

May 22, 1997

Mr. John Sutfin
Superior Underground Tank Service
430 Kevin Court
San Ramon, California 94583

**Subject: Tank Removal and Remedial Excavation Summary Report for
Redwood Gasoline Station, 800 San Pablo Avenue, Albany, CA**

Dear Mr. Sutfin:

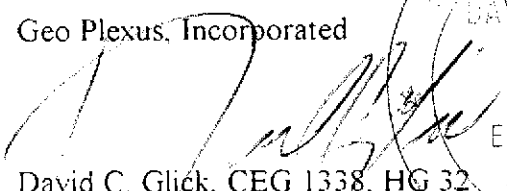
Geo Plexus, Incorporated is pleased to present this Summary Report regarding the removal of five (5) underground storage tanks from the subject property and to document the site conditions following excavation and off-site disposal of the petroleum contaminated soils.

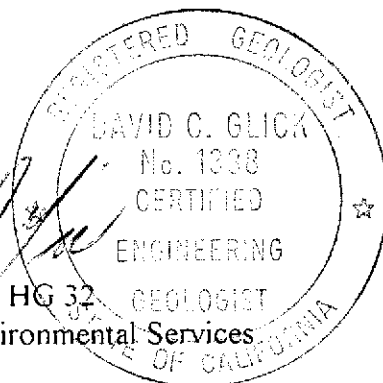
One copy of this report should be submitted to Ms. Juliet Shin with Alameda County Department of Environmental Health to review the findings and determine what mandatory soil and/or ground water investigations and/or additional remediation is required to achieve site closure.

It has been a pleasure to be of service to you on this project. Should you have questions regarding the attached report, please contact our office.

Respectfully submitted,

Geo Plexus, Incorporated


David C. Glick, CEG 1338, HG 32
Director, Geologic and Environmental Services



**TANK REMOVAL AND
REMEDIAL EXCAVATION SUMMARY REPORT
FOR
REDWOOD GASOLINE STATION
800 SAN PABLO AVENUE
ALBANY, CA**

Prepared for:

Mr. John Sutfin
Superior Underground Tank Service
430 Kevin Court
San Ramon, CA

and

Mr. Mohinder Sikand
800 San Pablo Avenue
Albany, CA

May 22, 1997

**TANK REMOVAL AND
REMEDIAL EXCAVATION SUMMARY REPORT
FOR
REDWOOD GASOLINE STATION
800 SAN PABLO AVENUE
ALBANY, CA**

INTRODUCTION

The project site consists of Redwood Gasoline Station located at 800 San Pablo Avenue, in the City of Albany, Alameda County, California as indicated on Figure 1. The site has been an active service station and recently upgraded the tanks for regulatory compliance and operational use. The underground tanks reportedly consisted of three gasoline, one diesel fuel tank, and one unknown product tank located as indicated on Figure 2. The tanks were identified as:

- Tank 1 - 10,000 gallon gasoline tank
- Tank 2 - 10,000 gallon gasoline tank
- Tank 3 - 6,000 gallon gasoline tank ←
- Tank 4 - 2,000 gallon diesel tank
- Tank 5 - 1,000 gallon unknown product tank

Based on drawings, I question these tank designations - One large double-walled tank was left in place to undergo a tank top modification + continue functioning along with the new system. My recollection is that this would have been tank 3. PE

TANKS 1-4 REMOVAL ACTIVITIES

It is understood that a tank removal permit was filed with Alameda County Department of Environmental Health for general compliance with County/State policies for tank closures. Tanks 1-4 were excavated and removed from the project site on March 5, 1997 by Superior Underground Tank Services (SUTS) personnel under the oversight of personnel from the Alameda County Department of Environmental Health.

The soil overlying and adjacent to the tanks was removed by a backhoe/excavator to expose the tanks and to facilitate removal of the piping. The riser assemblies and product lines extending from the tanks to the dispenser pumps and the vent lines were removed. The dispensing pumps were disconnected from the product lines prior to proceeding with the tank excavation activities.

The tanks were inerted by placing dry-ice into each tank and the tanks were allowed to vent to the atmosphere until the oxygen content was determined to be below 16% and the Lower Explosive Limit (LEL) was determined to be below 10% of the LEL as measured by a Gastech Tank Tester device and with a Gastech Combustible Gas/LEL/Oxygen Meter. The tanks were transported and disposed of by Erickson, Inc. under contract arrangements with SUTS.

The tanks did not exhibit visual evidence of holes; however, Tank 4 did exhibit some corrosion and pitting at the ends of the tank.

TANK REMOVAL SOIL SAMPLING

Samples of the native soil were obtained from beneath each tank and dispensing pump and along the pipe line. The samples were collected by Geo Plexus, Incorporated personnel under direct supervision of a Certified Engineering Geologist. The samples were obtained through the use of the excavation at the locations directed by Ms. Juliet Shin with the Alameda County Department of Environmental Health (see Figure 3).

The soil samples were obtained from the backhoe bucket by advancing pre-cleaned 2 inch I.D. brass liners into the undisturbed soil contained in the backhoe bucket. The soil samples were immediately sealed in the liner using aluminum foil and plastic caps and properly labeled including: the date, time, sample location, and project number. The samples were placed immediately into a chilled cooler and maintained at 4° C for transport to the laboratory under chain-of-custody documentation.

Water seepage was observed entering the excavation following removal of Tanks 1-3. A ground water collection point was created in the bottom of the excavation (see Figure 3) by excavating additional soil. A "grab" sample of the water encountered in the excavation was obtained by lowering a sterile teflon bailer into the water column and the water contained in the bailer was decanted into sterile vials/jars with Teflon lined screw caps. The samples were immediately sealed in the vials and properly labeled including: the date, time, sample location, project number, and indication of any preservatives added to the sample. The samples were placed immediately into a chilled cooler and maintained at 4° C for transport to the laboratory under chain-of-custody documentation.

REMEDIAL EXCAVATION ACTIVITIES

The excavations for the tanks extended to depths of 8-9 feet below the ground surface. The soil removed from the excavations above and adjacent to the storage tanks and dispensers exhibited some petroleum odors and some soil discoloration/staining (gray-green color) was observed. These soils were stockpiled on-site for characterization and disposal.

Subsequent to removal of Tanks 1-4, Alameda County Department of Environmental Health directed excavation of the soils exhibiting "free-product" and to re-sample the sidewalls and base of the excavation. **The excavation for Tanks 1-3 and the excavation for Tank 4 were enlarged several feet in lateral directions and excavated to a depth of 11-feet below original grade.** To protect the existing structure, sheet piling was installed along the western edge of the excavation (which also limited the extent of contaminated soil removal).

Additional soil samples were obtained from the perimeter of the excavations at locations indicated on Figure 4 in accordance with procedures/protocols previously described. **Following the limited remedial excavation action for Tanks 1-4 and purging the excavation of the retained ground water an additional water samples was collected.**

TANK 5 REMOVAL ACTIVITIES

During the excavation activities, an additional underground storage tank was detected located north of Tanks 1 and 2 and west of Tank 4 (see Figure 2). Tank 5 was excavated and removed from the project site on March 31, 1997 by SUTS personnel under the oversight of personnel from the Alameda County Department of Environmental Health.

The remaining soil overlying and adjacent to the tank was removed by a backhoe/excavator to expose the tank. The tank was inerted by placing dry-ice into the tank which was allowed to vent to the atmosphere until the oxygen content was determined to be below 16% and the Lower Explosive Limit (LEL) was determined to be below 10% of the LEL as measured by a Gastech Tank Tester device and with a Gastech Combustible Gas/LEL/Oxygen Meter. The tanks were transported and disposed of by Erickson, Inc. under contract arrangements with SUTS.

Soil samples were obtained from beneath Tank 5 at locations indicated on Figure 5 following procedures/protocols previously described.

One additional ground water grab sample was obtained from the excavated area for Tanks 1-4 from a temporary well point installed in the backfill gravel. The temporary well has since been removed from the backfill and the tank installation has been completed.

ANALYTICAL TESTING

The soil and water samples were submitted to McCampbell Analytical, a State of California, Department of Health Services certified testing laboratory and were tested in accordance with the State of California, Regional Water Quality Control Board Guidelines and Alameda County protocols. The testing for the tank samples included:

- Total Petroleum Hydrocarbons as gasoline
- Total Petroleum Hydrocarbons as diesel
- Volatile Aromatic Compounds (BTEX and MTBE)
- Polynuclear Aromatic Hydrocarbons
- Total Lead

The results of the analytical testing are attached as Appendix A. The results of the analytical testing for gasoline, diesel, and volatile aromatic compounds are summarized on Tables 1 and 2. Polynuclear Aromatic Hydrocarbons were not detected and the concentrations of Lead detected were 10 ppm or lower.

