
W. A. CRAIG, INC

Environmental Consulting and Contractor

P. O. Box 448

Napa, California 94559-0448

Contractor and Hazardous Substances License #455752

Cal/OSHA Statewide Annual Excavation Permit 559351

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June 23, 1995

Barney Chan

Alameda Co. Department of Environmental Health

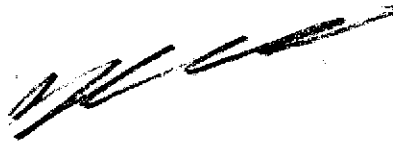
Division of Hazardous Materials

1131 Harbor Bay Parkway - 2nd Floor

Alameda, Ca. 94502

Tel: 510 567-6700

1138



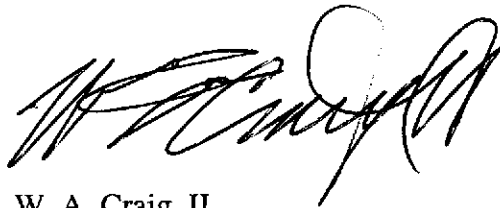
~~RE: 2901~~
Subject: Work Plan for 2901 Glascock St, Oakland, Ca.

REPORT

Referencing the above subject, Work Plan for 2901 Glascock St., Oakland, Ca. has been completed. We have submitted a copy for review to the R.P.'s (responsible parties). We will be forwarding a final copy to you by July 7, 1995.

If you have any questions please call.

Sincerely,



W. A. Craig, II
President

1138

JAMES C. MUIR
275 Oak Vue Road
Pleasant Hill, CA 94523
Tel: (510) 945-8602

August 1, 1995

Alameda County Health Department
Division of Hazardous Materials
1131 Harbor Bay Parkway
Alameda, CA 94502

Attention: Barney Chan

RE: Limited Soil and Groundwater Investigation Report
2901 Glascock Street, Oakland, California

Gentlemen:

This report covers the results of an investigation performed by W. A. Craig, Inc. on the west side of the Glascock building and the yard area located at the above address.

The purpose of the investigation was to evaluate the environmental status of subsurface soil and groundwater of the western half of the building and the side yard addition. A ferro-magnetic survey was also conducted to investigate the area for potentially hidden underground fuel storage tanks. The following report addresses each of these issues, as well as other services performed.

1.0 EXECUTIVE SUMMARY

This report presents the results of a site investigation at 2901 Glascock Street, Oakland, California. The work was conducted on April 17, 18 and 19, 1995. The purpose of this investigation was to evaluate the soil and groundwater conditions along the western half of the existing building and the west yard area currently leased to the Stan Flowers Company. The following activities were performed:

- Five boring (EB-1 through EB-5) were drilled to a depth of approximately 15 feet below ground surface (bags). The boring were advanced using a truck mounted, hollow-stem auger drilling rig.
- The boring were sampled at 5 foot vertical intervals and/or at first encountering ground water.

- Groundwater grab samples were collected from Boring EB-1 through EB-4. The samples were analyzed for total petroleum hydrocarbons as diesel (TPH-D and TPH-G) using EPA Method 8015 modified for gasoline and diesel range organics, and Benzene, Toluene, Ethylbenzene, Xylene as BTEX, using EPA Method 8020.
- Soils samples were collected from EB-1 through EB-4 and delivered to McCampbell Analytical Laboratory (a State Certified Lab) and analyzed for gasoline and diesel. EB-2 was also analyzed for LUFT Metals using EPA 7000 series.
- Five shallow boring (EB-6 through EB-10) were advanced using a hand held auger to depths ranging from 1.0 foot to 5.5 feet bgs.
- A soil sample was collected from boring EB-6 and delivered to McCampbell Analytical Laboratory and analyzed for gasoline and diesel.
- Soil samples were collected from boring EB-7 and EB-10. The samples were delivered to an analytical laboratory and tested for Polychlorinated Biphenyls (PCBs) using EPA Method 8080M, TPH-D using EPA Method 8015 modified, Oil and Grease using EPA Method 418.1, LUFT Metals using EPA 7000 Series, TPH-G, and BTEX using EPA Method 8015/8020.
- Soil samples were collected from boring EB-8 and EB-9. The samples were delivered to McCampbell Analytical Laboratory and tested for TPH-D using EPA Method 8015, TPH-G and BTEX using EPA Method 8015/8020.
- A soil sample was collected from the sandblast floor and the Fill Shaving area. The samples were delivered to McCampbell Analytical Laboratory and analyzed for LUFT Metals using EPA 7000 series.
- The hollow stem auger boring were backfilled with neat cement to the surface to seal any migratory pathways for contamination created by the boring.
- Both a Ferro Magnetic and a Radio Frequency Survey were conducted to investigate the property for any potentially hidden underground storage tanks.
- Soil samples collected at EP-1 were analyzed for PCBs, TPH-G, BTEX and TPH-D & TPH for motor oil ranged organics.

