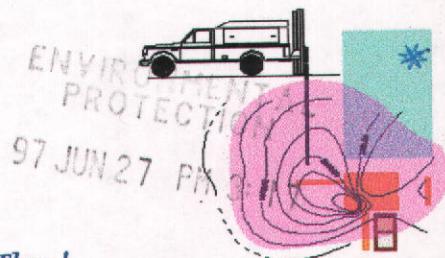


GeoSolv, LLC

Environmental and Hydrogeological Consulting
643 Oregon Street, Sonoma, CA 95476
Phone: (707) 996-4227 Fax: (707) 996-7882



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June 5, 1997

Madhulla Logan, M.S.
Hazardous Materials Specialist
Alameda County Health Care Agency
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

(510) 567-6764 Phone
(510) 337-9335 FAX

SUBJECT: LETTER REPORT FOR A LIMITED SUBSURFACE ENVIRONMENTAL INVESTIGATION AT THE FORMER CRYER BOAT YARD FOR:
Steve Cowley, 95 Hegenberger Loop, Oakland, CA 94502
Phone: (510) 635-9091 FAX: (510) 635-2223
SITE LOCATION: 1899 Dennison Street, Oakland, CA 94611

Dear Ms. Logan:

The aforementioned investigation was performed as per your written approval.

The purpose of this investigation was to determine if any gasoline, diesel, and/or metals identified in previous soil investigations have migrated into the groundwater. Groundwater was encountered between five and six feet below ground surface. Preliminary water level measurements documented the groundwater flow direction to be to the southeast.

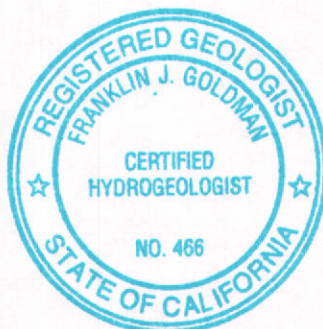
No significant levels of gasoline/BTEX/MTBE, diesel & PNAs, CAM 17 Metals, Ketones, and/or Chlorinated Solvents were identified in groundwater. The soil encountered in the 2 inch diameter Geoprobe boreholes was very old fill which was very high in organics. The high organic carbon content (foc) of the predominantly clay soils are probably a major factor, preventing the previously identified contaminants in soil, onsite, from leaching into groundwater.

If you have any questions in regard to this report, please contact us at (707) 996-4227.

Sincerely,

Franklin J. Goldman

Franklin J. Goldman
CEO/GeoSolv, LLC
Registered Geologist No. 5557
Certified Hydrogeologist No. 466



1.0 SITE SETTING

The site is located on the water front at the Port of Oakland, CA (See Figure 1). The site is used for industrial purposes and water supplies are not provided from wells. The site is split between the Port of Oakland and Mr. Cowley (See Figure 2). The former above ground diesel storage tanks (i.e. which may have contained gasoline in the past) and the mound of metal slag, located on the Port of Oakland side of the former Cryer and Sons property are obvious potential point sources for past discharges to subsurface soils and possibly groundwater.

2.0 SUBSURFACE INVESTIGATION AND LAB RESULTS

The site was investigated by excavation of Geoprobe boreholes to a depth of 16 feet bgs in boreholes B-2A, B-3A, and B-6A, and to 20 feet bgs in borehole B-1A (See Figure 2 for borehole locations and Figure 3a through 3d for boring logs). The former above ground diesel tanks, and the mound of metal slag, both located on the Port of Oakland side of the former Cryer and Sons property are potential point sources for past discharges of diesel and metals to soil, respectively.

Rationale for Well Locations

Boreholes B-1A, B-2A, B-3A, and B-6A placed adjacent to former boreholes B-1, B-2, B-3, and B-6. The former boreholes were installed with hollow-stem augers to collect soil samples. Groundwater samples could not be collected during the two previous investigations because the open boreholes could not yield enough groundwater due to low recharge caused by smearing of the inside walls of the boreholes. The recent boreholes were installed to obtain groundwater samples within a Geoprobe, Macrocore borehole which has a tendency to produce better yielding open borehole wells because the method does less smearing of the inner walls of the borehole.

On the day of the recent GeoSolv investigation, Madhulla Logan specified that she wanted borehole B-2A placed as close to the former AGSTs as possible. Her request was accommodated; however, it could not be moved any closer due to obstructions from stored machinery.

Groundwater Sample Collection

Temporary 0.5 inch diameter, schedule 40, 0.02 inch, slotted PVC casings were installed in the open Geoprobe boreholes to obtain groundwater grab samples from a peristaltic pump. The temporary wells were needed to prevent the holes from closing up due to expansive organic clays. The temporary wells were removed, two days after the investigation, after water level measurements were retrieved. The groundwater gradient flow direction was estimated, through water level measurements, to be to the southeast (e.g. from the Port of Oakland side of the property to the Cowley property).

Groundwater grab samples were collected for CAM 17 metals, diesel, and EPA 8270/PNAs were sealed in two - 1 liter amber bottles for each sample, from each well. The samples for metals were filtered in the lab. Groundwater samples collected for

TPHg/BTEX/MTBE and for EPA 8260 were sealed in two - 40 milliliter VOA bottles, for each sample, from each well. Care was taken to leave no air in the bottles and each sample was labeled, recorded on the chain of custody, and placed in a plastic Ziplock bag. The samples were placed in a cooler containing ice at 4 degrees Celsius for transportation to a State certified analytical laboratory (McCampbell Analytical, Inc. In Pacheco, CA). Each 4 foot long Macrocore soil sampler was decontaminated before and after each use by using an Alconox solution wash and deionized water. Each water sample was collected with a 25 foot length of disposable silicon tubing.

Laboratory Analyses Results

The four temporary wells designated on Figure 2 have text associated with each well location showing the laboratory analyses performed and the results of any contaminants identified. Very minor levels of toluene and xylenes were identified in B-1A and B-2A. Very minor levels of Arsenic, Barium, and Nickel were identified in B-3A and B-6A and a low level of Antimony was identified in B-6A, as well (See Appendix A for Laboratory Data Sheets with QA/QC).

Soil Waste Containment and Disposal

Since a push technology method was utilized, only 1 - five gallon bucket of soil waste was generated, during drilling. The soil was left onsite for later analyses to determine a legal point of disposal.

Additional Testing

Two (2) additional lab tests were performed, at the request of the client, for EPA 8260 to identify paint related chemicals in groundwater in B3A and B6A.

Two (2) additional lab tests were performed, at the request of the client, for TPHd to identify diesel in groundwater in B-1A and B-2A.

PNAs were only analyzed in B-1A, at the request of Madhulla Logan, because recent testing of diesel in soil was identified in a recent previous borehole adjacent to that location. One (1) additional test for PNAs along with an entire suite of associated semi-volatiles was performed at the request of the client to identify these chemicals in B-3A. This indicates that paint chips and sand blast dust are not likely to have leached ketones or other associated chemicals into groundwater, onsite.

3.0 COMMENTS ON PAST SUBSURFACE INVESTIGATIONS

A Sanborn map from 1950 shows the Cryer Boatyard on the waterfront at the same location that the main warehouse building is today. It shows that the site was used to manufacture electrical and heating elements and welding was also performed at a building at the entrance to the wharf. This scenario has been verified by the presence of a 2 to 5 foot high mound of metal slag which has entombed these electrical elements in it, just 30 feet southwest of the present warehouse, on the Port of Oakland side of the property.

Since the mound of metal slag and old fill provide the foundation for the buildings shown on the 1950 Sanborn map, and those same buildings exist today, it is apparent that the metals contamination identified in soil, during previous subsurface soil investigations, must have been discharged into the old fill, previously to, and contemporaneously with, the Cryer & Son occupancy of the site.

4.0 SPECIFIC FINDINGS AND CONCLUSIONS

Based upon the laboratory analytical data collected from the temporary well installations, borehole logs, and local hydrogeologic interpretations, the following conclusions are made:

- No significant levels of contaminants are identified in groundwater.
Contaminants previously identified in soil are apparently inert and are not leaching vertically into the groundwater.
- Very low levels of metals, toluene and xylenes were identified in groundwater.

Metals identified in soil, onsite, were most likely discharged from the mound of metal slag which was, and is presently, located on the Port of Oakland side of the property. Metals originally incorporated into the old fill exist on the Port of Oakland side of the property line. Under certain circumstances, these metals could migrate laterally from primary and secondary point sources, into groundwater, across the property line, and increase the levels of metals concentrations in groundwater, beneath the Cowley site, to unacceptable levels.

Diesel, and benzene associated with the diesel, identified in soil, were most likely discharged from the Above Ground Storage Tanks (AGSTs) which were previously located on the Port of Oakland side of the property. The AGSTs were apparently owned and operated by responsible parties other than Mr. Cowley. The AGSTs could have contained gasoline as well as diesel and the secondary source of hydrocarbon contaminated soils may not been completely removed.

5.0 CONCLUSIONS

Based on the data collected and observations recorded during this investigation, **GEOSOLV, LLC.**, believes that the contaminated soil at the Cowley site does not pose a risk to drinking water or the environment. The groundwater at the site is not designated as a drinking water source, nor is it likely to be hydrogeologically connected to another drinking water source. Water supplies at the site are provided by municipal sources other than nearby supply wells.

Contamination identified in soil during previous investigations, at the Cowley site still poses a very limited human health risk. Since the site is used for industrial purposes and the working personnel activities are in areas where exposure is unlikely, it does not appear to pose a practical human health threat unless on site workers were to ingest metals contaminated soil or breath benzene contaminated soil in an open excavation.

Even if these exposure pathways were relevant, a simple, isolated, surface cover, placed in the soil contaminated areas, will suffice to seal off these exposure pathways.

Even though the groundwater has only been impacted to levels which are acceptable to leave in-situ, it does not preclude the potential for contaminants to migrate laterally from their point source locations, across the Port of Oakland/Cowley property line, into the groundwater beneath the Cowley property. If concentrations of metals and hydrocarbons increase in the groundwater, then the bay and estuary waters of the State may be adversely impacted to the point that the contaminants are a threat to the environment.

6.0 RECOMMENDATIONS

Based on the conclusions, *GEOSOLV, LLC.*, recommends that the human health risk be mitigated by providing surface cover in the areas where contaminants in soil could be exposed to human receptors.

Formal groundwater monitoring should be implemented, on the Port of Oakland side of the property to determine if metals identified in soil, adjacent to the mound of metal slag, and the hydrocarbons identified in soil adjacent to the former AGSTs will migrate onto the Cowley property, via lateral migration through the groundwater.

7.0 LIMITATIONS

This report has been prepared in accordance with generally accepted environmental, geological and engineering practices. No warranty, either expressed or implied, is made as to the professional advice presented herein. The analysis, conclusions and recommendations contained in this report are based upon site conditions as they existed at the time of the investigation and they are subject to change.

The conclusions presented in this report are professional opinions based solely upon visual observations of the site and vicinity, and interpretation of available information as described in this report. *GEOSOLV, LLC.* recognizes that the limited scope of services performed in execution of this investigation may not be appropriate to satisfy the needs, or requirements of other state agencies, or of other users. Any use or reuse of this document or its findings, conclusions or recommendations presented herein is at the sole risk of said user.

cowley, 1899 dennison street, oakland

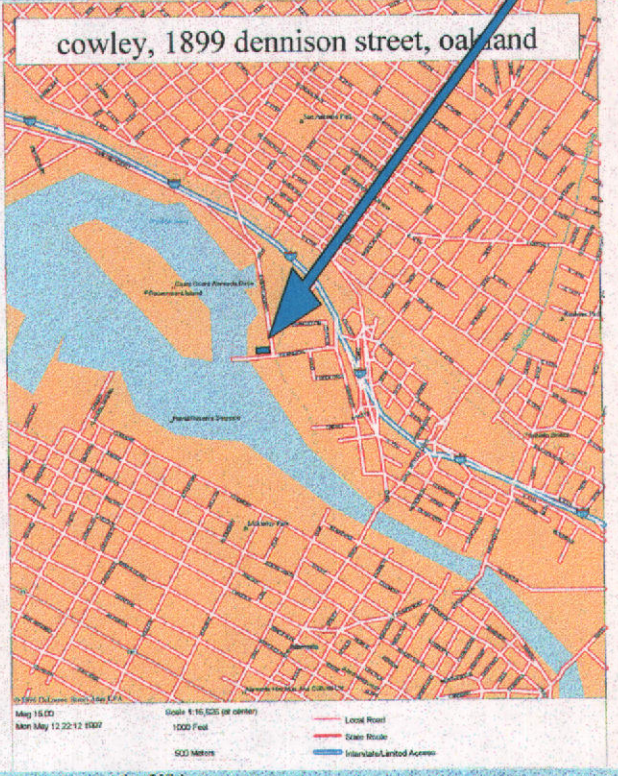
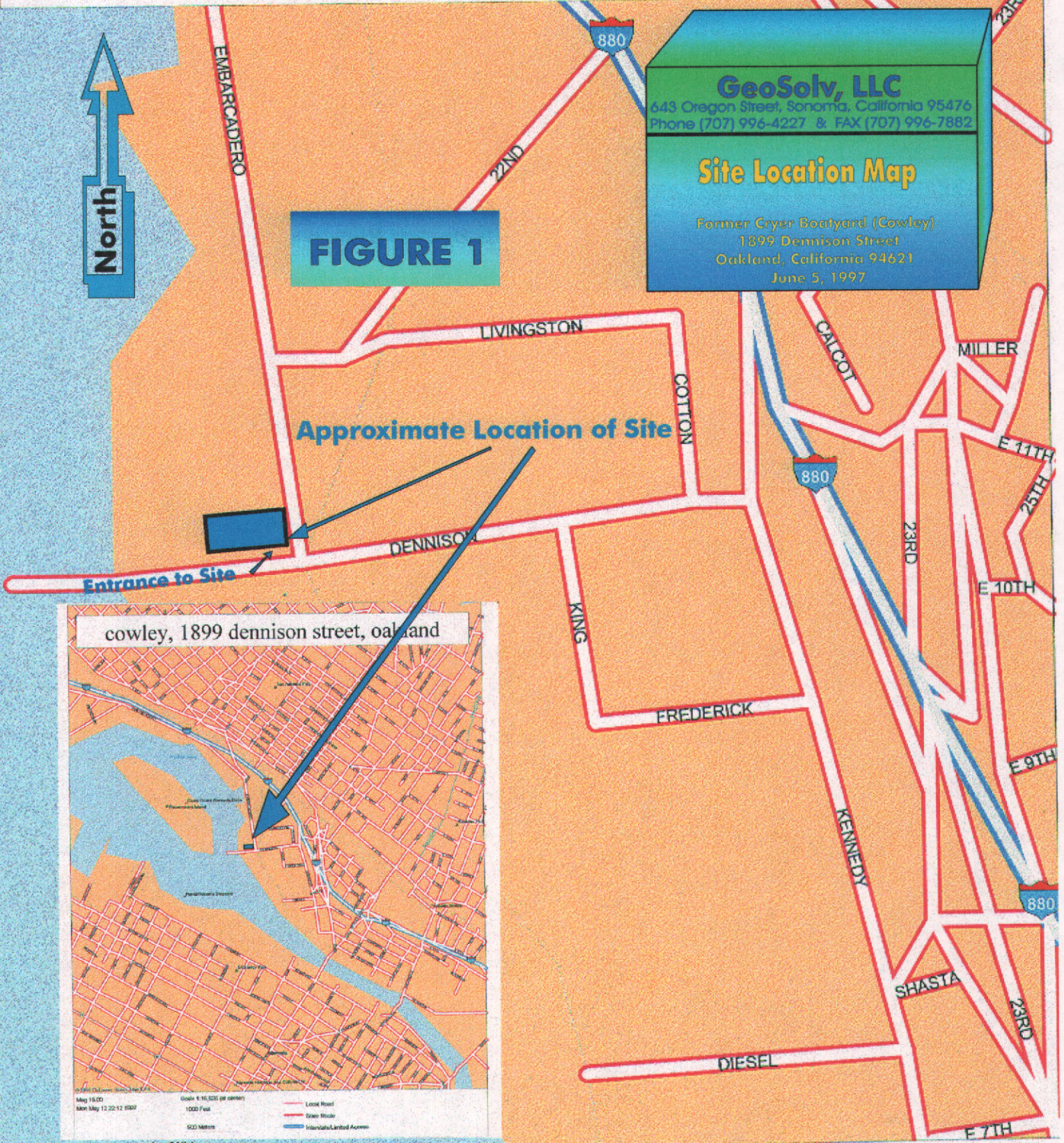


FIGURE 1

GeoSolv, LLC
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 Phone (707) 996-4227 & FAX (707) 996-7882

Site Location Map

Former Cryer Boatyard (Cowley)
 1899 Dennison Street
 Oakland, California 94621
 June 5, 1997



© 1996 DeLorme Street Atlas USA

Mag 16.00
 Mon May 12 22:08 1997

Scale 1:3,906 (at center)
 200 Feet
 100 Meters

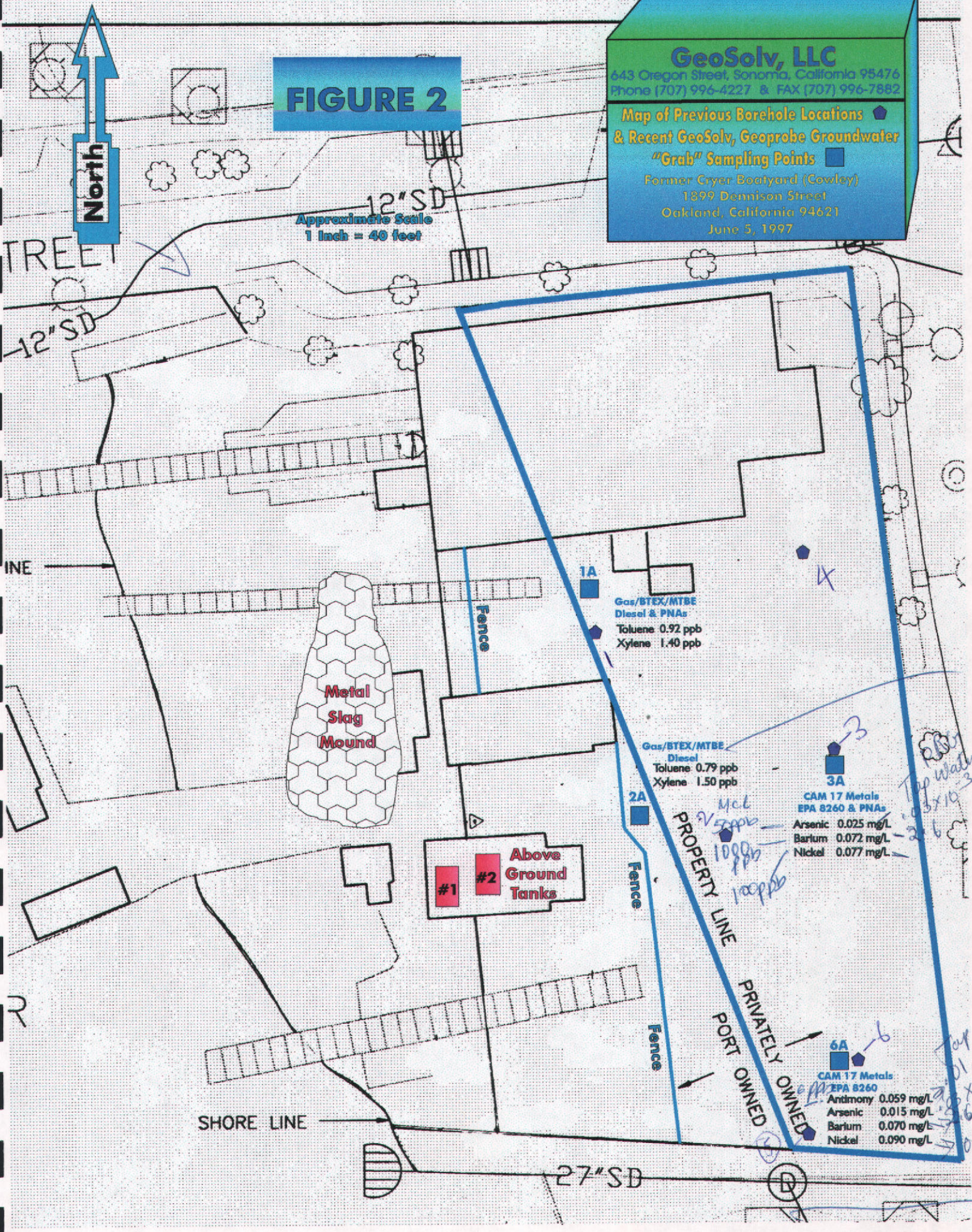
- Local Road
- Interstate/Limited Access
- Railroad

FIGURE 2

GeoSolv, LLC
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**Map of Previous Borehole Locations
 & Recent GeoSolv, Geoprobe Groundwater
 "Grab" Sampling Points**

Former Cryer Boatyard (Cowley)
 1899 Dennison Street
 Oakland, California 94621
 June 5, 1997



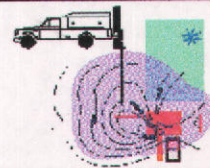
DRILL COMPANY: Vironex		SURFACE ELEVATION:		LOGGED BY: Frank Goldman		
DEPTH TO GROUNDWATER:		BORING DIAMETER: 2"		DRILLING METHOD: Geoprobe		
LITHOLOGIC DESCRIPTION	SAMPLE INTERVALS	LITHOLOGIC LOG	DEPTH	WATER LEVEL	WELL CONSTRUCTION DETAIL	USCS SYMBOLS
Fill: Clay, black, soft, moist; interspersed with 0.025 to 1.0 inch layers of peat, organic odor			1 2 3 4 5			
Borehole expansive; placed 0.5 inch diameter, schedule 40, PVC screen as a temporary well to collect groundwater grab samples			6 7 8 9 10			
Fill: Silty clay, grey-green, soft, moist			11 12 13 14 15			
Fill: Clayey silt, grey-green, soft, moist; mottled with burnt, charred wood			16 17 18			
Slow recharge			19			
End: 20 feet bgs, no groundwater encountered during drilling			20			



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PROJECT NAME: Cowley, Steve

BORING Number: B-1A

ADDRESS: 1899 Dennison Street
 Oakland, CA 94621

DATE: May 13, 1997

DRILL COMPANY: Vironex	SURFACE ELEVATION:	LOGGED BY: Frank Goldman
DEPTH TO GROUNDWATER:	BORING DIAMETER: 2"	DRILLING METHOD: Geoprobe

LITHOLOGIC DESCRIPTION	SAMPLE INTERVALS	LITHOLOGIC LOG	DEPTH	WATER LEVEL	WELL CONSTRUCTION DETAIL	USCS SYMBOLS
Fill: Clayey sand, red-brown, loose, fine to medium grained, slightly moist; mottled		[Pattern: Dotted]	1 2 3 4 5			
Borehole expansive; placed 0.5 inch diameter, schedule 40, PVC screen as a temporary well to collect groundwater grab samples		[Pattern: Dotted]	6 7 8			
Fill: Silty clay, black, soft, moist to very moist; high organics		[Pattern: Horizontal lines]	9			
Fill: Sand, black, loose, moist to wet; high organics		[Pattern: Dotted]	10			
Fill: Silty clay, black, soft, moist to very moist; high organics		[Pattern: Horizontal lines]	11 12 13			
Fill: Sand, black, loose, moist to wet; high organics		[Pattern: Dotted]	14			
Moderate recharge		[Pattern: Dotted]	15 16			
End: 16 feet bgs, no groundwater encountered during drilling			17 18 19 20			



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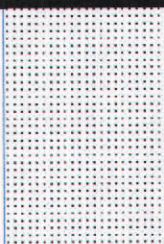
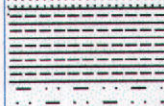
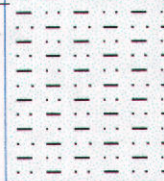

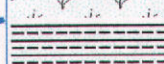

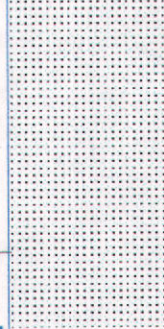
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PROJECT NAME: Cowley, Steve
 ADDRESS: 1899 Dennison Street
 Oakland, CA 94621

BORING Number: B-2A
 DATE: May 13, 1997

DRILL COMPANY: Vironex	SURFACE ELEVATION:	LOGGED BY: Frank Goldman
DEPTH TO GROUNDWATER:	BORING DIAMETER: 2"	DRILLING METHOD: Geoprobe

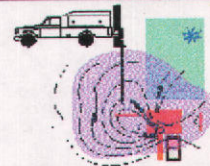
LITHOLOGIC DESCRIPTION	SAMPLE INTERVALS	LITHOLOGIC LOG	DEPTH	WATER LEVEL	WELL CONSTRUCTION DETAIL	USCS SYMBOLS
Fill: Sand, yellow, red-brown, loose, coarse, dry; mottled			1 2 3			
Fill: Clayey silt, black, soft, moist to very moist; high organics			4 5			
Fill: Silty sand, black, loose, coarse, moist to wet,; high organics			6 7			
Fill: Silty clay, black, soft, moist to very moist; high organics			8			
Fill: Peat, red-brown, moist			9			
Fill: Silty clay, black, soft, very moist; high organics			10 11			
Fill: Sand, black, moist to wet; high organics			12 13 14 15			
Borehole expansive; placed 0.5 inch diameter, schedule 40, PVC screen as a temporary well to collect groundwater grab samples			16			
Moderate recharge			17			
End: 16 feet bgs, no groundwater encountered during drilling			18 19 20			



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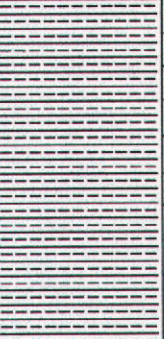
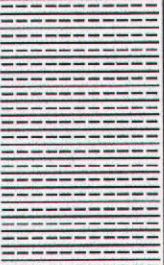
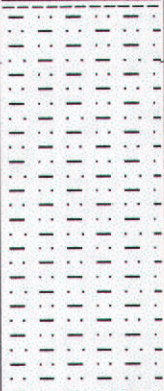


PROJECT NAME: Cowley, Steve

BORING Number: B-3A

ADDRESS: 1899 Dennison Street
 Oakland, CA 94621

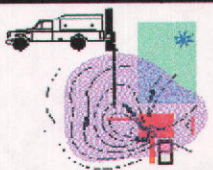
DATE: May 13, 1997

DRILL COMPANY: Vironex	SURFACE ELEVATION:	LOGGED BY: Frank Goldman
DEPTH TO GROUNDWATER:	BORING DIAMETER: 2"	DRILLING METHOD: Geoprobe

LITHOLOGIC DESCRIPTION	SAMPLE INTERVALS	LITHOLOGIC LOG	DEPTH	WATER LEVEL	WELL CONSTRUCTION DETAIL	USCS SYMBOLS
Fill: Silty clay, grey-green, soft to firm, moist			1 2 3 4 5			
Borehole expansive; placed 0.5 inch diameter, schedule 40, PVC screen as a temporary well to collect groundwater grab samples			6 7 8			
			9 10 11 12 13 14			
Fill: Silty clay, grey-green, soft, moist			15			
Fill: Silty clay, black, soft, moist to wet; organics			16			
Moderate recharge End: 16 feet bgs, no groundwater encountered during drilling			17 18 19 20			



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 Phone: (707) 936-4227 Fax: (707) 936-7882



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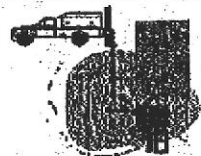
PROJECT NAME: Cowley, Steve
 ADDRESS: 1899 Dennison Street
 Oakland, CA 94621

BORING Number: B-6A
 DATE: May 13, 1997

ATTACHMENT A
LABORATORY DATA SHEETS

0001 X5240

GeoSolv, LLC
 Environmental and Hydrogeological Consulting
 613 Oregon Street, Sonoma, CA 95470
 Phone: (707) 936-4227 Fax: (707) 936-7892



CHAIN OF CUSTODY RECORD RA. Partial 1052

Laboratory Analysis P.O. No. _____
 Laboratory Please Call Accounts Payable for P.O. No. _____

Date: 5/13/97 Sheet 1 of 1

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Project Name Cowley
 Project Number _____
 Address 1899 Denison St.
 Sampler's Name: Frank Goldman
 Sampler's Signature: Franklin J. Goldman

Parameters														
TPH as Gasoline 8015	TPH as Diesel 8015	TPH-G and BTEX 8015/8020	BTEX EPA 8020 → <u>MTBE?</u>	Oil and Grease 5520	Volatile Organics (8010)	CAM Metals (17)	Pt. Pollutant Metals (13)	Base/Neu/Acids (Organic)	Pesticides 8140/8141	EPA 8260, <u>ketones?</u>	<u>PMA's (PAHs)</u>	6270 <u>SOB 9/16 50</u>	SOIL SAMPLE	WATER SAMPLE
	X										X			X
			X											
	X													
			X											
						X						X		
						X					X			
							X							
										X				

Lab Name McC Campbell
 Address Pacheco
 Phone Number (510) 798-1620
 Turnaround Time
 Rush 24 Hour 48 Hour 5-Day
 Repeat to: _____ **76396**
 Comment _____

5+
 +5
 5+
 1+
 5+
 +5
 5+
 +

Sampler's Number	Location	Date	Time
1AD		5/13/97	11 ¹⁰
1AB			11 ⁴⁵
2AD			12 ¹⁵
2AB			12 ³⁵
3A17			1 ¹⁰
3AK			1 ¹⁰
6A17			2 ¹⁵
6AK			2 ¹⁵

Diox/BTEX, PAHs **76397**
 BTEX **76398**
 Diesel, PAHs **76399**
 BTEX **76400**
 CAM 17 **76401**
 ketones **76402**
 CAM 17 **76403**

Relinquished By	Date	Time	Received By	Date	Time
<u>Franklin J. Goldman</u>	<u>5/14/97</u>	<u>10:00</u>	<u>Steve Rogers</u>	<u>5-14-97</u>	<u>10:00</u>
<u>Steve Rogers</u>	<u>5/14/97</u>	<u>2:00</u>	<u>Jenny Milevic</u>	<u>5/14</u>	<u>2:00</u>
Dispatched By	Date	Time	Received In Lab By	Date	Time
			<u>Jenny Milevic</u>	<u>5/14</u>	<u>2:00</u>

Total Number of Containers this Sheet: _____
 Method of Shipment: _____
 Special Shipment/Handling or Storage Requirements: _____
 PRESERVATIVE VOAS O&G METALS OTHER
 GOOD CONDITION HEAD SPACE ABSENT APPROPRIATE CONTAINERS

MAI

05-20-1997 11:28PM FROM McC Campbell Analytical Inc TO 17079967892 P.02



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

GEOSOLV, LLC 643 Oregon Street Sonoma, CA 95476	Client Project ID: Cowley	Date Sampled: 05/13/97
		Date Received: 05/13/97
	Client Contact: Frank Goldman	Date Extracted: 05/17-05/19/97
	Client P.O:	Date Analyzed: 05/17-05/19/97

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & 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) ⁺	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
73697	1AB	W	---	ND	ND	0.92	ND	1.4	102
73699	2AB	W	---	ND	ND	0.79	ND	1.5	99
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/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 Second Avenue South, #D7, Pacheco, CA 94553
 Telephone : 510-798-1620 Fax : 510-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

GEOSOLV, LLC 643 Oregon Street Sonoma, CA 95476	Client Project ID: Cowley	Date Sampled: 05/13/97
		Date Received: 05/13/97
	Client Contact: Frank Goldman	Date Extracted: 05/14/97
	Client P.O:	Date Analyzed: 05/14/97

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
76396	1AD	W	ND,i	102
76398	2AD	W	ND,i	104
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	
	S		1.0 mg/kg	

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

DHS Certification No. 1644

 Edward Hamilton, Lab Director

CHROMALAB, INC.

Environmental Services (SOB)

May 22, 1997

Submission #: 9705229

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: GS-COWELY
Received: May 15, 1997

Project#: 8639

re: One sample for Polynuclear Aromatic Hydrocarbons (PAHs) analysis.
Method: SW846 Method 8270A Nov 1990

Client Sample ID: 1AD-76396

Spl#: 132129

Sampled: May 13, 1997

Matrix: WATER

Run#: 6945

Extracted: May 19, 1997

Analyzed: May 20, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (\$)	DILUTION FACTOR
NAPHTHALENE	N.D.	2.1	N.D.	--	1
ACENAPHTHYLENE	N.D.	2.1	N.D.	--	1
ACENAPHTHENE	N.D.	2.1	N.D.	63.3	1
FLUORENE	N.D.	5.2	N.D.	--	1
PHENANTHRENE	N.D.	2.1	N.D.	--	1
ANTHRACENE	N.D.	2.1	N.D.	--	1
FLUORANTHENE	N.D.	2.1	N.D.	--	1
PYRENE	N.D.	2.1	N.D.	79.7	1
BENZO (A) ANTHRACENE	N.D.	2.1	N.D.	--	1
CHRYSENE	N.D.	2.1	N.D.	--	1
BENZO (B) FLUORANTHENE	N.D.	2.1	N.D.	--	1
BENZO (K) FLUORANTHENE	N.D.	2.1	N.D.	--	1
BENZO (A) PYRENE	N.D.	2.1	N.D.	--	1
INDENO (1, 2, 3-CD) PYRENE	N.D.	2.1	N.D.	--	1
DIBENZO (A, H) ANTHRACENE	N.D.	2.1	N.D.	--	1
BENZO (DEI) PERYLENE	N.D.	2.1	N.D.	--	1

Michael Lee
Chemist

Chip Poalinelli
Operations Manager

CHROMALAB, INC.

Environmental Services (SES)

May 22, 1997

Submission #: 9705229

MCCAMPBELL ANALYTICAL, INC.

Attn: Ed Hamilton

Project: GS-COWELY
Received: May 15, 1997

Project#: 8639

re: **Surrogate** report for 1 sample for Polynuclear Aromatic
Method: SW846 Method 8270A Nov 1990
Lab Run#: 6945
Matrix: WATER

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
132129-1	1AD-76396	NITROBENZENE-D5	56.2	35-114
132129-1	1AD-76396	2-FLUOROBIPHENYL	47.3	43-116
132129-1	1AD-76396	TERPHENYL-D14	54.2	33-141

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
132664-2	Reagent blank (MDB)	NITROBENZENE-D5	83.0	35-114
132664-1	Reagent blank (MDB)	2-FLUOROBIPHENYL	71.8	43-116
132664-1	Reagent blank (MDB)	TERPHENYL-D14	91.8	33-141
132666-1	Spiked blank (BSP)	NITROBENZENE-D5	76.4	35-114
132666-1	Spiked blank (BSP)	2-FLUOROBIPHENYL	73.6	43-116
132666-1	Spiked blank (BSP)	TERPHENYL-D14	95.8	33-141
132668-1	Spiked blank duplicate (BSD)	NITROBENZENE-D5	81.3	35-114
132668-1	Spiked blank duplicate (BSD)	2-FLUOROBIPHENYL	74.5	43-116
132668-1	Spiked blank duplicate (BSD)	TERPHENYL-D14	104	33-141

SI05
OCT09971229 WIKELER 22-May-97 10

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Federal ID #66-0140157



McCAMPBELL ANALYTICAL INC.

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 Telephone : 510-798-1620 Fax : 510-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

GEOSOLV, LLC 643 Oregon Street Sonoma, CA 95476	Client Project ID: Cowley	Date Sampled: 05/13/97
	Client Contact: Frank Goldman	Date Received: 05/13/97
	Client P.O:	Date Extracted: 05/15-05/16/97
		Date Analyzed: 05/15-05/16/97

Dissolved CAM / CCR 17 Metals*
 EPA methods 6010/200.7; 7470/7471/245.1/245.5 (Hg); 7060/206.2 (As); 7740/270.2 (Se); 7841/279.2 (Tl); 239.2 (Pb, water matrix)

Lab ID	76400	76402			Reporting Limit		
					S	W	STLC, TCLP
Client ID	3A17	6A17					
Matrix	W	W					
Extraction ^o	Filtered	Filtered			TTLIC	TTLIC	
Compound	Concentration*				mg/kg	mg/L	mg/L
Antimony (Sb)	ND	0.059			2.5	0.05	0.05
Arsenic (As)	0.025	0.015			2.5	0.005	0.25
Barium (Ba)	0.072	0.070			1.0	0.05	0.05
Beryllium (Be)	ND	ND			0.5	0.004	0.01
Cadmium (Cd)	ND	ND			0.5	0.005	0.01
Chromium (Cr)	ND	ND			0.5	0.005	0.05
Cobalt (Co)	ND	ND			2.0	0.05	0.05
Copper (Cu)	ND	ND			2.0	0.05	0.05
Lead (Pb)	ND	ND			3.0	0.005	0.2
Mercury (Hg)	ND	ND			0.06	0.0008	0.0008
Molybdenum (Mo)	ND	ND			2.0	0.05	0.05
Nickel (Ni)	0.077	0.090			2.0	0.05	0.05
Selenium (Se)	ND	ND			2.5	0.005	0.25
Silver (Ag)	ND	ND			1.0	0.01	0.05
Thallium (Tl)	ND	ND			0.5	0.001	0.5
Vanadium (V)	ND	ND			2.0	0.05	0.05
Zinc (Zn)	ND	ND			1.0	0.05	0.05
% Recovery Surrogate	NA	NA					
Comments							

* water samples are reported in mg/L, soil and sludge samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / SPLP extracts in mg/L
 ND means not detected above the reporting limit, N/A means surrogate not applicable to this analysis
^o EPA extraction methods 1311(TCLP), 3010/3020(water, TTLIC), 3040(organic matrices, TTLIC), 3050(solids, TTLIC); STLC - CA Title 22
^o surrogate diluted out of range
^a reporting limit raised due to matrix interference
 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.



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GEOSOLV, LLC 643 Oregon Street Sonoma, CA 95476	Client Project ID: Cowley	Date Sampled: 05/13/97
	Client Contact: Frank Goldman	Date Received: 05/13/97
	Client P.O:	Date Extracted: 05/14-05/16/97
		Date Analyzed: 05/14-05/16/97

Volatile Organics By GC/MS

EPA method 8260			
Lab ID	76401		
Client ID	3AK		
Matrix	W		
Compound	Concentration*	Compound	Concentration*
Acetone ^(b)	ND	trans-1,3-Dichloropropene	ND
Benzene	ND	Ethylene dibromide ^(d)	ND
Bromobenzene	ND	Ethylbenzene	ND<1.8
Bromochloromethane	ND	Hexachlorobutadiene	ND
Bromodichloromethane	ND	Iodomethane	ND
Bromoform	ND	Isopropylbenzene	ND
Bromomethane	ND	p-Isopropyl toluene	ND
n-Butyl benzene	ND	Methyl butyl ketone ^(f)	ND
sec-Butyl benzene	ND	Methylene Chloride ^(g)	ND
tert-Butyl benzene	ND	Methyl ethyl ketone ^(g)	ND
Carbon Disulfide	ND	Methyl isobutyl ketone ^(h)	ND
Carbon Tetrachloride	ND	Methyl tert-Butyl Ether (MTBE)	ND
Chlorobenzene	ND	Napthalene	ND<200
Chloroethane	ND	n-Propyl benzene	ND
2-Chloroethyl Vinyl Ether ⁽ⁱ⁾	ND	Styrene ^(j)	ND
Chloroform	ND	1,1,1,2-Tetrachloroethane	ND
Chloromethane	ND	1,1,2,2-Tetrachloroethane	ND
2-Chlorotoluene	ND	Tetrachloroethene	ND
4-Chlorotoluene	ND	Toluene ^(m)	ND
Dibromochloromethane	ND	1,2,3-Trichlorobenzene	ND<18
1,2-Dibromo-3-chloropropane	ND	1,2,4-Trichlorobenzene	ND<2.0
Dibromomethane	ND	1,1,1-Trichloroethane	ND
1,2-Dichlorobenzene	ND	1,1,2-Trichloroethane	ND
1,3-Dichlorobenzene	ND	Trichloroethene	ND
1,4-Dichlorobenzene	ND	Trichlorofluoromethane	ND
Dichlorodifluoromethane	ND	1,2,3-Trichloropropane	ND
1,1-Dichloroethane	ND	1,2,4-Trimethylbenzene	ND<5.2
1,2-Dichloroethane	ND	1,3,5-Trimethylbenzene	ND
1,1-Dichloroethene	ND	Vinyl Acetate ⁽ⁿ⁾	ND
cis-1,2-Dichloroethene	ND	Vinyl Chloride ^(o)	ND
trans-1,2-Dichloroethene	ND	Xylenes, total ^(p)	ND<8
1,2-Dichloropropane	ND	Comments: i: RIs raised because data unreliable; cmpds don't serially dilute or are not present in each injection; sample volume exhausted before resolution; sediment-water partitioning suspected; 8270 recomd.	
1,3-Dichloropropane	ND	Surrogate Recoveries (%)	
2,2-Dichloropropane	ND	Dibromofluoromethane	89
1,1-Dichloropropane	ND	Toluene-d8	105
cis-1,3-Dichloropropene	ND	4-Bromofluorobenzene	99

*water and vapor samples are reported in ug/L, soil and sludge samples in ug/kg, wipes in ug/wipe and all TCLP / SPLP extracts in ug/L
 Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2ug/wipe
 ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) 2-propanone or dimethyl ketone; (c) (2-chloroethoxy) ethane; (d) 2-hexanone; (e) dichloromethane; (f) 2-butanone; (g) 4-methyl-2-pentanone or isopropylacetone; (h) 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; (k) ethcylbenzene; (l) methylbenzene; (m) acetic acid ethenyl ester; (n) chloroethene; (o) dimethylbenzenes.



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GEOSOLV, LLC 643 Oregon Street Sonoma, CA 95476	Client Project ID: Cowley	Date Sampled: 05/13/97
	Client Contact: Frank Goldman	Date Received: 05/13/97
	Client P.O:	Date Extracted: 05/14-05/16/97
		Date Analyzed: 05/14-05/16/97

Volatile Organics By GC/MS

EPA method 8260			
Lab ID	76403		
Client ID	6AK		
Matrix	W		
Compound	Concentration*	Compound	Concentration*
Acetone ^(b)	ND<3	trans-1,3-Dichloropropene	ND
Benzene	ND	Ethylene dibromide ^(d)	ND
Bromobenzene	ND	Ethylbenzene	ND
Bromochloromethane	ND	Hexachlorobutadiene	ND
Bromodichloromethane	ND	Iodomethane	ND
Bromoform	ND	Isopropylbenzene	ND
Bromomethane	ND	p-Isopropyl toluene	ND
n-Butyl benzene	ND	Methyl butyl ketone ^(e)	ND
sec-Butyl benzene	ND	Methylene Chloride ^(f)	ND
tert-Butyl benzene	ND	Methyl ethyl ketone ^(g)	ND
Carbon Disulfide	ND	Methyl isobutyl ketone ^(h)	ND
Carbon Tetrachloride	ND	Methyl tert-Butyl Ether (MTBE)	ND
Chlorobenzene	ND	Napthalene	ND
Chloroethane	ND	n-Propyl benzene	ND
2-Chloroethyl Vinyl Ether ⁽ⁱ⁾	ND	Styrene ^(j)	ND
Chloroform	ND	1,1,1,2-Tetrachloroethane	ND
Chloromethane	ND	1,1,2,2-Tetrachloroethane	ND
2-Chlorotoluene	ND	Tetrachloroethene	ND
4-Chlorotoluene	ND	Toluene ^(k)	ND
Dibromochloromethane	ND	1,2,3-Trichlorobenzene	ND
1,2-Dibromo-3-chloropropane	ND	1,2,4-Trichlorobenzene	ND
Dibromomethane	ND	1,1,1-Trichloroethane	ND
1,2-Dichlorobenzene	ND	1,1,2-Trichloroethane	ND
1,3-Dichlorobenzene	ND	Trichloroethene	ND
1,4-Dichlorobenzene	ND	Trichlorofluoromethane	ND
Dichlorodifluoromethane	ND	1,2,3-Trichloropropane	ND
1,1-Dichloroethane	ND	1,2,4-Trimethylbenzene	ND
1,2-Dichloroethane	ND	1,3,5-Trimethylbenzene	ND
1,1-Dichloroethene	ND	Vinyl Acetate ^(l)	ND
cis-1,2-Dichloroethene	ND	Vinyl Chloride ^(m)	ND
trans-1,2-Dichloroethene	ND	Xylenes, total ⁽ⁿ⁾	ND
1,2-Dichloropropane	ND	Comments:	
1,3-Dichloropropane	ND	Surrogate Recoveries (%)	
2,2-Dichloropropane	ND	Dibromofluoromethane	96
1,1-Dichloropropene	ND	Toluene-d8	100
cis-1,3-Dichloropropene	ND	4-Bromofluorobenzene	104

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

Reporting limits unless otherwise stated: water samples 1 ug/L, vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg, wipes 0.2ug/wipe

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

(b) 2-propanone or dimethyl ketone; (c) (2-chloroethoxy) ethene; (d) 2-hexanone; (e) dichloromethane; (f) 2-butanone; (g) 4-methyl-2-pentanone or isopropylacetone; (h) 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; (k) ethenylbenzene; (l) methylbenzene; (m) acetic acid ethenyl ester; (n) chloroethene; (o) dimethylbenzenes.

DHS Certification No. 1644

Edward Hamilton, Lab Director

CHROMALAB, INC.

Environmental Services (SDB)

May 27, 1997

Submission #: 9705261

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: GS-COWELY
Received: May 19, 1997

Project#: 8639

re: One sample for Semivolatile Organic Compounds (S/NAs) analysis.
Method: SW846 Method 8270A Nov 1990