TABLE 1
SUMMARY OF SOIL ANALYTICAL TEST DATA
(concentrations in parts per million)

<u>Sample</u>	<u>TPHgas/diesel</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl- Benzene</u>	<u>Total Xylenes</u>	<u>MTBE</u>
Removal of Tanks 1-4 March 5, 1997						
T1-S1, 13'	380/----	0.66	2.5	10	45	ND<0.8
T1-S2, 12.5'	160/----	0.18	1.4	2.6	7.8	0.53
T2-S1, 13'	1100/----	3.3	37	24	110	5.0
T2-S2, 12.5'	490/----	1.2	1.8	10	35	ND<2.7
T3-S1, 13'	240/----	1.1	7.6	5.9	31	5.4
T3-S2, 12.5'	97/----	1.4	1.0	2.5	9.4	30
T4-S1, 11'	----/300	0.14	0.16	0.45	0.39	1.0
T4-S2, 11'	----/550	0.046	0.12	0.42	0.35	0.52
D1-S1, 4'	----/2.6	4.5	0.15	0.81	2.3	10
D2-S1, 4'	530/----	11	32	9.1	43	6.7
PL1-S1, 4'	8.5/ND	1.4	0.63	0.36	0.90	5.6
Limited Remedial Excavation March 22, 1997						
OX1-S1, 13'	370/370	3.1	13	7.3	40	3.1
OX1-S2, 15'	2500/820	18	42	52	280	12
OX1-S3, 13'	1100/240	7.2	63	29	150	41
OX1-S4, 11'	260/50	1.9	15	5.9	32	16
OX1-S5, 12'	470/98	3.6	20	9.8	54	4.9
OX1-S6, 12'	330/32	6.1	24	7.5	39	11
OX2-S1, 13'	11/160	0.017	0.022	0.035	0.042	0.42
OX2-S2, 10'	79/84	0.19	0.14	1.4	3.4	ND<0.18
OX2-S3, 11'	69/400	0.036	0.053	0.052	0.22	ND<0.12
OX2-S4, 9'	93/190	0.18	ND	1.2	0.56	0.51
OX2-S5, 10'	20/16	0.009	0.032	0.055	0.077	0.25
OX3-S1, 14'	890/300	9.4	43	ND	110	3.9
OX3-S2, 14'	3800/120	25	230	20	500	14
OX3-S3, 14'	930/520	5.8	44	21	120	4.3
OX3-S4, 12'	75/91	0.091	0.13	1.0	1.4	0.77
OX3-S5, 14'	150/31	1.2	5.8	2.9	16	0.88
Removal of Tank 5 March 5, 1997						
T5-S, 8.5'	470/----	7.9	1.4	12	27	ND<1
T5-N, 8.5'	480/----	5.0	1.1	13	29	ND<0.2
D2-S2, 3'	250/90	3.6	7.0	6.6	40	3.7
D2-S3, 3'	11/ND	3.2	0.16	0.37	0.30	1.6

Notes: TPH reported as gasoline/diesel fuel.
N.D. indicates that concentrations below detection limit.
---- indicates constituent not analyzed.

TABLE 2

SUMMARY OF RECHARGED WATER ANALYTICAL TEST DATA
(concentrations in parts per billion)

<u>Sample</u>	<u>TPHgas/diesel</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl- Benzene</u>	<u>Total Xylenes</u>	<u>MTBE</u>
Removal of Tanks 1-4 March 5, 1997						
TX1-WS1,2	120,000/220,000	11,000	13,000	3,800	21,000	72,000
Limited Remedial Excavation March 22, 1997						
OX3-WS1,2	23,000/220,000	5,800	1,100	ND	3,700	18,000
Post Tank Install March 5, 1997						
T1-Grab	820/550	16	7.3	ND	150	5,000

Notes: TPH reported as gasoline/diesel fuel.

N.D. indicates that concentrations below detection limit.

TANK TRANSPORT AND DISPOSAL

The tanks were removed and transported from the property under hazardous waste manifest documentation by Erickson, Inc. (a licensed hazardous material transporter) for destruction at their treatment, storage, and disposal facility. The certificates of destruction for the tanks are included in Appendix B.

FINDINGS

Low to moderate concentrations of Total Petroleum Hydrocarbons as gasoline and Total Petroleum Hydrocarbons as diesel remain in the soil and the ground water following the tank removal and excavation action. High concentrations of Benzene and MTBE were detected in the initial soil and the ground water "grab" samples; however the subsequent samples exhibited significantly reduced concentrations.

LIMITATIONS

We have only observed a small portion of the pertinent soil conditions present at the site. Subsurface conditions across the site have been extrapolated from information obtained from review of existing documents and from the field investigation. The conclusions made herein are based on the assumption that soil conditions do not deviate appreciably from those described in the reports and observed during the field investigation.

Geo Plexus, Incorporated provides consulting services in the fields of Geology and Engineering Geology performed in accordance with presently accepted professional practices. Professional judgments presented herein are based partly on information obtained from review of published documents, partly on evaluations of the technical information gathered, and partly on general experience in the fields of geology and engineering geology.

No attempt was made to verify the accuracy of the published information prepared by others used in preparation of this assessment report.

If you have questions regarding the findings, conclusions, or recommendations contained in this report, please contact us. We appreciate the opportunity to serve you.

Geo Plexus, Incorporated



Source: Thomas Brothers Maps

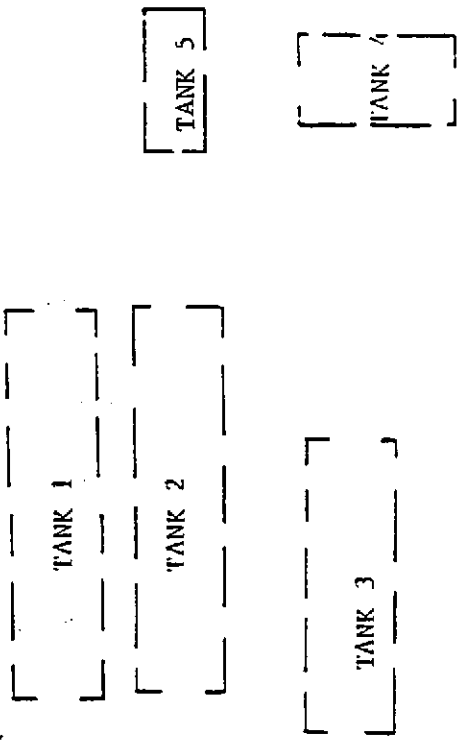
GeoPlexus, Inc.

REDWOOD GAS STATION		
DATE 3/20/97	SCALE n/a	DRAWN BY dcg
LOCATION PLAN		
Figure 1		

WASHINGTON AVE.

EXISTING BLDG.

SIDEWALK



DISPENSING ISLANDS

SAN PABLO AVE.



NOTE: Dimensions are approximate by taping from property corners.

REDWOOD GAS STATION SITE PLAN

DATE: | SCALE: 1"=10' | DRAWN BY: dcg

800 SAN PABLO AVE.

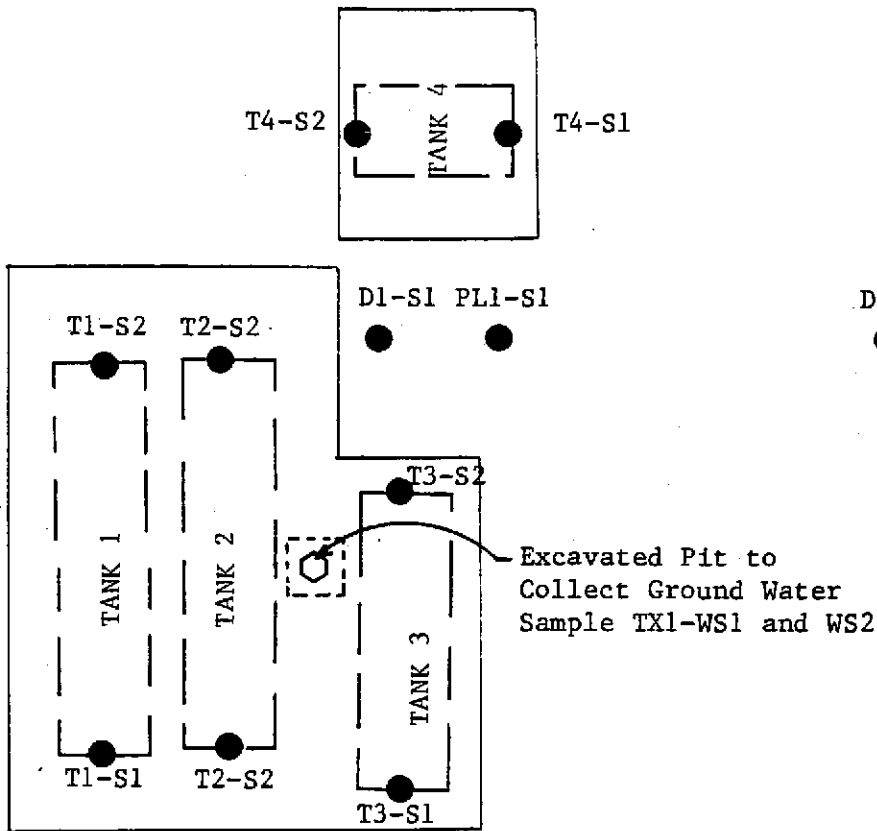
Figure 2

WASHINGTON AVE.

EXISTING BLDG.

SIDEWALK

SAN PABLO AVE.



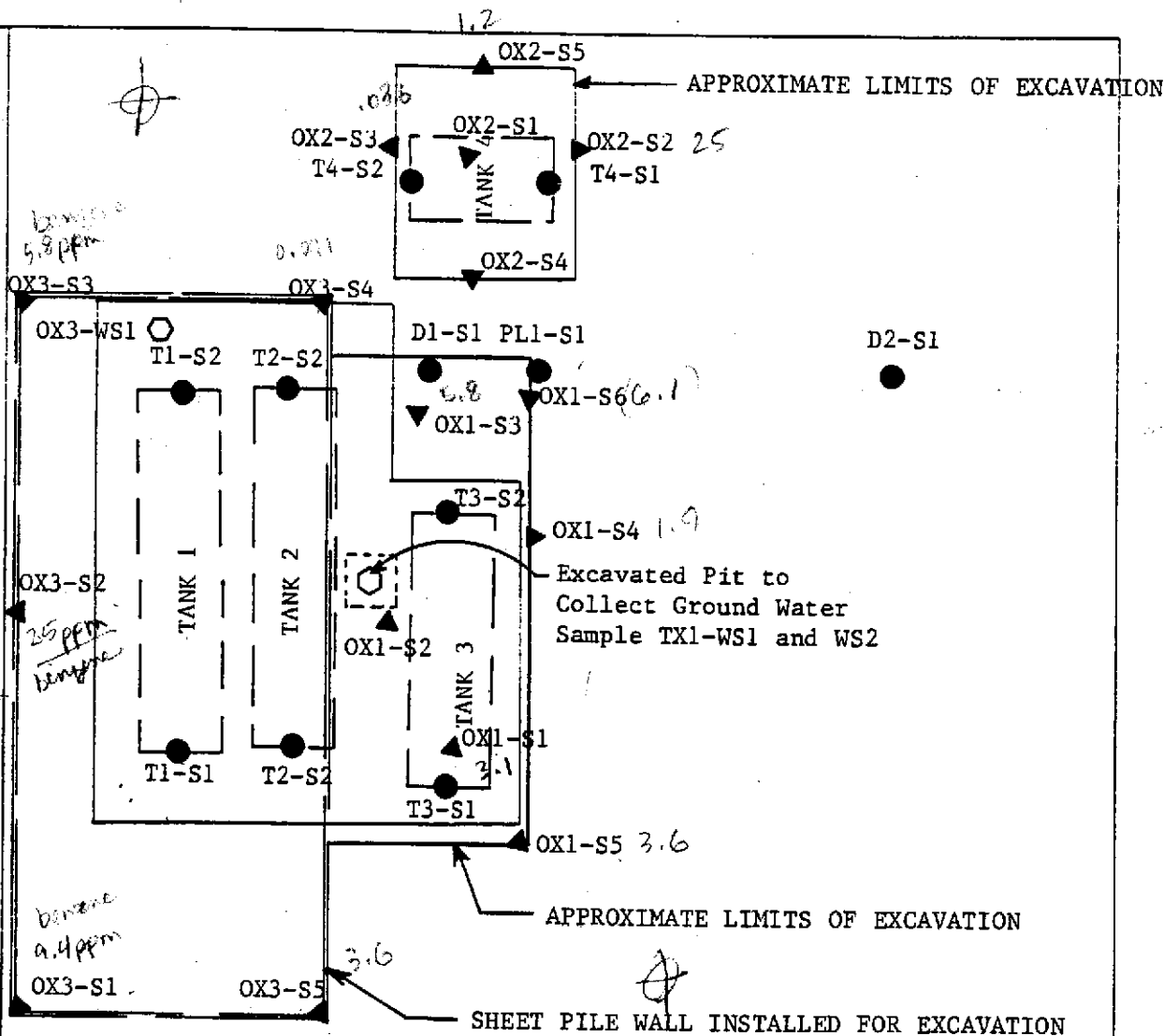
Samples T1-S1,2; T2-S1,2; T3-S1,2; T4-S1,2 and D1-S1; D2-S1, PL1-S1 and TX1-WS1,2 collected 3/5/97



NOTE: Dimensions are approximate by taping from property corners.

SAMPLE LOCATION PLAN		
DATE	SCALE 1"=10'	DRAWN BY dcg
800 SAN PABLO AVE.		
Figure 3		

WASHINGTON AVE.



- Indicates Samples Collected at Tank Removal on March 5, 1997
- ▲ Indicates Samples Collected following Excavation Activities on March 22, 1997

NOTE: Dimensions are approximate by taping from property corners.

SAMPLE LOCATION PLAN		
DATE	SCALE 1"=10'	DRAWN BY dcb
800 SAN PABLO AVE.		
Figure 4		

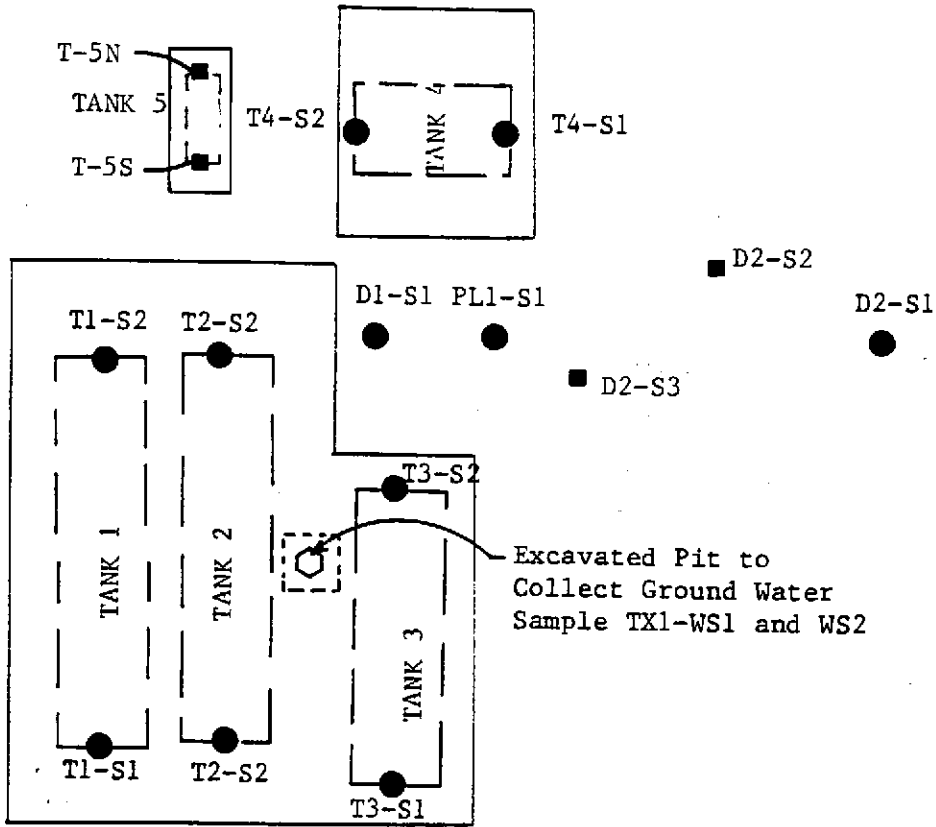
GeoPlexus, Inc.

Auto Body Repair Shop

WASHINGTON AVE.

EXISTING BLDG.
SIDEWALK

SAN PABLO AVE.



Samples T1-S1,2; T2-S1,2; T3-S1,2; T4-S1,2 and
D1-S1; D2-S1, PL1-S1 and TX1-WS1,2
collected 3/5/97

Samples T-5N and T-5S collected on 5/31/97

Samples D2-S2 and D2-S3 collected on 4/1/97



NOTE: Dimensions are approximate by
taping from property corners.

SAMPLE LOCATION PLAN		
DATE	SCALE 1"=10'	DEGREE deg
800 SAN PABLO AVE.		
		Figure 5

APPENDIX A

ANALYTICAL TEST DATA

AGP304

PROJECT NUMBER		PROJECT NAME				Number of Cntnrs	Type of Containers	Type of Analysis				Condition of Samples	Initial	
C97-001		REDWOOD GAS						TPH GAS/BTEX/MTBE	TPH/L	TOTAL LEAD	BTEX/MTBE			
Send Report Attention of:			Report Due	Verbal Due										
DAVID GLICK			1 1	1 1										
Sample Number	Date	Time	Comp	Grab	Station Location									
T1-S1	3/5/97	11:20		/	TANK #1 SOUTH END, 13 FT.	1 EA.	6" BRASS TURE	X	X				74126	
T1-S2		11:40		/	TANK #1 NORTH END, 12.5 FT.			X	X				74127	
T2-S1		11:30		/	TANK #2 SOUTH END, 13 FT.			X	X				74128	
T2-S2		11:55		/	TANK #2 NORTH END, 12.5 FT.			X	X				74129	
T3-S1		11:35		/	TANK #3 SOUTH END, 13 FT.			X	X				74130	
T3-S2		12:00		/	TANK #3 NORTH END, 12.5 FT.			X	X				74131	
T4-S1		12:05		/	TANK #4 EAST END, 11 FT.				X	X			74132	
T4-S2		12:15		/	TANK #4 WEST END, 11 FT.				X	X			74133	
D1-S1		12:35		/	DIESEL DISPENSOR 4 FT.				X	X			74134	
D2-S1		12:45		/	GASOLINE DISPENSOR 4 FT.			X	X				74135	
PL-S1		12:25		/	PRODUCT LINE 4 FT.			X	X	X			74136	

Relinquished by: (Signature) <i>J. George</i>	Date/Time 3/5/97 19:55	Received by: (Signature) <i>T. Wall</i>	Date/Time 3/5/97 19:55	Remarks: STANDARD TURNAROUND
Relinquished by: (Signature) <i>T. Wall</i>	Date/Time 3/6/97 1705	Received by: (Signature) <i>Carl</i>	Date/Time 3/6/97 1705	
Relinquished by: (Signature) <i>Robert</i>	Date/Time 3/6/97 1915	Received by: (Signature) <i>Angela</i>	Date/Time 3/6/97 1915	

ICE/	✓	VOAS	✓	O&G	✓	METALS	✓	OTHER	✓
GOOD CONDITION	✓	PRESERVATIVE	✓	APPROPRIATE	✓	CONTAINER	✓		✓

AGP304

PROJECT NUMBER		PROJECT NAME				Number of Cntrs	Type of Containers	Type of Analysis					Condition of Samples	Initial
C 97-001		REDWOOD GAS						TPH GAS / BTEX / APTS	TPHD	TPH	VALUET BUI	JS 7/13/97		
Send Report Attention of:		Report Due		Verbal Due										
DAVID GLICK		/ /		/ /										
Sample Number	Date	Time	Comp	Grab	Station Location									
STK1-S1	3/5/97	13:20		/	STOCKPILE	1 EA.	6" BRASS TUBE							
STK1-S2		13:25		/	↓	↓	COMPOSITE	✓	✓	X		74137		
STK1-S3		13:35		/										
STK1-S4		13:40		/										
STK1-S5		13:45		/										
STK1-S6		13:55		/										
STK1-S7		14:00		/										
STK1-S8	Y	14:05		/										
Relinquished by: (Signature)		Date/Time	Received by: (Signature)		Date/Time	Remarks: STANDARD TURNAROUND								
<i>D. George</i>		3/5/97 19:55	<i>[Signature]</i>		3/5/97 19:55									
Relinquished by: (Signature)		Date/Time	Received by: (Signature)		Date/Time									
<i>[Signature]</i>		3/6/97 1705	<i>[Signature]</i>		3/6/97 1705	ICET°	ICET° ✓	PRESCRIPTIVE	VOAS	O&G	METALS	OTM		
Relinquished by: (Signature)		Date/Time	Received by: (Signature)		Date/Time	GOOD CONDITION	GOOD CONDITION ✓	APPROPRIATE						
<i>[Signature]</i>		3/6/97 1918	<i>[Signature]</i>		3/6/97 1918	HEAD SPACE	HEAD SPACE ABSENT ✓	CONTAINERS ✓						

PROJECT NUMBER		PROJECT NAME				Number of Cntrs	Type of Containers	Type of Analysis			Condition of Samples	Initial
C97-001		REDWOOD GAS						TPH GAS/BTEX/MTBE	TPHD	BTEX/MTBE		
Send Report Attention of:		Report Due		Verbal Due		Sample Number	Date	Time	Comp	Grab	Station Location	
DAVID GLICK		/ /		/ /								
WZ	TX1-WS1A	3/5/97	14:15	/	TANK EXCAVATION PIT, ~13 FT.	1 EA.	ACIDIFIED 40ML VOA	X			74139	
PZ	TX1-WS1B	↓	14:40	/	↓	↓	↓	X			74140	
PZ	TX1-WS2	↓	15:00	/	↓	↓	1 LITER BOTTLE	X	DN		74141	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Remarks: STANDARD TURN AROUND ICE? <input checked="" type="checkbox"/> PRESERVATIVE <input checked="" type="checkbox"/> GOOD CONDITION <input checked="" type="checkbox"/> APPROPRIATE CONTAINERS <input checked="" type="checkbox"/> HEAD SPACE ABSENT <input checked="" type="checkbox"/>
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	

Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054	Client Project ID:# C97-001; Redwood Gas	Date Sampled: 03/05/97
		Date Received: 03/06/97
	Client Contact: David Glick	Date Extracted: 03/06-03/10/97
	Client P.O:	Date Analyzed: 03/06-03/10/97

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

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) ⁺	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
74126	T1-S1	S	380,b,d	ND< 0.8	0.66	2.5	10	45	98
74127	T1-S2	S	160,b,d	0.53	0.18	1.4	2.6	7.8	99
74128	T2-S1	S	1100,b,d	5.0	3.3	37	24	110	99
74129	T2-S2	S	490,b,d	ND< 2.7	1.2	1.8	10	35	99
74130	T3-S1	S	240,b,d	5.4	1.1	7.6	5.9	31	97
74131	T3-S2	S	97,a	30	1.4	1.0	2.5	9.4	96
74132	T4-S1	S	---	1.0	0.14	0.16	0.45	0.39	98
74133	T4-S2	S	---	0.52	0.046	0.12	0.42	0.35	97
74134	D1-S1	S	---	10	4.5	0.15	0.81	2.3	93
74135	D2-S1	S	530,a	6.7	11	32	9.1	43	105
74136	PL-S1	S	8.5,a	5.6	1.4	0.63	0.36	0.90	95
74137	STKP-S1-S4	S	120,b,d	ND< 0.5	0.10	1.2	0.84	6.3	97
74138	STKP-S5-S8	S	320,b,d	ND< 1.3	0.22	1.9	3.2	25	96
74139	TX1-WS1A	W	120,000,a,h	52,000	11,000	13,000	3800	21,000	104
74140	TX1-WS1B	W	110,000,a,h	72,000	15,000	12,000	3500	19,000	99
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	50 ug/L	5.0	0.5	0.5	0.5	0.5	0.5	
	S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	0.005	

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

cluttered chromatogram; sample peak coelutes with surrogate peak

⁺ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant (aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553

Tele: 510-798-1620 Fax: 510-798-1622

Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054	Client Project ID: # C97-001; Redwood Gas	Date Sampled: 03/05/97
		Date Received: 03/06/97
	Client Contact: David Glick	Date Extracted: 03/06-03/07/97
	Client P.O:	Date Analyzed: 03/06-03/07/97

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

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d) ⁺	% Recovery Surrogate
74132	T4-S1	S	300,a	104
74133	T4-S2	S	550,a	105
74134	D1-S1	S	2.6,d	104
74136	PL-S1	S	ND	104
74137	STKP-S1-S4	S	110,d	105
74138	STKP-S5-S8	S	390,d,b	105
74141	TX1-WS2	W	220,000,d	99
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

⁺ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054	Client Project ID:# C97-001; Redwood Gas	Date Sampled: 03/05/97
		Date Received: 03/06/97
	Client Contact: David Glick/John Sutfin	Date Extracted: 03/13/97
	Client P.O:	Date Analyzed: 03/14/97

LUFT Metals *

EPA analytical methods 6010/200.7, 239.2⁺

Lab ID	Client ID	Matrix	Extraction ^o	Cadmium	Chromium	Lead	Nickel	Zinc	% Rec. Surrogate
74137-38	STK1 (S1-S8)	S	TTLC	ND	30	7.3	29	32	107
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	S	TTLC	0.5 mg/kg	0.5	3.0	2.0	1.0		
	W	TTLC	0.005 mg/L	0.005	0.005	0.05	0.05		
	---	STLC,TCLP	0.01 mg/L	0.05	0.2	0.05	0.05		

* soil samples and sludge are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L

⁺ Lead is analysed using EPA method 6010 (ICP) for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples

^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

[&] reporting limit raised due matrix interference

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.

Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054	Client Project ID:# C97-001; Redwood Gas	Date Sampled: 03/05/97
		Date Received: 03/06/97
	Client Contact: David Glick	Date Extracted: 03/07/97
	Client P.O:	Date Analyzed: 03/10/97

Lead*

EPA analytical methods 6010/200.7, 239.2*

Lab ID	Client ID	Matrix	Extraction ^o	Lead*	% Recovery Surrogate
74126	T1-S1	S	TTLC	10	99
74127	T1-S2	S	TTLC	8.4	96
74128	T2-S1	S	TTLC	8.3	100
74129	T2-S2	S	TTLC	7.3	99
74130	T3-S1	S	TTLC	9.4	99
74131	T3-S2	S	TTLC	10	101
74135	D2-S1	S	TTLC	8.4	101
74136	PL-S1	S	TTLC	7.2	102
Reporting Limit unless otherwise stated; ND means not detected above the re- porting limit	S	TTLC	3.0 mg/kg		
	W	TTLC	0.005 mg/L		
	---	STLC,TCLP	0.2 mg/L		

* soil and sludge samples are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L

+ Lead is analysed using EPA method 6010 (ICP)for soils, sludges, 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

& reporting limit raised due matrix interference

j) 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.

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
 Tele: 510-798-1620 Fax: 510-798-1622

Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054	Client Project ID:# C97-001; Redwood Gas	Date Sampled: 03/05/97
		Date Received: 03/06/97
	Client Contact: David Glick/John Sutfin	Date Extracted: 03/13/97
	Client P.O:	Date Analyzed: 03/13/97

RCI (Reactivity, Corrosivity & Ignitability)

CA Title 22, Section 66261.21-66261.23

Lab ID	Client ID	Matrix	Reactivity ⁺	Corrosivity (pH)	Ignitability ^o
74137-38	STK1 (S1-S8)	S	negative	8.17 @ 25.6°C	negative

⁺ negative means no obvious reaction with water, no evolution of gas upon contact with water, appears to contain no reactive cyanide or sulfide (< ~ 5 mg/kg cyanide and 50 mg/kg sulfide by EPA SW-846, chapter 7, modified), and shows no indication of explosivity.

^o negative for a soil means the absence of spontaneous combustion and the absence of flammability upon exposure to a naked flame.

QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/06/97

Matrix: Water

Analyte	Concentration (mg/L) Sample (#74060)			Amount Spiked	% Recovery		RPD
	MS	MSD			MS	MSD	
TPH (gas)	0.0	98.4	97.3	100.0	98.4	97.3	1.2
Benzene	0.0	9.6	9.4	10.0	96.0	94.0	2.1
Toluene	0.0	10.0	9.6	10.0	100.0	96.0	4.1
Ethyl Benzene	0.0	10.4	10.0	10.0	104.0	100.0	3.9
Xylenes	0.0	30.9	30.0	30.0	103.0	100.0	3.0
TPH (diesel)	0	135	129	150	90	86	4.5
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

* Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/07/97

Matrix: Water

Analyte	Concentration (mg/L) Sample (#74177)			Amount Spiked	% Recovery		RPD
	MS	MSD			MS	MSD	
TPH (gas)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethyl Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Xylenes	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TPH (diesel)	0	135	119	150	90	79	12.8
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/10/97

Matrix: Water

Analyte	Concentration (mg/L)			Amount Spiked	% Recovery		
	Sample (#74177)	MS	MSD		MS	MSD	RPD
TPH (gas)	0.0	99.0	91.4	100.0	99.0	91.4	8.0
Benzene	0.0	9.6	9.0	10.0	96.0	90.0	6.5
Toluene	0.0	10.0	9.3	10.0	100.0	93.0	7.3
Ethyl Benzene	0.0	10.3	9.6	10.0	103.0	96.0	7.0
Xylenes	0.0	30.7	28.7	30.0	102.3	95.7	6.7
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/07/97-03/10/97

Matrix: Soil

Analyte	Concentration (mg/kg) Sample (#68840)			Amount Spiked	% Recovery		RPD
	MS	MSD			MS	MSD	
TPH (gas)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Xylenes	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TPH (diesel)	0	314	294	300	105	98	6.4
TRPH (oil and grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/06/97

Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		RPD
	Sample (#68848)	MS	MSD		MS	MSD	
TPH (gas)	0.000	1.788	1.802	2.03	88	89	0.8
Benzene	0.000	0.186	0.192	0.2	93	96	3.2
Toluene	0.000	0.190	0.198	0.2	95	99	4.1
Ethylbenzene	0.000	0.184	0.192	0.2	92	96	4.3
Xylenes	0.000	0.550	0.566	0.6	92	94	2.9
TPH (diesel)	0	318	321	300	106	107	0.8
TRPH (oil and grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/10/97

Matrix: Soil

Analyte	Concentration (mg/kg) Sample (#68848)			Amount Spiked	% Recovery		RPD
	MS	MSD	MSD		MS	MSD	
TPH (gas)	0.000	1.858	1.882	2.03	92	93	1.3
Benzene	0.000	0.180	0.180	0.2	90	90	0.0
Toluene	0.000	0.186	0.188	0.2	93	94	1.1
Ethylbenzene	0.000	0.180	0.180	0.2	90	90	0.0
Xylenes	0.000	0.536	0.532	0.6	89	89	0.7
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil and grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR METALS

Date: 03/14/97

Matrix: Soil

Extraction: TTLC

Analyte	Concentration (mg/kg, mg/L)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
Arsenic	0.0	5.2	5.0	5.0	105	99	5.4
Selenium	0.0	4.8	4.6	5.0	95	92	4.0
Molybdenum	0.0	5.3	5.2	5.0	106	104	1.9
Silver	0.0	0.4	0.4	0.5	85	82	2.7
Thallium	0.0	4.1	4.0	5.0	82	80	1.5
Barium	0.0	4.1	4.0	5.0	82	80	2.3
Nickel	0.0	4.7	4.6	5.0	94	93	1.1
Chromium	0.0	5.1	4.9	5.0	101	99	2.1
Vanadium	0.0	5.0	4.9	5.0	100	98	2.5
Beryllium	0.0	5.3	5.1	5.0	106	102	3.3
Zinc	0.0	5.0	4.9	5.0	100	98	2.7
Copper	0.0	4.5	4.4	5.0	89	88	2.0
Antimony	0.0	4.3	4.1	5.0	85	82	3.4
Lead	0.0	4.6	4.5	5.0	92	90	1.8
Cadmium	0.0	5.1	4.9	5.0	101	98	3.7
Cobalt	0.0	4.7	4.6	5.0	94	91	3.6
Mercury	0.000	0.254	0.265	0.25	102	106	4.2

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR ICP and/or AA METALS

Date: 03/09/97-03/10/97

Matrix: Soil

Extraction: TTLC

Analyte	Concentration (mg/kg, mg/L, ug/wip)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
Total Lead	0.0	4.64	4.63	5.0	93	93	0.2
Total Cadmium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Chromium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Nickel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Zinc	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Copper	N/A	N/A	N/A	N/A	N/A	N/A	N/A
STLC Lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

8043

AGP310

PROJECT NUMBER		PROJECT NAME				Number of Cntrns	Type of Containers	Type of Analysis										Condition of Samples	Initial	
C97001		REDWOOD A13																		
Send Report Attention of:			Report Due		Verbal Due															
DAVID ALICK			/ /		/ /															
Sample Number	Date	Time	Comp	Grab	Station Location			TPH	g	BTX	MTBE	TPH	diesel							
OX1-51	3/22/97	734		/	EXCAVATION 1 BOTTOM SOUTH -13'	1EA	U'BR33 TUBE	✓		✓								74638		
OX1-52		734		/	EXCAVATION 1 BOTTOM CENTER -13'			✓		✓								74639		
OX1-53		743		/	EXCAVATION 1 BOTTOM NORTH -13'			✓		✓								74640		
OX1-54		740		/	EXCAVATION 1 EAST WATI -11'			✓		✓								74641		
OX1-55		749		/	EXCAVATION 1 SE WATI -12'			✓		✓								74642		
OX1-56		753		/	EXCAVATION 1 N WATI -12'			✓		✓								74643		
OX2-51		755		/	EXCAVATION 2 BOTTOM CENTER -13'			✓		✓								74644		
OX2-52		759		/	EXCAVATION 2 EAST WATI -10'			✓		✓								74645		
OX2-53		801		/	EXCAVATION 2 WEST WATI -11'			✓		✓								74646		
OX2-54		805		/	EXCAVATION 2 SOUTH WATI -9'			✓		✓								74647		
OX2-55		807		/	EXCAVATION 2 NORTH WATI -10'			✓		✓								74648		
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time		Remarks: STANDARD TRENCHING 1 of 2												
[Signature]		3/24/97 1430		Ernie Walter		3/24/97														
Ernie Walter		3/24/97 1740		Denny Milenic MAI		3/24/97														
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time														
[Signature]				[Signature]																
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time														
[Signature]				[Signature]																

A6P310

PROJECT NUMBER		PROJECT NAME				Number of Cntrs	Type of Containers	Type of Analysis				Condition of Samples	Initial
C97001		REDWOOD GAS						TPH	BTEX	VOC	MPBC		
Send Report Attention of:			Report Due		Verbal Due								
DAVID ALICE			/ /		/ /								
Sample Number	Date	Time	Comp	Grab	Station Location								
+ OX3-W31 A3	3/22/97	825		1	EXCAVATION 3 WATER	2EA	Audited 40ml vials	✓					74649
+ OX3-W32	↓	825		1	↓	1EA	1 LTR AMB02		✓				74650
OX3-31	3/22/97	835		1	EXCAVATION 3 SW WALL -14'	1EA	W/GRASS TUBE	✓	✓				74651
OX3-32	↓	836		1	EXCAVATION 3 WEST WALL ESPACE -14'			✓	✓				74652
OX3-33	↓	837		1	EXCAVATION 3 NW WALL -14'			✓	✓				74653
OX3-34	↓	838		1	EXCAVATION 3 NE WALL -12'			✓	✓				74654
OX3-35	↓	839		1	EXCAVATION 3 SE WALL -14'			✓	✓				
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time		Remarks: STANDARD TURNAROUND 2 of 2					
<i>[Signature]</i>		3/24/97 1435		Emin Walters #02		3/24/97 1740							
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time							
<i>[Signature]</i>		3/24/97		Genny Milenic									
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time							

Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054	Client Project ID: # C97001; Redwood Gas	Date Sampled: 03/22/97
		Date Received: 03/24/97
	Client Contact: David Glick	Date Extracted: 03/24-03/25/97
	Client P.O:	Date Analyzed: 03/24-03/26/97

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

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) ⁺	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
74638	OX1-S1	S	370,b,d	3.1	3.1	13	7.3	40	97
74639	OX1-S2	S	2500,b,d	12	18	42	52	280	100
74640	OX1-S3	S	1100,b,d	41	7.2	63	29	150	101
74641	OX1-S4	S	260,b,d	16	1.9	15	5.9	32	99
74642	OX1-S5	S	470,b,d	4.9	3.6	20	9.8	54	97
74643	OX1-S6	S	330,a	11	6.1	24	7.5	39	108 [#]
74644	OX2-S1	S	11,g,d	0.42	0.017	0.022	0.035	0.042	95
74645	OX2-S2	S	79,g,d	ND< 0.18	0.19	0.14	1.4	3.4	94
74646	OX2-S3	S	69,g,d	ND< 0.12	0.036	0.053	0.052	0.22	96
74647	OX2-S4	S	93,g,d	0.51	0.18	ND< 0.01	1.2	0.56	98
74648	OX2-S5	S	20,g,d	0.25	0.009	0.032	0.055	0.077	99
74649	OX3-WS1A	W	23,000,a	18,000	5800	1100	ND< 13	3700	102
74650	OX3-S1	S	890,a	3.9	9.4	43	20	110	102
74651	OX3-S2	S	3800,a	14	25	230	97	500	108 [#]
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	50 ug/L	5.0	0.5	0.5	0.5	0.5	0.5	
	S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	0.005	

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

[#] cluttered chromatogram; sample peak coelutes with surrogate peak

⁺ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant (aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054	Client Project ID: # C97001; Redwood Gas	Date Sampled: 03/22/97
		Date Received: 03/24/97
	Client Contact: David Glick	Date Extracted: 03/24-03/25/97
	Client P.O:	Date Analyzed: 03/24-03/26/97

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

Lab ID	Client ID	Matrix	TPH(g) ⁺	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
74652	OX3-S3	S	930,a	4.3	5.8	44	21	120	100
74653	OX3-S4	S	75,b,d	0.77	0.091	0.13	1.0	1.4	98
74654	OX3-S5	S	150,a	0.88	1.2	5.8	2.9	16	96
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	50 ug/L	5.0	0.5	0.5	0.5	0.5	0.5	
	S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, and all TCLP extracts in mg/L
 # cluttered chromatogram; sample peak coelutes with surrogate peak
 + The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054	Client Project ID: # C97001; Redwood Gas	Date Sampled: 03/22/97
		Date Received: 03/24/97
	Client Contact: David Glick	Date Extracted: 03/24-03/25/97
	Client P.O:	Date Analyzed: 03/24-03/25/97

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

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d) ⁺	% Recovery Surrogate
74638	OX1-S1	S	370,d	108
74639	OX1-S2	S	820,d	99
74640	OX1-S3	S	240,d	106
74641	OX1-S4	S	50,d	96
74642	OX1-S5	S	98,d	107
74643	OX1-S6	S	32,d	98
74644	OX2-S1	S	160,a,d	107
74645	OX2-S2	S	84,d,b	109
74646	OX2-S3	S	400,a	100
74647	OX2-S4	S	190,a,d	100
74648	OX2-S5	S	16,d,a	109
74649	OX3-WS2	W	3200,d	109
74650	OX3-S1	S	300,d	107
74651	OX3-S2	S	120,d	99
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	
	S		1.0 mg/kg	

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054	Client Project ID: # C97001; Redwood Gas	Date Sampled: 03/22/97
		Date Received: 03/24/97
	Client Contact: David Glick	Date Extracted: 03/24-03/25/97
	Client P.O:	Date Analyzed: 03/24-03/25/97

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

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d) ⁺	% Recovery Surrogate
74652	OX3-S3	S	520,d	98
74653	OX3-S4	S	91,a,d	108
74654	OX3-S5	S	31,d	109
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	
	S		1.0 mg/kg	

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/24/97

Matrix: Soil

Analyte	Concentration (mg/kg) Sample (#68839)			Amount Spiked	% Recovery		RPD
	MS	MSD			MS	MSD	
TPH (gas)	0.000	1.953	2.140	2.03	96	105	9.1
Benzene	0.000	0.210	0.200	0.2	105	100	4.9
Toluene	0.000	0.214	0.210	0.2	107	105	1.9
Ethylbenzene	0.000	0.206	0.204	0.2	103	102	1.0
Xylenes	0.000	0.612	0.606	0.6	102	101	1.0
TPH (diesel)	0	328	319	300	109	106	2.9
TRPH (oil and grease)	0.0	21.3	20.9	20.8	102	100	1.9

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/26/97

Matrix: Soil

Analyte	Concentration (mg/kg) Sample (#68850)			Amount Spiked	% Recovery		RPD
	MS	MSD			MS	MSD	
TPH (gas)	0.000	2.060	2.144	2.03	101	106	4.0
Benzene	0.000	0.230	0.208	0.2	115	104	10.0
Toluene	0.000	0.238	0.216	0.2	119	108	9.7
Ethylbenzene	0.000	0.228	0.212	0.2	114	106	7.3
Xylenes	0.000	0.676	0.630	0.6	113	105	7.0
TPH (diesel)	0	334	334	300	111	111	0.0
TRPH (oil and grease)	0.0	24.9	25.0	20.8	120	120	0.4

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/24/97

Matrix: Water

Analyte	Concentration (mg/L) Sample (#74563)			Amount Spiked	% Recovery		RPD
	MS	MSD			MS	MSD	
TPH (gas)	0.0	101.4	100.8	100.0	101.4	100.8	0.6
Benzene	0.0	9.9	9.8	10.0	99.0	98.0	1.0
Toluene	0.0	10.3	10.2	10.0	103.0	102.0	1.0
Ethyl Benzene	0.0	10.4	10.4	10.0	104.0	104.0	0.0
Xylenes	0.0	31.1	31.3	30.0	103.7	104.3	0.6
TPH (diesel)	0	139	139	150	93	92	0.2
TRPH (oil & grease)	0	24800	24900	23700	105	105	0.4

* Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/26/97

Matrix: Water

Analyte	Concentration (mg/L) Sample (#74673)			Amount Spiked	% Recovery		RPD
	MS	MSD			MS	MSD	
TPH (gas)	0.0	105.3	97.0	100.0	105.3	97.0	8.2
Benzene	0.0	8.8	9.3	10.0	88.0	93.0	5.5
Toluene	0.0	9.1	9.7	10.0	91.0	97.0	6.4
Ethyl Benzene	0.0	9.9	10.1	10.0	99.0	101.0	2.0
Xylenes	0.0	29.9	30.6	30.0	99.7	102.0	2.3
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	0	26500	26400	23700	112	111	0.4

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

8385AGP313

PROJECT NUMBER		PROJECT NAME				Number of Cntrns	Type of Containers	Type of Analysis				Condition of Samples	Initial				
Send Report Attention of:		Report Due	Verbal Due		TPH-S/PTX/MIB			Pb-total	TPH-D	PNA (8270)							
Sample Number	Date	Time	Comp	Grab	Station Location												
C97001	Redwood G60, Albany CA																
David Glick		1	1	1	1												
T-5 south	3/31/97	11:00			soil	1	2XG ^{of} _{SS}	X	X			FU	DFA				
T-5 north		11:10			"	1	2XG ^a _{SS}	X	X			FU	DFA				
T-1 grab		11:35			water	2	VOA	X				FU	DFA				
T-1 grab		11:35			"	2	amber		X	X		FU	DFA				
D2-S2	4/1/97	09:35			soil	1	2XG ^u _{SS}	X	X			FU	DFA				
DD-53	"	09:55			"	1	2XG ^u _{SS}	X	X			FU	DFA				
<p style="text-align: right;">75046 75046 75047 75048 75049</p>																	
ICE/T			PRESERVATIVE			VGAS			ORG			METALS			OTHER		
GOOD CONDITION			APPROPRIATE														
HEAD SPACE ABSENT			CONTAINERS														
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time		Remarks:									
David Glick		4/1/97		SUD 819		4-1 10:15		Normal TAT									
SUD 819		4-1 10:50		Nikki Price		4-1-97 10:50											

Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054	Client Project ID: # C97001; Redwood Gass, Albany	Date Sampled: 03/31-04/01/97
		Date Received: 04/01/97
	Client Contact: David Glick	Date Extracted: 04/01-04/04/97
	Client P.O:	Date Analyzed: 04/01-04/04/97

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

Lab ID	Client ID	Matrix	TPH(g) ⁺	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
75045	T-5 South	S	470,a	ND< 1	7.9	1.4	12	27	99
75046	T-5 North	S	480,a	ND< 0.2	5.0	1.1	13	29	115 [#]
75047	T-1 grab	W	820,a	5000	16	7.3	ND< 0.8	150	94
75048	D2-S2	S	250,a	3.7	3.6	7.0	6.6	40	100
75049	DD-S3	S	11,c	1.6	3.2	0.16	0.37	0.30	98
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	50 ug/L	5.0	0.5	0.5	0.5	0.5	0.5	
	S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	0.005	

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

[#] cluttered chromatogram; sample peak coelutes with surrogate peak

⁺ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
 Tele: 510-798-1620 Fax: 510-798-1622

Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054	Client Project ID: # C97001; Redwood Gass, Albany	Date Sampled: 03/31-04/01/97
		Date Received: 04/01/97
	Client Contact: David Glick	Date Extracted: 04/01/97
	Client P.O.:	Date Analyzed: 04/01/97

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

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d) ⁺	% Recovery Surrogate
75047	T-1 grab	W	550,d	113
75048	D2-S2	S	90,d	109
75049	DD-S3	S	ND	106
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	
	S		1.0 mg/kg	

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

Geo Plexus, Inc. 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054	Client Project ID: # C97001; Redwood Gass, Albany	Date Sampled: 03/31-04/01/97
	Client Contact: David Glick	Date Received: 04/01/97
	Client P.O:	Date Extracted: 04/01/97
		Date Analyzed: 04/02/97

Lead*

EPA analytical methods 6010/200.7, 239.2*

Lab ID	Client ID	Matrix	Extraction ^o	Lead*	% Recovery Surrogate
75045-46	T-5 North/South	S	TTLC	8.9	94
Reporting Limit unless otherwise stated; ND means not detected above the re- porting limit	S	TTLC	3.0 mg/kg		
	W	TTLC	0.005 mg/L		
	---	STLC,TCLP	0.2 mg/L		

* soil and sludge samples are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L
 + Lead is analysed using EPA method 6010 (ICP) for soils, sludges, 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
 & reporting limit raised due matrix interference
 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.

QC REPORT FOR HYDROCARBON ANALYSES

Date: 04/01/97

Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		
	Sample (#74209)	MS	MSD		MS	MSD	RPD
TPH (gas)	0.000	1.876	1.803	2.03	92	89	4.0
Benzene	0.000	0.190	0.192	0.2	95	96	1.0
Toluene	0.000	0.206	0.200	0.2	103	100	3.0
Ethylbenzene	0.000	0.194	0.190	0.2	97	95	2.1
Xylenes	0.000	0.580	0.568	0.6	97	95	2.1
TPH (diesel)	0	333	326	300	111	109	2.1
TRPH (oil and grease)	0.0	22.8	22.8	20.8	110	110	0.0

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 04/04/97

Matrix: Soil

Analyte	Concentration (mg/kg) Sample (#74209)			Amount Spiked	% Recovery		RPD
	MS	MSD	MSD		MS	MSD	
TPH (gas)	0.000	1.851	1.822	2.03	91	90	1.6
Benzene	0.000	0.182	0.188	0.2	91	94	3.2
Toluene	0.000	0.194	0.202	0.2	97	101	4.0
Ethylbenzene	0.000	0.186	0.188	0.2	93	94	1.1
Xylenes	0.000	0.552	0.562	0.6	92	94	1.8
TPH (diesel)	0	336	336	300	112	112	0.2
TRPH (oil and grease)	0.0	22.5	22.1	20.8	108	106	1.8

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 04/01/97

Matrix: Water

Analyte	Concentration (mg/L)			Amount Spiked	% Recovery		RPD
	Sample (#74791)	MS	MSD		MS	MSD	
TPH (gas)	0.0	88.7	97.4	100.0	88.7	97.4	9.4
Benzene	0.0	9.1	9.5	10.0	91.0	95.0	4.3
Toluene	0.0	9.3	9.8	10.0	93.0	98.0	5.2
Ethyl Benzene	0.0	9.5	10.2	10.0	95.0	102.0	7.1
Xylenes	0.0	28.1	30.6	30.0	93.7	102.0	8.5
TPH (diesel)	0	140	139	150	93	93	0.9
TRPH (oil & grease)	0	24000	23400	23700	101	99	2.5

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 04/04/97

Matrix: Water

Analyte	Concentration (mg/L)			Amount Spiked	% Recovery		
	Sample (#75116)	MS	MSD		MS	MSD	RPD
TPH (gas)	0.0	89.1	100.6	100.0	89.1	100.6	12.1
Benzene	0.0	8.2	9.2	10.0	82.0	92.0	11.5
Toluene	0.0	8.6	9.8	10.0	86.0	98.0	13.0
Ethyl Benzene	0.0	8.7	10.0	10.0	87.0	100.0	13.9
Xylenes	0.0	25.9	29.6	30.0	86.3	98.7	13.3
TPH (diesel)	0	140	134	150	93	89	4.1
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR METALS

Date: 04/02/97

Matrix: Soil

Extraction: TTLC

Analyte	Concentration (mg/kg, mg/L)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
Arsenic	0.0	4.7	4.8	5.0	95	95	0.7
Selenium	0.0	4.6	4.6	5.0	91	91	0.0
Molybdenum	0.0	4.9	4.9	5.0	97	98	1.4
Silver	0.0	0.5	0.5	0.5	94	95	0.6
Thallium	0.0	4.3	4.3	5.0	86	85	1.0
Barium	0.0	4.3	4.3	5.0	85	86	0.6
Nickel	0.0	4.6	4.7	5.0	93	94	1.0
Chromium	0.0	4.9	5.0	5.0	99	100	1.2
Vanadium	0.0	4.6	4.6	5.0	91	92	0.6
Beryllium	0.0	5.5	5.5	5.0	110	110	0.2
Zinc	0.0	4.9	5.0	5.0	99	99	0.7
Copper	0.0	4.4	4.4	5.0	88	87	0.8
Antimony	0.0	4.3	4.3	5.0	87	87	0.0
Lead	0.0	4.5	4.6	5.0	91	92	0.9
Cadmium	0.0	4.8	4.8	5.0	96	96	0.0
Cobalt	0.0	4.7	4.7	5.0	94	95	0.8
Mercury	0.000	0.254	0.265	0.25	102	106	4.2

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

McCAMPBELL ANALYTICAL

110 2nd AVENUE, # D7
PACHECO, CA 94553

(510) 798-1620

FAX (510) 798-1622

REPORT TO: Ed HAMILTON

BILL TO: MAI

PROJECT NUMBER: 8385

PROJECT NAME: G-C97001/RG

PROJECT LOCATION:

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH 24 HOUR 48 HOUR 5 DAY ROUTINE

ANALYSIS REQUEST

OTHER

SUBM #: 9704030 REP: MV
CLIENT: MCCAM
DUE: 04/08/97
REF #: 32875

SAMPLE ID	LOCATION	SAMPLING		# CONTAINERS	TYPE CONTAINERS	MATRIX					METHOD PRESERVED						
		DATE	TIME			WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3	ICE	OTHER			
T-1 grab		3/31/97	11:35	1	Ltr	X							X				

EPA 601/8010	
EPA 602/8020	
EPA 608/8080	
EPA 508/8080 - PCBs Only	
EPA 624/8240/8260	
EPA 625/8270	
CAM - 17 Metals	
EPA - Priority Pollutant Metals	
LUF Metals	
LEAD (7240/7421/239.2/8010)	
ORGANIC LEAD	
RCI	
PNA's	X

COMMENTS

75047

RELINQUISHED BY: <i>Maida Puccia</i>	DATE: 4/1/97	TIME: 1656	RECEIVED BY: <i>[Signature]</i>
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY: <i>[Signature]</i>	DATE: 2/7/97	TIME: 1800	RECEIVED BY LABORATORY: <i>Chris Rowley</i>

REMARKS:

CHROMALAB, INC.

Environmental Services (SDB)

April 8, 1997

Submission #: 9704030

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: G-C97001/BG
Received: April 1, 1997

Project#: 8385

re: One sample for Polynuclear Aromatic Hydrocarbons (PAHs) analysis.
Method: SW846 Method 8270A Nov 1990

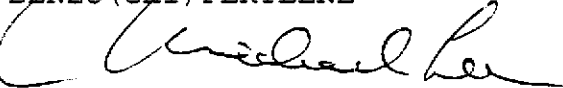
Client Sample ID: T-1 GRAB

Spl#: 124167
Sampled: March 31, 1997

Matrix: WATER
Run#: 6167

Extracted: April 7, 1997
Analyzed: April 7, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
NAPHTHALENE	N.D.	2.0	N.D.	--	1
ACENAPHTHYLENE	N.D.	2.0	N.D.	--	1
ACENAPHTHENE	N.D.	2.0	N.D.	67.3	1
FLUORENE	N.D.	5.0	N.D.	--	1
PHENANTHRENE	N.D.	2.0	N.D.	--	1
ANTHRACENE	N.D.	2.0	N.D.	--	1
FLUORANTHENE	N.D.	2.0	N.D.	--	1
PYRENE	N.D.	2.0	N.D.	96.3	1
BENZO (A) ANTHRACENE	N.D.	2.0	N.D.	--	1
CHRYSENE	N.D.	2.0	N.D.	--	1
BENZO (B) FLUORANTHENE	N.D.	2.0	N.D.	--	1
BENZO (K) FLUORANTHENE	N.D.	2.0	N.D.	--	1
BENZO (A) PYRENE	N.D.	2.0	N.D.	--	1
INDENO (1, 2, 3-CD) PYRENE	N.D.	2.0	N.D.	--	1
DIBENZO (A, H) ANTHRACENE	N.D.	2.0	N.D.	--	1
BENZO (GH) PERYLENE	N.D.	2.0	N.D.	--	1



Michael Lee
Chemist



Chip Poalinelli
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

April 8, 1997

Submission #: 9704030

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: G-C97001/BG
Received: April 1, 1997

Project#: 8385

re: **Surrogate** report for 1 sample for Polynuclear Aromatic
Method: SW846 Method 8270A Nov 1990
Lab Run#: 6167
Matrix: WATER

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
124167-1	T-1 GRAB	NITROBENZENE-D5	68.5	35-114
124167-1	T-1 GRAB	2-FLUOROBIPHENYL	73.6	43-116
124167-1	T-1 GRAB	TERPHENYL-D14	139	33-141

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
125064-1	Reagent blank (MDB)	NITROBENZENE-D5	86.2	35-114
125064-1	Reagent blank (MDB)	2-FLUOROBIPHENYL	85.0	43-116
125064-1	Reagent blank (MDB)	TERPHENYL-D14	94.2	33-141
125065-1	Spiked blank (BSP)	NITROBENZENE-D5	62.9	35-114
125065-1	Spiked blank (BSP)	2-FLUOROBIPHENYL	68.3	43-116
125065-1	Spiked blank (BSP)	TERPHENYL-D14	99.2	33-141
125066-1	Spiked blank duplicate (BSD)	NITROBENZENE-D5	68.0	35-114
125066-1	Spiked blank duplicate (BSD)	2-FLUOROBIPHENYL	72.4	43-116
125066-1	Spiked blank duplicate (BSD)	TERPHENYL-D14	94.6	33-141

S105
OCSURR1229 MIKELEE 08-Apr-97 11

APPENDIX B

UST TRANSPORTATION MANIFEST DOCUMENTS

970175

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. Manifest Document No. 2. Page 1

CA14C100010178121911 | 171082 | 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

ALBANY HILL MINI MANT.
 300 SAN PABLO, CA. 94706

4. Generator's Phone (510) 526-8170

5. Transporter 1 Company Name

EPICKSON INC

6. US EPA ID Number

CA14D10094146131912

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

WILSON-KAL...
 10000...
 ... CA. 95601

10. US EPA ID Number

CA14D10094146131912

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No. Type 13. Total Quantity 14. Unit Wt/Vol

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol
	No.	Type		
a. ...	012	...	16000	...
b. ...				
c. ...				
d. ...				