- While preparing to drill EB-7, 11 poison gas cylinders were encountered. These were removed from the site.
- Results from EP-1 samples indicated high PCB levels that could be harmful to workers and the environment. The area impacted was cleaned up.

2.0 INTRODUCTION

W. A. Craig, Inc. conducted the investigation at the request of the various investors who own the property and ICONCO. ICONCO is the prospective buyer of the property. The purpose of the investigation was to identify potential sources of contamination such as underground storage tanks and to determine if discharges of petroleum hydrocarbons, metals, PCBs and chlorinated solvents to the subsurface has occurred.

3.0 BACKGROUND

The subject site is located on the south side of Glascock Street and is bounded on the south by the Oakland Estuary. The property is comprised of a large warehouse and a small strip of undeveloped land to the west. The client has informed us that the warehouse was built in the 1920's. Two underground storage tanks (USTs) which previously contained fuel oils to run machinery in the warehouse were removed in February 1993. The client has informed us that the tanks have been out of operation for approximately 30 years. The approximate location of the USTs within the warehouse is shown on **Figure 1**, (Site plan with Monitoring Well Locations). The east half of the building is currently under contract with W. A. Craig, Inc. to have soil and groundwater investigated.

On February 23, 1993, Pacific Rim Environmental removed and disposed of a 4000 gallon UST (Tank No. 1). The UST apparently had some corrosion but was generally in good condition according to the tank closure report by Pacific Rim Environmental. A soil sample was collected from each end of the excavation at 18 inches below the tank bottom. One of the soil samples identified 1400 parts per million (ppm) Total Petroleum Hydrocarbons (TPH) as diesel and 1 ppm TPH as gasoline.

On February 26, 1993, Pacific Rim Environmental removed and disposed of the other UST (Tank No. 2), a 20,000 gallon UST. According to Pacific Rim Environmental, the UST experienced some corrosion but was intact. Four soil samples were collected from 24 inches below the bottom of the tank and four water samples were collected from the excavation pit for analyses. The four soil samples identified TPH as diesel ranging between 1200 ppm and 3800 ppm, oil and grease between 390 ppm and 1900 ppm, and up to 490 (ppb) ethylbenzene and 90

ppb total xylenes. The water collected from the excavation pit contained 16 ppm TPH as diesel and 26 ppm hydrocarbon oil and grease.

Pacific Rim Environmental subsequently performed overexcavation at both UST excavations and monitored the excavated soils with an organic vapor analyzer (OVA). The excavation for Tank No. 1 was overexcavated to 8 feet in width, 27 feet in length and 10.5 feet in depth. Overexcavation was apparently ceased by Pacific Rim Environmental due to the potential of compromising the building foundation. The excavation for Tank No. 2 was overexcavated to 25 feet wide, 32 feet long and 12 feet deep. This overexcavation was also apparently ceased due to concern that further excavation might compromise the structural integrity of the building. Nondetect readings using the OVA meter were apparently never reached during either overexcavation procedure.

4.0 REGIONAL GEOLOGY

Based on our limited review of published geologic literature, the subject site and vicinity are underlain by undivided Pleistocene Age alluvium and colluvium deposited on the gentle slopes located between the Oakland Hills and the San Francisco Bay.

The Hayward Fault is approximately 3.25 miles northeast of the site and is an active historic Fault. The Hayward Fault is the only active fault in the Oakland East Quadrangle.

5.0 HYDROGEOLOGY

The groundwater is typically encountered at about 13 to 15 feet below grade, in an apparent confined water bearing zone. The groundwater gradient is generally to the south, toward the Oakland Estuary.

The site is located within the East Bay Plain which makes up the ground water reservoir in the area. The water bearing capacity varies within the area due to the laterally discontinuous soil types and strata encountered beneath the East Bay Plain.

In general the water bearing capacities of the Younger Alluvium range from moderately permeable to low permeability soils. Below the Younger Alluvium at a depth of approximately 70 feet lies the Older Alluvium, which yields large to small quantities of water.

