

GW - 40

MONITORING REPORTS

DATE:
1989

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OIL CONSERVATION DIV.
SANTA FE



**ANALYTICAL RESULTS FOR
4TH QUARTER, 1989**

**GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO**

April 8, 1990

Prepared for:

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Submitted to:

MR. DAVE BOYER
Environmental Bureau Chief
NM Oil Conservation Division
Santa Fe, NM 87105

Prepared by:

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Radian Work Order 89-12-112

Analytical Report
01/08/90

Geoscience Consultants, Ltd.

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Orlando Gomez

Customer Work Identification M&A QUARTERLY
Purchase Order Number

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- 1 Analytical Data Summary
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8912112

Nº 3326

Chain of Custody

DATE 12/13/89 PAGE 1 OF 1

PROJECT INFORMATION		SAMPLE RECEIPT		ANALYSIS REQUEST														RELINQUISHED BY		RELINQUISHED BY																
TEST:	119A	TOTAL NO. OF CONTAINERS	CHAIN OF CUSTODY SEALS	RECT GOOD CONDITION/COLD	CONFORMS TO RECORD	LAB NO.	BASE/NEU/ACID CMPS.	GC/MS/ 625/8270	VOLATILE CMPS.	GC/MS/ 624/8240	PESTICIDES/PCB	608/8080	POLYNUCLEAR	AROMATIC 618/8310	PHENOLS, SUB PHENOLS	804/8040	HALOGENATED	VOLATILES 601/8010	AROMATIC VOLATILES	602/8020	TOTAL ORGANIC	CARBON 415/8080	HALIDES 9020	PETROLEUM	HYDROCARBONS 418.1	TPH	MODIFIED 8015	PRIORITY POLLUTANT	CAM METALS (18)	TLC/STLC	EP TOX	SDWA-INORGANICS	PRIMARY/SECONDARY	HAZARDOUS WASTE	PROFILE	NUMBER OF CONTAINERS
12131000	WATER	GBR-15																																	5	
12131030	WATER	GBR-30																																	5	
12131010	WATER	GBR-33																																	5	
2131300	WATER	GBR-31																																	5	
12131600	Water	GBR-6																																	5	

PROJECT INFORMATION		SAMPLE RECEIPT		RELINQUISHED BY		RELINQUISHED BY	
TEST:	119A	TOTAL NO. OF CONTAINERS	CHAIN OF CUSTODY SEALS	RECT GOOD CONDITION/COLD	CONFORMS TO RECORD	LAB NO.	BASE/NEU/ACID CMPS.
12131000	WATER	GBR-15					
12131030	WATER	GBR-30					
12131010	WATER	GBR-33					
2131300	WATER	GBR-31					
12131600	Water	GBR-6					

RECEIVED BY		RECEIVED BY		RECEIVED BY (LABORATORY)	
(Signature)	(Date)	(Signature)	(Date)	(Signature)	(Date)
<i>[Signature]</i>	12/13/89	<i>[Signature]</i>	12/13/89	<i>[Signature]</i>	12/13/89
<i>[Signature]</i>	12/13/89	<i>[Signature]</i>	12/13/89	<i>[Signature]</i>	12/13/89

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IN: 3324

Chain of Custody

DATE 12/12/89 PAGE 1 OF 1

LAB NAME Radian Analytical

ADDRESS 8501 Mo-Pac Blvd.

Austin, TX 78720-1088

TELEPHONE 512/454-4797

SAMPLE SIGNATURE

[Signature]

SAMPLE NUMBER

MATRIX

LOCATION

912121145E	Water	Air Strippa
912121145I	Water	Air Strippa
912120150	"	GBR-17
912121130	"	GBR-24B
912121200	"	GRW-13
912121530	"	GBR-13
912121600	"	GBR-8
Trip Blank	"	Trip

ANALYSIS REQUEST

GC/MS/ 825/8270	GC/MS/ 824/8240	PESTICIDES/PCB	POLYNUCLEAR AROMATIC 810/8310	PHENOLS, SUB PHENOLS 804/8040	HALOGENATED VOLATILES 801/8010	AROMATIC VOLATILES 802/8020	TOTAL ORGANIC CARBON 418/8080	TOTAL ORGANIC HALIDES 8020	PETROLEUM HYDROCARBONS 418.1	TPH MODIFIED 8018	PRIORITY POLLUTANT METALS (13)	CAM METALS (18) TLIC/STLC	EP TOX METALS (8)	SDWA-INORGANICS PRIMARY/SECONDARY	HAZARDOUS WASTE PROFILE	NUMBER OF CONTAINERS
			X	X	X	X	X									5
			X	X	X	X	X									5
			X	X	X	X	X									1
			X	X	X	X	X									5
			X	X	X	X	X									5
			X	X	X	X	X									5
			X	X	X	X	X									1

PROJECT INFORMATION	SAMPLE RECEIPT
PROJECT: <u>MHA</u>	TOTAL NO. OF CONTAINERS <u>✓</u>
PROJECT DIRECTOR: <u>ANNEC</u>	CHAIN OF CUSTODY SEALS <u>✓</u>
HARGE CODE NO. <u>348002</u>	RECTD GOOD CONDITION/COLD <u>30</u>
TRIPPING ID. NO. <u>33818637A</u>	CONFORMS TO RECORD <u>✓</u>
IA: <u>ECd-X</u>	LAB NO.

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY
(Signature) <u>[Signature]</u> (Printed Name) <u>M. J. HEE</u> (Date) <u>12/12/89</u>	(Signature) <u>[Signature]</u> (Printed Name) <u>[Signature]</u> (Date) <u>[Signature]</u>	(Signature) <u>[Signature]</u> (Printed Name) <u>[Signature]</u> (Date) <u>[Signature]</u>
RECEIVED BY	RECEIVED BY	RECEIVED BY (LABORATORY)
(Signature) <u>[Signature]</u> (Printed Name) <u>[Signature]</u> (Date) <u>[Signature]</u>	(Signature) <u>[Signature]</u> (Printed Name) <u>[Signature]</u> (Date) <u>[Signature]</u>	(Signature) <u>[Signature]</u> (Printed Name) <u>[Signature]</u> (Date) <u>[Signature]</u>

SPECIAL INSTRUCTIONS/COMMENTS:
OAH analysis to include
naphthalene, Monomethyl naphthalene
(40%L)

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Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: Halogenated volatiles (1)

List: SW8010

Sample ID:	8912121410	891212145E	891212145I	8912121130
Factor:	5	1	1	1
Results in:	ug/L	ug/L	ug/L	ug/L
Matrix:	water	water	water	water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
Bromodichloromethane	ND	0.50	ND	0.10	ND	0.10	ND	0.10
Bromoform	ND	2.5	ND	0.50	ND	0.50	ND	0.50
Bromomethane	ND	5.9	ND	1.2	ND	1.2	ND	1.2
Carbon Tetrachloride	ND	0.60	ND	0.12	ND	0.12	ND	0.12
Chlorobenzene	ND	1.3	ND	0.25	ND	0.25	ND	0.25
Chloroethane	ND	2.6	ND	0.52	ND	0.52	ND	0.52
2-Chloroethylvinylether	ND	2.5	ND	0.50	ND	0.50	ND	0.50
Chloroform	5.7	0.50	ND	0.10	ND	0.10	ND	0.10
Chloromethane	ND	1.5	ND	0.30	ND	0.30	ND	0.30
Dibromochloromethane-(2)	ND	1.0	ND	0.20	ND	0.20	ND	0.20
1,2-Dichlorobenzene	ND	2.5	ND	0.50	ND	0.50	0.60 *	0.50
1,3-Dichlorobenzene	ND	1.6	ND	0.32	ND	0.32	ND	0.32
1,4-Dichlorobenzene	ND	1.2	ND	0.24	ND	0.24	ND	0.24
1,1-Dichloroethane	0.72 *	2.5	ND	0.50	1.9 *	0.50	ND	0.50
1,2-Dichloroethane	7.1	0.50	1.0	0.10	3.5	0.10	18	0.10
1,1-Dichloroethene	ND	1.0	ND	0.20	ND	0.20	ND	0.20
trans-1,2-Dichloroethene	21	1.0	0.97 *	0.20	9.3	0.20	ND	0.20
1,2-Dichloropropene	ND	0.50	ND	0.10	ND	0.10	ND	0.10
cis-1,3-Dichloropropene-(2)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropene	ND	1.5	ND	0.30	ND	0.30	ND	0.30
Methylene Chloride	ND	2.0	ND	0.40	1.0 *	0.40	ND	0.40
1,1,2,2-Tetrachloroethane-(3)	ND	0.75	ND	0.15	ND	0.15	ND	0.15
Tetrachloroethene-(3)	ND	0.50	ND	0.10	1.3	0.10	ND	0.10
1,1,2-Trichloroethane-(2)	ND	1.0	ND	0.20	ND	0.20	ND	0.20
1,1,1-Trichloroethane	ND	1.0	ND	0.20	0.80 *	0.20	ND	0.20
Trichloroethene	6.2	1.0	ND	0.20	2.0	0.20	ND	0.20
Trichlorofluoromethane	ND	1.0	ND	0.20	ND	0.20	ND	0.20
Vinyl Chloride	ND	1.0	ND	0.20	ND	0.20	ND	0.20

 ND Not detected at specified detection limit
 N/A Not available

* Est. result less than 5 times detection limit

- (1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.
- (2) Dibromochloromethane, 1,1,2-Trichloroethane, and cis-1,3-Dichloropropene coelute. Quantitated as Dibromochloromethane unless otherwise noted.
- (3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane coelute. Quantitated as Tetrachloroethene unless otherwise noted.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: Halogenated volatiles (1)

List: SW8010

Sample ID:	8912121410	8912121145E	8912121145I	8912121130
Factor:	5	1	1	1
Results in:	ug/L	ug/L	ug/L	ug/L
	05A	06A	07A	08A
Matrix:	water	water	water	water

Surrogate Recovery(%)

1-Bromo-4-fluorobenzene

Control Limits: 76 to 140

Result Det. Limit

117

Result Det. Limit

117

Result Det. Limit

107

Result Det. Limit

104

- (1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.
- (2) Dibromochloromethane, 1,1,2-Trichloroethane, and cis-1,3-Dichloropropene coelute. Quantitated as Dibromochloromethane unless otherwise noted.
- (3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane coelute. Quantitated as Tetrachloroethene unless otherwise noted.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: Halogenated volatiles (1)

List: SW8010

Sample ID:

8912121200

8912121530

8912121600

8912131000

Factor:

1

1

1

1

Results in:

ug/L

ug/L

ug/L

ug/L

Matrix:

water

water

water

water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
Bromodichloromethane	ND	0.10	ND	0.10	ND	0.10	ND	0.10
Bromoform	ND	0.50	ND	0.50	ND	0.50	ND	0.50
Bromomethane	ND	1.2	ND	1.2	ND	1.2	ND	1.2
Carbon Tetrachloride	ND	0.12	ND	0.12	ND	0.12	ND	0.12
Chlorobenzene	ND	0.25	ND	0.25	ND	0.25	ND	0.25
Chloroethane	ND	0.52	ND	0.52	1.3 *	0.52	ND	0.52
2-Chloroethylvinylether	ND	0.50	ND	0.50	ND	0.50	ND	0.50
Chloroform	ND	0.10	ND	0.10	ND	0.10	ND	0.10
Chloromethane	ND	0.30	ND	0.30	ND	0.30	ND	0.30
Dibromochloromethane-(2)	ND	0.20	ND	0.20	ND	0.20	ND	0.20
1,2-Dichlorobenzene	ND	0.50	ND	0.50	0.84 *	0.50	ND	0.50
1,3-Dichlorobenzene	ND	0.32	ND	0.32	ND	0.32	ND	0.32
1,4-Dichlorobenzene	ND	0.24	ND	0.24	ND	0.24	ND	0.24
1,1-Dichloroethane	ND	0.50	4.9	0.50	5.3	0.50	ND	0.50
1,2-Dichloroethane	1.1	0.10	7.4	0.10	4.7	0.10	36	0.10
1,1-Dichloroethene	ND	0.20	ND	0.20	ND	0.20	ND	0.20
trans-1,2-Dichloroethene	ND	0.20	25	0.20	20	0.20	ND	0.20
1,2-Dichloropropane	ND	0.10	ND	0.10	ND	0.10	ND	0.10
cis-1,3-Dichloropropene-(2)	N/A	N/A	N/A	N/A	N/A	0.30	N/A	N/A
trans-1,3-Dichloropropene	ND	0.30	ND	0.30	ND	N/A	ND	0.30
Methylene Chloride	ND	0.40	1.3 *	0.40	ND	0.40	ND	0.40
1,1,2,2-Tetrachloroethane-(3)	ND	0.15	ND	0.15	ND	0.15	ND	0.15
Tetrachloroethene-(3)	ND	0.10	ND	0.10	ND	0.10	ND	0.10
1,1,2-Trichloroethane-(2)	ND	0.20	ND	0.20	ND	0.20	ND	0.20
1,1,1-Trichloroethane	ND	0.20	0.90 *	0.20	ND	0.20	ND	0.20
Trichloroethene	ND	0.20	4.0	0.20	2.3	0.20	ND	0.20
Trichlorofluoromethane	ND	0.20	ND	0.20	ND	0.20	ND	0.20
Vinyl Chloride	ND	0.20	ND	0.20	ND	0.20	ND	0.20

ND Not detected at specified detection limit

N/A Not available

* Est. result less than 5 times detection limit

- (1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.
- (2) Dibromochloromethane, 1,1,2-Trichloroethane, and cis-1,3-Dichloropropene coelute. Quantitated as Dibromochloromethane unless otherwise noted.
- (3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane coelute. Quantitated as Tetrachloroethene unless otherwise noted.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: Halogenated volatiles (1)

List: SW8010

Sample ID:	8912121200	8912121530	8912121600	8912131000
Factor:	1	1	1	1
Results in:	ug/L	ug/L	ug/L	ug/L
	09A	10A	11A	13A
Matrix:	water	water	water	water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
<u>Surrogate Recovery(X)</u>								
1-Bromo-4-fluorobenzene	103		115		110		108	
Control Limits: 76 to 140								

- (1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.
- (2) Dibromochloromethane, 1,1,2-Trichloroethane, and cis-1,3-Dichloropropene coelute. Quantitated as Dibromochloromethane unless otherwise noted.
- (3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane coelute. Quantitated as Tetrachloroethene unless otherwise noted.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: Halogenated volatiles (1)

List: SW8010

Sample ID:

WBL-33
 8912131210

WBL-31
 8912131300

WBL-6
 8912131600

WBL-30
 8912131030

Factor:

1

1

1

1

Results in:

ug/L

ug/L

ug/L

ug/L

14A

15A

16A

17A

Matrix:

water

water

water

water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
Bromodichloromethane	ND	0.10	ND	0.10	ND	0.10	ND	0.10
Bromoform	ND	0.50	ND	0.50	ND	0.50	ND	0.50
Bromomethane	ND	1.2	ND	1.2	ND	1.2	ND	1.2
Carbon Tetrachloride	ND	0.12	ND	0.12	ND	0.12	ND	0.12
Chlorobenzene	ND	0.25	ND	0.25	ND	0.25	ND	0.25
Chloroethane	ND	0.52	ND	0.52	ND	0.52	ND	0.52
2-Chloroethylvinylether	ND	0.50	ND	0.50	ND	0.50	ND	0.50
Chloroform	ND	0.10	ND	0.10	ND	0.10	ND	0.10
Chloromethane	ND	0.30	ND	0.30	ND	0.30	ND	0.30
Dibromochloromethane-(2)	ND	0.20	ND	0.20	ND	0.20	ND	0.20
1,2-Dichlorobenzene	ND	0.50	ND	0.50	ND	0.50	ND	0.50
1,3-Dichlorobenzene	ND	0.32	ND	0.32	ND	0.32	ND	0.32
1,4-Dichlorobenzene	ND	0.24	ND	0.24	ND	0.24	ND	0.24
1,1-Dichloroethane	ND	0.50	<u>3.4</u>	0.50	ND	0.50	ND	0.50
1,2-Dichloroethane	<u>4.0</u>	0.10	<u>2.0</u>	0.10	<u>1.2</u>	0.10	<u>0.94</u>	0.10
1,1-Dichloroethene	ND	0.20	ND	0.20	ND	0.20	ND	0.20
trans-1,2-Dichloroethene	<u>1.1</u>	0.20	<u>44</u>	0.20	ND	0.20	ND	0.20
1,2-Dichloropropene	ND	0.10	ND	0.10	ND	0.10	ND	0.10
cis-1,3-Dichloropropene-(2)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropene	ND	0.30	ND	0.30	ND	0.30	ND	0.30
Methylene Chloride	ND	0.40	<u>1.1 *</u>	0.40	ND	0.40	ND	0.40
1,1,2,2-Tetrachloroethane-(3)	ND	0.15	ND	0.15	ND	0.15	ND	0.15
Tetrachloroethene-(3)	ND	0.10	<u>12</u>	0.10	ND	0.10	ND	0.10
1,1,2-Trichloroethane-(2)	ND	0.20	ND	0.20	ND	0.20	ND	0.20
1,1,1-Trichloroethane	ND	0.20	<u>1.4</u>	0.20	ND	0.20	ND	0.20
Trichloroethene	ND	0.20	<u>7.9</u>	0.20	ND	0.20	ND	0.20
Trichlorofluoromethane	ND	0.20	ND	0.20	ND	0.20	ND	0.20
Vinyl Chloride	ND	0.20	ND	0.20	ND	0.20	ND	0.20

ND Not detected at specified detection limit

N/A Not available

* Est. result less than 5 times detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

(2) Dibromochloromethane, 1,1,2-Trichloroethane, and cis-1,3-Dichloropropene coelute. Quantitated as Dibromochloromethane unless otherwise noted.

(3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane coelute. Quantitated as Tetrachloroethene unless otherwise noted.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: Halogenated volatiles (1)				
List: SW8010				
Sample ID:	8912131210	8912131300	8912131600	8912131030
Factor:	1	1	1	1
Results in:	ug/L	ug/L	ug/L	ug/L
	14A	15A	16A	17A
Matrix:	water	water	water	water

	Result Det. Limit	Result Det. Limit	Result Det. Limit	Result Det. Limit
<u>Surrogate Recovery(%)</u>				
1-Bromo-4-fluorobenzene	112	115	117	117
Control Limits: 76 to 140				

- (1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.
- (2) Dibromochloromethane, 1,1,2-Trichloroethane, and cis-1,3-Dichloropropene coelute. Quantitated as Dibromochloromethane unless otherwise noted.
- (3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane coelute. Quantitated as Tetrachloroethene unless otherwise noted.

Geoscience Consultants, Ltd.
 Radian Work Orders: 89-12-112

Method: Halogenated volatiles (1)

List: SU8010

Sample ID:

Reagent blank

Factor:

1

Results in:

ug/L

22A

Matrix:

water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
Bromodichloromethane	ND	0.10						
Bromoform	ND	0.50						
Bromomethane	ND	1.2						
Carbon Tetrachloride	ND	0.12						
Chlorobenzene	ND	0.25						
Chloroethane	ND	0.52						
2-Chloroethylvinylether	ND	0.50						
Chloroform	ND	0.10						
Chloromethane	ND	0.30						
Dibromochloromethane-(2)	ND	0.20						
1,2-Dichlorobenzene	ND	0.50						
1,3-Dichlorobenzene	ND	0.32						
1,4-Dichlorobenzene	ND	0.24						
1,1-Dichloroethane	ND	0.50						
1,2-Dichloroethane	ND	0.10						
1,1-Dichloroethene	ND	0.20						
trans-1,2-Dichloroethene	ND	0.20						
1,2-Dichloropropene	ND	0.10						
cis-1,3-Dichloropropene-(2)	N/A	N/A						
trans-1,3-Dichloropropene	ND	0.30						
Methylene Chloride	ND	0.40						
1,1,2,2-Tetrachloroethane-(3)	ND	0.15						
Tetrachloroethene-(3)	ND	0.10						
1,1,2-Trichloroethane-(2)	ND	0.20						
1,1,1-Trichloroethane	ND	0.20						
Trichloroethene	ND	0.20						
Trichlorofluoromethane	ND	0.20						
Vinyl Chloride	ND	0.20						

ND Not detected at specified detection limit

N/A Not available

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

 (2) Dibromochloromethane, 1,1,2-Trichloroethane, and
 cis-1,3-Dichloropropene coelute. Quantitated as
 Dibromochloromethane unless otherwise noted.

 (3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane
 coelute. Quantitated as Tetrachloroethene unless
 otherwise noted.

Geoscience Consultants, Ltd.
 Radlan Work Order: 89-12-112

Method: Halogenated volatiles (1)

List: SV8010

Sample ID: Reagent blank

Factor: 1

Results in: ug/L

22A

Matrix: water

Surrogate Recovery(%)

1-Bromo-4-fluorobenzene

Control Limits: 76 to 140

Result Det. Limit

Result Det. Limit

Result Det. Limit

Result Det. Limit

104

- (1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.
- (2) Dibromochloromethane, 1,1,2-Trichloroethane, and cis-1,3-Dichloropropene coelute. Quantitated as Dibromochloromethane unless otherwise noted.
- (3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane coelute. Quantitated as Tetrachloroethene unless otherwise noted.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: Volatile aromatics (1)

List: SW8020

Sample ID:

8912121410

8912121145E

8912121145I

8912121130

Factor:

250

1

5

10

Results in:

ug/L

ug/L

ug/L

ug/L

058

068

078

088

Matrix:

water

water

water

water

Benzene

 Result Det. Limit
 ND 50

 Result Det. Limit
 3.3 0.20

 Result Det. Limit
 110 1.0

 Result Det. Limit
 21 2.0

Chlorobenzene

ND 50

ND 0.20

ND 1.0

ND 2.0

1,2-Dichlorobenzene

ND 100

ND 0.40

ND 2.0

ND 4.0

1,3-Dichlorobenzene

ND 100

ND 0.40

ND 2.0

ND 4.0

1,4-Dichlorobenzene

ND 75

1.4 * 0.30

8.6 1.5

ND 3.0

Ethylbenzene

ND 50

0.55 * 0.20

18 1.0

27 2.0

Toluene

ND 50

ND 0.20

ND 1.0

ND 2.0

Total xylenes

330 50

ND 0.20

9.1 1.0

6.9 * 2.0

Surrogate Recovery(%)

1-Bromo-4-fluorobenzene

113

94

114

110

Control Limits: 76 to 140

ND Not detected at specified detection limit

* Est. result less than 5 times detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: Volatile aromatics (1) List: SW8020				
Sample ID:	8912121200	8912121530	8912121600	TRIP BLANK
Factor:	1	500	250	1
Results in:	ug/L	ug/L	ug/L	ug/L
	098	108	118	12A
Matrix:	water	water	water	water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
Benzene	ND	0.20	710	100	2000	50	ND	0.20
Chlorobenzene	ND	0.20	ND	100	ND	50	ND	0.20
1,2-Dichlorobenzene	ND	0.40	ND	200	ND	100	ND	0.40
1,3-Dichlorobenzene	ND	0.40	ND	200	ND	100	ND	0.40
1,4-Dichlorobenzene	ND	0.30	ND	150	ND	75	ND	0.30
Ethylbenzene	ND	0.20	820	100	560	50	ND	0.20
Toluene	ND	0.20	130 *	100	ND	50	ND	0.20
Total xylenes	ND	0.20	3100	100	2200	50	ND	0.20
Surrogate Recovery(%)								
1-Bromo-4-fluorobenzene	92		98		105		94	
Control Limits: 76 to 140								

ND Not detected at specified detection limit	* Est. result less than 5 times detection limit
(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.	

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: Volatile aromatics (1)

List: SU8020

Sample ID:

8912131000

8912131210

8912131300

8912131600

Factor:

1

25

1

50

Results in:

ug/L

ug/L

ug/L

ug/L

Matrix:

water

water

water

water

Benzene

Result Det. Limit

63 D 1.0

Result Det. Limit

73 5.0

Result Det. Limit

ND 0.20

Result Det. Limit

110 10

Chlorobenzene

ND 0.20

ND 5.0

ND 0.20

ND 10

1,2-Dichlorobenzene

ND 0.40

ND 10

ND 0.40

ND 20

1,3-Dichlorobenzene

ND 0.40

ND 10

ND 0.40

ND 20

1,4-Dichlorobenzene

ND 0.30

ND 7.5

ND 0.30

ND 15

Ethylbenzene

2.8 0.20

120 5.0

ND 0.20

85 10

Toluene

0.45 * 0.20

ND 5.0

ND 0.20

ND 10

Total xylenes

1.5 0.20

170 5.0

ND 0.20

140 10

Surrogate Recovery(%)

1-Bromo-4-fluorobenzene

98

116

108

136

Control Limits: 76 to 140

D Sample diluted for this analyte

ND Not detected at specified detection limit

* Est. result less than 5 times detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: Volatile aromatics (1)

List: SW8020

Sample ID:

8912131030

Reagent blank

Factor:

1

1

Results in:

ug/L

ug/L

17B

22A

Matrix:

water

water

Benzene

 Result Det. Limit
 1.1 0.20

ND 0.20

Chlorobenzene

ND 0.20

ND 0.20

1,2-Dichlorobenzene

ND 0.40

ND 0.40

1,3-Dichlorobenzene

ND 0.40

ND 0.40

1,4-Dichlorobenzene

ND 0.30

ND 0.30

Ethylbenzene

ND 0.20

ND 0.20

Toluene

0.28 * 0.20

ND 0.20

Total xylenes

1.3 0.20

ND 0.20

Surrogate Recovery(%)

1-Bromo-4-fluorobenzene

110

97

Control Limits: 76 to 140

ND Not detected at specified detection limit

* Est. result less than 5 times detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: PAHs by GC 8100 (1)	<i>SB</i>	<i>SW</i>	<i>749</i>	<i>CRW 13</i>
List: 8100, special list				
Sample ID:	8912121145E	8912121145I	8912121130	8912121200
Factor:	0.94	0.94	0.94	0.94
Results in:	ug/L	ug/L	ug/L	ug/L
	06C	07C	08C	09C
Matrix:	water	water	water	water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
1-Methylnaphthalene	2.0 *	0.94	6.3	0.94	5.8	0.94	ND	0.94
2-Methylnaphthalene	2.8 *	0.94	2.8 *	0.94	ND	0.94	ND	0.94

* Est. result less than 5 times detection limit

ND Not detected at specified detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: PAHs by GC 8100 (1)	<i>LAB 13</i>	<i>LAB 13</i>	<i>LAB 13</i>	<i>LAB 13</i>
List: 8100, special list				
Sample ID:	8912121530	8912121600	8912131000	8912131210
Factor:	94	94	0.94	9.4
Results in:	ug/L	ug/L	ug/L	ug/L
	10C	11C	13C	14C
Matrix:	water	water	water	water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
1-Methylnaphthalene	<u>1600</u>	94	ND	94	ND	0.94	<u>43 *</u>	9.4
2-Methylnaphthalene	<u>2000</u>	94	<u>280 *</u>	94	ND	0.94	ND	9.4

ND Not detected at specified detection limit

* Est. result less than 5 times detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: PAHs by GC 8100 (1)	31	U	30	17
List: 8100, special list				
Sample ID:	8912131300	8912131600	8912131030	8912120950
Factor:	0.94	94	0.94	0.94
Results in:	ug/L	ug/L	ug/L	ug/L
	15C	16C	17C	18A
Matrix:	water	water	water	water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
1-Methylnaphthalene	ND	0.94	ND	94	ND	0.94	ND	0.94
2-Methylnaphthalene	ND	0.94	ND	94	10	0.94	ND	0.94

ND Not detected at specified detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
Radian Work Order: 89-12-112

Method: PAHs by GC 8100 (1)

List: 8100, special list

Sample ID:

METHOD BLANK

Factor:

1

Results in:

ug/L

19A

Matrix:

water.

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
1-Methylnaphthalene	ND	0.94						
2-Methylnaphthalene	ND	0.94						

ND Not detected at specified detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: SW8310 PAH's by HPLC (1)

List: B310 Method analytes

Sample ID:

8912121145E

8912121145I

8912121130

8912121200

Factor:

0.94

1.9

0.94

0.94

Results in:

ug/L

ug/L

ug/L

ug/L

06C

07C

08C

09C

Matrix:

water

water

water

water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
Acenaphthalene	ND	2.2	ND	4.4	ND	2.2	ND	2.2
Acenaphthene	ND	1.7	ND	3.4	144 D	1.7	ND	1.7
Anthracene	ND	0.62	ND	1.3	ND	0.62	ND	0.62
Benzo(a)anthracene	ND	0.012	ND	0.025	ND	0.012	ND	0.012
Benzo(a)pyrene	ND	0.022	ND	0.044	ND	0.022	ND	0.022
Benzo(b)fluoranthene	ND	0.017	ND	0.034	ND	0.017	ND	0.017
Benzo(g,h,i)perylene	ND	0.071	ND	0.14	ND	0.071	ND	0.071
Benzo(k)fluoranthene	ND	0.016	ND	0.032	ND	0.016	ND	0.016
Chrysene	ND	0.012	ND	0.025	ND	0.012	ND	0.012
Dibenzo(a,h)anthracene	ND	0.028	ND	0.057	ND	0.028	ND	0.028
Fluoranthene	ND	0.20	ND	0.40	ND	0.20	ND	0.20
Fluorene	3.4 D	0.20	4.0 D	0.40	2.6 D	0.20	ND	0.20
Indeno(1,2,3-cd)pyrene	ND	0.040	ND	0.082	ND	0.040	ND	0.040
Naphthalene	8.9 D	1.7	14 *D	3.4	1.9 *D	1.7	4.3 *D	1.7
Phenanthrene	11	0.60	13	1.2	3.0	0.60	ND	0.60
Pyrene	0.62 *	0.25	0.54 *	0.51	0.29 *	0.25	ND	0.25
Surrogate Recovery(%)								
Terphenyl-d14	93		80		79		80	
Control Limits: 37 to 139								

ND Not detected at specified detection limit

D Sample diluted for this analyte

* Est. result less than 5 times detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: SW8310 PAH's by HPLC (1)

List: 8310 Method analytes

Sample ID:

8912121530

8912121600

8912131000

8912131210

Factor:

380

9.4

0.94

1.9

Results in:

ug/L

ug/L

ug/L

ug/L

Matrix:

water

water

water

water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
Acenaphthalene	ND	870	ND	22	4.1 *D	2.2	ND	4.4
Acenaphthene	ND	680	ND	17	ND	1.7	6.0 *D	3.4
Anthracene	ND	250	ND	6.2	ND	0.62	ND	1.3
Benzo(a)anthracene	25	4.9	ND	0.12	0.012 *	0.012	0.20	0.025
Benzo(a)pyrene	ND	8.7	ND	0.22	ND	0.022	ND	0.044
Benzo(b)fluoranthene	ND	6.8	ND	0.17	ND	0.017	0.10 *	0.034
Benzo(g,h,i)perylene	ND	29	ND	0.71	ND	0.071	ND	0.14
Benzo(k)fluoranthene	ND	6.5	ND	0.16	ND	0.016	ND	0.032
Chrysene	86	4.9	ND	0.12	ND	0.012	0.88	0.025
Dibenzo(a,h)anthracene	ND	11	ND	0.28	ND	0.028	ND	0.057
Fluoranthene	ND	80	ND	2.0	ND	0.20	ND	0.40
Fluorene	360 *D	80	8.7 *D	2.0	0.47 *D	0.20	3.5 D	0.40
Indeno(1,2,3-cd)pyrene	ND	16	ND	0.40	ND	0.040	ND	0.082
Naphthalene	ND	680	88	17	ND	1.7	ND	3.4
Phenanthrene	1600	240	20 *	6.0	0.68 *	0.60	6.8	1.2
Pyrene	290 *	100	ND	2.5	ND	0.25	1.6 *	0.51

Surrogate Recovery(X)

Terphenyl-d14

NC

27 Q

134

120

Control Limits: 37 to 139

ND Not detected at specified detection limit

* Est. result less than 5 times detection limit

Q Outside control limits

D Sample diluted for this analyte

NC Not calculated

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: SW8310 PAH's by NPLC (1)

List: 8310 Method analytes

Sample ID:	31 8912131300	632 8912131600	30 8912131030	17 8912120950
Factor:	0.94	24	1.9	0.94
Results in:	ug/L	ug/L	ug/L	ug/L
	15C	16C	17C	18A
Matrix:	water	water	water	water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
Acenaphthalene	ND	2.2	ND	55	ND	2.2	ND	2.2
Acenaphthene	ND	1.7	ND	43	14 D	1.7	ND	1.7
Anthracene	ND	0.62	ND	16	ND	1.3	ND	0.62
Benzo(a)anthracene	ND	0.012	0.57 *	0.31	0.026 *	0.025	0.026 *	0.012
Benzo(a)pyrene	ND	0.022	ND	0.55	ND	0.044	ND	0.022
Benzo(b)fluoranthene	ND	0.017	ND	0.43	ND	0.034	ND	0.017
Benzo(g,h,i)perylene	ND	0.071	ND	1.8	ND	0.14	ND	0.071
Benzo(k)fluoranthene	ND	0.016	ND	0.41	ND	0.032	ND	0.016
Chrysene	ND	0.012	7.3	0.31	0.27	0.025	0.20	0.012
Dibenzo(a,h)anthracene	ND	0.028	ND	0.72	ND	0.057	ND	0.028
Fluoranthene	ND	0.20	ND	5.0	ND	0.40	0.40 *	0.20
Fluorene	ND	0.20	13 *D	5.0	4.1 D	0.20	2.3 D	0.20
Indeno(1,2,3-cd)pyrene	ND	0.040	ND	1.0	ND	0.040	ND	0.040
Naphthalene	ND	1.7	ND	43	5.8 *D	1.7	5.6 *D	1.7
Phenanthrene	ND	0.60	29 *	15	1.5 *	1.2	2.0 *	0.60
Pyrene	ND	0.25	ND	6.5	ND	0.51	0.25 *	0.25
Surrogate Recovery(%)								
Terphenyl-d14	84		106		76		124	
Control Limits: 37 to 139								

 ND Not detected at specified detection limit
 D Sample diluted for this analyte

* Est. result less than 5 times detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

Method: SW8310 PAH's by HPLC (1)

List: 8310 Method analytes

Sample ID: METHOD BLANK

Factor: 1

Results in: ug/L

19A

Matrix: water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
Acenaphthalene	ND	2.3						
Acenaphthene	ND	1.8						
Anthracene	ND	0.66						
Benzo(a)anthracene	ND	0.013						
Benzo(a)pyrene	ND	0.023						
Benzo(b)fluoranthene	ND	0.018						
Benzo(g,h,i)perylene	ND	0.076						
Benzo(k)fluoranthene	ND	0.017						
Chrysene	ND	0.013						
Dibenzo(a,h)anthracene	ND	0.030						
Fluoranthene	ND	0.21						
Fluorene	ND	0.21						
Indeno(1,2,3-cd)pyrene	ND	0.043						
Naphthalene	ND	1.8						
Phenanthrene	ND	0.64						
Pyrene	ND	0.27						

Surrogate Recovery(%)

Terphenyl-d14 96

Control Limits: 37 to 139

ND Not detected at specified detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-112

 Method: SW8310 PAH's by NPLC (1)
 List: Matrix Spike Analyte List

Sample ID:	RECOVERY CHECK	RECOVERY CHECK- K DUP
Factor:	1	1
Results in:	%	%
	20A	21A
Matrix:	water	water

	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit	Result	Det. Limit
Acenaphthalene	64	2.3	65	2.3				
Acenaphthene	71	1.8	73	1.8				
Anthracene	94	0.66	100	0.66				
Benzo(k)fluoranthene	80	0.017	83	0.017				
Dibenzo(a,h)anthracene	131	0.030	137	0.030				
Fluorene	87	0.21	92	0.21				
Naphthalene	57	1.8	57	1.8				
Phenanthrene	94	0.64	102	0.64				
 <u>Surrogate Recovery(%)</u>								
Terphenyl-d14	64		68					
Control Limits: 37 to 139								

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Analytical Report
12/22/89

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Geoscience Consultants, Ltd.

Geoscience Consultants, Ltd.
500 Copper NW
Suite 200
Albuquerque, NM 87102
Orlando Gomez

Customer Work Identification M&A Offsite / C of C #3320
Purchase Order Number

Contents:

- 1 Analytical Data Summary
- 2 Sample History
- 3 Comments Summary
- 4 Notes and Definitions

Radian Analytical Services
8501 Mo-Pac Boulevard
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Austin, TX 78720-1088

512/454-4797

Client Services Coordinator: WLBROWN

Certified by: David L. Hays

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-089

Method: Halogenated volatiles (1)

List: SW8010

Sample ID:

GBR-17

GBR-32

GBR-49

GBR-50

Trip Blank

Reagent Blank

Factor:

1

1

5

1

1

1

Results in:

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

Matrix:

water

water

water

water

water

water

Bromodichloromethane	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10
Bromoform	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50
Bromomethane	<1.2	<1.2	<5.9	<1.2	<1.2	<1.2
Carbon Tetrachloride	<0.12	<0.12	<0.60	<0.12	<0.12	<0.12
Chlorobenzene	<0.25	<0.25	<1.3	<0.25	<0.25	<0.25
Chloroethane	<0.52	<0.52	<2.6	<0.52	<0.52	<0.52
2-Chloroethylvinylether	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50
Chloroform	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10
Chloromethane	<0.30	<0.30	<1.5	<0.30	<0.30	<0.30
Dibromochloromethane-(2)	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20
1,2-Dichlorobenzene	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	<0.32	<0.32	<1.6	<0.32	<0.32	<0.32
1,4-Dichlorobenzene	<0.24	<0.24	<1.2	<0.24	<0.24	<0.24
1,1-Dichloroethane	<0.50	<u>3.0</u>	<u>2.8 *</u>	<0.50	<0.50	<0.50
1,2-Dichloroethane	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10
1,1-Dichloroethene	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20
trans-1,2-Dichloroethene	<0.20	<u>140 D</u>	<u>150</u>	<u>0.27 *</u>	<0.20	<0.20
1,2-Dichloropropane	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10
cis-1,3-Dichloropropene-(2)	N/A	N/A	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropene	<0.30	<0.30	<1.5	<0.30	<0.30	<0.30
Methylene Chloride	<0.40	<u>1.2 *</u>	<2.0	<0.40	<u>7.2</u>	<0.40
1,1,2,2-Tetrachloroethane-(3)	<0.15	<0.15	<0.75	<0.15	<0.15	<0.15
Tetrachloroethene-(3)	<u>0.13 *</u>	<u>17</u>	<u>25</u>	<u>1.2</u>	<0.10	<0.10
1,1,2-Trichloroethane-(2)	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	<u>1.0</u>	<u>1.3</u>	<u>1.0 *</u>	<u>0.26 *</u>	<0.20	<0.20
Trichloroethene	<0.20	<u>10</u>	<u>14</u>	<0.20	<0.20	<0.20
Trichlorofluoromethane	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20
Vinyl Chloride	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20

N/A Not available

D Sample diluted for this analyte

* Est. result less than 5 times detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

 (2) Dibromochloromethane, 1,1,2-Trichloroethane, and
 cis-1,3-Dichloropropene coelute. Quantitated as
 Dibromochloromethane unless otherwise noted.

 (3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane
 coelute. Quantitated as Tetrachloroethene unless
 otherwise noted.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-089

Method: Halogenated volatiles (1)

List: SW8010

Sample ID:	GBR-17	GBR-32	GBR-49	GBR-50	Trip Blank	Reagent Blank
Factor:	1	1	5	1	1	1
Results in:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	01A	02A	03A	04A	05A	06A
Matrix:	water	water	water	water	water	water

Surrogate Recovery(%)

1-Bromo-4-fluorobenzene

Control Limits: 76 to 140

95

104

88

110

127

N/A

N/A Not available

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

 (2) Dibromochloromethane, 1,1,2-Trichloroethane, and
 cis-1,3-Dichloropropene coelute. Quantitated as
 Dibromochloromethane unless otherwise noted.

 (3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane
 coelute. Quantitated as Tetrachloroethene unless
 otherwise noted.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-089

Method: Volatile aromatics (1)

List: SW8020

Sample ID:	GBR-17	GBR-32	GBR-49	GBR-50	Trip Blank	Reagent Blank
Factor:	1	1	5	1	1	1
Results in:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	01C	02C	03C	04C	05A	06A
Matrix:	water	water	water	water	water	water

Benzene	<0.20	<u>96</u>	<u>74</u>	<0.20	<0.20	<0.20
Chlorobenzene	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20
1,2-Dichlorobenzene	<0.40	<0.40	<2.0	<0.40	<0.40	<0.40
1,3-Dichlorobenzene	<0.40	<0.40	<2.0	<0.40	<0.40	<0.40
1,4-Dichlorobenzene	<0.30	<0.30	<1.5	<0.30	<0.30	<0.30
Ethylbenzene	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20
Toluene	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20
Total xylenes	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20

Surrogate Recovery(%)

1-Bromo-4-fluorobenzene	98	101	111	104	112	N/A
Control Limits: 76 to 140						

N/A Not available

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
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89/12/60 10 3321
Chain of Custody
DATE 12-20-89 PAGE 1

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Radian Work Order 89-12-160

Analytical Report
01/04/90

Geoscience Consultants, Ltd.

Geoscience Consultants, Ltd.
500 Copper NW
Suite 200
Albuquerque, NM 87102
Orlando Gomez

Customer Work Identification M & A, 348-ode, C of C #3321
Purchase Order Number

Contents:

- 1 Analytical Data Summary
- 2 Sample History
- 3 Comments Summary
- 4 Notes and Definitions

Radian Analytical Services
8501 Mo-Pac Boulevard
P. O. Box 201088
Austin, TX 78720-1088

512/454-4797

Client Services Coordinator: WLBROWN

Certified by: Marilyn Melton

Geoscience Consultants, Ltd.
Radian Work Order: 89-12-160

N/A Not available

D Sample diluted for this analyte

* Est. result less than 5 times detection limit

- (1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.
- (2) Dibromochloromethane, 1,1,2-Trichloroethane, and cis-1,3-Dichloropropene coelute. Quantitated as Dibromochloromethane unless otherwise noted.
- (3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane coelute. Quantitated as Tetrachloroethene unless otherwise noted.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-160

Method: Halogenated volatiles (1)

List: SW8010

Sample ID:	8912181059	8912181124	8912181244	8912181455	8912190901	8912191220
Factor:	1	1	1	1	1	1
Results in:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	01A	02A	03A	04A	05A	06A
Matrix:	water	water	water	water	water	water

Surrogate Recovery(%)

1-Bromo-4-fluorobenzene

Control Limits: 76 to 140

104	118	109	109	108	118
-----	-----	-----	-----	-----	-----

- (1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.
- (2) Dibromochloromethane, 1,1,2-Trichloroethane, and cis-1,3-Dichloropropene coelute. Quantitated as Dibromochloromethane unless otherwise noted.
- (3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane coelute. Quantitated as Tetrachloroethene unless otherwise noted.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-160

Method: Halogenated volatiles (1)

List: SW8010

Sample ID:	8912191645	8912201116	8912201452	Reagent Blank
Factor:	1	1	1	1
Results in:	ug/L	ug/L	ug/L	ug/L
	07A	08A	09A	10A
Matrix:	water	water	water	water

Bromodichloromethane	<0.10	<0.10	<0.10	<0.10
Bromoform	<0.50	<0.50	<0.50	<0.50
Bromomethane	<1.2	<1.2	<1.2	<1.2
Carbon Tetrachloride	<0.12	<0.12	<0.12	<0.12
Chlorobenzene	<0.25	<0.25	<0.25	<0.25
Chloroethane	<0.52	<0.52	<0.52	<0.52
2-Chloroethylvinylether	<0.50	<0.50	<0.50	<0.50
Chloroform	<0.10	<0.10	2.6	<0.10
Chloromethane	<0.30	4.0 Q	0.69 *Q	<0.30
Dibromochloromethane-(2)	<0.20	<0.20	<0.20	<0.20
1,2-Dichlorobenzene	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	<0.32	<0.32	<0.32	<0.32
1,4-Dichlorobenzene	<0.24	<0.24	<0.24	<0.24
1,1-Dichloroethane	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	<0.10	<0.10	<0.10	<0.10
1,1-Dichloroethene	<0.20	<0.20	<0.20	<0.20
trans-1,2-Dichloroethene	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	<0.10	<0.10	<0.10	<0.10
cis-1,3-Dichloropropene-(2)	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropene	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	<0.40	<0.40	<0.40	<0.40
1,1,2,2-Tetrachloroethane-(3)	<0.15	<0.15	<0.15	<0.15
Tetrachloroethene-(3)	<0.10	<0.10	2.9	<0.10
1,1,2-Trichloroethane-(2)	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	<0.20	<0.20	0.77 *	<0.20
Trichloroethene	<0.20	<0.20	1.3	<0.20
Trichlorofluoromethane	<0.20	1.2	1.1	<0.20
Vinyl Chloride	<0.20	<0.20	<0.20	<0.20

N/A Not available

Q Outside control limits

* Est. result less than 5 times detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

(2) Dibromochloromethane, 1,1,2-Trichloroethane, and cis-1,3-Dichloropropene coelute. Quantitated as Dibromochloromethane unless otherwise noted.

(3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane coelute. Quantitated as Tetrachloroethene unless otherwise noted.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-160

Method: Halogenated volatiles (1)

List: SW8010

Sample ID:	8912191645	8912201116	8912201452	Reagent Blank
Factor:	1	1	1	1
Results in:	ug/L	ug/L	ug/L	ug/L
	07A	08A	09A	10A
Matrix:	water	water	water	water

Surrogate Recovery(%)

1-Bromo-4-fluorobenzene
 Control Limits: 76 to 140

95

82

104

104

- (1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.
- (2) Dibromochloromethane, 1,1,2-Trichloroethane, and cis-1,3-Dichloropropene coelute. Quantitated as Dibromochloromethane unless otherwise noted.
- (3) Tetrachloroethene and 1,1,2,2-Tetrachloroethane coelute. Quantitated as Tetrachloroethene unless otherwise noted.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-160

Method: Volatile aromatics (1)

List: SW8020

Sample ID:	8912181059	8912181124	8912181244	8912181455	8912190901	8912191220
Factor:	1	1	1	1	1	50
Results in:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	01C	02C	03C	04C	05C	06C
Matrix:	water	water	water	water	water	water

Benzene	<0.20	<0.20	<0.20	<0.20	<0.20	<10
Chlorobenzene	<0.20	<0.20	<0.20	<0.20	<0.20	<10
1,2-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	<0.40	<20
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	<0.40	<20
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	<0.30	<15
Ethylbenzene	<0.20	<0.20	<0.20	<0.20	<0.20	23 *
Toluene	<0.20	<0.20	<0.20	0.37 *	<0.20	<10
Total xylenes	<0.20	<0.20	<0.20	<0.20	<0.20	130

Surrogate Recovery(%)

1-Bromo-4-fluorobenzene	110	106	117	115	114	136
Control Limits: 76 to 140						

* Est. result less than 5 times detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
 Radian Work Order: 89-12-160

Method: Volatile aromatics (1)

List: SW8020

Sample ID:	8912191645	8912201116	8912201452	Reagent Blank
Factor:	1	1	1	1
Results in:	ug/L	ug/L	ug/L	ug/L
	07C	08C	09C	10A
Matrix:	water	water	water	water

Benzene	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	<0.20	<0.20	<0.20	<0.20
1,2-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	<0.20	<0.20	<0.20	<0.20
Toluene	<0.20	<0.20	<0.20	<0.20
Total xylenes	0.80 *	<0.20	<0.20	<0.20

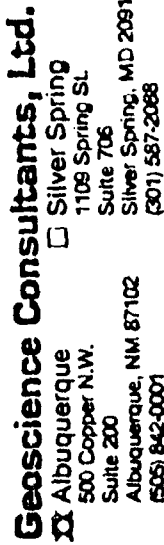
Surrogate Recovery(%)

1-Bromo-4-fluorobenzene	114	105	102	115
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Control Limits: 76 to 140

* Est. result less than 5 times detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.



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Nº 3328
Chain of Custody

DATE 17/11/87 PAGE 1 OF 1

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CLIENT: Geoscience Consultants

DATE REPORTED: 12/20/89

SITE: GBR-50

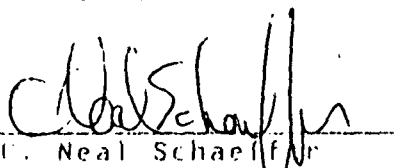
DATE RECEIVED: 12/11/89

LAB NO: F3652

DATE COLLECTED: 12/11/89

Lab pH (s.u.).....	7.30
Lab Conductivity: umhos/cm.....	2791
Lab resistivity, ohm-m.....	3.5829
Total Dissolved Solids (180), mg/l..	2154
Total Dissolved Solids (calc), mg/l.	2125
Total Alkalinity as CaCO ₃ , mg/l.....	209.83
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	814.71
Sodium Absorption Ratio.....	5.51

	mg/l	meq/l
Bicarbonate as HCO ₃	256.05	4.20
Carbonate as CO ₃	0.00	0.00
Chloride.....	141.85	4.00
Sulfate.....	1171.95	24.42
Calcium.....	313.72	15.65
Magnesium.....	7.78	0.64
Potassium.....	2.55	0.07
Sodium.....	161.50	15.72
Major Cations.....		32.08
Major Anions.....		32.61
Cation/Anion Difference.....		0.82 %


C. Neal Schaeffer
Senior Chemist



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

CLIENT: Geoscience Consultants

DATE REPORTED: 12/20/89

SITE: GBR-32

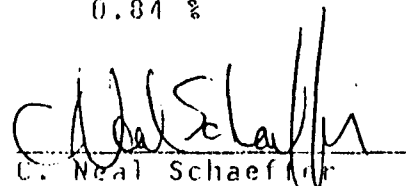
DATE RECEIVED: 12/11/89

LAB NO: F3653

DATE COLLECTED: 12/11/89

Lab pH (s.u.).....	7.44
Lab Conductivity, umhos/cm.....	3721
Lab resistivity, ohm-cm.....	2.6874
Total Dissolved Solids (180), mg/l..	2716
Total Dissolved Solids (calc), mg/l.	2770
Total Alkalinity as CaCO ₃ , mg/l.....	334.62
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	757.87
Sodium Absorption Ratio.....	9.91

	mg/l	meq/l
Bicarbonate as HCO ₃	408.24	6.69
Carbonate as CO ₃	0.00	0.00
Chloride.....	331.88	9.36
Sulfate.....	1304.46	27.18
Calcium.....	301.09	15.02
Magnesium.....	1.62	0.13
Potassium.....	2.40	0.06
Sodium.....	627.50	27.29
Major Cations.....		42.51
Major Anions.....		43.23
Cation/Anion Difference.....		0.84 %


C. Neal Schaeffer
Senior Chemist



Inter-Mountain
Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

CLIENT: Geoscience Consultants

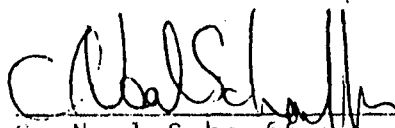
DATE REPORTED: 12/20/89

SITE: GBR-49
LAB NO: F3654

DATE RECEIVED: 12/11/89
DATE COLLECTED: 12/11/89

Lab pH (s.u.).....	7.33
Lab Conductivity, μ mhos/cm.....	4227
Lab resistivity, ohm-cm.....	2.3657
Total Dissolved Solids (180), mg/l..	3224
Total Dissolved Solids (calc), mg/l.	3266
Total Alkalinity as CaCO_3 , mg/l.....	356.40
Total Acidity as CaCO_3 , mg/l.....	0.00
Total Hardness as CaCO_3 , mg/l.....	1098.91
Sodium Absorption Ratio.....	8.44

	mg/l	meq/l
Bicarbonate as HCO_3	434.81	7.13
Carbonate as CO_3	0.00	0.00
Chloride.....	385.41	10.87
Sulfate.....	1554.65	32.39
Calcium.....	507.43	25.32
Magnesium.....	40.64	3.34
Potassium.....	1.80	0.05
Sodium.....	643.50	27.99
Major Cations.....		50.01
Major Anions.....		50.39
Cation/Anion Difference.....		0.37 %


C. Neal Schaeffer
Senior Chemist



Inter-Mountain
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Farmington, New Mexico 87401
Tel. (505) 326-4737

CLIENT: Geoscience Consultants

DATE REPORTED: 12/20/89

SITE: GBR-17

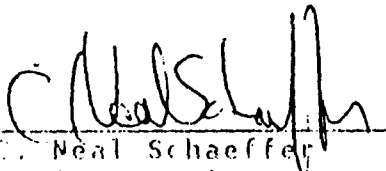
DATE RECEIVED: 12/11/89

LAB NO: F3655

DATE COLLECTED: 12/11/89

Lab pH (s.u.).....	8.24
Lab Conductivity, umhos/cm.....	2850
Lab resistivity, ohm-cm.....	3.5088
Total Dissolved Solids (180), mg/l..	2310
Total Dissolved Solids (calc), mg/l.	2283
Total Alkalinity as CaCO ₃ , mg/l.....	198.00
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1063.13
Sodium Absorption Ratio.....	3.98

	mg/l	meq/l
Bicarbonate as HCO ₃	241.56	3.96
Carbonate as CO ₃	0.00	0.00
Chloride.....	117.76	3.32
Sulfate.....	1326.68	27.54
Calcium.....	412.68	20.59
Magnesium.....	8.14	0.67
Potassium.....	0.81	0.02
Sodium.....	298.50	12.98
Major Cations.....		34.27
Major Anions.....		34.92
Cation/Anion Difference.....		0.95 %


C. Neal Schaeffer
Senior Chemist



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No. 3331

Chain of Custody

DATE 10/12/01 PAGE 1 OF 1

PAGE

of

ANALYSIS REQUEST										RECEIVED BY																					
LAB NAME InterMountain Laboratories ADDRESS 2506 West Main Street Farmington, NM 87401 TELEPHONE 505-326-4737										RECEIVED BY																					
SAMPLE NUMBER										RECEIVED BY																					
MATERIAL										RECEIVED BY																					
LOCATION										RECEIVED BY																					
891211150	H ₂ O	BM-30	GC/MS/ 625/8270	GC/MS/ 624/8240	PESTICIDES/PCB	608/8080	POLYNUCLEAR	AROMATIC 810/8310	PHENOLS, SUB PHENOLS	604/8040	HALOGENATED	VOLATILES 801/8010	AROMATIC VOLATILES	602/8020	TOTAL ORGANIC	CARBON 415/8060	TOTAL ORGANIC	HALIDES 8020	PETROLEUM	HYDROCARBONS 418.1	TPH	MODIFIED 8015	PRIORITY POLLUTANT	CAM METALS (18)	TTLG/STLC	EP TOX	METALS (18)	SDWA-INORGANICS	HAZARDOUS WASTE	PROFILE	1
8912111255	H ₂ O	BM-27	GC/MS/ 625/8270	GC/MS/ 624/8240	PESTICIDES/PCB	608/8080	POLYNUCLEAR	AROMATIC 810/8310	PHENOLS, SUB PHENOLS	604/8040	HALOGENATED	VOLATILES 801/8010	AROMATIC VOLATILES	602/8020	TOTAL ORGANIC	CARBON 415/8060	TOTAL ORGANIC	HALIDES 8020	PETROLEUM	HYDROCARBONS 418.1	TPH	MODIFIED 8015	PRIORITY POLLUTANT	CAM METALS (18)	TTLG/STLC	EP TOX	METALS (18)	SDWA-INORGANICS	HAZARDOUS WASTE	PROFILE	1
8912111520	H ₂ O	BM-37	GC/MS/ 625/8270	GC/MS/ 624/8240	PESTICIDES/PCB	608/8080	POLYNUCLEAR	AROMATIC 810/8310	PHENOLS, SUB PHENOLS	604/8040	HALOGENATED	VOLATILES 801/8010	AROMATIC VOLATILES	602/8020	TOTAL ORGANIC	CARBON 415/8060	TOTAL ORGANIC	HALIDES 8020	PETROLEUM	HYDROCARBONS 418.1	TPH	MODIFIED 8015	PRIORITY POLLUTANT	CAM METALS (18)	TTLG/STLC	EP TOX	METALS (18)	SDWA-INORGANICS	HAZARDOUS WASTE	PROFILE	1
8912121000	H ₂ O	SHS-2	GC/MS/ 625/8270	GC/MS/ 624/8240	PESTICIDES/PCB	608/8080	POLYNUCLEAR	AROMATIC 810/8310	PHENOLS, SUB PHENOLS	604/8040	HALOGENATED	VOLATILES 801/8010	AROMATIC VOLATILES	602/8020	TOTAL ORGANIC	CARBON 415/8060	TOTAL ORGANIC	HALIDES 8020	PETROLEUM	HYDROCARBONS 418.1	TPH	MODIFIED 8015	PRIORITY POLLUTANT	CAM METALS (18)	TTLG/STLC	EP TOX	METALS (18)	SDWA-INORGANICS	HAZARDOUS WASTE	PROFILE	1
8912121410	H ₂ O	SHS-1	GC/MS/ 625/8270	GC/MS/ 624/8240	PESTICIDES/PCB	608/8080	POLYNUCLEAR	AROMATIC 810/8310	PHENOLS, SUB PHENOLS	604/8040	HALOGENATED	VOLATILES 801/8010	AROMATIC VOLATILES	602/8020	TOTAL ORGANIC	CARBON 415/8060	TOTAL ORGANIC	HALIDES 8020	PETROLEUM	HYDROCARBONS 418.1	TPH	MODIFIED 8015	PRIORITY POLLUTANT	CAM METALS (18)	TTLG/STLC	EP TOX	METALS (18)	SDWA-INORGANICS	HAZARDOUS WASTE	PROFILE	1
8912131000	H ₂ O	GBR-15	GC/MS/ 625/8270	GC/MS/ 624/8240	PESTICIDES/PCB	608/8080	POLYNUCLEAR	AROMATIC 810/8310	PHENOLS, SUB PHENOLS	604/8040	HALOGENATED	VOLATILES 801/8010	AROMATIC VOLATILES	602/8020	TOTAL ORGANIC	CARBON 415/8060	TOTAL ORGANIC	HALIDES 8020	PETROLEUM	HYDROCARBONS 418.1	TPH	MODIFIED 8015	PRIORITY POLLUTANT	CAM METALS (18)	TTLG/STLC	EP TOX	METALS (18)	SDWA-INORGANICS	HAZARDOUS WASTE	PROFILE	1
8912131030	H ₂ O	GBR-30	GC/MS/ 625/8270	GC/MS/ 624/8240	PESTICIDES/PCB	608/8080	POLYNUCLEAR	AROMATIC 810/8310	PHENOLS, SUB PHENOLS	604/8040	HALOGENATED	VOLATILES 801/8010	AROMATIC VOLATILES	602/8020	TOTAL ORGANIC	CARBON 415/8060	TOTAL ORGANIC	HALIDES 8020	PETROLEUM	HYDROCARBONS 418.1	TPH	MODIFIED 8015	PRIORITY POLLUTANT	CAM METALS (18)	TTLG/STLC	EP TOX	METALS (18)	SDWA-INORGANICS	HAZARDOUS WASTE	PROFILE	1
8912131210	H ₂ O	GBR-33	GC/MS/ 625/8270	GC/MS/ 624/8240	PESTICIDES/PCB	608/8080	POLYNUCLEAR	AROMATIC 810/8310	PHENOLS, SUB PHENOLS	604/8040	HALOGENATED	VOLATILES 801/8010	AROMATIC VOLATILES	602/8020	TOTAL ORGANIC	CARBON 415/8060	TOTAL ORGANIC	HALIDES 8020	PETROLEUM	HYDROCARBONS 418.1	TPH	MODIFIED 8015	PRIORITY POLLUTANT	CAM METALS (18)	TTLG/STLC	EP TOX	METALS (18)	SDWA-INORGANICS	HAZARDOUS WASTE	PROFILE	1
8912131300	H ₂ O	GBR-31	GC/MS/ 625/8270	GC/MS/ 624/8240	PESTICIDES/PCB	608/8080	POLYNUCLEAR	AROMATIC 810/8310	PHENOLS, SUB PHENOLS	604/8040	HALOGENATED	VOLATILES 801/8010	AROMATIC VOLATILES	602/8020	TOTAL ORGANIC	CARBON 415/8060	TOTAL ORGANIC	HALIDES 8020	PETROLEUM	HYDROCARBONS 418.1	TPH	MODIFIED 8015	PRIORITY POLLUTANT	CAM METALS (18)	TTLG/STLC	EP TOX	METALS (18)	SDWA-INORGANICS	HAZARDOUS WASTE	PROFILE	1

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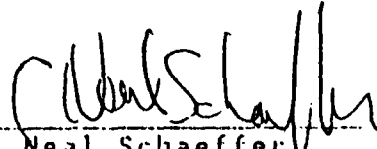
DATE REPORTED: 12/20/89

SITE: GBR-15
LAB NO: F3664

DATE RECEIVED: 12/13/89
DATE COLLECTED: 12/13/89

Lab pH (s.u.).....	8.41
Lab Conductivity, umhos/cm.....	4571
Lab resistivity, ohm-m.....	2.1877
Total Dissolved Solids (100), mg/l..	3694
Total Dissolved Solids (calc), mg/l.	3726
Total Alkalinity as CaCO ₃ , mg/l.....	177.65
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1326.28
Sodium Absorption Ratio.....	8.46

	mg/l	meq/l
Bicarbonate as HCO ₃	212.17	3.48
Carbonate as CO ₃	2.24	0.07
Chloride.....	337.24	9.51
Sulfate.....	2043.51	42.57
Calcium.....	511.64	25.53
Magnesium.....	12.10	0.99
Potassium.....	6.80	0.17
Sodium.....	708.40	30.81
Major Cations.....		57.51
Major Anions.....		55.64
Cation/Anion Difference.....		1.66 %


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Senior Chemist



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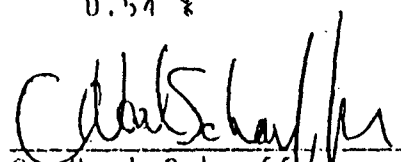
SITE: GBR-30
LAB NO: F3665

DATE REPORTED: 12/20/89

DATE RECEIVED: 12/13/89
DATE COLLECTED: 12/13/89

Lab pH (s.u.).....	8.07
Lab Conductivity, umhos/cm.....	4362
Lab resistivity, ohm-m.....	2.2925
Total Dissolved Solids (180), mg/l..	3250
Total Dissolved Solids (calc), mg/l.	3108
Total Alkalinity as CaCO ₃ , mg/l.....	306.68
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1178.91
Sodium Absorption Ratio.....	7.35

	mg/l	meq/l
Bicarbonate as HCO ₃	374.15	6.13
Carbonate as CO ₃	0.00	0.00
Chloride.....	567.41	16.01
Sulfate.....	1308.57	27.26
Calcium.....	454.79	22.69
Magnesium.....	10.75	0.88
Potassium.....	2.60	0.07
Sodium.....	580.00	25.73
Major Cations.....		48.87
Major Anions.....		49.40
Cation/Anion Difference.....		0.54 %


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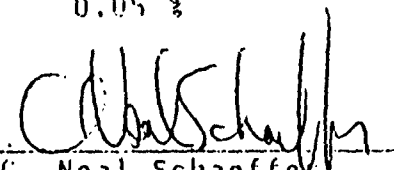
DATE REPORTED: 12/20/89

SITE: GDR-33
LAB NO: F3666

DATE RECEIVED: 12/13/89
DATE COLLECTED: 12/13/89

Lab pH (s.u.).....	7.21
Lab Conductivity, umhos/cm.....	4045
Lab resistivity, ohm-m.....	2.4722
Total Dissolved Solids (TDS), mg/l..	2916
Total Dissolved Solids (calc), mg/l.	2890
Total Alkalinity as CaCO ₃ , mg/l.....	457.38
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1105.23
Sodium Absorption Ratio.....	7.33

	mg/l	meq/l
Bicarbonate as HCO ₃	558.00	9.15
Carbonate as CO ₃	0.00	0.00
Chloride.....	519.24	14.65
Sulfate.....	1092.94	22.77
Calcium.....	437.94	21.85
Magnesium.....	3.05	0.25
Potassium.....	1.52	0.04
Sodium.....	560.40	24.38
Major Cations.....		46.52
Major Anions.....		46.56
Cation/Anion Difference.....		0.05 %


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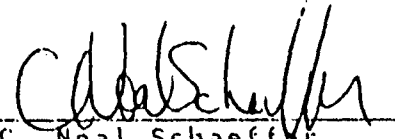
DATE REPORTED: 12/20/89

SITE: GBR-31
LAB NO: F3667

DATE RECEIVED: 12/13/89
DATE COLLECTED: 12/13/89

Lab pH (s.u.).....	7.18
Lab Conductivity, umhos/cm.....	5210
Lab resistivity, ohm-m.....	1.9194
Total Dissolved Solids (180), mg/l..	4128
Total Dissolved Solids (calc), mg/l.	4045
Total Alkalinity as CaCO ₃ , mg/l.....	354.42
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1668.37
Sodium Absorption Ratio.....	7.16

	mg/l	meq/l
Bicarbonate as HCO ₃	432.39	7.09
Carbonate as CO ₃	0.00	0.00
Chloride.....	618.27	17.44
Sulfate.....	1873.97	39.04
Calcium.....	661.13	32.99
Magnesium.....	4.58	0.38
Potassium.....	2.36	0.06
Sodium.....	672.40	29.25
Major Cations.....		62.68
Major Anions.....		63.57
Cation/Anion Difference.....		0.71 %


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P.C. Drawer Mail
Las Cruces, NM 88004
(505) 524-5364

N^o 3329

Chain of Custody

DATE 12/12/89 PAGE 2 OF 3

LAB NAME					
InterMountain Laboratories					
ADDRESS					
2506 West Main Street					
Farmington, NM 87401					
TELEPHONE					
505-326-4737					
SAMPLES SIGNATURE					
SAMPLE NUMBER	MATRIX	LOCATION			
8912121600	Water	G-BR-8			
8912121530	"	G-BR-13			
8912121200	"	G-RW-13			
8912121130	"	G-BR-24D			
8912121145L	"	Air Stripper			
8912121145E	"	Air Stripper			
8912131600	"	G-BR-6			

ANALYSIS REQUEST																
BASE/NEU/ACID CMPDS.	VOLATILE CMPDS. GC/MS/ 824/8240	PESTICIDES/PCB 608/8080	POLYNUCLEAR AROMATIC 810/8310	PHENOLS, SUB PHENOLS 604/8040	HALOGENATED VOLATILES 801/8010	AROMATIC VOLATILES 802/8020	TOTAL ORGANIC CARBON 415/8080	TOTAL ORGANIC HALIDES 8020	PETROLEUM HYDROCARBONS 418.1	TPH MODIFIED 8015	PRIORITY POLLUTANT METALS (13)	CAM METALS (18) TLC/STLC	TOX METALS (18)	BOWA-INORGANICS PRIMARY/SECONDARY	HAZARDOUS WASTE PROFILE	COND., PLS
						3648									X	X
						3618									X	X
						3675									X	X
						3671									X	X
						3672									X	X
						3673									X	X
						3674									X	X

PROJECT INFORMATION		SAMPLE RECEIPT		RELINQUISHED BY		RECEIVED BY	
PROJECT:	TOTAL NO. OF CONTAINERS	CHAIN OF CUSTODY SEALS	REC'D GOOD CONDITION/COLD	CONFORMS TO RECORD	LAB NO.	(Signature)	(Time)
M & A						MARTIN NEE	1700
PROJECT DIRECTOR M NEE						MARTIN NEE	12/12/89
CHARGE CODE NO. 348002						GEOSCIENCE CONSULTANTS	12/12/89
SHIPPING ID. NO. NA						GEOSCIENCE CONSULTANTS	12/12/89
VIA: Hand Delivery						GEOSCIENCE CONSULTANTS	12/12/89

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DATE REPORTED: 12/20/89

SITE: GBR-8

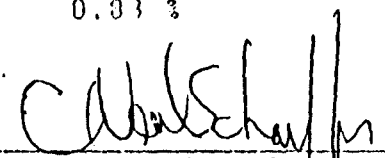
DATE RECEIVED: 12/13/89

LAB NO: F3668

DATE COLLECTED: 12/13/89

Lab pH (s.u.).....	7.22
Lab Conductivity, umhos/cm.....	4816
Lab resistivity, ohm-cm.....	2.0764
Total Dissolved Solids (180), mg/l..	3388
Total Dissolved Solids (calc), mg/l.	3425
Total Alkalinity as CaCO ₃ , mg/l.....	934.56
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1247.33
Sodium Absorption Ratio.....	8.99

	mg/l	meq/l
Bicarbonate as HCO ₃	1140.16	18.69
Carbonate as CO ₃	0.00	0.00
Chloride.....	591.50	16.69
Sulfate.....	1071.55	22.32
Calcium.....	421.10	21.01
Magnesium.....	47.83	3.93
Potassium.....	2.00	0.05
Sodium.....	730.00	31.75
Major Cations.....		56.75
Major Anions.....		57.70
Cation/Anion Difference.....		0.93 %


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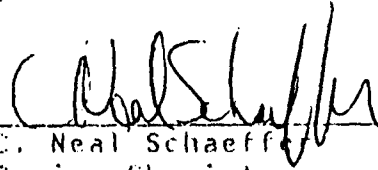
DATE REPORTED: 12/20/89

SITE: GBR-13
LAB NO: F3669

DATE RECEIVED: 12/13/89
DATE COLLECTED: 12/12/89

Lab pH (s.u.).....	7.16
Lab Conductivity, umhos/cm.....	5222
Lab resistivity, ohm-m.....	1.9150
Total Dissolved Solids (180), mg/l..	3968
Total Dissolved Solids (calc), mg/l.	3958
Total Alkalinity as CaCO ₃ , mg/l.....	744.48
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1584.16
Sodium Absorption Ratio.....	8.14

	mg/l	meq/l
Bicarbonate as HCO ₃	908.27	14.89
Carbonate as CO ₃	0.00	0.00
Chloride.....	594.18	16.76
Sulfate.....	1559.59	32.49
Calcium.....	570.59	28.47
Magnesium.....	39.04	3.21
Potassium.....	2.64	0.07
Sodium.....	744.80	32.40
Major Cations.....		64.15
Major Anions.....		64.14
Cation/Anion Difference.....		0.00 %


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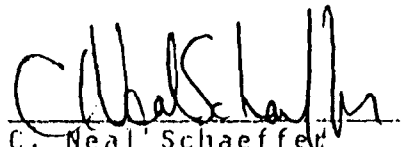
DATE REPORTED: 12/20/89

SITE: GRW-13
LAB NO: F3670

DATE RECEIVED: 12/13/89
DATE COLLECTED: 12/12/89

Lab pH (s.u.).....	8.06
Lab Conductivity, umhos/cm.....	4325
Lab resistivity, ohm-m.....	2.3121
Total Dissolved Solids (180), mg/l..	3242
Total Dissolved Solids (calc), mg/l.	3075
Total Alkalinity as CaCO ₃ , mg/l.....	278.63
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1384.17
Sodium Absorption Ratio.....	5.76

	mg/l	meq/l
Bicarbonate as HCO ₃	339.93	5.57
Carbonate as CO ₃	0.00	0.00
Chloride.....	567.41	16.01
Sulfate.....	1318.45	27.47
Calcium.....	484.26	24.16
Magnesium.....	42.78	3.52
Potassium.....	2.12	0.05
Sodium.....	492.80	21.44
Major Cations.....		49.17
Major Anions.....		49.05
Cation/Anion Difference.....		0.13 %


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DATE REPORTED: 12/20/89

SITE: GBR-240

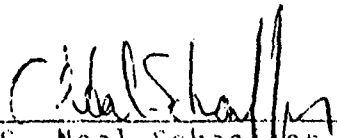
DATE RECEIVED: 12/13/89

LAB NO: F3671

DATE COLLECTED: 12/12/89

Lab pH (s.u.).....	7.59
Lab Conductivity, umhos/cm.....	4718
Lab resistivity, ohm-cm.....	2.1195
Total Dissolved Solids (180), mg/l..	3700
Total Dissolved Solids (calc), mg/l.	3573
Total Alkalinity as CaCO ₃ , mg/l.....	253.44
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1789.42
Sodium Absorption Ratio.....	4.93

	mg/l	meq/l
Bicarbonate as HCO ₃	309.20	5.07
Carbonate as CO ₃	0.00	0.00
Chloride.....	658.41	18.57
Sulfate.....	1658.35	34.55
Calcium.....	467.42	23.32
Magnesium.....	151.56	12.46
Potassium.....	5.52	0.14
Sodium.....	479.40	20.85
Major Cations.....		56.78
Major Anions.....		58.19
Cation/Anion Difference.....		1.23 %


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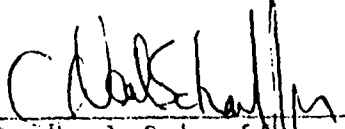
DATE REPORTED: 12/20/89

SITE: Stripper Influent
LAB NO: F3672

DATE RECEIVED: 12/13/89
DATE COLLECTED: 12/12/89

Lab pH (s.u.).....	7.75
Lab Conductivity, umhos/cm.....	4780
Lab resistivity, ohm-cm.....	2.0921
Total Dissolved Solids (180), mg/l..	3452
Total Dissolved Solids (calc), mg/l.	3421
Total Alkalinity as CaCO ₃ , mg/l.....	586.08
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1310.49
Sodium Absorption Ratio.....	8.21

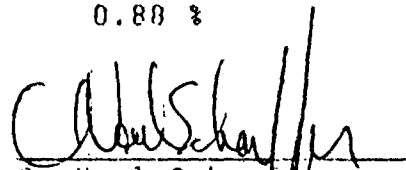
	mg/l	meq/l
Bicarbonate as HCO ₃	715.02	11.72
Carbonate as CO ₃	0.00	0.00
Chloride.....	599.53	16.91
Sulfate.....	1311.86	27.33
Calcium.....	389.52	19.44
Magnesium.....	82.36	6.77
Potassium.....	2.96	0.08
Sodium.....	683.60	29.73
Major Cations.....		56.02
Major Anions.....		55.96
Cation/Anion Difference.....		0.05 %


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SITE: Effluent DATE RECEIVED: 12/13/89
LAB NO: F3673 DATE COLLECTED: 12/12/89

Lab pH (s.u.)..... 7.92
Lab Conductivity, umhos/cm..... 4767
Lab resistivity, ohm-m..... 2.0978
Total Dissolved Solids (180), mg/l.. 3416
Total Dissolved Solids (calc), mg/l. 3433
Total Alkalinity as CaCO₃, mg/l..... 562.32
Total Acidity as CaCO₃, mg/l..... 0.00
Total Hardness as CaCO₃, mg/l..... 1268.38
Sodium Absorption Ratio..... 8.21

	mg/l	meq/l
Bicarbonate as HCO ₃	686.03	11.25
Carbonate as CO ₃	0.00	0.00
Chloride.....	604.88	17.06
Sulfate.....	1311.86	27.33
Calcium.....	496.90	24.80
Magnesium.....	6.96	0.57
Potassium.....	2.92	0.07
Sodium.....	672.00	29.23
Major Cations.....		54.67
Major Anions.....		55.64
Cation/Anion Difference.....		0.88 %


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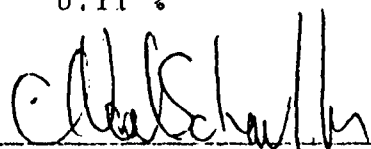
DATE REPORTED: 12/20/89

SITE: GBR-6
LAB NO: F3674

DATE RECEIVED: 12/13/89
DATE COLLECTED: 12/12/89

Lab pH (s.u.).....	7.30
Lab Conductivity, umhos/cm.....	3784
Lab resistivity, ohm-m.....	2.6427
Total Dissolved Solids (L80), mg/l..	2486
Total Dissolved Solids (calc), mg/l.	2559
Total Alkalinity as CaCO ₃ , mg/l.....	1235.52
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1236.81
Sodium Absorption Ratio.....	5.91

	mg/l	meq/l
Bicarbonate as HCO ₃	1507.33	24.71
Carbonate as CO ₃	0.00	0.00
Chloride.....	294.41	8.31
Sulfate.....	609.02	12.69
Calcium.....	336.88	16.81
Magnesium.....	96.38	7.93
Potassium.....	3.48	0.09
Sodium.....	477.60	20.77
Major Cations.....		45.60
Major Anions.....		45.70
Cation/Anion Difference.....		0.11 %


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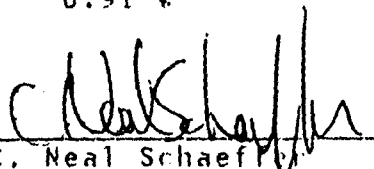
DATE REPORTED: 12/20/89

SITE: GBR-13 Lab Split
LAB NO: F3675

DATE RECEIVED: 12/13/89
DATE COLLECTED: 12/12/89

Lab pH (s.u.).....	7.43
Lab Conductivity, umhos/cm.....	4325
Lab resistivity, ohm-m.....	2.3121
Total Dissolved Solids (180), mg/l..	3250
Total Dissolved Solids (calc), mg/l.	3150
Total Alkalinity as CaCO ₃ , mg/l.....	387.09
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1399.96
Sodium Absorption Ratio.....	5.95

	mg/l	meq/l
Bicarbonate as HCO ₃	472.25	7.74
Carbonate as CO ₃	0.00	0.00
Chloride.....	572.77	16.16
Sulfate.....	1312.69	27.35
Calcium.....	450.58	22.48
Magnesium.....	67.07	5.52
Potassium.....	2.24	0.06
Sodium.....	512.00	22.27
Major Cations.....		50.33
Major Anions.....		51.25
Cation/Anion Difference.....		0.91 %


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SANTA FE

**ANALYTICAL RESULTS FOR
3RD QUARTER, 1989**

**GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO**

April 8, 1990

Prepared for:

**MONTGOMERY & ANDREWS, PA
325 Paseo de Peralta
P.O. Box 2307
Santa Fe, NM 87504-2307**

Submitted to:

**MR. DAVE BOYER
Environmental Bureau Chief
NM Oil Conservation Division
Santa Fe, NM 87105**

Prepared by:

GEOSCIENCE CONSULTANTS, LTD

**CORPORATE OFFICE
SOUTHWEST REGIONAL OFFICE
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2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Date: July 31, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 89D7121200

Sample Site: Effluent

JML Sample No: F1732

Analysis Requested: Purgeable Halocarbons

Sample Matrix: Water

Date Sampled: 07/12/89

Date Received: 07/12/89

Date Extracted: N/A

Date Analyzed: 07/17/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	ND (1.0)	ug/l
1,2-DICHLOROETHANE	ND (1.0)	ug/l
1,1,1-TRICHLOROETHANE	ND (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	ND (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	ND (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.

C. Neal Schaeffer

Date: 07/31/89

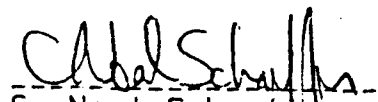
Client: Geoscience Consultants, Ltd.
GCL Sample No: 8907121200
Sample Site: Effluent
IML Sample No: F1732
Analysis Requested: Purgeable Aromatics
Sample Matrix: Water

Date Sampled: 07/12/89
Date Received: 07/12/89
Date Extracted: N/A
Date Analyzed: 07/21/89

Parameter	Concentration	Units
BENZENE	0.51 (0.2)	ug/l
TOLUENE	ND(0.2)	ug/l
ETHYLBENZENE	ND(0.2)	ug/l
CHLOROBENZENE	ND(0.2)	ug/l
m,p-XYLENE	ND(0.2)	ug/l
o-XYLENE	ND(0.2)	ug/l
1,4-DICHLOROBENZENE	ND(0.2)	ug/l
1,3-DICHLOROBENZENE	ND(0.2)	ug/l
1,2-DICHLOROBENZENE	ND(0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


C. Neal Schaeffer
Senior Organic Chemist

Client: GCL #8907121200 Date Reported: 07/25/89
GCL Sample No: Effluent Date Sampled: 07/12/89
IML Sample No: F1732 Date Received: 07/12/89
Analysis Requested: Polynuclear hydrocarbons Date Extracted: 07/19/89
Sample Matrix: Water Date Analyzed: 07/24/89

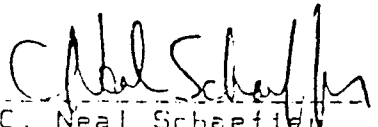
Parameter	Concentration	Units
Naphthalene	ND (0.02)	ug/ml
Acenaphthylene	ND (0.02)	ug/ml
Acenaphthene	ND (0.02)	ug/ml
Fluorene	4.50 (0.02)	ug/ml
Phenanthrene	4.50 (0.02)	ug/ml
Anthracene	ND (0.02)	ug/ml
Fluoranthene	22.40 (0.02)	ug/ml
Pyrene	11.00 (0.02)	ug/ml
Benzo(a)Anthracene	ND (0.02)	ug/ml
Chrysene	ND (0.02)	ug/ml
Benzo(b)fluoranthene	2.00 (0.02)	ug/ml
Benzo(k)fluoranthene	2.000 (0.02)	ug/ml
Benzo(a)pyrene	ND (0.02)	ug/ml
Dibenzo(a,h)anthracene	ND (0.02)	ug/ml
Indeno(1,2,3-cd)pyrene	ND (0.02)	ug/ml
Benzo(g,h,i)perylene	ND (0.02)	ug/ml
Benzo(j)fluoranthene	ND (0.02)	ug/ml
Dibenz(a,h)acridine	ND (0.02)	ug/ml
Dibenz(a,j)acridine	ND (0.02)	ug/ml
Dibenz(a,e)pyrene	ND (0.02)	ug/ml
Dibenz(a,h)pyrene	ND (0.02)	ug/ml
Dibenz(a,i)pyrene	ND (0.02)	ug/ml
3-Methylnaphthalene	ND (0.02)	ug/ml

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA (1986)
610 Polyaromatic Hydrocarbons, 40 CFR, Part 136

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.

Comments: Sample required extensive cleanup. Increased detection limits reflect increased baseline perturbation as well as sample loss due to cleanup.


C. Neal Schaeffgen
Senior Organic Chemist



RECEIVED AUG 23 1989

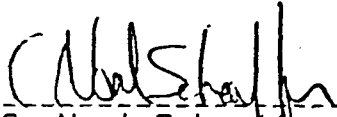
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8907121200
Site: Airstrip Eff.
IML #: F1732

Date of report: 07/26/89
Date sampled: 07/12/89
Date received: 07/12/89

Total dissolved solids (180)..... 3570.00 mg/l
Total dissolved solids (calculated). 3525.15 mg/l
Total alkalinity (as CaCO₃)..... 381.64 mg/l
Total hardness (as CaCO₃)..... 1307.64 mg/l
Lab pH..... 7.60
Lab conductivity..... 4760 umhos/cm @ 25C
Lab resistivity..... 2.1008 ohm-m

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	465.60	7.63
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	691.28	19.50
Sulfate.....	1448.07	30.17
Calcium.....	442.69	22.09
Magnesium.....	49.40	4.06
Potassium.....	3.44	0.09
Sodium.....	664.00	28.88
Major cations.....		55.12
Major anions.....		57.30
Anion/cation % difference.....		1.94 %


C. Neal Schaeffer
Senior Chemist

Date: July 31, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 89D7121145
Sample Site: Influent
IML Sample No: F1733
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

Date Sampled: 07/12/89
Date Received: 07/12/89
Date Extracted: N/A
Date Analyzed: 07/17/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	2.7 (1.0)	ug/l
CHLOROFORM	ND (1.0)	ug/l
1,2-DICHLOROETHANE	ND (1.0)	ug/l
1,1,1-TRICHLOROETHANE	3.4 (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	0.9 (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	1.2 (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.

C. Neal Schaeffer
C. Neal Schaeffer

Date: 07/31/89

Client: Geoscience Consultants, Ltd.
GCL Sample No: 89D7121145
Sample Site: Influent
IML Sample No: F1733
Analysis Requested: Purgeable Aromatics
Sample Matrix: Water

Date Sampled: 07/12/89
Date Received: 07/12/89
Date Extracted: N/A
Date Analyzed: 07/17/89

Parameter	Concentration	Units
BENZENE	33.5 (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	1.8 (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	11.2 (0.2)	ug/l
o-XYLENE	7.3 (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


C. Neal Schaeffer
Senior Organic Chemist

Client: GCL #89D7121145 Date Reported: 07/25/89
GCL Sample No: Influent Date Sampled: 07/12/89
IML Sample No: F1733 Date Received: 07/12/89
Analysis Requested: Polynuclear hydrocarbons Date Extracted: 07/19/89
Sample Matrix: Water Date Analyzed: 07/24/89

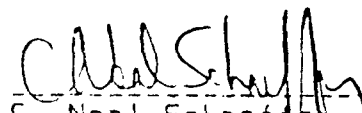
Parameter	Concentration	Units
Naphthalene	ND (0.02)	ug/ml
Acenaphthylene	ND (0.02)	ug/ml
Acenaphthene	ND (0.02)	ug/ml
Fluorene	4.20 (0.02)	ug/ml
Phenanthrene	2.00 (0.02)	ug/ml
Anthracene	ND (0.02)	ug/ml
Fluoranthene	9.40 (0.02)	ug/ml
Pyrene	5.30 (0.02)	ug/ml
Benzo(a)Anthracene	ND (0.02)	ug/ml
Chrysene	ND (0.02)	ug/ml
Benzo(b)fluoranthene	ND (0.02)	ug/ml
Benzo(k)fluoranthene	ND (0.02)	ug/ml
Benzo(a)pyrene	ND (0.02)	ug/ml
Dibenzo(a,h)anthracene	ND (0.02)	ug/ml
Indeno(1,2,3-cd)pyrene	ND (0.02)	ug/ml
Benzo(g,h,i)perylene	ND (0.02)	ug/ml
Benzo(j)fluoranthene	ND (0.02)	ug/ml
Dibenz(a,h)acridine	ND (0.02)	ug/ml
Dibenz(a,j)acridine	ND (0.02)	ug/ml
Dibenz(a,e)pyrene	ND (0.02)	ug/ml
Dibenz(a,h)pyrene	ND (0.02)	ug/ml
Dibenz(a,i)pyrene	ND (0.02)	ug/ml
3-Methylnaphthalene	ND (0.02)	ug/ml

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA (1986)
610 Polyaromatic Hydrocarbons, 40 CFR, Part 136

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.

Comments: Sample required extensive cleanup. Increased detection limits reflect increased baseline perturbation as well as sample loss due to cleanup.


C. Neal Schaeffer
Senior Organic Chemist



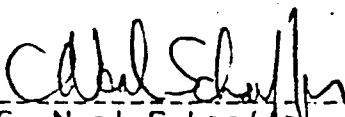
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8907121145
Site: Airstrip Inf.
IML #: F1733

Date of report: 07/26/89
Date sampled: 07/12/89
Date received: 07/12/89

Total dissolved solids (180)..... 3672.00 mg/l
Total dissolved solids (calculated). 3622.48 mg/l
Total alkalinity (as CaCO₃)..... 485.17 mg/l
Total hardness (as CaCO₃)..... 1434.72 mg/l
Lab pH..... 7.83
Lab conductivity..... 4860 umhos/cm @ 25C
Lab resistivity..... 2.0576 ohm-m

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	591.91	9.70
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	680.64	19.20
Sulfate.....	1445.60	30.12
Calcium.....	481.22	24.01
Magnesium.....	56.92	4.68
Potassium.....	3.44	0.09
Sodium.....	667.00	29.01
Major cations.....		57.79
Major anions.....		59.02
Anion/cation % difference.....		1.05 %



C. Neal Schaeffer
Senior Chemist

Date Reported: 08/08/89

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8907121200
Sample Site: Effluent Spike
IML Sample No: F1734
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

Date Sampled: 07/12/89
Date Received: 07/12/89
Date Extracted: N/A
Date Analyzed: 07/24/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	ND (1.0)	ug/l
1,2-DICHLOROETHANE	ND (1.0)	ug/l
1,1,1-TRICHLOROETHANE	ND (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	ND (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	ND (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.

Neal Schaeffer
Neal Schaeffer

Date Reported: 08/08/89

Client: Geoscience Consultants, Ltd.
GCL Sample No: B9D7121145
Sample Site: Influent Spike
IML Sample No: F1735
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

Date Sampled: 07/12/89
Date Received: 07/12/89
Date Extracted: N/A
Date Analyzed: 07/24/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	1.35 (1.0)	ug/l
CIS-1,2-DICHLOROETHENE	5.07 (1.0)	ug/l
CHLOROFORM	ND (1.0)	ug/l
1,2-DICHLOROETHANE	1.58 (1.0)	ug/l
1,1,1-TRICHLOROETHANE	ND (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	ND (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	ND (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.

C. Neal Schaeffer

C. Neal Schaeffer
Senior Organic Chemist

Date: 07/31/89

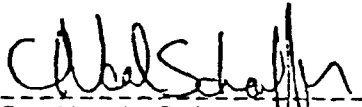
Client: Geoscience Consultants, Ltd.
GCL Sample No: B9D7121145
Sample Site: Influent Spike
IML Sample No: F1735
Analysis Requested: Purgeable Aromatics
Sample Matrix: Water

Date Sampled: 07/12/89
Date Received: 07/12/89
Date Extracted: N/A
Date Analyzed: 07/21/89

Parameter	Concentration	Units
BENZENE	32.3 (0.2)	ug/l
TOLUENE	0.90 (0.2)	ug/l
ETHYLBENZENE	2.0 (0.2)	ug/l
CHLOROBENZENE	ND	
m,p-XYLENE	7.9 (0.2)	ug/l
o-XYLENE	10.3 (0.2)	ug/l
1,4-DICHLOROBENZENE	ND	ug/l
1,3-DICHLOROBENZENE	ND	ug/l
1,2-DICHLOROBENZENE	ND	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


C. Neal Schaeffer
Senior Organic Chemist

Geoscience Consultants, Ltd.

☒ Albuquerque
500 Copper N.W.
Suite 200
Albuquerque, NM 87102
(505) 842-0001

☐ Silver Spring
1109 Spring St.
Suite 706
Silver Spring, MD 20910
(301) 587-2088

☐ Newport Beach
1400 Quail Street
Suite 140
Newport Beach, CA 92660
(714) 724-0536

☐ Las Cruces
P.O. Drawer MM
Las Cruces, NM 88004
(505) 524-5384

3030

Chain of Custody

DATE 8/17/89 PAGE 1 OF 1

LAB NAME Radian Analytical
ADDRESS 10395 Old Placerville Rd.
Sacramento, CA 95827
TELEPHONE 916/362-5332

SAMPLERS (SIGNATURE) [Signature]

SAMPLE NUMBER	MATRIX	LOCATION
5908171304	H ₂ O	Influent
5908171316	H ₂ O	Effluent
5908171333	H ₂ O	Rainbow Springs

ANALYSIS REQUEST

BASE/NEU/ACID CMPS.	GC/MS/ 625/8270	VOLATILE CMPS.	GC/MS/ 624/8240	PESTICIDES/PCB	608/8080	POLYNUCLEAR	AROMATIC 610/8310	PHENOLS, SUB PHENOLS	604/8040	HALOGENATED	VOLATILES 601/8010	AROMATIC VOLATILES	602/8020	TOTAL ORGANIC	CARBON 415/9060	TOTAL ORGANIC	HALIDES 9020	PETROLEUM	HYDROCARBONS 418.1	TPH	MODIFIED 8015	PRIORITY POLLUTANT	CAM METALS (18)	TLC/STLC	EP TOX	METALS (18)	SDWA-INORGANICS	HAZARDOUS WASTE	PROFILE	CALCULATED	CONCENTRATION	NUMBER OF CONTAINERS
							X			X	X	X	X																			
							X			X	X	X	X																			
							X			X	X	X	X																			

PROJECT INFORMATION	SAMPLE RECEIPT
PROJECT: <u>MIA</u>	TOTAL NO. OF CONTAINERS
PROJECT DIRECTOR <u>M. NEL</u>	CHAIN OF CUSTODY SEALS
CHARGE CODE NO. <u>0343-001</u>	REC'D GOOD CONDITION/COLD
SHIPPING ID. NO. <u>3381543231</u>	CONFORMS TO RECORD
VIA: <u>Federal Express</u>	LAB NO.

1. RELINQUISHED BY	2. RELINQUISHED BY	3. RELINQUISHED BY
(Signature) <u>[Signature]</u>	(Signature)	(Signature)
(Printed Name) <u>Tim Kersh</u>	(Printed Name)	(Printed Name)
(Date) <u>8/17/89</u>	(Date)	(Date)
RECEIVED BY	RECEIVED BY	RECEIVED BY (LABORATORY)
(Signature)	(Signature)	(Signature)
(Printed Name)	(Printed Name)	(Printed Name)
(Company)	(Company)	(Company)
(Time)	(Time)	(Time)
(Date)	(Date)	(Date)

SPECIAL INSTRUCTIONS/COMMENTS: 7 DAY T.A.T. ON 8/18/89

KADIAN
CORPORATION

Page 1

Received: 08/18/89

RAS Sacramento

08/24/89 12:27:51

REPORT

RECEIVED AUG 28 1989

Work Order # 59-vd-192

REPORT Geo Science

TO 500 Copper N.W., Suite 200
Albuquerque, NM 87102

ATTEN Sample Manager

CLIENT GEO SCIENCE SAMPLES 5
COMPANY Geo Science
FACILITY 500 Copper N.W. Suite 200
Albuquerque, NM 87102

WORK ID M & A

TAKEN 08/17/89

TRANS Fedex: 33B1862531

TYPE H2O/601.602

P.O. # 0348-001

INVOICE under separate cover

PREPARED Radian Analytical Services

BY 10395 Old Placerville Road
Sacramento,
California 95827

ATTEN

PHONE 916-362-5332

CONTACT WLBROWN

CERTIFIED BY

Paul M. Cole

SAMPLE IDENTIFICATION

01 B908171304 H2O Effluent
02 B908171316 H2O Effluent
03 B908171333 H2O Rainbow Spring
04 REAGENT BLANK H2O
05 REAGENT BLANK H2O

TEST CODES and NAMES used on this report

601 Purgeable Halocarbons H2O
602B Purgeable Aromatics - H2O

SAMPLE ID 8908171304 H2O Influent

FRACTION 01A TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 08/17/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST	TRJ	FILE #	D408229	VERIFIED	JD
INSTRMT	4	FACTOR	10	UNITS	ug/L

INJECTD 08/22/89

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	5.0	10
74-83-9	Bromomethane	ND	10	10
75-01-4	Vinyl Chloride	ND	2.0	10
75-00-3	Chloroethane	ND	5.0	10
75-09-2	Methylene Chloride	ND	4.0	10
75-69-4	Trichlorofluoromethane	ND	1.0	10
75-35-4	1,1-Dichloroethene	ND	1.0	10
75-34-3	1,1-Dichloroethane	ND	1.0	10
540-59-0	Total 1,2-Dichloroethene (2)	17 G	1.0	10
67-66-3	Chloroform	ND	1.0	10
107-06-2	1,2-Dichloroethane	3.9 G	1.0	10
71-55-6	1,1,1-Trichloroethane	ND	2.0	10
56-23-5	Carbon Tetrachloride	ND	2.0	10
75-27-4	Bromodichloromethane	ND	1.0	10
78-87-5	1,2-Dichloropropane	ND	1.0	10
10061-01-5	cis-1,3-Dichloropropene	ND	4.0	10
79-01-6	Trichloroethene	ND	2.0	10
124-48-1	Dibromochloromethane (3)	ND	2.0	10
79-00-5	1,1,2-Trichloroethane (3)	ND	2.0	10
10061-02-6	trans-1,3-Dichloropropene (3)	ND	4.0	10
110-75-8	2-Chloroethylvinyl Ether	ND	20	10
75-25-2	Bromoform	ND	20	10
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	2.0	10
127-18-4	Tetrachloroethene (4)	ND	1.0	10
108-90-7	Chlorobenzene	ND	2.0	10
541-73-1	1,3-Dichlorobenzene	ND	5.0	10
95-50-1	1,2-Dichlorobenzene	ND	2.0	10
106-46-7	1,4-Dichlorobenzene	ND	2.0	10



RAS

Sacramento

REPORT

Work Order # 59-08-192

Received: 02/18/89

Results by Sample

Continued From Above

In Plant

SAMPLE ID 8908171204 H2O

FRACTION 01A

TEST CODE 601

NAME Purgeable Halocarbon: H2O

Date & Time Collected 02/17/89

Category

SURROGATES

540-36-3
460-00-4

1-4-Difluorobenzene
1-Bromo-4-Fluorobenzene

NA % Recovery
92 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitates as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.



Page 4
Received: 08/18/89

RAS Sacramento
Results by Sample

Work Order # 89-VB-192

SAMPLE ID 8908171304 H2O Influent

FRACTION Q1C TEST CODE 602B
Date & Time Collected 08/17/89

NAME Purgeable Aromatics - H2O
Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	TBJ	FILE #	E408222	VERIFIED	JD
INSTRMT	4	FACTOR	10 UNITS	ug/L	
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR	
71-43-2	Benzene	140 C	1.0	10	
108-88-3	Toluene	6.1 C	3.0	10	
100-41-4	Ethylbenzene	ND	1.0	10	
108-90-7	Chlorobenzene	ND	1.0	10	
1330-20-7	Total Xylenes	36 C	2.0	10	
106-46-7	1,4-Dichlorobenzene	ND	2.0	10	
541-73-1	1,2-Dichlorobenzene	ND	4.0	10	
95-50-1	1,2-Dichlorobenzene	ND	2.0	10	

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 106% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

RAS Sacramento

REPORT

Work Order # 89-vd-192

Received: 08/18/89

Results by Sample

SAMPLE ID 8902171315 H2O Effluent

FRACTION 02A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 08/17/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST
INSTRMTTEJ
4

INJECTD 08/22/89

FILE #
FACTORD4082210
10VERIFIED
UNITSJD
ug/L

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	5.0	10
74-83-9	Bromomethane	ND	10	10
75-01-4	Vinyl Chloride	ND	2.0	10
75-00-3	Chloroethane	ND	5.0	10
75-09-2	Methylene Chloride	ND	4.0	10
75-69-4	Trichlorofluoromethane	ND	1.0	10
75-35-4	1,1-Dichloroethene	ND	1.0	10
75-34-3	1,1-Dichloroethane	ND	1.0	10
540-59-0	Total 1,2-Dichloroethene (2)	7.1 C	1.0	10
67-66-3	Chloroform	ND	1.0	10
107-06-2	1,2-Dichloroethane	ND	1.0	10
71-55-6	1,1,1-Trichloroethane	ND	2.0	10
56-23-5	Carbon Tetrachloride	ND	2.0	10
75-27-4	Bromodichloromethane	ND	1.0	10
78-87-5	1,2-Dichloropropane	ND	1.0	10
10061-01-5	cis-1,3-Dichloropropene	ND	4.0	10
79-01-6	Trichloroethene	ND	2.0	10
124-48-1	Dibromochloromethane (3)	ND	2.0	10
79-00-5	1,1,2-Trichloroethane (3)	ND	2.0	10
10061-02-6	trans-1,3-Dichloropropene (3)	ND	4.0	10
110-75-8	2-Chloroethylvinyl Ether	ND	20	10
75-25-2	Bromoform	ND	20	10
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	2.0	10
127-18-4	Tetrachloroethene (4)	ND	1.0	10
108-90-7	Chlorobenzene	ND	2.0	10
541-73-1	1,3-Dichlorobenzene	ND	5.0	10
95-50-1	1,2-Dichlorobenzene	ND	2.0	10
106-46-7	1,4-Dichlorobenzene	ND	2.0	10

Received: 08/18/89

RAS Sacramento

REPORT

Results by Sample

Work Order # 59-vg-192

Continued From Above

SAMPLE ID 8908171313 H2O Effluent

FRACTION 02A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 08/17/89

Category

SURROGATES

540-36-3

1-4-Difluorobenzene

460-00-4

1-Bromo-4-Fluorobenzene

NA % Recovery

100 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

Received: 08/18/89

RAS Sacramento

REPORT

Work Order # S9-V8-192

Results by Sample

SAMPLE ID 8908171333 H2O

Rainbow Spring

FRACTION 03A

TEST CODE 801

NAME Purgeable Halocarbons H2O

Date & Time Collected 08/17/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST _____
INSTRMT _____

TBJ
4

INJECTD 08/22/89

FILE # D4083211
FACTOR 100

VERIFIED _____
UNITS _____
ug/L

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	50	100
74-83-9	Bromomethane	ND	100	100
75-01-4	Vinyl Chloride	ND	20	100
75-00-3	Chloroethane	ND	50	100
75-09-2	Methylene Chloride	ND	40	100
75-69-4	Trichlorofluoromethane	ND	10	100
75-35-4	1,1-Dichloroethene	ND	10	100
75-34-3	1,1-Dichloroethane	ND	10	100
540-59-0	Total 1,2-Dichloroethene (2)	ND	10	100
67-66-3	Chloroform	ND	10	100
107-06-2	1,2-Dichloroethane	ND	10	100
71-55-6	1,1,1-Trichloroethane	ND	20	100
56-23-5	Carbon Tetrachloride	ND	20	100
75-27-4	Bromodichloromethane	ND	10	100
78-87-5	1,2-Dichloropropane	ND	10	100
10061-01-5	cis-1,3-Dichloropropene	ND	40	100
79-01-6	Trichloroethene	ND	20	100
124-48-1	Dibromochloromethane (3)	ND	20	100
79-00-5	1,1,2-Trichloroethane (3)	ND	20	100
10061-02-6	trans-1,3-Dichloropropene (3)	ND	40	100
110-75-8	2-Chloroethylvinyl Ether	ND	200	100
75-25-2	Bromoform	ND	200	100
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	20	100
127-18-4	Tetrachloroethene (4)	ND	10	100
108-90-7	Chlorobenzene	ND	20	100
541-73-1	1,3-Dichlorobenzene	ND	50	100
95-50-1	1,2-Dichlorobenzene	ND	20	100
106-46-7	1,4-Dichlorobenzene	ND	20	100

Received: 08/18/89

RAS Sacramento

REPORT

Results by Sample

Work Order # 89-VB-192
Continued From Above

SAMPLE ID 8908171302 H2O-Rainbow Spring

FRACTION 03A TEST CODE 401

NAME Purgeable Halocarbons H2O

Date & Time Collected 08/17/89

Category

SURROGATES

540-36-3
460-00-4

1-4-Difluorobenzene
1-Bromo-4-Fluorobenzene

NA % Recovery
103 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

Page 10
Received: 08/18/89

RAS Sacramento

REPORT

Results by Sample

Work Order # 89-vc-192

SAMPLE ID 8908171333 H2O-Rainbow Spring

FRACTION Q3C TEST CODE 602B

NAME PURGEABLE AROMATICS - H2O

Date & Time Collected 08/17/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST INSTRMT	TBJ 4	FILE # E4082211	VERIFIED ug/L	JD
		INJECTD 08/22/89	100 UNITS	
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene	2900 C	10	100
105-68-3	Toluene	400 C	30	100
100-41-4	Ethylbenzene	700 C	10	100
105-90-7	Chlorobenzene	ND	10	100
1330-20-7	Total Xylenes	4400 C	20	100
106-46-7	1,4-Dichlorobenzene	ND	20	100
541-73-1	1,3-Dichlorobenzene	ND	40	100
95-50-1	1,2-Dichlorobenzene	ND	20	100

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 94% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

RAS Sacramento

REPORT

Work Order # S9-ud-192

Page 11

Received: 08/18/89

Results by Sample

SAMPLE ID REAGENT BLANK H2O

FRACTION 04A TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST
INSTRUMENTTBJ
4

INJECTD 02/22/89

FILE #
FACTOR0408225
1VERIFIED
UNITSJD
ug/L

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-B7-3	Chloromethane	ND	0.50	1
74-B3-9	Bromomethane	ND	1.0	1
75-01-4	Vinyl Chloride	ND	0.20	1
75-00-3	Chloroethane	ND	0.50	1
75-09-2	Methylene Chloride	ND	0.40	1
75-69-4	Trichlorofluoromethane	ND	0.10	1
75-35-4	1,1-Dichloroethane	ND	0.10	1
75-34-3	1,1-Dichloroethane	ND	0.10	1
540-59-0	Total 1,2-Dichloroethane (2)	ND	0.10	1
67-66-3	Chloroform	ND	0.10	1
107-06-2	1,2-Dichloroethane	ND	0.10	1
71-55-6	1,1,1-Trichloroethane	ND	0.20	1
56-23-5	Carbon Tetrachloride	ND	0.20	1
75-27-4	Bromodichloromethane	ND	0.10	1
78-87-5	1,2-Dichloropropane	ND	0.10	1
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1
79-01-6	Trichloroethene	ND	0.20	1
124-48-1	Dibromochloromethane (3)	ND	0.20	1
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1
75-25-2	Bromoform	ND	2.0	1
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1
127-18-4	Tetrachloroethane (4)	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.50	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1

RAS Sacramento
Results by Sample

REPORT

Work Order # S9-06-192
Continued From Above

SAMPLE ID REAGENT BLANK H2O

FRACTION 044

TEST CODE 401

NAME Purgeable Halocarbon H2O

Date & Time Collected not specified

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	NA % Recovery
460-00-4	1-Bromo-4-Fluorobenzene	105 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

RAC Sacramento

REPORT

Work Order # 89-06-192

Received: 08/18/89

Results by Sample

SAMPLE ID REAGENT BLANK H2O

FRACTION 05A

TEST CODE 602B

NAME PURGEABLE AROMATICS - H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST
INSTRMTTRJ
4

INJECTD 08/22/89

FILE #
FACTORF408225
1 UNITSVERIFIED
ug/L

JD

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene	ND	0.10	1
108-88-2	Toluene	ND	0.30	1
100-41-4	Ethylbenzene	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.10	1
1330-20-7	Total Xylenes	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.40	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 102% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

Radian Work Order 89-08-243

RECEIVED SEP 20 1989

Analytical Report
09/15/89

Geoscience Consultants, Ltd.

Geoscience Consultants, Ltd.
500 Copper NW
Suite 200
Albuquerque, NM 87102

Customer Work Identification M&A
Purchase Order Number 0348-001

Contents:

- 1 Analytical Data Summary
- 2 Sample History
- 3 Comments Summary
- 4 Notes and Definitions

Radian Corporation
8501 MoPac Boulevard
Austin, Texas 78720-1088

512/454-4797

Client Services Coordinator: WLBROWN

Certified by:



Geoscience Consultants, Ltd.
Radfan Work Order: 89-08-243

Method: Alkalinity components (1)

List:

Sample ID:

Factor:

Results in:

Matrix:

Bicarbonate

Carbonate

Total alkalinity

Influent
8908171304

Effluent
8908171316

Rainbow Spring
8908171333

1

mg/L

01A

water

1

mg/L

02A

water

1

mg/L

03A

water

499

479

853

<1.0

<1.0

<1.0

499

479

853

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
Radian Work Order: 89-08-243

Method/Analyte	Influent 8908171304	Effluent 8908171316	Sample Identifications Rainbow Spring 8908171333
Matrix	01 water	02 water	03 water
Calcium by ICPEs			
Calcium	4200 mg/L	160 mg/L	160 mg/L
Chloride, by IC			
Chloride	620 mg/L	670 mg/L	69 mg/L
Magnesium by ICPEs			
Magnesium	430 mg/L	26 mg/L	25 mg/L
Conductivity			
Conductivity	4800 umhos/cm	4800 umhos/cm	1600 umhos/cm
Sodium by ICPEs			
Sodium	6000 mg/L	160 mg/L	160 mg/L
Sulfate			
Sulfate	1300 mg/L	1300 mg/L	14000 mg/L
Total dissolved solids			
Total dissolved solids	3500 mg/L	3700 mg/L	1100 mg/L

Q Outside control limits

For a detailed description of flags and technical terms in this report refer to the glossary.

Radian Work Order 89-08-259

Analytical Report
09/26/89

RECEIVED OCT 3 1989

Geoscience Consultants, Ltd.

Geoscience Consultants, Ltd.
500 Copper NW
Suite 200
Albuquerque, NM 87102

Customer Work Identification M&A
Purchase Order Number 0348-001

Contents:

- 1 Analytical Data Summary
- 2 Sample History
- 3 Comments Summary
- 4 Notes and Definitions

Radian Corporation
8501 MoPac Boulevard
Austin, Texas 78720-1088

512/454-4797

Client Services Coordinator: WLBROWN

Certified by:

Marilyn Melton

Geoscience Consultants, Ltd.
 Radian Work Order: 89-08-259

Method: SW8310 PAH's by HPLC (1)

List:

Sample ID:

Influent
 8908171304

Effluent
 8908171316

Rainbow Spring
 8908171333

REAGENT BLANK

Factors:

10

10

10

10

Results in:

ug/L

ug/L

ug/L

ug/L

Matrix:

water

water

water

water

Acenaphthalene	<23	<23	<23	<23
Acenaphthene	<18	<18	<18	<18
Anthracene	<6.6	<6.6	<6.6	<6.6
Benzo(a)anthracene	<0.13	<0.13	<0.13	<0.13
Benzo(a)pyrene	<0.23	<0.23	<0.23	<0.23
Benzo(b)fluoranthene	<0.18	<0.18	<0.18	<0.18
Benzo(g,h,i)perylene	<0.76	<0.76	<0.76	<0.76
Benzo(k)fluoranthene	<0.17	<0.17	<0.17	<0.17
Chrysene	<0.13	<0.13	<0.13	<0.13
Dibenzo(a,h)anthracene	<0.30	<0.30	<0.30	<0.30
Fluoranthene	<2.1	<2.1	<2.1	<2.1
Fluorene	4*	4*	<2.1	<2.1
Indeno(1,2,3-cd)pyrene	<0.43	<0.43	<0.43	<0.43
Naphthalene	250	27*	310	<18
Phenanthrene	43	42	<6.4	<6.4
Pyrene	<2.7	<2.7	<2.7	<2.7

Surrogate Recovery(%)

Terphenyl-d14

134

138

102

132

Control Limits: 37 to 139

* Est. result less than 5 times detection limit

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
Radian Work Order: 89-08-259

Method: SW6310 FAH's by HPLC (1)

List:

Sample ID:	RECOVERY CHECK	RECOVERY CHECK
		DUP.
Factor:	10	10
Results in:	%	%
	OSA	OSA
Matrix:	water	water

Acenaphthalene	69	70
Acenaphthene	69	72
Anthracene	67	68
Benzo(k)fluoranthene	24	26
Dibenzo(a,h)anthracene	51	52
Fluorene	76	78
Naphthalene	66	66
Phenanthrene	69	70

Surrogate Recovery(%)

Terphenyl-d14	123	127
---------------	-----	-----

Control Limits: 37 to 139

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.

EX Albuquerque
500 Copper N.W.
Suite 200
Albuquerque, NM
(505) 842-0001

**Silver Spring
1109 Spring St.
Suite 706
Silver Spring, MD
(301) 587-2088**

☐ **Newport Beach**
1400 Quail Street
Suite 140
Newport Beach, CA
(714) 724-0536

Las Cruces
P.O. Drawer MM
Las Cruces, NM 88004
(505) 524-5364

Chain of Custody

DATE 7/13/01 PAGE 1 OF 1

[illegible]

RADIAN CORPORATION

Page 1

Received: 09/14/89

RAS Sacramento

REPORT

10/03/89 10:10:43

Work Order # 59-09-082

REPORT Geo Science

TO 500 Copper N.W., Suite 200

Albuquerque, NM 87102

ATTEN Sample Manager

CLIENT GEO SCIENCE

COMPANY Geo Science

FACILITY 500 Copper N.W. Suite 200

Albuquerque, NM 87102

SAMPLES 7

WORK ID M & A/601/602

TAKEN 07/12, 13/89

TRANS Fedex: 3381863590

TYPE H2O

P.O. # 348-001/348-002

INVOICE under separate cover

PREPARED Radian Analytical Services

BY 10395 Old Placerville Road

Sacramento,

California 95827

ATTEN

PHONE 916-362-5332

CONTACT WLBROWN

RECEIVED OCT 4 1989

Paul H. Hale
CERTIFIED BY

SAMPLE IDENTIFICATION

01 B909131145 H2O *GBK-31*
02 B909131230 H2O *GBK-17*
03 B909131400 H2O *Field Blank*
04 TRIP BLANK #1 H2O
05 TRIP BLANK #2 H2O
06 REAGENT BLANK H2O
07 REAGENT BLANK H2O

TEST CODES and NAMES used on this report

601 Purgeable Halocarbons H2O
602B Purgeable Aromatics - H2O

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Results by Sample

REPORT

Work Order # 59-09-082

SAMPLE ID 8909131145 H2O *GB2-31*

FRACTION 01A TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 09/13/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST	MG	FILE #	DB092812	VERIFIED	JD
INSTRMT	B	INJECTD	09/28/89	UNITS	ug/L
		FACTOR	1		

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	0.50	1
74-83-9	Bromomethane	ND	1.0	1
75-01-4	Vinyl Chloride	ND	0.20	1
75-00-3	Chloroethane	ND	0.50	1
75-09-2	Methylene Chloride	0.71 C	0.40	1
75-69-4	Trichlorofluoromethane	3.6 C	0.10	1
75-35-4	1,1-Dichloroethene	ND	0.10	1
75-34-3	1,1-Dichloroethane	2.8 C	0.10	1
540-59-0	Total 1,2-Dichloroethene (2)	23 C	0.10	1
67-66-3	Chloroform	ND	0.10	1
107-06-2	1,2-Dichloroethane	1.8 C	0.10	1
71-55-6	1,1,1-Trichloroethane	0.65 C	0.20	1
56-23-5	Carbon Tetrachloride	ND	0.20	1
75-27-4	Bromodichloromethane	ND	0.10	1
78-87-5	1,2-Dichloropropane	ND	0.10	1
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1
79-01-6	Trichloroethene	ND	0.20	1
124-48-1	Dibromochloromethane (3)	ND	0.20	1
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1
75-25-2	Bromoform	ND	2.0	1
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1
127-18-4	Tetrachloroethene (4)	4.7 C	0.10	1
108-90-7	Chlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.50	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1

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REPORT

Work Order # S9-09-082
Continued From Above

Results by Sample

SAMPLE ID 8909131145 H2O GBR-31

FRACTION Q1A TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 09/13/89

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	NA	% Recovery
460-00-4	1-Bromo-4-Fluorobenzene	105	% Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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RAS Sacramento
Results by Sample

Work Order # S9-09-082

SAMPLE ID 8909131145 H2O GBR-31 FRACTION 01C TEST CODE 602B NAME Purgeable Aromatics - H2O
Date & Time Collected 09/13/89 Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST INSTRMT	MG B	INJECTD 09/28/89	FILE # FACTOR	EB092813 1 UNITS	VERIFIED ug/L	JD
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR		
71-43-2	Benzene	0.38 C	0.10	1		
108-88-3	Toluene	ND	0.30	1		
100-41-4	Ethylbenzene	ND	0.10	1		
108-90-7	Chlorobenzene	ND	0.10	1		
1330-20-7	Total Xylenes	ND	0.20	1		
106-46-7	1,4-Dichlorobenzene	ND	0.20	1		
541-73-1	1,3-Dichlorobenzene	ND	0.40	1		
95-50-1	1,2-Dichlorobenzene	ND	0.20	1		

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 88% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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REPORT

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Results by Sample

SAMPLE ID 8909131230 H2O GBR-17

FRACTION 02A TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 09/13/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST _____ MG
INSTRMT _____ B

INJECTD 09/28/89

FILE # DB092814
FACTOR 1VERIFIED _____ JD
UNITS _____ ug/L

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	0.50	1
74-83-9	Bromomethane	ND	1.0	1
75-01-4	Vinyl Chloride	ND	0.20	1
75-00-3	Chloroethane	ND	0.50	1
75-09-2	Methylene Chloride	ND	0.40	1
75-69-4	Trichlorofluoromethane	3.0 C	0.10	1
75-35-4	1,1-Dichloroethene	ND	0.10	1
75-34-3	1,1-Dichloroethane	0.89 C	0.10	1
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.10	1
67-66-3	Chloroform	ND	0.10	1
107-06-2	1,2-Dichloroethane	ND	0.10	1
71-55-6	1,1,1-Trichloroethane	ND	0.10	1
56-23-5	Carbon Tetrachloride	0.96 C	0.20	1
75-27-4	Bromodichloromethane	ND	0.20	1
78-87-5	1,2-Dichloropropane	ND	0.10	1
10061-01-5	cis-1,3-Dichloropropene	ND	0.10	1
79-01-6	Trichloroethene	ND	0.40	1
124-48-1	Dibromochloromethane (3)	ND	0.20	1
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.20	1
110-75-8	2-Chloroethylvinyl Ether	ND	0.40	1
75-25-2	Bromoform	ND	2.0	1
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	2.0	1
127-18-4	Tetrachloroethene (4)	0.21 C	0.20	1
108-90-7	Chlorobenzene	ND	0.10	1
541-73-1	1,3-Dichlorobenzene	ND	0.20	1
95-50-1	1,2-Dichlorobenzene	ND	0.50	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1

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Results by Sample

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SAMPLE ID 8909131230 H2O GBR-17

NAME Purgeable Halocarbons H2O

FRACTION 02A

TEST CODE 601

Date & Time Collected 09/13/89

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	NA	% Recovery
460-00-4	1-Bromo-4-Fluorobenzene	87	% Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
(2) Quantitated as the Trans-isomer
(3) Dibromochloromethane, 1,1,2-Trichloroethane and
Trans-1,3-dichloropropene co-elute.
(4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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REPORT

Results by Sample

Work Order # S9-09-082

SAMPLE ID 8909131230 H2O GBR-17

FRACTION 02C TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected 09/13/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	MG	FILE #	EB092815	VERIFIED	JD	
INSTRMT	B	INJECTD 09/28/89	FACTOR	1 UNITS	ug/L	
		CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
		71-43-2	Benzene	ND	0.10	1
		108-88-3	Toluene	ND	0.30	1
		100-41-4	Ethylbenzene	ND	0.10	1
		108-90-7	Chlorobenzene	ND	0.10	1
		1330-20-7	Total Xylenes	ND	0.20	1
		106-46-7	1,4-Dichlorobenzene	ND	0.20	1
		541-73-1	1,3-Dichlorobenzene	ND	0.40	1
		95-50-1	1,2-Dichlorobenzene	ND	0.20	1

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 92% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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REPORT

Work Order # S9-09-082

Results by Sample

SAMPLE ID 8909131400 H2O *Field Blank* FRACTION 05A TEST CODE 601 NAME Purgeable Halocarbons H2O
Date & Time Collected 09/13/89 Category _____

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST _____
INSTRMT BINJECTD 09/28/89FILE # DB092816
FACTOR 1VERIFIED _____
UNITS ug/L

JD

CAS#

COMPOUND

RESULT

DET LIMIT

FACTOR

74-87-3

Chloromethane

0.50

1

74-83-9

Bromomethane

1.0

1

75-01-4

Vinyl Chloride

0.20

1

75-00-3

Chloroethane

0.50

1

75-09-2

Methylene Chloride

0.40

1

75-69-4

Trichlorofluoromethane

0.10

1

75-35-4

1,1-Dichloroethene

0.10

1

75-34-3

1,1-Dichloroethane

0.10

1

540-59-0

Total 1,2-Dichloroethene (2)

0.10

1

67-66-3

Chloroform

0.10

1

107-06-2

1,2-Dichloroethane

0.10

1

71-55-6

1,1,1-Trichloroethane

0.20

1

56-23-5

Carbon Tetrachloride

0.20

1

75-27-4

Bromodichloromethane

0.10

1

78-87-5

1,2-Dichloropropane

0.10

1

10061-01-5

cis-1,3-Dichloropropene

0.40

1

79-01-6

Trichloroethene

0.20

1

124-48-1

Dibromochloromethane (3)

0.20

1

79-00-5

1,1,2-Trichloroethane (3)

0.20

1

10061-02-6

trans-1,3-Dichloropropene (3)

0.40

1

110-75-8

2-Chloroethylvinyl Ether

2.0

1

75-25-2

Bromoform

2.0

1

79-34-5

1,1,2,2-Tetrachloroethane (4)

0.20

1

127-18-4

Tetrachloroethene (4)

0.10

1

108-90-7

Chlorobenzene

0.20

1

541-73-1

1,3-Dichlorobenzene

0.50

1

95-50-1

1,2-Dichlorobenzene

0.20

1

106-46-7

1,4-Dichlorobenzene

0.20

1

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Results by Sample

Work Order # 59-09-082
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SAMPLE ID 8909131400 H20 Field Blank FRACTION 05A TEST CODE 601 NAME Purgeable Halocarbons H2O
Date & Time Collected 09/13/89 Category _____

SURROGATES

540-36-3	1-4-Difluorobenzene	<u>NA</u> % Recovery
460-00-4	1-Bromo-4-Fluorobenzene	<u>104</u> % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
 (2) Quantitated as the Trans-isomer
 (3) Dibromochloromethane, 1,1,2-Trichloroethane and
 Trans-1,3-dichloropropene co-elute.
 (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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REPORT

Work Order # S9-09-082

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Results by Sample

SAMPLE ID 8909131400 H2O *Field Blank* FRACTION 05C TEST CODE 602B NAME Purgeable Aromatics - H2O
Date & Time Collected 09/13/89 Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST INSTRMT	MG B	FILE # E8092817	VERIFIED JD	
		FACTOR 1	UNITS ug/L	
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene	ND	0.10	1
108-88-3	Toluene	ND	0.30	1
100-41-4	Ethylbenzene	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.10	1
1330-20-7	Total Xylenes	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.40	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 101% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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REPORT

Work Order # S9-09-082

Results by Sample

SAMPLE ID TRIP BLANK #1 H2O

FRACTION 06A TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 08/22/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST INSTRMT B MG INJECTD 09/28/89 FILE # DB072B18 FACTOR 1 VERIFIED UNITS ug/L JD

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	0.50	1
74-83-9	Bromomethane	ND	1.0	1
75-01-4	Vinyl Chloride	ND	0.20	1
75-00-3	Chloroethane	ND	0.50	1
75-09-2	Methylene Chloride	ND	0.40	1
75-69-4	Trichlorofluoromethane	ND	0.10	1
75-35-4	1,1-Dichloroethene	ND	0.10	1
75-34-3	1,1-Dichloroethane	ND	0.10	1
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.10	1
67-66-3	Chloroform	ND	0.10	1
107-06-2	1,2-Dichloroethane	ND	0.10	1
71-55-6	1,1,1-Trichloroethane	ND	0.20	1
56-23-5	Carbon Tetrachloride	ND	0.20	1
75-27-4	Bromodichloromethane	ND	0.10	1
78-87-5	1,2-Dichloropropane	ND	0.10	1
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1
79-01-6	Trichloroethene	ND	0.20	1
124-48-1	Dibromochloromethane (3)	ND	0.20	1
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1
75-25-2	Bromoform	ND	2.0	1
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1
127-18-4	Tetrachloroethene (4)	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.50	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1

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REPORT

Results by Sample

Work Order # S9-09-082
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SAMPLE ID TRIP BLANK #1 H2O

FRACTION 06A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 08/22/89

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	NA % Recovery
460-00-4	1-Bromo-4-Fluorobenzene	114 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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REPORT

Work Order # S9-09-082

Results by Sample

SAMPLE ID TRIP BLANK #2 H2O

FRACTION 07A TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected 08/22/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	MG	INJECTD	FILE #	EB092819	VERIFIED	JD
INSTRMT	B	09/28/89	FACTOR	1 UNITS	ug/L	
CAS#			COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2			Benzene	ND	0.10	1
108-88-3			Toluene	ND	0.30	1
100-41-4			Ethylbenzene	ND	0.10	1
108-90-7			Chlorobenzene	ND	0.10	1
1330-20-7			Total Xylenes	ND	0.20	1
106-46-7			1,4-Dichlorobenzene	ND	0.20	1
541-73-1			1,3-Dichlorobenzene	ND	0.40	1
95-50-1			1,2-Dichlorobenzene	ND	0.20	1

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 74% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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REPORT
Results by Sample
Work Order # S9-09-082

SAMPLE ID REAGENT BLANK H2O
FRACTION 08A
TEST CODE 601
NAME Purgeable Halocarbons H2O
Date & Time Collected not specified
Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST INSTRMT
MG
B
FILE # QB092B1
FACTOR 1
VERIFIED UNITS ug/L JD

INJECTD 09/28/89

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	0.50	1
74-83-9	Bromomethane	ND	1.0	1
75-01-4	Vinyl Chloride	ND	0.20	1
75-00-3	Chloroethane	ND	0.50	1
75-09-2	Methylene Chloride	ND	0.40	1
75-69-4	Trichlorofluoromethane	ND	0.10	1
75-35-4	1,1-Dichloroethene	ND	0.10	1
75-34-3	1,1-Dichloroethane	ND	0.10	1
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.10	1
67-66-3	Chloroform	ND	0.10	1
107-06-2	1,2-Dichloroethane	ND	0.10	1
71-55-6	1,1,1-Trichloroethane	ND	0.20	1
56-23-5	Carbon Tetrachloride	ND	0.20	1
75-27-4	Bromodichloromethane	ND	0.10	1
78-87-5	1,2-Dichloropropane	ND	0.10	1
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1
79-01-6	Trichloroethene	ND	0.20	1
124-48-1	Dibromochloromethane (3)	ND	0.20	1
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1
75-25-2	Bromoform	ND	2.0	1
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1
127-18-4	Tetrachloroethene (4)	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.50	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1

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REPORT
Results by Sample

Work Order # 59-09-082
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SAMPLE ID REAGENT BLANK H2O

FRACTION 08A TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

SURROGATES

540-36-3
460-00-4

1-4-Difluorobenzene
1-Bromo-4-Fluorobenzene

NA % Recovery
89 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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REPORT

Work Order # 59-09-082

Results by Sample

SAMPLE ID REAGENT BLANK H2O

FRACTION 09A

TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST _____
INSTRMT _____MG
B

INJECTD 09/28/89

FILE #

RB05281

1

UNITS

VERIFIED

JD

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene	ND	0.10	1
108-88-3	Toluene	ND	0.30	1
100-41-4	Ethylbenzene	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.10	1
1330-20-7	Total Xylenes	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.40	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 493 Q% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions



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RAS Sacramento

REPORT

Work Order # 89-09-083

09/19/89 10:55:18

REPORT Geo Science

TO 500 Copper N.W., Suite 200

Albuquerque, NM 87102

ATTEN Sample Manager

CLIENT GEO SCIENCE SAMPLES 4

COMPANY Geo Science

FACILITY 500 Copper N.W., Suite 200

Albuquerque, NM 87102

WORK ID K & A 601/602

TAKEN 09/12/12/89

TRANS Federal 03281242590

TYPE H2O

O. # 348-001/348-002

INVOICE under separate cover

PREPARED Radian Analytical Services

BY 10295 Old Placerville Road

Sacramento,

California 95827

ATTEN

PHONE 916-362-5522

CONTACT WEBBROWN

CERTIFIED BY

Paul Webb

SAMPLE IDENTIFICATION

01 8909131300 H2O Influent
02 8909131300 H2O Effluent
03 REAGENT BLANK H2O
04 REAGENT BLANK H2O

TEST CODES AND NAMES USED ON THIS REPORT

601 Purgable Halocarbons H2O
602B Purgable Aromatics - H2O

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REPORT

Work Order # 89-09-023

Results by Sample

SAMPLE ID 8909131300 H2O Influent

FRACTION 01A TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 09/13/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST TBJ
INSTRUMENT 4

INJECTD 09/16/89

FILE # D408148
FACTOR 100

VERIFIED ND
UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	50	100
74-83-6	Bromomethane	ND	100	100
75-01-4	Vinyl Chloride	ND	20	100
75-00-3	Chloroethane	ND	50	100
75-09-2	Methylene Chloride	ND	40	100
75-69-4	Trichlorofluoromethane	ND	10	100
75-35-4	1,1-Dichloroethene	ND	10	100
75-34-3	1,1-Dichloroethane	ND	10	100
940-59-0	Total 1,2-Dichloroethene (2)	ND	10	100
67-66-3	Chloroform	ND	10	100
107-06-2	1,2-Dichloroethane	ND	10	100
71-55-6	1,1,1-Trichloroethane	ND	20	100
56-23-5	Carbon Tetrachloride	ND	20	100
75-27-4	Bromodichloromethane	ND	10	100
78-57-5	1,2-Dichloropropene	ND	10	100
10061-01-5	cis-1,3-Dichloropropene	ND	40	100
79-01-6	Trichloroethene	ND	20	100
124-48-1	Dibromochloromethane (3)	ND	20	100
79-00-5	1,1,2-Trichloroethane (3)	ND	20	100
10061-02-6	trans-1,3-Dichloropropene (3)	ND	40	100
110-75-8	2-Chloroethylvinyl Ether	ND	200	100
75-25-2	Bromoform	ND	200	100
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	20	100
127-18-4	Tetrachloroethene (4)	ND	10	100
106-90-7	Chlorobenzene	ND	20	100
541-72-1	1,3-Dichlorobenzene	ND	50	100
55-50-1	1,2-Dichlorobenzene	ND	20	100
106-46-7	1,4-Dichlorobenzene	ND	20	100

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REPORT

Results by Sample

Work Order # 59-09-053

Continued From Above

SAMPLE ID 8907131300 H2O Influent

FRACTION Q14 TEST CODE 601

NAME Surveable Halocarbons H2O

Date & Time Collected 09/13/89

Category

SURROGATES

540-06-3	1-4-Difluorobenzene	NA % Recovery
450-00-4	1-Bromo-4-Fluorobenzene	90 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,2-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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REPORT

Work Order # 89-09-083

Exhibits by Sample

SAMPLE ID 8909121300 H2O Influent

FRACTION O1C TEST CODE 6028

NAME PURGEABLE Aromatics - H2O

Date & Time Collected 07/13/89

Category

ORGANICS ANALYSIS DATA SHEET -- PURGEABLE AROMATICS (1)

ANALYST INSTRKT	TEU 4	FILE # E408148	VERIFIED 94%	WD
		INJECTED SAMPLES 100 UNITS		
CASE#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene	1800 C	10	100
108-28-3	Toluene	260 C	30	100
100-41-4	Ethylbenzene	130 C	10	100
108-20-7	Chlorobenzene	ND	10	100
1330-20-7	Total Xylenes	210 C	20	100
106-46-7	1,4-Dichlorobenzene	ND	20	100
541-73-1	1,3-Dichlorobenzene	ND	40	100
95-50-1	1,2-Dichlorobenzene	ND	20	100

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 94% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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REPORT

Work Order # 89-09-083

Results by Sample

SAMPLE ID 8909131330 H2O Effluent

FRACTION 02A TEST CODE 601

NAME Purgeable Halocarbons H2C

Date & Time Collected 09/13/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST TEJ
INSTRMT 4

FILE # D40P1510
FACTOR 100

VERIFIED
UNITS ug/L

INJECTED 09/13/89

CASE#	COMPOUND	RESULT	DET LIMIT	FACTOR
72-87-2	Chloromethane	ND	50	100
74-83-9	Bromomethane	ND	100	100
75-01-1	Vinyl Chloride	ND	20	100
75-00-3	Chloroethane	ND	50	100
75-05-2	Methylene Chloride	ND	40	100
75-69-4	Trichlorofluoromethane	ND	10	100
75-65-4	1,1-Dichloroethene	ND	10	100
75-34-3	1,1-Dichloroethane	ND	10	100
540-59-0	Total 1,2-Dichloroethene (2)	ND	10	100
67-66-3	Chloroform	ND	10	100
107-06-2	1,2-Dichloroethane	ND	10	100
71-55-6	1,1,1-Trichloroethane	ND	20	100
56-23-5	Carbon Tetrachloride	ND	20	100
75-27-4	Bromodichloromethane	ND	10	100
76-87-5	1,2-Dichloropropane	ND	10	100
10061-01-5	cis-1,3-Dichloropropene	ND	40	100
79-01-6	Trichloroethene	ND	20	100
124-46-1	Dibromochloromethane (3)	ND	20	100
79-00-5	1,1,2-Trichloroethane (3)	ND	20	100
10061-02-6	trans-1,3-Dichloropropene (3)	ND	40	100
110-75-8	2-Chloroethylvinyl Ether	ND	200	100
75-25-2	Bromoform	ND	200	100
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	20	100
127-18-4	Tetrachloroethene (4)	ND	10	100
108-90-7	Chlorobenzene	ND	20	100
541-73-1	1,3-Dichlorobenzene	ND	50	100
55-50-1	1,2-Dichlorobenzene	ND	20	100
106-46-7	1,4-Dichlorobenzene	ND	20	100

RADIAN CORPORATION

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Work Order # 89-09-083

Results by Sample

Continued From Above

SAMPLE ID 8909131330 H2O Effluent

FRACTION OEA

TEST CODE 601

NAME POTENTIAL Halocarbons H2O

Date & Time Collected 09/13/89

Category

SURROGATES

540-06-3	1-4-Difluorobenzene	NA % Recovery
460-00-4	1-Bromo-4-Fluorobenzene	102 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-Isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,2-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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WPT Order # 99-09-083

Results to Sample

SAMPLE ID 8909131330 H2O Effluent

FRACTION Q30 TEST CODE 5028

NAME PURGEABLE AROMATICS - H2O

Date & Time Collected 09/13/99

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	TRV	FILE #	E4091510	VERIFIED	JD
INSTRKT	4	INJECTD	CONCENTR	100 UNITS	WELL
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR	
71-43-2	Benzene	1200 C	10	100	
105-88-3	Toluene	190 C	30	100	
100-41-4	Ethylbenzene	50 C	10	100	
108-90-7	Chlorobenzene	ND	10	100	
1330-20-7	Total Xylenes	110 C	20	100	
106-46-7	1,4-Dichlorobenzene	ND	20	100	
541-73-1	1,3-Dichlorobenzene	ND	40	100	
95-50-1	1,2-Dichlorobenzene	ND	20	100	

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 100% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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REPORT

Work Order # 89-09-083

Results by Sample

SAMPLE ID REAGENT BLANK H2O

FRACTION 03A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected Not Specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST
INSTRMTTBU
4

INJECTED 05/16/89

FILE # 0409161
FACTOR 1VERIFIED
UNITS ug/L

JD

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	0.50	1
74-83-6	Bromomethane	ND	1.0	1
75-01-4	Vinyl Chloride	ND	0.20	1
75-00-3	Chloroethane	ND	0.50	1
75-09-2	Methylene Chloride	ND	0.40	1
75-69-4	Trichlorofluoromethane	ND	0.10	1
75-35-4	1,1-Dichloroethene	ND	0.10	1
75-34-3	1,1-Dichloroethane	ND	0.10	1
540-69-0	Total 1,2-Dichloroethene (2)	ND	0.10	1
67-66-3	Chloroform	ND	0.10	1
107-06-2	1,2-Dichloroethane	ND	0.10	1
71-55-6	1,1,1-Trichloroethane	ND	0.20	1
56-23-5	Carbon Tetrachloride	ND	0.20	1
75-27-4	Bromodichloromethane	ND	0.10	1
75-87-5	1,2-Dichloropropane	ND	0.10	1
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1
79-01-6	Trichloroethene	ND	0.20	1
124-49-1	Dibromochloromethane (3)	ND	0.20	1
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1
75-25-2	Bromoform	ND	2.0	1
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1
127-18-4	Tetrachloroethene (4)	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.50	1
55-50-1	1,2-Dichlorobenzene	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1

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Results by Sample

Work Order # S9-09-083

Continued From Above

SAMPLE ID REAGENT BLANK H2O

FRACTION 03A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	NA	% Recovery
450-00-4	1-Bromo-4-Fluorobenzene	96	% Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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Results by Sample
REPORT
Work Order # S9-09-083

SAMPLE ID REAGENT BLANK H2O
FRACTION 04A TEST CODE 602B NAME Purgeable Aromatics - H2O
Date & Time Collected not specified Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	TBJ	FILE #	R409161	VERIFIED	JD
INSTRMT	4	FACTOR	1 UNITS	UR/L	
		INJECTD	09/16/89		
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR	
71-43-2	Benzene	ND	0.10	1	
108-88-3	Toluene	ND	0.30	1	
100-41-4	Ethylbenzene	ND	0.10	1	
108-90-7	Chlorobenzene	ND	0.10	1	
1330-20-7	Total Xylenes	ND	0.20	1	
106-46-7	1,4-Dichlorobenzene	ND	0.20	1	
541-73-1	1,3-Dichlorobenzene	ND	0.40	1	
95-50-1	1,2-Dichlorobenzene	ND	0.20	1	

SURROGATE
460-00-4 1-Bromo-4-Fluorobenzene 102% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

Radian Work Order 89-09-111

Analytical Report
10/04/89

RECEIVED OCT 9 1989

Geoscience Consultants, Ltd.

Geoscience Consultants, Ltd.
500 Copper NW
Suite 200
Albuquerque, NM 87102

Customer Work Identification M&A COC #3098
Purchase Order Number 348002/348001

Contents:

- 1 Analytical Data Summary
- 2 Sample History
- 3 Comments Summary
- 4 Notes and Definitions

Radian Corporation
8501 MoPac Boulevard
Austin, Texas 78720-1088

512/454-4797

Client Services Coordinator: WLBROWN

Certified by:

Marilyn Melton

Albuquerque
500 Copper N.W.
Suite 200
Albuquerque, NM
(505) 842-0001

**Silver Spring
1109 Spring St.
Suite 706
Silver Spring, MD
(301) 587-2088**

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1400 Quail Street
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REPORT
10/06/89 13:04:21
Work Order # 59-09-081

REPORT Geo Science
TO 500 Copper N.W., Suite 200
Albuquerque, NM 87102

ATTEN Sample Manager
CLIENT GEO SCIENCE SAMPLES 10
COMPANY Geo Science
FACILITY 500 Copper N.W. Suite 200
Albuquerque, NM 87102

WORK ID M & A 601/602
TAKEN 09/12, 13/89
TRANS Fedex 3381863586
TYPE H2O
P.O. # 348-002
INVOICE under separate cover

PREPARED Radian Analytical Services
BY 10395 Old Placerville Road
Sacramento,
California 95827
ATTEN
PHONE 916-362-5332

Paul Vile
CERTIFIED BY
CONTACT WLBROWN

NUMEROUS BACKGROUND INTERFERENCES WERE PRESENT IN 602 DATA.
SOME ANALYTES REPORTED AS ESTIMATED VALUE. SAMPLE 8909131015
COULD NOT BE CONFIRMED DUE TO HIGH LEVELS OF INTERFERENCES.
RESULTS REPORTED AS UNCONFIRMED AND ESTIMATED VALUES.

Previously Reported on 10/06/89.

SAMPLE IDENTIFICATION

- 01 8909121550 H2O GRR-13
- 02 8909121615 H2O GRR-8
- 03 8909121650 H2O GRR-6
- 04 8909121750 H2O GRR-33
- 05 8909120830 H2O GRR-15
- 06 8909130915 H2O GRR-240
- 07 8909131015 H2O GRR-30
- 08 8909131030 H2O GRW-13
- 09 REAGENT BLANK H2O
- 10 REAGENT BLANK H2O

TEST CODES and NAMES used on this report

- 601 Purgeable Halocarbons H2O
- 602B Purgeable Aromatics - H2O

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Results by Sample
REPORT
Work Order # S9-09-081

SAMPLE ID 8909121550 H2O 66R-13
FRACTION 01A
Date & Time Collected 09/12/89
TEST CODE 601
NAME Purgeable Halocarbons H2O
Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST _____
INSTRMT _____
MG
B
FILE # DB09269
FACTORS 50
VERIFIED JD
UNITS ug/L

INJECTD 09/26/89

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	25	50
74-83-9	Bromomethane	ND	50	50
75-01-4	Vinyl Chloride	ND	10	50
75-00-3	Chloroethane	ND	25	50
75-09-2	Methylene Chloride	ND	20	50
75-69-4	Trichlorofluoromethane	ND	5.0	50
75-35-4	1,1-Dichloroethene	ND	5.0	50
75-34-3	1,1-Dichloroethane	ND	5.0	50
540-59-0	Total 1,2-Dichloroethene (2)	57 C	5.0	50
67-66-3	Chloroform	ND	5.0	50
107-06-2	1,2-Dichloroethane	ND	5.0	50
71-55-6	1,1,1-Trichloroethane	ND	10	50
56-23-5	Carbon Tetrachloride	ND	10	50
75-27-4	Bromodichloromethane	ND	5.0	50
78-87-5	1,2-Dichloropropane	ND	5.0	50
10061-01-5	cis-1,3-Dichloropropene	ND	20	50
79-01-6	Trichloroethene	13 C	10	50
124-48-1	Dibromochloromethane (3)	ND	10	50
79-00-5	1,1,2-Trichloroethane (3)	ND	10	50
10061-02-6	trans-1,3-Dichloropropene (3)	ND	20	50
110-75-8	2-Chloroethylvinyl Ether	ND	100	50
75-25-2	Bromoform	ND	100	50
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	10	50
127-18-4	Tetrachloroethene (4)	ND	5.0	50
108-90-7	Chlorobenzene	ND	10	50
541-73-1	1,3-Dichlorobenzene	ND	25	50
95-50-1	1,2-Dichlorobenzene	ND	10	50
106-46-7	1,4-Dichlorobenzene	ND	10	50

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Results by Sample

Work Order # S9-09-081
Continued From Above

SAMPLE ID 8909121550 H2O

6BR-13

FRACTION 01A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 09/12/89

Category

SURROGATES

540-36-3
460-00-4

1-4-Difluorobenzene
1-Bromo-4-Fluorobenzene

NA % Recovery
96 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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REPORT

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Results by Sample

SAMPLE ID 8909121550 H2O GBR-13

FRACTION 01C TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected 09/12/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST _____
INSTRMT _____MG
B

INJECTD 09/26/89

FILE # EBO92610
FACTOR 50 UNITSVERIFIED _____
ug/L

JD

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene	1700 C	5.0	50
108-88-3	Toluene	200 C	15	50
100-41-4	Ethylbenzene	540 C	5.0	50
108-90-7	Chlorobenzene	ND	5.0	50
1330-20-7	Total Xylenes	1900 C	10	50
106-46-7	1,4-Dichlorobenzene	ND	10	50
541-73-1	1,3-Dichlorobenzene	ND	20	50
95-50-1	1,2-Dichlorobenzene	ND	10	50

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 76% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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REPORT

Work Order # S9-09-081

Results by Sample

SAMPLE ID 8909121615 H2O GBR-8 FRACTION 02A TEST CODE 601 NAME Purgeable Halocarbons H2O
Date & Time Collected 09/12/89 Category _____

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST _____
INSTRMT _____

FILE # DB092611 VERIFIED JD
FACTOR 250 UNITS ug/L

INJECTD 09/26/89

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	130	250
74-83-9	Bromomethane	ND	250	250
75-01-4	Vinyl Chloride	ND	50	250
75-00-3	Chloroethane	ND	130	250
75-09-2	Methylene Chloride	ND	100	250
75-69-4	Trichlorofluoromethane	ND	25	250
75-35-4	1,1-Dichloroethene	ND	25	250
75-34-3	1,1-Dichloroethane	ND	25	250
540-59-0	Total 1,2-Dichloroethene (2)	ND	25	250
67-66-3	Chloroform	ND	25	250
107-06-2	1,2-Dichloroethane	ND	25	250
71-55-6	1,1,1-Trichloroethane	ND	50	250
56-23-5	Carbon Tetrachloride	ND	50	250
75-27-4	Bromodichloromethane	ND	25	250
78-87-5	1,2-Dichloropropane	ND	25	250
10061-01-5	cis-1,3-Dichloropropene	ND	100	250
79-01-6	Trichloroethene	ND	50	250
124-48-1	Dibromochloromethane (3)	ND	50	250
79-00-5	1,1,2-Trichloroethane (3)	ND	50	250
10061-02-6	trans-1,3-Dichloropropene (3)	ND	100	250
110-75-8	2-Chloroethylvinyl Ether	ND	500	250
75-25-2	Bromoform	ND	500	250
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	50	250
127-18-4	Tetrachloroethene (4)	ND	25	250
108-90-7	Chlorobenzene	ND	50	250
541-73-1	1,3-Dichlorobenzene	ND	130	250
95-50-1	1,2-Dichlorobenzene	ND	50	250
106-46-7	1,4-Dichlorobenzene	ND	50	250

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Results by Sample

Work Order # S9-09-081
Continued From Above

SAMPLE ID B909121615 H2O GBR-8

FRACTION 02A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 09/12/89

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	NA	% Recovery
460-00-4	1-Bromo-4-Fluorobenzene	106	% Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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Results by Sample

Work Order # 59-09-081

SAMPLE ID 8909121615 H2O GBR-8

FRACTION 02C TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected 09/12/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	MG	INSTRMT	B	FILE #	EB092612	VERIFIED	JD
				FACTOR	250 UNITS	ug/L	
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR			
71-43-2	Benzene	2200 CE	25	250			
108-88-3	Toluene	180 CE	75	250			
100-41-4	Ethylbenzene	1400 CE	25	250			
108-90-7	Chlorobenzene	ND	25	250			
1330-20-7	Total Xylenes	4400 CE	50	250			
106-46-7	1,4-Dichlorobenzene	ND	50	250			
541-73-1	1,3-Dichlorobenzene	ND	100	250			
95-50-1	1,2-Dichlorobenzene	ND	50	250			

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 28.0% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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Results by Sample

REPORT

Work Order # S9-09-081

SAMPLE ID 8909121650 H2O GBR-06

NAME Purgeable Halocarbons H2O

FRACTION 03A TEST CODE 601

Date & Time Collected 09/12/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST _____
INSTRMT _____

FILE # _____
FACTOR _____

INJECTD 09/26/89

VERIFIED _____
UNITS _____

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	130	250
74-83-9	Bromomethane	ND	250	250
75-01-4	Vinyl Chloride	ND	50	250
75-00-3	Chloroethane	ND	130	250
75-09-2	Methylene Chloride	ND	100	250
75-69-4	Trichlorofluoromethane	ND	25	250
75-35-4	1,1-Dichloroethene	ND	25	250
75-34-3	1,1-Dichloroethane	ND	25	250
540-59-0	Total 1,2-Dichloroethene (2)	ND	25	250
67-66-3	Chloroform	ND	25	250
107-06-2	1,2-Dichloroethane	ND	25	250
71-55-6	1,1,1-Trichloroethane	ND	50	250
56-23-5	Carbon Tetrachloride	ND	50	250
75-27-4	Bromodichloromethane	ND	25	250
78-87-5	1,2-Dichloropropane	ND	25	250
10061-01-5	cis-1,3-Dichloropropene	ND	100	250
79-01-6	Trichloroethene	ND	50	250
124-48-1	Dibromochloromethane (3)	ND	50	250
79-00-5	1,1,2-Trichloroethane (3)	ND	50	250
10061-02-6	trans-1,3-Dichloropropene (3)	ND	100	250
110-75-8	2-Chloroethylvinyl Ether	ND	500	250
73-25-2	Bromoform	ND	500	250
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	50	250
127-18-4	Tetrachloroethene (4)	ND	25	250
108-90-7	Chlorobenzene	ND	50	250
541-73-1	1,3-Dichlorobenzene	ND	130	250
95-50-1	1,2-Dichlorobenzene	ND	50	250
106-46-7	1,4-Dichlorobenzene	ND	50	250

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 FRACTION 03A
 TEST CODE 601
 NAME Purgeable Halocarbons H2O
 Work Order # S9-09-081
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 Category

SAMPLE ID 8909121650 H2O GBR-6

SURROGATES		
540-36-3	1-4-Difluorobenzene	NA % Recovery
460-00-4	1-Bromo-4-Fluorobenzene	110 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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 SAMPLE ID 8909121650 H2O 682-6
 FRACTION 03C
 TEST CODE 602B
 NAME Purgeable Aromatics - H2O
 Date & Time Collected 09/12/89
 Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	MG	FILE #	EB092615	VERIFIED	JD
INSTRMT	B	INJECTD	09/26/89	250 UNITS	ug/L
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR	
71-43-2	Benzene	200 CE	25	250	
108-88-3	Toluene	ND	75	250	
100-41-4	Ethylbenzene	860 CE	25	250	
108-90-7	Chlorobenzene	ND	25	250	
1330-20-7	Total Xylenes	4100 C	50	250	
106-46-7	1,4-Dichlorobenzene	ND	50	250	
541-73-1	1,3-Dichlorobenzene	ND	100	250	
95-50-1	1,2-Dichlorobenzene	ND	50	250	

SURROGATE
 460-00-4 1-Bromo-4-Fluorobenzene 90% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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SAMPLE ID B909121750 H2O GBR-33
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FRACTION 04A
Date & Time Collected 09/12/89
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NAME Purgeable Halocarbons H2O
Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST	MG	FILE #	DB100112	VERIFIED	JD
INSTRMT	B	FACTOR	5	UNITS	ug/L
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR	
74-87-3	Chloromethane	ND	2.5	5	
74-83-9	Bromomethane	ND	5.0	5	
75-01-4	Vinyl Chloride	ND	1.0	5	
75-00-3	Chloroethane	ND	2.5	5	
75-09-2	Methylene Chloride	ND	2.0	5	
75-69-4	Trichlorofluoromethane	ND	0.50	5	
75-35-4	1,1-Dichloroethene	ND	0.50	5	
75-34-3	1,1-Dichloroethane	ND	0.50	5	
540-59-0	Total 1,2-Dichloroethene (2)	2.5 C	0.50	5	
67-66-3	Chloroform	ND	0.50	5	
107-06-2	1,2-Dichloroethane	0.97 C	0.50	5	
71-55-6	1,1,1-Trichloroethane	ND	1.0	5	
56-23-5	Carbon Tetrachloride	ND	1.0	5	
75-27-4	Bromodichloromethane	ND	0.50	5	
78-87-5	1,2-Dichloropropane	ND	0.50	5	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	5	
79-01-6	Trichloroethene	ND	1.0	5	
124-48-1	Dibromochloromethane (3)	ND	1.0	5	
79-00-5	1,1,2-Trichloroethane (3)	ND	1.0	5	
10061-02-6	trans-1,3-Dichloropropene (3)	ND	2.0	5	
110-75-8	2-Chloroethylvinyl Ether	ND	10	5	
75-25-2	Bromoform	ND	10	5	
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	1.0	5	
127-18-4	Tetrachloroethene (4)	ND	0.50	5	
108-90-7	Chlorobenzene	ND	1.0	5	
541-73-1	1,3-Dichlorobenzene	ND	2.5	5	
95-50-1	1,2-Dichlorobenzene	ND	1.0	5	
106-46-7	1,4-Dichlorobenzene	ND	1.0	5	

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SAMPLE ID 8909121750 H2O GBR-33

FRACTION 04C TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected 09/12/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	MG	FILE #	EB100113	VERIFIED	JD
INSTRMT	B	INJECTD	10/01/89	5 UNITS	ug/L
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR	
71-43-2	Benzene	ND	0.50	5	
108-88-3	Toluene	ND	1.5	5	
100-41-4	Ethylbenzene	7.9 CE	0.50	5	
108-90-7	Chlorobenzene	ND	0.50	5	
1330-20-7	Total Xylenes	17 C	1.0	5	
106-46-7	1,4-Dichlorobenzene	ND	1.0	5	
541-73-1	1,3-Dichlorobenzene	ND	2.0	5	
95-50-1	1,2-Dichlorobenzene	ND	1.0	5	

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 64% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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Results by Sample

SAMPLE ID 8909120830 H20

GBR-15

FRACTION 05A TEST CODE 601

NAME Purgeable Halocarbons H20

Date & Time Collected 09/13/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST _____
INSTRMT _____

INJECTD 09/27/89

FILE # DB092717
FACTOR 5

VERIFIED _____
UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	2.5	5
74-83-9	Bromomethane	ND	5.0	5
75-01-4	Vinyl Chloride	ND	1.0	5
75-00-3	Chloroethane	ND	2.5	5
75-09-2	Methylene Chloride	6.7 C	2.0	5
75-69-4	Trichlorofluoromethane	ND	0.50	5
75-35-4	1,1-Dichloroethene	ND	0.50	5
75-34-3	1,1-Dichloroethane	ND	0.50	5
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.50	5
67-66-3	Chloroform	ND	0.50	5
107-06-2	1,2-Dichloroethane	77 C	0.50	5
71-55-6	1,1,1-Trichloroethane	ND	1.0	5
56-23-5	Carbon Tetrachloride	ND	1.0	5
75-27-4	Bromodichloromethane	ND	0.50	5
78-87-5	1,2-Dichloropropane	ND	0.50	5
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	5
79-01-6	Trichloroethene	ND	1.0	5
124-48-1	Dibromochloromethane (3)	ND	1.0	5
79-00-5	1,1,2-Trichloroethane (3)	ND	1.0	5
10061-02-6	trans-1,3-Dichloropropene (3)	ND	2.0	5
110-75-8	2-Chloroethylvinyl Ether	ND	10	5
75-25-2	Bromoform	ND	10	5
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	1.0	5
127-18-4	Tetrachloroethene (4)	ND	0.50	5
108-90-7	Chlorobenzene	ND	1.0	5
541-73-1	1,3-Dichlorobenzene	ND	2.5	5
95-50-1	1,2-Dichlorobenzene	ND	1.0	5
106-46-7	1,4-Dichlorobenzene	ND	1.0	5

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SAMPLE ID 8909120830 H2O GBR-15

FRACTION 05A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 09/13/89

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	NA % Recovery
460-00-4	1-Bromo-4-Fluorobenzene	95 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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SAMPLE ID 8909120830 H2O GBR-15 FRACTION 05C TEST CODE 602B NAME Purgeable Aromatics - H2O
Date & Time Collected 09/13/89 Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST INSTRMT	MG B	INJECTD	FILE #	EB092719	VERIFIED	JD
		06/27/89	FACTOR	5 UNITS	ug/L	
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR		
71-43-2	Benzene	33 C	0.50	5		
108-88-3	Toluene	ND	1.5	5		
100-41-4	Ethylbenzene	ND	0.50	5		
108-90-7	Chlorobenzene	ND	0.50	5		
1330-20-7	Total Xylenes	ND	1.0	5		
106-46-7	1,4-Dichlorobenzene	ND	1.0	5		
541-73-1	1,3-Dichlorobenzene	ND	2.0	5		
95-50-1	1,2-Dichlorobenzene	ND	1.0	5		

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 75% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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Results by Sample

Work Order # S9-09-081

SAMPLE ID 8909130915 H2O GBR-240 FRACTION 06A TEST CODE 601 NAME Purgeable Halocarbons H2O

Date & Time Collected 09/13/89 Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST
INSTRMTMG
B

INJECTD 09/27/89

FILE # DB092720
FACTOR 1VERIFIED
UNITS ug/L

JD

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	0.50	1
74-83-9	Bromomethane	ND	1.0	1
75-01-4	Vinyl Chloride	ND	0.20	1
75-00-3	Chloroethane	ND	0.50	1
75-09-2	Methylene Chloride	0.50 C	0.40	1
75-69-4	Trichlorofluoromethane	2.5 C	0.10	1
75-35-4	1,1-Dichloroethene	ND	0.10	1
75-34-3	1,1-Dichloroethane	ND	0.10	1
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.10	1
67-66-3	Chloroform	ND	0.10	1
107-06-2	1,2-Dichloroethane	18 C	0.10	1
71-55-6	1,1,1-Trichloroethane	ND	0.20	1
56-23-5	Carbon Tetrachloride	ND	0.20	1
75-27-4	Bromodichloromethane	ND	0.10	1
78-87-5	1,2-Dichloropropane	ND	0.10	1
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1
79-01-6	Trichloroethene	ND	0.20	1
124-48-1	Dibromochloromethane (3)	ND	0.20	1
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1
75-25-2	Bromoform	ND	2.0	1
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1
127-18-4	Tetrachloroethene (4)	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.50	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1

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SAMPLE ID 8909130915 H2O GBR-240 FRACTION 06A TEST CODE 601 NAME Purgeable Halocarbons H2O

Date & Time Collected 09/13/89

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	NA % Recovery
460-00-4	1-Bromo-4-Fluorobenzene	100 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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FRACTION 06C

TEST CODE 602B

NAME Purgeable Aromatics - H2O

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Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST _____
INSTRMT _____
MG _____
B _____

FILE # EBO92721 VERIFIED JD
FACTOR 1 UNITS ug/L

CAS#	INJECTD 09/27/89	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2		Benzene	12 C	0.10	1
108-88-3		Toluene	2.8 C	0.30	1
100-41-4		Ethylbenzene	18 C	0.10	1
108-90-7		Chlorobenzene	0.47 C	0.10	1
1330-20-7		Total Xylenes	19 C	0.20	1
106-46-7		1,4-Dichlorobenzene	ND	0.20	1
541-73-1		1,3-Dichlorobenzene	ND	0.40	1
95-50-1		1,2-Dichlorobenzene	ND	0.20	1

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 75% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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Results by Sample

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Work Order # S9-09-081

SAMPLE ID 8909131015 H2O

GBR-30

FRACTION 07A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 09/13/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST _____
INSTRMT _____

FILE # DB100114
FACTOR 2

VERIFIED _____
UNITS ug/L

INJECTD 10/01/89

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	1.0	2
74-83-9	Bromomethane	ND	2.0	2
75-01-4	Vinyl Chloride	ND	0.40	2
75-00-3	Chloroethane	ND	1.0	2
75-09-2	Methylene Chloride	ND	0.80	2
75-69-4	Trichlorofluoromethane	0.91 C	0.20	2
75-35-4	1,1-Dichloroethene	ND	0.20	2
75-34-3	1,1-Dichloroethane	0.88 C	0.20	2
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.20	2
67-66-3	Chloroform	ND	0.20	2
107-06-2	1,2-Dichloroethane	9.6 C	0.20	2
71-55-6	1,1,1-Trichloroethane	ND	0.40	2
56-23-5	Carbon Tetrachloride	ND	0.40	2
75-27-4	Bromodichloromethane	ND	0.20	2
78-87-5	1,2-Dichloropropane	ND	0.20	2
10061-01-5	cis-1,3-Dichloropropene	ND	0.80	2
79-01-6	Trichloroethene	ND	0.40	2
124-48-1	Dibromochloromethane (3)	ND	0.40	2
79-00-5	1,1,2-Trichloroethane (3)	ND	0.40	2
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.80	2
110-75-8	2-Chloroethylvinyl Ether	ND	4.0	2
75-25-2	Bromoform	ND	4.0	2
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.40	2
127-18-4	Tetrachloroethene (4)	ND	0.20	2
108-90-7	Chlorobenzene	ND	0.40	2
541-73-1	1,3-Dichlorobenzene	ND	1.0	2
95-50-1	1,2-Dichlorobenzene	ND	0.40	2
106-46-7	1,4-Dichlorobenzene	ND	0.40	2

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SAMPLE ID 8909131015 H2O GBR-30 FRACTION 07A TEST CODE 601 NAME Purgeable Halocarbons H2O
Date & Time Collected 09/13/89 Category _____

SURROGATES

540-36-3	1-4-Difluorobenzene	NA % Recovery
460-00-4	1-Bromo-4-Fluorobenzene	82 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
(2) Quantitated as the Trans-isomer
(3) Dibromochloromethane, 1,1,2-Trichloroethane and
Trans-1,3-dichloropropene co-elute.
(4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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Results by Sample

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SAMPLE ID 8909131015 H2O GBR-30

FRACTION 07C TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected 09/13/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST MG
INSTRMT 5

FILE # D510034 VERIFIED JD
FACTOR 5 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene	0.96 UE	0.50	5
108-88-3	Toluene	4.3 UE	1.5	5
100-41-4	Ethylbenzene	11 UE	0.50	5
108-90-7	Chlorobenzene	2.7 UE	0.50	5
1330-20-7	Total Xylenes	44 UE	1.0	5
106-46-7	1,4-Dichlorobenzene	40 UE	1.0	5
541-73-1	1,3-Dichlorobenzene	17 UE	2.0	5
95-50-1	1,2-Dichlorobenzene	35 UE	1.0	5

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 78% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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 NAME Purgeable Halocarbons H2O
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 Category

Work Order # S9-09-081

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST	MG	INJECTD	09/28/89	FILE #	DB092810	VERIFIED	JD
INSTRMT	B			FACTOR	1	UNITS	ug/L
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR			
74-87-3	Chloromethane	ND	0.50	1			
74-83-9	Bromomethane	ND	1.0	1			
75-01-4	Vinyl Chloride	ND	0.20	1			
75-00-3	Chloroethane	ND	0.50	1			
75-09-2	Methylene Chloride	ND	0.40	1			
75-69-4	Trichlorofluoromethane	2.0 C	0.10	1			
75-35-4	1,1-Dichloroethene	ND	0.10	1			
75-34-3	1,1-Dichloroethane	ND	0.10	1			
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.10	1			
67-66-3	Chloroform	ND	0.10	1			
107-06-2	1,2-Dichloroethane	12 C	0.10	1			
71-55-6	1,1,1-Trichloroethane	0.29 C	0.20	1			
56-23-5	Carbon Tetrachloride	ND	0.20	1			
75-27-4	Bromodichloromethane	ND	0.10	1			
78-87-5	1,2-Dichloropropane	ND	0.10	1			
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1			
79-01-6	Trichloroethene	ND	0.20	1			
124-48-1	Dibromochloromethane (3)	ND	0.20	1			
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1			
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1			
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1			
75-25-2	Bromoform	ND	2.0	1			
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1			
127-18-4	Tetrachloroethene (4)	ND	0.10	1			
108-90-7	Chlorobenzene	ND	0.20	1			
541-73-1	1,3-Dichlorobenzene	ND	0.50	1			
95-50-1	1,2-Dichlorobenzene	ND	0.20	1			
106-46-7	1,4-Dichlorobenzene	ND	0.20	1			

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Results by Sample

Work Order # S9-09-081
Continued From Above

(6BR-14)

SAMPLE ID 8909131030 H2O

6RW-13

FRACTION OBA

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 09/13/89

Category

SURROGATES

540-36-3
460-00-41-4-Difluorobenzene
1-Bromo-4-FluorobenzeneNA % Recovery
102 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
(2) Quantitated as the Trans-isomer
(3) Dibromochloromethane, 1,1,2-Trichloroethane and
Trans-1,3-dichloropropene co-elute.
(4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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Results by Sample

REPORT

Work Order # S9-09-081

(6BR-14)

SAMPLE ID 8909131030 H2O GRW-13

FRACTION OBC

TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected 09/13/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	MG	INSTRMT	B	FILE #	EB092811	VERIFIED	JD
				FACTOR	1	UNITS	ug/L
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR			
71-43-2	Benzene	ND	0.10	1			
108-88-3	Toluene	ND	0.30	1			
100-41-4	Ethylbenzene	ND	0.10	1			
108-90-7	Chlorobenzene	ND	0.10	1			
1330-20-7	Total Xylenes	4.7 C	0.20	1			
106-46-7	1,4-Dichlorobenzene	ND	0.20	1			
541-73-1	1,3-Dichlorobenzene	ND	0.40	1			
95-50-1	1,2-Dichlorobenzene	ND	0.20	1			

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 91% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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Work Order # S9-09-081

Results by Sample

SAMPLE ID REAGENT BLANK H2O

FRACTION 09A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST	MG	FILE #	QB09261	VERIFIED	JD
INSTRMT	B	FACTOR	1	UNITS	ug/L

INJECTD 09/26/89

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	0.50	1
74-83-9	Bromomethane	ND	1.0	1
75-01-4	Vinyl Chloride	ND	0.20	1
75-00-3	Chloroethane	ND	0.50	1
75-09-2	Methylene Chloride	ND	0.40	1
75-69-4	Trichlorofluoromethane	ND	0.10	1
75-35-4	1,1-Dichloroethene	ND	0.10	1
75-34-3	1,1-Dichloroethane	ND	0.10	1
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.10	1
67-66-3	Chloroform	ND	0.10	1
107-06-2	1,2-Dichloroethane	ND	0.10	1
71-55-6	1,1,1-Trichloroethane	ND	0.20	1
56-23-5	Carbon Tetrachloride	ND	0.20	1
75-27-4	Bromodichloromethane	ND	0.10	1
78-87-5	1,2-Dichloropropene	ND	0.10	1
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1
79-01-6	Trichloroethene	ND	0.20	1
124-48-1	Dibromochloromethane (3)	ND	0.20	1
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1
75-25-2	Bromoform	ND	2.0	1
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1
127-18-4	Tetrachloroethene (4)	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.50	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1

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Results by Sample

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Continued From Above

SAMPLE ID REAGENT BLANK H2O

FRACTION 09A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	NA % Recovery
460-00-4	1-Bromo-4-Fluorobenzene	102 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

SAMPLE ID REAGENT BLANK H2O

FRACTION 09B

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST _____
INSTRMT _____

MG
B

INJECTD 09/27/89

FILE # _____
FACTOR _____

QB09271
1

VERIFIED _____
UNITS _____
ug/L

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	0.50	1
74-83-9	Bromomethane	ND	1.0	1
75-01-4	Vinyl Chloride	ND	0.20	1
75-00-3	Chloroethane	ND	0.50	1
75-09-2	Methylene Chloride	ND	0.40	1
75-69-4	Trichlorofluoromethane	ND	0.10	1
75-35-4	1,1-Dichloroethene	ND	0.10	1
75-34-3	1,1-Dichloroethane	ND	0.10	1
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.10	1
67-66-3	Chloroform	ND	0.10	1
107-06-2	1,2-Dichloroethane	ND	0.10	1
71-55-6	1,1,1-Trichloroethane	ND	0.20	1
56-23-5	Carbon Tetrachloride	ND	0.20	1
75-27-4	Bromodichloromethane	ND	0.10	1
78-87-5	1,2-Dichloropropane	ND	0.10	1
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1
79-01-6	Trichloroethene	ND	0.20	1
124-48-1	Dibromochloromethane (3)	ND	0.20	1
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1
75-25-2	Bromoform	ND	2.0	1
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1
127-18-4	Tetrachloroethene (4)	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.50	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1

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SAMPLE ID REAGENT BLANK H2O

FRACTION 09B

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

SURROGATES

540-36-3

1-4-Difluorobenzene

460-00-4

1-Bromo-4-Fluorobenzene

NA % Recovery

104 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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Results by Sample
REPORT
Work Order # S9-09-081
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TEST CODE 601
NAME Purgeable Halocarbons H2O
Date & Time Collected not specified
Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST	MC	FILE #	GB09281	VERIFIED	JD
INSTRMT	B	FACTOR	1	UNITS	ug/L
		INJECTD	09/28/89		
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR	
74-87-3	Chloromethane	ND	0.50	1	
74-83-9	Bromomethane	ND	1.0	1	
75-01-4	Vinyl Chloride	ND	0.20	1	
75-00-3	Chloroethane	ND	0.50	1	
75-09-2	Methylene Chloride	ND	0.40	1	
75-69-4	Trichlorofluoromethane	ND	0.10	1	
75-35-4	1,1-Dichloroethene	ND	0.10	1	
75-34-3	1,1-Dichloroethane	ND	0.10	1	
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.10	1	
67-66-3	Chloroform	ND	0.10	1	
107-06-2	1,2-Dichloroethane	ND	0.10	1	
71-55-6	1,1,1-Trichloroethane	ND	0.20	1	
56-23-5	Carbon Tetrachloride	ND	0.20	1	
75-27-4	Bromodichloromethane	ND	0.10	1	
78-87-5	1,2-Dichloropropane	ND	0.10	1	
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1	
79-01-6	Trichloroethene	ND	0.20	1	
124-48-1	Dibromochloromethane (3)	ND	0.20	1	
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1	
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1	
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1	
75-25-2	Bromoform	ND	2.0	1	
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1	
127-18-4	Tetrachloroethene (4)	ND	0.10	1	
108-90-7	Chlorobenzene	ND	0.20	1	
541-73-1	1,3-Dichlorobenzene	ND	0.50	1	
95-50-1	1,2-Dichlorobenzene	ND	0.20	1	
106-46-7	1,4-Dichlorobenzene	ND	0.20	1	

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SAMPLE ID REAGENT BLANK H2O

FRACTION 09C

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

SURROGATES

540-36-3

1-4-Difluorobenzene

460-00-4

1-Bromo-4-Fluorobenzene

NA % Recovery

89 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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Results by Sample

SAMPLE ID REAGENT BLANK H2O

FRACTION 09D

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST INSTRMT	MG B	INJECTD 10/01/89	COMPOUND	FILE # QB10016		VERIFIED		JD
				FACTOR	1	UNITS	uq/L	
CAS#				RESULT	DET LIMIT	FACTOR		
74-87-3			Chloromethane	ND	0.50	1		
74-83-9			Bromomethane	ND	1.0	1		
75-01-4			Vinyl Chloride	ND	0.20	1		
75-00-3			Chloroethane	ND	0.50	1		
75-09-2			Methylene Chloride	ND	0.40	1		
75-69-4			Trichlorofluoromethane	ND	0.10	1		
75-35-4			1,1-Dichloroethene	ND	0.10	1		
75-34-3			1,1-Dichloroethane	ND	0.10	1		
540-59-0			Total 1,2-Dichloroethene (2)	ND	0.10	1		
67-66-3			Chloroform	ND	0.10	1		
107-06-2			1,2-Dichloroethane	ND	0.10	1		
71-55-6			1,1,1-Trichloroethane	ND	0.20	1		
56-23-5			Carbon Tetrachloride	ND	0.20	1		
75-27-4			Bromodichloromethane	ND	0.10	1		
78-87-5			1,2-Dichloropropane	ND	0.10	1		
10061-01-5			cis-1,3-Dichloropropene	ND	0.40	1		
79-01-6			Trichloroethene	ND	0.20	1		
124-48-1			Dibromochloromethane (3)	ND	0.20	1		
79-00-5			1,1,2-Trichloroethane (3)	ND	0.20	1		
10061-02-6			trans-1,3-Dichloropropene (3)	ND	0.40	1		
110-75-8			2-Chloroethylvinyl Ether	ND	2.0	1		
75-25-2			Bromoform	ND	2.0	1		
79-34-5			1,1,2,2-Tetrachloroethane (4)	ND	0.20	1		
127-18-4			Tetrachloroethene (4)	ND	0.10	1		
108-90-7			Chlorobenzene	ND	0.20	1		
541-73-1			1,3-Dichlorobenzene	ND	0.50	1		
95-50-1			1,2-Dichlorobenzene	ND	0.20	1		
106-46-7			1,4-Dichlorobenzene	ND	0.20	1		

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Results by Sample

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SAMPLE ID REAGENT BLANK H2O

FRACTION 09D

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	NA % Recovery
460-00-4	1-Bromo-4-Fluorobenzene	113 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

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Work Order # S9-09-081

Results by Sample

SAMPLE ID REAGENT BLANK H2O

FRACTION 10A

TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST _____ MG
INSTRMT _____ B

INJECTD 09/26/89 FILE # RB09261 VERIFIED _____ JD
FACTOR 1 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene	ND	0.10	1
108-88-3	Toluene	ND	0.30	1
100-41-4	Ethylbenzene	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.10	1
1330-20-7	Total Xylenes	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.40	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 92% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions



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Results by Sample

SAMPLE ID REAGENT BLANK H2O

FRACTION 10B

TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST INSTRMT	MG B	INJECTD 09/27/89	FILE # FACTOR	RBO9271 1 UNITS	VERIFIED ug/L	JD
CAS#		COMPOUND	RESULT	DET LIMIT	FACTOR	
71-43-2		Benzene	ND	0.10	1	
108-88-3		Toluene	ND	0.30	1	
100-41-4		Ethylbenzene	ND	0.10	1	
108-90-7		Chlorobenzene	ND	0.10	1	
1330-20-7		Total Xylenes	ND	0.20	1	
106-46-7		1,4-Dichlorobenzene	ND	0.20	1	
541-73-1		1,3-Dichlorobenzene	ND	0.40	1	
95-50-1		1,2-Dichlorobenzene	ND	0.20	1	

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 96% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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Results by Sample

Work Order # S9-09-081

SAMPLE ID REAGENT BLANK H2O

FRACTION 10C

TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	MG	INJECTD	FILE #	VERIFIED	JD
INSTRMT	B	09/28/89	RB09281	ug/L	
			FACTOR	1 UNITS	
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR	
71-43-2	Benzene	ND	0.10	1	
108-88-3	Toluene	ND	0.30	1	
100-41-4	Ethylbenzene	ND	0.10	1	
108-90-7	Chlorobenzene	ND	0.10	1	
1330-20-7	Total Xylenes	ND	0.20	1	
106-46-7	1,4-Dichlorobenzene	ND	0.20	1	
541-73-1	1,3-Dichlorobenzene	ND	0.40	1	
95-50-1	1,2-Dichlorobenzene	ND	0.20	1	

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 493 Q% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions



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Results by Sample

SAMPLE ID REAGENT BLANK H2O

FRACTION 10C

TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST _____ MG
INSTRMT _____ B

INJECTD 09/28/89

FILE # _____
FACTOR _____

RBO9281
1 UNITS

VERIFIED _____
ug/L

JD

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene	ND	0.10	1
108-88-3	Toluene	ND	0.30	1
100-41-4	Ethylbenzene	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.10	1
1330-20-7	Total Xylenes	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.40	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 493 % recovery

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Results by Sample

SAMPLE ID REAGENT BLANK H2O

FRACTION 10D

TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	MQ	FILE #	RB10016	VERIFIED	JD
INSTRMT	B	INJECTD 10/01/89	FACTOR	1 UNITS	ug/L
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR	
71-43-2	Benzene	ND	0.10	1	
108-88-3	Toluene	ND	0.30	1	
100-41-4	Ethylbenzene	ND	0.10	1	
108-90-7	Chlorobenzene	ND	0.10	1	
1330-20-7	Total Xylenes	ND	0.20	1	
106-46-7	1,4-Dichlorobenzene	ND	0.20	1	
541-73-1	1,3-Dichlorobenzene	ND	0.40	1	
95-50-1	1,2-Dichlorobenzene	ND	0.20	1	

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 113% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

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Results by Sample

Work Order # S9-09-081

SAMPLE ID REAGENT BLANK H2O

FRACTION 10E

TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST INSTRMT	MG	INJECTD	FILE #	R510031	VERIFIED	JD
	5	10/03/89	FACTOR	1 UNITS	ug/L	
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR		
71-43-2	Benzene	ND	0.10	1		
108-88-3	Toluene	ND	0.30	1		
100-41-4	Ethylbenzene	ND	0.10	1		
108-90-7	Chlorobenzene	ND	0.10	1		
1330-20-7	Total Xylenes	ND	0.20	1		
106-46-7	1,4-Dichlorobenzene	ND	0.20	1		
541-73-1	1,3-Dichlorobenzene	ND	0.40	1		
95-50-1	1,2-Dichlorobenzene	ND	0.20	1		

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 86% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

Analytical Data Summary

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Geoscience Consultants, Ltd.
 Radian Work Order: 89-09-111

Method: PAHs by MPLC (1)	GBR-13	GBR-8	GBR-6	GBR-33	GBR-15	GBR-240
List:						
Sample ID:	8909121550	8909121615	8909121650	8909121750	8909130830	8909130915
Factors:	94	95	24	9	1	1
Results in:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	01A	02A	03A	04A	05A	06A
Matrix:	water	water	water	water	water	water
Acenaphthalene	<220	<220	<55	<21	<2.3	<2.3
Acenaphthene	<170	<170	580	<16	<1.8	<1.8
Anthracene	<62	<63	<16	<5.9	<0.66	<0.66
Benzo(a)anthracene	<1.2	<1.2	<0.31	<0.12	<0.013	<0.013
Benzo(a)pyrene	<2.2	<2.2	<0.55	<0.21	<0.023	<0.023
Benzo(b)fluoranthene	<1.7	<1.7	<0.43	<0.16	<0.018	<0.018
Benzo(g,h,i)perylene	<7.1	<7.2	<1.8	<0.68	<0.076	<0.076
Benzo(k)fluoranthene	<1.6	<1.6	<0.41	<0.15	<0.017	<0.017
Chrysene	<1.2	<1.2	<0.31	<0.12	<0.013	<0.013
Dibenzo(a,h)anthracene	<2.8	<2.9	<0.72	<0.27	<0.030	<0.030
Fluoranthene	830	<20	<5.0	<1.9	<0.21	<0.21
Fluorene	<20	<20	57	6*	<0.21	4.6
Indeno(1,2,3-cd)pyrene	<4.0	<4.1	<1.0	<0.39	<0.043	<0.043
Naphthalene	330*	420*	120*	16*	<1.8	<1.8
Phenanthrene	<60	320	25*	<5.8	<0.64	7.4
Pyrene	<25	59*	<6.5	<2.4	<0.27	<0.27
Surrogate Recovery(%)						
Terphenyl-d14	NC	NC	NC	PC	122	110
Control Limits: 37 to 139						

* Est. result less than 5 times detection limit

NC Not calculated

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
Radfan Work Order: 89-09-111

Method: PAHs by HPLC (1)

Lists:	GBR-30	GRW-13	GBR-31	GBR-17	Influent	Effluent
Sample ID:	8909131015	8909131030	8909131145	8909131230	8909131300	8909131330
Factor:	24	1	1	1	24	10
Results in:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	07A	08A	09A	10A	11A	12A
Matrix:	water	water	water	water	water	water
Acenaphthalene	<55	<2.3	<2.3	<2.3	<55	<23
Acenaphthene	<43	<1.8	<1.8	<1.8	<43	<18
Anthracene	<16	<0.66	<0.66	<0.66	<16	<6.6
Benzo(a)anthracene	<0.31	<0.013	<0.013	<0.013	<0.31	<0.13
Benzo(a)pyrene	<0.55	<0.023	<0.023	<0.023	<0.55	<0.23
Benzo(b)fluoranthene	<0.43	<0.018	<0.018	<0.018	<0.43	<0.18
Benzo(g,h,i)perylene	<1.8	<0.076	<0.076	<0.076	<1.8	<0.76
Benzo(k)fluoranthene	<0.41	<0.017	<0.017	<0.017	<0.41	<0.17
Chrysene	<0.31	<0.013	<0.013	<0.013	<0.31	<0.13
Dibenzo(a,h)anthracene	<0.72	<0.030	<0.030	<0.030	<0.72	<0.30
Fluoranthene	<5.0	<0.21	<0.21	<0.21	<5.0	<2.1
Fluorene	11*	<0.21	<0.21	<0.21	9.4*	9.5*
Indeno(1,2,3-cd)pyrene	<1.0	<0.043	<0.043	<0.043	<1.0	<0.43
Naphthalene	<43	<1.8	<1.8	<1.8	<43	<18
Phenanthrene	<15	<0.64	<0.64	<0.64	<15	<6.4
Pyrene	<6.5	<0.27	<0.27	<0.27	<6.5	<2.7
<u>Surrogate Recovery(%)</u>						
Terphenyl-d14	NC	128	129	114	NC	130
Control Limits: 37 to 139						

* Est. result less than 5 times detection limit

NC Not calculated

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
Kadian Work Order: 89-09-111

Method: PAHs by HPLC (1)

List:

Sample ID: REAGENT BLANK

Factors: 1

Results in: ug/L

13A

Matrix: water

Acenaphthalene	<2.3
Acenaphthene	<1.8
Anthracene	<0.66
Benzo(a)anthracene	<0.013
Benzo(a)pyrene	<0.023
Benzo(b)fluoranthene	<0.018
Benzo(g,h,i)perylene	<0.076
Benzo(k)fluoranthene	<0.017
Chrysene	<0.013
Dibenzo(a,h)anthracene	<0.030
Fluoranthene	<0.21
Fluorene	<0.21
Indeno(1,2,3-cd)pyrene	<0.043
Naphthalene	<1.8
Phenanthrene	<0.64
Pyrene	<0.27

Surrogate Recovery(%)

Terphenyl-d14 126

Control Limits: 37 to 139

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

Geoscience Consultants, Ltd.
Radian Work Order: 89-09-111

Method: SW8310 PAH's by HPLC (1)

List:

Sample ID:	RECOVERY CHECK	RECOVERY CHECK
		DUP
Factor:	1	1
Results in:	%	%
	14A	15A
Matrix:	water	water

Acenaphthalene	68	72
Acenaphthene	68	71
Anthracene	66	69
Benzo(k)fluoranthene	25	26
Dibenzo(a,h)anthracene	50	52
Fluorene	69	72
Naphthalene	78	82
Phenanthrene	67	69

Surrogate Recovery(%)

Terphenyl-d14	129	133
Control Limits: 37 to 139		

(1) For a detailed description of flags and technical terms in this report refer to Appendix A in this report.

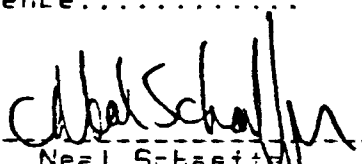


2506 West Main Street
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Tel. (505) 326-4737

CLIENT: Geoscience Consultants, Ltd DATE REPORTED: 09/27/89
SAMPLE: 8909121615
SITE: G2R-8 DATE RECEIVED: 09/13/89
LAB NO: F3153 DATE COLLECTED: 09/13/89

Lab pH.....	7.46
Lab Conductivity, $\mu\text{mhos/cm}$	6422
Lab resistivity, ohm-m	2.2614
Total Dissolved Solids (180), mg/l ..	2556
Total Dissolved Solids (calc), mg/l ..	2727
Total Alkalinity as CaCO_3 , mg/l	1298.29
Total Acidity as CaCO_3 , mg/l	0.00
Total Hardness as CaCO_3 , mg/l	700.56
Sodium Absorption Ratio.....	17.94

	mg/l	meq/l
Bicarbonate as HCO_3	1583.91	25.97
Carbonate as CO_3	0.00	0.00
Chloride.....	485.68	13.70
Sulfate.....	419.73	8.74
Calcium.....	210.55	10.51
Magnesium.....	42.62	3.50
Potassium.....	1.64	0.04
Sodium.....	787.60	34.26
Major Cations.....		48.31
Major Anions.....		48.41
Cation/Anion Difference.....		0.10 %


C. Neal Schaeffer
Senior Chemist



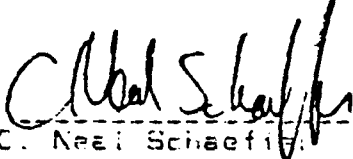
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CLIENT: Geoscience Consultants, Ltd DATE REPORTED: 09/27/89
SAMPLE: 2909121550
SITE: CSR13 DATE RECEIVED: 09/13/89
LAB NO: FB154 DATE COLLECTED: 09/12/89

Lab pH.....	7.53
Lab Conductivity, $\mu\text{mhos/cm}$	5384
Lab resistivity, Ωcm	1.8574
Total Dissolved Solids (TDS), mg/l.....	4084
Total Dissolved Solids (calc), mg/l.....	3962
Total Alkalinity as CaCO_3 , mg/l.....	674.42
Total Acidity as CaCO_3 , mg/l.....	0.00
Total Hardness as CaCO_3 , mg/l.....	1436.42
Sodium Absorption Ratio.....	2.06

	mg/l	meq/l
Bicarbonate as HCO_3	835.23	13.53
Carbonate as CO_3	0.00	0.00
Chloride.....	404.62	17.06
Sulfate.....	1612.26	33.59
Calcium.....	551.64	27.53
Magnesium.....	14.60	1.20
Potassium.....	2.64	0.07
Sodium.....	770.80	33.53
Major Cations.....		62.32
Major Anions.....		64.17
Cation/Anion Difference.....		1.46 %


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Senior Chemist



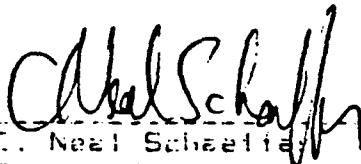
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CLIENT: Geoscience Consultants, Ltd. DATE REPORTED: 09/27/89
SAMPLE: 8909121682
SITE: 03874 DATE RECEIVED: 09/13/89
LAB NO: F3155 DATE COLLECTED: 09/12/89

Lab pH.....	7.53
Lab Conductivity, umhos/cm.....	4368
Lab resistivity, ohm-cm.....	2.4582
Total Dissolved Solids (TDS), mg/l.....	2794
Total Dissolved Solids (calc), mg/l.....	2879
Total Alkalinity as CaCO ₃ , mg/l.....	1265.56
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1340.80
Sodium Absorption Ratio.....	4.15

	mg/l	meq/l
Bicarbonate as HCO ₃	1543.95	25.71
Carbonate as CO ₃	0.00	0.00
Chloride.....	267.44	8.01
Sulfate.....	842.75	17.56
Calcium.....	383.20	19.12
Magnesium.....	98.43	8.09
Potassium.....	3.44	0.09
Sodium.....	524.40	22.81
Major Cations.....		50.11
Major Anions.....		53.98
Cation/Anion Difference.....		0.25 %


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CLIENT: Geoscience Consultants, Ltd DATE REPORTED: 09/27/89
SAMPLE: 8909121750
SITE: 08R33 DATE RECEIVED: 09/13/89
LAB NO: F3156 DATE COLLECTED: 09/12/89

Lab pH	7.18
Lab Conductivity, umhos/cm	4105
Lab resistivity, ohm-cm	14361
Total Dissolved Solids (TDS), mg/l	2856
Total Dissolved Solids (calc), mg/l	2891
Total Alkalinity as CaCO ₃ , mg/l	548.05
Total Acidity as CaCO ₃ , mg/l	0.00
Total Hardness as CaCO ₃ , mg/l	1078.56
Sodium Absorption Ratio	7.89

	mg/l	meq/l
Bicarbonate as HCO ₃	455.05	10.85
Carbonate as CO ₃	0.00	0.00
Chloride	505.50	14.26
Sulfate	1048.50	21.84
Calcium	391.62	19.54
Magnesium	24.67	2.03
Potassium	1.40	0.04
Sodium	595.60	25.91
Major Cations		47.51
Major Anions		46.90
Cation/Anion Difference		0.65 %

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Senior Chemist



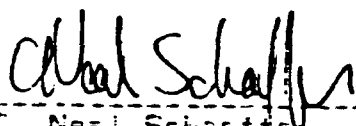
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CLIENT: Geoscience Consultants, Ltd DATE REPORTED: 09/27/89
SAMPLE: 8929130830
SITE: 33R15 DATE RECEIVED: 09/13/89
LAB NO: F3157 DATE COLLECTED: 09/13/89

Lab pH.....	7.19
Lab Conductivity, umhos/cm.....	4641
Lab Resistivity, ohmm.....	0.1067
Total Dissolved Solids (TDS), mg/l.....	3678
Total Dissolved Solids (calc), mg/l.....	3629
Total Alkalinity as CaCO ₃ , mg/l.....	185.47
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	185.47
Sodium Absorption Ratio.....	9.10

	mg/l	meq/l
Bicarbonate as HCO ₃	226.27	3.71
Carbonate as CO ₃	0.00	0.00
Chloride.....	267.62	7.55
Sulfate.....	2578.47	43.14
Calcium.....	482.68	22.59
Magnesium.....	7.24	0.60
Potassium.....	5.72	0.17
Sodium.....	712.40	30.97
Major Cations.....		54.34
Major Anions.....		54.40
Cation/Anion Difference.....		0.06 %


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Senior Chemist

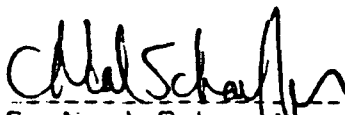
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CLIENT: Geoscience Consultants, Ltd DATE REPORTED: 09/27/89
SAMPLE: 89D9130915
SITE: GBR 24D DATE RECEIVED: 09/13/89
LAB NO: F3158 DATE COLLECTED: 09/13/89

Lab pH.....	8.21
Lab Conductivity, umhos/cm.....	4629
Lab resistivity, ohm-m.....	2.1603
Total Dissolved Solids (180), mg/l..	3666
Total Dissolved Solids (calc), mg/l.	3527
Total Alkalinity as CaCO ₃ , mg/l.....	229.11
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1483.36
Sodium Absorption Ratio.....	5.38

	mg/l	meq/l
Bicarbonate as HCO ₃	279.51	4.59
Carbonate as CO ₃	0.00	0.00
Chloride.....	545.15	15.38
Sulfate.....	1692.09	35.25
Calcium.....	585.33	29.21
Magnesium.....	54.22	4.46
Potassium.....	5.16	0.13
Sodium.....	507.20	22.06
Major Cations.....		55.86
Major Anions.....		55.21
Cation/Anion Difference.....		0.58 %


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Senior Chemist



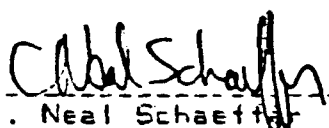
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CLIENT: Geoscience Consultants, Ltd DATE REPORTED: 09/27/89
SAMPLE: 89D9131015
SITE: GBR 30 DATE RECEIVED: 09/13/89
LAB NO: F3159 DATE COLLECTED: 09/13/89

Lab pH.....	7.78
Lab Conductivity, umhos/cm.....	3957
Lab resistivity, ohm-m.....	2.6114
Total Dissolved Solids (180), mg/l..	2314
Total Dissolved Solids (calc), mg/l.	2318
Total Alkalinity as CaCO ₃ , mg/l.....	512.77
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	531.60
Sodium Absorption Ratio.....	7.11

	mg/l	meq/l
Bicarbonate as HCO ₃	625.58	10.26
Carbonate as CO ₃	0.00	0.00
Chloride.....	386.56	10.90
Sulfate.....	819.71	17.08
Calcium.....	326.35	16.29
Magnesium.....	4.22	0.35
Potassium.....	1.96	0.05
Sodium.....	471.60	20.51
Major Cations.....		37.20
Major Anions.....		38.24
Cation/Anion Difference.....		1.36 %


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Senior Chemist



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CLIENT: Geoscience Consultants, Ltd DATE REPORTED: 09/27/89
SAMPLE: B9D9131030
SITE: GRW-13 DATE RECEIVED: 09/13/89
LAB NO: F3160 DATE COLLECTED: 09/13/89

Lab pH.....	8.10
Lab Conductivity, umhos/cm.....	4506
Lab resistivity, ohm-cm.....	2.2193
Total Dissolved Solids (100), mg/l..	3154
Total Dissolved Solids (calc), mg/l.	3133
Total Alkalinity as CaCO ₃ , mg/l.....	360.03
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1209.60
Sodium Absorption Ratio.....	7.43

	mg/l	meq/l
Bicarbonate as HCO ₃	439.24	7.20
Carbonate as CO ₃	0.00	0.00
Chloride.....	644.27	18.17
Sulfate.....	1203.23	25.07
Calcium.....	444.26	22.17
Magnesium.....	24.60	2.02
Potassium.....	5.84	0.15
Sodium.....	594.40	25.85
Major Cations.....		50.20
Major Anions.....		50.44
Cation/Anion Difference.....		0.24 %


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CLIENT: Geoscience Consultants, Ltd DATE REPORTED: 09/27/89
SAMPLE: B909131145
SITE: GER-31 DATE RECEIVED: 09/13/89
LAB NO: F3161 DATE COLLECTED: 09/13/89

Lab pH.....	7.31
Lab Conductivity, umhos/cm.....	4958
Lab resistivity, ohm-m.....	2.0169
Total Dissolved Solids (180), mg/l..	3654
Total Dissolved Solids (calc), mg/l.	3590
Total Alkalinity as CaCO ₃ , mg/l.....	370.94
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1421.28
Sodium Absorption Ratio.....	7.49

	mg/l	meq/l
Bicarbonate as HCO ₃	452.55	7.42
Carbonate as CO ₃	0.00	0.00
Chloride.....	584.80	16.50
Sulfate.....	1578.51	32.89
Calcium.....	526.38	26.27
Magnesium.....	26.26	2.16
Potassium.....	2.20	0.06
Sodium.....	649.60	28.26
Major Cations.....		56.74
Major Anions.....		56.80
Cation/Anion Difference.....		0.06 %


C. Neal Schaeffer
Senior Chemist

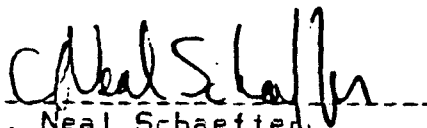


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CLIENT: Geoscience Consultants, Ltd DATE REPORTED: 09/27/89
SAMPLE: 8909131230
SITE: GBR-17 DATE RECEIVED: 09/13/89
LAB NO: F3162 DATE COLLECTED: 09/13/89

Lab pH.....	8.05
Lab Conductivity, umhos/cm.....	2984
Lab resistivity, ohm-m.....	3.3512
Total Dissolved Solids (180), mg/l..	2300
Total Dissolved Solids (calc), mg/l.	2280
Total Alkalinity as CaCO ₃ , mg/l.....	218.20
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	927.36
Sodium Absorption Ratio.....	4.96

	mg/l	meq/l
Bicarbonate as HCO ₃	266.20	4.36
Carbonate as CO ₃	0.00	0.00
Chloride.....	99.12	2.80
Sulfate.....	1334.91	27.81
Calcium.....	357.93	17.86
Magnesium.....	8.34	0.69
Potassium.....	1.36	0.03
Sodium.....	347.20	15.10
Major Cations.....		33.68
Major Anions.....		34.97
Cation/Anion Difference.....		1.87 %


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Senior Chemist



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CLIENT: Geoscience Consultants, Ltd DATE REPORTED: 09/27/89
SAMPLE: 8909131300
SITE: Influent DATE RECEIVED: 09/13/89
LAB NO: F3163 DATE COLLECTED: 09/13/89

Lab pH.....	8.11
Lab Conductivity, umhos/cm.....	4544
Lab resistivity, ohm-m.....	2.2007
Total Dissolved Solids (180), mg/l..	3138
Total Dissolved Solids (calc), mg/l.	2887
Total Alkalinity as CaCO ₃ , mg/l.....	414.58
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1079.97
Sodium Absorption Ratio.....	7.76

	mg/l	meq/l
Bicarbonate as HCO ₃	505.79	8.29
Carbonate as CO ₃	0.00	0.00
Chloride.....	572.48	16.15
Sulfate.....	1060.85	22.10
Calcium.....	385.31	19.23
Magnesium.....	28.85	2.37
Potassium.....	4.52	0.12
Sodium.....	586.00	25.49
Major Cations.....		47.20
Major Anions.....		46.54
Cation/Anion Difference.....		0.71 %


C. Neal Schaeffer
Senior Chemist

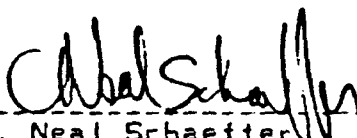


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CLIENT: Geoscience Consultants, Ltd DATE REPORTED: 09/27/89
SAMPLE: B9D913133D
SITE: Effluent DATE RECEIVED: 09/13/89
LAB NO: F3164 DATE COLLECTED: 09/13/89

Lab pH.....	8.19
Lab Conductivity, umhos/cm.....	4519
Lab resistivity, ohm-m.....	2.2129
Total Dissolved Solids (180), mg/l..	3096
Total Dissolved Solids (calc), mg/l.	3077
Total Alkalinity as CaCO ₃ , mg/l.....	567.32
Total Acidity as CaCO ₃ , mg/l.....	0.00
Total Hardness as CaCO ₃ , mg/l.....	1128.96
Sodium Absorption Ratio.....	8.52

	mg/l	meq/l
Bicarbonate as HCO ₃	692.13	11.35
Carbonate as CO ₃	0.00	0.00
Chloride.....	564.97	15.94
Sulfate.....	1088.01	22.67
Calcium.....	372.67	18.60
Magnesium.....	48.43	3.98
Potassium.....	4.32	0.11
Sodium.....	658.00	28.62
Major Cations.....		51.31
Major Anions.....		49.95
Cation/Anion Difference.....		1.34 %


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Senior Chemist

Received: 09/08/89

RAS Sacramento

REPORT

Work Order # S9-09-049

(602-42)

Results by Sample

SAMPLE ID 8909071330 H2O

62W-2

FRACTION 07A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 09/07/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST _____
INSTRMT _____

INJECTD 09/21/89

FILE # DB09214
FACTOR 1

VERIFIED _____
UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	0.50	1
74-83-9	Bromomethane	ND	1.0	1
75-01-4	Vinyl Chloride	ND	0.20	1
75-00-3	Chloroethane	ND	0.50	1
75-09-2	Methylene Chloride	ND	0.40	1
75-69-4	Trichlorofluoromethane	1.4 C	0.10	1
75-35-4	1,1-Dichloroethene	ND	0.10	1
75-34-3	1,1-Dichloroethane	ND	0.10	1
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.10	1
67-66-3	Chloroform	ND	0.10	1
107-06-2	1,2-Dichloroethane	0.36 C	0.10	1
71-55-6	1,1,1-Trichloroethane	ND	0.20	1
56-23-5	Carbon Tetrachloride	ND	0.20	1
75-27-4	Bromodichloromethane	ND	0.10	1
78-87-5	1,2-Dichloropropane	ND	0.10	1
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1
79-01-6	Trichloroethene	ND	0.20	1
124-48-1	Dibromochloromethane (3)	ND	0.20	1
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1
75-25-2	Bromoform	ND	2.0	1
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1
127-18-4	Tetrachloroethane (4)	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.50	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1

Received: 09/08/89

RAS Sacramento

REPORT

Results by Sample

Work Order # S9-09-049
Continued From Above

(6BR-42)

SAMPLE ID 8909071330 H2O

6RW-2

FRACTION 07A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected 09/07/89

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	NA % Recovery
460-00-4	1-Bromo-4-Fluorobenzene	81 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

(GBR-42)

SAMPLE ID 8909071330 H2O

GRW-2

FRACTION 07C

TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected 09/07/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	MG	INSTRMT	B	INJECTD 09/21/89	FILE #	ES09215	VERIFIED	JD
					FACTOR	1	ug/L	
	CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR			
	71-43-2	Benzene	0.26 C	0.10	1			
	108-88-3	Toluene	ND	0.30	1			
	100-41-4	Ethylbenzene	1.6 C	0.10	1			
	108-90-7	Chlorobenzene	ND	0.10	1			
	1330-20-7	Total Xylenes	0.23 C	0.20	1			
	106-46-7	1,4-Dichlorobenzene	ND	0.20	1			
	541-73-1	1,3-Dichlorobenzene	ND	0.40	1			
	95-50-1	1,2-Dichlorobenzene	ND	0.20	1			

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 86% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

Page 29
Received: 09/08/89

RAS Sacramento

REPORT

Work Order # S9-09-049

Results by Sample

SAMPLE ID REAGENT BLANK H2O

FRACTION 08A

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST _____
INSTRMT _____

INJECTD 09/19/89

FILE # Q807191
FACTOR 1

VERIFIED JD
UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	0.50	1
74-83-9	Bromomethane	ND	1.0	1
75-01-4	Vinyl Chloride	ND	0.20	1
75-00-3	Chloroethane	ND	0.50	1
75-09-2	Methylene Chloride	ND	0.40	1
75-69-4	Trichlorofluoromethane	ND	0.10	1
75-35-4	1,1-Dichloroethene	ND	0.10	1
75-34-3	1,1-Dichloroethane	ND	0.10	1
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.10	1
67-66-3	Chloroform	ND	0.10	1
107-06-2	1,2-Dichloroethane	ND	0.10	1
71-55-6	1,1,1-Trichloroethane	ND	0.20	1
56-23-5	Carbon Tetrachloride	ND	0.20	1
75-27-4	Bromodichloromethane	ND	0.10	1
78-87-5	1,2-Dichloropropane	ND	0.10	1
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1
79-01-6	Trichloroethene	ND	0.20	1
124-48-1	Dibromochloromethane (3)	ND	0.20	1
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1
10051-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1
75-25-2	Bromoform	ND	2.0	1
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1
127-18-4	Tetrachloroethane (4)	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.50	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1

Received: 09/08/89

RAS Sacramento

REPORT

Results by Sample

Work Order # S9-09-049

Continued From Above

SAMPLE ID REAGENT BLANK H2O

FRACTION OBA

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	NA	% Recovery
460-00-4	1-Bromo-4-Fluorobenzene	121	% Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

Received: 09/08/87

RAS Sacramento

REPORT

Results by Sample

Work Order # S9-09-049

SAMPLE ID REAGENT BLANK H2O

FRACTION 08B

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST INSTRMT MQ B FILE # QB07204 VERIFIED JD UNITS ug/L

INJECTD 09/20/89

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	0.50	1
74-83-9	Bromomethane	ND	1.0	1
75-01-4	Vinyl Chloride	ND	0.20	1
75-00-3	Chloroethane	ND	0.50	1
75-09-2	Methylene Chloride	ND	0.40	1
75-69-4	Trichlorofluoromethane	ND	0.10	1
75-35-4	1,1-Dichloroethene	ND	0.10	1
75-34-3	1,1-Dichloroethane	ND	0.10	1
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.10	1
67-66-3	Chloroform	ND	0.10	1
107-06-2	1,2-Dichloroethane	ND	0.10	1
71-55-6	1,1,1-Trichloroethane	ND	0.20	1
56-23-5	Carbon Tetrachloride	ND	0.20	1
75-27-4	Bromodichloromethane	ND	0.10	1
78-87-5	1,2-Dichloropropane	ND	0.10	1
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1
79-01-6	Trichloroethene	ND	0.20	1
124-48-1	Dibromochloromethane (3)	ND	0.20	1
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1
75-25-2	Bromoform	ND	2.0	1
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1
127-18-4	Tetrachloroethene (4)	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.50	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1



Page 32

Received: 09/08/89

RAS Sacramento

REPORT

Work Order # S9-09-049

Results by Sample

Continued From Above

SAMPLE ID REAGENT BLANK H2O

FRACTION 088

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	<u>NA</u> % Recovery
460 00-4	1-Bromo-4-Fluorobenzene	<u>99</u> % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethane co-elute.

Received: 09/08/89

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REPORT

Results by Sample

Work Order # S9-09-049

SAMPLE ID REAGENT BLANK H2O

FRACTION OBC

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE HALOCARBONS (1)

ANALYST _____
INSTRMT _____

FILE # _____
FACTORS _____

VERIFIED _____
UNITS _____

INJECTD 09/21/89

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
74-87-3	Chloromethane	ND	0.50	1
74-83-9	Bromomethane	ND	1.0	1
75-01-4	Vinyl Chloride	ND	0.20	1
75-00-3	Chloroethane	ND	0.50	1
75-09-2	Methylene Chloride	ND	0.40	1
75-69-4	Trichlorofluoromethane	ND	0.10	1
75-35-4	1,1-Dichloroethene	ND	0.10	1
75-34-3	1,1-Dichloroethane	ND	0.10	1
540-59-0	Total 1,2-Dichloroethene (2)	ND	0.10	1
67-66-3	Chloroform	ND	0.10	1
107-06-2	1,2-Dichloroethane	ND	0.10	1
71-55-6	1,1,1-Trichloroethane	ND	0.20	1
56-23-5	Carbon Tetrachloride	ND	0.20	1
75-27-4	Bromodichloromethane	ND	0.10	1
78-87-5	1,2-Dichloropropane	ND	0.10	1
10061-01-5	cis-1,3-Dichloropropene	ND	0.40	1
79-01-6	Trichloroethene	ND	0.20	1
124-48-1	Dibromochloromethane (3)	ND	0.20	1
79-00-5	1,1,2-Trichloroethane (3)	ND	0.20	1
10061-02-6	trans-1,3-Dichloropropene (3)	ND	0.40	1
110-75-8	2-Chloroethylvinyl Ether	ND	2.0	1
75-25-2	Bromoform	ND	2.0	1
79-34-5	1,1,2,2-Tetrachloroethane (4)	ND	0.20	1
127-18-4	Tetrachloroethene (4)	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.50	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1

Received: 09/08/89

RAS Sacramento

REPORT

Results by Sample

Work Order # S9-09-049
Continued From Above

SAMPLE ID REAGENT BLANK H2O

FRACTION OBC

TEST CODE 601

NAME Purgeable Halocarbons H2O

Date & Time Collected not specified

Category

SURROGATES

540-36-3	1-4-Difluorobenzene	NA % Recovery
460-00-4	1-Bromo-4-Fluorobenzene	82 % Recovery

- (1) See Appendix A for Glossary of Report and Data Flag Definitions
- (2) Quantitated as the Trans-isomer
- (3) Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-dichloropropene co-elute.
- (4) 1,1,2,2-Tetrachloroethane and tetrachloroethene co-elute.

Received: 09/08/89

RAS Sacramento

REPORT

Results by Sample

Work Order # S9-09-049

SAMPLE ID REAGENT BLANK H2O

FRACTION 09A

TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	MG	FILE #	R809191	VERIFIED	JD
INSTRMT	B	INJECTD	09/19/89	1 UNITS	ug/L
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR	
71-43-2	Benzene	ND	0.10	1	
108-88-3	Toluene	ND	0.30	1	
100-41-4	Ethylbenzene	ND	0.10	1	
108-90-7	Chlorobenzene	ND	0.10	1	
1330-20-7	Total Xylenes	ND	0.20	1	
106-46-7	1,4-Dichlorobenzene	ND	0.20	1	
541-73-1	1,3-Dichlorobenzene	ND	0.40	1	
95-50-1	1,2-Dichlorobenzene	ND	0.20	1	

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 122% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

Received: 09/08/89

RAS Sacramento

Results by Sample

REPORT

Work Order # S9-09-049

SAMPLE ID REAGENT BLANK H2O

FRACTION 09B

TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	MG	FILE #	VERIFIED	JD
INSTRMT	B	INJECTD 09/20/89	1 UNITS	ug/L
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene	ND	0.10	1
108-88-3	Toluene	ND	0.30	1
100-41-4	Ethylbenzene	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.10	1
1330-20-7	Total Xylenes	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.40	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 92% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

Received: 09/08/89

RAS Sacramento

REPORT

Results by Sample

Work Order # 59-09-049

SAMPLE ID REAGENT BLANK H2O

FRACTION 09C

TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected not specified

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST	MQ	FILE #	VERIFIED	
INSTRMT	R	8807211	JD	
		INJECTD 09/21/89	FACTOR	UNITS
			1	ug/L
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene	ND	0.10	1
108-88-3	Toluene	ND	0.30	1
100-41-4	Ethylbenzene	ND	0.10	1
108-90-7	Chlorobenzene	ND	0.10	1
1330-20-7	Total Xylenes	ND	0.20	1
106-46-7	1,4-Dichlorobenzene	ND	0.20	1
541-73-1	1,3-Dichlorobenzene	ND	0.40	1
95-50-1	1,2-Dichlorobenzene	ND	0.20	1

SURROGATE

460-00-4 1-Bromo-4-Fluorobenzene 92% recovery

(1) See Appendix A for Glossary of Report and Data Flag Definitions

RAS Sacramento REPORT
NonReported Work

Work Order # S9-09-049

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B	:	DUPGC	01D	:	DUPGC
02B	:	DUPGC	02D	:	DUPGC
03B	:	DUPGC	03D	:	DUPGC
05B	:	DUPGC	05D	:	DUPGC
06B	:	DUPGC	06D	:	DUPGC
07B	:	DUPGC	07D	:	DUPGC

RECEIVED

JUN 05 1990

OIL CONSERVATION DIV.
SANTA FE



**ANALYTICAL RESULTS FOR
2ND QUARTER, 1989**

**GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO**

April 8, 1990

Prepared for:

MONTGOMERY & ANDREWS, PA
325 Paseo de Peralta
P.O. Box 2307
Santa Fe, NM 87504-2307

Submitted to:

MR. DAVE BOYER
Environmental Bureau Chief
NM Oil Conservation Division
Santa Fe, NM 87105

Prepared by:

GEOSCIENCE CONSULTANTS, LTD

**CORPORATE OFFICE
SOUTHWEST REGIONAL OFFICE
500 Copper Avenue, NW Suite 200
Albuquerque, New Mexico 87102
(505) 842-0001
FAX (505) 842-0595**



GEOSCIENCE CONSULTANTS, LTD.

RECEIVED JUN 29 1989

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

27 June 1989

Geoscience Consultants, Ltd.
500 Coper NW
Suite 200
Albuquerque, NM 87102

Orlando Gomez,

This data package incorporates a few changes from our routine. Please let me know of any other changes you might like.

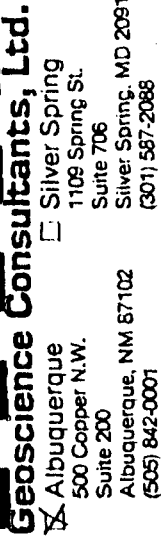
The invoices are separated by job number. The original Chain-of-custody forms precede the results for the samples on that Chain-of-custody. Following these four sets of data please find a 360K floppy containing all this data in ASCII files. For filenames protocol and other instructions please load "DIRECTIONS" using Lotus One. Finally I've included the QA/QC data.

As I communicated to Martin Nee on 26 June, the results for the 610 PAHs are not available due to equipment failure. These analyses are being run today by our Gillette lab. Please accept my apology for this inconvenience.

Sincerely,

A handwritten signature in dark ink, appearing to read 'C. Neal Schaeffer', is written over the typed name.

C. Neal Schaeffer
Laboratory Director



☒ Albuquerque
500 Copper N.W.
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Albuquerque, NM 87102
(505) 842-0001

☐ Silver Spring
1109 Spring St.
Suite 706
Silver Spring, MD 209
(301) 587-2088

☐ Newport Beach
1400 Quail Street
Suite 140
Newport Beach, CA 92660
(714) 724-0536

Las Cruces
P.O. Drawer MM
Las Cruces, NM 88004
(505) 524-5364

N^o. 3008

Chain of Custody

DATE 6/12/2009 PAGE 1 OF 6

[illegible]

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-------------------------------------	--	--------------------------	--

☐ **Newport Beach**
1400 Quail Street
Suite 140
Newport Beach, CA
(714) 724-0536

Las Cruces
P.O. Drawer MM
Las Cruces, NM 88004
(505) 524-5364

Nº 3011

Chain of Custody

DATE 6/13/87 PAGE 2 OF 2

ANALYSIS REQUEST		NUMBER OF CONTAINERS									
BASE / NEU/ACID CMPDS.	GC/MS/ 625/8270										5
VOLATILE CMPDS.	GC/MS/ 624/8240										5
PESTICIDES/PCB	608/8080										5
POLYNUCLEAR	AROMATIC 610/8310	X	X	X	X	X	X	X	X	X	5
PHENOLS, SUB PHENOLS	604/8040										5
HALOGENATED	VOLATILES (601/8010)	X	X	X	X	X	X	X	X	X	5
AROMATIC VOLATILES	602/8020	X	X	X	X	X	X	X	X	X	5
TOTAL ORGANIC	CARBON 415/9060										5
TOTAL ORGANIC	HALIDES 9020										5
PETROLEUM	HYDROCARBONS 418.1										5
TPH	MODIFIED 8015										5
TD5 Cat 100	TD5 Cat 100	X	X	X	X	X	X	X	X	X	5
PRIORITY POLLUTANT	METALS (13)										5
CAM METALS (18)	TLLC/STLC										5
EP TOX	METALS (8)										5
SDWA-INORGANICS	PRIMARY/SECONDARY										5
HAZARDOUS WASTE	PROFILE										5
Conductivity									X		5

PROJECT INFORMATION	SAMPLE RECEIPT
PROJECT: <i>MSA</i>	TOTAL NO. OF CONTAINERS
PROJECT DIRECTOR <i>N/E</i>	CHAIN OF CUSTODY SEALS
CHARGE CODE NO. <i>034800Z</i>	REC'D GOOD CONDITION/COLD
SHIPPING ID. NO.	CONFORMS TO RECORD
VIA: <i>Hand Delivered</i>	LAB NO.

RELINQUISHED BY	1.	RELINQUISHED BY	2.	RELINQUISHED BY	3.
(Signature)	(Signature)	(Time)	(Signature)	(Time)	(Time)
(Printed Name)	(Printed Name)	(Date)	(Printed Name)	(Date)	(Date)
(Company)	(Company)		(Company)		
RECEIVED BY	1.	RECEIVED BY	2.	RECEIVED BY (LABORATORY)	3.
(Signature)	(Time)	(Signature)	(Time)	(Signature)	614-84
(Printed Name)	(Date)	(Printed Name)	(Date)	(Signature)	(Time)
(Company)		(Company)		(Printed Name)	10:00

SPECIAL INSTRUCTIONS/COMMENTS:

14 Day turn-around

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Inter-Mountain
Laboratories, Inc.

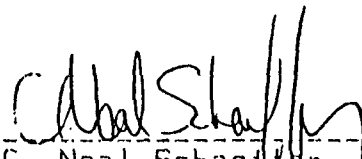
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8906121501
Site: GBR-8
IML #: F1559

Date of report: 06/23/89
Date sampled: 06/12/89
Date received: 06/13/89

Total dissolved solids (180)..... 3380.00 mg/l
Total dissolved solids (calculated). 3280.02 mg/l
Total alkalinity (as CaCO₃)..... 960.15 mg/l
Total hardness (as CaCO₃)..... 1204.43 mg/l
Lab pH..... 7.27
Lab conductivity..... 4650 umhos/cm @ 25C
Lab resistivity..... 2.1505 ohm-cm

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	1171.38	19.20
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	550.82	15.54
Sulfate.....	964.97	20.10
Calcium.....	377.11	18.82
Magnesium.....	64.09	5.27
Potassium.....	2.16	0.06
Sodium.....	751.60	32.69
Major cations.....		56.84
Major anions.....		54.84
Anion/cation % difference.....		1.78 %


C. Neal Schaeffer
Senior Chemist



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

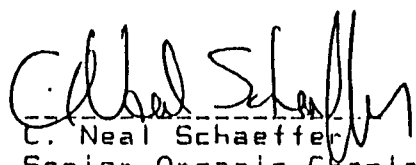
Client: GCL #8906121501
Site: GBR-8
IML #: F1559

Date of report: 06/23/89
Date sampled: 06/12/89
Date received: 06/13/89

Parameter	Concentration	Units
-----	-----	-----
Benzene	4400 (20)	ug/l
Toluene	560 (20)	ug/l
Chlorobenzene	ND (20)	ug/l
Ethylbenzene	2130 (20)	ug/l
m,p-xylene	5500 (20)	ug/l
o-xylene	1510 (20)	ug/l
1,4 Dichlorobenzene	ND (20)	ug/l
1,3 Dichlorobenzene	ND (20)	ug/l
1,2 Dichlorobenzene	ND (20)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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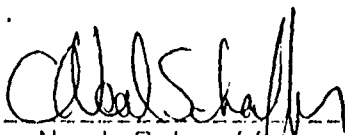
Client: GCL #8906121501
Site: GBR-B
IML #: F1559

Date of report: 06/23/89
Date sampled: 06/12/89
Date received: 06/13/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (50)	ug/l
BROMOMETHANE	ND (50)	ug/l
DICHLORODIFLUOROMETHANE	ND (50)	ug/l
VINYL CHLORIDE	ND (50)	ug/l
CHLOROETHANE	ND (50)	ug/l
METHYLENE CHLORIDE	ND (50)	ug/l
TRICHLOROFLUOROMETHANE	ND (50)	ug/l
1,1-DICHLOROETHENE	ND (50)	ug/l
1,1-DICHLOROETHANE	ND (50)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (50)	ug/l
CHLOROFORM	ND (50)	ug/l
1,2-DICHLOROETHANE	ND (50)	ug/l
1,1,1-TRICHLOROETHANE	ND (50)	ug/l
CARBON TETRACHLORIDE	ND (50)	ug/l
BROMODICHLOROMETHANE	ND (50)	ug/l
1,2-DICHLOROPROPANE	ND (50)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (50)	ug/l
TRICHLOROETHENE	ND (50)	ug/l
DIBROMOCHLOROMETHANE	ND (50)	ug/l
1,1,2-TRICHLOROETHANE	ND (50)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (50)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (50)	ug/l
BROMOFORM	ND (50)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (50)	ug/l
TETRACHLOROETHENE	ND (50)	ug/l
CHLOROBENZENE	ND (50)	ug/l
1,3-DICHLOROBENZENE	ND (50)	ug/l
1,2-DICHLOROBENZENE	ND (50)	ug/l
1,4-DICHLOROBENZENE	ND (50)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
401 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.

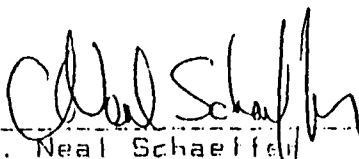

C. Neal Schaeffer
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Client: GCL #8906121548
Site: GBR-13
IML #: F1560

Date of report: 06/23/89
Date sampled: 06/12/89
Date received: 06/13/89

Total dissolved solids (180)..... 4220.00 mg/l
Total dissolved solids (calculated). 4013.88 mg/l
Total alkalinity (as CaCO₃)..... 736.30 mg/l
Total hardness (as CaCO₃)..... 1781.77 mg/l
Lab pH..... 7.30
Lab conductivity..... 5340 umhos/cm @ 25C
Lab resistivity..... 1.8727 ohm-m

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	898.29	14.73
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	599.42	16.91
Sulfate.....	1698.26	35.38
Calcium.....	278.73	13.91
Magnesium.....	264.19	21.73
Potassium.....	2.32	0.06
Sodium.....	734.40	31.94
Major cations.....		67.64
Major anions.....		67.02
Anion/cation % difference.....		0.46 %


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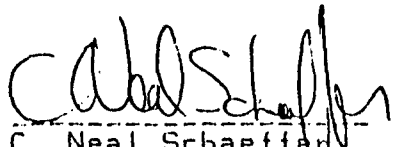
Client: GCL #8906121548
Site: GBR-13
IML #: F1560

Date of report: 06/23/89
Date sampled: 06/12/89
Date received: 06/13/89

Parameter	Concentration	Units
BENZENE	1600 (20)	ug/l
TOLUENE	840 (20)	ug/l
ETHYLBENZENE	620 (20)	ug/l
CHLOROBENZENE	ND (20)	ug/l
m,p-XYLENE	1400 (20)	ug/l
o-XYLENE	660 (20)	ug/l
1,4-DICHLOROBENZENE	ND (20)	ug/l
1,3-DICHLOROBENZENE	ND (20)	ug/l
1,2-DICHLOROBENZENE	ND (20)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1902)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


C. Neal Schaeffer
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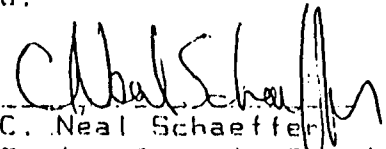
Client: GCL #8906121548
Site: GBR-13
IML #: F1560

Date of report: 06/23/89
Date sampled: 06/12/89
Date received: 06/13/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (100)	ug/l
BROMOMETHANE	ND (100)	ug/l
DICHLORODIFLUOROMETHANE	ND (100)	ug/l
VINYL CHLORIDE	ND (100)	ug/l
CHLOROETHANE	ND (100)	ug/l
METHYLENE CHLORIDE	ND (100)	ug/l
TRICHLOROFLUOROMETHANE	ND (100)	ug/l
1,1-DICHLOROETHENE	ND (100)	ug/l
1,1-DICHLOROETHANE	ND (100)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (100)	ug/l
CHLOROFORM	ND (100)	ug/l
1,2-DICHLOROETHANE	ND (100)	ug/l
1,1,1-TRICHLOROETHANE	ND (100)	ug/l
CARBON TETRACHLORIDE	ND (100)	ug/l
BROMODICHLOROMETHANE	ND (100)	ug/l
1,2-DICHLOROPROPANE	ND (100)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (100)	ug/l
TRICHLOROETHENE	ND (100)	ug/l
DIBROMOCHLOROMETHANE	ND (100)	ug/l
1,1,2-TRICHLOROETHANE	ND (100)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (100)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (100)	ug/l
BROMOFORM	ND (100)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (100)	ug/l
TETRACHLOROETHENE	ND (100)	ug/l
CHLOROBENZENE	ND (100)	ug/l
1,3-DICHLOROBENZENE	ND (100)	ug/l
1,2-DICHLOROBENZENE	ND (100)	ug/l
1,4-DICHLOROBENZENE	ND (100)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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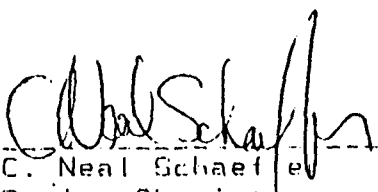
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Tel. (505) 326-4737

Client: GCL #8906121750
Site: GBR-15
IML #: F1561

Date of report: 06/23/89
Date sampled: 06/12/89
Date received: 06/13/89

Total dissolved solids (100)..... 3754.00 mg/l
Total dissolved solids (calculated). 3614.83 mg/l
Total alkalinity (as CaCO₃)..... 188.70 mg/l
Total hardness (as CaCO₃)..... 1274.02 mg/l
Lab pH..... 7.60
Lab conductivity..... 4500 umhos/cm @ 25C
Lab resistivity..... 2.2222 ohm-cm

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	230.21	3.77
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	307.81	8.68
Sulfate.....	2103.59	43.82
Calcium.....	209.05	10.43
Magnesium.....	187.86	15.45
Potassium.....	5.44	0.14
Sodium.....	689.20	29.98
Major cations.....		56.00
Major anions.....		56.28
Anion/cation % difference.....		0.25 %


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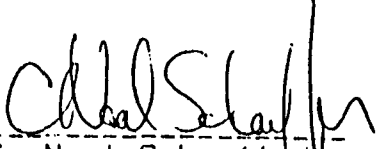
Client: GCL #8906121750
Site: GBR-15
IML #: F1561

Date of report: 06/23/89
Date sampled: 06/12/89
Date received: 06/13/89

Parameter	Concentration	Units
BENZENE	23.7 (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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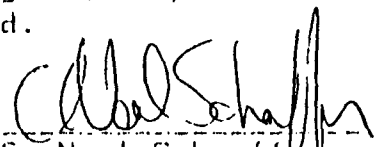
Client: GCL #8906121750
Site: GBR-15
IML #: F1561

Date of report: 06/23/89
Date sampled: 06/12/89
Date received: 06/13/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	ND (1.0)	ug/l
1,2-DICHLOROETHANE	10.7 (1.0)	ug/l
1,1,1-TRICHLOROETHANE	ND (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	ND (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	ND (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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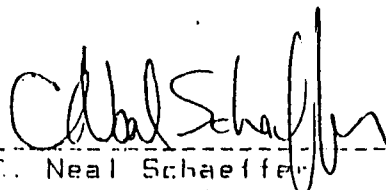
2506 West Main Street
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Tel. (505) 326-4737

Client: GCL #8906131457
Site: GBR-47
IML #: F1568

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Total dissolved solids (180)..... 4274.00 mg/l
Total dissolved solids (calculated). 4044.96 mg/l
Total alkalinity (as CaCO₃)..... 252.83 mg/l
Total hardness (as CaCO₃)..... 1522.96 mg/l
Lab pH..... 7.03
Lab conductivity..... 5700 umhos/cm @ 25C
Lab resistivity..... 1.7544 ohm-cm

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	308.46	5.06
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	891.04	25.13
Sulfate.....	1660.81	34.60
Calcium.....	565.66	28.23
Magnesium.....	27.15	2.23
Potassium.....	6.00	0.15
Sodium.....	744.40	32.38
Major cations.....		62.99
Major anions.....		64.79
Anion/cation % difference.....		1.41 %


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2506 West Main Street
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Client: GCL #8906131459
Site: GBR-47
IML #: F1568

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Concentration	Units
BENZENE	17.7 (0.2)	ug/l
TOLUENE	22.5 (0.2)	ug/l
ETHYLBENZENE	15.5 (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	40.4 (0.2)	ug/l
o-XYLENE	15.6 (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1902)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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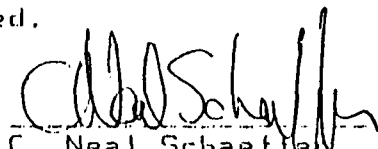
Client: GCL #8906131459
Site: GBR-47
IML #: F1568

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	4.0 (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	1.0 (1.0)	ug/l
1,2-DICHLOROETHANE	9.3 (1.0)	ug/l
1,1,1-TRICHLOROETHANE	ND (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	ND (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	ND (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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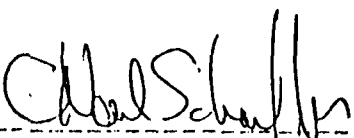
Client: GCL #0906131700
Site: Blank
IML #: F1571

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Concentration	Units
BENZENE	ND (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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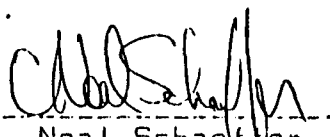
Client: GCL #8906131700
Site: Blank
IML #: F1571

Date of report: 06/23/07
Date sampled: 06/13/07
Date received: 06/14/07

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	ND (1.0)	ug/l
1,2-DICHLOROETHANE	ND (1.0)	ug/l
1,1,1-TRICHLOROETHANE	ND (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	ND (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	ND (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
401 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


C. Neal Schaeffer
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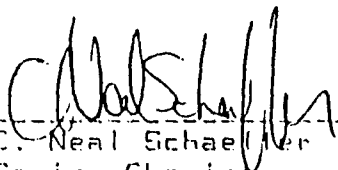
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8906140830
Site: GBR-17
IML #: F1574

Date of report: 06/23/89
Date sampled: 06/14/89
Date received: 06/14/89

Total dissolved solids (100)..... 2466.00 mg/l
Total dissolved solids (calculated). 2332.09 mg/l
Total alkalinity (as CaCO3)..... 222.00 mg/l
Total hardness (as CaCO3)..... 1134.76 mg/l
Lab pH..... 7.40
Lab conductivity..... 2970 umhos/cm @ 25C
Lab resistivity..... 3.3670 ohm-cm

	mg/l	meq/l
Acidity (as CaCO3).....	<1.0	<0.01
Bicarbonate (as HCO3).....	270.84	4.44
Carbonate (as CO3).....	0.00	0.00
Chloride.....	145.81	4.11
Sulfate.....	1332.05	27.77
Calcium.....	389.41	19.43
Magnesium.....	39.69	3.26
Potassium.....	0.72	0.02
Sodium.....	292.00	12.70
Major cations.....		35.41
Major anions.....		36.32
Anion/cation % difference.....		1.26 %


C. Neal Schaeffer
Senior Chemist



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Farmington, New Mexico 87401
Tel. (505) 326-4737

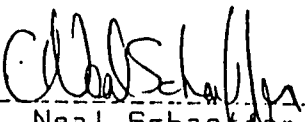
Client: GCL #8906140830
Site: GBR-17
IML #: F1574

Date of report: 06/23/89
Date sampled: 06/14/89
Date received: 06/14/89

Parameter	Concentration	Units
BENZENE	ND (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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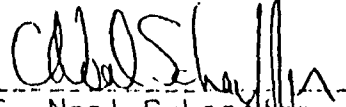
Client: GCL #8906140830
Site: GBR-17
IML #: F1574

Date of report: 06/23/89
Date sampled: 06/14/89
Date received: 06/14/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	ND (1.0)	ug/l
1,2-DICHLOROETHANE	ND (1.0)	ug/l
1,1,1-TRICHLOROETHANE	1.4 (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	ND (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	ND (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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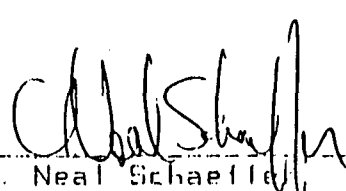
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8906131111
Site: GBR-24D
IML #: F1575

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Total dissolved solids (180)..... 3722.00 mg/l
Total dissolved solids (calculated). 3504.62 mg/l
Total alkalinity (as CaCO3)..... 246.67 mg/l
Total hardness (as CaCO3)..... 1736.77 mg/l
Lab pH..... 8.02
Lab conductivity..... 4690 umhos/cm @ 25C
Lab resistivity..... 2.1322 ohm-cm

	mg/l	meq/l
Acidity (as CaCO3).....	<1.0	<0.01
Bicarbonate (as HCO3).....	300.93	4.93
Carbonate (as CO3).....	0.00	0.00
Chloride.....	591.32	16.68
Sulfate.....	1644.77	34.27
Calcium.....	545.17	27.20
Magnesium.....	71.63	7.54
Potassium.....	5.00	0.13
Sodium.....	480.40	20.90
Major cations.....		55.77
Major anions.....		55.80
Anion/cation % difference.....		0.10 %


C. Neal Schaeffer
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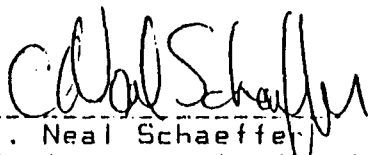
Client: GCL #8906131111
Site: GBR-24D
IML #: F1575

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Concentration	Units
BENZENE	19.4 (0.2)	ug/l
TOLUENE	6.9 (0.2)	ug/l
ETHYLBENZENE	34.0 (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	10.6 (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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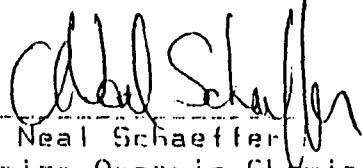
Client: GCL #8906131111
Site: GBR-24D
IML #: F1575

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	4.3 (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	ND (1.0)	ug/l
1,2-DICHLOROETHANE	13.1 (1.0)	ug/l
1,1,1-TRICHLOROETHANE	ND (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	ND (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	ND (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parentheses.
ND means analyte was not detected.


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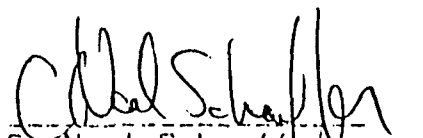
Client: GCL #0906131200
Site: GBR-30
IML #: F1576

Date of report: 06/23/07
Date sampled: 06/13/07
Date received: 06/14/07

Parameter	Concentration	Units
BENZENE	ND (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	4.3 (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1902)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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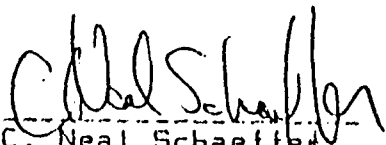
Client: GCL #8906131200
Site: GBR-30
IML #: F1576

Date of report: 06/23/87
Date sampled: 06/13/87
Date received: 06/14/87

Parameter	Concentration	Units
BENZENE	ND (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	4.3 (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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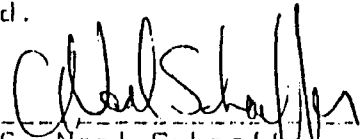
Client: GCL #8906131200
Site: GBR-30
IML #: F1576

Date of report: 06/23/87
Date sampled: 06/13/87
Date received: 06/14/87

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	ND (1.0)	ug/l
1,2-DICHLOROETHANE	ND (1.0)	ug/l
1,1,1-TRICHLOROETHANE	ND (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	ND (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	ND (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


C. Neal Schaeffer
Senior Organic Chemist

Client: GCL #8906131220
Site: GBR-6
IML #: F1577

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Total dissolved solids (100)..... 2780.00 mg/l
Total dissolved solids (calculated). 2770.65 mg/l
Total alkalinity (as CaCO₃)..... 1124.86 mg/l
Total hardness (as CaCO₃)..... 1204.43 mg/l
Lab pH..... 7.33
Lab conductivity..... 3910 umhos/cm @ 25C
Lab resistivity..... 2.5575 ohm-cm

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1	<0.01
Bicarbonate (as HCO ₃).....	1372.33	22.50
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	315.91	8.91
Sulfate.....	773.21	16.11
Calcium.....	500.08	24.95
Magnesium.....	<1	<0.01
Potassium.....	2.64	0.07
Sodium.....	522.40	22.72
Major cations.....		46.80
Major anions.....		47.52
Anion/cation % difference.....		0.68 %


C. Neal Schaeffer
Senior Chemist



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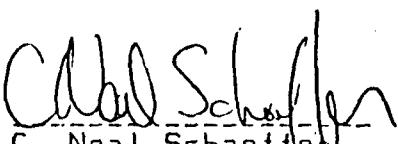
Client: GCL #89D6131220
Site: GBR-6
IML #: F1577

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Concentration	Units
BENZENE	136 (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	149 (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	167 (0.2)	ug/l
o-XYLENE	39 (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1902)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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Senior Organic Chemist



Inter-Mountain
Laboratories, Inc.

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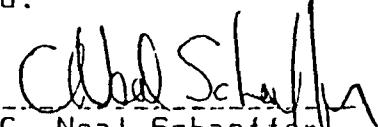
Client: GCL #8906131220
Site: GBR-6
IML #: F1577

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (10.0)	ug/l
BROMOMETHANE	ND (10.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (10.0)	ug/l
VINYL CHLORIDE	ND (10.0)	ug/l
CHLOROETHANE	ND (10.0)	ug/l
METHYLENE CHLORIDE	ND (10.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (10.0)	ug/l
1,1-DICHLOROETHENE	ND (10.0)	ug/l
1,1-DICHLOROETHANE	ND (10.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (10.0)	ug/l
CHLOROFORM	ND (10.0)	ug/l
1,2-DICHLOROETHANE	ND (10.0)	ug/l
1,1,1-TRICHLOROETHANE	ND (10.0)	ug/l
CARBON TETRACHLORIDE	ND (10.0)	ug/l
BROMODICHLOROMETHANE	ND (10.0)	ug/l
1,2-DICHLOROPROPANE	ND (10.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (10.0)	ug/l
TRICHLOROETHENE	ND (10.0)	ug/l
DIBROMOCHLOROMETHANE	ND (10.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (10.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (10.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (10.0)	ug/l
BROMOFORM	ND (10.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (10.0)	ug/l
TETRACHLOROETHENE	ND (10.0)	ug/l
CHLOROBENZENE	ND (10.0)	ug/l
1,3-DICHLOROBENZENE	ND (10.0)	ug/l
1,2-DICHLOROBENZENE	ND (10.0)	ug/l
1,4-DICHLOROBENZENE	ND (10.0)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
401 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


C. Neal Schaeffer
Senior Organic Chemist



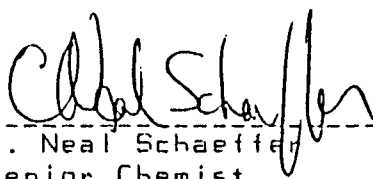
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8906131315
Site: GBR-31
IML #: F1578

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Total dissolved solids (180)..... 4414.00 mg/l
Total dissolved solids (calculated). 4180.76 mg/l
Total alkalinity (as CaCO₃)..... 342.25 mg/l
Total hardness (as CaCO₃)..... 1682.23 mg/l
Lab pH..... 7.66
Lab conductivity..... 5520 umhos/cm @ 25C
Lab resistivity..... 1.8116 ohm-cm

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	417.55	6.85
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	575.12	16.22
Sulfate.....	2032.40	42.34
Calcium.....	569.76	28.43
Magnesium.....	63.39	5.21
Potassium.....	1.96	0.05
Sodium.....	735.20	31.78
Major cations.....		65.67
Major anions.....		65.41
Anion/cation % difference.....		0.20 %


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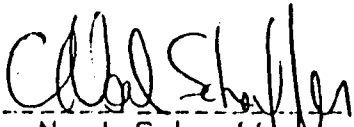
Client: GCL #8906131315
Site: GBR-31
IML #: F1578

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Concentration	Units
BENZENE	ND (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


C. Neal Schaeffer
Senior Organic Chemist



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8906131315
Site: GBR-31
IML #: F1578

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	5.7 (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	1.9 (1.0)	ug/l
1,2-DICHLOROETHANE	ND (1.0)	ug/l
1,1,1-TRICHLOROETHANE	1.6 (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	10.8 (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	17.2 (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.

C. Neal Schaeffer
Senior Organic Chemist



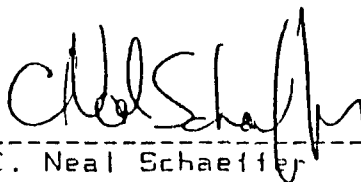
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8906131355
Site: GBR-33
IML #: F1579

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Total dissolved solids (180)..... 3576.00 mg/l
Total dissolved solids (calculated). 3442.99 mg/l
Total alkalinity (as CaCO₃)..... 354.58 mg/l
Total hardness (as CaCO₃)..... 1311.74 mg/l
Lab pH..... 7.17
Lab conductivity..... 4490 umhos/cm @ 25C
Lab resistivity..... 2.2272 ohm-m

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	432.59	7.09
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	364.51	10.28
Sulfate.....	1768.22	36.84
Calcium.....	434.49	21.68
Magnesium.....	55.37	4.55
Potassium.....	1.36	0.03
Sodium.....	608.80	26.48
Major cations.....		52.75
Major anions.....		54.21
Anion/cation % difference.....		1.37 %



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Senior Chemist



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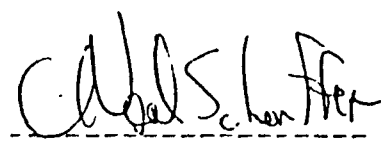
Client: GCL #8906131355
Site: GBR-33
IML #: F1579

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Concentration	Units
BENZENE	32.6 (0.2)	ug/l
TOLUENE	11.3 (0.2)	ug/l
ETHYLBENZENE	76.0 (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	55.1 (0.2)	ug/l
o-XYLENE	19.0 (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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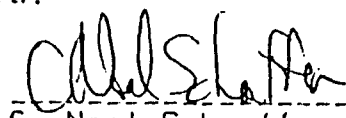
Client: GCL #8906131355
Site: GBR-33
IML #: F1579

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	ND (1.0)	ug/l
1,2-DICHLOROETHANE	1.8 (1.0)	ug/l
1,1,1-TRICHLOROETHANE	ND (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	ND (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	ND (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
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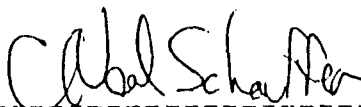
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8906131426
Site: GBR-14
IML #: F1580

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Total dissolved solids (180)..... 4318.00 mg/l
Total dissolved solids (calculated). 4072.08 mg/l
Total alkalinity (as CaCO₃)..... 246.67 mg/l
Total hardness (as CaCO₃)..... 1602.59 mg/l
Lab pH..... 7.27
Lab conductivity..... 5750 umhos/cm @ 25C
Lab resistivity..... 1.7391 ohm-m

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	300.93	4.93
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	899.14	25.36
Sulfate.....	1686.33	35.13
Calcium.....	577.96	28.84
Magnesium.....	39.05	3.21
Potassium.....	4.96	0.13
Sodium.....	738.40	32.12
Major cations.....		64.30
Major anions.....		65.43
Anion/cation % difference.....		0.87 %



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Client: GCL #8906131426
Site: GBR-14 **
IML #: F1500

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Concentration	Units
BENZENE	ND (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.

** This sample was labeled GBR-14 on the volatiles sample bottles.

C. Neal Schaeffer
Senior Organic Chemist



2506 West Main Street
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Tel. (505) 326-4737

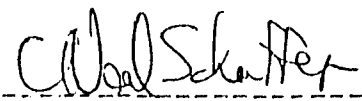
Client: GCL #8906131426
Site: GBR-14
IML #: F1580

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	ND (1.0)	ug/l
1,2-DICHLOROETHANE	4.3 (1.0)	ug/l
1,1,1-TRICHLOROETHANE	ND (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	ND (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	ND (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


C. Neal Schaeffer
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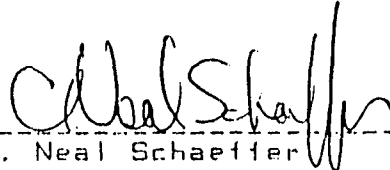
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8906140915
Site: Effluent
IML #: F1581

Date of report: 06/23/89
Date sampled: 06/14/89
Date received: 06/14/89

Total dissolved solids (TDD)..... 3632.00 mg/l
Total dissolved solids (calculated)..... 3496.75 mg/l
Total alkalinity (as CaCO₃)..... 427.04 mg/l
Total hardness (as CaCO₃)..... 1343.79 mg/l
Lab pH..... 8.11
Lab conductivity..... 4950 umhos/cm @ 25C
Lab resistivity..... 2.0202 ohm-cm

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	520.99	8.54
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	704.73	19.88
Sulfate.....	1347.66	28.08
Calcium.....	430.39	21.48
Magnesium.....	65.65	5.40
Potassium.....	2.32	0.06
Sodium.....	692.80	30.13
Major cations.....		57.07
Major anions.....		56.50
Anion/cation % difference.....		0.50 %


C. Neal Schaeffer
Senior Chemist



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #89D614D915
Site: Effluent
IML #: F1581

Date of report: 06/23/89
Date sampled: 06/14/89
Date received: 06/14/89

Parameter	Concentration	Units
BENZENE	5.5 (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.

** This sample was labeled GBR-14 on the volatiles sample bottles.


C. Neal Schaeffer
Senior Organic Chemist



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Tel. (505) 326-4737

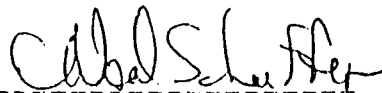
Client: GCL #8906140915
Site: Effluent
IML #: F1581

Date of report: 06/23/89
Date sampled: 06/14/89
Date received: 06/14/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	ND (1.0)	ug/l
1,2-DICHLOROETHANE	ND (1.0)	ug/l
1,1,1-TRICHLOROETHANE	ND (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	ND (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	ND (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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Senior Organic Chemist



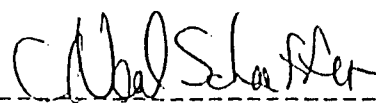
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8906140926
Site: Influent
IML #: F1582

Date of report: 06/23/89
Date sampled: 06/14/89
Date received: 06/14/89

Total dissolved solids (100)..... 3682.00 mg/l
Total dissolved solids (calculated). 3497.17 mg/l
Total alkalinity (as CaCO3)..... 446.47 mg/l
Total hardness (as CaCO3)..... 1373.65 mg/l
Lab pH..... 7.43
Lab conductivity..... 5040 umhos/cm @ 25C
Lab resistivity..... 1.9841 ohm-m

	mg/l	meq/l
Acidity (as CaCO3).....	<1.0	<0.01
Bicarbonate (as HCO3).....	544.69	8.93
Carbonate (as CO3).....	0.00	0.00
Chloride.....	696.63	17.65
Sulfate.....	1352.60	28.18
Calcium.....	459.09	22.91
Magnesium.....	55.50	4.56
Potassium.....	2.24	0.06
Sodium.....	666.40	28.99
Major cations.....		56.52
Major anions.....		56.76
Anion/cation % difference.....		0.21 %



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Senior Chemist



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2506 West Main Street
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Tel. (505) 326-4737

Client: GCL #8906140926
Site: Influent
IML #: F1582

Date of report: 06/23/89
Date sampled: 06/14/89
Date received: 06/14/89

Parameter	Concentration	Units
BENZENE	82.3 (0.2)	ug/l
TOLUENE	17.8 (0.2)	ug/l
ETHYLBENZENE	11.4 (0.2)	ug/l
CHLOROBENZENE	ND (0.2)	ug/l
m,p-XYLENE	24.2 (0.2)	ug/l
o-XYLENE	18.8 (0.2)	ug/l
1,4-DICHLOROBENZENE	ND (0.2)	ug/l
1,3-DICHLOROBENZENE	ND (0.2)	ug/l
1,2-DICHLOROBENZENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.

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Senior Organic Chemist



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Tel. (505) 326-4737

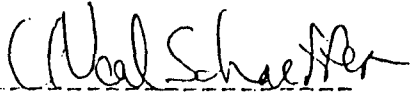
Client: GCL #8906140926
Site: Influent
IML #: F1582

Date of report: 06/23/89
Date sampled: 06/14/89
Date received: 06/14/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	4.6 (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	1.2 (1.0)	ug/l
1,2-DICHLOROETHANE	3.3 (1.0)	ug/l
1,1,1-TRICHLOROETHANE	ND (1.0)	ug/l
CARBON TETRACHLORIDE	ND (1.0)	ug/l
BROMODICHLOROMETHANE	ND (1.0)	ug/l
1,2-DICHLOROPROPANE	ND (1.0)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
TRICHLOROETHENE	1.9 (1.0)	ug/l
DIBROMOCHLOROMETHANE	ND (1.0)	ug/l
1,1,2-TRICHLOROETHANE	ND (1.0)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (1.0)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (1.0)	ug/l
BROMOFORM	ND (1.0)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (1.0)	ug/l
TETRACHLOROETHENE	1.6 (1.0)	ug/l
CHLOROBENZENE	ND (1.0)	ug/l
1,3-DICHLOROBENZENE	ND (1.0)	ug/l
1,2-DICHLOROBENZENE	ND (1.0)	ug/l
1,4-DICHLOROBENZENE	ND (1.0)	ug/l

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


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Tel. (505) 326-4737

Quality control data, matrix spike analysis.

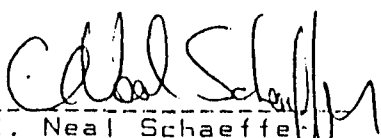
Client: GCL #8906131459
Site: GBR-47
IML #: F1568

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Spike added	Sample amount (prev. run)	Result	Percent recovery
BENZENE	0.0	0.0 ug/l	0.0	
TOLUENE	0.0	0.0 ug/l	0.0	
ETHYLBENZENE	0.0	0.0 ug/l	0.0	
CHLOROBENZENE	20	0.0 ug/l	18.8	93.7
m,p-XYLENE	20	40.4 ug/l	58.4	90.1
o-XYLENE	0.0	0.0 ug/l	0.0	
1,4-DICHLOROBENZENE	0.0	0.0 ug/l	0.0	
1,3-DICHLOROBENZENE	0.0	0.0 ug/l	0.0	
1,2-DICHLOROBENZENE	0.0	0.0 ug/l	0.0	

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


C. Neal Schaeffer
Senior Organic Chemist

Quality control data, matrix spike analysis.

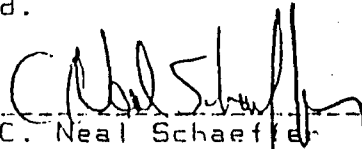
Client: GCL #0906131457
Site: GBR-47
IML #: F1568

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Spike added	Sample amount (prev. run)	Result	Percent recovery
CHLOROMETHANE	0.0	0.0 ug/l	0.0	
BROMOMETHANE	0.0	0.0 ug/l	0.0	
DICHLORODIFLUOROMETHANE	0.0	0.0 ug/l	0.0	
VINYL CHLORIDE	0.0	0.0 ug/l	0.0	
CHLOROETHANE	0.0	0.0 ug/l	0.0	
METHYLENE CHLORIDE	0.0	0.0 ug/l	0.0	
TRICHLOROFLUOROMETHANE	0.0	0.0 ug/l	0.0	
1,1-DICHLOROETHENE	0.0	0.0 ug/l	0.0	
1,1-DICHLOROETHANE	0.0	0.0 ug/l	0.0	
TRANS-1,2-DICHLOROETHENE	0.0	0.0 ug/l	0.0	
CHLOROFORM	0.0	0.0 ug/l	0.0	
1,2-DICHLOROETHANE	20	9.3 ug/l	29.2	99.4
1,1,1-TRICHLOROETHANE	20	0.0 ug/l	19.5	97.2
CARBON TETRACHLORIDE	0.0	0.0 ug/l	0.0	
BROMODICHLOROMETHANE	0.0	0.0 ug/l	0.0	
1,2-DICHLOROPROPANE	0.0	0.0 ug/l	0.0	
CIS-1,3-DICHLOROPROPENE	0.0	0.0 ug/l	0.0	
TRICHLOROETHENE	0.0	0.0 ug/l	0.0	
DIBROMOCHLOROMETHANE	0.0	0.0 ug/l	0.0	
1,1,2-TRICHLOROETHANE	0.0	0.0 ug/l	0.0	
TRANS-1,3-DICHLOROPROPENE	0.0	0.0 ug/l	0.0	
2-CHLOROETHYL VINYL ETHER	0.0	0.0 ug/l	0.0	
BROMOFORM	0.0	0.0 ug/l	0.0	
1,1,2,2-TETRACHLOROETHANE	0.0	0.0 ug/l	0.0	
TETRACHLOROETHENE	20	0.0 ug/l	19.5	97.4
CHLOROBENZENE	20	0.0 ug/l	20.3	102
1,3-DICHLOROBENZENE	0.0	0.0 ug/l	0.0	
1,2-DICHLOROBENZENE	0.0	0.0 ug/l	0.0	
1,4-DICHLOROBENZENE	0.0	0.0 ug/l	0.0	

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


C. Neal Schaeffer
Senior Organic Chemist



Inter-Mountain
Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

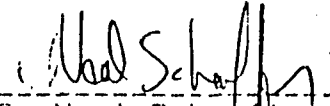
Quality control data, matrix spike analysis.

Client: GCL #8906131355
Site: GBR-33
IML #: F1579

Date of report: 06/23/89
Date sampled: 06/13/89
Date received: 06/14/89

Parameter	Spike added	Sample amount (prev. run)	Result	Percent recovery
CHLOROMETHANE	0.0	0.0 ug/l	0.0	
BROMOMETHANE	0.0	0.0 ug/l	0.0	
DICHLORODIFLUOROMETHANE	0.0	0.0 ug/l	0.0	
VINYL CHLORIDE	0.0	0.0 ug/l	0.0	
CHLOROETHANE	0.0	0.0 ug/l	0.0	
METHYLENE CHLORIDE	0.0	0.0 ug/l	0.0	
TRICHLOROFLUOROMETHANE	0.0	0.0 ug/l	0.0	
1,1-DICHLOROETHENE	0.0	0.0 ug/l	0.0	
1,1-DICHLOROETHANE	0.0	0.0 ug/l	0.0	
TRANS-1,2-DICHLOROETHENE	0.0	0.0 ug/l	0.0	
CHLOROFORM	0.0	0.0 ug/l	0.0	
1,2-DICHLOROETHANE	20	1.8 ug/l	19.1	86.5
1,1,1-TRICHLOROETHANE	20	0.0 ug/l	20.7	104
CARBON TETRACHLORIDE	0.0	0.0 ug/l	0.0	
BROMODICHLOROMETHANE	0.0	0.0 ug/l	0.0	
1,2-DICHLOROPROPANE	0.0	0.0 ug/l	0.0	
CIS-1,3-DICHLOROPROPENE	0.0	0.0 ug/l	0.0	
TRICHLOROETHENE	0.0	0.0 ug/l	0.0	
DIBROMOCHLOROMETHANE	0.0	0.0 ug/l	0.0	
1,1,2-TRICHLOROETHANE	0.0	0.0 ug/l	0.0	
TRANS-1,3-DICHLOROPROPENE	0.0	0.0 ug/l	0.0	
2-CHLOROETHYL VINYL ETHER	0.0	0.0 ug/l	0.0	
BROMOFORM	0.0	0.0 ug/l	0.0	
1,1,2,2-TETRACHLOROETHANE	0.0	0.0 ug/l	0.0	
TETRACHLOROETHENE	20	0.0 ug/l	21.1	106
CHLOROBENZENE	20	0.0 ug/l	22.4	112
1,3-DICHLOROBENZENE	0.0	0.0 ug/l	0.0	
1,2-DICHLOROBENZENE	0.0	0.0 ug/l	0.0	
1,4-DICHLOROBENZENE	0.0	0.0 ug/l	0.0	

Methods: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).
Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


C. Neal Schaeffer
Senior Organic Chemist

RECEIVED

JUN 05 1990

OIL CONSERVATION DIV.
SANTA FE

**ANALYTICAL RESULTS FOR
1ST QUARTER, 1989**

**GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO**

April 8, 1990

Prepared for:

**MONTGOMERY & ANDREWS, PA
325 Paseo de Peralta
P.O. Box 2307
Santa Fe, NM 87504-2307**

Submitted to:

**MR. DAVE BOYER
Environmental Bureau Chief
NM Oil Conservation Division
Santa Fe, NM 87105**

Prepared by:

GEOSCIENCE CONSULTANTS, LTD

**CORPORATE OFFICE
SOUTHWEST REGIONAL OFFICE
500 Copper Avenue, NW Suite 200
Albuquerque, New Mexico 87102
(505) 842-0001
FAX (505) 842-0595**



RECEIVED APR 9 3 1989

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Bruce Willard
Geoscience Consultants, Ltd.
500 Cooper N.W.
Albuquerque, N.M. 87102

04 April, 1989

Dear Mr. Willard:

From March 14 to 16, 1989, Inter-Mountain Laboratories, Inc. received eighteen (18) water samples from GCL to be analyzed for parameters indicated on the chain-of-custody forms which accompanied the samples.

Inorganic analyses were performed in accordance with 40 CFR, Part 136, "Guidelines Establishing Test Procedures for Analysis", as amended.

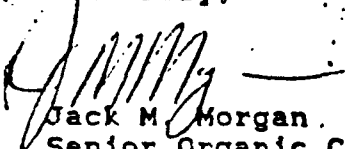
Organic analyses were performed in accordance with 40 CFR, Part 136 and/or SW-846, "Test Methods for Evaluating Solid Waste", USEPA, 1986. Specific method references are found at the bottom of each analytical report.

In the performance of Method 601, 40 CFR, Part 136, Purgeable Halocarbons, holding times were exceeded on three samples, 8903141157, 8903151217, and 8903151101. These analyses will not be invoiced and should it be necessary to re-sample, there will be no charge for the analysis.

On sample 8903150823, a 601 spike analysis was performed (taken from a second vial collected at the site) and the recoveries were within the acceptance interval for the spiked parameters, however three additional compounds were identified which were not in the original sample matrix; Chlorobenzene, 1,4-Dichlorobenzene, and 1,2-Dichlorobenzene. The quantification of these parameters can be found on the spike analysis report.

Should you have any questions or concerns, please feel free to give me a call. Thank you and we look forward to working with GCL again.

Sincerely,


Jack M. Morgan
Senior Organic Chemist

500 Copper N.W.
Suite 200
Albuquerque, NM 87102
(505) 842-0001

☐ **Newport Beach**
5000 Birch Street
West Tower, Suite 300
Newport Beach, CA
(714) 476-3650

Las Cruces
P.O. Drawer MM
Las Cruces, NM 88004
(505) 524-5384

No. 0950
Chain of Custody

DATE 2/5/37 PAGE 1 OF 1

PAGE

30

ANALYSIS REQUEST

[illegible]

Geoscience Consultants, Ltd.

☒ Albuquerque
500 Copper N.W.
Suite 200
Albuquerque, NM
(505) 842-0001

Silver Spring
1100 Spring St.
Suite 706
Silver Spring, MD 20910
(301) 587-2068

☐ **Newport Beach**
5000 Birch Street
West Tower, Suite 300
Newport Beach, CA 92660
(714) 478-3650

☐ Las Cruces
P.O. Drawer MM
Las Cruces, NM 88004
(505) 524-5384

Nº 0949

Chain of Custody

DATE 2/14/09 PAGE 2 OF 2

PAGE.

1

OF -

LAB NAME				ADDRESS				TELEPHONE				SPECIAL INSTRUCTIONS/COMMENTS			
PROJECT INFORMATION				SAMPLE RECEIPT				TOTAL NO. OF CONTAINERS				CHAIN OF CUSTODY SEALS			
PROJECT: MFA				TOTAL NO. OF CONTAINERS				CHAIN OF CUSTODY SEALS				REC'D GOOD CONDITION/COLD			
PROJECT MANAGER: HACKS				CONFORMS TO RECORD				LAB NO.				SHIPPING ID NO.			
CHANGE CODE NO. 348-002				LAB NO.				SHIPPING ID NO.				VIA:			
8903141331				Effluent				8903141331				8903141331			
8903141347				Influent				8903141347				8903141347			
8903141353				GW-13				8903141353				8903141353			
8903141607				GBR-30				8903141607				8903141607			
8903141629				GBR-15				8903141629				8903141629			
8903141715				Effluent				8903141715				8903141715			
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8903141715				Influent				8903141715				8903141715			
8903141715				Effluent				8903141715				890314171			

CONTRIBUTOR: WHITE CANARY — GEOSCIENCE CONSULTANTS, LTD. • PINK BORATORY



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326 4737

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903150823

Sample Site: GBR-47

IML Lab No: F890970

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/15/89

Date Received: 03/15/89

Date Extracted: NA

Date Analyzed: 03/28/89

Parameter	Concentration	Units
BENZENE	ND (0.2)	ug/l
TOLUENE	0.26 (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.

Comments: Septum inverted on sample vial.

Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

**** Quality Assurance Report
Spike Analysis**

Date: April 02, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903141629

Sample Site: GBR-15

IML Sample No: F890900

Analysis Requested: Purgeable Halocarbons

Sample Matrix: Water

Date Sampled: 03/14/89

Date Received: 03/14/89

Date Extracted: N/A

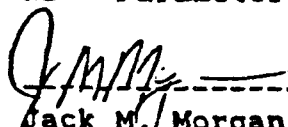
Date Analyzed: 03/28/89

Parameter	Spike Added (ug/l)	Concentration (ug/l)	Recovery (%)
1,1-DICHLOROETHENE	10	15.6 (0.1)	155
1,2-DICHLOROETHANE	10	25.1 (0.03)	82.0

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-1737

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903141157

Sample Site: GBR-47

IML Lab No: F890850

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/14/89

Date Received: 03/14/89

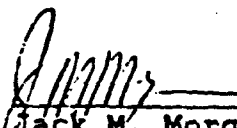
Date Extracted: NA

Date Analyzed: 03/22/89

Parameter	Concentration	Units
BENZENE	ND (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


Jack M. Morgan
Senior Organic Chemist



Inter-Mountain
Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326 4737

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903141317

Sample Site: GBR-17

IML Lab No: F890860

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/14/89

Date Received: 03/14/89

Date Extracted: NA

Date Analyzed: 03/22/89

Parameter	Concentration	Units
BENZENE	ND (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903141423

Sample Site: GBR-24D

IML Lab No: F890870

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/14/89

Date Received: 03/14/89

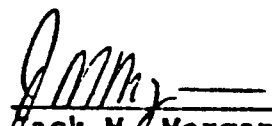
Date Extracted: NA

Date Analyzed: 03/27/89

Parameter	Concentration	Units
BENZENE	28.7 (0.2)	ug/l
TOLUENE	8.9 (0.2)	ug/l
ETHYLBENZENE	58.9 (0.2)	ug/l
m,p-XYLENE	16.7 (0.2)	ug/l
o-XYLENE	2.2 (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326 4737

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903141503

Sample Site: GRW-13

IML Lab No: F890880

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/14/89

Date Received: 03/14/89

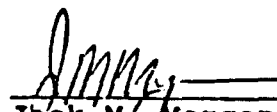
Date Extracted: NA

Date Analyzed: 03/23/89

Parameter	Concentration	Units
BENZENE	ND (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.



Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4747

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903141607

Sample Site: GBR-30

IML Lab No: F890890

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/14/89

Date Received: 03/14/89

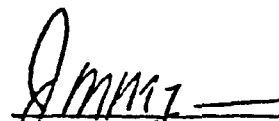
Date Extracted: NA

Date Analyzed: 03/22/89

Parameter	Concentration	Units
BENZENE	1.9 (0.2)	ug/l
TOLUENE	5.3 (0.2)	ug/l
ETHYLBENZENE	3.5 (0.2)	ug/l
m,p-XYLENE	8.2 (0.2)	ug/l
o-XYLENE	3.4 (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326 4737

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903141629

Sample Site: GBR-15

IML Lab No: F890900

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/14/89

Date Received: 03/14/89

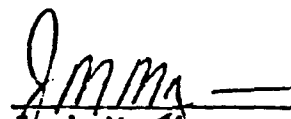
Date Extracted: NA

Date Analyzed: 03/27/89

Parameter	Concentration	Units
-----	-----	-----
BENZENE	32.6 (0.2)	ug/l
TOLUENE	2.1 (0.2)	ug/l
ETHYLBENZENE	2.9 (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.



Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
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Tel. (505) 326-4737

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903141331

Sample Site: GBR-EFFLUENT

IML Lab No: F890910

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/14/89

Date Received: 03/14/89

Date Extracted: NA

Date Analyzed: 03/16/89

Parameter	Concentration	Units
-----	-----	-----
BENZENE	219 (0.2)	ug/l
TOLUENE	319 (0.2)	ug/l
ETHYLBENZENE	12.5 (0.2)	ug/l
m,p-XYLENE	94.7 (0.2)	ug/l
o-XYLENE	42.5 (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.



Jack M. Morgan
Senior Organic Chemist



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Tel. (505) 326-4737

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903141347

Sample Site: GBR-INFLUENT

IML Lab No: F890920

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/14/89

Date Received: 03/14/89

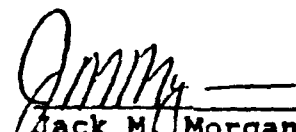
Date Extracted: NA

Date Analyzed: 03/22/89

Parameter	Concentration	Units
BENZENE	2314 (50.0)	ug/l
TOLUENE	2630 (50.0)	ug/l
ETHYLBENZENE	191 (50.0)	ug/l
m,p-XYLENE	860 (50.0)	ug/l
o-XYLENE	301 (50.0)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.



Jack M. Morgan
Senior Organic Chemist

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903151135

Sample Site: GBR-8

IML Lab No: F890930

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/15/89

Date Received: 03/15/89

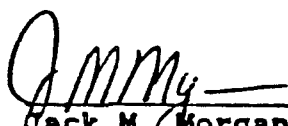
Date Extracted: NA

Date Analyzed: 03/27/89

Parameter	Concentration	Units
-----	-----	-----
BENZENE	5184 (50.0)	ug/l
TOLUENE	172 (50.0)	ug/l
ETHYLBENZENE	1341 (50.0)	ug/l
m,p-XYLENE	2080 (50.0)	ug/l
o-XYLENE	584 (50.0)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
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Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903151217

Sample Site: GBR-6

IML Lab No: F890940

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/15/89

Date Received: 03/15/89

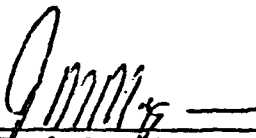
Date Extracted: NA

Date Analyzed: 03/27/89

Parameter	Concentration	Units
-----	-----	-----
BENZENE	222 (2.0)	ug/l
TOLUENE	37.0 (2.0)	ug/l
ETHYLBENZENE	323 (2.0)	ug/l
m,p-XYLENE	265 (2.0)	ug/l
o-XYLENE	167 (2.0)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.



Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
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Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903151101

Sample Site: GBR-31

IML Lab No: F890950

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/15/89

Date Received: 03/15/89

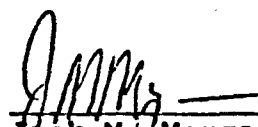
Date Extracted: NA

Date Analyzed: 03/28/89

Parameter	Concentration	Units
-----	-----	-----
BENZENE	12.6 (0.2)	ug/l
TOLUENE	3.3 (0.2)	ug/l
ETHYLBENZENE	16.3 (0.2)	ug/l
m,p-XYLENE	13.5 (0.2)	ug/l
o-XYLENE	4.8 (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.



Jack M. Morgan
Senior Organic Chemist



2500 West Main Street
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Tel. (505) 326 4737

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903151003

Sample Site: GBR-33

IML Lab No: F890960

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/15/89

Date Received: 03/15/89

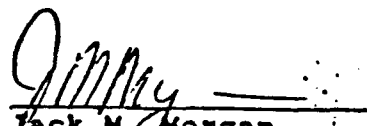
Date Extracted: NA

Date Analyzed: 03/22/89

Parameter	Concentration	Units
-----	-----	-----
BENZENE	0.30 (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.



Jack M. Morgan
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2506 West Main Street
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Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903161013

Sample Site: GBR-13

IML Lab No: F890980

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/16/89

Date Received: 03/16/89

Date Extracted: NA

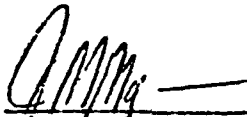
Date Analyzed: 03/28/89

Parameter	Concentration	Units
BENZENE	309 (2.0)	ug/l
TOLUENE	24.3 (2.0)	ug/l
ETHYLBENZENE	166 (2.0)	ug/l
m,p-XYLENE	102 (2.0)	ug/l
o-XYLENE	30.9 (2.0)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.

ND means analyte was not detected.



Jack M. Morgan
Senior Organic Chemist

**** Quality Assurance Report
Duplicate Analysis**

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903150823

Sample Site: GBR-47

IML Lab No: F890970

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/15/89

Date Received: 03/15/89

Date Extracted: NA

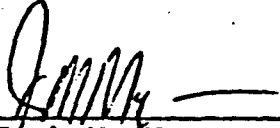
Date Analyzed: 03/28/89

Parameter	Concentration	Units
BENZENE	ND (0.2)	ug/l
TOLUENE	0.26 (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l

**Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136**

**Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.**

Comments: Septum inverted on sample vial.



Jack M. Morgan
Senior Organic Chemist

**** Quality Assurance Report
Travel Blank Analysis**

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: NA

Sample Site: NA

IML Lab No: NA

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: NA

Date Received: 03/14/89

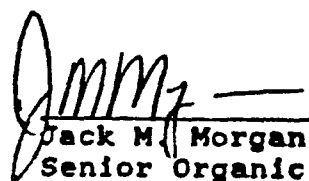
Date Extracted: NA

Date Analyzed: 03/15/89

Parameter	Concentration	Units
BENZENE	0.2 (0.2)	ug/l
TOLUENE	0.4 (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
m,p-XYLENE	ND (0.2)	ug/l
o-XYLENE	ND (0.2)	ug/l

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.


Jack M. Morgan
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2506 West Main Street
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**** Quality Assurance Report
Spike Analysis**

Date: April 01, 1989

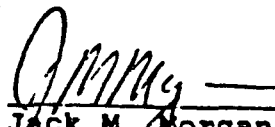
Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903151101
Sample Site: GBR-31
IML Lab No: F890950
Analysis Requested: Purgeable Aromatic
Sample Matrix: Water

Date Sampled: 03/15/89
Date Received: 03/15/89
Date Extracted: NA
Date Analyzed: 03/28/89

Parameter	Spike Added (ug/l)	Concentration (ug/l)	% Recovery
-----	-----	-----	-----
BENZENE	10	20.5 (0.2)	79.1
TOLUENE	10	11.4 (0.2)	80.7
ETHYLBENZENE	10	23.1 (0.2)	67.5
m,p-XYLENE	10	20.3 (0.2)	68.1
o-XYLENE	10	12.0 (0.2)	72.4

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.



Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
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**** Quality Assurance Report
Spike Analysis**

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903141503

Sample Site: GRW-13

IML Lab No: F890880

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/14/89

Date Received: 03/14/89

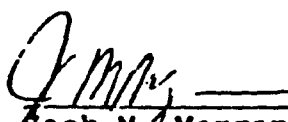
Date Extracted: NA

Date Analyzed: 03/23/89

Parameter	Spike Added (ug/l)	Concentration (ug/l)	% Recovery
-----	-----	-----	-----
BENZENE	10	9.51 (0.2)	95.1
TOLUENE	10	9.23 (0.2)	92.3
ETHYLBENZENE	10	9.48 (0.2)	94.8
m,p-XYLENE	10	9.46 (0.2)	94.6
o-XYLENE	10	9.47 (0.2)	94.7

Method: 8020 Aromatic Volatile Organics, SW-846, USEPA (1982)
602 Purgeable Aromatics, 40 CFR, Part 136

Note: Method Detection Limit (MDL) is given in parenthesis.
ND means analyte was not detected.



Jack M. Morgan
Senior Organic Chemist

Date: April 02, 1989

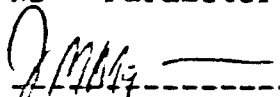
Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141157
Sample Site: GBR-47 Date Sampled: 03/14/89
IML Sample No: F890850 Date Received: 03/14/89
Analysis Requested: Purgeable Halocarbons Date Extracted: N/A
Sample Matrix: Water Date Analyzed: 03/29/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	3.1 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	ND (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	ND (0.03)	ug/l
1,1,1-TRICHLOROETHANE	ND (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	ND (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	ND (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan
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2506 West Main Street
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Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141313
Sample Site: GBR-17
IML Sample No: F890860
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

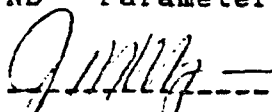
Date Sampled: 03/14/89
Date Received: 03/14/89
Date Extracted: N/A
Date Analyzed: 03/28/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	1.8 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	ND (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	ND (0.03)	ug/l
1,1,1-TRICHLOROETHANE	0.85 (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	ND (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	ND (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist

Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141423
Sample Site: GBR-24D Date Sampled: 03/14/89
IML Sample No: F890870 Date Received: 03/14/89
Analysis Requested: Purgeable Halocarbons Date Extracted: N/A
Sample Matrix: Water Date Analyzed: 03/28/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	ND (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	6.8 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	ND (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	ND (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	ND (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.


Jack M. Morgan
Senior Organic Chemist

Date: April 02, 1989

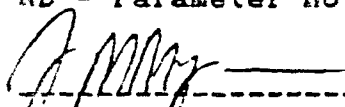
Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141503
Sample Site: GRW-13 Date Sampled: 03/14/89
IML Sample No: F890880 Date Received: 03/14/89
Analysis Requested: Purgeable Halocarbons Date Extracted: N/A
Sample Matrix: Water Date Analyzed: 03/28/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	2.0 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	ND (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	2.1 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	ND (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	ND (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	ND (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.


Jack M. Morgan -
Senior Organic Chemist



Inter-Mountain
Laboratories, Inc.

2506 West Main Street
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Tel. (505) 326 4737

Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141607
Sample Site: GBR-30
IML Sample No: F890890
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

Date Sampled: 03/14/89
Date Received: 03/14/89
Date Extracted: N/A
Date Analyzed: 03/28/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	1.0 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	0.08 (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	0.10 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	ND (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	ND (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	ND (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.

Jack M. Morgan
Senior Organic Chemist

Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141629
Sample Site: GBR-15
IML Sample No: F890900
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

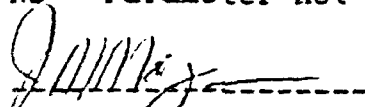
Date Sampled: 03/14/89
Date Received: 03/14/89
Date Extracted: N/A
Date Analyzed: 03/28/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	1.2 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	0.10 (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	16.9 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	ND (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	ND (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	ND (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.


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Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326 4737

Date: April 02, 1989

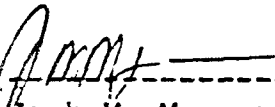
Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141331
Sample Site: GBR-EFFLUENT Date Sampled: 03/14/89
IML Sample No: F890910 Date Received: 03/14/89
Analysis Requested: Purgeable Halocarbons Date Extracted: N/A
Sample Matrix: Water Date Analyzed: 03/17/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	7.2 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	ND (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	11.1 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	ND (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	ND (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	ND (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.


Jack M. Morgan
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Date: April 02, 1989

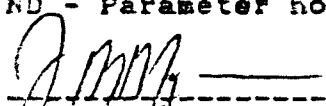
Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141347
Sample Site: GBR-INFLUENT Date Sampled: 03/14/89
IML Sample No: F890920 Date Received: 03/14/89
Analysis Requested: Purgeable Halocarbons Date Extracted: N/A
Sample Matrix: Water Date Analyzed: 03/17/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	2.5 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	ND (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	13.4 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	ND (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	ND (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	ND (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan -
Senior Organic Chemist

Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903151133
Sample Site: GBR-8
IML Sample No: F890930
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

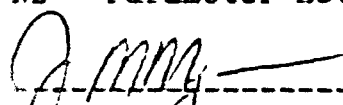
Date Sampled: 03/15/89
Date Received: 03/15/89
Date Extracted: N/A
Date Analyzed: 03/19/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	10.7 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	3.2 (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	5.7 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	ND (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	1.4 (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	ND (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.


Jack M. Morgan
Senior Organic Chemist

Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903151217
Sample Site: GBR-6
IML Sample No: F890940
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

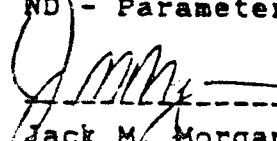
Date Sampled: 03/15/89
Date Received: 03/15/89
Date Extracted: N/A
Date Analyzed: 03/30/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	2.0 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	ND (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	ND (0.03)	ug/l
1,1,1-TRICHLOROETHANE	ND (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	ND (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	ND (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
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Date: April 02, 1989

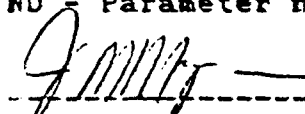
Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903151101
Sample Site: GBR-31- Date Sampled: 03/15/89
IML Sample No: F890950 Date Received: 03/15/89
Analysis Requested: Purgeable Halocarbons Date Extracted: N/A
Sample Matrix: Water Date Analyzed: 03/30/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	3.2 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	0.18 (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	0.84 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	ND (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	ND (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	0.17 (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
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Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903151003
Sample Site: GBR-33
IML Sample No: F890960
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

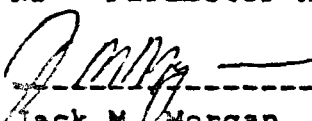
Date Sampled: 03/15/89
Date Received: 03/15/89
Date Extracted: N/A
Date Analyzed: 03/19/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	5.8 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	1.4 (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	0.33 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	0.32 (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	1.1 (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	1.4 (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
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Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903150823
Sample Site: GBR-47
IML Sample No: F890970
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

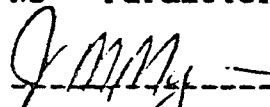
Date Sampled: 03/15/89
Date Received: 03/15/89
Date Extracted: N/A
Date Analyzed: 03/19/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	0.5 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	0.81 (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	0.45 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	0.24 (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	1.2 (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	2.0 (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist

Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903161013
Sample Site: GBR-13
IML Sample No: F890980
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

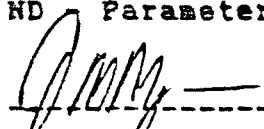
Date Sampled: 03/16/89
Date Received: 03/16/89
Date Extracted: N/A
Date Analyzed: 03/19/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	30.8 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	4.3 (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	4.4 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	ND (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	3.6 (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	ND (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist

**** Quality Assurance Report
Travel Blank Analysis**

Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: NA
Sample Site: NA
IML Sample No: NA
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

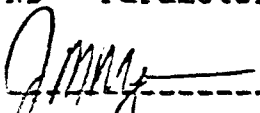
Date Sampled: NA
Date Received: 03/14/89
Date Extracted: N/A
Date Analyzed: 03/29/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	3.1 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	ND (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	0.21 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	ND (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	ND (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	ND (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	ND (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan -
Senior Organic Chemist

**** Quality Assurance Report
Travel Blank Analysis**

Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: NA
Sample Site: NA
IML Sample No: NA
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

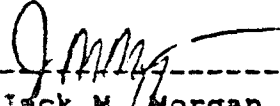
Date Sampled: NA
Date Received: 03/16/89
Date Extracted: N/A
Date Analyzed: 03/29/89

Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	9.4 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	ND (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	ND (0.1)	ug/l
1,2-DICHLOROETHANE	0.42 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	ND (0.03)	ug/l
CARBON TETRACHLORIDE	ND (0.1)	ug/l
BROMODICHLOROMETHANE	ND (0.1)	ug/l
1,2-DICHLOROPROPANE	1.2 (0.1)	ug/l
CIS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
TRICHLOROETHENE	ND (0.1)	ug/l
DIBROMOCHLOROMETHANE	ND (0.1)	ug/l
1,1,2-TRICHLOROETHANE	ND (0.02)	ug/l
TRANS-1,3-DICHLOROPROPENE	ND (0.1)	ug/l
2-CHLOROETHYL VINYL ETHER	ND (0.1)	ug/l
BROMOFORM	ND (0.2)	ug/l
1,1,2,2-TETRACHLOROETHANE	ND (0.03)	ug/l
TETRACHLOROETHENE	ND (0.03)	ug/l
CHLOROBENZENE	ND (0.1)	ug/l
1,2-DICHLOROBENZENE	ND (0.1)	ug/l
1,3-DICHLOROBENZENE	ND (0.1)	ug/l
1,4-DICHLOROBENZENE	ND (0.1)	ug/l

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist

**** Quality Assurance Report
Spike Analysis**

Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903150823
Sample Site: GBR-47
IML Sample No: F890970
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

Date Sampled: 03/15/89
Date Received: 03/15/89
Date Extracted: N/A
Date Analyzed: 03/19/89

Parameter	Spike Added (ug/l)	Concentration (ug/l)	Recovery (%)
1,1-DICHLOROETHANE	10	12.0 (0.1)	112
1,1,1-TRICHLOROETHANE	10	9.80 (0.03)	95.6

Method: 601 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.

Comments: The following compounds were detected in the spiked sample (taken from a second vial) which were not detected in the original sample matrix:

CHLOROBENZENE	25.2 ug/l
1,4-DICHLOROBENZENE	25.0 ug/l
1,2-DICHLOROBENZENE	18.1 ug/l



Jack M. Morgan
Senior Organic Chemist

Date: March 31, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141157
Site: GBR-47
IML Lab No: F890850
Date Collected: 3/14/89
Date Received: 3/14/89

Total Dissolved Solids (180), mg/l.....	2512
Total Dissolved Solids (calc), mg/l.....	2412
Total Alkalinity as CaCO ₃ , mg/l.....	230
Total Hardness as CaCO ₃ , mg/l.....	1227

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	281	4.60
Carbonate as CO ₃	0	0.00
Chloride.....	162	4.58
Sulfate.....	1351	28.15
Calcium.....	424	21.14
Magnesium.....	41	3.40
Potassium.....	1	0.03
Sodium.....	295	12.83
Nitrate/Nitrite.....	3.14	0.22

Major Cations.....	37.40
Major Anions.....	37.33
Cation/Anion Difference.....	0.09 %

J. Morgan

Jack M. Morgan
Senior Organic Chemist

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141313
Site: GBR-17
IML Lab No: F890860
Date Collected: 3/14/89
Date Received: 3/14/89

Total Dissolved Solids (180), mg/l.....	2496
Total Dissolved Solids (calc), mg/l.....	2407
Total Alkalinity as CaCO ₃ , mg/l.....	232
Total Hardness as CaCO ₃ , mg/l.....	1234

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	282	4.63
Carbonate as CO ₃	0	0.00
Chloride.....	162	4.56
Sulfate.....	1341	27.95
Calcium.....	415	20.72
Magnesium.....	48	3.96
Potassium.....	1	0.03
Sodium.....	301	13.09
Nitrate/Nitrite.....	3.14	0.22

Major Cations.....	37.80
Major Anions.....	37.14
Cation/Anion Difference.....	0.88 %



Jack M. Morgan
Senior Organic Chemist

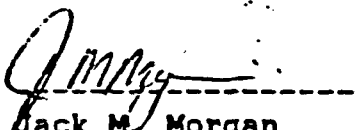
Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141423
Site: GBR-24D
IML Lab No: F890870
Date Collected: 3/14/89
Date Received: 3/14/89

Total Dissolved Solids (180), mg/l.....	3616
Total Dissolved Solids (calc), mg/l.....	3478
Total Alkalinity as CaCO ₃ , mg/l.....	240
Total Hardness as CaCO ₃ , mg/l.....	1696

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	292	4.79
Carbonate as CO ₃	0	0.00
Chloride.....	630	17.78
Sulfate.....	1593	33.19
Calcium.....	543	27.08
Magnesium.....	83	6.85
Potassium.....	6	0.15
Sodium.....	479	20.84
Nitrate/Nitrite.....	0.08	0.01

Major Cations.....	54.92
Major Anions.....	55.76
Cation/Anion Difference.....	0.76 %


Jack M. Morgan
Senior Organic Chemist

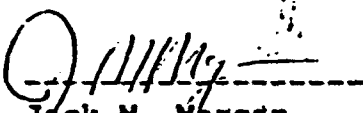
Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141503
Site: GRW-13
IML Lab No: F890880
Date Collected: 3/14/89
Date Received: 3/14/89

Total Dissolved Solids (180), mg/l.....	4232
Total Dissolved Solids (calc), mg/l.....	4116
Total Alkalinity as CaCO ₃ , mg/l.....	216
Total Hardness as CaCO ₃ , mg/l.....	1586

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	263	4.31
Carbonate as CO ₃	0	0.00
Chloride.....	830	23.42
Sulfate.....	1796	37.41
Calcium.....	588	29.33
Magnesium.....	29	2.39
Potassium.....	7	0.17
Sodium.....	738	32.10
Nitrate/Nitrite.....	0.41	0.03

Major Cations.....	63.99
Major Anions.....	65.14
Cation/Anion Difference.....	0.89 %



Jack M. Morgan
Senior Organic Chemist

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141607
Site: GBR-30
IML Lab No: F890890
Date Collected: 3/14/89
Date Received: 3/14/89

Total Dissolved Solids (180), mg/l.....	3604
Total Dissolved Solids (calc), mg/l.....	3518
Total Alkalinity as CaCO ₃ , mg/l.....	437
Total Hardness as CaCO ₃ , mg/l.....	1484

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	533	8.74
Carbonate as CO ₃	0	0.00
Chloride.....	583	16.45
Sulfate.....	1501	31.27
Calcium.....	530	26.46
Magnesium.....	39	3.23
Potassium.....	3	0.07
Sodium.....	600	26.10
Nitrate/Nitrite.....	0.05	.00

Major Cations.....	55.86
Major Anions.....	56.46
Cation/Anion Difference.....	0.53 %



Jack M. Morgan
Senior Organic Chemist

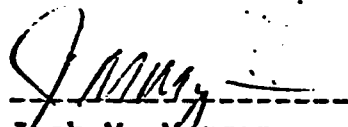
Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141629
Site: GBR-15
IML Lab No: F890900
Date Collected: 3/14/89
Date Received: 3/14/89

Total Dissolved Solids (180), mg/l.....	3724
Total Dissolved Solids (calc), mg/l.....	3670
Total Alkalinity as CaCO ₃ , mg/l.....	188
Total Hardness as CaCO ₃ , mg/l.....	1189

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	229	3.75
Carbonate as CO ₃	0	0.00
Chloride.....	282	7.96
Sulfate.....	2110	43.96
Calcium.....	449	22.41
Magnesium.....	17	1.37
Potassium.....	7	0.18
Sodium.....	693	30.14
Nitrate/Nitrite.....	0.06	.00

Major Cations.....	54.10
Major Anions.....	55.67
Cation/Anion Difference.....	1.43 %



Jack M. Morgan
Senior Organic Chemist

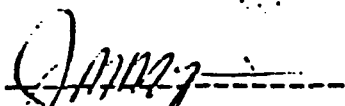
Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141331
Site: GBR-EFFLUENT
IML Lab No: F890910
Date Collected: 3/14/89
Date Received: 3/14/89

Total Dissolved Solids (180), mg/l.....	2592
Total Dissolved Solids (calc), mg/l.....	2478
Total Alkalinity as CaCO ₃ , mg/l.....	426
Total Hardness as CaCO ₃ , mg/l.....	1211

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	520	8.52
Carbonate as CO ₃	0	0.00
Chloride.....	357	10.08
Sulfate.....	1032	21.50
Calcium.....	408	20.38
Magnesium.....	47	3.84
Potassium.....	5	0.13
Sodium.....	374	16.27
Nitrate/Nitrite.....	0.79	0.06

Major Cations.....	40.62
Major Anions.....	40.10
Cation/Anion Difference.....	0.64 %


Jack M. Morgan
Senior Organic Chemist

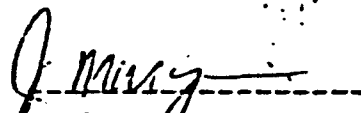
Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141347
Site: GBR-INFLUENT
IML Lab No: F890920
Date Collected: 3/14/89
Date Received: 3/14/89

Total Dissolved Solids (180), mg/l.....	2628
Total Dissolved Solids (calc), mg/l.....	2524
Total Alkalinity as CaCO ₃ , mg/l.....	455
Total Hardness as CaCO ₃ , mg/l.....	1264

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	555	9.10
Carbonate as CO ₃	0	0.00
Chloride.....	356	10.04
Sulfate.....	1042	21.71
Calcium.....	428	21.34
Magnesium.....	48	3.95
Potassium.....	5	0.13
Sodium.....	373	16.22
Nitrate/Nitrite.....	1.64	0.12

Major Cations.....	41.64
Major Anions.....	40.85
Cation/Anion Difference.....	0.96 %


Jack M. Morgan
Senior Organic Chemist

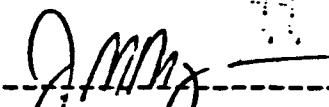
Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903151133
Site: GBR-8
IML Lab No: F890930
Date Collected: 3/15/89
Date Received: 3/15/89

Total Dissolved Solids (180), mg/l.....	3240
Total Dissolved Solids (calc), mg/l.....	3175
Total Alkalinity as CaCO ₃ , mg/l.....	1182
Total Hardness as CaCO ₃ , mg/l.....	1053

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	1441	23.63
Carbonate as CO ₃	0	0.00
Chloride.....	638	18.00
Sulfate.....	653	13.61
Calcium.....	351	17.49
Magnesium.....	43	3.57
Potassium.....	3	0.07
Sodium.....	780	33.93
Nitrate/Nitrite.....	0.81	0.06

Major Cations.....	55.06
Major Anions.....	55.24
Cation/Anion Difference.....	0.16 %



Jack M. Morgan
Senior Organic Chemist

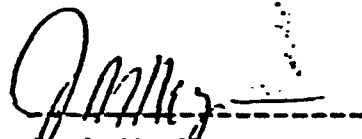
Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903151217
Site: GBR-6
IML Lab No: F890940
Date Collected: 3/15/89
Date Received: 3/15/89

Total Dissolved Solids (180), mg/l.....	2576
Total Dissolved Solids (calc), mg/l.....	2530
Total Alkalinity as CaCO ₃ , mg/l.....	1222
Total Hardness as CaCO ₃ , mg/l.....	1112

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	1491	24.44
Carbonate as CO ₃	0	0.00
Chloride.....	351	9.90
Sulfate.....	525	10.94
Calcium.....	321	16.03
Magnesium.....	75	6.20
Potassium.....	4	0.11
Sodium.....	522	22.71
Nitrate/Nitrite.....	0.16	0.01

Major Cations.....	45.05
Major Anions.....	45.28
Cation/Anion Difference.....	0.25 %



Jack M. Morgan
Senior Organic Chemist



Inter-Mountain
Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4717

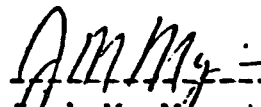
Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903151101
Site: GBR-31
IML Lab No: F890950
Date Collected: 3/15/89
Date Received: 3/15/89

Total Dissolved Solids (180), mg/l.....	3688
Total Dissolved Solids (calc), mg/l.....	3599
Total Alkalinity as CaCO ₃ , mg/l.....	445
Total Hardness as CaCO ₃ , mg/l.....	1454

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	543	8.90
Carbonate as CO ₃	0	0.00
Chloride.....	642	18.10
Sulfate.....	1490	31.03
Calcium.....	540	26.94
Magnesium.....	26	2.14
Potassium.....	3	0.08
Sodium.....	633	27.53
Nitrate/Nitrite.....	0.35	0.02

Major Cations.....	56.69
Major Anions.....	58.03
Cation/Anion Difference.....	1.17 %



Jack M. Morgan
Senior Organic Chemist

Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903151003
Site: GBR-33
IML Lab No: F890960
Date Collected: 3/15/89
Date Received: 3/15/89

Total Dissolved Solids (180), mg/l.....	3904
Total Dissolved Solids (calc), mg/l.....	3841
Total Alkalinity as CaCO ₃ , mg/l.....	284
Total Hardness as CaCO ₃ , mg/l.....	1604

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	346	5.67
Carbonate as CO ₃	0	0.00
Chloride.....	449	12.67
Sulfate.....	1983	41.32
Calcium.....	589	29.39
Magnesium.....	33	2.69
Potassium.....	2	0.06
Sodium.....	615	26.75
Nitrate/Nitrite.....	1.20	0.09

Major Cations.....	58.89
Major Anions.....	59.66
Cation/Anion Difference.....	0.65 %

Ammy

Jack M. Morgan
Senior Organic Chemist

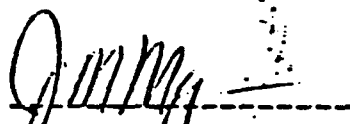
Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903150823
Site: GBR-47
IML Lab No: F890970
Date Collected: 3/15/89
Date Received: 3/15/89

Total Dissolved Solids (180), mg/l.....	3920
Total Dissolved Solids (calc), mg/l.....	3816
Total Alkalinity as CaCO ₃ , mg/l.....	281
Total Hardness as CaCO ₃ , mg/l.....	1588

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	343	5.62
Carbonate as CO ₃	0	0.00
Chloride.....	443	12.49
Sulfate.....	1980	41.25
Calcium.....	573	28.61
Magnesium.....	38	3.15
Potassium.....	3	0.06
Sodium.....	611	26.58
Nitrate/Nitrite.....	1.32	0.09

Major Cations.....	58.40
Major Anions.....	59.36
Cation/Anion Difference.....	0.82 %



Jack M. Morgan
Senior Organic Chemist

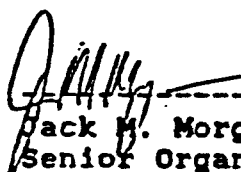
Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903161013
Site: GBR-13
IML Lab No: F890980
Date Collected: 3/16/89
Date Received: 3/16/89

Total Dissolved Solids (180), mg/l.....	4212
Total Dissolved Solids (calc), mg/l.....	4156
Total Alkalinity as CaCO ₃ , mg/l.....	724
Total Hardness as CaCO ₃ , mg/l.....	1709

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	883	14.47
Carbonate as CO ₃	0	0.00
Chloride.....	667	18.82
Sulfate.....	1639	34.15
Calcium.....	603	30.09
Magnesium.....	50	4.08
Potassium.....	3	0.08
Sodium.....	761	33.10
Nitrate/Nitrite.....	0.19	0.01

Major Cations.....	67.35
Major Anions.....	67.44
Cation/Anion Difference.....	0.07 %


Jack M. Morgan
Senior Organic Chemist

**** Quality Assurance Report
Duplicate Analysis**

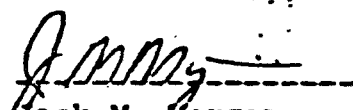
Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141313
Site: GBR-17
IML Lab No: F890860
Date Collected: 3/14/89
Date Received: 3/14/89

Total Dissolved Solids (180), mg/l.....	2480
Total Dissolved Solids (calc), mg/l.....	2402
Total Alkalinity as CaCO₃, mg/l.....	232
Total Hardness as CaCO₃, mg/l.....	1216

	mg/l	meq/l
Acidity as CaCO₃.....	<1	<0.01
Bicarbonate as HCO₃.....	283	4.64
Carbonate as CO₃.....	0	0.00
Chloride.....	161	4.54
Sulfate.....	1341	27.95
Calcium.....	422	21.06
Magnesium.....	40	3.26
Potassium.....	1	0.02
Sodium.....	298	12.96
Nitrate/Nitrite.....	2.85	0.20

Major Cations.....	37.30
Major Anions.....	37.13
Cation/Anion Difference.....	0.23 %


Jack M. Morgan
Senior Organic Chemist

**** Quality Assurance Report
Duplicate Analysis**

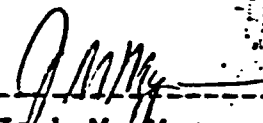
Date: April 01, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903151003
Site: GBR-33
IML Lab No: P890960
Date Collected: 3/15/89
Date Received: 3/15/89

Total Dissolved Solids (180), mg/l.....	3932
Total Dissolved Solids (calc), mg/l.....	3838
Total Alkalinity as CaCO₃, mg/l.....	283
Total Hardness as CaCO₃, mg/l.....	1598

	mg/l	meq/l
Acidity as CaCO₃.....	<1	<0.01
Bicarbonate as HCO₃.....	345	5.66
Carbonate as CO₃.....	0	0.00
Chloride.....	445	12.56
Sulfate.....	1990	41.46
Calcium.....	579	28.89
Magnesium.....	37	3.07
Potassium.....	2	0.06
Sodium.....	615	26.75
Nitrate/Nitrite.....	1.25	0.09

Major Cations.....	58.77
Major Anions.....	59.68
Cation/Anion Difference.....	0.77 %



Jack M. Morgan
Senior Organic Chemist



Inter-Mountain
Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Geoscience Consultants, Ltd.
Attn: Bruce Willard
500 Cooper Avenue NW
Suite 200
Albuquerque, NM 87102

09 April, 1989

Dear Mr. Willard:

From March 14 to 16, 1989, Inter-Mountain Laboratories, Inc. received eighteen (18) water samples from GCL to be analyzed for parameters so indicated on the chain-of-custody forms which accompanied the samples. Eleven (11) of the samples were analyzed for polynuclear aromatic hydrocarbons by method 8100, SW-846, "Test Methods for Evaluating Solid Waste", USEPA, 1986. The results of those analyses are enclosed.

The cleanup method employed was method 3630, SW-846, "Silica Gel Cleanup". Three samples, 8903141313, 8903141503, and 8903150823 were sufficiently interference free that cleanup was not required. However three samples, 8903141607, 8903151133, and 8903151217 required exhaustive cleanup such that the detection limits were increased substantially to reflect the practical quantitation limit (PQL).

Within the method, twenty four compounds are listed. Only sixteen of these were analyzed for, as the quality assurance data presented in the method is incomplete for the remaining eight compounds. It is thought that without complete quality assurance guidelines, these compounds cannot adequately be quantified. At your request, 1-Methylnaphthalene was also included in the analytical schedule.

Thank you for this opportunity, we hope to be able to work with GCL in the future. If you have any questions, please feel free to give me a call.

Sincerely,

Jack M. Morgan
Senior Organic Chemist

Date: April 08, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141313
Sample Site: GBR-17
IML Sample No: F890860
Analysis: Polynuclear Aromatic Hydrocarbons
Sample Matrix: Water

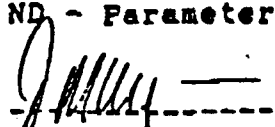
Date Sampled: 03/14/89
Date Received: 03/14/89
Date Extracted: 03/16/89
Date Analyzed: 04/06/89

Parameter	Concentration	Units
Acetnaphthene	ND (0.5)	ug/l
Acenaphthylene	ND (0.5)	ug/l
Anthracene	ND (0.5)	ug/l
Benzo(a)Anthracene	ND (0.5)	ug/l
Benzo(a)pyrene	ND (0.5)	ug/l
Benzo(b)fluoranthene	ND (0.5)	ug/l
Benzo(g,h,i)perylene	ND (0.5)	ug/l
Benzo(k)fluoranthene	2.6 (0.5)	ug/l
Chrysene	ND (0.5)	ug/l
Dibenzo(a,h)anthracene	ND (0.5)	ug/l
Fluoranthene	1.4 (0.5)	ug/l
Fluorene	1.8 (0.5)	ug/l
Indeno(1,2,3-cd)pyrene	ND (0.5)	ug/l
Naphthalene	ND (0.5)	ug/l
Phenanthrene	ND (0.5)	ug/l
Pyrene	ND (0.5)	ug/l
1-Methylnaphthalene	ND (0.5)	ug/l

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA(1986)

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist

Date: April 08, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141423
Sample Site: GBR-24D
IML Sample No: F890870
Analysis: Polynuclear Aromatic Hydrocarbons
Sample Matrix: Water

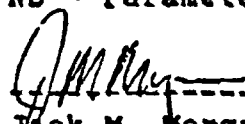
Date Sampled: 03/14/89
Date Received: 03/14/89
Date Extracted: 03/16/89
Date Analyzed: 04/04/89

Parameter	Concentration	Units
Acetnaphthene	ND (1.0)	ug/l
Acenaphthylene	ND (1.0)	ug/l
Anthracene	ND (1.0)	ug/l
Benzo(a)Anthracene	ND (0.5)	ug/l
Benzo(a)pyrene	ND (0.5)	ug/l
Benzo(b)fluoranthene	ND (0.5)	ug/l
Benzo(g,h,i)perylene	ND (0.5)	ug/l
Benzo(k)fluoranthene	ND (0.5)	ug/l
Chrysene	ND (0.5)	ug/l
Dibenzo(a,h)anthracene	ND (0.5)	ug/l
Fluoranthene	ND (1.0)	ug/l
Fluorene	ND (1.0)	ug/l
Indeno(1,2,3-cd)pyrene	ND (0.5)	ug/l
Naphthalene	ND (1.0)	ug/l
Phenanthrene	ND (1.0)	ug/l
Pyrene	ND (1.0)	ug/l
1-Methylnaphthalene	ND (1.0)	ug/l

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA(1986)

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist

Date: April 08, 1989

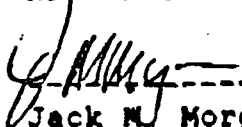
Client:	Geoscience Consultants, Ltd.		
GCL Sample No:	8903141503	Date Sampled:	03/14/89
Sample Site:	GRW-13	Date Received:	03/14/89
IML Sample No:	F890880	Date Extracted:	03/16/89
Analysis:	Polynuclear Aromatic Hydrocarbons	Date Analyzed:	04/01/89
Sample Matrix:	Water		

Parameter	Concentration	Units
Acetnaphthene	ND (0.5)	ug/l
Acenaphthylene	ND (0.5)	ug/l
Anthracene	ND (0.5)	ug/l
Benzo(a)Anthracene	ND (0.5)	ug/l
Benzo(a)pyrene	ND (0.5)	ug/l
Benzo(b)fluoranthene	ND (0.5)	ug/l
Benzo(g,h,i)perylene	ND (0.5)	ug/l
Benzo(k)fluoranthene	ND (0.5)	ug/l
Chrysene	ND (0.5)	ug/l
Dibenzo(a,h)anthracene	ND (0.5)	ug/l
Fluoranthene	ND (0.5)	ug/l
Fluorene	ND (0.5)	ug/l
Indeno(1,2,3-cd)pyrene	ND (0.5)	ug/l
Naphthalene	ND (0.5)	ug/l
Phenanthrene	ND (0.5)	ug/l
Pyrene	ND (0.5)	ug/l
1-Methylnaphthalene	ND (0.5)	ug/l

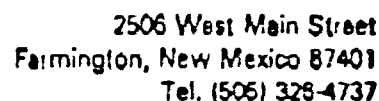
Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA(1986)

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist



Client:	Geoscience Consultants, Ltd.		
GCL Sample No:	8903141607		
Sample Site:	GBR-30	Date Sampled:	03/14/89
IML Sample No:	F890890	Date Received:	03/14/89
Analysis:	Polynuclear Aromatic	Date Extracted:	03/16/89
	Hydrocarbons	Date Analyzed:	04/09/89
Sample Matrix:	Water		

Jack M. Morgan
Senior Organic Chemist

Date: April 08, 1989

Client:	Geoscience Consultants, Ltd.		
GCL Sample No:	8903141629	Date Sampled:	03/14/89
Sample Site:	GBR-15	Date Received:	03/14/89
IML Sample No:	F890900	Date Extracted:	03/16/89
Analysis:	Polynuclear Aromatic Hydrocarbons	Date Analyzed:	04/07/89
Sample Matrix:	Water		

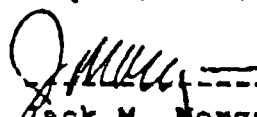
Parameter	Concentration	Units
Acetnaphthene	0.9 (1.0) *	ug/l
Acenaphthylene	ND (1.0)	ug/l
Anthracene	ND (1.0)	ug/l
Benzo(a)Anthracene	ND (0.5)	ug/l
Benzo(a)pyrene	ND (0.5)	ug/l
Benzo(b)fluoranthene	ND (0.5)	ug/l
Benzo(g,h,i)perylene	ND (0.5)	ug/l
Benzo(k)fluoranthene	3.0 (0.5)	ug/l
Chrysene	7.6 (0.5)	ug/l
Dibenzo(a,h)anthracene	ND (0.5)	ug/l
Fluoranthene	2.5 (1.0)	ug/l
Fluorene	3.4 (1.0)	ug/l
Indeno(1,2,3-cd)pyrene	ND (0.5)	ug/l
Naphthalene	ND (1.0)	ug/l
Phenanthrene	ND (1.0)	ug/l
Pyrene	1.5 (1.0)	ug/l
1-Methylnaphthalene	ND (1.0)	ug/l

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA(1986)

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.

* Qualitative identification below detection limit.


Jack M. Morgan
Senior Organic Chemist

Date: April 09, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903151133
Sample Site: GBR-8
IML Sample No: F890930
Analysis: Polynuclear Aromatic Hydrocarbons
Sample Matrix: Water

Date Sampled: 03/15/89
Date Received: 03/15/89
Date Extracted: 03/22/89
Date Analyzed: 04/09/89

Parameter	Concentration	Units
Acetnaphthene	86.3 (50.0)	ug/l
Acenaphthylene	66.5 (50.0)	ug/l
Anthracene	ND (50.0)	ug/l
Benzo(a)Anthracene	ND (50.0)	ug/l
Benzo(a)pyrene	ND (50.0)	ug/l
Benzo(b)fluoranthene	ND (50.0)	ug/l
Benzo(g,h,i)perylene	ND (50.0)	ug/l
Benzo(k)fluoranthene	ND (50.0)	ug/l
Chrysene	ND (50.0)	ug/l
Dibenzo(a,h)anthracene	ND (50.0)	ug/l
Fluoranthene	ND (50.0)	ug/l
Fluorene	93.9 (50.0)	ug/l
Indeno(1,2,3-cd)pyrene	ND (50.0)	ug/l
Naphthalene	70.3 (50.0)	ug/l
Phenanthrene	ND (50.0)	ug/l
Pyrene	ND (50.0)	ug/l
1-Methylnaphthalene	71.8 (50.0)	ug/l

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA(1986)

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.

Comments: Sample required extensive cleanup. Increased detection limits reflect increased baseline perturbation as well as sample loss due to cleanup.


Jack M. Morgan
Senior Organic Chemist

Date: April 09, 1989

Client:	Geoscience Consultants, Ltd.		
GCL Sample No:	8903151217	Date Sampled:	03/15/89
Sample Site:	GBR-6	Date Received:	03/15/89
IML Sample No:	F890940	Date Extracted:	03/22/89
Analysis:	Polynuclear Aromatic Hydrocarbons	Date Analyzed:	04/09/89
Sample Matrix:	Water		

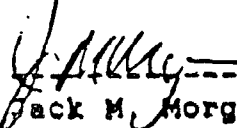
Parameter	Concentration	Units
Acetnaphthene	ND (50.0)	ug/l
Acenaphthylene	ND (50.0)	ug/l
Anthracene	ND (50.0)	ug/l
Benzo(a)Anthracene	ND (50.0)	ug/l
Benzo(a)pyrene	ND (50.0)	ug/l
Benzo(b)fluoranthene	ND (50.0)	ug/l
Benzo(g,h,i)perylene	ND (50.0)	ug/l
Benzo(k)fluoranthene	ND (50.0)	ug/l
Chrysene	ND (50.0)	ug/l
Dibenzo(a,h)anthracene	ND (50.0)	ug/l
Fluoranthene	ND (50.0)	ug/l
Fluorene	ND (50.0)	ug/l
Indeno(1,2,3-cd)pyrene	ND (50.0)	ug/l
Naphthalene	ND (50.0)	ug/l
Phenanthrene	ND (50.0)	ug/l
Pyrene	ND (50.0)	ug/l
1-Methylnaphthalene	ND (50.0)	ug/l

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USZPA(1986)

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.

Comments: Sample required extensive cleanup. Increased detection limits reflect increased baseline perturbation as well as sample loss due to cleanup.


Jack M. Morgan
Senior Organic Chemist

Date: April 09, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903151101
Sample Site: GBR-31
IML Sample No: F890950
Analysis: Polynuclear Aromatic Hydrocarbons
Sample Matrix: Water

Date Sampled: 03/15/89
Date Received: 03/15/89
Date Extracted: 03/22/89
Date Analyzed: 04/09/89

Parameter	Concentration	Units
Acetnaphthene	ND (5.0)	ug/l
Acenaphthylene	ND (5.0)	ug/l
Anthracene	ND (5.0)	ug/l
Benzo(a)Anthracene	ND (2.0)	ug/l
Benzo(a)pyrene	ND (2.0)	ug/l
Benzo(b)fluoranthene	ND (2.0)	ug/l
Benzo(g,h,i)perylene	ND (2.0)	ug/l
Benzo(k)fluoranthene	ND (2.0)	ug/l
Chrysene	ND (2.0)	ug/l
Dibenzo(a,h)anthracene	ND (2.0)	ug/l
Fluoranthene	8.3 (5.0)	ug/l
Fluorene	20.0 (5.0)	ug/l
Indeno(1,2,3-cd)pyrene	ND (2.0)	ug/l
Naphthalene	7.4 (5.0)	ug/l
Phenanthrene	15.8 (5.0)	ug/l
Pyrene	2.9 (5.0) *	ug/l
1-Methylnaphthalene	10.0 (5.0)	ug/l

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA(1986)

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.

* Qualitative identification below detection limit.



Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Date: April 08, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903151003
Sample Site: GBR-33
IML Sample No: F890960
Analysis: Polynuclear Aromatic Hydrocarbons
Sample Matrix: Water

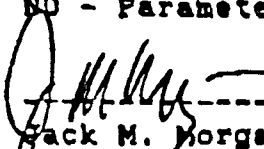
Date Sampled: 03/15/89
Date Received: 03/15/89
Date Extracted: 03/22/89
Date Analyzed: 04/07/89

Parameter	Concentration	Units
Acetnaphthene	ND (1.0)	ug/l
Acenaphthylene	ND (1.0)	ug/l
Anthracene	ND (1.0)	ug/l
Benzo(a)Anthracene	ND (0.5)	ug/l
Benzo(a)pyrene	ND (0.5)	ug/l
Benzo(b)fluoranthene	ND (0.5)	ug/l
Benzo(g,h,i)perylene	ND (0.5)	ug/l
Benzo(k)fluoranthene	ND (0.5)	ug/l
Chrysene	ND (0.5)	ug/l
Dibenzo(a,h)anthracene	ND (0.5)	ug/l
Fluoranthene	ND (1.0)	ug/l
Fluorene	ND (1.0)	ug/l
Indeno(1,2,3-cd)pyrene	ND (0.5)	ug/l
Naphthalene	ND (1.0)	ug/l
Phenanthrene	ND (1.0)	ug/l
Pyrene	ND (1.0)	ug/l
1-Methylnaphthalene	ND (1.0)	ug/l

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA(1986)

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist



2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 328-4737

Date: April 08, 1989

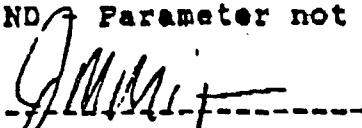
Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903150823
Sample Site: GBR-47
IML Sample No: F890970
Analysis: Polynuclear Aromatic Hydrocarbons
Sample Matrix: Water
Date Sampled: 03/15/89
Date Received: 03/15/89
Date Extracted: 03/22/89
Date Analyzed: 04/04/89

Parameter	Concentration	Units
Acetnaphthene	ND (0.5)	ug/l
Acenaphthylene	ND (0.5)	ug/l
Anthracene	ND (0.5)	ug/l
Benzo(a)Anthracene	ND (0.5)	ug/l
Benzo(a)pyrene	ND (0.5)	ug/l
Benzo(b)fluoranthene	ND (0.5)	ug/l
Benzo(g,h,i)perylene	ND (0.5)	ug/l
Benzo(k)fluoranthene	3.0 (0.5)	ug/l
Chrysene	7.6 (0.5)	ug/l
Dibenzo(a,h)anthracene	ND (0.5)	ug/l
Fluoranthene	ND (0.5)	ug/l
Fluorene	ND (0.5)	ug/l
Indeno(1,2,3-cd)pyrene	ND (0.5)	ug/l
Naphthalene	ND (0.5)	ug/l
Phenanthrene	ND (0.5)	ug/l
Pyrene	ND (0.5)	ug/l
1-Methylnaphthalene	ND (0.5)	ug/l

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA(1986)

(Detection limit in parenthesis.)

ND Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist



Inter-Mountain
Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Date: April 08, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903161013
Sample Site: GBR-13
IML Sample No: F890980
Analysis: Polynuclear Aromatic Hydrocarbons
Sample Matrix: Water

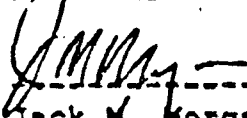
Date Sampled: 03/16/89
Date Received: 03/16/89
Date Extracted: 03/22/89
Date Analyzed: 04/07/89

Parameter	Concentration	Units
Acetnaphthene	ND (5.0)	ug/l
Acenaphthylene	ND (5.0)	ug/l
Anthracene	ND (5.0)	ug/l
Benzo(a)Anthracene	ND (1.0)	ug/l
Benzo(a)pyrene	ND (1.0)	ug/l
Benzo(b)fluoranthene	ND (1.0)	ug/l
Benzo(g,h,i)perylene	ND (1.0)	ug/l
Benzo(k)fluoranthene	ND (1.0)	ug/l
Chrysene	ND (1.0)	ug/l
Dibenzo(a,h)anthracene	ND (1.0)	ug/l
Fluoranthene	ND (5.0)	ug/l
Fluorene	ND (5.0)	ug/l
Indeno(1,2,3-cd)pyrene	ND (1.0)	ug/l
Naphthalene	ND (5.0)	ug/l
Phenanthrene	ND (5.0)	ug/l
Pyrene	ND (5.0)	ug/l
1-Methylnaphthalene	ND (5.0)	ug/l

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA(1986)

(Detection limit in parenthesis.)

ND) - Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist

**** Quality Assurance Report
Matrix Duplicate Analysis**

Date: April 08, 1989

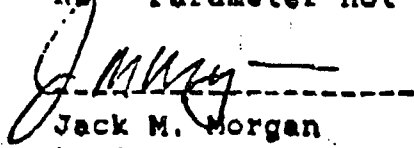
Client:	Geoscience Consultants, Ltd.		
GCL Sample No:	8903151003	Date Sampled:	03/15/89
Sample Site:	GBR-33	Date Received:	03/15/89
IML Sample No:	7890960	Date Extracted:	03/22/89
Analysis:	Polynuclear Aromatic Hydrocarbons	Date Analyzed:	04/07/89
Sample Matrix:	Water		

Parameter	Concentration	Units
Acetnaphthene	ND (1.0)	ug/l
Acenaphthylene	ND (1.0)	ug/l
Anthracene	ND (1.0)	ug/l
Benzo(a)Anthracene	ND (0.5)	ug/l
Benzo(a)pyrene	ND (0.5)	ug/l
Benzo(b)fluoranthene	ND (0.5)	ug/l
Benzo(g,h,i)perylene	ND (0.5)	ug/l
Benzo(k)fluoranthene	ND (0.5)	ug/l
Chrysene	ND (0.5)	ug/l
Dibenzo(a,h)anthracene	ND (0.5)	ug/l
Fluoranthene	ND (1.0)	ug/l
Fluorene	ND (1.0)	ug/l
Indeno(1,2,3-cd)pyrene	ND (0.5)	ug/l
Naphthalene	ND (1.0)	ug/l
Phenanthrene	ND (1.0)	ug/l
Pyrene	ND (1.0)	ug/l
1-Methylnaphthalene	ND (1.0)	ug/l

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA(1986)

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.



Jack M. Morgan
Senior Organic Chemist

**** Quality Assurance Report
Duplicate Matrix Spike**

Date: April 08, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141503
Sample Site: GRW-13
IML Sample No: F890880
Analysis: Polynuclear Aromatic
Hydrocarbons
Sample Matrix: Water

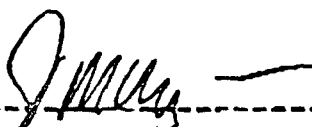
Date Sampled: 03/14/89
Date Received: 03/14/89
Date Extracted: 03/16/89
Date Analyzed: 04/04/89

Parameter	Concentration (ug/l)	Percent Recovery
Acetnaphthene	5.78 (0.5)	57.8
Acenaphthylene	6.51 (0.5)	55.1
Anthracene	5.83 (0.5)	58.3
Benzo(a)Anthracene	4.03 (0.5)	40.3
Benzo(a)pyrene	4.46 (0.5)	44.6
Benzo(b)fluoranthene	4.21 (0.5)	42.1
Benzo(g,h,i)perylene	1.49 (0.5)	14.9
Benzo(k)fluoranthene	5.77 (0.5)	57.7
Chrysene	5.29 (0.5)	52.9
Dibenzo(a,h)anthracene	3.11 (0.5)	31.1
Fluoranthene	5.29 (0.5)	52.9
Fluorene	5.93 (0.5)	59.3
Indeno(1,2,3-cd)pyrene	3.60 (0.5)	36.0
Naphthalene	5.95 (0.5)	59.5
Phenanthrene	6.23 (0.5)	62.3
Pyrene	5.81 (0.5)	58.1

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA(1986)

Detection Limit in parenthesis

Comments: Spike 10 ug of all parameters into 1 litre of sample.



Jack M. Morgan
Senior Organic Chemist

**** Quality Assurance Report
Method Blank**

Date: April 09, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: NA
Sample Site: NA
IML Sample No: NA
Analysis: Polynuclear Aromatic
Hydrocarbons
Sample Matrix: Water
Date Sampled: NA
Date Received: NA
Date Extracted: 03/16/89
Date Analyzed: 04/09/89

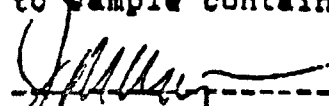
Parameter	Concentration	Units
Acetnaphthene	ND (0.5)	ug/l
Acenaphthylene	ND (0.5)	ug/l
Anthracene	ND (0.5)	ug/l
Benzo(a)Anthracene	ND (0.5)	ug/l
Benzo(a)pyrene	ND (0.5)	ug/l
Benzo(b)fluoranthene	ND (0.5)	ug/l
Benzo(g,h,i)perylene	ND (0.5)	ug/l
Benzo(k)fluoranthene	ND (0.5)	ug/l
Chrysene	ND (0.5)	ug/l
Dibenzo(a,h)anthracene	ND (0.5)	ug/l
Fluoranthene	ND (0.5)	ug/l
Fluorene	ND (0.5)	ug/l
Indeno(1,2,3-cd)pyrene	ND (0.5)	ug/l
Naphthalene	ND (0.5)	ug/l
Phenanthrene	ND (0.5)	ug/l
Pyrene	ND (0.5)	ug/l
1-Methylnaphthalene	ND (0.5)	ug/l

Method: 8100 Polynuclear Aromatic Hydrocarbons, SW-846, USEPA (1986)

(Detection limit in parenthesis.)

ND - Parameter not detected at the stated detection limit.

Comments: Duplicate DI water blanks were prepared in bottles which were set up for the field crew, but not used. These were extracted and analyzed to identify any contamination sources due to sample containers or preservatives. None were identified.


Jack M. Morgan
Senior Organic Chemist