

GW - 40

MONITORING REPORTS

DATE:
1989

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OIL CONSERVATION DIV.
SANTA FE



**ANALYTICAL RESULTS FOR
UPGRADIENT WELLS, 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



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: 8903141053

Sample Site: GBR-32

IML Lab No: F890830

Analysis Requested: Purgeable Aromatic

Sample Matrix: Water

Date Sampled: 03/14/89

Date Received: 03/14/89

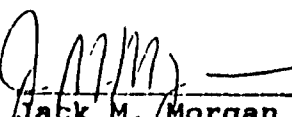
Date Extracted: NA

Date Analyzed: 03/23/89

Parameter	Concentration	Units
BENZENE	0.81 (0.2)	ug/l
TOLUENE	1.1 (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



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Date: April 01, 1989

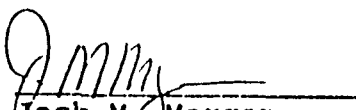
Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141113
Sample Site: GBR-48
IML Lab No: F890840
Analysis Requested: Purgeable Aromatic
Sample Matrix: Water

Date Sampled: 03/14/89
Date Received: 03/14/89
Date Extracted: NA
Date Analyzed: 03/27/89

Parameter	Concentration	Units
BENZENE	0.24 (0.2)	ug/l
TOLUENE	0.23 (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.


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Date: April 01, 1989

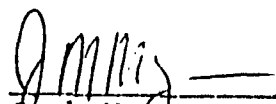
Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141023
Sample Site: GBR-49
IML Lab No: F890820
Analysis Requested: Purgeable Aromatic
Sample Matrix: Water

Date Sampled: 03/14/89
Date Received: 03/14/89
Date Extracted: NA
Date Analyzed: 03/23/89

Parameter	Concentration	Units
BENZENE	0.63 (0.2)	ug/l
TOLUENE	ND (0.2)	ug/l
ETHYLBENZENE	ND (0.2)	ug/l
m,p-XYLENE	0.28 (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.



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Date: April 01, 1989

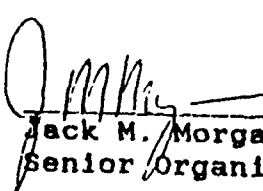
Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141001
Sample Site: GBR-50
IML Lab No: F890810
Analysis Requested: Purgeable Aromatic
Sample Matrix: Water

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
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2506 West Main Street
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Date: April 02, 1989

Client: Geoscience Consultants, Ltd.

GCL Sample No: 8903141053

Sample Site: GBR-32

IML Sample No: F890830

Analysis Requested: Purgeable Halocarbons

Sample Matrix: Water

Date Sampled: 03/14/89

Date Received: 03/14/89

Date Extracted: N/A

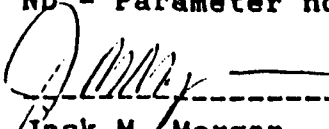
Date Analyzed: 03/28/89

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	10.8 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	3.1 (0.1)	ug/l
1,1-DICHLOROETHANE	ND (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	0.4 (0.1)	ug/l
1,2-DICHLOROETHANE	ND (0.03)	ug/l
1,1,1-TRICHLOROETHANE	0.78 (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	8.1 (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	11.7 (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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**** Quality Assurance Report
Duplicate Analysis**

Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141113
Sample Site: GBR-48
IML Sample No: F890840
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

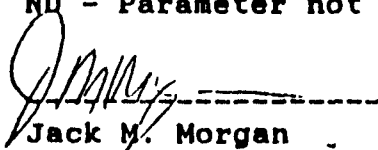
Date Sampled: 03/14/89
Date Received: 03/14/89
Date Extracted: N/A
Date Analyzed: 03/28/89

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	1.1 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	3.3 (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	0.5 (0.1)	ug/l
1,2-DICHLOROETHANE	ND (0.03)	ug/l
1,1,1-TRICHLOROETHANE	0.73 (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	6.0 (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	7.6 (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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Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141113
Sample Site: GBR-48
IML Sample No: F890840
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

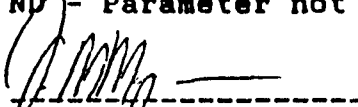
Date Sampled: 03/14/89
Date Received: 03/14/89
Date Extracted: N/A
Date Analyzed: 03/28/89

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	0.6 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	3.0 (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (0.1)	ug/l
CHLOROFORM	0.6 (0.1)	ug/l
1,2-DICHLOROETHANE	ND (0.03)	ug/l
1,1,1-TRICHLOROETHANE	0.69 (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	6.4 (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	7.4 (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.



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

Date: April 02, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141023
Sample Site: GBR-49
IML Sample No: F890820
Analysis Requested: Purgeable Halocarbons
Sample Matrix: Water

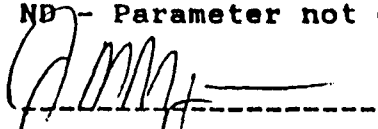
Date Sampled: 03/14/89
Date Received: 03/14/89
Date Extracted: N/A
Date Analyzed: 03/19/89

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	2.5 (0.1)	ug/l
TRICHLOROFLUOROMETHANE	ND (0.1)	ug/l
1,1-DICHLOROETHENE	ND (0.1)	ug/l
1,1-DICHLOROETHANE	10.4 (0.05)	ug/l
TRANS-1,2-DICHLOROETHENE	0.3 (0.1)	ug/l
CHLOROFORM	1.0 (0.1)	ug/l
1,2-DICHLOROETHANE	0.07 (0.03)	ug/l
1,1,1-TRICHLOROETHANE	3.5 (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	24.9 (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	25.3 (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



InterMountain
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: 8903141001

Sample Site: GBR-50

IML Sample No: F890810

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	0.1 (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	0.19 (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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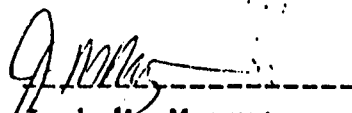
Date: March 31, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141053
Site: GBR-32
IML Lab No: F890830
Date Collected: 3/14/89
Date Received: 3/14/89

Total Dissolved Solids (180), mg/l.....	3660
Total Dissolved Solids (calc), mg/l.....	3573
Total Alkalinity as CaCO ₃ , mg/l.....	384
Total Hardness as CaCO ₃ , mg/l.....	1133

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	468	7.68
Carbonate as CO ₃	0	0.00
Chloride.....	541	15.26
Sulfate.....	1588	33.09
Calcium.....	395	19.72
Magnesium.....	36	2.93
Potassium.....	3	0.08
Sodium.....	780	33.93
Nitrate/Nitrite.....	3.97	0.28

Major Cations.....	56.66
Major Anions.....	56.03
Cation/Anion Difference.....	0.56 %



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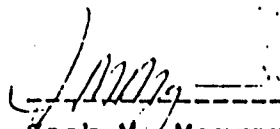
Date: March 31, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141113
Site: GBR-48
IML Lab No: F890840
Date Collected: 3/14/89
Date Received: 3/14/89

Total Dissolved Solids (180), mg/l.....	4496
Total Dissolved Solids (calc), mg/l.....	4329
Total Alkalinity as CaCO ₃ , mg/l.....	396
Total Hardness as CaCO ₃ , mg/l.....	1732

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	483	7.92
Carbonate as CO ₃	0	0.00
Chloride.....	693	19.54
Sulfate.....	1960	40.84
Calcium.....	625	31.19
Magnesium.....	42	3.44
Potassium.....	3	0.07
Sodium.....	770	33.49
Nitrate/Nitrite.....	6.20	0.44

Major Cations.....	68.19
Major Anions.....	68.30
Cation/Anion Difference.....	0.08 %



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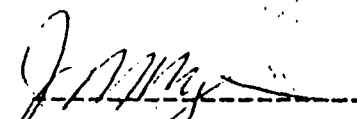
Date: March 22, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141023
Site: GBR-49
IML Lab No: F890820
Date Collected: 3/14/89
Date Received: 3/14/89

Total Dissolved Solids (180), mg/l.....	6068
Total Dissolved Solids (calc), mg/l.....	5911
Total Alkalinity as CaCO ₃ , mg/l.....	482
Total Hardness as CaCO ₃ , mg/l.....	2171

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	587	9.63
Carbonate as CO ₃	0	0.00
Chloride.....	1524	42.98
Sulfate.....	2077	43.28
Calcium.....	733	36.57
Magnesium.....	83	6.85
Potassium.....	7	0.18
Sodium.....	1199	52.15
Nitrate/Nitrite.....	7.12	0.51

