1140 - 5th Avenue, Crockett, CA 94525

(510) 787-6867 - Fax (510) 787-1457

LETTER OF TRANSMITTAL

December 22, 2000

To: Ms. Susan Hugo

Alameda County Environmental Health Services

1131 Harbor Bay Parkway, 2nd Floor

Alameda, CA 94608

Enclosed:

4th Quarter 2000 Quarterly Monitoring Report Former Berkeley Farms Truck Shop and Yard 4575 San Pablo Avenue Emeryville, CA

ENVINCENSE HALL BY A STRONG TO STRON

geo - logic geotechnical and environmental consulting services

1140 - 5th Avenue, Crockett, CA 94525

(510) 787-6867 - Fax (510) 787-1457

GL-97-110.R15 Paradiso Job No. 1113-02 December 22,2000

Mr. Peter Puckett Berkeley Farms 25500 Clawiter Road Hayward, California

RE:

4th Quarter 2000 Monitoring and Sampling Report for Former Berkeley Farms Truck Repair Shop and Yard 4575 San Pablo Avenue, Emeryville, California

Mr. Roland:

This report presents the results of the fourth quarter 2000 monitoring and sampling of the wells at the subject site. During this quarter, the three wells were monitored and sampled on December 13,2000. This monitoring event was conducted in conjunction with monitoring at the former Berkeley Farms Dairy site directly across San Pablo Avenue. The work during this quarter was performed in compliance with the guidelines established Regional Water Quality Control Board (RWQCB), and the Alameda County Department of Environmental Health (ACDEH).

SITE DESCRIPTION AND BACKGROUND

The subject site is located on the western side of San Pablo Avenue between 45th and 47th Streets in Emeryville, California, and formerly contained a service station facility at the southern portion of the property. Until 1998, the site operated as a truck repair shop and yard for Berkeley Farms. A Site Plan (Figure 1) is attached to this report.

Geo-Logic's previous work at the site includes sampling during overexcavation of a waste oil tank at the northern end of the property. This work is summarized in Geo-Logic's reports (GL-97-110.R1 and GL-97-110.R2), both dated February 10, 1998.

Following this work, installation of three monitoring wells was proposed (workplan/proposal GL-98-110, dated November 15, 1997). The wells were installed in February, 1998. This work, including the results of the first quarter of monitoring and sampling, was documented in Geo-Logic's report (GL-97-110.R3) dated March 7, 1998.

In April and May, 1998, a former service station fuel tank pit at the southern portion of the site was extensively overexcavated. This work, and the results of the second quarter of monitoring and sampling, was documented in Geo-Logic's report (GL-97-110.R4) dated June 9, 1998.

On September 5, 1998, as discussed in a prior meeting with Ms. Susan Hugo of the ACDEH, ORC filter socks were placed in monitoring wells MW2 and MW3. ORC is a insoluble solid peroxygen consisting of magnesium peroxide which has been formulated to release oxygen at a controlled rate when hydrated. The purpose of the ORC in wells MW2 and MW3 was to enhance conditions for the natural biodegradation of petroleum hydrocarbons. Prior to installation of the ORC, baseline measurements of dissolved oxygen in groundwater (DO) were taken. With the concurrence of MS. Susan Hugo of the ACDEH, the ORC was removed from well MW2 on February 5, 1999.

On July 30, 1999, well MW1, damaged during construction, was properly abandoned, and replacement well MW1A was constructed, developed, and initially sampled. This work was documented in Geo-Logic's report (GL-97-110.R9) dated August 12, 1999. The wells have been monitored and sampled quarterly since that time.

RECENT FIELD ACTIVITIES

Wells MW1A, MW2 and MW3 were monitored and sampled during this quarter on December 13, 2000. Prior to sampling, the wells were checked for depth to water, and the presence of free product and sheen. No free product or sheen was noted in any of the wells. Monitoring data collected this quarter is summarized in Table 1. Water samples were then collected by the use of a clean Teflon bailer. The samples were decanted into clean VOA vials and/or one-liter amber bottles, as appropriate, which were then sealed with Teflon-lined screw caps, labeled, and stored in a cooler, on ice, until delivery to a state-certified laboratory.

