



WESTERN GEOLOGIC RESOURCES INC.

2169 E. FRANCISCO BLVD., SUITE B / SAN RAFAEL
CALIFORNIA 94901 / FAX 415.457.8521
TELE 415.457.7595

FEB 28 '91 T.L.H.

27 February 1991

Ms. Lucia Chou
Chevron USA
2410 Camino Ramon
P.O. Box 5004
San Ramon, CA 94583-0804

Re: Former Chevron Terminal
Emeryville, CA
WGR Project 1-045.50

Dear Ms Chou:

The following is a summary of the soil sampling performed by Western Geologic Resources, Inc. (WGR) at the request of Chevron USA Inc. on 31 January 1991 at the former Chevron Terminal in Emeryville, California.

SCOPE OF WORK

WGR was designated by Chevron to collect soil samples from the area under the former Chevron facility laboratory. The laboratory was recently demolished and the area is now clear as shown in Figure 1. The points of collection for the soil samples were specified by Chevron at approximately three feet below ground surface and at approximately 35 foot centers on a grid pattern throughout the area. Superior Analytical Laboratories of San Francisco was designated to perform the following analyses on the soil samples: modified EPA Method 8015 for diesel, EPA Method 8240 for organic volatiles, and Standard Method 503E for oil and grease.

PROCEDURE

On February 1, 1991, a Giddings drill rig was used to drill 23 borings to three feet below ground surface and one boring to four feet below ground surface for a total of 24 borings. The borings were spaced approximately 35 ft from each other as shown in Figure 2. After each boring was drilled, a Xitech sampler was used to extract soil from the bottom of each boring in 1-1/2 inch diameter by 4 inch long brass tubes.

All brass tubes with soil were sealed with duct tape, labeled, and placed in a cooler for shipment to Superior Analytical Laboratories of San Francisco under chain-of-custody.



L.Chou/27 February 1991

2

ANALYTIC RESULTS

The results of the analysis are listed in Table 1. Samples taken from only five borings contained TPH as diesel with the highest concentration reported as 250 ppm. Samples taken from eight borings contained oil and grease with the highest concentration at 690 ppm.

Detectible quantities of volatile organics were found in samples taken from 14 borings. The contaminants found were trichloroethene, benzene, toluene, xylene, chloroform, acetone, and ethylbenzene. Trichloroethene was found in samples taken from 14 borings with the highest concentration at 2,300 ppb. This concentration was the highest found of all detected volatile organics.

If there are any additional questions, please call us at (415) 457-7595.

Sincerely,
Western Geologic Resources, Inc.

A handwritten signature in black ink, appearing to read 'Kevin Spala', is written over the typed name.