Major Cations.....	95.75
Major Anions.....	95.89
Cation/Anion Difference.....	0.07 %


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Senior Organic Chemist

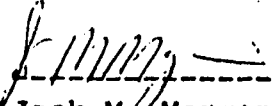
Date: March 31, 1989

Client: Geoscience Consultants, Ltd.
GCL Sample No: 8903141001
Site: GBR-50
IML Lab No: F890810
Date Collected: 3/14/89
Date Received: 3/14/89

Total Dissolved Solids (180), mg/l.....	2564
Total Dissolved Solids (calc), mg/l.....	2503
Total Alkalinity as CaCO ₃ , mg/l.....	215
Total Hardness as CaCO ₃ , mg/l.....	963

	mg/l	meq/l
Acidity as CaCO ₃	<1	<0.01
Bicarbonate as HCO ₃	262	4.29
Carbonate as CO ₃	0	0.00
Chloride.....	173	4.87
Sulfate.....	1396	29.08
Calcium.....	338	16.85
Magnesium.....	29	2.41
Potassium.....	3	0.09
Sodium.....	436	18.96
Nitrate/Nitrite.....	2.90	0.21

Major Cations.....	38.31
Major Anions.....	38.24
Cation/Anion Difference.....	0.09 %



Jack M. Morgan
Senior Organic Chemist

Geoscience Consultants, Ltd.
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 500 Copper N.W.
 Suite 200
 Albuquerque, NM 87102
 (505) 842-0001
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 (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 3010
Chain of Custody
2-29 PAGE 2 OF 2

[illegible]

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 (505) 524-5364

No 3009

Chain of Custody

DATE 6/13/89 PAGE 1 OF 2

LAB NAME		ANALYSIS REQUEST												NUMBER OF CONTAINERS																			
ADDRESS																																	
TELEPHONE																																	
SAMPLE (SIGNATURE)																																	
SAMPLE NUMBER	MATRIX	LOCATION	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	502/8020	TOTAL ORGANIC	CARBON 415/8060	TOTAL ORGANIC	HALIDES 9020	PETROLEUM	HYDROCARBONS 418.1	TPH	MODIFIED 8015	PRIORITY POLLUTANT	CAM METALS (18)	TTL/C/STLC	EP TOX	SDWA-INORGANICS	PRIMARY/SECONDARY	HAZARDOUS WASTE	PROFILE	Conductivity	
3906131459	Water	GBR-47											X	X	X																		4
3906131615	Water	GBR-50											X	X	X																		6
3906131650	Water	GBR-48											X	X	X																		6
3906131700	Water	Blank											X	X	X																		4
3906131745	Water	GBR-32											X	X	X																		6
3906140800	Water	GBR-49											X	X	X																		5
3906140830	Water	GBR-14											X	X	X																		5

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJECT:	PROJECT DIRECTOR	TOTAL NO. OF CONTAINERS	CHAIN OF CUSTODY SEALS
M47A	NEE		
CHARGE CODE NO. 0348006		REC'D GOOD CONDITION/COLD	CONFORMS TO RECORD
SHIPPING ID. NO.		LAB NO.	
1A: Hand Delivery			
SPECIAL INSTRUCTIONS/COMMENTS: These are only 2-40ml vials for GBR-47			

RELINQUISHED BY		RELINQUISHED BY	
1.	2.	1.	2.
Martina Lee (Signature) 1000 (Date) 6/14/89 (Printed Name) GCL (Company)			
RECEIVED BY	RECEIVED BY	RECEIVED BY	RECEIVED BY
(Signature)	(Signature)	(Signature)	(Signature)
(Printed Name)	(Printed Name)	(Printed Name)	(Printed Name)
(Company)	(Company)	(Company)	(Company)
RECEIVED BY (LABORATORY) 3		RECEIVED BY (LABORATORY) 3	
(Signature)		(Signature)	
(Printed Name)		(Printed Name)	
(Company)		(Company)	



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 file naming 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