HYDROLOGY

On December 13, 2000, the measured depth to ground water in the three monitoring wells varied between 7.41 and 9.33 feet below the tops of the well casings. Since last quarter, the elevation of ground water in the wells has 4th Qtr. Monitoring and Sampling Report, 4575 San Pablo Avenue, Emeryville

increased between 0.52 and 0.78 feet. The calculated ground water flow direction at the site on December 13, 2000, was to the west, as shown on the attached Potentiometric Surface Map, Figure 1. The hydraulic gradient at the site on December 13, 2000, was approximately 0.007.

ANALYTICAL RESULTS

Water samples from the three wells were analyzed at McCampbell Analytical, Inc., in Pacheco, California. All samples analyzed were accompanied by properly executed Chain of Custody documentation. The samples were analyzed for TPH as gasoline and TPH as diesel by EPA method 8015, and benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA method 8020. In addition, the sample collected from MW2, located in the downgradient vicinity of a former waste oil tank, was analyzed for TPH as Motor Oil by EPA Method 8015-modified.

The concentrations of TPH as gasoline, benzene, and TPH as diesel detected in the ground water samples collected on December 13, 2000, are shown on the attached Figure 2. The results of the water analyses are summarized in Table 2. Copies of the laboratory analyses and the Chain of Custody documentation are attached to this report.

DISTRIBUTION

A copy of this report should be sent to Ms. Susan Hugo of the ACDEH.

LIMITATIONS

Environmental changes, either naturally occurring or artificially induced, may cause changes in ground water levels and flow paths, thereby changing the extent and concentration of any contaminants. Our studies assume that the field and laboratory data are reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.

The results of this work are based on the data obtained from the field and laboratory analyses obtained from a state-certified laboratory. We have analyzed these data using what we believe to be currently applicable engineering techniques and principles in the Northern California region. We make no warranty, either expressed or implied, regarding the above, including laboratory analyses, except that our services have been performed in accordance with generally accepted professional principles and practices existing for such work.

If you have any questions regarding this report, please do not hesitate to call me at (510) 787-6867.

J<u>oel</u> G. Gregef No. eg 1633

CERTIFIED ENGINEERING GEOLOGIST

Sincerely,

Geo-Logic

Joel G. Greger, C.E.G.

Certified Engineering Geologist

License No. EG 1633 Exp. Date 8/31/2002

Attachments:

Tables 1 and 2 Figures 1 and 2

Laboratory Analyses and

Chain of Custody documentation

TABLE 1
SUMMARY OF GROUND WATER MONITORING AND PURGING DATA

Well #	Ground Water Elevation (feet)	Depth to Water (feet) •	Total Well Depth (feet)*	Product Thickness (feet)	Sheen	Water Purged (gallons)
		red and Sa	umpled on De		, 2000)	0
MW1A	32.68	9.33	16.92	0	No	0
MW2	32.56	8.22	16.52	0	No	0
MW3	33.67	7.41	16.56	0	No	0
	(Monito:	red and Sa	umpled on So	eptember 1	9, 2000)	
MW1A	32.10	9.91	16.92	0	No	0
MW2	32.04	8.74	16.53	0	No	0
MW3	32.89	8.19	16.57	0	No	0
	(Monito	red and Sa	mpled on <u>J</u>	une 6. 200	01	
MW1A	33.59	8.42	16.93	0	No	0
MW2	32.46	8.32	16.53	ŏ	No	Ō
MW3	33.93	7.15	16.58	Ō	No	Ō
11110						•
			ampled on <u>M</u>	arch 6, 20	<u>(00)</u>	
MW1A	36.46	5.55	16.93	0	No	8
MW2	35.77	5.01	16.54	0	No	8
KW3	37.49	3.59	16.58	0	No	8
	(Monito	red and Sa	ampled on D	ecember 8.	1999)	
MW1A	32.95	9.06	16.93	0	No	. 8
MW2	31.87	8.91	16.55	Ō	No	8
MW3	32.57	8.51	16.58	Ö	No	8
11110	32.07	0,01	20.00	ŭ		
	(Monito:	red and Sa	ampled on S	eptember 6	, <u>1999</u>)	
MW1A	32.92	9.88	16.94	0	No	8
MW2	32.16	8.62	16.55	0	No	8
EWM	32.88	8.20	16.59	0	No	8
	(Monito	red and Sa	ampled on J	une 7, 199	99)	
MW1	,		ell inacces			
MW2	32,65	8.13	16.55	0	No	8
MW3	33.57	7.51	16.61	Ō	No	8
				=	- · ·	

TABLE 1 - (Continued)

SUMMARY OF GROUND WATER MONITORING AND PURGING DATA

	(Monitored	and Sampl				
MW1		(Well	inaccessib:	le, damaged	i)	
MW2	35.28	5.5	16.56	0	No	8
MW3	35.85	5.23	16.60	0	No	8
'						
	(Monitored	and Sampl		mber 17, 19	9 <u>98</u>)	
MW1	32.95	9.06	16.59	0	No	7
MW2	31.73	9.05	16.55	0	No	7
MW3	33.09	7.99	16.61	0 -	No	7
11170				-		
	(Monitored	l and Sampl	ed on Augus	st 21, 1998	3)	
MW1	35.51	7.84	16.60	0	No	7
MW2	34.17	8.61	16.56	Ō	No	7
MW3	35.42	6.27	16.61	0	No	7
TIMO	33.42	0.27	10.01	· ·	110	,
	(Monitored	l and Sampl	ed on June	3, 1998)		
MW1	35.51	6.50	16.60	0	No	8
MW2	34.17	6.61	16.57	0	No	8
MW3	35.42	5.66	16.62	Ō	No	8
11447	33.42	5.00	10.02	O .		
	(Monitored	d and Sampl	ed on Febr	uary 27, 19	998)	
MW1	37.51	4.50	16.61	0	No	8
MW2	35.61	5.17	16.58	0	No	8
MW3			10.00		1.0	_
TATAN 2	27 70	3 60	16 63	n	Nο	Я
	37.28	3.80	16.63	0	No	8
				_		8
MW1	(Monitore	d and Deve	loped on Fe	_		8 2 4
MW1	(Monitore	d and Deve	loped on Fe	ebruary 24,	1998) No	24
MW1 MW2 MW3	(Monitore	d and Deve	loped on Fe	ebruary 24,	1998)	

Well #	Top of Casing Elevation* (feet)
MW1A	42.01
MW2	40.78
MW3	41.08
MW1-Dairy	NA
MW2-Dairy	42.12

- ♦ Depth to water and total well depth measurements are taken from the top of the well casings.
- * The elevation of the tops of the well casings have been surveyed relative to City of Oakland Benchmark No. 241.

TABLE 2
SUMMARY OF LABORATORY ANALYSES
WATER

·						
Sample	TPH as	TPH as			Ethyl	
Date Number		Gasoline	Benzene	Toluene	benzene	Xylenes
$\frac{2}{12/13/00}$ MW1A		1,400	96	12	<2.0	10
9/19/00 MW1A		<50	<0.5	< 0.5	<0.5	<0.5
6/6/00 MW1A	630	2,400	270	9.5	79	27
3/6/00 MW1A		13,000	560	<20	640	1,200
12/8/99 MW1A	•	1,200	93	1.8	48	53
9/6/99 MW1A	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
8/6/99 MW1A	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
6/7/99 MW1		(Well				
3/4/99 MW1		(Well		ble, damage		
11/17/98 MW1	88,000	29,000	2,300	3,000	3,600	3,100
8/21/98 MW1+		38,000	1,700	1,000	2,400	3,300
6/2/98 MW1	105,000	34,000	1,900	1,600	2,400	3,500
2/27/98 MW1	81,000	27,000	2,200	910	1,700	2,700
12/13/00 MW2	<50	<50	<0.5	<0.5	<0.5	<0.5
9/19/00 MW2	330	2,000	210	8.7	5.5	6.0
6/6/00 MW2	<50	<50	<0.5	<0.5	<0.5	<0.5
3/6/00 MW2	<50	<5.0	< 0.5	<0.5	<0.5	<0.5
12/8/99 MW2	<50	<5.0	<0.5	<0.5	<0.5	<0.5
9/6/99 MW2	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
6/7/99 MW2	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
3/4/99 MW2	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
11/17/98 MW2	4,300	260	190	420	470	600
8/21/98 MW2+		<5.0	<0.5	<0.5	220	400
6/2/98 MW2	7,600	60	220	510	800	1,100
2/27/98 MW2	14,000	<5.0	<0.5	120	460	730
2,2,,30	• •			_		
12/13/00 MW3	<50	<50	<0.5	<0.5	<0.5	<0.5
9/19/00 MW3	<50	<50	<0.5	<0.5	<0.5	<0.5
6/6/00 MW3	<50	<50	<0.5	<0.5	<0.5	<0.5
3/6/00 MW3	<50	<5.0	<0.5	<0.5	<0.5	<0.5
12/8/99 MW3	<50	<5.0	<0.5	<0.5	<0.5	<0.5
9/6/99 MW3	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
6/7/99 MW3	<5.0		<0.5	<0.5	<0.5	<0.5
3/4/99 MW3	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
11/17/98 MW3	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
8/21/98 MW3+	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
6/2/98 MW3	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
2/27/98 MW3		<5.0	<0.5	<0.5	<0.5	<0.5

TABLE 2-(Continued)
SUMMARY OF LABORATORY ANALYSES-WATER

<u>Date</u>	Sample Number	TPH as Motor Oil	MTBE	TOTAL LEAD
12/13/00 9/19/00 6/6/00 3/6/00 12/8/99 9/6/99 8/6/99 6/7/99 3/4/99 11/17/98 6/2/98 2/27/98	MW1A MW1A MW1A MW1A MW1A MW1A MW1A MW1A	320 320 (Well ina (Well ina 80,000	170 13 210 <400 140 <0.5 <0.5 accessible <0.5 <0.5	
12/13/00 9/19/00 6/6/00 3/6/00 12/8/99 9/6/99 6/7/99 3/4/99 11/17/98 6/2/98 2/27/98	MW2 MW2 MW2 MW2 MW2 MW2 MW2 MW2 MW2* MW2*	<250 <250 <250 <250 <250 <47 <0.5 <0.5 <0.5 <0.5 3,800 20,000**	<5.0 180 <5.0 <5.0 <5.5 <0.5 <0.5 <0.5 <0.5	 <5.0
12/13/00 9/19/00 6/6/00 3/6/00 12/8/99 9/6/99 6/7/99 3/4/99 11/17/98 6/2/98 2/27/98	MW3 MW3 MW3 MW3 MW3 MW3 MW3 MW3 MW3 MW3*	<250 <5.0	9.3 <5.0 21 24/21++ 18 <0.5 <0.5 <0.5 <0.5 <0.5	 <5.0

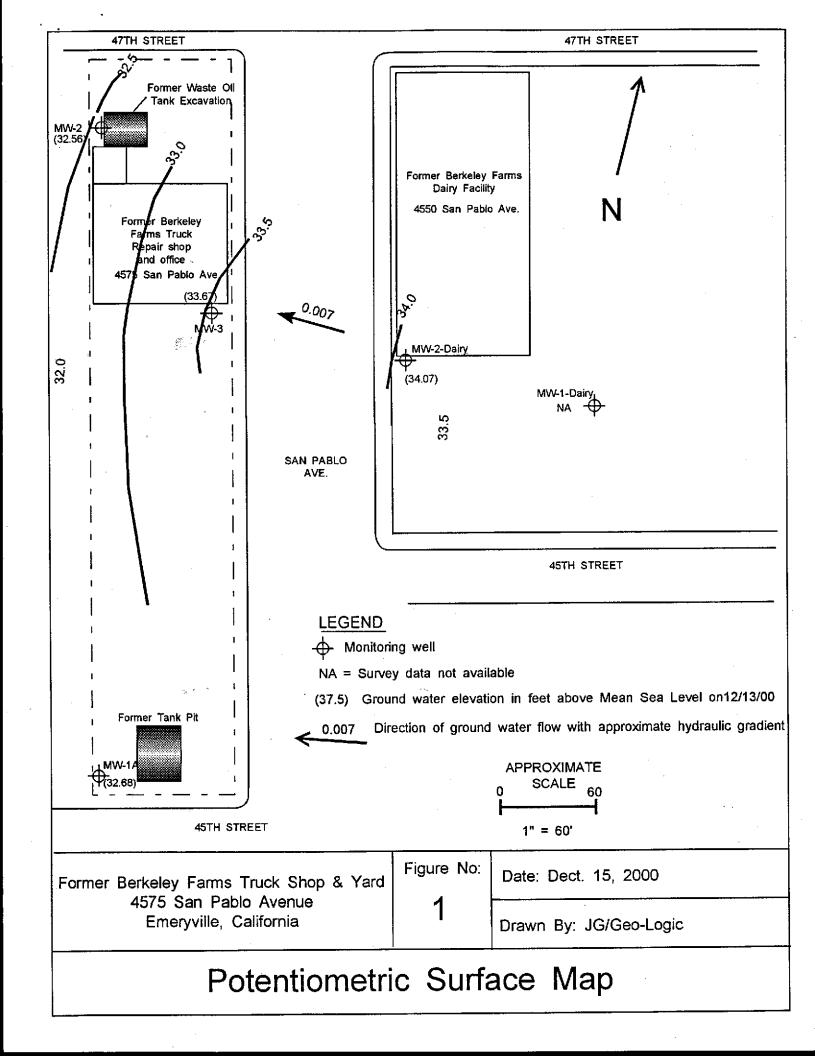
⁺ Cadmium, chromium, lead, nickel, and zinc were nondetectable, except for 0.078 mg/l of nickel detected in MWl.