Kevin Spala
Project Chemist

KS/es



L.Chou/27 February 1991

3

FIGURES

1. Site Map with Soil Sampling Area
2. Soil Sampling Area and Boring Locations

TABLE

1. Analytic Results: Soil Samples

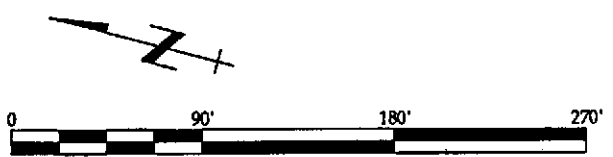
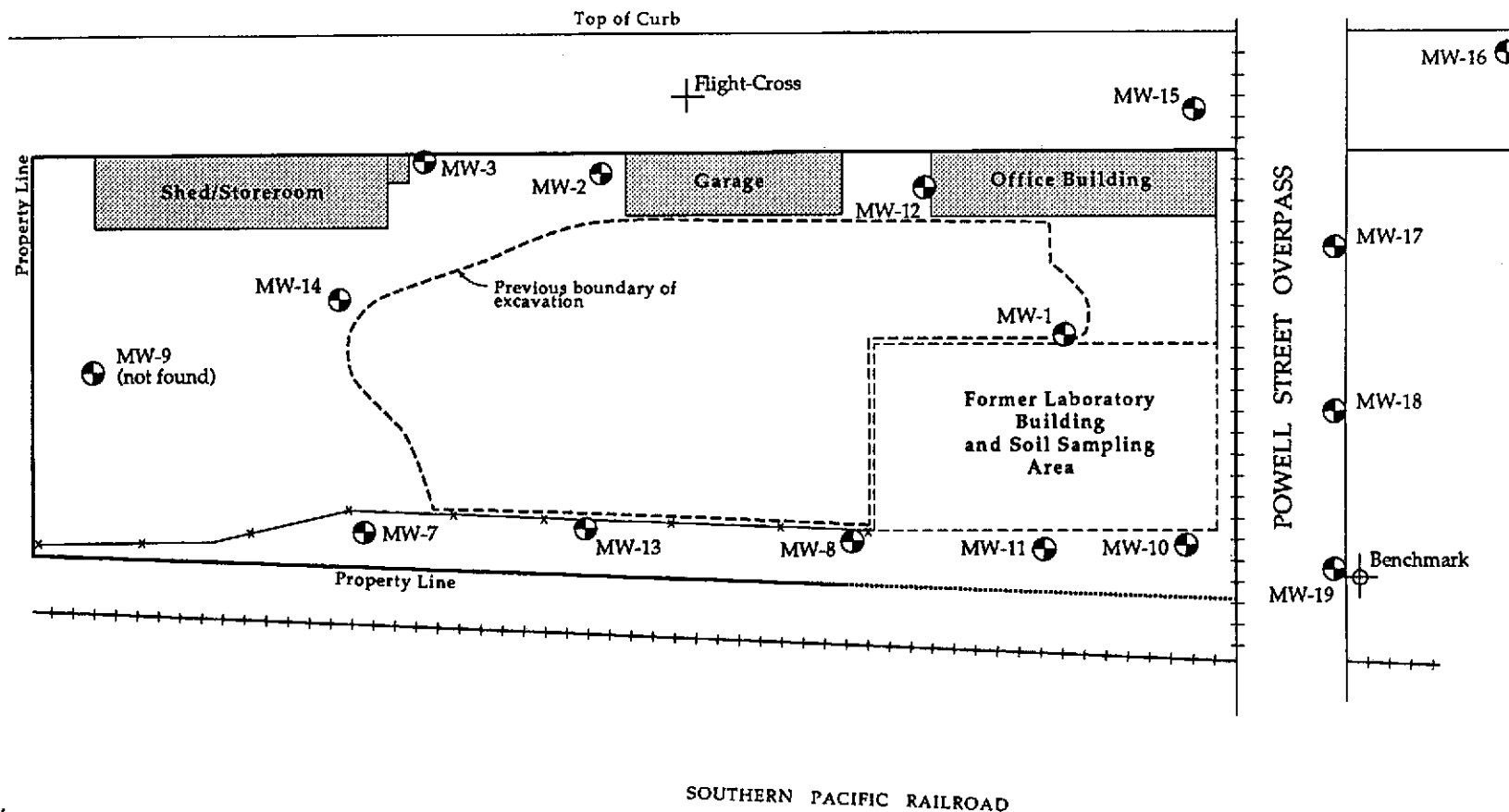
ATTACHMENTS