15. Special Handling Instructions and Additional Information

... Always wear hazmat when ...
 Contact Name MOHINDER S. SIKAND (510) 526-8170

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this shipment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name Signature Month Day Year
 MOHINDER S SIKAND 03 05 97

17. Transporter 1 Acknowledgment of Receipt of Materials
 Printed/Typed Name Signature Month Day Year
 DENNIS L ESTER 03 05 97

18. Transporter 2 Acknowledgment of Receipt of Materials
 Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
 Printed/Typed Name Signature Month Day Year
 DAVID SATO DAVE SATO 03 05 97

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. CA100101072122111710717	Manifest Document No. 970175	2. Page 1 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address ALBANY HILL MINI MART 300 South Pacific Ave. Albany, CA 94706					
4. Generator's Phone (510) 526-9170					
5. Transporter 1 Company Name ERICKSON INC			6. US EPA ID Number CA100094166392		
7. Transporter 2 Company Name					
9. Designated Facility Name and Site Address ERICKSON INC 300 SOUTH PACIFIC AVE. ALBANY, CA 94706					
10. US EPA ID Number CA1001010998650312					
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol	
a. HAZARDOUS WASTE SOLID		2 DRUM	15000	LB	
b.					
c.					
d.					
15. Special Handling Instructions and Additional Information Keep away from sources of ignition. Always wear hardhat when working around drums. Contact HomeMatters SIKANO (510) 526-9170					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name MOHINDER S SIVANO		Signature <i>[Signature]</i>		Month Day Year 03 05 97	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name DAN BAILEY		Signature <i>[Signature]</i>		Month Day Year 03 05 97	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. Printed/Typed Name DAVID SATO		Signature <i>[Signature]</i>		Month Day Year 03 05 97	

DO NOT WRITE BELOW THIS LINE.

DAY OR NIGHT
TELEPHONE
(510) 235-1393

CERTIFICATE
CERTIFIED SERVICES COMPANY

22444th Boulevard - Richmond, California 94801

NO. 23105

CUSTOMER
SUPERIOR UNDER
JOB NO.
970175

FOR: ERICKSON, INC. TANK NO. 19735

LOCATION: RICHMOND DATE: 97/03/17 TIME: 15:05

TEST METHOD VISUAL GASTECH/1314 SMPN LAST PRODUCT ULG

This is to certify that I have personally determined that this tank is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE 10000 GALLON TANK CONDITION SAFE FOR FIRE

REMARKS: OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1%
ERICKSON, INC. HEREBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN
PROPERLY OPEN, PROCESSED, AND THEREFORE DESTROYED AT OUR PERMITTED HAZARDOUS
WASTE FACILITY.
ERICKSON, INC. HAS THE APPROPRIATE PERMITS FOR, AND HAS ACCEPTED THE TANK
DELIVERED TO US FOR PROCESSING.

In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or if in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

STANDARD SAFETY DESIGNATION

SAFE FOR MEN: Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Inspector, the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Inspector's certificate.

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) In the judgment of the Inspector, the residues are not capable of producing a higher concentration than permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.

REPRESENTATIVE

TITLE

INSPECTOR

DAY OR NIGHT
TELEPHONE
(510) 235-1393

CERTIFICATE
CERTIFIED SERVICES COMPANY
2501st Boulevard - Richmond, California 94801

NO. 23104

CUSTOMER
SUPERIOR UNDER
JOB NO.
970175

FOR: ERICKSON, INC. TANK NO. 19734

LOCATION: RICHMOND DATE: 97/03/17 TIME: 15:05

TEST METHOD VISUAL GASTECH/1314 SMPN LAST PRODUCT ULG

This is to certify that I have personally determined that this tank is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE 10000 GALLON TANK CONDITION SAFE FOR FIRE

REMARKS: OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1%
ERICKSON, INC. HEREBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN
INSPECTION, PROCESSED, AND THEREFORE DESTROYED AT OUR PERMITTED HAZARDOUS
WASTE FACILITY.
ERICKSON, INC. HAS THE APPROPRIATE PERMITS FOR, AND HAS ACCEPTED THE TANK
TURNED TO US FOR PROCESSING.

In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or if in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

STANDARD SAFETY DESIGNATION

SAFE FOR MEN: Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Inspector, the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Inspector's certificate.

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) In the judgment of the Inspector, the residues are not capable of producing a higher concentration that permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate. and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.

[Signature] REPRESENTATIVE TITLE [Signature] INSPECTOR

DAY OR NIGHT
TELEPHONE
(510) 235-1393

CERTIFICATE CERTIFIED SERVICES COMPANY

255 Parr Boulevard • Richmond, California 94801

NO. 23106

CUSTOMER
SUPERIOR UNDER
JOB NO.
970175

FOR: ERICKSON, INC. TANK NO. 19736

LOCATION: RICHMOND DATE: 97/03/17 TIME: 15:05

TEST METHOD VISUAL GASTECH/1314 SMPN LAST PRODUCT ULG

This is to certify that I have personally determined that this tank is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE 6000 GALLON TANK CONDITION SAFE FOR FIRE

REMARKS: OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1%
ERICKSON, INC. HEREBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN
PROCESSED, AND THEREFORE DESTROYED AT OUR PERMITTED HAZARDOUS
WASTE FACILITY.
ERICKSON, INC. HAS THE APPROPRIATE PERMITS FOR, AND HAS ACCEPTED THE TANK
SHIPPED TO US FOR PROCESSING.

In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or if in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

STANDARD SAFETY DESIGNATION

SAFE FOR MEN: Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Inspector, the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Inspector's certificate.

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) In the judgment of the Inspector, the residues are not capable of producing a higher concentration that permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.

REPRESENTATIVE [Signature] TITLE _____ INSPECTOR [Signature]

DAY OR NIGHT
TELEPHONE
(510) 235-1393

CERTIFICATE

CERTIFIED SERVICES COMPANY

255 Parr Boulevard • Richmond, California 94801

NO. 23107

CUSTOMER
SUPERIOR UNDER
JOB NO.
970175

FOR: ERICKSON, INC. TANK NO. 19737

LOCATION: RICHMOND DATE: 97/03/17 TIME: 15:05

TEST METHOD VISUAL GASTECH/1314 SMPN LAST PRODUCT D

This is to certify that I have personally determined that this tank is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE 2000 GALLON TANK CONDITION SAFE FOR FIRE

REMARKS: OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1%
ERICKSON, INC. HEREBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN
TESTED, OPEN, PROCESSED, AND THEREFORE DESTROYED AT OUR PERMITTED HAZARDOUS
WASTE FACILITY.
ERICKSON, INC. HAS THE APPROPRIATE PERMITS FOR, AND HAS ACCEPTED THE TANK
TRANSFERRED TO US FOR PROCESSING.

In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or if in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

STANDARD SAFETY DESIGNATION

SAFE FOR MEN. Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Inspector, the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Inspector's certificate.

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) In the judgment of the Inspector, the residues are not capable of producing a higher concentration than permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.

Chase REPRESENTATIVE TITLE D. W. S. INSPECTOR

970366

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. CAL000178291		Manifest Document No. 01058		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address Mohinder Sikand 800 San Pablo Ave. - Albany, Calif.		4. Generator's Phone (510) 526-8170		5. Transporter 1 Company Name Dexanna		6. US EPA ID Number CAD982438566			
7. Transporter 2 Company Name		8. US EPA ID Number		9. Designated Facility Name and Site Address Erickson, Inc. 255 Parr Blvd. Richmond, CA. 94801		10. US EPA ID Number CAD009466392			
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) NON-RCRA Hazardous Waste Solid Waste Empty Storage Tank.		12. Containers No. Type 001 TP		13. Total Quantity 00250 P		14. Unit Wt/Vol P			
15. Special Handling Instructions and Additional Information Keep away from sources of ignition. Always wear hardhats when working around U.G.S.T.'s 24 Hr. Contact Name Mohinder Sikand (510) 526-8170 Site Location: 800 San Pablo Ave. - Albany, Calif.									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled; and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.									
Printed/Typed Name MOHINDER SIKAND				Signature <i>Mohinder Sikand</i>		Month Day Year 03 31 97			
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name James P. Cox				Signature <i>James P. Cox</i>		Month Day Year 03 31 97			
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name				Signature		Month Day Year			
19. Discrepancy Indication Space									
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. Printed/Typed Name DAVID SATO									
				Signature <i>David Sato</i>		Month Day Year 03 23 19 97			

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDf SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
 (Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

DAY OR NIGHT
TELEPHONE
(510) 235-1393

CERTIFICATE CERTIFIED SERVICES COMPANY

255 Parr Boulevard • Richmond, California 94801

NO. 13551

CUSTOMER
SUPERIOR UNDERGROUND
JOB NO.
970366

FOR: ERICKSON, INC. TANK NO. 19920

LOCATION: RICHMOND, CA DATE: 04/07/97 TIME: 05:00 PM

TEST METHOD VISUAL/GASTEC (O2/LEL) METER LAST PRODUCT WASTE OIL

This is to certify that I have personally determined that this tank is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE 750 GALLONS CONDITION SAFE FOR FIRE

REMARKS: OXYGEN, 20.9%; LOWER EXPLOSIVE LIMIT (LEL), LESS THAN 0.1 %

ERICKSON, INC. HEREBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN
CUT OPEN, PROCESSED, AND THEREFORE DESTROYED AT OUR PERMITTED HAZARDOUS
WASTE FACILITY.

ERICKSON, INC. HAS THE APPROPRIATE PERMITS FOR AND HAS ACCEPTED THE TANK
SHIPPED TO US FOR PROCESSING.

In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or if in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

STANDARD SAFETY DESIGNATION

SAFE FOR MEN: Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Inspector, the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Inspector's certificate.

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) In the judgment of the Inspector, the residues are not capable of producing a higher concentration that permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.

Francis Chang
REPRESENTATIVE

TITLE

Dave Sabo
INSPECTOR