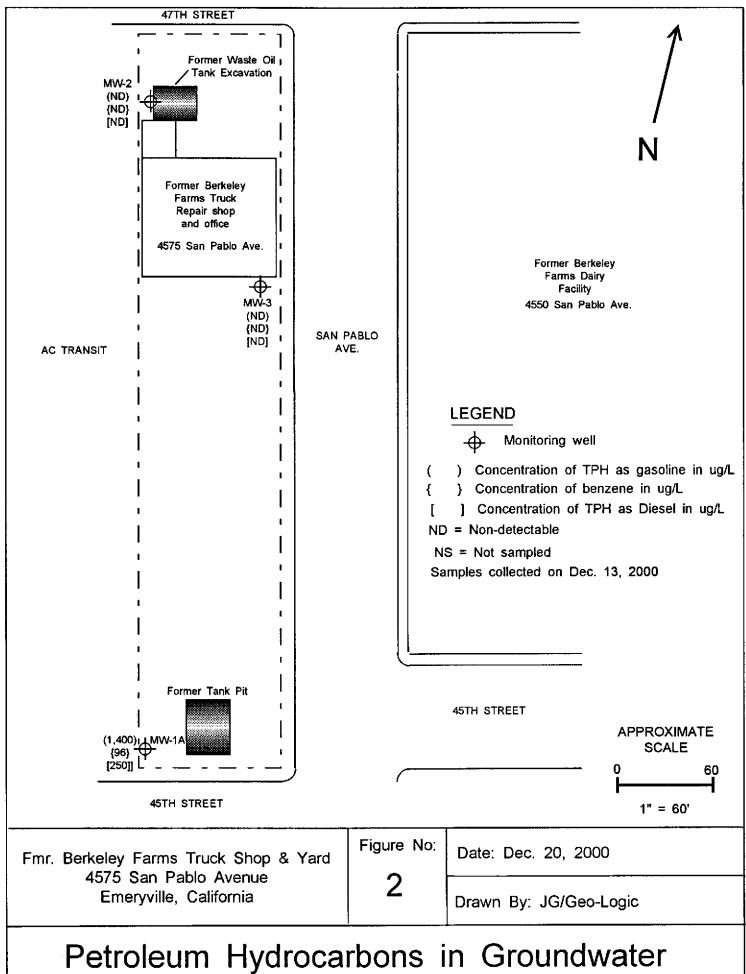
^{++ 21} ppb by EPA Method 8260.

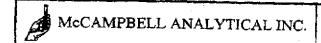
^{*} All EPA Method 8010 constituents were nondetectable.

^{** 20,000} ppb of Total Recoverable Petroleum Hydrocarbons by EPA Method 418.1.

⁻⁻ Analyses not performed. Results are in micrograms per liter ($\mu g/L$), unless otherwise indicated.







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

Geo-Logic	Client Project ID: #1113-02; Former	Date Sampled: 12/13/00		
1140 5th Avenue	Berkeley Farms/KFC	Date Received: 12/13/00		
Crockett, CA 94525	Client Contact: Joel Greger	Date Extracted: 12/14-12/18/00		
	Client P.O:	Date Analyzed: 12/14-12/18/00		

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

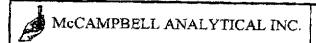
EPA metho	EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)								
Lab ID	Client ID	Matrix	TPH(g)	мтве	Benzene	Toluene	Ethylben- zene	Xylcnes	% Recovery Surrogate
55883	MWIA	w	1400,a	170	96	12	ND<2.0	10	102
55884	MW2	w	ND	ND	ND	ND	ND	ND	99
55885	MW3	w	ND	9.3	ND -	ND	ND	ND	101
									
					_				
Reportin	g Limit unless se stated; ND	w	50 ug/L	5.0	0.5	0.5	0.5	0.5	
means not	detected above sorting limit	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

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) immodified or weakly modified gasoline is significant; h) 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.

Edward Hamilton, Lab Director

^{*} cluttered chromatogram; sample peak coclutes with surrogate peak



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

~ 					·		
Geo-Logic		Client Project ID: #1113-02; Former		Date Sampled: 12/13/00			
1140 5th Ave	nue	Berkeley Fa	Berkeley Farms/KFC		Date Received: 12/13/00		
Crockett, CA	94525	Client Cont	act: Joel Greger	Date Extracted: 12/13/00			
,		Client P.O: Date Analyzed: 12/13-12/19/00					
EPA methods m			3) Extractable Hydrocarbo a RWQCB (SF Bay Region) method		D(351Q)		
Lab ID	Client ID	Matrix	TPH(d) [†]		% Recovery Surrogate		
55883	MW1A	w	250,d		93		
55884	MW2	w	ND		110		
55885	MW 3	W	ND		98		
	,						
					·		

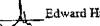
W

S

DHS Certification No. 1644

Reporting Limit unless otherwise stated; ND means not detected above

the reporting limit



50 ug/L

1.0 mg/kg

Edward Hamilton, Lab Director

^{*} 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 cocluted surrogate and sample peaks, or; surrogate peak is on clevated 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.

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

Geo-Logic 1140 5 th Avenue			Client Project ID: #1113-02; Former Berkeley Farms/KFC		Date Sampled: 12/13/00 Date Received: 12/13/00		
Crockett, CA		Client Co	ntact: Joel Greger		Date Extracted: 12/13/00		
		Client P.C);	 	Date Analyzed	12/14/00	
Diesel Ra	nge (C10-C23)	and Oil-Range	e (C18+) Extractable mia RWQCB (SF Bay Regio	Hydroca	rbons as Diesel GCFID(3550) or GC	and Motor Oil* FID(3510)	
Lab ID	Client ID	Matrix	TPH(d) ⁺		ſPH(mo)Ť	% Recovery Surrogate	
55884	MW2	w	ND		ND	110	
1							
		-					

50 ug/L

1.0 mg/kg

W

S

Edward Hamilton, Lab Director

250 ug/L

5.0 mg/kg

Reporting Limit unless otherwise stated; ND means not detected above

the reporting limit

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

[&]quot;cluttered chromatogram resulting in coeluted surrogate and sample peaks, or, surrogate peak is an 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) aged diesel? is significant; d) gasoline range compounds are significant; h) lighter than water immissible sheen is present; i) liquid une to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immissible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

McCampbell ent, By:

Z Calco 159 McCAMPBELL ANALYTICAL INC. CHAIN OF CUSTODY RECORD 110 2nd AVENUE SOUTH, #07 TURN AROUND TIME PACHECO, CA 94553-5560 Q M Telephone: (925) 798-1620 Fax: (925) 798-1622 RUSH 24 HR 48 HR 72 HR 5 DAY Report To: Jeel Greger Bill To: Parage Mechanical
Company: Gen-Logic POB 1836 Analysis Request Other Comments 100 1836

AVE 2400, Williams St. 44 94575 Son Wand War Clause Color 94577 Fax: (570) 6448-396 78714577 Some Four Berkeley Facens/KFE 28 1146-57h Ave Crocks 17 49 94525 Total Petroleum Hydrocarbons (4+8+1) PC - 5 EPA 601 / 8010 Tele: (530 7876867 Project #: 113-02 Project Location: 45 75 San Public Ave Enterguille BTEX ONLY (EPA 602 / 8020) EPA 608 / 8080 PCB's ONLY EPA 624 / 8240 / 8260 Lead (7240/7421/239.2/6010) RCI Sampler Signature: Carella BIEX & TPH 28 Gas (602 Total Petroleum Oil & SAMPLING METHOD ific Conductivity TPH as Diesel (8015) MATRIX PRESERVED CAM-17 Metals LUFT 5 Metals EPA 608 / 8080 EPA 625 / 8270 SAMPLE ID LOCATION Water
Soil
Air
Sludge
Other
HOO Date Time 55883 BFIKEC 12800 55884 MW2 χ yy 55885 Relanguished By: Received By N/W/3 12:15 Reference Jub Address + Jub # on lub Sheets + Invoice as fellows: Remarks: 12/13/w /215 Pm Relinquished By: Former Berkelon Farms /KFC Relinquished By: Date: Time: Received By: