

Epigene International

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FAX

Date: 8/28/96
To: Ms. Jennifer Eberle
Alameda Co. Dept. of Environmental Health
From: John Alt

Number of Pages (Including Cover):

Subject: Results of Analysis for
Soil Samples from Auto Service

Notes: Center, 820 Isabella St.,
Oakland

draft of partial site plan
also included

cc: Mr. James Brinker

Aug-29-96 06:20A John N. Alt
 (510) 791-3306
 P.02

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Epigene International

CONSULTING GEOLOGISTS

38750 Paseo Pedro Parkway, Suite A-11
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CHAIN OF CUSTODY

Laboratory: McCampbell Analytical
110 2nd Avenue South, D-7
Pacheco, California 94553.
telephone: (510) 798-1620 FAX: (510) 798-1622
Contact: Ed Hamilton

Contact: Jack Alt	Sampler: Mike D.
Project Name: 820 Isabella Street, Oakland	
Project no. 96-168	Date: August 19, 1996

Sample I.D.	Date/Time Sampled	Matrix Desc.	Container		Comments	Analyses Requested										Lab. #
			No. of	Type		TPH/Soxline	BTX	TPH/Biosol	601/6010	602/6020	Total Oil & Grease	5 Metals	MTS R			
1-S-1	Aug 19, ~2:00 pm	soil	1	brass tube		X	X	X	X		X	X	X			68108
2-S-2	" ~2:00 pm	"	"	"		X	X	X	X		X	X	X			68109
3-SP-1	" ~2:30 pm	"	"	"	} composite 2 to 1	X	X	X			X	X	X			68110
4-SP-2	" ~2:30 pm	"	"	"		X	X	X			X	X	X			
5.																
6.																
7.																
8.																
9.																
10.																

Relinquished by: [Signature]	Date: 8/20/96	Time: 1:25	Received by: [Signature]	Date: 8-20-96	Time: 125 PM
Relinquished by: [Signature]	Date: 8-20-96	Time: 2:00 PM	Received by: [Signature]	Date: 8-20-96	Time: 2:30 PM
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

Turnaround Time: Standard

Additional Comments: O & G by 5520

Page 1 of 1

McCAMPBELL ANALYTICAL, INC.	110 2nd Avenue South, #D7, Pacheco, CA 94553 Tele: 510-798-1620 Fax: 510-798-1622
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Epigene International 38750 Paseo Padre Pkwy, # A-11 Fremont, CA 94536	Client Project ID: # 96-168: 820 Isabella Street, Oakland	Date Sampled: 08/19/96
	Client Contact: John Alt	Date Received: 08/20/96
	Client P.O:	Date Extracted: 08/20/96
		Date Analyzed: 08/20-08/23/96

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*
 EPA methods 8030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

65
9

Lab ID	Client ID	Matrix	TPH(g) ⁺	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
68108	S-1	S	110,b,d	ND < 0.06	0.026	0.44	0.62	1.7	104
68109	S-2	S	73,b,d	ND < 0.06	ND	0.23	0.27	0.90	108
68110	SP-1,2	S	100,b,d	ND	ND	0.17	0.52	0.75	108
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	0.5	
	S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, soil and sludge 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.

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		Date Analyzed: 08/20-08/22/96

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
68108	S-1	S	240,g,d	108
68109	S-2	S	85,g,d	102
68110	SP-1,2	S	180,g,d	114 [#]
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	50 ug/L		
	S	1.0 mg/kg		

* water samples are reported in ug/L, soil and sludge 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.

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	Client P.O.:	Date Extracted: 08/20/96
		Date Analyzed: 08/20/96

Total Recoverable Petroleum Hydrocarbons as Oil & Grease (with Silica Gel Clean-up) by Scanning IR Spectrometry*

EPA method 418.1 or 9073; Standard Methods 5520 C&F

which

Lab ID	Client ID	Matrix	TRPH*	% Recovery Surrogate
68108	S-1	S	3900	---
68109	S-2	S	750	---
68110	SP-1,2	S	2000	---
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		1.0 mg/L	
	S		10 mg/kg	

* water samples are reported in mg/L and soils and sludges in mg/kg

* surrogate diluted out of range or not applicable to this sample

+ At the laboratory's discretion, one positive sample may be run by direct injection chromatography with FID detection. The following comments pertain to this GC result: a) gasoline-range compounds (C6-C12) are present; b) diesel range compounds (C10-C23) are present; c) oil-range compounds (> C18) are present; d) other patterned solvent (?); e) isolated peaks; f) GC compounds are absent or insignificant relative to TRPH inferring that complex biologically derived molecules (lipids?) are the source of IR absorption; h) a lighter than water immiscible sheen is present; i) liquid sample that contains greater than - 5 vol. % sediment.

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	Client P.O:	Date Extracted: 08/20/96
		Date Analyzed: 08/20-08/26/96

Volatile Halocarbons			
EPA method 601 of 8010			
Lab ID	68108	68109	
Client ID	S-1	S-2	
Matrix	S	S	
Compound	Concentration		
Bromodichloromethane	ND< 25	ND< 15	
Bromoform ^(b)	ND< 25	ND< 15	
Bromomethane	ND< 25	ND< 15	
Carbon Tetrachloride ^(c)	ND< 25	ND< 15	
Chlorobenzene	ND< 25	ND< 15	
Chloroethane	ND< 25	ND< 15	
2-Chloroethyl Vinyl Ether ^(d)	ND< 25	ND< 15	
Chloroform ^(e)	ND< 25	ND< 15	
Chloromethane	ND< 25	ND< 15	
Dibromochloromethane	ND< 25	ND< 15	
1,2-Dichlorobenzene	1100	290	
1,3-Dichlorobenzene	190	55	
1,4-Dichlorobenzene	460	100	
Dichlorodifluoromethane	ND< 25	ND< 15	
1,1-Dichloroethane	ND< 25	ND< 15	
1,2-Dichloroethane	ND< 25	ND< 15	
1,1-Dichloroethene	ND< 25	ND< 15	
cis 1,2-Dichloroethene	ND< 25	ND< 15	
trans 1,2-Dichloroethene	ND< 25	ND< 15	
1,2-Dichloropropane	ND< 25	ND< 15	
cis 1,3-Dichloropropene	ND< 25	ND< 15	
trans 1,3-Dichloropropene	ND< 25	ND< 15	
Methylene Chloride ^(f)	ND< 100	ND< 60	
1,1,2,2-Tetrachloroethane	ND< 25	ND< 15	
Tetrachloroethene	33	28	
1,1,1-Trichloroethane	ND< 25	ND< 15	
1,1,2-Trichloroethane	ND< 25	ND< 15	
Trichloroethene	ND< 25	ND< 15	
Trichlorofluoromethane	ND< 25	ND< 15	
Vinyl Chloride ^(g)	ND< 25	ND< 15	
% Recovery Surrogate	117	117	
Comments			

ppb

* water and vapor samples are reported in ug/L. soil and sludge samples in ug/kg and all TCLP extracts in ug/L.
 Reporting limit unless otherwise stated: water/TCLP extracts, ND< 0.5ug/L; soil and sludge, ND< 5ug/kg
 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.
 DHS Certification No. 1644
 _____ Edward Hamilton, Lab Director

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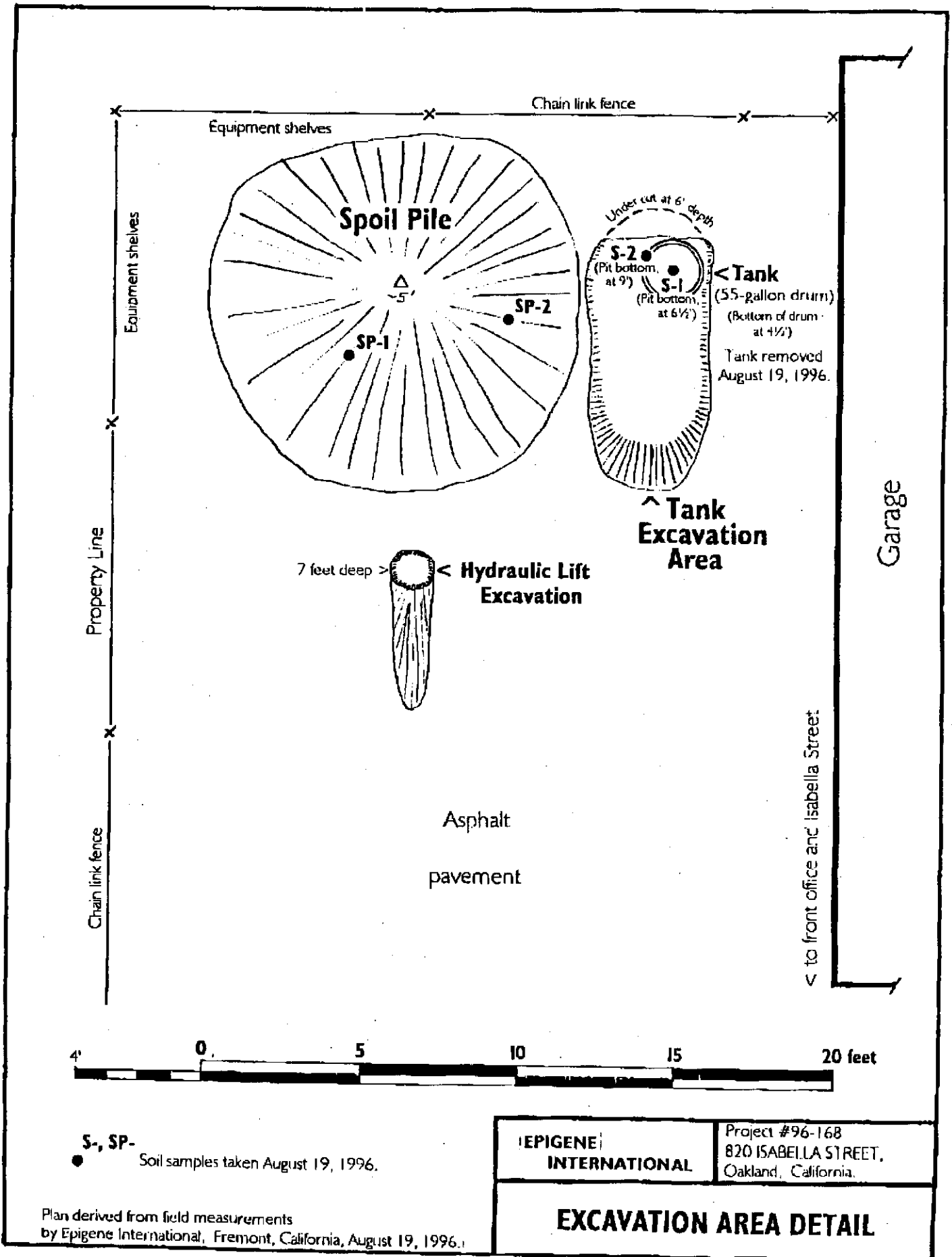
LUFT Metals

EPA analytical methods 6010/2007, 239.2*

Lab ID	Client ID	Matrix	Extraction ^o	Cadmium	Chromium	Lead	Nickel	Zinc	% Rec. Surrogate
68108	S-1	S	TTLIC	ND	40	7.1	56	45	102
68109	S-2	S	TTLIC	ND	38	7.1	67	51	100
68110	SP-1,2	S	TTLIC	ND	42	7.0	110	40	100

Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	S	TTLIC	0.5 mg/kg	0.5	3.0	2.0	1.0	
	W	TTLIC	0.005 mg/L	0.005	0.005	0.05	0.05	
	---	STLC, TCLP	0.01 mg/L	0.05	0.2	0.05	0.05	

* soil samples and sludge 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
 ° 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
 ‡ reporting limit raised due matrix interference
 §) 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.



S-, SP-
 ● Soil samples taken August 19, 1996.

Plan derived from field measurements
 by Epigene International, Fremont, California, August 19, 1996.

EPIGENE INTERNATIONAL	Project #96-168 820 ISABELLA STREET, Oakland, California.
	EXCAVATION AREA DETAIL