

FACSIMILE

CAL

INC

TRANSMITTAL

to: Eva Chu

fax #: 510-337-9335

re: Camp Parks Bldg 558

date: 4/13/98

pages: 18, including cover sheet. Please give me
a call if you do not receive all of the pages of
this fax.

4/17/98
 Approved use
 to backfill pit
 pit highest contains soil
 on top.

Attached are analytical data obtained
from the stockpile samples and overexcavation
samples near the dispenser (see map). Camp Parks
would like to use the remaining stockpile as
backfill. (1A-1D through 3A-3D came from Gas
and diesel UST and 4A-4D from Waste Oil Tank.

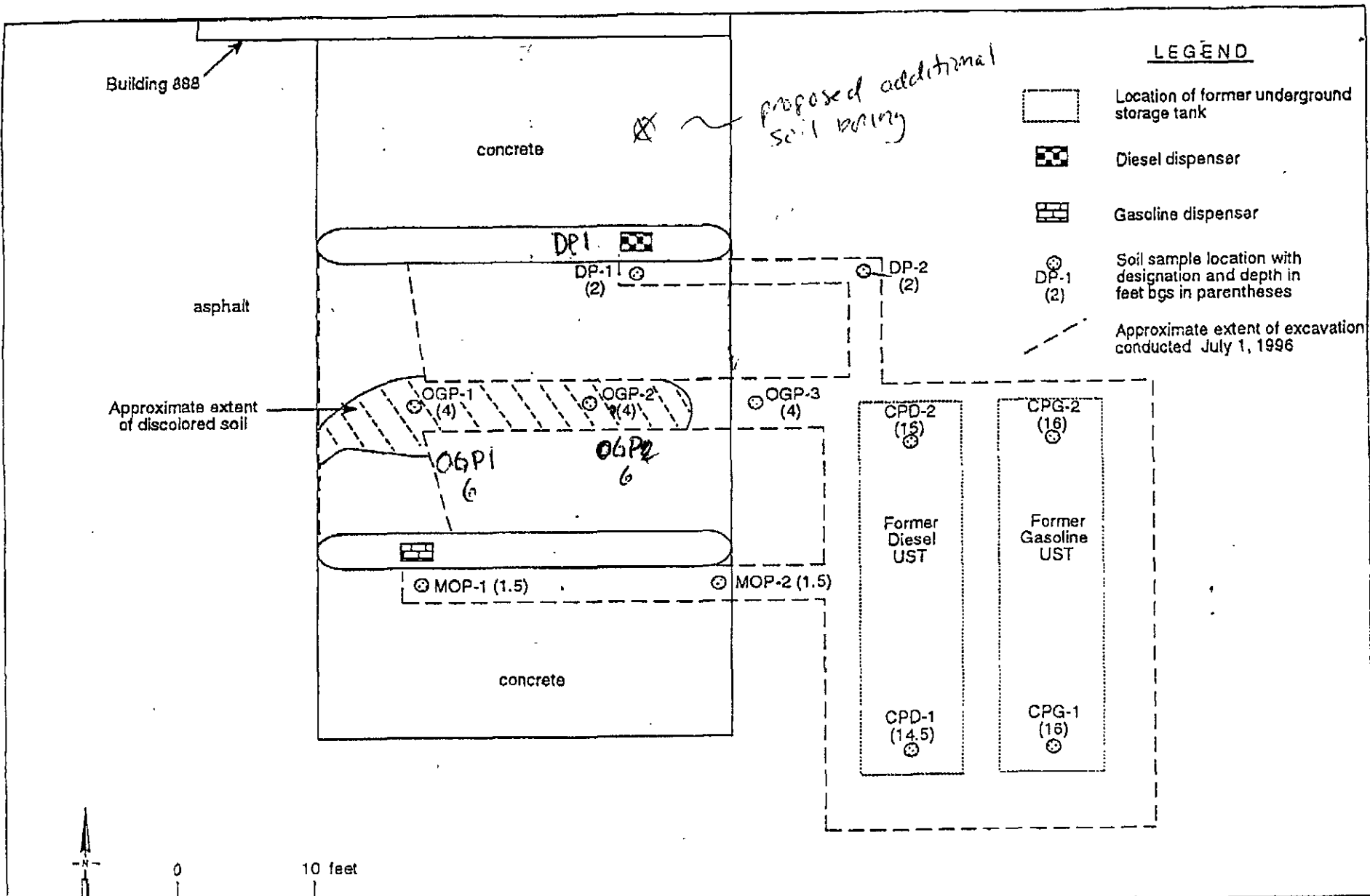
From the desk of...

Thank you & have a great day!

Cleudio Avila

CAL INC.
P.O. Box 6327
Vacaville, CA 95696-6327

(707)446-7996
Fax: (707)446-4906



Project No. ORHZ005	PRFTA/HAZWRAP	SAMPLE LOCATION MAP	Figure 4
Woodward-Clyde			



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710. Phone (510) 486-0900

COVER PAGE


Laboratory Number 131776

CAL Inc.
2040 Peabody Rd.
Suite 400
Vacaville, CA 95687

Project#: 2809
Location: Camp Parks

Sample ID	Lab ID
S-1218-1A-1D	131776-001
S-1218-2A-2D	131776-002
S-1218-3A-3D	131776-003
S-1218-4A-4D	131776-004
RINSATE BLANK	131776-005

I certify that this data package has been reviewed for technical correctness and completeness. Please see attached narrative for a discussion of any analytical problems related to this sample set. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 
Title: Operations Manager


Date: 1/8/98

Signature: 
Title: Project Manager

Date: 1/8/98

CHAIN OF CUSTODY FORM

P.04

Curtis & Tompkins, Ltd.
 Analytical Laboratories, Since 1878

 2323 Fifth Street
 Berkeley, CA 94710
 (510) 486-0900 Phone
 (510) 486-0532 Fax

C&T
 LOGIN # 131770

Project No: 2809
 Project Name: Camp Parks
 Project P.O.:
 Turnaround Time: 2 weeks

Sampler: Claudio Anla
 Report To: Claudio Anla
 Company: CAC INC
 Telephone: 907-446-7996
 Fax: 446-4906

Analyses

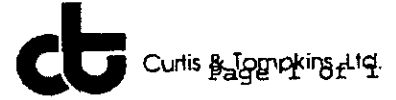
Lab Number	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative				Field Notes	Analyses
			Soil	Water	Waste		HCl	H ₂ SO ₄	HNO ₃	ICE		
	S-1218-1A-1D	12/18/97	X			4					Composite 4:1	TPH6 (8015)
	S-1218-2A-2D	12/18/97	X			4					Composite 4:1	BTEX/MTBE (8020)
	S-1218-3A-3D	12/18/97	X			4					Composite 4:1	TPHD (8015)
	S-1218-4A-4D	12/18/97	X			4					Composite 4:1	H ₂ O ₂ (8010)
	Rinsule Blank	12/18/97		X		5	✓					Semi Volatile (8270)
												Oil & Grease (5520 E/F)
												Cd, Cr, Pb, Zn, Ni, 6010/7000
												Total Lead

Notes:
 Client submitted 1 VOAS only
 No 8270
 J. 12/19/97

RELINQUISHED BY:		RECEIVED BY:	
<i>Claudio Anla</i>	12-19-97 0600		
	DATE/TIME		DATE/TIME
	DATE/TIME		DATE/TIME
	DATE/TIME	<i>Thomas K. Morris</i>	1430
	DATE/TIME	12/19/97	DATE/TIME

Signature on this form constitutes a firm Purchase Order for the services requested above.

Apr-13-98 08:57A

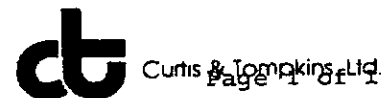


TVH-Total Volatile Hydrocarbons	
Client: CAL Inc.	Analysis Method: TVH
Project#: 2809	Prep Method: EPA 5030
Location: Camp Parks	

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
131776-001	S-1218-1A-1D	38305	12/18/97	12/30/97	12/30/97	
131776-002	S-1218-2A-2D	38305	12/18/97	12/30/97	12/30/97	
131776-003	S-1218-3A-3D	38305	12/18/97	12/30/97	12/30/97	
131776-004	S-1218-4A-4D	38305	12/18/97	12/30/97	12/30/97	

Matrix: Soil

Analyte	Units	131776-001	131776-002	131776-003	131776-004
Diln Fac:		1	1	1	1
Gasoline C7-C12	mg/Kg	<1	<1	<1	<1
Surrogate					
Bromofluorobenzene	%REC	76	96	94	75



BTXE

Client: CAL Inc.
 Project#: 2809
 Location: Camp Parks

Analysis Method: EPA 8020A
 Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
131776-001	S-1218-1A-1D	38305	12/18/97	12/30/97	12/30/97	
131776-002	S-1218-2A-2D	38305	12/18/97	12/30/97	12/30/97	
131776-003	S-1218-3A-3D	38305	12/18/97	12/30/97	12/30/97	
131776-004	S-1218-4A-4D	38305	12/18/97	12/30/97	12/30/97	

Matrix: Soil

Analyte	Units	131776-001	131776-002	131776-003	131776-004
Diln Fac:		1	1	1	1
MTBE	ug/Kg	<20	<20	<20	<20
Benzene	ug/Kg	<5	<5	<5	<5
Toluene	ug/Kg	<5	<5	<5	<5
Ethylbenzene	ug/Kg	<5	<5	<5	<5
m, p-Xylenes	ug/Kg	<5	<5	<5	<5
o-Xylene	ug/Kg	<5	<5	<5	<5
Surrogate					
Trifluorotoluene	%REC	83	84	83	90
Bromofluorobenzene	%REC	72	74	69	69



Curtis & Tompkins, Ltd.

Client: CAL Inc.

Laboratory Login Number: 131776

Project Name: Camp Parks
Project Number: 2809

Report Date: 06 January 98

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) METHOD: SMWW 17:5520EF

Lab #	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
131776-014	S-1218-4A-4D	Soil	18-DEC-97	19-DEC-97	29-DEC-97	170	mg/Kg	50	SDG	18288

↑
 put this soil near surface / cap -
 not near BW.

ND = Not Detected at or above Reporting Limit (RL).



TEH-Tot Ext Hydrocarbons	
Client: CAL Inc.	Analysis Method: EPA 8015M
Project#: 2809	Prep Method: CA LUFT
Location: Camp Parks	

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
131776-001	S-1218-1A-1D	38213	12/18/97	12/22/97	12/24/97	
131776-002	S-1218-2A-2D	38213	12/18/97	12/22/97	12/24/97	
131776-003	S-1218-3A-3D	38213	12/18/97	12/22/97	12/24/97	
131776-004	S-1218-4A-4D	38213	12/18/97	12/22/97	12/25/97	

Matrix: Soil

Analyte	Units	131776-001	131776-002	131776-003	131776-004
Diln Fac:		1	1	1	10
Diesel C12-C22	mg/Kg	2 YH	9.4YH	15 YH	620 YH
Surrogate					
Hexacosane	%REC	89	96	93	DO

DO: Surrogate diluted out
 Y: Sample exhibits fuel pattern which does not resemble standard
 H: Heavier hydrocarbons than indicated standard

Halogenated Volatile Organics
 EPA 8010 Analyte List

 Client: CAL Inc.
 Project#: 2809
 Location: Camp Parks

 Analysis Method: EPA 8260
 Prep Method: EPA 5030

 Field ID: S-1218-4A-4D
 Lab ID: 131776-004
 Matrix: Soil
 Batch#: 38207
 Units: ug/Kg
 Diln Fac: 1

 Sampled: 12/18/97
 Received: 12/19/97
 Extracted: 12/22/97
 Analyzed: 12/22/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Dibromochloromethane	ND	5.0
Bromoform	ND	10
Tetrachloroethene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Chlorobenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	103	68-126
Toluene-d8	88	87-125
Bromofluorobenzene	98	79-122



Semivolatile Organics by GC/MS

Client: CAL Inc.
 Project#: 2809
 Location: Camp Parks

Analysis Method: EPA 8270B
 Prep Method: EPA 3550

Field ID: S-1218-4A-4D
 Lab ID: 131776-004
 Matrix: Soil
 Batch#: 38304
 Units: ug/Kg
 Diln Fac: 1

Sampled: 12/18/97
 Received: 12/19/97
 Extracted: 12/29/97
 Analyzed: 12/31/97

Analyte	Result	Reporting Limit
Phenol	ND	330
2-Chlorophenol	ND	330
Benzyl alcohol	ND	330
2-Methylphenol	ND	330
3,4-Methylphenol	ND	330
2-Nitrophenol	ND	1700
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1700
2,4-Dichlorophenol	ND	330
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2,4-Dinitrophenol	ND	1700
4-Nitrophenol	ND	1700
4,6-Dinitro-2-methylphenol	ND	1700
Pentachlorophenol	ND	1700
N-Nitrosodimethylamine	ND	330
Aniline	ND	330
bis(2-Chloroethyl) ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
bis(2-Chloroisopropyl) ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
bis(2-Chloroethoxy) methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	1700
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1700
Dimethylphthalate	ND	330
Acenaphthylene	ND	330



