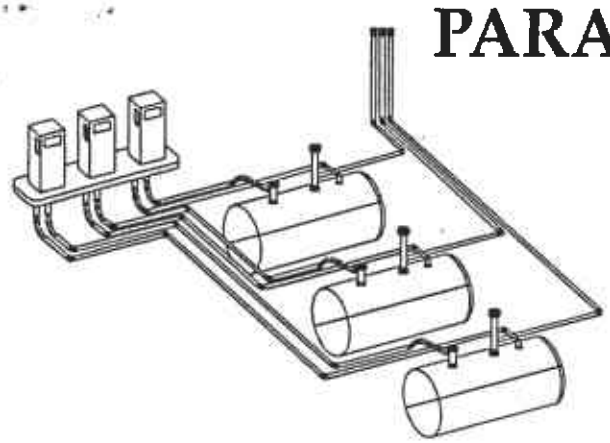
RO2604

PARADISO MECHANICAL, INC.



GENERAL & PETROLEUM CONTRACTORS and ENVIRONMENTAL SERVICES

P.O. BOX 1836
2600 WILLIAMS STREET
SAN LEANDRO, CA 94577

LICENSE NO: 677909
PHONE (510) 614-8390
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1/07/2004

Pacific Gas & Electric Company
1030 Detroit Ave.
Concord, CA 94518
Attn: Gary Pforr, Corp. Real Estate

Alameda County
JAN 23 2004
Environmental Health

Re: PG&E Training Center, Fuel Tank Removal
7205 National Ave., Livermore

Dear Gary,

Enclosed for your review is the Sampling Report for the UST removal at 7205 National Drive. This report was prepared for us by Joel Gregor of Geo-Logic. A copy has also been sent to Paul Smith of LPFD.

Sincerely,

Robert S. Corsun

geo - logic geotechnical and environmental consulting services
1140 - 5th Avenue, Crockett, CA 94525 (510) 787-6867 - Fax (510) 787-1457

December 12, 2003
Paradiso Job No. 03-863

Paradiso Mechanical, Inc.
P. O. Box 1836
2600 Williams Street
San Leandro, California

Attention : Mr. Bob Corsun

RE: Sampling Report for Fuel Tank Removals
P. G. & E. Training Center
7205 National Drive
Livermore, California

Dear Mr. Corsun:

This report summarizes the results of sampling performed by Geo-Logic at the referenced site, during the recent fuel tank removals at the above-referenced P. G. & E. training facility.

The scope of the work performed by Geo-Logic consisted of the following:

Collection of two soil samples from beneath each of two fuel tanks, and two composite samples from the excavated soils;

Delivery of the samples with properly executed Chain of Custody documentation to a certified analytical laboratory; and

Technical review of data and preparation of this report.

SITE HISTORY AND BACKGROUND

The subject site, which is a P. G. & E. training facility, is located on the southern side of National Drive, south of the 580 freeway, in Livermore, California. At the site, two fuel underground storage tanks (USTs) were removed. Site Plans (Figures 1 and 2) are attached to this report.

FIELD ACTIVITIES

Geo-Logic's field work was performed on December 3 and 4, 2003. On December 3, 2003, Geo-Logic was present on site for the tank removals, however, the removals could not be completed on that date due to the oxygen levels within the tanks. The tanks were constructed of double-walled steel, and consisted of one 3,000-gallon unleaded gasoline tank and one identical diesel tank. The tanks were approximately twenty feet in length and eight feet in diameter, and were buried approximately four feet. The tanks were underlain by about one foot of pea gravel and then a concrete hold-down slab, to which they were fastened with large steel tie-down straps. The dispenser island and piping were located between the two tanks and had already been entirely removed.

On December 3, 2003, four-part composite samples of two stockpiles were collected. The samples were collected by driving brass liners directly into random points approximately one foot within the stockpiles. The liners containing the samples were capped, labeled, and stored in a cooled ice chest, and then delivered immediately to the laboratory. The excavated soil consisted predominantly of pea gravel, although there was some clayey silt material from the sidewalls of the excavation. There was no obvious indication of any hydrocarbon impacts such as odors or staining. Mr. Paul M. Smith of the Livermore-Pleasanton Fire Department was present during the sampling.

On December 4, 2003, the two tanks were moved. The tanks, which were approximately twelve years old, appeared to be in good condition with no holes. The tanks were transported under manifest to ECI in Richmond, California. The dispenser pumps and piping were also removed from the site.

Following removal of the tanks, soil and water samples were collected. The water in the tank pit appeared to have originated from a broken water pipe several feet below the top of the tank pit, with some contribution from rainfall. The water was contained by the concrete hold-down slab, and was several inches thick in depth. One water sample was collected from the fill end (west end) of each of the two tanks. The samples, labeled as Diesel-W-Water and UNL-W-Water, were collected by laying a disposable teflon bailer down horizontally within the shallow puddle of water. It should be noted that groundwater in the area of the P. G. & E. facility would not be expected at ten feet below grade (the depth of the hold-down slab).

Soil samples were also collected from native soil in the sidewalls of the excavation at each end of the tanks. The soil samples were collected from just above the concrete hold-down slab, at approximately ten feet below grade. The locations of the samples are shown on Figure 1.

The samples were collected by hand driving brass liners directly into material retrieved by backhoe. The native material encountered in the sidewalls of the excavation consisted of silt. The liners containing the samples were capped, labeled, and stored in a cooled ice chest prior to delivery to the laboratory. The samples were delivered to the laboratory under chain-of-custody procedures, immediately after sampling was completed.

ANALYTICAL RESULTS

The soil samples were analyzed by McCampbell Analytical in Pacheco, California, and were accompanied by properly executed Chain of Custody documentation. All of the samples were analyzed for total petroleum hydrocarbons (TPH) as diesel by EPA Method 8015 Modified, and for TPH as gasoline, benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Methods 8015-Modified and 8020. These samples were also analyzed for fuel oxygenates by EPA Method 8260, and for total lead.

The analytical results of all of the soil samples, including the two stockpile samples, indicated non-detectable concentrations of TPH as gasoline, BTEX, and MTBE and the other fuel oxygenates. TPH as diesel was non-detectable in all of the samples where that analyses was performed.

Total lead was detected in all of the soil samples at concentrations ranging from non-detectable to 9.1 parts per million (ppm), which appears to be naturally-occurring "background" levels.

The analytical results of the two "grab" water samples were non-detectable for TPH as gasoline and BTEX. TPH as diesel was detected in the sample from the fill end of the diesel tank at a concentration of 300 parts per billion (ppb). MTBE and t-butyl alcohol (TBA) were detected at elevated concentrations in both water samples. Other fuel oxygenates were non-detectable. Lead was detected at concentrations of 0.065 and 0.13 ppm in the samples from beneath the diesel tank and the gasoline tank, respectively.

The results of the analyses are summarized in Tables 1 and 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 Mr. Paul M. Smith of the Livermore-Pleasanton Fire Department.

LIMITATIONS

Soil deposits and rock formations may vary in thickness, lithology, saturation, strength and other properties across any site. In addition, environmental changes, either naturally-occurring or artificially-induced, may cause changes in 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 study are based on the data obtained from the field and laboratory analyses obtained from a state certified laboratory. We have analyzed this 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.

Should you have any questions regarding this report, please feel free to call me at (510) 787-6867.

Sincerely,

Geo-Logic

Joel G. Greger, C.E.G.
Certified Engineering Geologist

REGISTERED GEOLOGIST
JOEL G. GREGER
No. EG 1633
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

License No. EG 1633
Exp. Date 8/31/2004

Attachments: Tables 1 and 2
Figure 1
Laboratory Analyses and
Chain of Custody documentation

TABLE 1
SOIL ANALYTICAL RESULTS
P. G. & E. - Livermore
7205 National Drive, Livermore, CA

Samples collected on 12/3 and 12/4/03.

Sample/ Depth (feet)	TPH-d (ppm)	TPH-g (ppm)	BTEX (ppm)	MTBE by 8260	Other Fuel Oxygenates	Total Lead (ppm)
UNL-WEST (10')	NA	<1.0	<0.005	<0.005	ND	8.1
UNL-EAST (10')	NA	<1.0	<0.005	<0.005	ND	7.5
DIESEL-WEST (10	<1.0	<1.0	<0.005	<0.005	ND	9.1
DIESEL-EAST (10	<1.0	<1.0	<0.005	<0.005	ND	8.0
Comp S1	<1.0	<1.0	<0.005	<0.005	ND	<5.0
Comp S2	<1.0	<1.0	<0.005	<0.005	ND	5.3

EXPLANATION:
ppm = parts per million

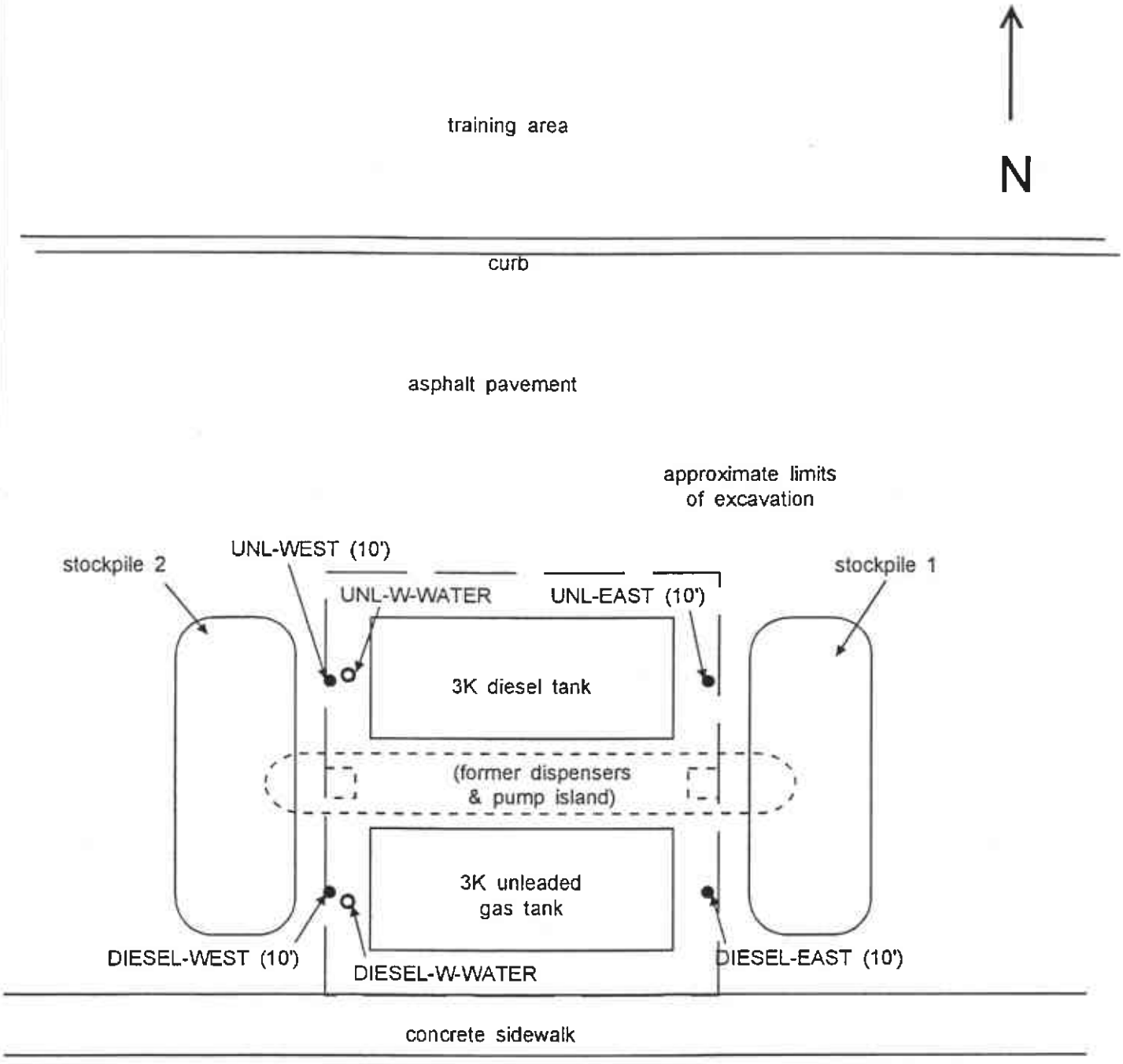
TABLE 2
WATER ANALYTICAL RESULTS
P. G. & E. - Livermore
7205 National Drive, Livermore, CA

Samples collected on 12/4/03.

Sample/ Depth (feet)	TPH-d (ppb)	TPH-g (ppb)	BTEX (ppb)	MTBE by 8260	TBA (ppb)	Lead (ppm)
DIESEL-W-WATER	300	<50	ND	150	90*	0.065
UNL-W-WATER	NA	<250	ND	7,500	2,200*	0 13

EXPLANATION:
ppb = parts per billion

* Other fuel oxygenates were non-detectable.



LEGEND

● soil sample (depth)
samples collected on 12/3 and 12/4/03

o water sample (depth)

APPROXIMATE SCALE
0 10
1" = 10'

P. G. & E. - Stockton 7205 National Drive Livermore, California	Figure No: 1	Date: December 4, 2003 Drawn By: JG/Geo-Logic

Site Plan

McCampbell Analytical Inc.
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: #03-863- PGE-Livermore	Date Sampled: 12/04/03
1140 5th Avenue		Date Received: 12/04/03
Crockett, CA 94525	Client Contact: Joel Greger	Date Extracted: 12/05/03-12/09/03
	Client P.O.:	Date Analyzed: 12/05/03-12/09/03

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0312087

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	UNL-West (10')	S	ND	ND	ND	ND	ND	ND	1	89.1
002A	UNL-East (10')	S	ND	ND	ND	ND	ND	ND	1	92.7
003A	Diesel-West (10')	S	ND	ND	ND	ND	ND	ND	1	88.9
004A	Diesel-East (10')	S	ND	ND	ND	ND	ND	ND	1	88.1
005A	Diesel-W-Water	W	ND,i	100	ND	ND	ND	ND	1	106
006A	UNL-W-Water	W	ND<250,j	7000	ND<2.5	ND<2.5	ND<2.5	ND<2.5	5	101
Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* 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.

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 (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 ~2 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.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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http://www.mccampbell.com E-mail: main@mccampbell.com

Geo-Logic 1140 5th Avenue Crockett, CA 94525	Client Project ID: #03-863- PGE-Livermore	Date Sampled: 12/04/03
		Date Received: 12/04/03
	Client Contact: Joel Greger	Date Extracted: 12/04/03
	Client P.O.:	Date Analyzed: 12/05/03

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0312087

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0312087-003A	Diesel-West (10')	S	ND	1	102
0312087-004A	Diesel-East (10')	S	ND	1	104
0312087-005D	Diesel-W-Water	W	300,h,d,i	1	106

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	1.0	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/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) unknown medium boiling point pattern that does not appear to be derived from diesel; 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 ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

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Geo-Logic 1140 5th Avenue Crockett, CA 94525	Client Project ID: #03-863- PGE-Livermore	Date Sampled: 12/04/03
		Date Received: 12/04/03
	Client Contact: Joel Greger	Date Extracted: 12/04/03
	Client P.O.:	Date Analyzed: 12/05/03

Oxygenated Volatile Organics by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0312087

Lab ID	0312087-001A	0312087-002A	0312087-003A	0312087-004A	Reporting Limit for DF =1	
Client ID	UNL-West (10')	UNL-East (10')	Diesel-West (10')	Diesel-East (10')		
Matrix	S	S	S	S		
DF	1	1	1	1	S	W
Compound	**Concentration**				µg/Kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	5.0	NA
t-Butyl alcohol (TBA)	ND	ND	ND	ND	25	NA
Diisopropyl ether (DIPE)	ND	ND	ND	ND	5.0	NA
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	5.0	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	5.0	NA
Surrogate Recoveries (%)						
%SS:	101	100	99.5	100		
Comments						

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

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

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Angela Rydelius, Lab Manager

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Geo-Logic 1140 5th Avenue Crockett, CA 94525	Client Project ID: #03-863- PGE-Livermore	Date Sampled: 12/04/03
		Date Received: 12/04/03
	Client Contact: Joel Greger	Date Extracted: 12/05/03-12/08/03
	Client P.O.:	Date Analyzed: 12/05/03-12/08/03

Oxygenated Volatile Organics by P&T and GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0312087

					Reporting Limit for DF =1	
Lab ID	0312087-005B	0312087-006B				
Client ID	Diesel-W-Water	UNL-W-Water				
Matrix	W	W				
DF	5	200			S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND<2.5	ND<100			NA	0.5
t-Butyl alcohol (TBA)	90	2200			NA	5.0
Diisopropyl ether (DIPE)	ND<2.5	ND<100			NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<2.5	ND<100			NA	0.5
Methyl-t-butyl ether (MTBE)	150	7500			NA	0.5
Surrogate Recoveries (%)						
%SS:	112	107				
Comments	i					

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

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

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Geo-Logic 1140 5th Avenue Crockett, CA 94525	Client Project ID: #03-863- PGE-Livermore	Date Sampled: 12/04/03
		Date Received: 12/04/03
	Client Contact: Joel Greger	Date Extracted: 12/04/03
	Client P.O.:	Date Analyzed: 12/05/03

Lead by ICP*

Extraction method: SW3050B Analytical methods: 6010C Work Order: 0312087

Lab ID	Client ID	Matrix	Extraction	Lead	DF	% SS
0312087-001A	UNL-West (10')	S	TTLC	8.1	1	101
0312087-002A	UNL-East (10')	S	TTLC	7.5	1	99.9
0312087-003A	Diesel-West (10')	S	TTLC	9.1	1	96.1
0312087-004A	Diesel-East (10')	S	TTLC	8.0	1	98.9

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TTLC	NA	mg/L
	S	TTLC	5.0	mg/Kg

*water/product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

means surrogate recovery outside of acceptance range due to matrix interference; & means low or no surrogate due to matrix interference; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water/liquid- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipe/filter - As, Se, Tl); 7471B (Hg).

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; j) reporting limit raised due to insufficient sample amount; k) results are reported by dry weight; y) estimated values due to low surrogate recovery; z) reporting limit raised due to matrix interference.

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Angela Rydelius, Lab Manager

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Geo-Logic 1140 5th Avenue Crockett, CA 94525	Client Project ID: #03-863- PGE-Livermore	Date Sampled: 12/04/03
		Date Received: 12/04/03
	Client Contact: Joel Greger	Date Extracted: 12/04/03
	Client P.O.:	Date Analyzed: 12/05/03

Lead by Graphite Furnace Atomic Absorption*

Extraction method: E200.9 Analytical methods: E200.9 Work Order: 0312087

Lab ID	Client ID	Matrix	Extraction	Lead	DF	% SS
0312087-005C	Diesel-W-Water	W	TTLC	0.065,i	4	N/A
0312087-006C	UNL-W-Water	W	TTLC	0.13	10	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TTLC	0.005	mg/L
	S	TTLC	NA	mg/kg

*water/product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

means surrogate recovery outside of acceptance range due to matrix interference; & means low or no surrogate due to matrix interference; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water/liquid- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipe/filter - As, Se, Tl); 7471B (Hg).

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; j) reporting limit raised due to insufficient sample amount; k) results are reported by dry weight; y) estimated values due to low surrogate recovery; z) reporting limit raised due to matrix interference.

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Angela Rydelius, Lab Manager

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Joel Gregor	**Bill To:** Ramesso Mechanical
Company: Geo-Logic	P.O.B 1836
1140-5th Ave.	2600 W. Williams St
Crockett CA 94525	**E-Mail:** Sanleandro CA 94577
Tele: ( ) 510 787 6867	**Fax:** ( ) 510 787 1457
Project #: 03 863	**Project Name:** PGE-Livermore
Project Location: 7205 Nethaniel Dr, Livermore	
Sampler Signature: Joel Gregor	**P.O.#:**

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
UNL-WEST (10')	Tank pit	12-4-03	2:30pm	1	1 liter		X				X				X													X		X	
UNL-EAST (10')							X				X				X													X		X	
Diesel-West (10')							X				X				X	X												X		X	
Diesel-East (10')							X				X				X	X												X		X	
Diesel-W-water			3pm	3	1/2 L	X					X	X			X	X												X		X	
UNL-W-water			4pm	4	1/2 L	X					X	X			X	X												X		X	

Relinquished By:	Date:	Time:	Received By:
Joel Gregor	12-4-03	5:15pm	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

	VOAS	O&G	METALS	OTHER
ICE/t°				
GOOD CONDITION	PRESERVATION			
HEAD SPACE ABSENT	APPROPRIATE			
DECHLORINATED IN LAB	CONTAINERS			
	PERSERVED IN LAB			

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Geo-Logic	Client Project ID: #63-863; PGE-Livermore	Date Sampled: 12/03/03
1140 5th Avenue		Date Received: 12/03/03
Crockett, CA 94525	Client Contact: Joel Greger	Date Extracted: 12/03/03
	Client P.O.:	Date Analyzed: 12/04/03

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0312066

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	Comp S1	S	ND	ND	ND	ND	ND	ND	1	101
002A	Comp S2	S	ND	ND	ND	ND	ND	ND	1	101
Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	NA	NA	1	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* 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.

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 (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 ~2 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.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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http://www.mccampbell.com E-mail: main@mccampbell.com

Geo-Logic	Client Project ID: #63-863; PGE-Livermore	Date Sampled: 12/03/03
1140 5th Avenue		Date Received: 12/03/03
Crockett, CA 94525	Client Contact: Joel Greger	Date Extracted: 12/03/03
	Client P.O.:	Date Analyzed: 12/04/03

Diesel Range (C10–C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0312066

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0312066-001A	Comp S1	S	ND	1	97.7
0312066-002A	Comp S2	S	ND	1	95.2
Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA		NA	
	S	1.0		mg/Kg	

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/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) unknown medium boiling point pattern that does not appear to be derived from diesel; 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 ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

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Geo-Logic	Client Project ID: #63-863; PGE-Livermore	Date Sampled: 12/03/03
1140 5th Avenue		Date Received: 12/03/03
Crockett, CA 94525	Client Contact: Joel Greger	Date Extracted: 12/03/03
	Client P.O.:	Date Analyzed: 12/04/03

Oxygenated Volatile Organics by P&T and GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0312066

Lab ID	0312066-001A	0312066-002A			Reporting Limit for DF = 1	
Client ID	Comp S1	Comp S2				
Matrix	S	S				
DF	1	1			S	W
Compound	**Concentration**				**µg/Kg**	**ug/L**
tert-Amyl methyl ether (TAME)	ND	ND			5.0	NA
t-Butyl alcohol (TBA)	ND	ND			25	NA
Diisopropyl ether (DIPE)	ND	ND			5.0	NA
Ethyl tert-butyl ether (ETBE)	ND	ND			5.0	NA
Methyl-t-butyl ether (MTBE)	ND	ND			5.0	NA
Surrogate Recoveries (%)						
%SS:	95.6	94.9				
Comments						

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

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

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Geo-Logic	Client Project ID: #63-863; PGE-Livermore	Date Sampled: 12/03/03
1140 5th Avenue		Date Received: 12/03/03
Crockett, CA 94525	Client Contact: Joel Greger	Date Extracted: 12/03/03
	Client P.O.:	Date Analyzed: 12/05/03

Lead by ICP*

Extraction method: SW3050B Analytical methods: 6010C Work Order: 0312066

Lab ID	Client ID	Matrix	Extraction	Lead	DF	% SS
0312066-001A	Comp S1	S	TTLC	ND	1	103
0312066-002A	Comp S2	S	TTLC	5.3	1	101

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TTLC	NA		mg/L
	S	TTLC	5.0		mg/Kg

*water/product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

means surrogate recovery outside of acceptance range due to matrix interference; & means low or no surrogate due to matrix interference; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water/liquid- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipe/filter - As, Se, Tl); 7471B (Hg).

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; j) reporting limit raised due to insufficient sample amount; k) results are reported by dry weight; y) estimated values due to low surrogate recovery; z) reporting limit raised due to matrix interference.

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY
EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Joel Gregor	Bill To: Rudolph Mechanical
Company: Geo-Logic	PO B 1836
1140-5th Ave.	2660 Williams St.
Crockett CA 94525	E-Mail: San Leandro CA 94577
Tele: (510) 5435382	Fax: (510) 7871457
Project #: 63-863	Project Name: PGE-Livermore
Project Location: 2205 National Drive, Livermore	
Sampler Signature: Joel Gregor	

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010/8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010/ 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other	Other	Other	Comments
Comp S1	stockpile	12/3/03	1:30 pm	4	liner		X				X				X	X													X	X	Fuel oxygenates by 8260			Filter Samples for Metals analysis: Yes / No
Comp S2	"	"	"	4	"		X				X				X	X													X	X	"			

Relinquished By: Joel Gregor	Date: 12-3-03	Time: 2:40 pm	Received By: Mark Mello
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t°_____
GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PERSERVED IN LAB_____

PRESERVATION VOAS | O&G | METALS | OTHER

COMMENTS: