/31/97	5.47	20.42	14.95
	11/6/97	5.61	20.42	14.81
	3/3/98	3.77	20.42	16.65
MW-1	7/31/97	8.01	18.29	10.28
	11/6/97	8.27	18.29	10.02
	3/3/98	3.90	18.29	14.39
MW-2	7/31/97	6.92	20.18	13.26
	11/6/97	6.10	20.18	14.08
	3/3/98	5.09	20.18	15.09
MW-3	7/31/97	8.83	19.55	10.72
	11/6/97	9.72	19.55	9.83
	3/3/98	5.51	19.55	14.04

Top of Casing – toc
Above mean sea level - amsl

TABLE 2

Volatile Halocarbon* Groundwater Sample Analytical Data

Well Number	Date	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	7/31/97	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5
	11/6/97	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5
	3/3/98	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5
MW-1	7/31/97	**0.63**	<0.5	**0.80**	<0.5	<0.5	<0.5	<0.5
	11/6/97	NS	NS	NS	NS	NS	NS	NS
	3/3/98	**2.0**	<0.5	**2.0**	<0.5	<0.5	**0.95**	<0.5
MW-2	7/31/97	<1.0	**1.4**	**46**	**1.9**	**27**	**100**	**2.3**
	11/6/97	NS	NS	NS	NS	NS	NS	NS
	3/3/98	<0.5	**0.57**	**6.6**	<0.5	**3.7**	**14**	**1.4**
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

ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: AE-1

Project Name: Foss	Date of Sampling: 3/3/98
Job Number: 1599	Name of Sampler: DR
Project Address: 1353 E. 14th Street	
Oakland, CA	

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	15.0
Depth to Water	3.77
Water Elevation	16.65
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	5.39
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	7 gallons
Appearance of Purge Water	Light greenish, clear

GROUNDWATER SAMPLES

Number of Samples/Container Size	2-40ml VOAs

Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments
	1	71.1	6.85	950	
	3	71.3	7.00	935	
	5	71.3	7.00	933	
	7	71.3	7.00	933	

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

TD - Total Depth of Well
DTW - Depth To Water

ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name: Foss	Date of Sampling: 3/3/98
Job Number: 1599	Name of Sampler: DR
Project Address: 1353 E. 14th Street	
Oakland, CA	

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	15.5
Depth to Water	3.90
Water Elevation	14.39
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	5.57
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	6.0
Appearance of Purge Water	clear

GROUNDWATER SAMPLES

Number of Samples/Container Size	2-40ml voas

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
	1	70.8	6.65	899	
	3	70.7	6.70	877	
	5	70.7	6.70	865	
	7	70.7	6.70	865	

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

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: Foss	Date of Sampling: 3/3/98
Job Number: 1599	Name of Sampler: DR
Project Address: 1353 E. 14th Street	
Oakland, CA	

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	15.5
Depth to Water	5.09
Water Elevation	15.09
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	5
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	16
Appearance of Purge Water	clear

GROUNDWATER SAMPLES

Number of Samples/Container Size	2-40ml voas

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
	1	70.1	6.7	820	
	6	70.5	6.9	833	
	12	70.5	6.8	840	
	16	70.5	6.8	852	

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

TD - Total Depth of Well
DTW - Depth To Water

ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM					
Monitoring Well Number: MW-3					
Project Name: Foss				Date of Sampling: 3/3/98	
Job Number: 1599				Name of Sampler: DR	
Project Address: 1353 E. 14th Street					
Oakland, CA					
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				15.5	
Depth to Water				5.51	
Water Elevation				14.04	
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)				NA	
Appearance of Purge Water				NA	
GROUNDWATER SAMPLES					
Number of Samples/Container Size					
Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)					
No samples collected.					