- A. Chain-of-Custody Form
- C. Laboratory Reports



FIGURES

LANDREGAN STREET



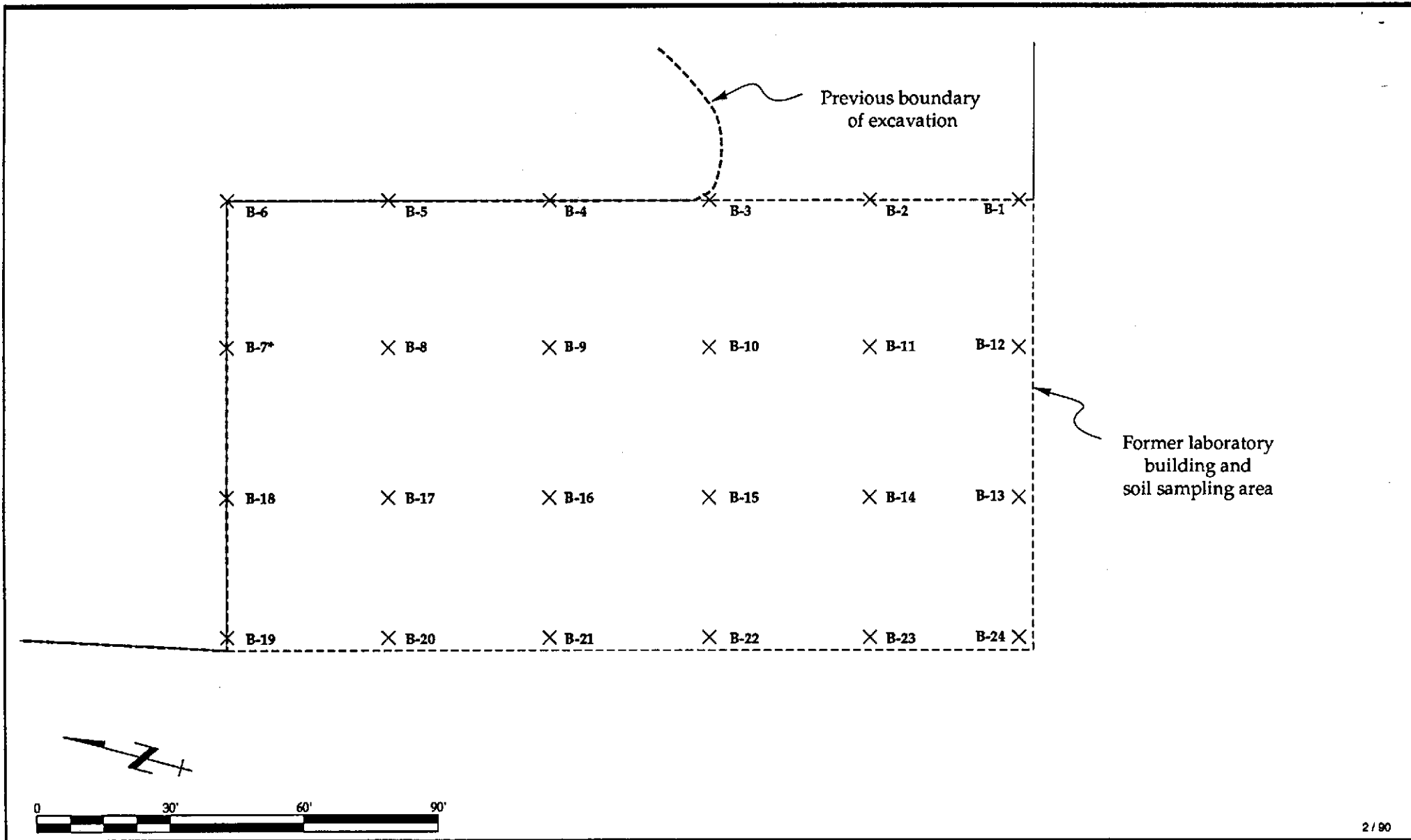
2/90

EXPLANTAION

⊕ MW-8 Monitor Well location

Site Map with Soil Sampling Area
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE
1



2 / 90

EXPLANATION

- × B-21 Boring location, drilled to 3.0 ft. below ground surface
- × B-7* Boring location, drilled to 4.0 ft. below ground surface

Soil Sampling Area and Boring Locations
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE

2



TABLE



TABLE 1. Analytic Results: Soil Samples
Former Chevron Asphalt Plant
Emeryville, California

Boring ID#	Date	Method	Lab	TPH ←-ppm-→	TCE ←-----ppb-----→	Benzene	Toluene	E-Benzene	Xylenes	Chloroform	Acetone	O&G ←-ppm-→
B-1	01 Feb 91	8015/8240/503E	SAL	<10	26	17	49	<15	78	<15	<50	110
B-2	01 Feb 91	8015/8240/503E	SAL	<10	120	<10	15	<15	<15	<15	<50	56
B-3	01 Feb 91	8015/8240/503E	SAL	<10	1,800	26	<15	<15	<15	22	<50	<50
B-4	01 Feb 91	8015/8240/503E	SAL	70	30	<10	<15	<15	<15	<15	<50	690
B-5	01 Feb 91	8015/8240/503E	SAL	180	<15	<10	<15	<15	<15	<15	<50	160
B-6	01 Feb 91	8015/8240/503E	SAL	250	330	17	66	44	140	<15	120	75
B-7	01 Feb 91	8015/8240/503E	SAL	98	2,300	<10	<15	<15	<15	<15	<50	100
B-8	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50
B-9	01 Feb 91	8015/8240/503E	SAL	<10	530	<10	<15	<15	<15	17	<50	<50
B-10	01 Feb 91	8015/8240/503E	SAL	<10	210	<10	<15	<15	<15	<15	<50	<50
B-11	01 Feb 91	8015/8240/503E	SAL	<10	350	<10	<15	<15	<15	<15	<50	<50
B-12	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50
B-13	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50



TABLE 1. Analytic Results: Soil Samples (continued)
Former Chevron Asphalt Plant
Emeryville, California

Boring ID#	Date	Method	Lab	TPH	TCE	Benzene	Toluene	E-Benzene	Xylenes	Chloroform	Acetone	O&G
				<--ppm-->	-----ppb-----							
B-14	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50
B-15	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50
B-16	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50
B-17	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	81
B-18	01 Feb 91	8015/8240/503E	SAL	<10	21	<10	<15	<15	<15	<15	<50	<50
B-19	01 Feb 91	8015/8240/503E	SAL	<10	42	<10	<15	<15	<15	<15	<50	50
B-20	01 Feb 91	8015/8240/503E	SAL	<10	46	<10	<15	<15	<15	<15	<50	<50
B-21	01 Feb 91	8015/8240/503E	SAL	<10	1,400	<10	<15	<15	<15	<15	<50	<50
B-22	01 Feb 91	8015/8240/503E	SAL	<10	98	<10	<15	<15	<15	<15	<50	<50
B-23	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50
B-24	01 Feb 91	8015/8240/503E	SAL	18	<15	<10	<15	<15	<15	<15	<50	<50



TABLE 1. Analytic Results: Soil Samples (continued)
Former Chevron Asphalt Plant
Emeryville, California

NOTES:

TPH = Total Petroleum Hydrocarbons as diesel
TCE = Trichloroethene
E-Benzene = Ethylbenzene
O&G = Oil and Grease
ppm = parts-per-million
ppb = parts-per-billion
--- = Not Analyzed
SAL = Superior Analytical Laboratories



ATTACHMENT A
CHAIN-OF-CUSTODY FORMS

11452

SHEET 1 OF 2

Chain-of-Custody Record

Chevron U.S.A. Inc.
P.O. Box 5004
San Ramon, CA 94583
FAX (415) 842-9591

Chevron Facility Number 1001067
 Consultant Release Number _____ Consultant Project Number 1-045.50
 Consultant Name WOR INC.
 Address SANRAFAEL
 Fax Number _____
 Project Contact (Name) MARK INGLIS
 (Phone) (415) 457-7595

Chevron Contact (Name) LUCIA CHOW / LISA BACKLAND
 (Phone) (415) 842-9527
 Laboratory Name SUPERIOR
 Contract Number 4705990
 Samples Collected by (Name) M. FRYE, D. REICHARD
 Collection Date 2-1-91
 Signature [Signature]

Sample Number	Lab Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite	Time	Sample Preservation	Iced	Analyses To Be Performed										Remarks					
								Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline	Modified EPA 8015 Total Petro. Hydrocarb. as Diesel	503 Oil and Grease	Arom. Volatiles - BTXE Soil: 8020/Wtr.: 602	Arom. Volatiles - BTXE Soil: 8240/Wtr.: 624	Total Lead DHS-Luft	EDB DHS-AB 1803	5520 org								
B1		1	S		0923	U-AE	X		X				X										
B2					0929																		
B3					0938																		
B4					0948																		
B5					0958																		
B6					1018																		
B7					1030 1210 ~ PF																		
B8					1130																		
B9					1139																		
B10					1151																		
B11					1205																		
B12					1210																		
B13		↓	↓		1214	↓	↓		↓				↓										

Please initial: [Signature]
 Samples Stored in ice. ✓
 Appropriate containers. ✓
 Samples preserved. ✓
 VOA's without headspace. ✓
 Comments: ✓

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>WOR</u>	Date/Time <u>2-4-91/10:30</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>EXPRESS-IT</u>	Date/Time <u>2-4-91 11:10</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>EXPRESS-IT</u>	Date/Time <u>2-4-91 10:20</u>	Turn Around Time (Circle Choice) 24 Hrs 48 Hrs 5 Days <u>10 Days</u>
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>EXPRESS-IT</u>	Date/Time <u>2-4-91 11:10</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>EXPRESS-IT</u>	Date/Time <u>2-4-91 11:10</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>EXPRESS-IT</u>	Date/Time <u>2-4-91 10:20</u>	
Relinquished By (Signature) _____	Organization _____	Date/Time _____	Received For Laboratory By (Signature) <u>[Signature]</u>	Organization <u>SAC</u>	Date/Time <u>2-4-91 (10:20)</u>	Received For Laboratory By (Signature) _____	Organization _____	Date/Time _____	

Chevron U.S.A. Inc.
 P.O. Box 5004
 San Ramon, CA 94583
 FAX (415) 842-9591

Chevron Facility Number 1001067
 Consultant Release Number _____ Consultant Project Number 1-045-50
 Consultant Name WGR INC.
 Address SAN RAFAEL
 Fax Number _____
 Project Contact (Name) MARK INGLIS
 (Phone) (415) 457-7595

Chevron Contact (Name) LUCIA CHOW/LISA BACKLAND
 (Phone) (415) 842-9527
 Laboratory Name SUPERIOR
 Contract Number 4705990
 Samples Collected by (Name) M. FRYE, D. REICHLARD
 Collection Date 2.1.91
 Signature [Signature]

Sample Number	Lab Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite	Time	Sample Preservation	Iced	Analyses To Be Performed										Remarks
								Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline	Modified EPA 8015 Total Petro. Hydrocarb. as Diesel	503 Oil and Grease	Arom. Volatiles - BTXE Soil: 8020/Wtr.: 602	Arom. Volatiles - BTXE Soil: 8240/Wtr.: 624	Total Lead DHS-Luft	EDB DHS-AB 1803	5520 OTG			
B14		1	S		1219	NONE	X		X			X				X		
B15					1226													
B16					1232													
B17					1247													
B18					1256													
B19					1309													
B20					1321													
B21					1328													
B22					1333													
B23					1338													
B24					1345													

Relinquished By (Signature) <u>David D. Reichard</u>	Organization <u>WGR</u>	Date/Time <u>2-4-91/10:30</u>	Received By (Signature) <u>B. Woods</u>	Organization <u>EXPRESS-IT</u>	Date/Time <u>2/4/91 10:20</u>	Turn Around Time (Circle Choice) 24 Hrs 48 Hrs 5 Days <u>10 Days</u>
Relinquished By (Signature) <u>B. Woods</u>	Organization <u>EXPRESS-IT</u>	Date/Time <u>2-9-91 11:10</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>SAC</u>	Date/Time <u>2/11/91 10:20</u>	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time	



ATTACHMENT B
LABORATORY REPORTS

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I - SAN FRANCISCO, CA 94124 - PHONE (415) 647-2081

DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 11452
 CLIENT: Western Geologic Resources
 CLIENT JOB NO.: 1-045.50

DATE RECEIVED: 02/04/91
 DATE REPORTED: 02/14/91

Page 1 of 4

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
11452- 1	B1	02/03/91	02/07/91
11452- 2	B2	02/03/91	02/07/91
11452- 3	B3	02/03/91	02/07/91
11452- 4	B4	02/03/91	02/07/91
11452- 5	B5	02/03/91	02/07/91
11452- 6	B6	02/03/91	02/07/91
11452- 7	B7	02/03/91	02/07/91
11452- 8	B8	02/03/91	02/07/91
11452- 9	B9	02/03/91	02/07/91
11452-10	B10	02/03/91	02/07/91

Laboratory Number:	11452	11452	11452	11452	11452
	1	2	3	4	5

ANALYTE LIST	Amounts/Quantitation Limits (mg/kg)				
OIL AND GREASE:	110	56	ND<50	690	160
TPH/GASOLINE RANGE:	NA	NA	NA	NA	NA
TPH/DIESEL RANGE:	ND<10	ND<10	ND<10	70	180
BENZENE:	NA	NA	NA	NA	NA
TOLUENE:	NA	NA	NA	NA	NA
ETHYL BENZENE:	NA	NA	NA	NA	NA
XYLENES:	NA	NA	NA	NA	NA

Laboratory Number:	11452	11452	11452	11452	11452
	6	7	8	9	10

ANALYTE LIST	Amounts/Quantitation Limits (mg/kg)				
OIL AND GREASE:	75	100	ND<50	ND<50	ND<50
TPH/GASOLINE RANGE:	NA	NA	NA	NA	NA
TPH/DIESEL RANGE:	250	98	ND<10	ND<10	ND<10
BENZENE:	NA	NA	NA	NA	NA
TOLUENE:	NA	NA	NA	NA	NA
ETHYL BENZENE:	NA	NA	NA	NA	NA
XYLENES:	NA	NA	NA	NA	NA

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 11452
 CLIENT: Western Geologic Resources
 CLIENT JOB NO.: 1-045.50

DATE RECEIVED: 02/04/91
 DATE REPORTED: 02/14/91

Page 2 of 4

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
11452-11	B11	02/03/91	02/07/91
11452-12	B12	02/03/91	02/07/91
11452-13	B13	02/03/91	02/07/91
11452-14	B14	02/03/91	02/07/91
11452-15	B15	02/03/91	02/07/91
11452-16	B16	02/03/91	02/07/91
11452-17	B17	02/03/91	02/07/91
11452-18	B18	02/03/91	02/07/91
11452-19	B19	02/03/91	02/07/91
11452-20	B20	02/03/91	02/07/91

Laboratory Number:	11452 11	11452 12	11452 13	11452 14	11452 15
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ANALYTE LIST	Amounts/Quantitation Limits (mg/kg)				
OIL AND GREASE:	ND<50	ND<50	ND<50	ND<50	ND<50
TPH/GASOLINE RANGE:	NA	NA	NA	NA	NA
TPH/DIESEL RANGE:	ND<10	ND<10	ND<10	ND<10	ND<10
BENZENE:	NA	NA	NA	NA	NA
TOLUENE:	NA	NA	NA	NA	NA
ETHYL BENZENE:	NA	NA	NA	NA	NA
XYLENES:	NA	NA	NA	NA	NA

Laboratory Number:	11452 16	11452 17	11452 18	11452 19	11452 20
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ANALYTE LIST	Amounts/Quantitation Limits (mg/kg)				
OIL AND GREASE:	ND<50	81	ND<50	50	ND<50
TPH/GASOLINE RANGE:	NA	NA	NA	NA	NA
TPH/DIESEL RANGE:	ND<10	ND<10	ND<10	ND<10	ND<10
BENZENE:	NA	NA	NA	NA	NA
TOLUENE:	NA	NA	NA	NA	NA
ETHYL BENZENE:	NA	NA	NA	NA	NA
XYLENES:	NA	NA	NA	NA	NA

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1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 11452
CLIENT: Western Geologic Resources
CLIENT JOB NO.: 1-045.50

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/14/91

Page 3 of 4

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
11452-21	B21	02/03/91	02/07/91
11452-22	B22	02/03/91	02/07/91
11452-23	B23	02/03/91	02/07/91
11452-24	B24	02/03/91	02/07/91

Laboratory Number:	11452	11452	11452	11452
	21	22	23	24

ANALYTE LIST	Amounts/Quantitation Limits (mg/kg)			
OIL AND GREASE:	ND<50	ND<50	ND<50	ND<50
TPH/GASOLINE RANGE:	NA	NA	NA	NA
TPH/DIESEL RANGE:	ND<10	ND<10	ND<10	18
BENZENE:	NA	NA	NA	NA
TOLUENE:	NA	NA	NA	NA
ETHYL BENZENE:	NA	NA	NA	NA
XYLENES:	NA	NA	NA	NA

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SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 4 of 4
QA/QC INFORMATION
SET: 11452

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
mg/kg = part per million (ppm)

OIL AND GREASE ANALYSIS By Standard Methods Method 503E:
Minimum Detection Limit in Soil: 50mg/kg

Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Soil: 1mg/kg
Standard Reference: 01/18/91

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Soil: 1mg/kg
Standard Reference: 08/24/90

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Soil: 0.005mg/kg
Standard Reference: NA

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	10/16/90	10mg	61	<1	50-130
Diesel	01/18/91	1000ug	87	2	75-125
Gasoline	01/09/91	200ng	NA	NA	58-120
Benzene	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA
Ethyl Benzene	NA	NA	NA	NA	NA
Total Xylene	NA	NA	NA	NA	NA

Richard Srna, Ph.D.

Cecilia G. Jozani (for)
Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-1
 CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
 DATE REPORTED: 02/20/91
 JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
 by Gas Chromatography/ Mass Spectrometry

SAMPLE: B1

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)	26
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene (MDL = ND<10)	17
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene (MDL = ND<15)	49
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes (MDL = ND<15)	78
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

1,2-DCA-d4.....	98%
Toluene-d8.....	112%
Bromofluorobenzene.....	85%

QC Limits

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard S. Sina Ph.D.

[Signature]
 Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-2
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B2

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)	120
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene (MDL = ND<15)	15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries	
1,2-DCA-d4.....	101%
Toluene-d8.....	115%
Bromofluorobenzene.....	81%

QC Limits	
water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-3
 CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
 DATE REPORTED: 02/20/91
 JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
 by Gas Chromatography/ Mass Spectrometry

SAMPLE: B3

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)	1800
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene (MDL = ND<10)	26
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform (MDL = ND<15)	22	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

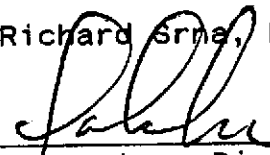
1,2-DCA-d4.....	110%
Toluene-d8.....	117%
Bromofluorobenzene.....	94%

QC Limits

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.



Laboratory Director

OUTSTANDING QUALITY AND SERVICE

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-4
 CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
 DATE REPORTED: 02/20/91
 JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
 by Gas Chromatography/ Mass Spectrometry

SAMPLE: B4

Compound -----	ug/kg -----	Compound -----	ug/kg -----
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)	30
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

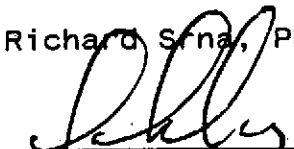
1,2-DCA-d4.....	99%
Toluene-d8.....	113%
Bromofluorobenzene.....	93%

QC Limits

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.



Laboratory Director

OUTSTANDING QUALITY AND SERVICE

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-5
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B5

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene	ND<15
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

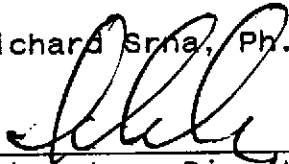
1,2-DCA-d4.....	104%
Toluene-d8.....	106%
Bromofluorobenzene.....	106%

QC Limits

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

OUTSTANDING QUALITY AND SERVICE

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-6
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B6

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)	330
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene (MDL = ND<10)	17
Acetone (MDL = ND<50)	120	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene (MDL = ND<15)	66
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene (MDL = ND<15)	44
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes (MDL = ND<15)	140
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

1,2-DCA-d4.....	105%
Toluene-d8.....	124%
Bromofluorobenzene.....	100%

QC Limits

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

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C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-7
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B7

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)	2300
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

1,2-DCA-d4.....	103%
Toluene-d8.....	105%
Bromofluorobenzene.....	89%

QC Limits

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-8
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B8

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene	ND<15
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

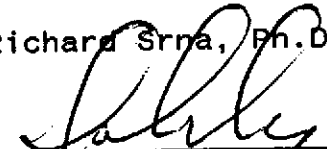
1,2-DCA-d4.....	102%
Toluene-d8.....	106%
Bromofluorobenzene.....	97%

QC Limits

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-9
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B9

Compound	ug/kg	Compound	ug/kg
-----	-----	-----	-----
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)	530
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform (MDL = ND<15)	17	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

1,2-DCA-d4.....	102%
Toluene-d8.....	118%
Bromofluorobenzene.....	87%

QC Limits

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-10
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B10

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)	210
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

	Surrogate Recoveries	QC Limits	
		water	soil
1,2-DCA-d4.....	97%	76-114	81-117
Toluene-d8.....	109%	88-110	81-140
Bromofluorobenzene.....	88%	86-115	74-121

comments:

Richard Sina, Ph.D.



Laboratory Director

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-11
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B11

Compound	ug/kg	Compound	ug/kg
-----	-----	-----	-----
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)	350
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

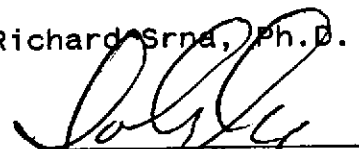
1,2-DCA-d4.....	104%
Toluene-d8.....	106%
Bromofluorobenzene.....	90%

QC Limits

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-12
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B12

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene	ND<15
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries


1,2-DCA-d4.....	107%
Toluene-d8.....	102%
Bromofluorobenzene.....	94%

QC Limits

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-13
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B13

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene	ND<15
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

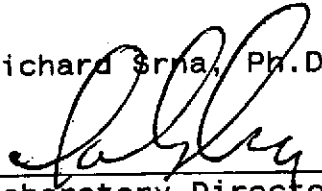
1,2-DCA-d4.....	107%
Toluene-d8.....	103%
Bromofluorobenzene.....	96%

QC Limits

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

OUTSTANDING QUALITY AND SERVICE

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-14
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B14

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene	ND<15
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

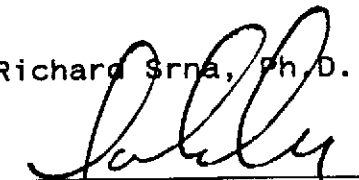
QC Limits

1,2-DCA-d4.....	105%
Toluene-d8.....	113%
Bromofluorobenzene.....	94%

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

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C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-15
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B15

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene	ND<15
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

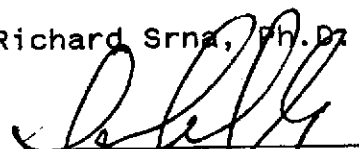
Surrogate Recoveries

QC Limits

		water	soil
1,2-DCA-d4.....	103%	76-114	81-117
Toluene-d8.....	99%	88-110	81-140
Bromofluorobenzene.....	96%	86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-16
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B16

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene	ND<15
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

	Surrogate Recoveries	QC Limits	
		water	soil
1,2-DCA-d4.....	111%	76-114	81-117
Toluene-d8.....	119%	88-110	81-140
Bromofluorobenzene.....	89%	86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

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C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-17
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B17

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene	ND<15
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

QC Limits

1,2-DCA-d4.....	103%
Toluene-d8.....	103%
Bromofluorobenzene.....	96%

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

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SUPERIOR ANALYTICAL LABORATORY, INC.

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-18
 CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
 DATE REPORTED: 02/20/91
 JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
 by Gas Chromatography/ Mass Spectrometry

SAMPLE: B18

Compound	ug/kg	Compound	ug/kg
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Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)21	
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

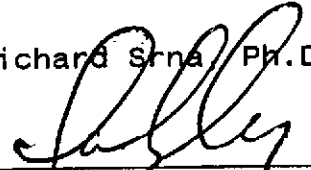
1,2-DCA-d4.....	104%
Toluene-d8.....	102%
Bromofluorobenzene.....	97%

QC Limits

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.


 Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-19
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B19

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)	42
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

QC Limits

1,2-DCA-d4.....	89%
Toluene-d8.....	116%
Bromofluorobenzene.....	99%

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-20
 CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
 DATE REPORTED: 02/20/91
 JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
 by Gas Chromatography/ Mass Spectrometry

SAMPLE: B20

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)	46
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

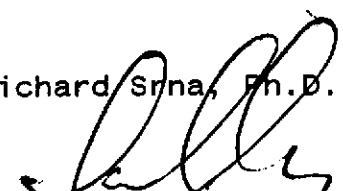
ug/kg = part per billion (ppb)

QC DATA:

	Surrogate Recoveries	QC Limits	
		water	soil
1,2-DCA-d4.....	86%	76-114	81-117
Toluene-d8.....	120%	88-110	81-140
Bromofluorobenzene.....	96%	86-115	74-121

comments:

Richard Srna, Ph.D.


 Laboratory Director

OUTSTANDING QUALITY AND SERVICE

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-21
 CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
 DATE REPORTED: 02/20/91
 JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
 by Gas Chromatography/ Mass Spectrometry

SAMPLE: B21

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)	1400
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

	Surrogate Recoveries	QC Limits	
		water	soil
1,2-DCA-d4.....	88%	76-114	81-117
Toluene-d8.....	129%	88-110	81-140
Bromofluorobenzene.....	82%	86-115	74-121

comments:

Richard Srna, Ph.D.


 Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-22
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B22

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene (MDL = ND<15)	98
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

	Surrogate Recoveries	QC Limits	
		water	soil
1,2-DCA-d4.....	89%	76-114	81-117
Toluene-d8.....	121%	88-110	81-140
Bromofluorobenzene.....	89%	86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-23
 CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
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 JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
 by Gas Chromatography/ Mass Spectrometry

SAMPLE: B23

Compound	ug/kg	Compound	ug/kg
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Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene	ND<15
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

Surrogate Recoveries

1,2-DCA-d4.....	91%
Toluene-d8.....	117%
Bromofluorobenzene.....	100%

QC Limits

water	soil
76-114	81-117
88-110	81-140
86-115	74-121

comments:

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 11452-24
CLIENT: Western Geo. Resources

DATE RECEIVED: 02/04/91
DATE REPORTED: 02/20/91
JOB NO. 1-045.50

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: B24

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene	ND<15
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<10
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	2-Hexanone	ND<50
1,2-Dichloroethene (total)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<15	Toluene	ND<15
2-Butanone	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,2&1,4-Dichlorobenzenes	ND<15

ug/kg = part per billion (ppb)

QC DATA:

	Surrogate Recoveries	QC Limits	
		water	soil
1,2-DCA-d4.....	88%	76-114	81-117
Toluene-d8.....	121%	88-110	81-140
Bromofluorobenzene.....	94%	86-115	74-121

comments:

Richard Srna, Ph.D.


Laboratory Director

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