ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6777

ALAMEDA COUNTY ENVIRONMENTAL HEALTH LABORATORY

Certification No. 1816

Laboratory No: 96-050

Sample Identification: **Former Ramos Property, 5293 Crow Canyon Road, Castro Valley,CA**

Analysis Requested By: ~~**Madhulla Logan/Amy Leech**~~ Robert Kuenning

Date Collected: **7/25/96** Collected By: **Scott Ferriman**

Date Received: **7/25/96** Received By: **D. Wong**

Analysis Requested: **Metals: As, Cd, Cr, Cu, Ni, Pb, Zn. Total Oil & Grease, Polynuclear Aromatic Hydrocarbons.**

Background Information: **3 soil samples taken from the above location.**

ANALYTICAL RESULTS

Parameter	Observation or Results

See Attached Sheet

Conclusion: **Metal results and Total Oil & Grease indicated on attached sheets. Samples were forwarded to the State Hazardous Material Laboratory in Berkeley for analysis of arsenic and polynuclear aromatic hydrocarbons.**

Date Analysis Completed: **8/13/96** Chemist: **N. Leung**

Approved: D.W.S

Distribution: **Amy Leech, Jun Makishima.**

LABORATORY NUMBER: 96-050
SAMPLE NUMBER: STKP-(A-C)
CLIENT: FORMER RAMOS PROPERTY
5293 CROW CANYON ROAD
CASTRO VALLEY, CA

DATE SAMPLED: 7/25/96
DATE RECEIVED: 7/25/96
DATE REPORTED: 8/13/96

ANALYSIS: TOTAL OIL & GREASE
ANALYSIS METHOD: SOXHLET EXTRACTION 5520 E

LAB ID	SAMPLE ID	TOTAL OIL & GREASE
96-050-1	STKP-A	ND(0.1%)
96-050-2	STKP-B	0.2%
96-050-3	STKP-C	ND(0.1%)

ND=NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
REPORTING LIMIT INDICATED IN PARENTHESIS.

QA/QC SUMMARY

RPD %	0.1
RECOVERY %	109

LABORATORY NUMBER: 96-050-1
SAMPLE NUMBER: STKP-A
CLIENT: FORMER RAMOS PROPERTY
5293 CROW CANYON ROAD
CASTRO VALLEY, CA

DATE SAMPLED: 7/25/96
DATE RECEIVED: 7/25/96
DATE REPORTED: 8/13/96

METAL ANALYSIS RESULTS
DIGESTION METHOD: 3050

METAL	RESULT TTLC mg/kg	TTLC LIMIT mg/kg	STLC LIMIT mg/kg	METHOD
Cadmium	1	100	1.0	EPA 7130
Chromium	72	2,500	560	EPA 7210
Copper	23	2,500	25	EPA 7190
Lead	132	1,000	5.0	EPA 7420
Nickel	53	2,000	20	EPA 7520
Zinc	46	5,000	250	EPA 7950

QA/QC SUMMARY

	RPD, %	RECOVERY, %
Cadmium	2	98
Chromium	32	113
Copper	23	116
Lead	6	113
Nickel	10	100
Zinc	0	100

LABORATORY NUMBER: 96-050-2
SAMPLE NUMBER: STKP-B
CLIENT: FORMER RAMOS PROPERTY
5293 CROW CANYON ROAD
CASTRO VALLEY, CA

DATE SAMPLED: 7/25/96
DATE RECEIVED: 7/25/96
DATE REPORTED: 8/13/96

METAL ANALYSIS RESULTS
DIGESTION METHOD: 3050

METAL	RESULT TTLC mg/kg	TTLC LIMIT mg/kg	STLC LIMIT mg/kg	METHOD
Cadmium	1	100	1.0	EPA 7130
Chromium	69	2,500	560	EPA 7210
Copper	22	2,500	25	EPA 7190
Lead	24	1,000	5.0	EPA 7420
Nickel	35	2,000	20	EPA 7520
Zinc	59	5,000	250	EPA 7950

QA/QC SUMMARY

	RPD, %	RECOVERY, %
Cadmium	2	98
Chromium	32	113
Copper	23	116
Lead	6	113
Nickel	10	100
Zinc	0	100

LABORATORY NUMBER: 96-050-3
SAMPLE NUMBER: STKP-C
CLIENT: FORMER RAMOS PROPERTY
5293 CROW CANYON ROAD
CASTRO VALLEY, CA

DATE SAMPLED: 7/25/96
DATE RECEIVED: 7/25/96
DATE REPORTED: 8/13/96

METAL ANALYSIS RESULTS
DIGESTION METHOD: 3050

METAL	RESULT TTLC mg/kg	TTLC LIMIT mg/kg	STLC LIMIT mg/kg	METHOD
Cadmium	1	100	1.0	EPA 7130
Chromium	90	2,500	560	EPA 7210
Copper	36	2,500	25	EPA 7190
Lead	21	1,000	5.0	EPA 7420
Nickel	43	2,000	20	EPA 7520
Zinc	77	5,000	250	EPA 7950

QA/QC SUMMARY

	RPD, %	RECOVERY, %
Cadmium	2	98
Chromium	32	113
Copper	23	116
Lead	6	113
Nickel	10	100
Zinc	0	100

California Environmental Protection Agency
Department of Toxic Substances Control
Hazardous Materials Laboratory (Inorganic Section)
2151 Berkeley Way, Berkeley, CA 94704

Phone: (510) 540-3003 or (ATSS) 571-3003

HML #: 96015
96015

Collector's Name: **NEWTON LEUNG**
Site of Sampling: **FORMER RAMOS PROPERTY**
5293 CROW CANYON ROAD
CASTRO VALLEY

Auth. No.: **HMM2933**
Activity : **OTHERS**
Date Collected: **07/25/96**
Date Received: **07/31/96**

Analytical Procedure: EPA-SW 846

Samples are digested with 1:1 HNO3 (and 30% H202, and 1:1 HCl if applicable) over a hot plate. Digests are cooled, filtered and made to final volume with deionized H2O. Metal analysis of the digests is by ICPAES (EPA #6010). Units are mg/kg.