TD - Total Depth of Well
DTW - Depth To Water

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: Foss	Date Sampled: 03/03/98
3364 Mt. Diablo Blvd.		Date Received: 03/03/98
Lafayette, CA 94549	Client Contact: Jennifer Pucci	Date Extracted: 03/03-03/05/98
	Client P.O:	Date Analyzed: 03/03-03/05/98

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	86342	86343	86344	
Client ID	AE-1	MW-1	MW-2	
Matrix	W	W	W	
Compound	Concentration*			
Bromodichloromethane	ND	ND	ND	
Bromoform[b]	ND	ND	ND	
Bromomethane	ND	ND	ND	
Carbon Tetrachloride[c]	ND	ND	ND	
Chlorobenzene	ND	ND	ND	
Chloroethane	ND	ND	ND	
2-Chloroethyl Vinyl Ether[d]	ND	ND	ND	
Chloroform[e]	ND	ND	ND	
Chloromethane	ND	ND	ND	
Dibromochloromethane	ND	ND	ND	
1,2-Dichlorobenzene	ND	ND	ND	
1,3-Dichlorobenzene	ND	ND	ND	
1,4-Dichlorobenzene	ND	ND	ND	
Dichlorodifluoromethane	ND	ND	ND	
1,1-Dichloroethane	ND	2.0	ND	
1,2-Dichloroethane	ND	ND	ND	
1,1-Dichloroethene	ND	ND	0.57	
cis 1,2-Dichloroethene	ND	2.0	6.6	
trans 1,2-Dichloroethene	ND	ND	ND	
1,2-Dichloropropane	ND	ND	ND	
cis 1,3-Dichloropropene	ND	ND	ND	
trans 1,3-Dichloropropene	ND	ND	ND	
Methylene Chloride[f]	ND<0.6	ND<0.6	ND<0.6	
1,1,2,2-Tetrachloroethane	ND	ND	ND	
Tetrachloroethene	ND	ND	3.7	
1,1,1-Trichloroethane	ND	ND	ND	
1,1,2-Trichloroethane	ND	ND	ND	
Trichloroethene	ND	0.95	14	
Trichlorofluoromethane	ND	ND	ND	
Vinyl Chloride[g]	ND	ND	1.4	
% Recovery Surrogate	100	99	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: 03/03/98 Matrix: WATER

Analyte	Concentration (ug/L) Sample #(85465)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
1,1-DCE	0.0	11.9	11.6	10.0	119	116	2.6
Trichloroethene	0.0	10.1	9.8	10.0	101	98	3.0
EDB	0.0	9.2	8.9	10.0	92	89	3.3
Chlorobenzene	0.0	10.9	10.5	10.0	109	105	3.7
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

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: 03/05/98 Matrix: WATER

Analyte	Concentration (ug/L) Sample #(86198)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
1,1-DCE	0.0	11.7	12.0	10.0	117	120	2.5
Trichloroethene	0.0	10.0	10.2	10.0	100	102	2.0
EDB	0.0	8.6	8.9	10.0	86	89	3.4
Chlorobenzene	0.0	10.1	10.2	10.0	101	102	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

10609 XALE235

McCAMBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553
Telephone: (510) 798-1620 Fax: (510) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

Report To: JENNIFER RICCI Bill To: AEI
Company: All Environmental, Inc.
3364 Mt. Diablo Blvd.
Lafayette, CA 94549
Tele: (510) 283-6000 Fax: (510) 283-6121
Project #: Project Name: FOSS
Project Location: OAKLAND
Sampler Signature: Dustin Ry

	SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015)/ MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other: 8010			Comments
(4)	AE-1		3/3/98		2		X																								X			86342
(5)	MW-1		"		2		X																								X			86343
(6)	MW-2		"		2		X																								X			86344

Relinquished By:	Date:	Time:	Received By:
Dustin Ry	3/3/98	4:05	Heidi Rica
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Remarks:

			VOAS	O&G	METALS	OTHER
ICE/T	✓	PRESERVATION	✓			
GOOD CONDITION	✓	APPROPRIATE				
HEAD SPACE ABSENT	✓	CONTAINERS	✓			