



July 9, 1998

Service Request No.: S9801785

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

RE: MEEK ORCHARD/M174-EB

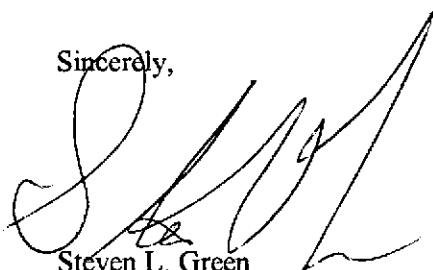
Dear Mr. Litzau:

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,



Steven L. Green
Project Chemist

COLUMBIA ANALYTICAL SERVICES, Inc.

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.
LCS	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)

COLUMBIA ANALYTICAL SERVICES, INC.

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: S9801785-001
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	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	7/7/98	7/7/98	78	
Nickel	EPA 3050BM	6010A	2	1	7/7/98	7/7/98	19	
Silver	EPA 3050BM	6010A	2	1	7/7/98	7/7/98	ND	
Zinc	EPA 3050BM	6010A	2	1	7/7/98	7/7/98	760	

COLUMBIA ANALYTICAL SERVICES, INC.

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
Lab Code: S980707-MB
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

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	1	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	1	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	1	7/7/98	7/7/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

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'
Lab Code: S9801785-002
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

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	

COLUMBIA ANALYTICAL SERVICES, INC.

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-2/1'
Lab Code: S9801785-003
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

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	

COLUMBIA ANALYTICAL SERVICES, INC.

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'
Lab Code: S9801785-004
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

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	22	
Lead	EPA 3050BM	6010A	5	1	7/7/98	7/7/98	39	

COLUMBIA ANALYTICAL SERVICES, INC.

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-4/1'
Lab Code: S9801785-005
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

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	21	
Lead	EPA 3050BM	6010A	5	1	7/7/98	7/7/98	17	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: HARZA
Project: MEEK ORCHARD/M174-EB
Sample Matrix: Soil

Service Request: S9801785
Date Collected: NA
Date Received: NA

Total Metals

Sample Name: Method Blank
Lab Code: S980707-MB
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

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	ND	
Lead	EPA 3050BM	6010A	5	1	7/7/98	7/7/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

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)
Basis: Wet

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	7/7/98	ND	
Motor Oil	LUFT	Modified EPA 8015	5	1	7/7/98	7/7/98	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

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-2/1'
Lab Code: S9801785-007
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

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	

COLUMBIA ANALYTICAL SERVICES, INC.

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)
Basis: Wet

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	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: HARZA
Project: MEEK ORCHARD/M174-EB
Sample Matrix: Soil

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

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Diescl	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	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: HARZA
Project: MEEK ORCHARD/M174-EB
Sample Matrix: Soil

Service Request: S9801785
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

Sample Name	Lab Code	Test Notes	Percent Recovery p-Terphenyl
RS-1/1'	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

Entech Analytical Labs, Inc.

CA ELAP# 2224

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

July 8, 1998

Steve 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

Entech Analytical Labs, Inc.

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
 Sample Matrix: Concrete
 Sample Date/Time: 7/7/98
 Lab #: E12730
 Client ID: DRAIN-1

Date Reported: 7/8/98
 Date Received: 7/7/98
 Date Analyzed: 7/7/98
 Dilution Factor: 1