REFERENCES:

Redbrick, Dorothy H., Areal and Engineering Geology of the Oakland West Quadrangle, California, Map I-239, 1957

6.0 RADIO FREQUENCY AND FERRO MAGNETIC SURVEY

A Radio Frequency survey was conducted to determine the possibility of additional hidden underground storage tanks within the property lines. The Ferro Magnetic Survey was conducted using a model 880B, ferrous magnetic locator. The equipment was used to screen for ferrous metals at all boring and sampling locations. Areas where suspected buried ferrous metals were detected were marked with white spray paint. The results of the R. F. were as follows:

- A vent pipe and fill pipe were discovered near the PG&E vault along Glascock Street. The lines were traced until interference from electrical conduits and other buried utilities made it impossible to continue any further.
- A possible fill pipe was opened and a wire was inserted into the pipe as far as it would go. A diesel odor was noted when the wire was removed.
- A fill pipe was traced outside the building by hand excavation down to the pipe elevation. W. A. Craig, Inc. ceased tracing the line as it was beyond the scope of work proposed.

Strong signals were detected in the center of the main drive entrance into the building. A concrete patch was observed on the surface leading into the entrance. An underground storage tank or other underground facility may be buried below the patch. No visible fill ports or vent lines were encountered. It was beyond the scope of work proposed to continue to investigate the area more thoroughly by other methods (i.e., Ground Penetrating Radar, Backhoe, Excavation, Boreholes, etc.).

Possible
UST

7.0 SOIL SAMPLING

This scope of work for subsurface investigation which entailed trenching of contamination was performed at ten locations randomly chosen to provide the most efficient coverage of the suspected contamination with the least number of soil boring.

A State of California licenced geotechnical engineer was on site May 17, 1995 to observe the drilling of four boreholes to log the materials encountered, assist in collecting soil samples from the boring and to determine the depth to groundwater and obtain water samples. The locations of the boring are shown on the site plot plan. Borehole five (EB5) was advanced through 2.5' of the concrete floor to a depth of 4.5' below ground surface.

Two pits were excavated in the Stan Flowers Lumber Yard as shown on the site plot plan as EP-1 and EP-2. Five hand augered soil boring were performed at locations as shown on the site plot map as EB-6, EB-7, EB-8, EB-9 and EB-10. The samples collected from the designated depths within these boring below grade are as follows: EB-6 at 2', EB-7 at 5.5', EB-8 at 5.5', EB-9 at 5.5' and EB-10 at 1'.

Boring EB-1 through EB-5 were drilled using a truck-mounted drill rig operated by Clear Heart Construction and Drilling of Guerneville, California. Six-inch diameter, continuous-flight hollow-stem augers were used to drill the bore holes to the total depth. The augers were steam cleaned prior to each use to reduce the possibility of down hole or crosshole contamination. The hand-augered samples EB-6 through EB-10 were collected by grab samples of the cuttings.

The sampler barrels were decontaminated before and after each use by using an Alconox solution wash and tap water. The samples were covered at each end with Teflon sheeting and PVC end caps. The samples were then placed in an ice chest and filled with ice for transportation to an analytical laboratory.

A total of twenty-four samples were collected from the ten boring (EB-1 through EB-10) and two excavation pit samples (EP-1 and EP-2), twenty soil and four groundwater samples.

Selected samples were tested for Polychlorinated Biphenyls (PCBs) using EPA Method 8080M, TPH-D using EPA Method 8015, Oil and Grease using EPA Method 418.1, LUFT Metals using EPA 7000 Series, TPH-G and BTEX using EPA Method 8015/8020. The analytical results are listed in **Tables 1, 2 and Appendix A.**

8.0 GROUNDWATER SAMPLING

Four groundwater samples were collected from boring EB-1 through EB-4 by inserting a clean disposable plastic bailer down the casing of each boring. The groundwater was then placed into 40 ml VOA vials with Teflon septums containing HCL as a preservative for gasoline and BTEX analysis. Diesel samples were placed in one-liter amber bottles.

A total of four groundwater grab samples were collected from the four truck-mounted boring. The samples were labeled and placed in an ice chest filled with ice for transportation to an analytical laboratory accompanied with chain-of-custody.

9.0 ANALYTICAL RESULTS

A total of four groundwater and twenty soil samples were obtained from the ten boring and two excavation pits. The laboratory results are as follows:

SOIL

The analytical results revealed detectable levels of TPH-D in excavation pit EP-2 (9,600 ppm) and boring EB-6 (7.9 ppm), EB-8 (1.8 ppm) and EB-10 (2,500 ppm). Detectable levels of TPH-G (51 ppm to 31 ppm) and Benzene (0.14 to 0.02 ppm) were noted in boring EB-10 and Excavation pit EP-2. The analysis for TPH-MO revealed detectable levels (11,000 ppm) in the upper one-foot of soil beneath the concrete floor near the southwestern portion of the existing building. The LUFT Metals results were within the TTLC threshold limits for boring EB-2, EB-6, EB-7, EB-10, test pit EP-1 and the sandblast area.

Sample EP-2 was near TTLC limits for lead. The sample taken from the shavings is above the TTLC for lead and near the TTLC limits for Chromium.

