

# *Growth Environmental Services, Inc.*

*(Formerly Certified Environmental Consulting, Inc.)*

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*536 Stone Road, Suite J*

*Benicia, CA 94510*

*(707) 745-0171*

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## **FAX TRANSMISSION COVER SHEET**

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**Date:** 3/31/95

**To:** Eva Chu

**Fax #:** (510) 337-9335

**Re:** Analytical Results of Soil Sampling at VA Med Center

**From:** Michael Davis c/o Chris Wong

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**YOU SHOULD RECEIVE 4 PAGES, INCLUDING THIS COVER SHEET. IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL <(707) 745-0171>.**

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Here are the analytical results from the excavation at the VA Med Center site. The highest concentration of total petroleum hydrocarbons as diesel was 30 mg/kg in sample FH-7 @ 8.5'. Soil sample results were below detection limits for total petroleum hydrocarbons as gasoline and BTEX.

These results will confirm that further excavation is not required and that backfilling may proceed.

If you have any questions please call at the number referenced above.

<b>McCAMPBELL ANALYTICAL INC.</b>	110 2nd Avenue South, #D7, Pacheco, CA 94553 Tele: 510-798-1620 Fax: 510-798-1622
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<b>Growth Environmental Services</b> 536 Stone Road, Suite J Benicia, Ca. 94510-1016	Client Project ID: # 173-631; VA Med. Center	Date Sampled: 03/29/95
	Client Contact: Michael Davis	Date Received: 03/29/95
	Client P.O.: # 1500	Date Analyzed: 03/29-03/30/95
		Date Extracted: 03/29/95

**Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel \***  
 EPA methods modified 8015, And 3550 or 3510; California RWOCB (SF Bay Region) method GCPIID(3550) or GCPIID(3510)

Lab ID	Client ID	Matrix	TPH(d) *	% Recovery Surrogate
51168	Stkp 1	S	980,a	107
51169	Stkp 2	S	760,a	107
51170	FH-1 @ 1.5'	S	ND	97
51171	FH-2 @ 3.5'	S	3.0,b/g	92
51172	FH-3 @ 2'	S	6.2,b/g	96
51173	FH-4 @ 3.5'	S	ND	98
51174	FH-5 @ 1.5'	S	22,b/g	104
51175	FH-6 @ 10'	S	9.7,b/g	97
51176	FH-7 @ 8.5'	S	30,b	103
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 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 shecn is present; i) liquid sample that contains greater than ~ 3 vol. % sediment.

DHS Certification No. 1644

     Edward Hamilton, Lab Director

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Growth Environmental Services 536 Stone Road, Suite J Benicia, Ca. 94510-1016	Client Project ID: # 173-631; VA Med. Center	Date Sampled: 03/29/95
	Client Contact: Michael Davis	Date Received: 03/29/95
	Client P.O:	Date Extracted: 03/29/95
		Date Analyzed: 03/29/95

**Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\*, with BTEX\***  
 EPA methods 5030, modified 5015, and 5020 or 502; California RWOCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)*	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
51168	Stkp 1	S	47.g	ND	0.005	0.022	0.078	103
51169	Stkp 2	S	9.2.g	ND	ND	ND	0.010	103
51170	FH-1 @ 1.5'	S	ND	ND	ND	ND	ND	106
51171	FH-2 @ 3.5'	S	ND	ND	ND	ND	ND	109
51172	FH-3 @ 2'	S	ND	ND	ND	ND	ND	108
51173	FH-4 @ 3.5'	S	ND	ND	ND	ND	ND	106
51174	FH-5 @ 1.5'	S	ND	ND	ND	ND	ND	99
51175	FH-6 @ 10'	S	ND	ND	ND	ND	ND	100
51176	FH-7 @ 8.5'	S	ND	ND	ND	ND	ND	103

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.

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*EH*  
 Edward Hamilton, Lab Director

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<b>Growth Environmental Services</b> 536 Stone Road, Suite J Benicia, Ca. 94510-1016	Client Project ID: # 173-631; VA Med. Center	Date Sampled: 03/29/95
	Client Contact: Michael Davis	Date Received: 03/29/95
	Client P.O.:	Date Extracted: 03/29/95
		Date Analyzed: 03/29/95

**LUFT Metals**  
 EPA analytical methods 6010/200.7, 239.2\*

Lab ID	Client ID	Matrix	Extraction <sup>o</sup>	Cadmium	Chromium	Lead	Nickel	Zinc	% Rec. Surrogate
51168	Stkp 1	S	TTLC	ND	16	7.6	16	30	95
51169	Stkp 2	S	TTLC	ND	23	7.1	21	35	97
51170	FH-1 @ 1.5'	S	TTLC	ND	26	ND	30	27	85
51171	FH-2 @ 3.5'	S	TTLC	ND	20	7.5	20	40	97
51172	FH-3 @ 2'	S	TTLC	ND	25	14	21	45	95
51173	FH-4 @ 3.5'	S	TTLC	ND	16	6.3	17	35	96
51174	FH-5 @ 1.5'	S	TTLC	ND	16	4.8	9.9	19	94
51175	FH-6 @ 10'	S	TTLC	ND	25	9.9	35	41	98
51176	FH-7 @ 8.5'	S	TTLC	ND	37	8.6	31	69	97

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 analyzed 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  
 ‡ 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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Growth Environmental Services 536 Stone Road, Ste. J Benicia, CA 94510-1016	Client Project ID: # 173-631; VA Med. Center	Date Sampled: 03/27/95
	Client Contact: Michael Davis	Date Received: 03/27/95
	Client P.O: # 1496	Date Extracted: 03/27/95
		Date Analyzed: 03/27/95

**Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel \***  
 EPA methods modified 8015, and 3550 or 3516, California RWOCB (SF Bay Region) method GCFID(3540) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d) <sup>†</sup>	% Recovery Surrogate
51099	Bld. 88 -N	S	ND	95
51100	Bld. 88 -S	S	ND	96
51101	Bld. 90 -W	S	3.2,a	98
51102	Bld. 90 -E	S	ND	96
51103	Bld. 88 Stkp	S	52,a	100
51104	Bld. 90 Stkp 1	S	11,a	100
51105	Bld. 90 Stkp 2	S	26,a	99

Detection Limit unless otherwise stated: ND means Not Detected	W	50 ug/L
	S	1.0 mg/kg

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

# cluttered chromatogram; surrogate and sample peaks co-elute or surrogate peak is on elevated baseline

+ 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) modified diesel?; light (CL) or heavy (CH) diesel compounds are 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 phase is present.



CALIFORNIA ENVIRONMENTAL LABORATORY, INC.

536 Stone Road, Ste. J, Menlo Park, CA 94025-1016  
Tel: (707) 745-0171 (RMC) 228-0671 Fax: (707) 745-0163

3861 ACEC 745

# CHAIN OF CUSTODY RECORD

Laboratory Analysis P.O. No. 1496

Laboratory: Please Call Accounts Payable for P.O. No.

Date: 3/27/95 Street \_\_\_\_\_ # \_\_\_\_\_

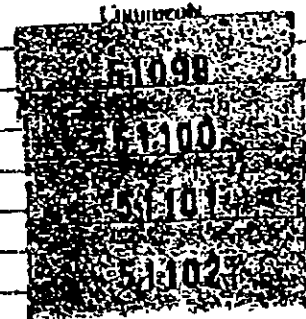
Project Number: 173-631  
Project Name: VA Med Center  
Address: \_\_\_\_\_

Sampler's Name: Michael Davis  
Sampler's Signature: Michael Davis

Sample Number	Location	Date	Time
Bld. 88-N	8.5'	3/27/95	10:50 A.M.
Bld. 88-S	9'		11:05 A.M.
Bld. 90-W	10'		11:20 A.M.
Bld. 90-E	10'		11:30 A.M.
Bld. 885 Hcp			11:00 A.M.
Bld. 90 Stk 1			11:35 A.M.
Bld. 90 Stk 2			11:35 A.M.

Parameters										
TPH in Gasoline SOLS	TPH in Diesel SOLS	TPH-G and B.T.E.X. SOLS/SO2	B.T.X. & E. SO2	Oil and Grease 5320	Volatile Organics (SO10)	CAM Metals (17)	P: Pollutant Metals (13)	Base/Neutral Acids (Organic)	Pesticides 8140/6141	Matrix (Soil/Water)
	X	X								S

Lab Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone Number: \_\_\_\_\_  
Turnaround Time:  
 Rush 24 Hrs  
 48 Hrs  
 5 Day  
 Expedite



FOR GOOD QUALITY, PLEASE LEAVE HEADSPACE ABSENT  
PRESERVATIVE APPROPRIATE CONTAINERS

Re-inspected By	Date	Time	Received By	Date	Time
<u>Michael Davis</u>	<u>3/27/95</u>	<u>1:20 PM</u>	<u>[Signature]</u>		

Inspected By	Date	Time	Received/Initials By	Date	Time

Total Number of Containers This Sheet: 7  
Method of Shipment:  
Special Shipment / Handling or Storage Requirements:

