- was drain trans / sump excavotel and confunction 55 collected?



July 16, 1998

Mr. Don Lapidus Greystone Homes South Bay Division 920 Hillview Court, # 280 Milpitas, CA 95035

Re:

Additional Environmental Services

Shallow Soil Testing

Meek Orchard Property, Hayward, CA

Project No.: M174-EB

103 or chard Ave Hayward

Exch Room:

Dear Mr. Lapidus:

This letter presents the results of additional environmental services performed at the above-referenced site. The results of our Phase I preliminary site assessment (PSA), dated July 1, 1998, indicated the potential for soil contamination due to historical site use in the areas of the rail spur, old orchard area, and etching room area. This investigation was conducted to evaluate the potential presence for soil contamination in these areas. Shallow soil samples were collected around the northern and southern rail spur for analysis of hydrocarbons; in the central portion of the site for analysis of volatile organic compounds (VOCs), organochlorine pesticides, lead, and arsenic; and in the area of the etching room for analysis of VOCs, chromium, copper, lead, nickel, silver, and zinc.

#### SITE LOCATION

The site is located in Hayward, California, and is shown on the attached Site Vicinity Map, Figure 1. The approximately nine-acre site is bounded by Southern Pacific Railroad tracks to the west, Orchard Avenue to the north, Berry Avenue to the south, residences along Lucien Way to the northeast, and a concrete-lined flood control channel to the southeast.

#### SOIL SAMPLING AND ANALYSIS

On July 7, 1998, Harza collected shallow soil samples from across the site in the areas identified in Figure 2, Meek Orchard Soil Sample Locations. A brief description of each sampling area follows.

Harza Engineering Company, Western Division 425 Roland Way Oakland, California 94621 Tel: (510) 568-4001 Fax: (510) 568-2205

M174EBRP.001 07-16-98 Etching Room: In order to identify the existence of hazardous materials in the area of the former etching room, a sample of the concrete lined trench (Drain-1) was collected and analyzed for VOCs using EPA method 8240 and select metals using EPA Series 6000/7000.

Central Portion (Old Orchard Area): Soil samples were collected at depths of approximately 12 inches below ground surface (bgs) from four locations (C-1,C-2,C-3,C-4) in the central area of the site. Based on the historical use of this area as an orchard, soil samples were analyzed for VOCs using EPA Method 8240, pesticides using EPA Method 8080, and arsenic and lead using EPA Method Series 6000/7000.

Rail Spurs: As indicated in our previous investigation, railroad spurs are present on the western portion of the site. It has been our experience that old railroad spurs can be a potential source of contamination. In order to evaluate this area, one soil sample from the southern spur (RS-1) was collected from a depth of 12 inches bgs, and soil samples were collected from the northern rail spur (RS-2) at depths of 12 and 36 inches bgs. All samples were analyzed for diesel and motor oil range hydrocarbons using EPA Method 8015M.

All soil samples were collected using hand tools, stored in glass containers, labeled and placed in a cooler for transport to the analytical laboratory. Sampling tools were cleaned between collection locations to minimize the potential for cross-contamination.

Samples were analyzed by Columbia Analytical Services, Inc. (CAS) of Santa Clara, California. CAS is certified by the State of California for the analyses performed.

#### ANALYTICAL RESULTS

Analytical results are summarized on Table 1, and laboratory analytical reports are attached to this letter.

#### **Etching Room**

In the area of the etching room, VOCs were below laboratory method reporting limits (MRLs). With the exception of total chromium reported at a concentration of 950 parts per million (ppm), all other metals were reported at levels below stated regulated limits in the sample collected from the etching room (Drain-1).



#### Central Portion (Old Orchard Area)

Arsenic and lead were reported at low levels in all soil samples collected from the central portion of the site. Concentrations of these constituents were reported at or below state regulated preliminary remediation goals (PRGs). VOCs were reported below laboratory MRLs in samples C-1 and C-2. Laboratory results indicated low levels of acetone and methylene-chloride in soil samples collected from locations C-3 and C-4. The laboratory indicated that dieldrin was present at a concentration slightly above PRGs in sample C-1. Pesticides were not reported above laboratory MRLs in any other soil samples collected from the central portion of the site.

#### Railroad Spurs

In the area of the northern and southern rail spur, diesel and motor oil range hydrocarbons were below laboratory reporting limits.

#### **DISCUSSION**

Concentrations of constituents detected in soil samples were compared to PRGs for residential site use. PRGs are health risk-based concentrations developed by the Region IX U.S. Environmental Protection Agency (EPA). Although they are non-binding, they are typically used at sites such as this to provide a preliminary evaluation of contaminant levels. PRGs for compounds of concern for this investigation are shown of Table 1.

The chromium level in the concrete sample collected from the etching room drain trough was reported above the residential PRG. In our reconnaissance of this area, we did not find evidence of cracking in the concrete of the trough or sump. Due to the lack of other metals and VOCs in the concrete, it is our opinion that the chromium value is localized to the immediate area of the trough and sump. During construction activities we would recommend proper disposal of the concrete debris and shallow soil surrounding this area.

In sample C-1 collected from the central portion of the site, dieldrin was detected in a concentration slightly above PRGs. This should not present a concern for future development of the property as it will be dispersed during normal construction activities and was not detected in the other soil samples collected from this area.

In conclusion, other than the aforementioned chromium and its proper disposal, our field investigation did not reveal the presence of any significant environmental concern that would preclude development of the site.



#### **LIMITATIONS**

No investigation is thorough enough to absolutely rule out the presence of hazardous materials at a given site. If hazardous conditions have not been identified during the investigation, such a finding should not therefore be construed as a guarantee of the absence of such materials on the site, but rather as the result of the services performed within the scope, limitations, and cost of the work performed.

Environmental conditions may exist at the site that cannot be identified by visual observation. Our professional opinions are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions at unsampled locations.

Should you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

Harza Engineering Company of California

Mark C. Litzau

Manager, Environmental and Regulatory Services

ML:rl/encl.

Copies: Addressee (2)

Reilly

M174EBRP.001 07-16-98

HARZA

#### **TABLE**

TABLE 1
Soil Analytical Results
Meek Orchard

Hayward, California

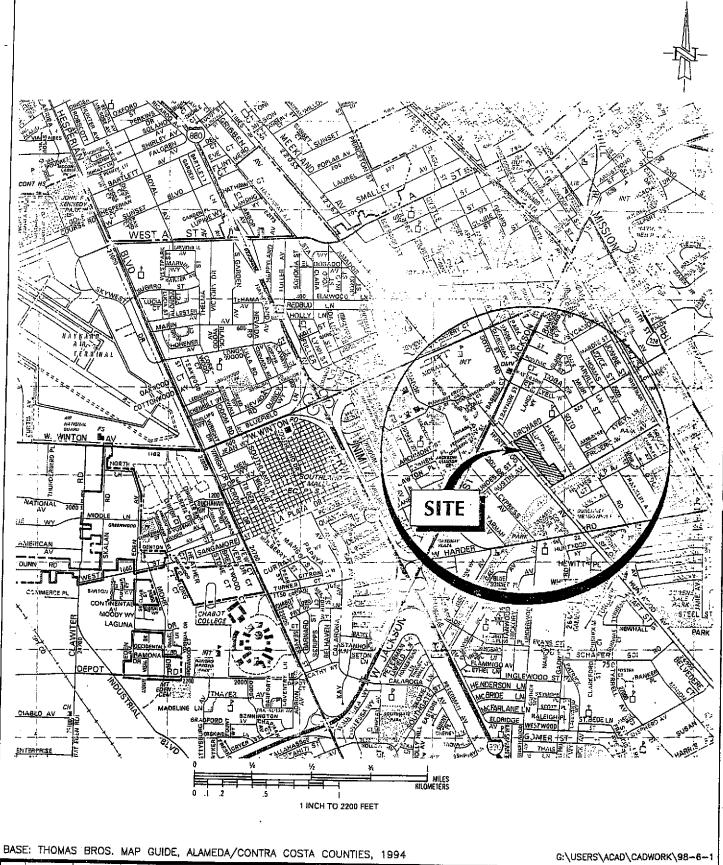
Sample Location	Drain-1	RS-1	RS-2	RS-2	C-I	C-2	C-3	C-4	PRG
Depth	12"	12"	12"	36"	12"	12"	.12"	12"	
Description	concrete	native soil							
Petroleum Hydroc	arbons								
Diesel		ND	ND	ND					none
Motor Oil		ND	ND	ŅD					none
Pesticides									
DDD					ND	ND	ND	ND	1.9
DDE					ND	ND	ND	ND	1.3
DDT					. ND	ND	ND	ND	1.3
Dieldrin					0.03	ND	ND	ND	0.028
Metals					į į				
Arsenic	. 7				17	16	22	21	22
Lead	78				62	11	39	, .17	130
Chromium	950					<u>.</u>			210
Copper	28								2800
Nickel	19								150
Silver	ND √							: :	380
Zinc	760								23000

#### NOTES

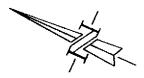
All results in parts per million, or milligrams per kilogram

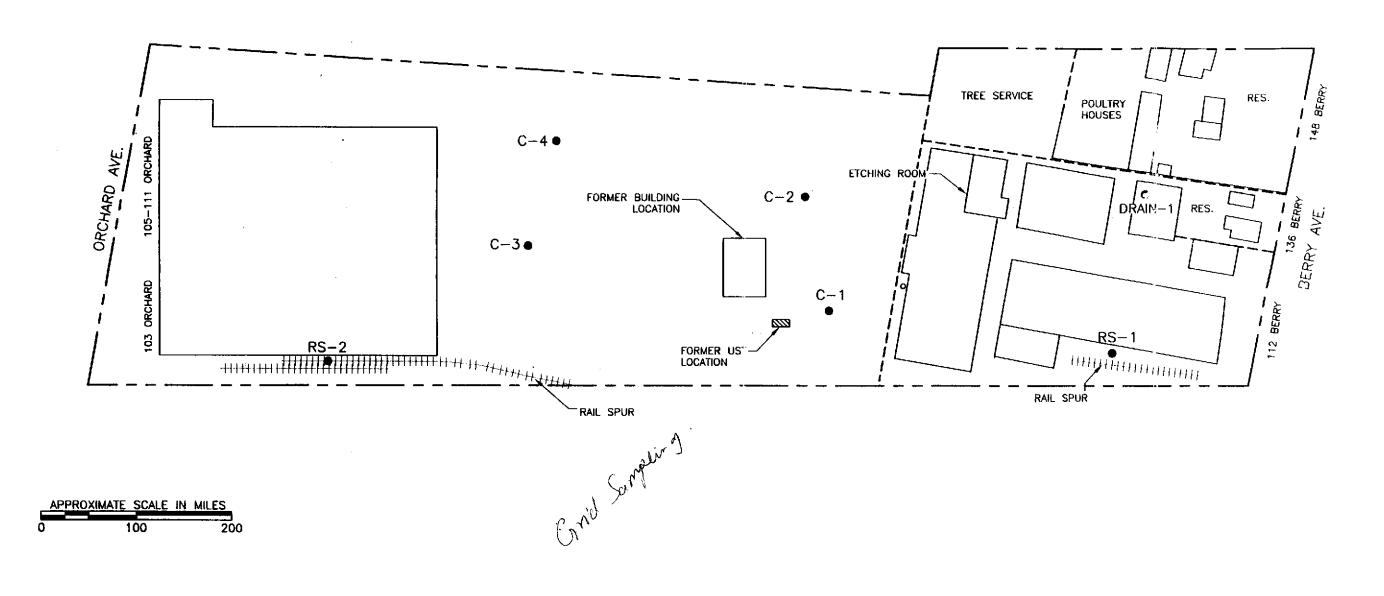
PRG: Preliminary Remediation Goal for residential use (U.S. EPA Region IX, August 1, 1996)

#### **FIGURES**



Rev.		Chk'd By [	Date		SITE VICINITY MAP	Figure
0	H.H.	M.L. 0	6/24/98	HARZA	MEEK ORCHARD PSA	1
<u> </u>					Hayward, California	Project No.
						M174-EB





BASE: ENVIRONMENTAL RISK INFORMATION & IMAGING SERVICES, Herndon, VA, dated 1995.

 Rev.
 Orawn By
 Chk'd By
 Date

 0
 H.H.
 M.L.
 6/25/98

 1
 H.H.
 M.L.
 7/15/98

HARZA

SITE PLAN	Figure
MEEK ORCHARD SOIL SAMPLE LOCATIONS	2
	Project No.
Hayward, California	M174-EB

G:\USERS\ACACADWORK\M174EB\98~7~2

### LABORATORY ANALYTICAL REPORTS

HARZA



July 9, 1998

Service Request No.: \$9801785

Mark Litzau Harza Consulting Engineers and Scientists 425 Roland Way Oakland, CA 94621

RE: MEEK ORCHARD/M174-EB

Dear Mr. Litzau:

The following pages contain analytical results for sample(s) received by the laboratory on July 7, 1998. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytical Report below confirms that pages 2 through 15, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

**Project Chemist** 

Acronyms

A2LA American Association for Laboratory Accreditation

ASTM American Society for Testing and Materials

BOD Biochemical Oxygen Demand

BTEX Benzene, Toluene, Ethylbenzene, Xylenes

CAM California Assessment Metals
CARB California Air Resources Board

CAS Number Chemical Abstract Service registry Number

CFC Chlorofluorocarbon
CFU Colony-Forming Unit
COD Chemical Oxygen Demand

DEC Department of Environmental Conservation
DEQ Department of Environmental Quality
DHS Department of Health Services
DLCS Duplicate Laboratory Control Sample

DMS Duplicate Matrix Spike
DOE Department of Ecology
DOH Department of Health

EPA U. S. Environmental Protection Agency

ELAP Environmental Laboratory Accreditation Program

GC Gas Chromatography

GC/MS Gas Chromatography/Mass Spectrometry

IC Ion Chromatography

ICB Initial Calibration Blank sample

ICP Inductively Coupled Plasma atomic emission spectrometry

ICV Initial Calibration Verification sample

J Estimated concentration. The value is less than the MRL, but greater than or equal to

the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.

LUS Laboratory Control Sample
LUFT Leaking Underground Fuel Tank

M Modified

MBAS Methylene Blue Active Substances

MCL Maximum Contaminant Level. The highest permissible concentration of a

substance allowed in drinking water as established by the U. S. EPA.

MDL Method Detection Limit
MPN Most Probable Number
MRL Method Reporting Limit

MS Matrix Spike

MTBE Methyl tert-Butyl Ether

NA Not Applicable
NAN Not Analyzed
NC Not Calculated

NCASI National Council of the paper industry for Air and Stream Improvement

ND Not Detected at or above the method reporting/detection limit (MRL/MDL)

NIOSH National Institute for Occupational Safety and Health

NTU Nephelometric Turbidity Units

ppb Parts Per Billion ppm Parts Per Million

PQL Practical Quantitation Limit
QA/QC Quality Assurance/Quality Control
RCRA Resource Conservation and Recovery Act

RPD Relative Percent Difference
SIM Selected Ion Monitoring

SM Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992

STLC Solubility Threshold Limit Concentration

SW Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846,

3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.

TCLP Toxicity Characteristic Leaching Procedure

TDS Total Dissolved Solids

TPH Total Petroleum Hydrocarbons

tr Trace level. The concentration of an analyte that is less than the PQL but greater than or equal

to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.

TRPH Total Recoverable Petroleum Hydrocarbons

TSS Total Suspended Solids

TTLC Total Threshold Limit Concentration

VOA Volatile Organic Analyte(s) ACRONLST.DOC 7/14/95

#### Analytical Report

Client:

HARZA

Project:

MEEK ORCHARD/M174-EB

Sample Matrix:

Solid

Service Request: S9801785

Date Collected: 7/7/98

Date Received: 7/7/98

Total Metals

Sample Name:

DRAIN-1

Lab Code:

Units: mg/Kg (ppm)

Test Notes:

S9801785-001

Analyte	Prep Method	Analysis Method	MRL	F	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
Chromium	EPA 3050BM	6010A	1		5	7/7/98	7/8/98	950	
Copper	EPA 3050BM	6010A	1		1	7/7/98	7/7/98	28	
Lead	EPA 3050BM	6010A	5		1	<i>7/7/</i> 98	7/7/98	78	
Nickel	EPA 3050BM	6010A	2		1	7/7/98	<i>7/7/</i> 98	19	
Silver	EPA 3050BM	6010A	2		1	7/7/98	<i>7171</i> 98	ND	
Zinc	EPA 3050BM	6010A	2		i	7/7/98	7/7/98	<b>76</b> 0	

#### Analytical Report

Client:

HARZA

Project:

MEEK ORCHARD/M174-EB

Sample Matrix:

Solid

Service Request: S9801785

Date Collected: NA Date Received: NA

Total Metals

Sample Name:

Method Blank

Units: mg/Kg (ppm)

Lab Code:

S980707-MB

Basis: Wet

Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
Chromium	· EPA 3050BM	6010A	1	1	7/7/98	7/7/98	ND	
Copper	EPA 3050BM	6010A	1	ſ	7/7/98	7/7/98	ND	
Lead	EPA 3050BM	6010A	5	1	7/7/98	7/7/98	ND	
Nickel	EPA 3050BM	6010A	2	ī	7/7/98	7/7/98	ND	
Silver	EPA 3050BM	6010A	2	1	7/7/98	7/7/98	ND	
Zinc	EPA 3050BM	6010A	2	Ī	7/7/98	7/7/98	ND	

1\$22/020597p

#### Analytical Report

Client:

HARZA

Project:

MEEK ORCHARD/M174-EB

Sample Matrix:

Soil

Service Request: S9801785

Date Collected: 7/7/98

Date Received: 7/7/98

Total Metals

Sample Name:

C-1/1'

Units: mg/Kg (ppm)

Lab Code:

S9801785-002

Basis: Wet

Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
Arsenic	EPA 3050BM	6010A	5	1	7/7/98	7/7/98	17	
Lead	EPA 3050BM	6010A	5	1	7/7/98	7/7/98	62	

1S22/020597p

#### Analytical Report

Client:

HARZA

Service Request: \$9801785

Project:

MEEK ORCHARD/M174-EB

Date Collected: 7/7/98

Sample Matrix:

Soil

Date Received: 7/7/98

**Total Metals** 

Sample Name:

C-2/1'

Units: mg/Kg (ppm)

Lab Code:

S9801785-003

Basis: Wet

Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
Arsenic	· EPA 3050BM	6010A	5	1	7/7/98	7/7/98	16	
Lead	EPA 3050BM	6010A	5	1	7/7/98	7/7/98	11	

1S22/020597p

**Analytical Report** 

Client:

HARZA

Project:

MEEK ORCHARD/M174-EB

Sample Matrix:

Soil

Service Request: S9801785

Date Collected: 7/7/98

Date Received: 7/7/98

Total Metals

Sample Name:

C-3/1'

Units: mg/Kg (ppm)

Lab Code:

S9801785-004

Basis: Wet

Test Notes:

Analyte		Prep Method	Analysis Method	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
Arsenic Lead	•	EPA 3050BM EPA 3050BM	6010A 6010A	5 5	1	7/7/98 7/7/98	7/7/98 7/7/98	22 39	

1S22/020597p

#### Analytical Report

Client:

HARZA

Project:

MEEK ORCHARD/M174-EB

Sample Matrix:

Soil

Service Request: \$9801785

Date Collected: 7/7/98

Date Received: 7/7/98

Total Metals

Sample Name:

C-4/1'

S9801785-005

Units: mg/Kg (ppm)
Basis: Wet

Lab Code: Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
Arsenic Lead	EPA 3050BM EPA 3050BM	6010A 6010A	5 5	1 1	7/7/98 7/7/98	7/7/98 7/7/98	21 17	

#### Analytical Report

Client:

HARZA

Service Request: S9801785

Project:

MEEK ORCHARD/M174-EB

Date Collected: NA

Sample Matrix:

Soil

Date Received: NA

Total Metals

Sample Name:

Method Blank

Units: mg/Kg (ppm)

Lab Code:

S980707-MB

Basis: Wet

Test Notes:

Analyte		Prep Method	Analysi Method	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
Arsenic Lead	•	EPA 3050BM EPA 3050BM	6010A 6010A	5 5	1	7/7/98 7/7/98	7/7/98 7/7/98	ND ND	

#### Analytical Report

Client:

HARZA

Project:

MEEK ORCHARD/M174-EB

Sample Matrix:

Soil

Service Request: S9801785

Date Collected: 7/7/98

Date Received: 7/7/98

Hydrocarbon Scan

Sample Name:

RS-1/1'

Lab Code:

S9801785-006

Test Notes:

Units: mg/Kg (ppm)

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Diesel Motor Oil	LUFT LUFT	Modified EPA 8015 Modified EPA 8015	1	1	7/7/98 7/7/98	7/7/98 7/7/98	ND ND	

#### Analytical Report

Client:

**HARZA** 

Project:

MEEK ORCHARD/M174-EB

Sample Matrix:

Soil

Service Request: S9801785

Date Collected: 7/7/98
Date Received: 7/7/98

Hydrocarbon Scan

Sample Name:

RS-2/11

Lab Code:

S9801785-007

Test Notes:

Units: mg/Kg (ppm)

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Diesel	LUFT	Modified EPA 8015	1	1	7/7/98	7/8/98	ND	
Motor Oil	LUFT	Modified EPA 8015	5	1	7/7/98	7/8/98	ND	

#### Analytical Report

Client:

HARZA

Project:

MEEK ORCHARD/M174-EB

Sample Matrix:

Soil

Service Request: S9801785

Date Collected: 7/7/98
Date Received: 7/7/98

Hydrocarbon Scan

Sample Name:

RS-2/3'

Lab Code:

S9801785-008

Test Notes:

Units: mg/Kg (ppm)

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Diesel	LUFT	Modified EPA 8015	1	1	7/7/98	7/8/98	ND	
Motor Oil	LUFT	Modified EPA 8015	5	1	7/7/98	7/8/98	ND	

#### Analytical Report

Client:

HARZA

Project:

MEEK ORCHARD/M174-EB

Sample Matrix:

Service Request: S9801785

Date Collected: NA

Date Received: NA

Hydrocarbon Scan

Sample Name:

Method Blank

Lab Code:

S980707-MB

Test Notes:

Units: mg/Kg (ppm) Basis: Wet

**Dilution** Date Result Date Prep Analysis Notes Factor Extracted Analyzed Result Analyte Method Method MRL 7/7/98 7/8/98 ND 1 Modified EPA 8015 Diesel LUFT 1 ND 7/8/98 Motor Oil LUFT Modified EPA 8015 5 1 7/7/98

#### QA/QC Report

Client:

HARZA

Project:

MEEK ORCHARD/M174-EB

Sample Matrix:

Service Request: \$9801785

Date Collected: NA

Date Received: NA Date Extracted: NA

Date Analyzed: NA

Surrogate Recovery Summary

Hydrocarbon Scan

Prep Method:

LUFT

Analysis Method: Modified EPA 8015

Units: PERCENT

Basis: NA

,		Test	Percent Recovery
Sample Name	Lab Code	Notes	p-Terphenyl
			<b>-</b> ′
RS-1/I'	S9801785-006		47
RS-2/1'	S9801785-007		63
RS-2/3'	S9801785-008		52
Method Blank	S980707-MB		71

CAS Acceptance Limits:

41-140



July 14, 1998

Service Request No.: S9801786

Mr. Mark Litzau
Harza Consulting Engineers and Scientists
425 Roland Way
Oakland, CA 94621

4084379356

RE: MEEK ORCHARD/M174-EB

Dear Mr. Litzau:

The following pages contain analytical results for sample(s) received by the laboratory on July 7, 1998. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytical Report below confirms that pages 2 through 9, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact, me should you have questions or further needs.

Sincerely

Steven L. Green

Project Chemist

Apronyme

AZLA American Association for Laboratory Accreditation
ASTM American Society for Testing and Materials

BOD Biochemical Oxygan Demand

BTEX Benzene, Toluene, Ethylbenzene, Xylenes

CAM California Assessment Metals
CARB California Air Resources Board

CAS Number Chemical Abstract Service registry Number

CFC Chlorofluorecerbon
CFU Colony-Forming Unit
COD Chemical Chygen Demand

DEC Department of Environmental Conservation
DEQ Department of Environmental Quality
DHS Department of Health Services
DLCS Duplicate Laboratory Control Sample

DM8 Duplicate Matrix Spike DOE Department of Ecology DOH Department of Health

EPA U. S. Environmental Protection Agency

ELAP Environmental Laboratory Accreditation Program

GC Ges Chromatography

GC/MS Ges Chrometography/Mess Spectrometry

IC ion Chromatography
ICE initial Calibration Blaz

ICB initial Calibration Blank sample

ICP Inductively Coupled Pleams atomic emission spectrometry

ICV Initial Calibration Verification sample

J Estimated concentration. The value is less than the MRL, but greater than or equal to

the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.

LCS Laboratory Control Sample
LUFT Leaking Underground Fuel Tank

M Modified

MBAS Methylene Blue Active Substances

MCL Meximum Conteminent Level. The highest permiseible concentration of a

substance allowed in drinking water as established by the U. S. EPA.

MDL Method Detection Limit
MPN Most Probable Number
Method Reporting Limit

M8 Matrix Spike

MTBE Methyl tert-Butyl Ether
NA Not Applicable
NAN Not Analyzed

NAN Not Analyzed NC Not Calculated

NCASI National Council of the paper industry for Air and Stream Improvement ND Not Detected at or above the method reporting/detection limit (MRL/MDL)

NIOSH National Institute for Occupational Safety and Health

NTU Nephelometric Turbidity Units

ppb Parts Per Billion ppm Parts Per Million

PQL Practical Quantitation Limit
QA/QC Quality Assurance/Quality Control
RCRA Resource Conservation and Recovery Act

RPD Relative Percent Difference
SIM Selected for Monitoring

8M Standard Methods for the Exemination of Water and Wastewater, 18th Ed., 1992

STLC Sokubility Threehold Limit Concentration

8W Test Methods for Evaluating Solid Wasts, Physical/Chemical Methods, SW-846.

3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.

TCLP Toxicity Characteristic Leaching Procedure

TDS Total Dissolved Solida

TPH Total Patroleum Hydrocerbone

tr Trace level. The concentration of an enalyte that is less than the PQL but greater than or equal

to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.

TRPH Total Recoverable Petroleum Hydrocarbona

T88 Total Suspended Solids

TTLC Total Threshold Limit Concentration

VOA Volotile Organic Analyte(s) ACRONLST.DOC 7/14/95

#### **Analytical Report**

Client: Project: HARZA

Service Request: S9801786 Date Collected: 7/7/98

Sample Matrix:

07/14/1998 16:49

MEEK ORCHARD/M174-EB Soil

Date Received: 7/7/98

#### Organochlorine Pesticides

Sample Name:

C-1/1'

Units: mg/Kg (ppm) Basis: Wet

Lab Code:

S9801786-001

Test	Notes:
TCAL	MOTER:

Analyte

	Prep Method	Analysis Method	MRL.	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
C (Lindane)	EPA 3550	8080	0.01	i	7/7/98	7/12/98	ND	
· (/	EPA 3550	8080	0.03	ì	7/7/98	7/12/98	ND	
	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
	EPA 3550	8080	0.01	3	7/7/98	7/12/98	ND	
poxide	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
•							4	

Alpha-BHC	RPA 3550	8080	0.01	1	<i>7/7/</i> 98	7/12/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	7/7/98	7/12/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Aldrin	EPA 3550	8080	0.01	3	7/7/98	7/12/98	ND	
Heptachlor Epoxida	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan I	EPA 3550	8080	0.01	3	7/7/98	7/12/98	ND	
4, <i>A</i> '-DDE	EPA 3550	8080	0.01	3	7/7/98	7/12/9B	ND	
Dieldrin	EPA 3550	8020	0.01	1	7/7/98	7/12/98	0.03	
Endrin	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	7/7/98	7/12/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	7/7/98	7/12/98	ND	
Chlordano	EPA 3550	8080	0.1	1	7/7/98	7/12/98	ND	

#### **Analytical Report**

Client: Project: Sample Matrix: HARZA

MEEK ORCHARD/M174-EB

Soil

Service Request: S9801786 Date Collected: 7/7/98

Date Received: 7/7/98

Organochlorine Pesticides

Sample Name: Lab Code:

Test Notes:

C-2/1'

S9801786-002

Units: mg/Kg (ppm)
Basis: Wot

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Bota-BHC	EPA 3550	8080	0.03	1	7/7/98	7/1 <b>2/98</b>	ND	
Heptachlor	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	<i>7/7/</i> 98	7/12/98	ND	
Aldrin	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endrin	EPA 3550	8080	0.01	i	7/7/98	7/12/98	ND	
4.4'-DDD	EPA 3550	8080	0.01	ı	7/7/98	7/12/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	i	7/7/98	7/12/9B	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	7/7/9B	7/12/98	ND	
Methoxychlor	EPA 3550	8080	0.02	ī	7/7/98	7/12/98	ND	
Toxaphene	EPA 3550	8080	0.3	ī	7/7/98	7/12/98	ND	
Chlordane	EPA 3550	8080	0.1	ī	7/7/98	7/12/98	ND	

#### **Analytical Report**

HARZA

Service Request: S9801786 Date Collected: 7/7/98

Client: Project: Sample Matrix:

MEEK ORCHARD/M174-EB

Soil

Data Received: 7/7/98

#### Organochlorine Pesticides

Sample Name: Lab Code: Test Notes:

C-3/1'

Units: mg/Kg (ppm) Basis: Wct

89801786-003

Analyte	Prop Method	Analysia Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	KPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Gumma-BHC (Lindane)	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Bota-BHC	EPA 3550	8080	0.03	1	7/7/98	7/12/98	ND	
Hoptachier	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Delta-BHC	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Aldrin ·	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Hoptachlor Epoxide	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Dieldrie	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endrin	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan II	EPA 3550	<b>808</b> 0	0.01	1	7/7/98	7/12/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	i	7/7/98	7/12/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	7/7/98	7/12/98	ND	
Toxaphene	EPA 3550	B080	0.3	1	7/7/98	7/12/98	ND	
Chlordane	EPA 3550	8080	0.1	1	7/7/98	7/12/98	ND	

#### **Analytical Report**

Client: Project: Sample Matrix:

HARZA MEEK ORCHARD/M174-EB Soil

Service Request: S9801786 Date Collected: 7/7/98 Date Received: 7/7/98

Organochlorine Pesticides

Sample Name: Lab Code: Test Notes:

C-4/1\* \$9801786-004 Units: mg/Kg (ppm) Basis: Wet

PAGE 06

Analyte	Prop Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	<i>7/7/9</i> 8	7/12/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	7/7/98	7/12/98	ND	
Heptachior	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Delta-BHC	EPA 3550	8080	0,01	1	7/7/98	7/12/98	ND	
Aldrin	EPA 3550	2080	0.01	1	7/7/98	7/12/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan I	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Dieldrin	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endrin	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	i	7/7/98	7/12/98	ND	
Endrin Aldehyde	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Methoxychlor	EPA 3550	8080	0.02	1	7/7/98	7/12/98	ND	
Toxaphene	EPA 3550	8080	0.3	1	7/7/98	7/12/98	ND	
Chlordane	EPA 3550	8080	0.1	ì	7/7/98	7/12/98	ND	

#### Analytical Report

**Client:** Project: Sample Matrix: HARZA

Service Request: \$9801786

Date Collected: NA

Date Received: NA

MEEK ORCHARD/M174-EB Soil

#### Organochlorine Pesticides

Sample Name: Lab Code:

Test Notes:

Method Blank S980707-MB

Units: mg/Kg (ppm) Basis: Wet

Analyte	Prep Method	Analysie Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Alpha-BHC	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Gamma-BHC (Lindane)	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Beta-BHC	EPA 3550	8080	0.03	1	7/7/98	7/12/98	ND	
Heptachlor	EPA 3550	8080	0.01	1	7/7/98	7/12/98 .	ND	
Delta-BHC	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Aldrin	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Heptachlor Epoxide	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan I	EPA 3550	B080	0.01	1	7/7/98	7/12/98	ND	
4,4'-DDE	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Di <b>ck</b> in	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endrin	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
4,4'-DDD	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan II	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
4,4'-DDT	EPA 3550	8080	0.01	1	7/7/98	7/1 <b>2/98</b>	ND	
Endrin Akichyde	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Endosulfan Sulfate	EPA 3550	8080	0.01	1	7/7/98	7/12/98	ND	
Methoxychlor	EPA 3550	8080	0.02	ī	7/7/98	7/12/98	ND	
Toxaphene	EPA 3550	8080	0.3	ī	7/7/98	7/12/98	ND	
Chlordane	EPA 3550	8080	0.1	î	7/7/98	7/12/98	ND	

#### QA/QC Report

Client:

HARZA

Project:

MEEK ORCHARD/M174-EB

4084379356

Sample Matrix:

Soil

Service Request: 39801786

Date Collected: NA

Date Received: NA

Date Extracted: NA Date Analyzed: NA

Surrogate Recovery Summary Organochlorine Pesticides

Prep Method:

EPA 3550

Analysis Method: 8080 Units: PERCENT

Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery Decachlorobiphenyl
C-1/I'	S9801786-001		97
C-2/1'	S9801786-002		106
C-3/1'	S9801786-003		104
C-4/1'	S9801786-004		105
Method Blank	9980707-MB		119

**CAS Acceptance Limits:** 

53-120

Columbia Analytical Services ~
As Engigner-Chantel Chaige Fre

# **S980/786**3334 Victor Court • Santa Clara, CA 95054

CHAIN OF CUSTODY/LABORATORY ANALYSIS HEPUHI FUHIN

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Services \*\* 3334 Victor Court • Santa Clara, CA 95054 (408) 437-2400 • FAX (408) 437-9356

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM SERVICE REQUEST NO. 5980/186 due 7/14/91 P.O.# PAGE / OF /

	DJECT NAME MEEK ORCHARD # M174-EB DJECT NAME MARK LITZAV											-					REQ								
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**CA ELAP# 2224** 

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

July 8, 1998

Stave Green
Columbia Analytical Services
3334 Victor Court
Santa Clara, CA 95054

Subject

1 Concrete Sample and 4 Soil Samples

Lab #'s:

E12730 - E12734

Project Name:

Project Number:

S9801785

Method(s):

**EPA 8240** 

Dear Steve Green,

Chemical analysis on the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2224). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michael N. Golden

Lab Director

**CA ELAP# 2224** 

525 Del Rey Avenue, Suite E • Sunnyvalc, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

#### Certified Analytical Report Volatile Organic Compounds by EPA Method 8240

Client: Columbia Analytical

Date Reported: 7/\$/98

Sample Matrix: Concrete

Date Received: 7/7/98

Sample Date/Time: 7/7/98

Date Analyzed: 7/7/98

Lab #: E12730

. Dilution Factor: 1

Client ID:	DRAIN-I			<u> </u>			
Cempound	Value	PQL	DLR	Compound	Value	PQL	DLR
Acetone	ND	20	20	1.1-Dichlorcethese	ND	5	5
Allyl Chloride	ND	20	20	traus-1,2-Dichloroethene	ND	5	5
Benzene	ND	5	5	1.2-Dichleropropune	ND	5	5
Benzyi Chioride	ND	20	20	cis-1,3-Dichleropropone	MD	5	5
Bromodichloromethane	ND	5	5	trans-1,3-Dichlorogropene	ND	- 3	
Bronsform	ND	5[	5	Ethyl Beazene	ND	5	5
Bromomethane	ND	5		2-Hexanone	MD	20	20
2-Butanope	ND	20	20	Iodomethane	ND	5	5
Carbon Disulfide	ND	5	5	Methylene Chieride	ND	5	5
Carbon Tetrachloride	ND	3		4-Methyl-2-Pentanone	ND	20	20
Chlorobessene	ND	5	5	Styrene	ND	5	5
Chloroethane	ND	5]		1,1,1,2-Tetrachloroethane	ND	5	5
Chloroform	ND	5	5	1,1,2,2-Tetrackloroethane	ND	5	5
Chloromethane	ND	5	5	Tetrachloroethene	ND	5	5
Dibromochloromethane	ND	5	5	Toluene	ND	5	5
1,2-Dibromo 3-Chloropropan	MD	5	5	1,1,1-Trichloroethage	ND	5	5
1,2-Dibromoethane (EDB)	MD	5	5	1,1,2-Trichloroethane	ND	5	5
Dichlorodifiuoromethane	ND	- 3	5	Trichloroethese	KD	5	3
1,2- Dichlorobennese	ND	5	5	Trichloroflooremethane	סא	- 5	
1,3- Dichlorobennese	ND	.5	5	1,2,3-Trickloropropane	ND	5	5
1,4- Dichlorobenzene	ND	5		Vinyl Acetate	ND	10	10
1,1-Dickloroethaue	ND	5	5	Vinyl Chloride	ND	5	5
cis-1.2-Dichloroethene	ND	5	5	Xylenes	ND	5	5
1,2-Dichloroethane	700	5	S	<u> </u>	-		

Surrogate Recovery (%) Dibromofluoromethune 102 Toluene-d8 90 4-Bromofivorobenzene 92

1. Results are reported in ug/kg (ppb).

2. DLR-DF x PQL

3. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

ND: None Detected at or above DLR

PQL: Precioni Quantitation Limit

DLR: Detection Reporting Limit

DF: Dilation Feator

CA ELAP# 2224

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

#### Certified Analytical Report Volatile Organic Compounds by EPA Method 8240

Client: Columbia Analytical

Date Reported: 7/8/98

Sample Matrix: Soll

Date Received: 7/7/98 Date Analyzed: 7/8/98

Sample Date/Time: 7/7/98

Lab 4: E12731

- Dilution Factor: 1

Client ID:	C-DI			<u> </u>			
Compound	Value	PQL	DLR	Compound	Value	PQL	DLR
Acetone	ND	20	20	1,1-Dichleroethese	ND	5	5
Allyl Chloride	ND	20		trase-1,2-Dichloroethese	ND	5	
Benzene .	ND	5	5	1.2-Dichieropropane	ND	5	5
Benzyl Chloride	ND	20		cis-1,3-Dichloropropene	ND	5	5
Bramodickloromethane	MD	- 5	5	trans-1,3-Dichloropropene	ND	5	5
Bromoferm	ND	5		Ethyl Bennene	ND	5	5
Brogsomethane	ND	5	5	2-Hexanone	ND	20	20
2-Butasone	ND	20		Iodomethane	ND	5	5
Carbon Dissifide	ND	5	5	Methyloge Chloride	ND	5	5
Carbon Tetrachloride	ND	5	5	4-Methyl-2-Pentanone	ND	20	20
Chlorobensene	ND	5	5	Styrene	ND		5
Chloroethane	MD	5	5	1,1,1,2-Tetrachloreethane	ND.	5	5
Chloroform	ND	5	5	1,1,2,2-Tetrachloroethane	ND	5	5
Chloromethane	ND	5	5	Tetrachlorvethene	ND	5	5
Dibromochlorosethane	מא	5	5	Toluene	ND	5	5
1,2-Dibrome 3-Chloropropan	ND	5	5	1,1,1-Trichloroethene	ND	5	5
1,2-Dibromoethane (EDB)	ND	5	5	1.1,2-Trichloroethane	ND ND	5	5
Dichlorodi/koromethane	ND	5	5	Trichloroethene	ND	5	5
1,2- Dicktorobeasene	ND	5	5	Trichloroftvoromethane	MD	5	5
1,3- Dichlorobenzene	ND	5	5	1,2,3-Trickloropropane	MD	5	5
1,4- Dichlorobeauene	ND	5	5	Vinyl Acetete	ND	Į0	10
1,1-Dichloroethane	ND	3		Vinyl Chloride	ND	5	5
cis-1,2-Dichloroethene	ND	5	5	Xylenes	ND	5	- 5
1,2-Dichloroethaue	ND	5	3				

Surrogate Recovery (%) Dibromofluoromethane 98 Toluene-d8 113 4-Bromofluorobenzene 83

Results are reported in ug/kg (ppb).

2. DLR= DF x PQL

3. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

ND. Name Detected at or above DLR

PQL: Preciou Questitation Limit

DLR: Detection Reporting Limit

DF: Dibation Factor

**CA ELAP# 2224** 

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

#### Certified Analytical Report Volatile Organic Compounds by EPA Method 8240

Client: Columbia Analytical

Date Reported: 7/3/98

Sample Matrix: Soil

Date Received: 7/7/98 Date Analyzed: 7/8/98

Sample Date/Time: 7/7/98 Lab #: E12732

- Dilution Factor: 1

Chiana The C.301

Compound	Vaine	PQL	DLR	Compound	Value	PQL	DLR
Acesone	ND	20		1,1-Dichloroethene	ND	5	3
Allyi Chloride	ND	20	20	trans-1,2-Dichlorosthene	ND	5	- 5
Benzene	ND	5	5	1,2-Dichieropropese	ND	_ 3	5
Benzyl Chloride	ND	20		cis-1,3 Dichleropropene	ND	5	5
Bromodichloromethane	ND	3		trans-1,3-Dichlorepropess	ND	5	5
Brosseform	ND	5		Ethyl Bounene	ND	5	5
Bromomethane	ND	5	5	2-Hexanoue	ND	20	20
2-Butazone	MD	20	20	Indomethane	ND	5	5
Carbon Disuifide	ND	5]	\$	Methyleae Chioride	ND	5	5
Carbon Tetrachloride	ND	5	5	4-Methyl-2-Pentanone	ND	20	20
Chlorobensene	ND	5	5	Styrene	ND	5	5
Chloroethane	ND	5	5	1,1,1,2-Tetrachiorusthane	ND		5
Chloroform	ND		5	1,1,2,2-Tetrachloreethane	ND	5	5
Chloromethane	ND	5	5	Tetrachloroethene	ND	5	5
Dibromochloromethane	ND	5	5	Toluese	ND	5	5
1,2-Dibromo 3-Chiorepropas	ND		5	1,1.1-Trichloroethane	ND	5	5
1,3-Dibromoethane (LDB)	פא		5	1,1,2-Trichloroethane	ND	5	5
Dichlorodiffuoromethane	ND	5	5	Trichioroethene	ND	5]	5
1,2- Dichlerobennene	ND	5	5	Tricklorefluoromethane	ND	5	5
1,3- Dichiorobennene	ND	5	5	1,2,3-Trichloropropase	מא	5	5
1,4- Dichlerobenzene	ND	5	5	Vinyl Acetate	ND	10	10
1,1-Dichloroethane	ND	3	5	Vinyl Chloride	ND	5	5
cis-1,2-Dichloroethene	ND	5	5	Xylenes	ND	5	5
1,2-Dichigroethane	ND	5	5				

Recovery (%) Surrogate Dibromofluoromethane 100 Tolueno-d8 114 4-Bromofiuorobenzene 76

Results are reported in ug/kg (ppb).

2. DLR= DF x PQL

3. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

ND: Name Detected at or above DLR

PQL: Practical Quantitation Limit

DLR: Detection Reporting Limit

DF: Dilgion Factor

**CA FLAP# 2224** 

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

#### Certified Analytical Report Volatile Organic Compounds by EPA Method 8240

Client: Columbia Analytical

Date Reported: 7/8/98

Sample Matrix: Soil

Date Received: 7/7/98 Date Analyzed: 7/7/98

Sample Date/Time: 7/7/98

, Dilution Fector: 1

Lab #: E12733

Client ID: C-3/11

Compound	Value	PQL	DI.P	Compound	Value	PQL	DLR
Acctore	30	20		1,1-Dichloroethene	ND	5	4
Allyl Chloride	ND	20		trans-1,2-Dichlorosthene	ND	3	<del></del>
Benzene	ND	5		1,2-Dickloropropage	ND	- 5	
Bensyl Chloride	ND	20		cis-1,3-Dichloropropene	ND	5	5
Bromodichloromethung	ND	- 5		trans-1,3-Dichloropropens	CN	3	3
Broweform	ND	5		Ethyl Benzene	ND	5	
Bromomethane	ND	3		2-Hexasone	ND	20	20
2-Butanous	ND	20		Iodomethase	ND	5	
Carbon Disulfide	ND	- 3		Methylene Chloride	7.6	5	
Carbon Tetrachloride	ND	- 5		4-Methyl-2-Pentagone	ND	20	20
Chierobenzene	ND	5		Styrene	ND	3	5
Chleroothane	ND	5		1,1,1,2-Tetrachioroethane	ND	- 5	- 5
Chioroform	ND	5		1,1,2,2-Tetrachloroethane	ND	- 5	
Chioromethane	ND	3		Tetrachlorosthene	ND	5	5
Dibromochloromethane	ND	5		Tobsec	ND	5	5
1,2-Dibromo 3-Ckloropropau	ND	31		1,1,1-Trichloreethane	ND	5	
1,2-Dibromoethane (EDB)	ND	5		1,1,2-Trichloroethane	ND	5	5
Dichlorodifiuoromethene	ND	5		Tricklorostkese	ND	5	3
1,2- Dichlorobeasese	ND	5		Trichlorofluoromethane	ND	5	
1,3- Dichlorobezzene	ND	5		1,2,3-Trichloropropane	ND	5	3
1,4- Dichiorobeusene	ND	5		Vinyl Acetate	ND	10	10
1,1-Dichloroethane	ND	5		Vinyl Chloride	MD	5	5
cis-1,2-Dichloroethene	ND			Xylenes	ND	5	5
1,2-Dichloreethane	ND	3	5				

Recovery (%) Surrogate Dibromoliuoromethane 112 Toluene-d8 110 4-Bromoducrobenzene **83** 

1. Results are reported in ug/kg (ppb).

2. DLR- DF x POL

3. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

ND: None Detected at or above DLR

PQL Predict Quantitation Limit

DLR: Detection Reporting Limit

DP: Dilution Pactor

**CA ELAP# 2224** 

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

#### Certified Analytical Report Volatile Organic Compounds by EPA Method 5240

**Client:** Columbia Analytical

Dute Reported: 7/\$/98

Sample Matrix: Soil

Date Received: 7/7/98

Sample Date/Time: 7/7/98

Date Annivzed: 7/7/98

Lab #: E12734

, Dilution Factor: 1

Client ID: C-4/1'

Compound	Value	PQL	DLR	Compound	Value	PQL	DLR
Acetone	ND	20	20	1.1-Dichleroethene	ND	5	5
Allyl Chloride	ND	20		trans-1,2-Dichlorosthane	ND	5	5
Bensene	ND	5	5	1,2-Dickloroprepane	ND	5	5
Benzyl Chloride	ND	20		cis-1,3-Dichioropropens	ND	_ 5	5
Brossodichloromethane	ND	5		trans-1,3-Dichloropropens	ND	5	3
Bromoform	ND	5		Ethyl Benzene	ND	- 3	5.
Bromomethane	ND	5		2-Hexanone	ND	20	20
2-Botanose	ND	20	20	Iodomethane	ND	5	- 5
Carbon Dissifide	ND	5	5	Methylene Chloride	6.3	5	5
Carbon Tetrachloride	ND	5		4-Mathyl-2-Pentanone	ND	20	20
Chlorobeazene	ND	5		Styrene	ND	5	5
Chloroethane	ND	5		1,1,1,2-Tetrachloroethane	ND	5	3
Chieroform	ND		5	1,1,2,2-Tetrachleroethans	ND	5	5
Chloromethage	ND	5	5	Tetrachieroethene	ND	5	5
Dibromochleremethane	ND	5	5	Toluene	ND	5	5
1,2-Dibromo 3-Chloropropan	ND	5	5	1,1,1-Trichlorosthase	ND	5	5
1,2-Dibromosthane (EDB)	ND	5	5	1,1,2-Trichloroothane	מא	5	5
Dichlorodificoromethane	ND	5	5	Trickloroethese	ND	5	5
1,2- Dichlorobenzeze	ND	. 5	- 5	Trichlorofluoromethene	ND	5	5
1,3- Dichlorobenzene	MD	5	5	1,2,3-Trichloropropane	ND	5	5
1,4- Dichlorobennene	ND	5		Vinyi Acetate	ND	10	10
1,1-Dichleroethane	ND	5		Vlayi Chloride	MD	5	5
cis-1,2-Dichloroethene	ND	5		Xylenes	ND	5	5
1.2-Dichloroethane	ND	3	5				

Recovery (%) Surrogate Dibromofluoromethane 110 114 Toluene-d8 85 4-Brosnofluorobenzane

1. Results are reported in ug/kg (ppb).

2. DLR-DF x PQL

3. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

ND: None Detected at or above DLR

DF: Dilution Factor

PQL: Presion Questitation Limit

DLR: Detection Reporting Limit

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