Client Sample ID: 3A17/76400

Spl#: 132408

Matrix: WATER

Extracted: May 23, 1997

Sampled: May 13, 1997

Run#: 7023

Analyzed: May 27, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE DILUTION FACTOR
PHENOL	N.D.	2.5	N.D.	23.5
BIS(2-CHLOROETHYL) ETHER	N.D.	2.5	N.D.	--
2-CHLOROPHENOL	N.D.	2.5	N.D.	55.5
1,3-DICHLOROBENZENE	N.D.	2.5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	2.5	N.D.	57.7
BENZYL ALCOHOL	N.D.	6.2	N.D.	--
1,2-DICHLOROBENZENE	N.D.	2.5	N.D.	--
2-METHYLPHENOL	N.D.	2.5	N.D.	--
BIS(2-CHLOROISOPROPYL) ETHER	N.D.	2.5	N.D.	--
4-METHYLPHENOL	N.D.	2.5	N.D.	--
N-NITROSO-DI-N-PROPYLAMINE	N.D.	2.5	N.D.	63.7
HEXACHLOROETHANE	N.D.	2.5	N.D.	--
NITROBENZENE	N.D.	2.5	N.D.	--
ISOPHORONE	N.D.	2.5	N.D.	--
2-NITROPHENOL	N.D.	2.5	N.D.	--
2,4-DIMETHYLPHENOL	N.D.	2.5	N.D.	--
BIS(2-CHLOROETHOXY) METHANE	N.D.	6.2	N.D.	--
2,4-DICHLOROPHENOL	N.D.	2.5	N.D.	--
1,3,4-TRICHLOROBENZENE	N.D.	2.5	N.D.	57.3
NAPHTHALENE	N.D.	2.5	N.D.	--
4-CHLOROANILINE	N.D.	2.5	N.D.	--
HEXACHLOROBUTADIENE	N.D.	2.5	N.D.	--
4-CHLORO-3-METHYLPHENOL	N.D.	6.2	N.D.	60.7
2-METHYLNAPHTHALENE	N.D.	2.5	N.D.	--
HEXACHLOROCYCLOPENTADIENE	N.D.	2.5	N.D.	--
2,4,6-TRICHLOROPHENOL	N.D.	2.5	N.D.	--
2,4,5-TRICHLOROPHENOL	N.D.	2.5	N.D.	--
2-CHLORONAPHTHALENE	N.D.	2.5	N.D.	--
2-NITROANILINE	N.D.	12	N.D.	--
DIMETHYL PHTHALATE	N.D.	6.2	N.D.	--
ACENAPHTHYLENE	N.D.	2.5	N.D.	--
3-NITROANILINE	N.D.	12	N.D.	--
ACENAPHTHENE	N.D.	2.5	N.D.	60.0
2,4-DINITROPHENOL	N.D.	12	N.D.	--
4-NITROPHENOL	N.D.	12	N.D.	17.7
DIBENZOFURAN	N.D.	2.5	N.D.	--
2,4-DINITROTOLUENE	N.D.	2.5	N.D.	46.0
2,6-DINITROTOLUENE	N.D.	6.2	N.D.	--
DIETHYL PHTHALATE	N.D.	6.2	N.D.	--
4-CHLOROPHENYL PHENYL ETHER	N.D.	2.5	N.D.	--

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510 12-200408 INKLEE 10/97

CHROMALAB, INC.

Environmental Services (SDB)

May 27, 1997

Submission #: 9705261
page 2

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: GS-COWELY
Received: May 19, 1997

Project#: 8639

re: One sample for Semivolatile Organic Compounds (B/NAs) analysis, continued.

Method: SW846 Method 8270A Nov 1990

Client Sample ID: 3A17/76400

Spl#: 132408

Sampled: May 13, 1997

Matrix: WATER

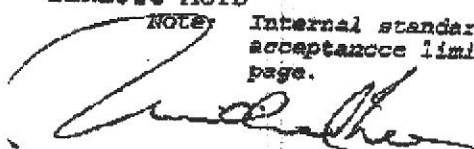
Run#: 7023

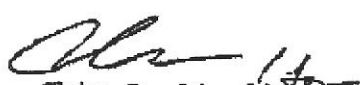
Extracted: May 23, 1997

Analyzed: May 27, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
FLUORENE	N.D.	6.2	N.D.	--	1
4-NITROANILINE	N.D.	12	N.D.	--	1
2-METHYL-4,6-DINITROPHENOL	N.D.	12	N.D.	--	1
N-NITROSO-DI-N-PHENYLAMINE	N.D.	2.5	N.D.	--	1
4-BROMOPHENYL PHENYL ETHER	N.D.	6.2	N.D.	--	1
HEXACHLOROBENZENE	N.D.	2.5	N.D.	--	1
PENTACHLOROPHENOL	N.D.	12	N.D.	45.0	1
PHENANTHRENE	N.D.	2.5	N.D.	--	1
ANTHRACENE	N.D.	2.5	N.D.	--	1
DI-N-BUTYL PHTHALATE	N.D.	6.2	N.D.	--	1
FLUORANTHENE	N.D.	2.5	N.D.	--	1
PYRENE	N.D.	2.5	N.D.	--	1
BUTYL BENZYL PHTHALATE	N.D.	2.5	N.D.	54.0	1
3,3'-DICHLOROBENZIDINE	N.D.	6.2	N.D.	--	1
BENZO (A) ANTHRACENE	N.D.	6.2	N.D.	--	1
BIS (2-ETHYLHEXYL) PHTHALATE	N.D.	2.5	N.D.	--	1
CHRYSENE	N.D.	6.2	N.D.	--	1
DI-N-OCTYL PHTHALATE	N.D.	2.5	N.D.	--	1
BENZO (B) FLUORANTHENE	N.D.	6.2	N.D.	--	1
BENZO (K) FLUORANTHENE	N.D.	2.5	N.D.	--	1
BENZO (A) PYRENE	N.D.	2.5	N.D.	--	1
INDENO (1,2,3 C,D) PYRENE	N.D.	2.5	N.D.	--	1
DIBENZO (A,H) ANTHRACENE	N.D.	2.5	N.D.	--	1
BENZO (G,H,I) PERYLENE	N.D.	2.5	N.D.	--	1
BENZOIC ACID	N.D.	12	N.D.	--	1

NOTE: Internal standard #6 and 2-fluorobiphenyl (surrogate) outside of QC acceptance limits due to matrix interference. See surrogate summary page.


Michael Lee
Chemist


Chip Poalinelli
Operations Manager

ATTACHMENT B

SANBORN MAP

230
CAL. 001

224
KING

232

2187

231

E. K. WOOD LUMBER CO'S MILL YARD
PLANING MILL
WOOD WORKING
LUMBER SALES
WOOD PILING
LUMBER SALES
WOOD PILING

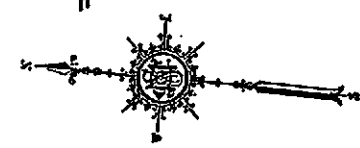
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229

2166

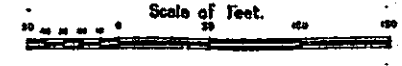
PORT OF OAKLAND
PARTLY TOL. H.

NOTE: THIS MAP IS FOR THE USE OF THE PORT OF OAKLAND AND IS NOT TO BE USED FOR ANY OTHER PURPOSE. THE PORT OF OAKLAND IS A FEDERAL PORT AND IS SUBJECT TO THE REGULATIONS OF THE FEDERAL GOVERNMENT. THE PORT OF OAKLAND IS A FEDERAL PORT AND IS SUBJECT TO THE REGULATIONS OF THE FEDERAL GOVERNMENT. THE PORT OF OAKLAND IS A FEDERAL PORT AND IS SUBJECT TO THE REGULATIONS OF THE FEDERAL GOVERNMENT.



Oakland

Scale of Feet.



1956