Method: **3050 for solids; 3010 for liquids; 3005 for clean water.**

HML Number:	960151	960152	960153
Collector's Sample No.:	STKP-A	STKP-B	STKP-C
Sample Type:	SOIL	SOIL	SOIL
As-Arsenic	<5.00	<5.00	<5.00

Notes: < = below detection limit of method.

Merlyn de Guzman 8/22/96
ICP Analyst, Date
Merlyn de Guzman

Zaida Ilejay 8/22/
Chemist's Signature Date
Zaida R. Ilejay, Chemist

Milad S. Iskander, Supervisor 8/23/96
Date

MSI (Rev.) 8/23/96

California Department of Toxic Substances Control
Hazardous Materials Laboratory
Inorganic Section

HML Number: 960151
to 960153

Quality Assurance Summary for ICP

Element	HML Soil QC Sample mg/kg			Method Blank mg/L	Calibration Verification Standard mg/L			Duplicate Spiked Sample			HML No.: 960153		Matrix: SOIL	
								Spike Results mg/kg			Unspiked Result (mg/kg)	Spike Added (mg/kg)	% Recovery	
	found	known	%		found	known	%	A:	B:	RPD			A:	B:
As-Arsenic	63.1	59.9	105	<0.04	1.02	1.00	102	428	427	0.23	<5.00	500	85.6	85.4
	HML Liquid QC Sample mg/kg			Reagent Blank mg/L	Inorganic Ventures Reference Standard mg/L			Duplicate Spiked Sample			HML No.: 960153		Matrix: SOIL	
								Spike Results mg/kg			Unspiked Result (mg/kg)	Spike Added (mg/kg)	% Recovery	
	found	known	%		found	known	%	A:	B:	RPD				
As-Arsenic				<0.04	10.1	10.0	101							

ICP Analyst's Signature: _____
Chemist: Zaida R. Ilejay
Date Analyzed: 08/22/96
Chemist's Signature: Zaida Ilejay

Milad S. Iskander, Supervisor: _____ Date: 8/23/96

State of California-California Environmental Protection Agency

Department of Toxic Substances Control
Hazardous Materials Laboratory

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

1. Authorization Number: H M M 2 9 3 3

HML No. 960151 To 960153

2. Page 1 of 1

3. Requester: NEWTON LEUNG 4. Phone (S/C) 567 - 6815

Address (To Receive Results): 1131 HARBOR BAY PARKWAY ALAMEDA CA 94502

5. Priority Level: 1 2 (3)

a. Authorized by

6. Date Sampled 7/25/96 7. Time Sampled 10 • 50 Hours

8. Codes (fill in all applicable codes)

a. STC	3000
b. Region	02
c. INDEX	6110
d. PCA	36200
e. MPC	
f. SITE	
g. County	01

9. Activity: ☐ SEB ☐ SMB ☐ FPB ☐ FMB ☐ HQ ☑ OTHER

10. SAMPLING LOCATION

a. EPA ID No.

b. Site FORMER RAMOS PROPERTY

c. Address 5293 (Number) CROW CANYON ROAD (Street) CASTRO VALLEY (City) ? (Zip)

11. SAMPLES

a. ID	b. Collector's No.	c. Lab No.	d. Sample Type	e. Container Type	f. Size	g. Field Information
A	STKP-A	960151	SOIL	3 BRASS TUBES		
B	STKP-B	960152	SOIL	BRASS TUBES		
C	STKP-C	960153	SOIL	BRASS TUBES		
D						
E						
F						
G						
H						

FIELD

12. ANALYSIS REQUESTED

a. ☐ pH
b. ☐ Metal Scan
c. ☒ Metals (Spec) A, B, C ARSENIC
d. ☐ W.E.T.
e. ☐ VOA-8010
f. ☐ VOA-8020
g. ☐ VOA-H/S
h. ☐ VOA-8240
i. ☐ VOA-8260
j. ☒ SVO-8270 A, B, C
k. ☐ Diesel/ Gasoline
l. ☐ Flash Point
m. ☐ C1-Pesticides
n. ☐ OP-Pesticides
o. ☐
p. ☐
q. ☐

13. SPECIAL REMARKS:

14. SUPPLEMENTAL REQUESTS ☐ ☐ ☐ ☐ Initials Date

15. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a.		NEWTON LEUNG / ALCO CHEMIST	7/25/96 - 7/31/96
b.		IRENE EDELWOLDSON / LAB ASST	7/31/96 - / /
c.			/ / - / /
d.			/ / - / /

16. LAB REMARKS: Received 8/5/96

LAB

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Hazardous Materials Laboratory
2151 Berkeley Way, Berkeley, California 94704

HML Sample Numbers 960151 to 960153
Authorization Number HMM2933

GC/MS LABORATORY REPORT

Collector: Newton Leung
Sampling Location: Former Ramos Property, 5293 Crow Canyon Road, Castro Valley

Date Sampled: 7/25/96
Date Received at HML: 7/31/96
Priority: 3

Test: GC/MS Semivolatile Analysis-Extended Target List [Base-Neutral/Acid Extractables and EPA Hazardous Substances List]
Analytical Procedures: Samples were extracted with dichloromethane. Electron impact, full scan DB-5 capillary gas chromatography-mass spectrometry is used for the analysis of Semivolatile Organic Analytes.
Extraction Method Reference: EPA Method 3550 (Solid/Sonication); EPA Method 3540 (Solid/Soxhlet); EPA Method 3580 (Liquid/Waste Dilution); EPA Method 3510 (Liquid/Separatory Funnel)
GC/MS Method Reference: EPA Method 8270 - GC/MS Semivolatile Organics Capillary Column Technique [Target compound list is limited to BNA extractables and Hazardous Substance List Analytes.]