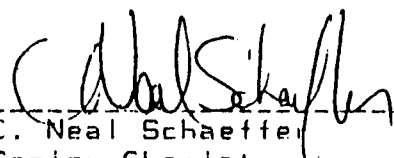
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8906121632
Site: GBR-51
IML #: F1562

Date of report: 06/23/87
Date sampled: 06/12/87
Date received: 06/13/87

Total dissolved solids (180)..... 2542.00 mg/l
Total dissolved solids (calculated). 2340.46 mg/l
Total alkalinity (as CaCO₃)..... 249.75 mg/l
Total hardness (as CaCO₃)..... 1094.94 mg/l
Lab pH..... 7.44
Lab conductivity..... 3040 umhos/cm @ 25C
Lab resistivity..... 3.2895 ohm-m

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	304.69	4.99
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	137.71	3.88
Sulfate.....	1361.65	28.37
Calcium.....	200.85	10.02
Magnesium.....	144.42	11.88
Potassium.....	0.96	0.02
Sodium.....	346.80	15.08
Major cations.....		37.01
Major anions.....		37.25
Anion/cation % difference.....		0.32 %


C. Neal Schaeffer
Senior Chemist



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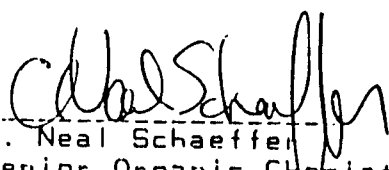
Client: GCL #8906121632
Site: GBR-51
IML #: F1562

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

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	1.4 (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



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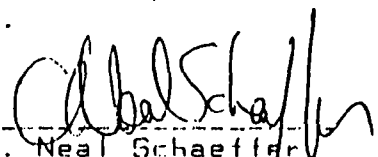
Client: GCL #8906121632
Site: GBR-51
IML #: F1562

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 (10.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	3.3 (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	1.3 (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



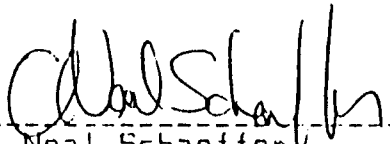
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8906121700
Site: GBR-52
IML #: F1563

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

Total dissolved solids (100)..... 2858.00 mg/l
Total dissolved solids (calculated). 2633.63 mg/l
Total alkalinity (as CaCO₃)..... 183.15 mg/l
Total hardness (as CaCO₃)..... 1393.56 mg/l
Lab pH..... 7.24
Lab conductivity..... 3200 umhos/cm @ 25C
Lab resistivity..... 3.1250 ohm-cm

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	223.44	3.66
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	113.40	3.20
Sulfate.....	1662.05	34.63
Calcium.....	233.64	11.66
Magnesium.....	197.14	16.21
Potassium.....	1.60	0.04
Sodium.....	317.20	13.80
Major cations.....		41.71
Major anions.....		41.47
Anion/cation % difference.....		0.27 %


C. Neal Schaeffer
Senior Chemist



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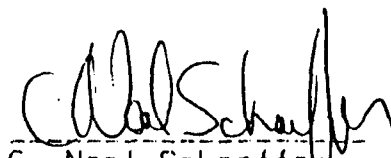
Client: GCL #8906121700
Site: GBR-52
IML #: F1563

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

Parameter	Concentration	Units
BENZENE	7.6 (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 parentheses.
ND means analyte was not detected.


C. Neal Schaeffer
Senior Organic Chemist

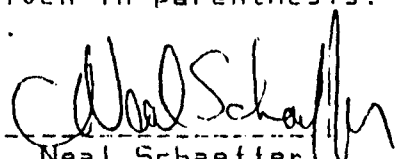
Client: GCL #8906121700
Site: GBR-52
IML #: F1563

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	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	1.3 (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



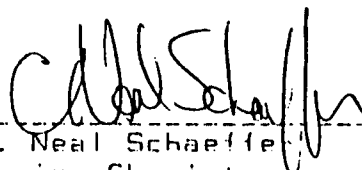
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

Client: GCL #8906131615
Site: GBR-50
IML #: F1569

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

Total dissolved solids (100)..... 2712.00 mg/l
Total dissolved solids (calculated). 2610.71 mg/l
Total alkalinity (as CaCO₃)..... 197.33 mg/l
Total hardness (as CaCO₃)..... 974.50 mg/l
Lab pH..... 7.35
Lab conductivity..... 3290 umhos/cm @ 25C
Lab resistivity..... 3.0375 ohm-cm