Compound	Value	PQL	DLR	Compound	Value	PQL	DLR
Acetone	ND	20	20	1,1-Dichloroethene	ND	5	5
Allyl Chloride	ND	20	20	trans-1,2-Dichloroethene	ND	5	5
Benzene	ND	5	5	1,2-Dichloropropane	ND	5	5
Benzyl Chloride	ND	20	20	cis-1,3-Dichloropropane	ND	5	5
Bromodichloromethane	ND	5	5	trans-1,3-Dichloropropane	ND	5	5
Bromoform	ND	5	5	Ethyl Benzene	ND	5	5
Bromomethane	ND	5	5	2-Hexanone	ND	20	20
2-Butanone	ND	20	20	Iodomethane	ND	5	5
Carbon Disulfide	ND	5	5	Methylene Chloride	ND	5	5
Carbon Tetrachloride	ND	5	5	4-Methyl-2-Pentanone	ND	20	20
Chlorobenzene	ND	5	5	Styrene	ND	5	5
Chloroethane	ND	5	5	1,1,1,2-Tetrachloroethane	ND	5	5
Chloroform	ND	5	5	1,1,2,2-Tetrachloroethane	ND	5	5
Chloromethane	ND	5	5	Tetrachloroethene	ND	5	5
Dibromochloromethane	ND	5	5	Toluene	ND	5	5
1,2-Dibromo 3-Chloropropane	ND	5	5	1,1,1-Trichloroethane	ND	5	5
1,2-Dibromoethane (EDB)	ND	5	5	1,1,2-Trichloroethane	ND	5	5
Dichlorodifluoromethane	ND	5	5	Trichloroethene	ND	5	5
1,2-Dichlorobenzene	ND	5	5	Trichlorofluoromethane	ND	5	5
1,3-Dichlorobenzene	ND	5	5	1,2,3-Trichloropropane	ND	5	5
1,4-Dichlorobenzene	ND	5	5	Vinyl Acetate	ND	10	10
1,1-Dichloroethane	ND	5	5	Vinyl Chloride	ND	5	5
cis-1,2-Dichloroethene	ND	5	5	Xylenes	ND	5	5
1,2-Dichloroethane	ND	5	5				

Surrogate	Recovery (%)
Dibromofluoromethane	102
Toluene-d8	90
4-Bromofluorobenzene	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
 DLR: Detection Reporting Limit

PQL: Practical Quantitation Limit
 DF: Dilution Factor

Entech Analytical Labs, Inc.

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
 Sample Matrix: Soil
 Sample Date/Time: 7/7/98
 Lab #: E12731
 Client ID: C-1/1'

Date Reported: 7/8/98
 Date Received: 7/7/98
 Date Analyzed: 7/8/98
 Dilution Factor: 1

Compound	Value	PQL	DLR	Compound	Value	PQL	DLR
Acetone	ND	20	20	1,1-Dichloroethene	ND	5	5
Allyl Chloride	ND	20	20	trans-1,2-Dichloroethene	ND	5	5
Benzene	ND	5	5	1,2-Dichloropropane	ND	5	5
Benzyl Chloride	ND	20	20	cis-1,3-Dichloropropene	ND	5	5
Bromodichloromethane	ND	5	5	trans-1,3-Dichloropropene	ND	5	5
Bromoform	ND	5	5	Ethyl Benzene	ND	5	5
Bromomethane	ND	5	5	2-Hexanone	ND	20	20
2-Butanone	ND	20	20	Iodomethane	ND	5	5
Carbon Disulfide	ND	5	5	Methylene Chloride	ND	5	5
Carbon Tetrachloride	ND	5	5	4-Methyl-2-Pentanone	ND	20	20
Chlorobenzene	ND	5	5	Styrene	ND	5	5
Chloroethane	ND	5	5	1,1,1,2-Tetrachloroethane	ND	5	5
Chloroform	ND	5	5	1,1,2,2-Tetrachloroethane	ND	5	5
Chloromethane	ND	5	5	Tetrachloroethene	ND	5	5
Dibromochloromethane	ND	5	5	Toluene	ND	5	5
1,2-Dibromo 3-Chloropropane	ND	5	5	1,1,1-Trichloroethane	ND	5	5
1,2-Dibromoethane (EDB)	ND	5	5	1,1,2-Trichloroethane	ND	5	5
Dichlorodifluoromethane	ND	5	5	Trichloroethene	ND	5	5
1,2-Dichlorobenzene	ND	5	5	Trichlorofluoromethane	ND	5	5
1,3-Dichlorobenzene	ND	5	5	1,2,3-Trichloropropane	ND	5	5
1,4-Dichlorobenzene	ND	5	5	Vinyl Acetate	ND	10	10
1,1-Dichloroethane	ND	5	5	Vinyl Chloride	ND	5	5
cis-1,2-Dichloroethene	ND	5	5	Xylenes	ND	5	5
1,2-Dichloroethane	ND	5	5				

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

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
 DLR: Detection Reporting Limit

PQL: Practical Quantitation Limit
 DF: Dilution Factor

Entech Analytical Labs, Inc.

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
 Sample Matrix: Soil
 Sample Date/Time: 7/7/98
 Lab #: E12732
 Client ID: C-2/1'

Date Reported: 7/8/98
 Date Received: 7/7/98
 Date Analyzed: 7/8/98
 Dilution Factor: 1

Compound	Value	PQL	DLR	Compound	Value	PQL	DLR
Acetone	ND	20	20	1,1-Dichloroethene	ND	5	5
Allyl Chloride	ND	20	20	trans-1,2-Dichloroethene	ND	5	5
Benzene	ND	5	5	1,2-Dichloropropane	ND	5	5
Benzyl Chloride	ND	20	20	cis-1,3-Dichloropropane	ND	5	5
Bromodichloromethane	ND	5	5	trans-1,3-Dichloropropane	ND	5	5
Bromoform	ND	5	5	Ethyl Benzene	ND	5	5
Bromomethane	ND	5	5	2-Hexanone	ND	20	20
2-Butanone	ND	20	20	Iodomethane	ND	5	5
Carbon Disulfide	ND	5	5	Methylene Chloride	ND	5	5
Carbon Tetrachloride	ND	5	5	4-Methyl-2-Pentanone	ND	20	20
Chlorobenzene	ND	5	5	Styrene	ND	5	5
Chloroethane	ND	5	5	1,1,1,2-Tetrachloroethane	ND	5	5
Chloroform	ND	5	5	1,1,2,2-Tetrachloroethane	ND	5	5
Chloromethane	ND	5	5	Tetrachloroethene	ND	5	5
Dibromochloromethane	ND	5	5	Toluene	ND	5	5
1,2-Dibromo 3-Chloropropan	ND	5	5	1,1,1-Trichloroethane	ND	5	5
1,2-Dibromoethane (EDB)	ND	5	5	1,1,2-Trichloroethane	ND	5	5
Dichlorodifluoromethane	ND	5	5	Trichloroethene	ND	5	5
1,2-Dichlorobenzene	ND	5	5	Trichlorofluoromethane	ND	5	5
1,3-Dichlorobenzene	ND	5	5	1,2,3-Trichloropropane	ND	5	5
1,4-Dichlorobenzene	ND	5	5	Vinyl Acetate	ND	10	10
1,1-Dichloroethane	ND	5	5	Vinyl Chloride	ND	5	5
cis-1,2-Dichloroethene	ND	5	5	Xylenes	ND	5	5
1,2-Dichloroethane	ND	5	5				

Surrogate	Recovery (%)
Dibromofluoromethane	100
Toluene-d8	114
4-Bromofluorobenzene	76

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
 DLR: Detection Reporting Limit

PQL: Practical Quantitation Limit
 DF: Dilution Factor

Entech Analytical Labs, Inc.

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
 Sample Matrix: Soil
 Sample Date/Time: 7/7/98
 Lab #: E12733
 Client ID: C-3/1'

Date Reported: 7/8/98
 Date Received: 7/7/98
 Date Analyzed: 7/7/98
 Dilution Factor: 1

Compound	Value	PQL	DLR	Compound	Value	PQL	DLR
Acetone	30	20	20	1,1-Dichloroethene	ND	5	5
Allyl Chloride	ND	20	20	trans-1,2-Dichloroethene	ND	5	5
Benzene	ND	5	5	1,2-Dichloropropane	ND	5	5
Benzyl Chloride	ND	20	20	cis-1,3-Dichloropropene	ND	5	5
Bromodichloromethane	ND	5	5	trans-1,3-Dichloropropene	ND	5	5
Bromoform	ND	5	5	Ethyl Benzene	ND	5	5
Bromomethane	ND	5	5	2-Hexanone	ND	20	20
2-Butanone	ND	20	20	Iodomethane	ND	5	5
Carbon Disulfide	ND	5	5	Methylene Chloride	7.0	5	5
Carbon Tetrachloride	ND	5	5	4-Methyl-2-Pentanone	ND	20	20
Chlorobenzene	ND	5	5	Styrene	ND	5	5
Chloroethane	ND	5	5	1,1,1,2-Tetrachloroethane	ND	5	5
Chloroform	ND	5	5	1,1,2,2-Tetrachloroethane	ND	5	5
Chloromethane	ND	5	5	Tetrachloroethene	ND	5	5
Dibromochloromethane	ND	5	5	Toluene	ND	5	5
1,2-Dibromo-3-Chloropropane	ND	5	5	1,1,1-Trichloroethane	ND	5	5
1,2-Dibromoethane (EDB)	ND	5	5	1,1,2-Trichloroethane	ND	5	5
Dichlorodifluoromethane	ND	5	5	Trichloroethene	ND	5	5
1,2-Dichlorobenzene	ND	5	5	Trichlorofluoromethane	ND	5	5
1,3-Dichlorobenzene	ND	5	5	1,2,3-Trichloropropane	ND	5	5
1,4-Dichlorobenzene	ND	5	5	Vinyl Acetate	ND	10	10
1,1-Dichloroethane	ND	5	5	Vinyl Chloride	ND	5	5
cis-1,2-Dichloroethene	ND	5	5	Xylenes	ND	5	5
1,2-Dichloroethane	ND	5	5				

Surrogate	Recovery (%)
Dibromofluoromethane	112
Toluene-d8	110
4-Bromofluorobenzene	83

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
 DLR: Detection Reporting Limit

PQL: Practical Quantitation Limit
 DF: Dilution Factor

Entech Analytical Labs, Inc.

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
 Sample Matrix: Soil
 Sample Date/Time: 7/7/98
 Lab #: E12734
 Client ID: C-4/1

Date Reported: 7/8/98
 Date Received: 7/7/98
 Date Analyzed: 7/7/98
 Dilution Factor: 1

Compound	Value	PQL	DLR	Compound	Value	PQL	DLR
Acetone	ND	20	20	1,1-Dichloroethene	ND	5	5
Allyl Chloride	ND	20	20	trans-1,2-Dichloroethene	ND	5	5
Benzene	ND	5	5	1,2-Dichloropropane	ND	5	5
Benzyl Chloride	ND	20	20	cis-1,3-Dichloropropene	ND	5	5
Bromodichloromethane	ND	5	5	trans-1,3-Dichloropropene	ND	5	5
Bromoform	ND	5	5	Ethyl Benzene	ND	5	5
Bromomethane	ND	5	5	2-Hexanone	ND	20	20
2-Butanone	ND	20	20	Iodomethane	ND	5	5
Carbon Disulfide	ND	5	5	Methylene Chloride	6.3	5	5
Carbon Tetrachloride	ND	5	5	4-Methyl-2-Pentanone	ND	20	20
Chlorobenzene	ND	5	5	Styrene	ND	5	5
Chloroethane	ND	5	5	1,1,1,2-Tetrachloroethane	ND	5	5
Chloroform	ND	5	5	1,1,2,2-Tetrachloroethane	ND	5	5
Chloromethane	ND	5	5	Tetrachloroethene	ND	5	5
Dibromochloromethane	ND	5	5	Toluene	ND	5	5
1,2-Dibromo 3-Chloropropan	ND	5	5	1,1,1-Trichloroethane	ND	5	5
1,2-Dibromomethane (EDB)	ND	5	5	1,1,2-Trichloroethane	ND	5	5
Dichlorodifluoromethane	ND	5	5	Trichloroethene	ND	5	5
1,2-Dichlorobenzene	ND	5	5	Trichlorofluoromethane	ND	5	5
1,3-Dichlorobenzene	ND	5	5	1,2,3-Trichloropropane	ND	5	5
1,4-Dichlorobenzene	ND	5	5	Vinyl Acetate	ND	10	10
1,1-Dichloroethane	ND	5	5	Vinyl Chloride	ND	5	5
cis-1,2-Dichloroethene	ND	5	5	Xylenes	ND	5	5
1,2-Dichloroethane	ND	5	5				

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

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
 DLR: Detection Reporting Limit

PQL: Practical Quantitation Limit
 DF: Dilution Factor



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

SUBCONTRACT

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. **59801785**

P.O.#

PAGE OF

PROJECT NAME: **59801785**
 PROJECT MGR: **Steve Green**
 COMPANY: **Columbia Analytical Services**
 ADDRESS: **3334 Victor Court**
Santa Clara PHONE: _____
SubLab FAX: _____
 SAMPLERS SIGNATURE: **ENTECH**

NUMBER OF CONTAINERS	ANALYSIS REQUESTED																REMARKS *
	PRESERVATIVE	HCl	HCl	HCl	NP	NP	NP	HCl	HCl	HNO ₃	NP	H ₂ SO ₄	H ₂ SO ₄	H ₂ SO ₄	RAOH		
	Volatiles Organics GC/MS 8210/8210/8280																
	Halogenated or Aromatic Volatiles 801/8210/8210/8280																
	TPH as Gaseous/TEX DHS LUFT / 8280																
	TPH as Dissolved/HSBC DHS LUFT																
	Base/Neutral/Acid Organics GC/MS 825/8270																
	Pesticides / PCBs 608/8280																
	TPH - 418.1																
	Oil and Grease Method																
	Metals (Total or dissolved) List Below																
	pH, Cond, Cl, SO ₄ , F, TDS, TSS																
	Alk. NO ₃ , NO ₂ (circle)																
	NH ₃ -N, COD, TOC, TSS																
	NO ₃ / NO ₂ (circle)																
	Total Organic Carbon TOC																
	Total Phenols																
	Cyanide																

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX
DRAIN-1	7/7		E12730	Overluc
C-1/1'			E12731	Soil
C-2/1'			E12732	Soil
C-3/1'			E12733	Soil
C-4/1'			E12734	Soil

RUSH

RELINQUISHED BY:
 Signature: *[Signature]*
 Printed Name: **CURRY BURN**
 Firm: **Columbia**
 Date/Time: **7/7/98 14:40**

RECEIVED BY:
 Signature: *[Signature]*
 Printed Name: **Brenda Goff**
 Firm: **Entech**
 Date/Time: **7/7/98 2:40**

RELINQUISHED BY:
 Signature: *[Signature]*
 Printed Name: **Brenda Goff**
 Firm: **Entech**
 Date/Time: **7/7/98 3:00**

RECEIVED BY:
 Signature: **V. TRAZO**
 Printed Name: **V. TRAZO**
 Firm: **Entech**
 Date/Time: **7/7 2:12p**

TURNAROUND REQUIREMENTS
 1 day 2 day 3 day
 5 day Other
 Standard (10 working days)
 Results Due: **7/8/98**

REPORT REQUIREMENTS
 I. Routine Report
 II. Report includes MS, MSD, as required, may be changed as samples
 III. Data Validation Report (excludes All Flow Data)
 MDLs/POL/Trace I
 Electronic Data Deliverables

RELINQUISHED BY:
 Signature: _____
 Printed Name: _____
 Firm: _____
 Date/Time: _____

RECEIVED BY:
 Signature: _____
 Printed Name: _____
 Firm: _____
 Date/Time: _____

SAMPLE RECEIPT: Condition _____ Custody Seals _____

SPECIAL INSTRUCTIONS/COMMENTS:
 Circle which metals are to be analyzed:
 Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn
 As Pb Se Tl Hg

ILSR and Draft Invoice will follow

Storage: _____

*Will sample results be used in connection with drinking water regulations? Yes No If yes, you must so indicate by writing "DW" for each such sample.

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