### McCAMPBELL ANALYTICAL, INC.

110 2rd AVENUE SOUTH, #D7

PACHECO, CA 94553-5560 Website: www.mccampbell.com Email: main@mccampbell.com

Fax: (925) 798-1622

TURN AROUND TIME

CHAIN OF CUSTODY RECORD

24 HR

EDF Required? Coelt (Normal)

Write On (DW) No

RUSH

48 HR 72 HR No

5 DAY

Telephone: (925) 798-1620 Analysis Request Other Comments Bill To: Same Report To: Cabe Silverhame Company: Terra Firma Consultino LLC Filter 20 Sunnyside Ave. #A.418 8015/MTBE Samples PAH's / PNA's by EPA 625 / 8270 / 8310 M4/4. Mill Valla CA 94941 E-Mail: case o terra tima-/10.6m for Metals EPA 8150 / 8151 (Acidic Herbicides) Fax: (4/5) 38/ 0858 Tele: (415) 381 0855 analysis: EPA 601/8010/8021 (Halocarbons) Total Petroleum Hydrocarbons (418.1) EPA 8140 / 8141 (Np Pesticides) Project Name: Lucasey Yes / No Project #: E 50603 EPA 524.2 / 624 / 8260 (VOCs) EPA 608 / 8081 (CI Pesticides) EPA 608 / 8082 PCB's ONLY LUFT 5 Metals (6010 / 6020) Project Location: 2744 E. 1/79 Oakland Lead (200.8 / 200.9 / 6010) Sampler Signature: METHOD SAMPLING MATRIX BTEX & TPH as Gas Type Containers PRESERVED TPH as Diesel (8015) Containers SAMPLE ID LOCATION Sludge (Field Point Name) Water HNO3 Other Date Time Other HCL Soil ICE Air table 8:40 N.N. 50603-1-12 tube 8:55 N.N. -1-16 1460 9:15 -2-12 W.N LTR -2-16 15:00 W.N. -3-7.5 E.E. 10:20 5.5. 12:10 LTR 5.5. 15:15 SNC 13:50 14:05 SWC UPA > SW 15:30 -5-20 COMMENTS: ICE/t° Relinquished By: Time: Received By: Date: GOOD CONDITION 7/11 10:20 HEAD SPACE ABSENT **RECEIVED** Relinquished By: Date: Time: Received By: DECHLORINATED IN LAB APPROPRIATE CONTAINERS By lopprojectop at 8:59 am, Feb 02, 2006 PRESERVED IN LAB Received By: Relinquished By: Date: Time: O&G METALS OTHER PRESERVATION pH<2

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

110 Second Avenue South, #D7 Pacheco, CA 94553-5560 (925) 798-1620

50603-5-20

Water

WorkOrder: 0507132 ClientID: TFCL EDF: NO

Report to: Bill to Requested TAT: 5 days

Cabe Silverhame TEL: (408) 868-0855 Gabe Silverhame

07/09/2005

Terra Firma Consulting, LLC FAX: (415) 868-0858 Terra Firma Consulting, LLC

Requested Tests (See legend below) 11 2 3 10 12 13 14 15 Sample ID ClientSampID Matrix Collection Date Hold 4 0507132-001 50603-1-12 07/09/2005 Soil Α Α 0507132-002 50603-1-16 07/09/2005 Soil Α Α 0507132-003 50603-2-12 Soil 07/09/2005 Α Α 0507132-004 50603-2-16 Water 07/09/2005 С Α В 0507132-005 50603-3-7.5 Soil 07/09/2005 Α Α 0507132-006 50603-4-12 Soil 07/09/2005 Α Α С В 0507132-007 07/09/2005 50603-4-16 Water 0507132-008 50603-6-12 Soil 07/09/2005 Α Α 0507132-009 Soil 07/09/2005 50603-6-16 Α Α