Detectable levels of PCB (AROCOR 1260) were found in soil sample EP-2 down to two feet.

GROUNDWATER


The analytical results revealed no detectable levels of TPH-D, TPH-G or BTEX from any of the grab samples (See Table 2).

10.0 SITE SAFETY PLAN

Field work performed at the site by W. A. Craig, Inc. was conducted in accordance with the Site Safety Plan submitted with our Work Plan on August 5, 1994. The safety plan described the basic safety requirements for a subsurface environmental investigation and drilling of soil boring at the site. The Site Safety Plan was applicable to personnel and subcontractors performing work at the site. Personnel and subcontractors scheduled to perform work at the site were briefed on the contents of the Site Safety Plan and provided a copy before work began.

On behalf of the investor owners of the property, I am submitting this report to you in the hope that it will facilitate our remediation of the property. For any technical questions, please contact Messrs. W. A. Craig, Inc.

Sincerely,



James C. Muir

Listing of cylinders and who removed them:

1 each HBR (Hydrogen Bromide) Linde

Alt Air
1025 Comstock Street
Santa Clara, CA 95054

2 each Hydrogen

Air Products
465 N. Whisman Road
Mount View, CA 94043

1 each HC1 (Hydrogen Chloride)

BOC Gases
441 Hobson Street
San Jose, CA 95110

2 each HC1 (Hydrogen Chloride)

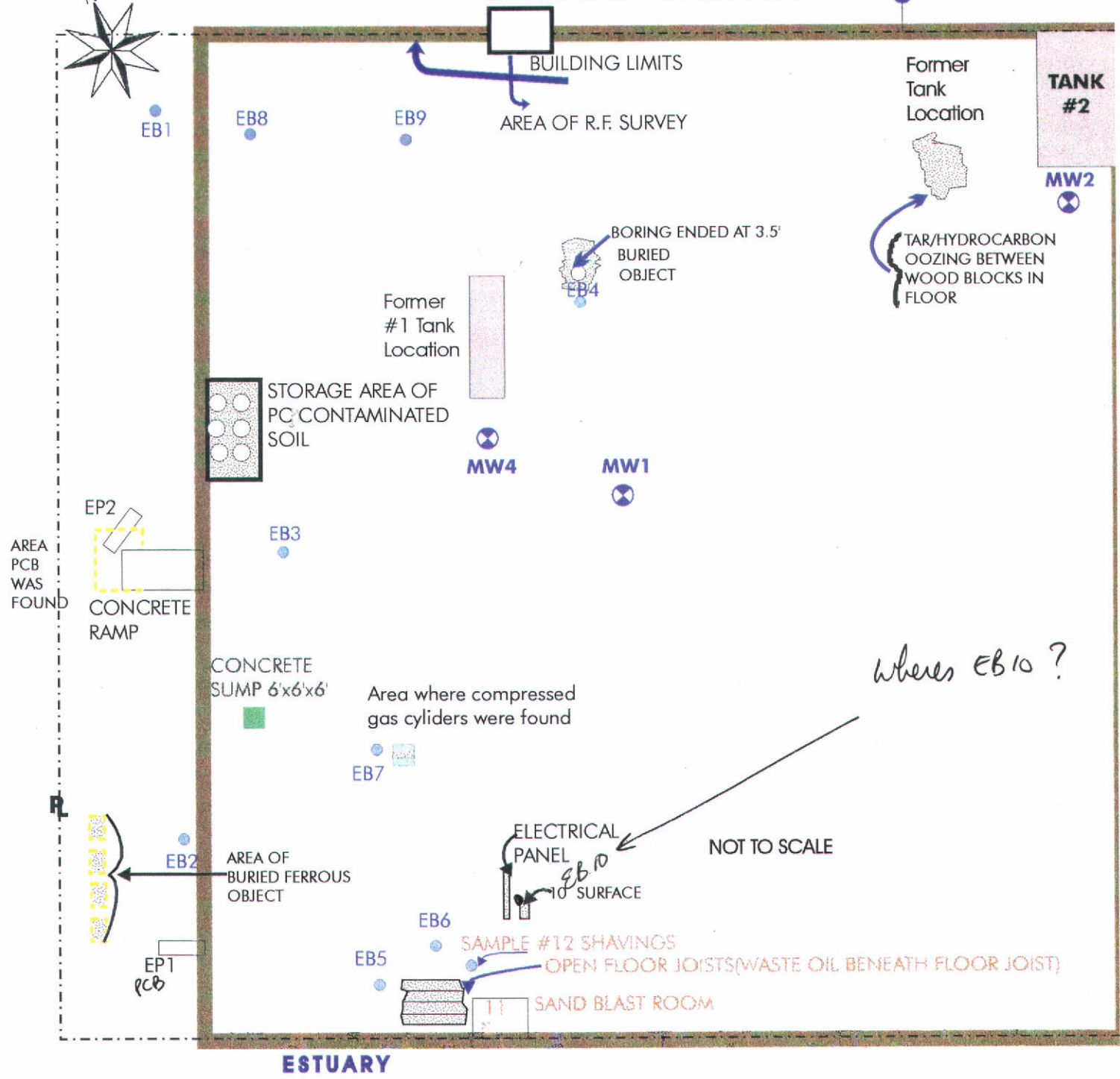
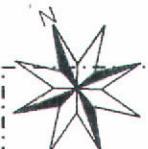
Rollins Environmental SVCs
2027 Battleground Road
Deer Park, TX 77536

5 each: 3 each labled HC1
2 each unknowns

Morgan Chemical
AP Tech
1700 Maxwell Road
Chula Vista, CA 91911

GLASCOCK STREET

MW3



LEGEND

MW1
PROPOSED GROUNDWATER MONITORING WELL LOCATION

Sample 12 is full of metal shavings
 Sample 11 floor dust from Sandblast room
 Sample 10 is 12" boring by electrical panel

W.A. CRAIG, INC.

P.O. BOX 448, NAPA, CALIFORNIA 94559-0448

2901 Glascock Street
 Oakland, California

JOB # 3518

SITE PLOT PLAN

Table 1
Analytical Results of Soil Samples for
2901 Glascok Street, Oakland, Calif.

Sample No.	Sample Date	Depth	TPH-G PPM	TPH-D PPM	Benzene PPM	Toluene PPM	Ethylbenzene PPM	Xylene PPM
EB-1	4-17-95	5.0	ND	ND	ND	ND	ND	ND
EB-2	4-17-95	4.0	ND	ND	ND	ND	ND	ND
EB-2	4-17-95	8.0	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD
EB-3	4-17-95	3.0	ND	ND	ND	ND	ND	ND
EB-3	4-17-95	4.0	ND	ND	ND	ND	ND	ND
EB-3	4-17-95	10.0	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD
EB-4	4-17-95	13.0	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD
EB-5	4-17-95	4.0	ND	ND	ND	ND	ND	ND
EP-1	4-17-95	1.0	ND	ND	ND	ND	ND	ND
EP-1	4-17-95	4.0	ND	ND	ND	ND	ND	ND
EP-2	4-17-95	SURFACE	51	9,600	0.14	0.18	0.49	7.2
EP-2	4-17-95	2.0	ND	ND	ND	ND	ND	ND
EP-2	4-17-95	4.0	ND	ND	ND	ND	ND	ND
EB-6	4-18-95	2.0	ND	ND	ND	ND	ND	ND
EB-7	4-18-95	5.5	ND	ND	ND	ND	ND	ND
EB-8	4-18-95	5.5	ND	ND	ND	ND	ND	ND
EB-9	4-18-95	5.5	ND	ND	ND	ND	ND	ND
EB-10	4-18-95	1.0	31?	ND	<0.02	0.15	0.21	1.6
SAND BLAST	4-18-95	FLOOR	NT	ND	0.029	0.017	0.030	0.014
SHAVINGS	4-18-95	2.0	NT	20	0.86	1.4	1.9	4.7
California MCL	-----	----	None	None	0.1	1000	680	1750
Detection Limits	-----	----	50	50	0.5	0.5	0.5	0.5

ND - Below Detectable Limits NT- Not Tested

Table 2
Soil Sampling Results for
2901 Glascock Street, Oakland, Calif.

Sample No.	Sample Date	Depth	Cadmium mg/l	Chromium mg/l	Lead mg/l	Nickel mg/l	Zinc mg/l	TRPH mg/l
EB2	4-17-95	SURFACE	NT	NT	NT	NT	NT	NT
EB2	4-17-95	2.0	NT	NT	NT	NT	NT	NT
EB2	4-18-95	4.0	ND	45	7.9	46	52	NT
EB6	4-18-95	2.0	1.2	41	39	64	150	NT
EB7	4-18-95	5.5	ND	41	7.3	73	37	ND
EB10	4-18-95	1.0	ND	40	13	60	51	11,000
SAND BLAST	4-18-95	2.0	6.1	13	40	60	51	NT
SHAVINGS	4-18-95	1.0	3.5	400	5,300	560	700	NT
California MCL	-----	-----	100	2,500	1,000	2,000	5,000	----
Detection Limits	-----	-----	0.5	0.5	3.0	2.0	1.0	50

mg/kg

ND - Below Detectable Limits
 NT - Not Taken

Table 3
Groundwater Sampling Results for
2901 Glascock Street, Oakland, Calif.