Date GC/MS Analysis Requested: 7/29/96
Date Received at GC/MS Lab: 8/06/96

Extraction Method: Liquid Matrix:
Solid Matrix: 3540

Date Extraction Completed: 8/09/96
Sample Prepared by: Ven-Chi Liao, Jane Tang

Date of GC/MS Analysis: 8/13-14/96
Analyst: Ven-Chi Liao

Method 8270 GC/MS Semivolatile Organics Analysis-Extended List (BNA & HSL Analytes) (page 1 of 3)

CAS Number	Base-Neutral/Acid Extractable and Hazardous Substance List Analytes	HML No.	960151	960152	960153	Method Blank	Quantitation Limit
		Collector#	STKP-A	STKP-B	STKP-C		
		Matrix	soil	soil	soil		
		Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
208-96-8	acenaphthylene		ND	ND	ND	ND	0.40
83-32-9	acenaphthene		ND	ND	ND	ND	0.40
62-53-3	aniline		ND	ND	ND	ND	0.40
120-12-7	anthracene		ND	ND	ND	ND	0.40
56-55-3	benz(a)anthracene		ND	ND	ND	ND	0.40
50-32-8	benzo(a)pyrene		ND	ND	ND	ND	0.40
205-99-2	benzo(b)fluoranthene		ND	ND	ND	ND	0.40
191-24-2	benzo(g,h,i)perylene		ND	ND	ND	ND	0.40
207-08-9	benzo(k)fluoranthene		ND	ND	ND	ND	0.40
100-51-6	benzyl alcohol		ND	ND	ND	ND	0.40
111-91-1	bis(2-chloroethoxy)methane		ND	ND	ND	ND	0.40
111-44-4	bis(2-chloroethyl)ether		ND	ND	ND	ND	0.40
108-60-1	bis(2-chloroisopropyl)ether		ND	ND	ND	ND	0.40
117-81-7	bis(2-ethylhexyl)phthalate		D	0.58	0.44	0.41	0.40
101-55-3	4-bromophenyl phenyl ether		ND	ND	ND	ND	0.40
85-68-7	butyl benzyl phthalate		ND	ND	ND	ND	0.40
106-47-8	4-chloroaniline		ND	ND	ND	ND	0.40
59-50-7	4-chloro-3-methylphenol		ND	ND	ND	ND	0.40
91-58-7	2-chloronaphthalene		ND	ND	ND	ND	0.40
95-57-8	2-chlorophenol		ND	ND	ND	ND	0.40

Note: D = Detected Below Quantitation Limit
ND = Not Detected
NA = Not Analyzed
Quantitation Limit = Lowest Standard x Dilution Factor x Matrix Factor

[continue on page 2]

Analyst: VC

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Hazardous Materials Laboratory
2151 Berkeley Way, Berkeley, California 94704

HML Sample Numbers 960151 to 960153

GC/MS Laboratory Report (Continued)

Collector: Newton Leung
Sampling Location: Former Ramos Property

Method 8270 GC/MS Semivolatile Organics Analysis-Extended List [BNA & HSL Analytes] (page 2 of 3)

CAS Number	Base-Neutral/Acid Extractables and Hazardous Substance List Analytes	HML No.	960151	960152	960153	Method Blank	Quantitation Limit
		Collector#	STKP-A	STKP-B	STKP-C		
		Matrix	soil	soil	soil		
		Units	mg/Kg	mg/Kg	mg/Kg	mg/kg	mg/Kg
7005-72-3	4-chlorophenyl phenyl ether		ND	ND	ND	ND	0.40
218-01-9	chrysene		ND	ND	ND	ND	0.40
53-70-3	dibenzo(a,h)anthracene		ND	ND	ND	ND	0.40
132-64-9	dibenzofuran		ND	ND	ND	ND	0.40
95-50-1	1,2-dichlorobenzene		ND	ND	ND	ND	0.40
541-73-1	1,3-dichlorobenzene		ND	ND	ND	ND	0.40
106-46-7	1,4-dichlorobenzene		ND	ND	ND	ND	0.40
91-94-1	3,3'-dichlorobenzidine		ND	ND	ND	ND	0.40
120-83-2	2,4-dichlorophenol		ND	ND	ND	ND	0.40
84-66-2	diethyl phthalate		D	D	D	D	0.40
131-11-3	dimethyl phthalate		ND	ND	ND	ND	0.40
105-67-9	2,4-dimethylphenol		ND	ND	ND	ND	0.40
84-74-2	di-n-butyl phthalate		7.3	8.5	3.8	7.6	0.40
117-84-0	di-n-octyl phthalate		ND	ND	ND	ND	0.40
51-28-5	2,4-dinitrophenol		ND	ND	ND	ND	2.0
121-14-2	2,4-dinitrotoluene		ND	ND	ND	ND	1.0
606-20-2	2,6-dinitrotoluene		ND	ND	ND	ND	0.40
86-73-7	fluorene		ND	ND	ND	ND	0.40
206-44-0	fluoranthene		ND	ND	ND	ND	0.40
118-74-1	hexachlorobenzene		ND	ND	ND	ND	0.40
87-68-3	hexachlorobutadiene		ND	ND	ND	ND	0.40
77-47-4	hexachlorocyclopentadiene		ND	ND	ND	ND	0.40
67-72-1	hexachloroethane		ND	ND	ND	ND	0.40
78-59-1	isophorone		ND	ND	ND	ND	0.40
193-39-5	indeno(1,2,3-c,d)pyrene		ND	ND	ND	ND	0.40
534-52-1	2-methyl-4,6-dinitrophenol		ND	ND	ND	ND	2.0

Note: D = Detected Below Quantitation Limit
ND = Not Detected
NA = Not Analyzed
Quantitation Limit = Lowest Standard x Dilution Factor x Matrix Factor

[continue on page 3]

[GC/MS Form:XL8270-P2 Rev. 11/89]

Analyst: VC
Supervisor: JT

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Hazardous Materials Laboratory
2151 Berkeley Way, Berkeley, California 94704

HML Sample Numbers 960151 to 960153

GC/MS Laboratory Report (Continued)

Collector: Newton Leung
Sampling Location: Former Ramos Property

Method 8270 GC/MS Semivolatile Organics Analysis-Extended List [BNA & HSL Analytes] (page 2 of 3)

CAS Number	Base-Neutral/Acid Extractables and Hazardous Substance List Analytes	HML No.	960151	960152	960153	Method Blank	Quantitation Limit
		Collector#	STKP-A	STKP-B	STKP-C		
		Matrix	soil	soil	soil		
		Units	mg/Kg	mg/Kg	mg/Kg	mg/kg	mg/Kg
7005-72-3	4-chlorophenyl phenyl ether		ND	ND	ND	ND	0.40
218-01-9	chrysene		ND	ND	ND	ND	0.40
53-70-3	dibenzo(a,h)anthracene		ND	ND	ND	ND	0.40
132-64-9	dibenzofuran		ND	ND	ND	ND	0.40
95-50-1	1,2-dichlorobenzene		ND	ND	ND	ND	0.40
541-73-1	1,3-dichlorobenzene		ND	ND	ND	ND	0.40
106-46-7	1,4-dichlorobenzene		ND	ND	ND	ND	0.40
91-94-1	3,3'-dichlorobenzidine		ND	ND	ND	ND	0.40
120-83-2	2,4-dichlorophenol		ND	ND	ND	ND	0.40
84-66-2	diethyl phthalate		D	D	D	D	0.40
131-11-3	dimethyl phthalate		ND	ND	ND	ND	0.40
105-67-9	2,4-dimethylphenol		ND	ND	ND	ND	0.40
84-74-2	di-n-butyl phthalate		7.3	8.5	3.8	7.6	0.40
117-84-0	di-n-octyl phthalate		ND	ND	ND	ND	0.40
51-28-5	2,4-dinitrophenol		ND	ND	ND	ND	2.0
121-14-2	2,4-dinitrotoluene		ND	ND	ND	ND	1.0
606-20-2	2,6-dinitrotoluene		ND	ND	ND	ND	0.40
86-73-7	fluorene		ND	ND	ND	ND	0.40
206-44-0	fluoranthene		ND	ND	ND	ND	0.40
118-74-1	hexachlorobenzene		ND	ND	ND	ND	0.40
87-68-3	hexachlorobutadiene		ND	ND	ND	ND	0.40
77-47-4	hexachlorocyclopentadiene		ND	ND	ND	ND	0.40
67-72-1	hexachloroethane		ND	ND	ND	ND	0.40
78-59-1	isophorone		ND	ND	ND	ND	0.40
193-39-5	indeno(1,2,3-c,d)pyrene		ND	ND	ND	ND	0.40
534-52-1	2-methyl-4,6-dinitrophenol		ND	ND	ND	ND	2.0

Note: D = Detected Below Quantitation Limit
ND = Not Detected
NA = Not Analyzed
Quantitation Limit = Lowest Standard x Dilution Factor x Matrix Factor

[continue on page 3]

[GC/MS Form:XL8270-P2 Rev. 11/89]

Analyst: VL

Supervisor: JT

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Hazardous Materials Laboratory
2151 Berkeley Way, Berkeley, California 94704

HML Sample Numbers 960151 to 960153

GC/MS Laboratory Report (Continued)

Collector: Newton Leung
Sampling Location: former Ramos Property

Method 8270 GC/MS Semivolatile Organics Analysis-Extended List (BNA & HSL Analytes) (page 3 of 3)

CAS Number	Base-Neutral/Acid Extractable and Hazardous Substance List Analytes	HML No.	960151	960152	960153	Method Blank	Quantitation Limit
		Collector#	STKP-A	STKP-B	STKP-C		
		Matrix	soil	soil	soil		
		Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
91-20-3	naphthalene		ND	ND	ND	ND	0.40
98-95-3	nitrobenzene		ND	ND	ND	ND	0.40
88-74-4	o-nitroaniline		ND	ND	ND	ND	0.40
99-09-2	m-nitroaniline		ND	ND	ND	ND	0.40
100-01-6	p-nitroaniline		ND	ND	ND	ND	1.0
88-75-5	2-nitrophenol		ND	ND	ND	ND	0.40
100-02-7	4-nitrophenol		ND	ND	ND	ND	2.0
62-75-9	N-nitrosodimethylamine		ND	ND	ND	ND	1.0
86-30-6	N-nitrosodiphenylamine		ND	ND	ND	ND	0.40
621-64-7	N-nitrosodi-n-propylamine		ND	ND	ND	ND	0.40
87-86-5	pentachlorophenol		ND	ND	ND	ND	1.0
85-01-8	phenanthrene		ND	ND	ND	ND	0.40
108-95-2	phenol		ND	ND	ND	ND	0.40
129-00-0	pyrene		ND	ND	ND	ND	0.40
120-82-1	1,2,4-trichlorobenzene		ND	ND	ND	ND	0.40
88-06-2	2,4,6-trichlorophenol		ND	ND	ND	ND	0.40
91-57-6	2-methylnaphthalene		ND	ND	ND	ND	0.40
95-95-4	2,4,5-trichlorophenol		ND	ND	ND	ND	0.40
95-48-7	2-methylphenol		ND	ND	ND	ND	0.40
106-44-5	3&4-methylphenol		ND	ND	ND	ND	0.40
110-86-1	pyridine		ND	ND	ND	ND	0.40
86-74-8	carbazole		ND	ND	ND	ND	1.0

Note: D = Detected Below Quantitation Limit
ND = Not Detected
NA = Not Analyzed
Quantitation Limit = Lowest Standard x Dilution Factor x Matrix Factor

Comment(s):

GC/MS Analyst: Ven-Chi Liao
Reviewer: William Lum
Supervisor: William Lum
960151R.BNA

Signature(s): Ven-Chi Liao
Signature: Wm. Lum for
Signature: Wm. Lum for

Report Date: 8/16/96
Review Date: 8/22/96
Date: 8/23/96

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Hazardous Materials Laboratory
2151 Berkeley Way, Berkeley, California 94704

HML Sample Numbers 960151 to 960153

GC/MS LABORATORY REPORT - QUALITY CONTROL SUMMARY

Collector: Newton Leung
Sampling Location: Former Ramos Property
9293 Crow Canyon Road, Castro Valley

QC Description: GC/MS Semivolatile Organics Analysis - Matrix Spike and Matrix Spike Duplicate Summary

Extraction Procedures: X Solid Samples -[dichloromethane extraction, Soxhlet]
___ Aqueous Samples -[dichloromethane separatory funnel extraction]
___ Organic Samples -[dichloromethane - waste dilution]
___ Others (specify): Soil Samples-[dichloromethane extraction, sonication]

GC/MS Analysis Procedure: DB-5 Capillary Column GC/MS - Electron Impact -Repetitive Scan

Date Extraction Completed: 8/09/96
Sample Preparation by: Ven-Chi/Jane Teng
Date of GC/MS Analysis: 8/13-14/96
Analyst: Ven-Chi Liao

QC Data Applicable for the following HML Samples: 960151, 960152, 960153.
Sample Used for Matrix Spike and Matrix Spike Duplicate: HML # 960151 Matrix: Soil
Applicable Sample Matrix: Soil

GC/MS Semivolatile Organics Analysis - QC Report For Matrix Spike and Matrix Spike Duplicate

MATRIX SPIKE COMPOUNDS	AMOUNT FOUND IN UNSPIKED SAMPLE	AMOUNT SPIKED IN SAMPLE	AMOUNT DETECTED (RUN #1)	AMOUNT DETECTED (RUN #2)	AVERAGE RECOVERY			RPD		Quantitation Limit
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	%	Control Range	%	Control Limit	mg/Kg
acenaphthene	ND	10.0	7.45	8.24	7.85	78.5	40-130	10.1	19	0.400
2-chlorophenol	ND	10.0	7.99	7.41	7.70	77.0	35-114	7.53	23	0.400
4-chloro-3-methylphenol	ND	10.0	10.7	11.0	10.9	109	40-118	2.75	22	0.400
1,4-dichlorobenzene	ND	10.0	7.79	7.30	7.55	75.5	57-132	6.49	17	0.400
2,4-dinitrotoluene	ND	10.0	11.2	12.5	11.9	119	41-128	10.9	19	1.00
4-nitrophenol	ND	10.0	9.66	10.1	9.88	98.8	34-131	4.45	17	2.00
phenol	ND	10.0	7.69	7.50	7.60	76.0	40-123	2.50	22	0.400
pentachlorophenol	ND	10.0	12.2	12.5	12.4	124	37-110	2.42	21	1.00
pyrene	ND	10.0	8.27	8.52	8.40	84.0	47-108	2.98	20	0.400
1,2,4-trichlorobenzene	ND	10.0	7.79	8.04	7.92	79.2	40-137	3.16	24	0.400
n-nitrosodi-n-propylamine	ND	10.0	6.71	7.11	6.91	70.6	63-134	5.79	21	0.400

Notes: ND = not detected; NA = not analyzed because of matrix interferences

Amount Recovered = [Amount Detected - Amount Found in Unspiked Sample]

RPD = Relative Percent Deviation = $\frac{|[\text{Amount Recovered Run \#1} - \text{Amount Recovered Run \#2}]|}{\text{Average Amount Recovered}} \times 100$

Comment(s):

GC/MS Analyst: Ven-Chi Liao Signature: Ven-Chi Liao Report Date: 8/16/96
Reviewer: William Lum Signature: W. Lum LL Aug 27 Review Date: 8/22/96
Supervisor: William Lum Signature: W. Lum Aug 27 Date: 8/23/96

960151QC.MSD

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Hazardous Materials Laboratory
2151 Berkeley Way, Berkeley, California 94704

HML Sample Numbers 960151 to 960153

GC/MS LABORATORY REPORT - QUALITY CONTROL SUMMARY

Collector: Newton Leung
Sampling Location: Former Ramos Property
5293 Crow Canyon Road, Castro Valley

QC Description: GC/MS Semivolatile Organics Analysis - Matrix Spike and Matrix Spike Duplicate Summary

Extraction Procedures: X Solid Samples -[dichloromethane extraction, Soxhlet]
___ Aqueous Samples -[dichloromethane separatory funnel extraction]
___ Organic Samples -[dichloromethane - waste dilution]
___ Others (specify): Soil Samples-[dichloromethane extraction, sonication]

GC/MS Analysis Procedure: DB-5 Capillary Column GC/MS - Electron Impact -Repetitive Scan

Date Extraction Completed: 8/09/96
Sample Preparation by: Ven-Chi/Jane Tang
Date of GC/MS Analysis: 8/13-14/96
Analyst: Ven-Chi Liao

QC Data Applicable for the following HML Samples: 960151, 960152, 960153.
Sample Used for Matrix Spike and Matrix Spike Duplicate: HML # 960151 Matrix: Soil
Applicable Sample Matrix: Soil

GC/MS Semivolatile Organics Analysis - QC Report For Matrix Spike and Matrix Spike Duplicate