Curtis & Tompkins, Ltd

Page 2 of 2

Semivolatile Organics by GC/MS

Field ID: S-1218-4A-4D	Sampled: 12/18/97
Lab ID: 131776-004	Received: 12/19/97
Matrix: Soil	Extracted: 12/29/97
Batch#: 38304	Analyzed: 12/31/97
Units: ug/Kg	
Diln. Fac: 1	

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1700
Acenaphthene	ND	330
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1700
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Benzidine	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1700
Benzo(a)anthracene	ND	330
Chrysene	ND	330
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b,k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenz(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	98	25-121
Phenol-d5	98	24-113
2,4,6-Tribromophenol	75	19-122
Nitrobenzene-d5	88	23-120
2-Fluorobiphenyl	94	30-115
Terphenyl-d14	114	18-137



Curtis & Tompkins, Ltd.

SAMPLE ID: S 1218-4A-4D
 LAB ID: 131776-004
 CLIENT: CAL Inc.
 PROJECT ID: 2909
 LOCATION: Camp Parks
 MATRIX: Soil

DATE SAMPLED: 12/18/97
 DATE RECEIVED: 12/19/97
 DATE REPORTED: 12/29/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	2.9	1	38218	EPA 6010A	12/23/97
Arsenic	4.7	0.24	1	38218	EPA 6010A	12/23/97
Barium	210	0.49	1	38218	EPA 6010A	12/23/97
Beryllium	0.46	0.098	1	38218	EPA 6010A	12/23/97
Cadmium	0.67	0.098	1	38218	EPA 6010A	12/23/97
Chromium (total)	36	0.49	1	38218	EPA 6010A	12/23/97
Cobalt	9.3	0.98	1	38218	EPA 6010A	12/23/97
Copper	39	0.49	1	38218	EPA 6010A	12/23/97
Lead	15	0.15	1	38218	EPA 6010A	12/23/97
Mercury	ND	0.095	1	38239	EPA 7471	12/23/97
Molybdenum	ND	0.98	1	38218	EPA 6010A	12/23/97
Nickel	39	0.98	1	38218	EPA 6010A	12/23/97
Selenium	0.38	0.24	1	38218	EPA 6010A	12/23/97
Silver	ND	0.49	1	38218	EPA 6010A	12/23/97
Thallium	2.7	0.24	1	38218	EPA 6010A	12/23/97
Vanadium	38	0.49	1	38218	EPA 6010A	12/23/97
Zinc	76	0.98	1	38218	EPA 6010A	12/23/97

ND = Not detected at or above reporting limit

CLIENT: CAL Inc.
 PROJECT ID: 2809
 LOCATION: Camp Parks
 MATRIX: Soil

DATE REPORTED: 12/29/97

Apr-13-98 09:00A

Metals Analytical Report

Lead


Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
S-1218-1A-1D	131776-001	12/18/97	12/19/97	6.9	0.14	1	38218	EPA 6010A	12/23/97
S-1218-2A-2D	131776-002	12/18/97	12/19/97	6.9	0.14	1	38218	EPA 6010A	12/23/97
S-1218-3A-3D	131776-003	12/18/97	12/19/97	6.6	0.14	1	38218	EPA 6010A	12/24/97



CHAIN OF CUSTODY FORM

Page ____ of ____

Analyses

Curtis & Tompkins, Ltd.
 Analytical Laboratories, Since 1878

 2323 Fifth Street
 Berkeley, CA 94710
 (510) 486-0900 Phone
 (510) 486-0532 Fax

C&T
 LOGIN # _____

132335

Project No: 2809
 Project Name: Camp Parks
 Project P.O.: _____
 Turnaround Time: 2-week

Sampler: Claudio Avila
 Report To: Claudio Avila
 Company: Cal Inc
 Telephone: 916-707-446-7996
 Fax: _____

Lab Number	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative				Field Notes	TPH _g /BTX (8015/8020)	TPH _D (8015)	Total Lead
			Soil	Water	Waste		HCl	H ₂ SO ₄	HNO ₃	ICE				
1	S-6-06P2	2/12/98	✓			1								
2	S-6-06P2D	2/12/98	✓			1								
3	S-5-DP1	2/12/98	✓			1								
4	S-6-06P1	2/12/98	✓			1								
For Laboratory Use														

Notes: Run MS/MSD

RELINQUISHED BY:

Claudio Avila 815 ²⁻¹²⁻⁹⁸ DATE/TIME
 _____ DATE/TIME
 _____ DATE/TIME

RECEIVED BY:

Cowl Wether 41498 0915 DATE/TIME
 _____ DATE/TIME
 _____ DATE/TIME

Signature on this form constitutes a firm Purchase Order for the services requested above.

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TVH-Total Volatile Hydrocarbons

Client: CAL Inc.
 Project#: 2809
 Location: Camp Parks

Analysis Method: TVH
 Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
132335-001	S-6-OGP2	39154	02/12/98	02/19/98	02/19/98	
132335-002	S-6-OGP2D	39154	02/12/98	02/19/98	02/19/98	
132335-003	S-5-DP1	39154	02/12/98	02/19/98	02/19/98	
132335-004	S-6-OGP1	39154	02/12/98	02/19/98	02/19/98	

Matrix: Soil

Analyte	Units	132335-001	132335-002	132335-003	132335-004
Diln Fac:		1	1	2	1
Gasoline C7-C12	mg/Kg	<1	<1	36 YH	<1
Surrogate					
Bromofluorobenzene	%REC	68	70	131	69

Y: Sample exhibits fuel pattern which does not resemble standard
 H: Heavier hydrocarbons than indicated standard



BTXE	
Client: CAL Inc.	Analysis Method: EPA 8020A
Project#: 2809	Prep Method: EPA 5030
Location: Camp Parks	

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
132335-001	S-6-OGP2	39154	02/12/98	02/19/98	02/19/98	
132335-002	S-6-OGP2D	39154	02/12/98	02/19/98	02/19/98	
132335-003	S-5-DP1	39154	02/12/98	02/19/98	02/19/98	
132335-004	S-6-OGP1	39154	02/12/98	02/19/98	02/19/98	

Matrix: Soil

Analyte	Units	132335-001	132335-002	132335-003	132335-004
Diln Fac:		1	1	2	1
MTBE	ug/Kg	<20	<20	<40	<20
Benzene	ug/Kg	<5	<5	<10	<5
Toluene	ug/Kg	<5	<5	42 C	<5
Ethylbenzene	ug/Kg	<5	<5	45 C	<5
m,p-Xylenes	ug/Kg	<5	<5	74	<5
o-Xylene	ug/Kg	<5	<5	160 C	<5
Surrogate					
Trifluorotoluene	%REC	84	84	87	85
Bromofluorobenzene	%REC	72	73	85	72

C: Presence of this compound confirmed by second column, however, the confirmation concentration differed from the reported result by more than a factor of two

can be biased high



TEH-Tot Ext Hydrocarbons	
Client: CAL Inc.	Analysis Method: EPA 8015M
Project#: 2809	Prep Method: CA LUFT
Location: Camp Parks	

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
132335-001	S-6-OGP2	39238	02/12/98	02/23/98	02/25/98	
132335-002	S-6-OGP2D	39238	02/12/98	02/23/98	02/25/98	
132335-003	S-5-DP1	39238	02/12/98	02/23/98	02/25/98	
132335-004	S-6-OGP1	39238	02/12/98	02/23/98	02/25/98	

Matrix: Soil

Analyte	Units	132335-001	132335-002	132335-003	132335-004
Diln Fac:		1	1	S-5-DP-1	1
Diesel C12-C22	mg/Kg	<1	<1	370	<1
Surrogate					
Hexacosane	%REC	90	94	85	89

CLIENT: CAL Inc.
PROJECT ID: 2809
LOCATION: Camp Parks
MATRIX: Soil

DATE REPORTED: 02/24/98

Apr-13-98 09:02A

Metals Analytical Report

Lead

Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
S-6-OGP2	132335-001	02/12/98	02/12/98	8.1	0.15	1	39144	EPA 6010A	02/23/98
S-6-OGP2D	132335-002	02/12/98	02/12/98	6.6	0.15	1	39144	EPA 6010A	02/23/98
S-5-DP1	132335-003	02/12/98	02/12/98	9.6	0.15	1	39144	EPA 6010A	02/23/98
S-6-OGP1	132335-004	02/12/98	02/12/98	5.9	0.15	1	39144	EPA 6010A	02/23/98



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