Α

В

С

#### Test Legend:

0507132-010

1 8260B_W	2 G-MBTEX_S	3 G-MBTEX_W	4 TPH(DMO)_S	5 TPH(DMO)_W
6	7	8	9	10
11	12	13	14	15

Prepared by: Melissa Valles

#### **Comments:**

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



110 2nd Avenue South, #D7, Pacheco, CA 94553-5560 Telephone: 925-798-1620 Fax: 925-798-1622 Website: www.mccampbell.com E-mail: main@mccampbell.com

Terra Firma Consulting, LLC Client Project ID: #E50603; Lucasey Date Sampled: 07/09/05 07/11/05 Date Received: 20 Sunnyside Avenue #14-418 Client Contact: Cabe Silverhame Date Extracted: 07/14/05 Mill Valley, CA 94941 Client P.O.: Date Analyzed: 07/14/05

#### Volatile Organics by P&T and GC/MS (Basic Target List)\*

Extraction Method: SW5030B		Ana	alytical Met	thod: SW8260B	Work	Order: 0	507132	
Lab ID	Lab ID 0507132-004C							
Client ID	50603-2-16							
Matrix				Water				
Compound	Concentration *	DF	Reporting	Compound	Concentration *	DF	Reporting	
			Limit				Limit	
Acetone	ND	1.0	5.0	Acrolein (Propenal)	ND	1.0	5.0	
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5	
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5	
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5	
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5	
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	5.0	
n-Butyl benzene	1.5	1.0	0.5	sec-Butyl benzene	0.60	1.0	0.5	
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND<1.0	1.0	0.5	
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5	
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0	
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5	
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5	
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5	
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5	
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5	
1,4-Dichlorobenzene	0.75	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5	
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5	
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	0.57	1.0	0.5	
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5	
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5	
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5	
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5	
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5	
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5	
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5	
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5	
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5	
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5	
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5	
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5	
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	0.68	1.0	0.5	
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5	
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5	
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5	
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5	
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5	
Vinyl Chloride	ND	1.0	0.5	Xylenes	0.68	1.0	0.5	
		Sur	rogate Re	ecoveries (%)	<del>_</del>			
%SS1: 107				%SS2: 96				
%SS3:	87				, , , ,			

	Surrogate Re	ecoveries (%)	
%SS1:	107	%SS2:	96
%SS3:	87		

Comments: h,i

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

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.



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Terra Firma Consulting, LLC Client Project ID: #E50603; Lucasey Date Sampled: 07/09/05 07/11/05 Date Received: 20 Sunnyside Avenue #14-418 Client Contact: Cabe Silverhame Date Extracted: 07/14/05 Mill Valley, CA 94941 Client P.O.: Date Analyzed: 07/14/05

#### Volatile Organics by P&T and GC/MS (Basic Target List)\*

Extraction Method: SW5030B	9	-		thod: SW8260B		Order: 0:	507132
Lab ID							
Client ID							
Matrix				Water			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	5.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND<1.0	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	1.4	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5
		Sur	rogate Re	ecoveries (%)			
%SS1:	108	%SS2:	93				
%SS3:	89				, , , ,		
,,,,,,,,,	07						

	ecoveries (%)		
%SS1:	108	%SS2:	93
%SS3:	89		

Comments: h,i

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

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

<sup>#</sup> surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Terra Firma Consulting, LLC Client Project ID: #E50603; Lucasey Date Sampled: 07/09/05 07/11/05 Date Received: 20 Sunnyside Avenue #14-418 Client Contact: Cabe Silverhame Date Extracted: 07/14/05 Mill Valley, CA 94941 Client P.O.: Date Analyzed: 07/14/05

### Volatile Organics by P&T and GC/MS (Basic Target List)\*

	Volatile Organic	•		d GC/MS (Basic Target List						
Extraction Method: SW5030B		ethod: SW8260B Work Order: 0507132								
Lab ID				0507132-010C						
Client ID				50603-5-20						
Matrix		Water								
Compound	Concentration *	DF	DF Reporting Limit Compound		Concentration *	DF	Reporting Limit			
Acetone	ND	1.0	5.0	Acrolein (Propenal)	ND	1.0	5.0			
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5			
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5			
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5			
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5			
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	5.0			
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5			
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND<1.0	1.0	0.5			
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5			
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0			
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5			
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5			
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5			
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5			
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5			
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5			
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5			
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5			
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5			
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5			
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5			
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5			
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5			
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5			
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5			
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5			
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5			
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5			
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5			
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5			
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5			
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5			
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5			
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5			
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5			
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5			
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5			
	<del></del>	Sur	rrogate R	ecoveries (%)						
%SS1:	103			%SS2:	95					
%SS3:	101			·						
70555.	101			1						

Surrogate Recoveries (%)						
	%SS1:	103	%SS2:	95		
	%SS3:	101				

Comments: i

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

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

<sup>#</sup> surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

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Terra Firma Consulting, LLC	Client Project ID: #E50603; Lucasey	Date Sampled: 07/09/05
20 Sunnyside Avenue #14-418		Date Received: 07/11/05
Mill Valley, CA 94941	Client Contact: Cabe Silverhame	Date Extracted: 07/11/05
vancy, crivity	Client P.O.:	Date Analyzed: 07/12/05-07/14/05

#### Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons as Diesel and Motor Oil\*

Extraction method: SW3510C/SW3550C Analytical methods: SW8015C Work Order: 0507132

Extraction method: SW3510C/SW3550C Analytical methods: SW8015C					Work Order: 0507132			
Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS		
0507132-001A	50603-1-12	S	22,g,b	83	10	95.0		
0507132-002A	50603-1-16	S	48,b,g	46	2	98.0		
0507132-003A	50603-2-12	S	8900,b,g	7500	200	#		
0507132-004B	50603-2-16	w	580,000,b,g,h,i	510,000	100	97.0		
0507132-005A	50603-3-7.5	S	50,g,b	79	10	105		
0507132-006A	50603-4-12	S	2800,g,b	3000	50	101		
0507132-007B	50603-4-16	w	160,000,b,g,h,i	150,000	50	95.0		
0507132-008A	50603-6-12	S	41,g,b	53	2	103		
0507132-009A	50603-6-16	S	1800,b,g	1700	50	100		
0507132-010B	50603-5-20	W	670,g,b,i	2800	2	88.0		
	imit for DF =1;	W	50	250	μ	g/L		
	ot detected at or reporting limit	S	1.0	5.0	mg	g/Kg		

<sup>\*</sup> water samples are reported in  $\mu$ g/L, wipe samples in  $\mu$ g/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / SPLP / TCLP extracts are reported in  $\mu$ g/L.

<sup>#</sup> 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.

<sup>+</sup>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) unknown medium boiling point pattern that does not appear to be derived from diesel (asphalt?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.



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Terra Firma Consulting, LLC
20 Sunnyside Avenue #14-418
Mill Valley, CA 94941

Client Project ID: #E50603; Lucasey
Date Sampled: 07/09/05

Date Received: 07/11/05

Client Contact: Cabe Silverhame
Date Extracted: 07/11/05-07/18/05

Client P.O.:
Date Analyzed: 07/12/05-07/18/05

#### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0507132

Lab ID	Lab ID Client ID Mat		TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	50603-1-12	S	ND	ND	ND	ND	ND	ND	1	97
002A	50603-1-16	S	4.8,g	ND	ND	ND	ND	ND	1	83
003A	50603-2-12	S	700,g	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	100	103
004A	50603-2-16	W	310,g,h,i	ND	ND	ND	ND	ND	1	97
005A	50603-3-7.5	S	4.7,g	ND	ND	ND	ND	ND	1	91
006A	50603-4-12	S	89,g	ND<2.0	ND<0.20	ND<0.20	ND<0.20	0.23	40	87
007A	50603-4-16	W	ND,h,i	ND	ND	ND	ND	ND	1	104
008A	50603-6-12	S	ND	ND	ND	ND	ND	ND	1	88
009A	50603-6-16	S	73,g	ND<0.50	ND<0.050	ND<0.050	ND<0.050	ND<0.050	10	83
010A	50603-5-20	W	ND,i	ND	ND	ND	ND	ND	1	99
	ng Limit for DF =1;	W	50	5.0	0.5	0.5	0.5	0.5	1	μg/L
ND means not detected at or above the reporting limit		S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

<sup>\*</sup> water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

<sup>#</sup> cluttered chromatogram; sample peak coelutes with surrogate peak.

<sup>+</sup>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 (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.

## QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0507132

EPA Method: SW8015C	Е	xtraction:	SW3510C	;	BatchID: 17044			Spiked Sample ID: N/A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance	Criteria (%)
Analyte	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	115	115	0	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	88	90	2.77	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 17044 SUMMARY

Sample ID	Date Sampled Date Extracted Date Analyza		Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507132-004b	7/09/05 3:00 PM	7/11/05	7/12/05 7:46 AM	0507132-007b	7/09/05 3:15 PM	7/11/05	7/12/05 2:42 PM
0507132-010B	7/09/05 3:30 PM	7/11/05	7/14/05 2:29 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

DHS Certification No. 1644

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

## QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0507132

EPA Method: SW8021B/80150	Cm E	Extraction: SW5030B			BatchID: 17072			Spiked Sample ID: 0507131-010A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance	Criteria (%)
, and yes	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) <sup>£</sup>	ND	60	104	106	1.22	104	103	0.347	70 - 130	70 - 130
MTBE	ND	10	96.9	93.9	3.12	108	100	7.51	70 - 130	70 - 130
Benzene	ND	10	98.5	99.8	1.24	107	106	1.72	70 - 130	70 - 130
Toluene	ND	10	103	103	0	104	104	0	70 - 130	70 - 130
Ethylbenzene	ND	10	110	110	0	109	108	1.16	70 - 130	70 - 130
Xylenes	ND	30	96.7	96.7	0	95.7	95.7	0	70 - 130	70 - 130
%SS:	98	10	103	106	3.02	107	105	1.65	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 17072 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed	
0507132-004A	7/09/05 3:00 PM	7/18/05	7/18/05 12:23 PM	0507132-007A	7/09/05 3:15 PM	7/16/05	7/16/05 8:22 AM	
0507132-010A	7/09/05 3:30 PM	7/15/05	7/15/05 1:36 AM					

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

<sup>%</sup> Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0507132

EPA Method: SW8260B	Е	Extraction: SW5030B			BatchII	BatchID: 17073			Spiked Sample ID: 0507131-011B		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance	Criteria (%)	
, wilding to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD	
tert-Amyl methyl ether (TAME)	ND	10	109	115	5.82	112	107	4.45	70 - 130	70 - 130	
Benzene	ND	10	105	106	0.881	104	104	0	70 - 130	70 - 130	
t-Butyl alcohol (TBA)	ND	50	118	115	2.18	99.7	101	1.34	70 - 130	70 - 130	
Chlorobenzene	ND	10	112	115	2.37	107	109	1.61	70 - 130	70 - 130	
1,2-Dibromoethane (EDB)	ND	10	108	110	1.81	105	106	1.05	70 - 130	70 - 130	
1,2-Dichloroethane (1,2-DCA)	ND	10	116	119	2.41	116	118	1.29	70 - 130	70 - 130	
1,1-Dichloroethene	ND	10	92.5	93.8	1.34	94.9	94.7	0.202	70 - 130	70 - 130	
Diisopropyl ether (DIPE)	ND	10	119	119	0	119	119	0	70 - 130	70 - 130	
Ethyl tert-butyl ether (ETBE)	ND	10	108	112	3.13	110	109	0.969	70 - 130	70 - 130	
Methyl-t-butyl ether (MTBE)	ND	10	106	109	3.21	104	104	0	70 - 130	70 - 130	
Toluene	ND	10	103	103	0	99.2	100	1.24	70 - 130	70 - 130	
Trichloroethene	ND	10	80.1	80.7	0.800	81.2	80.4	0.976	70 - 130	70 - 130	
%SS1:	100	10	93	92	2.01	100	98	2.68	70 - 130	70 - 130	
%SS2:	116	10	99	97	2.53	99	98	1.04	70 - 130	70 - 130	
%SS3:	115	10	110	115	4.21	109	108	1.30	70 - 130	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### **BATCH 17073 SUMMARY**

5	Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
(	)507132-004C	7/09/05 3:00 PM	7/14/05	7/14/05 5:16 PM	0507132-007C	7/09/05 3:15 PM	7/14/05	7/14/05 4:32 PM
(	0507132-010C	7/09/05 3:30 PM	7/14/05	7/14/05 4:33 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

DHS Certification No. 1644

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

## QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0507132

EPA Method: SW8015C Extraction: SW3550C					BatchID: 17076			Spiked Sample ID: 0507127-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance	Criteria (%)	
Analyte	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD	
TPH(d) %SS:	ND	20	103	105	2.27	99.9	101	0.961	70 - 130	70 - 130	
	99	50	94	95	1.15	100	100	0	70 - 130	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### **BATCH 17076 SUMMARY**

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507132-001A	7/09/05	7/11/05	7/13/05 3:59 PM	0507132-002A	7/09/05 8:55 AM	7/11/05	7/13/05 5:36 AM
0507132-003A	7/09/05 9:15 AM	7/11/05	7/12/05 5:30 AM	0507132-005A	7/09/05 10:20 AM	7/11/05	7/13/05 2:36 PM
0507132-006A	7/09/05 12:10 PM	7/11/05	7/12/05 12:26 PM	0507132-008A	7/09/05 1:50 PM	7/11/05	7/13/05 2:36 PM
0507132-009A	7/09/05 2:05 PM	7/11/05	7/12/05 8:29 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

DHS Certification No. 1644

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

## QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0507132

EPA Method: SW8021B/80150	Cm E	extraction: SW5030B			BatchID: 17078			Spiked Sample ID: 0507135-011A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance	Criteria (%)
, ulaiyio	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) <sup>£</sup>	ND	0.60	94.6	96.8	2.35	94.7	94.8	0.0541	70 - 130	70 - 130
MTBE	ND	0.10	93.8	102	8.26	106	108	1.73	70 - 130	70 - 130
Benzene	ND	0.10	93.1	91.5	1.78	92.3	93.7	1.54	70 - 130	70 - 130
Toluene	ND	0.10	94.3	92.5	1.89	93.1	95.2	2.16	70 - 130	70 - 130
Ethylbenzene	ND	0.10	97.9	97.1	0.828	97.2	99.2	2.04	70 - 130	70 - 130
Xylenes	ND	0.30	100	99.7	0.334	99.7	100	0.334	70 - 130	70 - 130
%SS:	90	0.10	99	98	0.609	94	98	3.75	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### **BATCH 17078 SUMMARY**

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed	
0507132-001A	7/09/05	7/11/05	7/12/05 8:55 AM	0507132-002A	7/09/05 8:55 AM	7/11/05	7/12/05 2:00 AM	
0507132-003A	7/09/05 9:15 AM	7/11/05	7/12/05 2:56 AM	0507132-005A	7/09/05 10:20 AM	7/11/05	7/12/05 2:33 AM	
0507132-006A	7/09/05 12:10 PM	7/11/05	7/12/05 3:06 AM	0507132-008A	7/09/05 1:50 PM	7/11/05	7/12/05 9:57 PM	
0507132-009A	7/09/05 2:05 PM	7/11/05	7/12/05 7:05 PM					

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

<sup>%</sup> Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