MATRIX SPIKE COMPOUNDS	AMOUNT FOUND IN UNSPIKED SAMPLE	AMOUNT SPIKED IN SAMPLE	AMOUNT DETECTED (RUN #1)	AMOUNT DETECTED (RUN #2)	AVERAGE RECOVERY			RPD		Quantitation Limit
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	%	Control Range	%	Control Limit	mg/Kg
acenaphthene	ND	10.0	7.45	8.24	7.85	78.5	40-130	10.1	19	0.400
2-chlorophenol	ND	10.0	7.99	7.41	7.70	77.0	35-114	7.53	23	0.400
4-chloro-3-methylphenol	ND	10.0	10.7	11.0	10.9	109	40-118	2.75	22	0.400
1,4-dichlorobenzene	ND	10.0	7.79	7.30	7.55	75.5	57-132	6.49	17	0.400
2,4-dinitrotoluene	ND	10.0	11.2	12.5	11.9	119	41-128	10.9	19	1.00
4-nitrophenol	ND	10.0	9.66	10.1	9.88	98.8	34-131	4.45	17	2.00
phenol	ND	10.0	7.69	7.50	7.60	76.0	40-123	2.50	22	0.400
pentachlorophenol	ND	10.0	12.2	12.5	12.4	124	37-110	2.42	21	1.00
pyrene	ND	10.0	8.27	8.52	8.40	84.0	47-108	2.98	20	0.400
1,2,4-trichlorobenzene	ND	10.0	7.79	8.04	7.92	79.2	40-137	3.16	24	0.400
n-nitrosodi-n-propylamine	ND	10.0	6.71	7.11	6.91	70.6	63-134	5.79	21	0.400

Notes: ND = not detected; NA = not analyzed because of matrix interferences

Amount Recovered = [Amount Detected - Amount Found in Unspiked Sample]

RPD = Relative Percent Deviation = $\frac{|[\text{Amount Recovered Run \#1} - \text{Amount Recovered Run \#2}]|}{\text{Average Amount Recovered}} \times 100$

Comment(s):

GC/MS Analyst: Ven-Chi Liao Signature: Ven-Chi Liao Report Date: 8/16/96

Reviewer: William Lum Signature: W. Lum LL Review Date: 8/22/96

Supervisor: William Lum Signature: W. Lum Date: 8/23/96

960151QC.MSD

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Hazardous Materials Laboratory
2151 Berkeley Way, Berkeley, California 94704

HML Sample Numbers 960151 to 960153

GC/MS LABORATORY REPORT - QUALITY CONTROL SUMMARY

Collector: Newton Leung
Sampling Location: Former Ramos Property
5293 Crow Canyon Road, Castro Valley

QC Description: QA Summary For Surrogate Compound Recovery
Semivolatile Organic Analysis - EPA Method 8270
[Surrogate compounds are selected analogs of the target compounds used to evaluate method performance.]

Extraction Method:
___ EPA Method 3550 (Solid/Sonication)
X EPA Method 3540 (Solid/Soxhlet)
___ EPA Method 3510 (Liquid/Separatory)
___ EPA Method 3580 (Liquid/Waste Dilution)

Date Extraction Completed: 8/09/96
Sample Matrix: Soil
Sample Preparation by: Ven-Chi/Jane

Date of GC/MS Analysis: 8/13-14/96
GC/MS Analyst: Ven-Chi Liao

QC Data Applicable for the following HML Samples: 960151, 960152, 960153.

Method 8270 GC/MS Semivolatile Organics - QC Report for BNA Surrogate Recovery

	Surrogate Compound #	Compound Identity	Amount Spiked In Sample	Units
SURROGATE SPIKE INFORMATION	Compound #1	2-Fluorophenol	10.0	mg/kg
	Compound #2	Phenol-d6	10.0	mg/Kg
	Compound #3	Nitrobenzene-d5	10.0	mg/Kg
	Compound #4	2-Fluorobiphenyl	10.0	mg/Kg
	Compound #5	2,4,6-tribromophenol	10.0	mg/Kg
	Compound #6	Terphenyl-d14	10.0	mg/Kg

Remark: Method blank, method standard and samples are spiked to give a final concentration of 50 mg/Kg.

HML Sample #	SURROGATE COMPOUND RECOVERY					
	% Rec. Cpd #1	% Rec. Cpd #2	%Rec. Cpd #3	%Rec. Cpd #4	%Rec. Cpd #5	%Rec. Cpd #6
METHOD BLANK	67.9	72.8	74.5	82.6	94.2	88.4
METHOD STANDARD	75.5	78.5	43.9	44.7	98.4	53.3
960151	73.5	76.7	73.6	73.0	97.0	88.6
960151 MXSP1	67.9	72.3	75.7	82.3	102	92.3
960151 MXSP2	69.4	80.1	75.0	91.1	117	92.6
960152	62.3	75.3	67.1	84.5	97.8	89.0
960153	77.0	86.9	71.8	84.7	109	93.6
Control Range (Soil)	35 - 106	38 - 115	38 - 119	31 - 136	45 - 140	42 - 136

Note: ND = Not Detected; NA = Not analyzed due to matrix interferences

Comment(s):

GC/MS Analyst: Ven-Chi Liao Signature: Ven-Chi Liao Report Date: 8/16/96

Reviewer: William Lum Signature: W. Lum LL 8/22/96 Review Date: 8/22/96

Supervisor: William Lum Signature: W. Lum 8/23/96 Date: 8/23/96

DEPARTMENT OF TOXIC SUBSTANCE CONTROL
Hazardous Materials Laboratory
2151 Berkeley Way, Berkeley, California 94704

HML Sample Numbers 960151 to 960153

GC/MS LABORATORY REPORT - QUALITY CONTROL SUMMARY

Collector: Newton Leung
Sampling Location: Former Ramos Property
5293 Crow Canyon Road, Castro Valley

QC Description: GC/MS Semivolatile Organics Analysis - Method Standard Recovery

Extraction Procedures: x Solid Samples -[dichloromethane extraction, Soxhlet]
___ Aqueous Samples -[dichloromethane separatory funnel extraction]
___ Organic Samples -[dichloromethane - waste dilution]
___ Others (specify): ______

GC/MS Analysis Procedure: DB-5 Capillary Column GC/MS - Electron Impact -Repetitive Scan

Date Extraction Completed: 8/09/96
Sample Preparation by: Ven-Chi/Jane Tang
Date of GC/MS Analysis: 8/13-14/96
Analyst: Ven-Chi Liao

QC Data Applicable for the following HML Samples: 960151, 960152, 960153.
Method Standard Matrix: Methylene Chloride

GC/MS Semivolatile Organics - QC Report for Method 8270 Method Standard Recovery

MATRIX SPIKE COMPOUNDS	Amount Found in Method Blank	Amount Spiked in Method Standard	Amount Detected Method Standard	Percent Recovery	Quantitation Limit
UNITS	micrograms	micrograms	micrograms	%	micrograms
phenol	ND	50.0	39.3	78.6	2.00
2-chlorophenol	ND	50.0	40.9	81.8	2.00
1,4-dichlorobenzene	ND	50.0	42.7	85.4	2.00
N-nitroso-di-n-propylamine	ND	50.0	36.5	73.0	2.00
1,2,4-trichlorobenzene	ND	50.0	42.5	85.0	2.00
4-chloro-3-methylphenol	ND	50.0	44.4	88.8	2.00
acenaphthene	ND	50.0	34.2	68.4	2.00
4-nitrophenol	ND	50.0	44.3	88.6	10.0
2,4-dinitrotoluene	ND	50.0	54.9	110	5.00
pentachlorophenol	ND	50.0	54.9	110	5.00
pyrene	ND	50.0	43.2	86.4	2.00

Notes: ND = not detected; NA = not analyzed because of matrix interferences

Comment(s): - Method Standard: The above analytes were spiked into a reagent blank and was followed by EPA Method 3540(Solid/Soxhlet) and GCMS analysis.

GC/MS Analyst: Ven-Chi Liao Signature: [signature] Report Date: 8/16/96

Reviewer: William Lum Signature: [signature] Review Date: 8/22/96

Supervisor: William Lum Signature: [signature] Date: 8/23/96

DEPARTMENT OF TOXIC SUBSTANCE CONTROL
Hazardous Materials Laboratory
2151 Berkeley Way, Berkeley, California 94704

HML Sample Numbers 960151 to 960153

GC/MS LABORATORY REPORT - QUALITY CONTROL SUMMARY

Collector: Newton Leung
Sampling Location: Former Ramos Property
5293 Crow Canyon Road, Castro Valley

QC Description: GC/MS Semivolatile Organics Analysis - Method Standard Recovery

Extraction Procedures: X Solid Samples - [dichloromethane extraction, Soxhlet]
___ Aqueous Samples - [dichloromethane separatory funnel extraction]
___ Organic Samples - [dichloromethane - waste dilution]
___ Others (specify): ___

GC/MS Analysis Procedure: DB-5 Capillary Column GC/MS - Electron Impact -Repetitive Scan

Date Extraction Completed: 8/09/96
Sample Preparation by: Ven-Chi/Jane Tang
Date of GC/MS Analysis: 8/13-14/96
Analyst: Ven-Chi Liao

QC Data Applicable for the following HML Samples: 960151, 960152, 960153.
Method Standard Matrix: Methylene Chloride

GC/MS Semivolatile Organics - QC Report for Method 8270 Method Standard Recovery

MATRIX SPIKE COMPOUNDS / UNITS	Amount Found in Method Blank	Amount Spiked in Method Standard	Amount Detected Method Standard	Percent Recovery	Quantitation Limit
	micrograms	micrograms	micrograms	%	micrograms
phenol	ND	50.0	39.3	78.6	2.00
2-chlorophenol	ND	50.0	40.9	81.8	2.00
1,4-dichlorobenzene	ND	50.0	42.7	85.4	2.00
N-nitroso-di-n-propylamine	ND	50.0	36.5	73.0	2.00
1,2,4-trichlorobenzene	ND	50.0	42.5	85.0	2.00
4-chloro-3-methylphenol	ND	50.0	44.4	88.8	2.00
acenaphthene	ND	50.0	34.2	68.4	2.00
4-nitrophenol	ND	50.0	44.3	88.6	10.0
2,4-dinitrotoluene	ND	50.0	54.9	110	5.00
pentachlorophenol	ND	50.0	54.9	110	5.00
pyrene	ND	50.0	43.2	86.4	2.00

Notes: ND = not detected; NA = not analyzed because of matrix interferences

Comment(s): - Method Standard: The above analytes were spiked into a reagent blank and was followed by EPA Method 3540(Solid/Soxhlet) and GCMS analysis.

GC/MS Analyst: Ven-Chi Liao Signature: Ven-Chi Liao Report Date: 8/16/96

Reviewer: William Lum Signature: Lum for WL Review Date: 8/22/96

Supervisor: William Lum Signature: W. Lum for WL Date: 8/23/96

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Hazardous Materials Laboratory
2151 Berkeley Way, Berkeley, California 94704

HML Sample Numbers 960151 to 960153

GC/MS LABORATORY REPORT

Collector: Newton Leung
Sampling Location: Former Ramos Property
5293 Crow Canyon Raod, Castro Valley

Date Sampled: 7/25/96
Date Received at GC/MS Lab: 8/06/96
Date Analyzed: 8/13-14796

Test: GC/MS Semivolatile Organics Analysis - Tentative Identification Non-Target Compounds
Analytical Procedures: Samples are extracted with dichloromethane. Electron impact, full scan DB-5 capillary gas chromatograph/mass spectrometry is used for the analysis of Semivolatile Organic Analytes. Mass spectra of chromatographic peaks which were not identified as target analytes were compared by computer searches against a mass spectral database published by the National Bureau of Standards. Unknown chromatographic peaks are tentatively identified based on best match to NBS database and best correlations with sample related data.
GC/MS Method Reference: EPA Method 8270 - GC/MS Semivolatile Organics Capillary Column Technique [Target compound list is limited to BNA extractables and Hazardous Substances List Analytes.]

Method 8270 GC/MS Semivolatile Organics Analysis - Tentatively Identified Non-Target Compounds [Notes 1,2]

Method Blank:	No non-target peaks detected.
960151 (STKP-A):	This is a light brown soil sample. No non-target found higher than 2 mg/Kg.
960152(STKP-B):	This is a light brown soil sample. No non-target found higher than 2 mg/Kg.
960153 (STKP-C):	This is a brown soil sample. No non-target found higher than 2 mg/Kg.

Notes
1: Identification are tentative and is based on a comparison of sample's electron impact mass spectrum with the EPA/NIH Mass Spectral Database compiled by National Bureau of Standards.
2: The concentration of individually identified nontarget compound is estimated base on the RIC area of the non-target GC peak relative to the RIC area of the closet internal standard. Six GC/MS internal standards are used: 1,4-dichlorobenzene-d4, naphthalene-d8, acenaphthene-d10, phenanthrene-d10, chrysene-d12, and perylene-d12.

GC/MS Analyst: Ven-Chi Liao Signature: Ven-Chi Liao Report Date: 8/16/96

Reviewer: William Lum Signature: W. Lum Report Date: 8/22/96

Supervisor: William Lum Signature: W. Lum Review Date: 8/22/96

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

MEE LING TUNG, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6777

ALAMEDA COUNTY ENVIRONMENTAL HEALTH LABORATORY

Certification No. 1816

Laboratory No: 96-050

Sample Identification: Former Ramos Property, 5293 Crow Canyon Road, Castro Valley, CA

Analysis Requested By: ~~Madhulla Logan/Amy~~ Leech Robert Kuenning

Date Collected: 7/25/96 Collected By: Scott Ferriman

Date Received: 7/25/96 Received By: D. Wong

Analysis Requested: Total Oil and Grease re-analysis.

Background Information: 3 soil samples taken from the above location.

ANALYTICAL RESULTS

Parameter	Observation or Results

See Attached Sheet

Conclusion: Samples STKP-A and STKP-C were below 50 ppm (mg/kg) and STKP-B contains 1561 ppm mg/kg of total oil and grease.

Date Analysis Completed: 9/18/96 Chemist: N. Leung

Approved: M

Distribution: Amy Leech, Jun Makishima.

LABORATORY NUMBER: 96-050
SAMPLE NUMBER: STKP-(A-C)
CLIENT: FORMER RAMOS PROPERTY
5293 CROW CANYON ROAD
CASTRO VALLEY, CA

DATE SAMPLED: 7/25/96
DATE RECEIVED: 7/25/96
DATE REPORTED: 9/18/96

ANALYSIS: TOTAL OIL & GREASE
ANALYSIS METHOD: 5520E (SOXHLET EXTRACTION)

LAB ID	SAMPLE ID	TOTAL OIL & GREASE mg/kg
96-050-1	STKP-A	ND(50)
96-050-2	STKP-B	1561
96-050-3	STKP-C	ND(50)

ND=NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
REPORTING LIMIT INDICATED IN PARENTHESIS.

QA/QC SUMMARY

RPD %	0.03
RECOVERY %	101

Aqua Science Engineers, Inc.
2411 Old Crow Canyon Road, #4,
San Ramon, CA 94583
(510) 820-9391 - FAX (510) 837-4853

Chain of Custody

DATE 7-25-96 PAGE 1 OF 1

SAMPLERS (SIGNATURE) (PHONE NO) Scott T. Ferriman 510-820-9391

PROJECT NAME FORMER RAMOS PROPERTY NO. 2740

ADDRESS 5293 CROW CANYON ROAD

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GASOLINE (EPA 5030/8015)	TPH-GASOLINE/BTEX (EPA 5030/8015-8020)	TPH-DIESEL (EPA 3510/8015)	PURGABLE AROMATICS (EPA 602/CC20)	PURGABLE HALOCARBONS (EPA 601/8010)	VOLATILE ORGANICS (EPA 624/8240)	BASE/NUETRALS, ACIDS (EPA 625/8270)	OIL & GREASE (EPA 5520 E&F or B&F)	LUFT METALS (5) (EPA 6010+7000)	TITLE 22 (CAM 17) (EPA 6010+7000)	TCLP (EPA 1311/1310)	STLC-CAM WET (EPA 1311/1310)	REACTIVITY CORROSIVITY IGNITABILITY	CADMIUM, CHROMIUM, LEAD, NICKEL, ZINC & ARSENIC	PNA's by EPA 8100			
STKP-A	7-25-96	10.50	Soil	1-BT								X						X	X			
STKP-B	↓	11:20	↓	↓								X						X	X			
STKP-C	↓	11:40	↓	↓								X						X	X			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY LABORATORY:	COMMENTS:
Scott T. Ferriman 14:50	Darcy Wong 14:50	NEWTON LEUNG 1046	VERNE WOODSON	Composite Samples taken From two locations at 4-Feet (bgs) each.
(signature) (time)	(signature) (time)	(signature) (time)	(signature) (time)	
Scott T. Ferriman 7-25-96	DARCY WONG 7/25/96		10:27	
(printed name) (date)	(printed name) (date)	(printed name) (date)	(printed name) (date)	
Company- ASE Inc.	Company- Alameda County Env. Health	Company- ALAMEDA COUNTY ENV. HEALTH	TOTIC SUBTRACT 7-31-96 Company- HML	