Sample No.	Sample Date	Depth	TPH-G (ppb)	TPH-D (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylene (ppb)
EB1-W	4-17-95	B.O.H	ND	ND	ND	ND	ND	ND
EB2-W	4-17-95	B.O.H	ND	ND	ND	ND	ND	1.1
EB3-W	4-17-95	B.O.H	ND	ND	ND	ND	ND	ND
EB4-W	4-17-95	B.O.H	ND	ND	ND	ND	ND	ND
California MCL	-----	-----	None	None	1.0	1000	680	1750
Detection Limits	-----	-----	50	50	0.5	0.5	0.5	0.5

ND - Below Detectable Limits
 B.O.H- Bottom of Hole

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553

Tele: 510-798-1620 Fax: 510-798-1622

W.A. Craig, Inc. P.O. Box 448 Napa, CA 94559-0448	Client Project ID: # 3518; Glascock	Date Sampled: 04/17/95
		Date Received: 04/18/95
	Client Contact: Bill Craig	Date Extracted: 04/18-04/21/95
	Client P.O:	Date Analyzed: 04/18-04/21/95

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d) ⁺	% Recovery Surrogate
51765	3406 EB1 @ 5	S	ND	98
51766	3406 EB1.W	W	ND	98
51767	3406 EB2 @ 4	S	ND	97
51769	3406 EB2.W	W	ND	97
51770	3406 EB3 @ 4	S	ND	97.
51772	3406 EB3.W	W	ND	97
51775	3406 EB4.W	W	ND	101
51776	3406 EB5 @ 4	S	ND	97
51777	3406 EB3 @ 3	S	ND	90
51778	3406 EP1 @ 1	S	ND	90
51779	3406 EP1 @ 4	S	ND	87
51780	3406 EP2 @ S	S	9600,g,b	96
51781	3406 EP2 @ 2	S	1.8,g	100
51782	3406 EP2 @ 4	S	ND	89
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

also 48, 100 ppm
PCBS
need manifest

* water samples are reported in ug/L, soil samples in mg/kg, and all TCLP and STLC extracts in mg/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

W.A. Craig, Inc. P.O. Box 448 Napa, CA 94559-0448	Client Project ID: # 3518; Glascock	Date Sampled: 04/17/95
		Date Received: 04/18/95
	Client Contact: Bill Craig	Date Extracted: 04/19-04/21/95
	Client P.O.:	Date Analyzed: 04/19-04/21/95

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) ⁺	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
51765	3406 EB1 @ 5	S	ND	ND	ND	ND	ND	105
51766	3406 EB1.W	W	ND	ND	ND	ND	ND	98
51767	3406 EB2 @ 4	S	ND	ND	ND	ND	ND	103
51769	3406 EB2.W	W	ND,b	ND	ND	ND	1.1	98
51770	3406 EB3 @ 4	S	ND	ND	ND	ND	ND	---
51772	3406 EB3.W	W	ND	ND	ND	ND	ND	102
51775	3406 EB4.W	W	ND	ND	ND	ND	ND	103
51776	3406 EB5 @ 4	S	ND	ND	ND	ND	ND	---
51777	3406 EB3 @ 3	S	ND	ND	ND	ND	ND	107
51778	3406 EP1 @ 1	S	ND	ND	ND	ND	ND	108
51779	3406 EP1 @ 4	S	ND	ND	ND	ND	ND	108
51780	3406 EP2 @ S	S	51,b	0.14	0.18	0.49	7.2	99
51781	3406 EP2 @ 2	S	ND	ND	ND	ND	ND	106
51782	3406 EP2 @ 4	S	ND	ND	ND	ND	ND	107
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak coelutes with surrogate peak

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant (aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

McCAMPBELL ANALYTICAL INC.

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

QC REPORT FOR HYDROCARBON ANALYSES

Date: 09/24-09/25/94

Matrix: Water

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		
	Sample	MS	MSD		MS	MSD	RPD
TPH (gas)	0.0	102.6	97.1	100	102.6	97.1	5.5
Benzene	0	9.9	9.5	10	99.0	95.0	4.1
Toluene	0	10	9.7	10	100.0	97.0	3.0
Ethyl Benzene	0	9.9	9.6	10	99.0	96.0	3.1
Xylenes	0	31.2	30.1	30	104.0	100.3	3.6
TPH (diesel)	0	161	154	150	107	103	4.4
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553

Tele: 510-798-1620 Fax: 510-798-1622

W.A. Craig, Inc. P.O. Box 448 Napa, CA 94559-0448	Client Project ID: # 3518; Glascock	Date Sampled: 04/17/95
		Date Received: 04/18/95
	Client Contact: Bill Craig	Date Extracted: 04/19/95
	Client P.O:	Date Analyzed: 04/19/95

LUFT Metals *

EPA analytical methods 6010/200.7, 239.2*

Lab ID	Client ID	Matrix	Extraction ^o	Cadmium	Chromium	Lead	Nickel	Zinc	% Rec. Surrogate
51767	3406 EB2 @ 4	S	TTLIC	ND	45	7.9	46	52	99
51778	3406 EP1 @ 1	S	TTLIC	ND	22	8.1	39	25	100
51780	3406 EP2 @ S	S	TTLIC	4.5	82	940	80	1100	97
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	S	TTLIC	0.5 mg/L	0.5	3.0	2.0	1.0		
	W	TTLIC	0.01 mg/kg	0.005	0.005	0.02	0.01		
	---	STLC,TCLP	0.01 mg/L	0.05	0.2	0.05	0.05		

* soil samples are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L

+ Lead is analysed using EPA method 6010 (ICP)for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples

o EPA extraction methods 1311(TCLP), 3010/3020(water, TTLIC), 3040(organic matrices, TTLIC), 3050(solids, TTLIC); STLC from CA Title 22

surrogate diluted out of range; N/A means surrogate not applicable to this analysis

i) liquid sample that contains greater than ~ 2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.

McCAMPBELL ANALYTICAL INC.

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

W.A. Craig, Inc. P.O. Box 448 Napa, CA 94559-0448	Client Project ID: # 3518; Glascock	Date Sampled: 04/18/95
		Date Received: 04/18/95
	Client Contact: Bill Craig	Date Extracted: 04/19/95
	Client P.O:	Date Analyzed: 04/19/95

LUFT Metals

EPA analytical methods 6010/200.7, 239.2*

Lab ID	Client ID	Matrix	Extraction ^o	Cadmium	Chromium	Lead	Nickel	Zinc	% Rec. Surrogate
51783	EB-6 @ 2	S	TTLC	1.2	41	39	64	150	98
51784	EB-7 @ 5.5	S	TTLC	ND	41	7.3	73	37	97
51787	EB-10 @ 1	S	TTLC	ND	40	13	60	51	98
51788	Sandblast	S	TTLC	6.1	13	40	60	51	98
51789	Shavings	S	TTLC	3.5	400	5300	560	700	99
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	S	TTLC	0.5 mg/L	0.5	3.0	2.0	1.0		
	W	TTLC	0.01 mg/kg	0.005	0.005	0.02	0.01		
	---	STLC,TCLP	0.01 mg/L	0.05	0.2	0.05	0.05		

* soil samples are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L
 + Lead is analysed using EPA method 6010 (ICP) for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples
 o EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC); STLC from CA Title 22
 # surrogate diluted out of range; N/A means surrogate not applicable to this analysis
 i) liquid sample that contains greater than ~ 2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.

CHROMALAB, INC.

Environmental Services (SDB)

April 27, 1995

Submission #: 9504244

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: W/G

Project#: 3980

Received: April 20, 1995

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Sample ID: EB-10

Spl#: 85522

Matrix: SOIL

Extracted: April 21, 1995

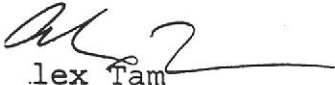
Sampled: April 18, 1995

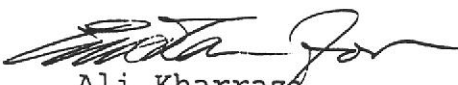
Run#: 6407

Analyzed: April 25, 1995

Method: EPA 8080M

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
AROCLOR 1016	N.D.	1	N.D.	--
AROCLOR 1221	N.D.	1	N.D.	--
AROCLOR 1232	N.D.	1	N.D.	--
AROCLOR 1242	N.D.	1	N.D.	--
AROCLOR 1248	N.D.	1	N.D.	--
AROCLOR 1254	N.D.	1	N.D.	--
AROCLOR 1260	4	1	N.D.	114


Alex Tam
Chemist


Ali Kharrazi
Organic Manager

CHROMALAB, INC.

Environmental Services (SDB)

April 27, 1995

Submission #: 9504243

MCCAMPBELL ANALYTICAL, INC.

Written: Ed Hamilton

Project: W/3518

Project#: 3979

Received: April 20, 1995

Re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Sample ID: 3406EP1@1'

Spl#: 85518

Matrix: SOIL

Extracted: April 21, 1995

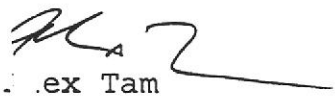
Sampled: April 17, 1995

Run#: 6407

Analyzed: April 25, 1995

Method: EPA 8080M

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
AROCLOR 1016	N.D.	0.1	N.D.	--
AROCLOR 1221	N.D.	0.1	N.D.	--
AROCLOR 1232	N.D.	0.1	N.D.	--
AROCLOR 1242	N.D.	0.1	N.D.	--
AROCLOR 1248	N.D.	0.1	N.D.	--
AROCLOR 1254	N.D.	0.1	N.D.	--
AROCLOR 1260	N.D.	0.1	N.D.	114


Alex Tam
Chemist


Ali Kharrazi
Organic Manager

CHROMALAB, INC.

Environmental Services (SDB)

April 27, 1995

Submission #: 9504243

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: W/3518

Project#: 3979

Received: April 20, 1995

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Sample ID: 3406EB2@4'

Spl#: 85517

Matrix: SOIL

Extracted: April 21, 1995


Sampled: April 17, 1995


Run#: 6407

Analyzed: April 25, 1995

Method: EPA 8080M

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
AROCLOR 1016	N.D.	0.1	N.D.	---
AROCLOR 1221	N.D.	0.1	N.D.	--
AROCLOR 1232	N.D.	0.1	N.D.	--
AROCLOR 1242	N.D.	0.1	N.D.	--
AROCLOR 1248	N.D.	0.1	N.D.	--
AROCLOR 1254	N.D.	0.1	N.D.	--
AROCLOR 1260	N.D.	0.1	N.D.	114


Alex Tam
Chemist


Ali Kharrazi
Organic Manager

CHROMALAB, INC.

Environmental Services (SDB)

April 27, 1995

Submission #: 9504243

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: W/3518

Project#: 3979

Received: April 20, 1995

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Sample ID: 3406EP2@S

Spl#: 85519

Matrix: SOIL

Extracted: April 21, 1995

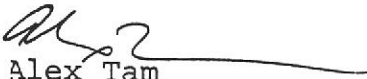
Sampled: April 17, 1995


Run#: 6407

Analyzed: April 25, 1995

Method: EPA 8080M

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
AROCLOR 1016	N.D.	200	N.D.	---
AROCLOR 1221	N.D.	200	N.D.	--
AROCLOR 1232	N.D.	200	N.D.	--
AROCLOR 1242	N.D.	200	N.D.	--
AROCLOR 1248	N.D.	200	N.D.	--
AROCLOR 1254	N.D.	200	N.D.	--
AROCLOR 1260	48000	200	N.D.	114


Alex Tam
Chemist


Ali Kharrazi
Organic Manager

CHROMALAB, INC.

Environmental Services (SDB)

April 27, 1995

Submission #: 9504244

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: W/G

Project#: 3980

Received: April 20, 1995

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Sample ID: EB-7

Spl#: 85521

Matrix: SOIL

Extracted: April 21, 1995


Sampled: April 18, 1995


Run#: 6407

Analyzed: April 25, 1995

Method: EPA 8080M

<u>ANALYTE</u>	<u>RESULT</u> (mg/Kg)	<u>REPORTING</u> <u>LIMIT</u> (mg/Kg)	<u>BLANK</u> <u>RESULT</u> (mg/Kg)	<u>BLANK SPIKE</u> <u>RESULT</u> (%)
ROCLOR 1016	N.D.	0.1	N.D.	--
AROCLOR 1221	N.D.	0.1	N.D.	--
AROCLOR 1232	N.D.	0.1	N.D.	--
ROCLOR 1242	N.D.	0.1	N.D.	--
ROCLOR 1248	N.D.	0.1	N.D.	--
AROCLOR 1254	N.D.	0.1	N.D.	--
AROCLOR 1260	0.4	0.1	N.D.	114


Alex Tam
Chemist


Ali Kharrazi
Organic Manager

CHROMALAB, INC.

Environmental Services (SDB)

April 27, 1995

Submission #: 9504243

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: W/3518

Project#: 3979

Received: April 20, 1995

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.

Sample ID: 3406EP2@2'

Spl#: 85520

Matrix: SOIL

Extracted: April 21, 1995


Sampled: April 17, 1995


Run#: 6407

Analyzed: April 25, 1995

Method: EPA 8080M

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
AROCLOR 1016	N.D.	1	N.D.	--
AROCLOR 1221	N.D.	1	N.D.	--
AROCLOR 1232	N.D.	1	N.D.	--
AROCLOR 1242	N.D.	1	N.D.	--
AROCLOR 1248	N.D.	1	N.D.	--
AROCLOR 1254	N.D.	1	N.D.	--
AROCLOR 1260	2	1	N.D.	114


Alex Tam
Chemist


Ali Kharrazi
Organic Manager