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	240.75	3.95
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	97.20	2.74
Sulfate.....	1591.68	33.16
Calcium.....	327.92	16.36
Magnesium.....	38.02	3.13
Potassium.....	2.40	0.06
Sodium.....	436.40	18.98
Major cations.....		38.54
Major anions.....		39.85
Anion/cation % difference.....		1.68 %


C. Neal Schaeffer
Senior Chemist



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Farmington, New Mexico 87401
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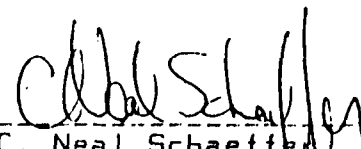
Client: GCL #8906131615
Site: GBR-50
IML #: F1569

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	6.0 (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 #8906131615
Site: GBR-50
IML #: F1569

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)
401 Purgeable Halocarbons, 40 CFR Part 136, USEPA (1984).

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

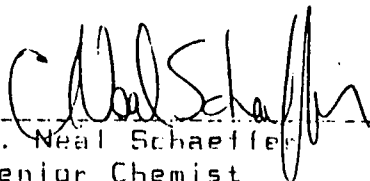

C. Neal Schaeffer
Senior Organic Chemist

Client: GCL #8906131450
Site: GBR-48
IML #: F1570

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

Total dissolved solids (180)..... 6022.00 mg/l
Total dissolved solids (calculated) 5677.67 mg/l
Total alkalinity (as CaCO3)..... 454.79 mg/l
Total hardness (as CaCO3)..... 2065.46 mg/l
Lab pH..... 6.84
Lab conductivity..... 8010 umhos/cm @ 25C
Lab resistivity..... 1.2484 ohm-cm

	mg/l	meq/l
Acidity (as CaCO3).....	<1.0	<0.01
Bicarbonate (as HCO3).....	554.85	9.10
Carbonate (as CO3).....	0.00	0.00
Chloride.....	1409.46	39.76
Sulfate.....	2055.85	42.83
Calcium.....	659.94	32.93
Magnesium.....	101.88	8.38
Potassium.....	4.90	0.13
Sodium.....	1176.00	51.15
Major cations.....		92.59
Major anions.....		91.69
Anion/cation % difference.....		0.47 %


C. Neal Schaeffer
Senior Chemist



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

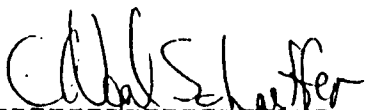
Client: GCL #8906131650
Site: GBR-48
IML #: F1570

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 (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
Senior Organic Chemist

Client: GCL #8906131650
Site: GBR-48
IML #: F1570

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

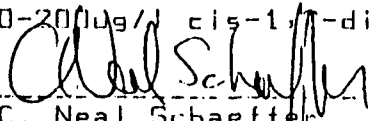
Parameter	Concentration	Units
CHLOROMETHANE	ND (1.0)	ug/l
BROMOMETHANE	ND (1.0)	ug/l
DICHLORODIFLUOROMETHANE	ND (1.0)	ug/l
VINYL CHLORIDE	ND (1.0)	ug/l
CHLOROETHANE	ND (1.0)	ug/l
METHYLENE CHLORIDE	ND (1.0)	ug/l
TRICHLOROFLUOROMETHANE	ND (1.0)	ug/l
1,1-DICHLOROETHENE	ND (1.0)	ug/l
1,1-DICHLOROETHANE	5.2 (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	2.4 (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	14.7 (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	26.1 (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.

** Chromatographic evidence of about 100-200 ug/l cis-1,2-dichloroethene.


C. Neal Schaeffer
Senior Organic Chemist



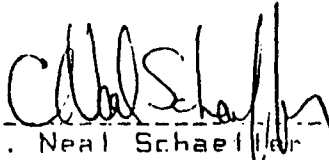
2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326 4737

Client: GCL #8906131745
Site: GBR-32
IML #: F1572

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

Total dissolved solids (100)..... 3770.00 mg/l
Total dissolved solids (calculated). 3682.43 mg/l
Total alkalinity (as CaCO₃)..... 375.24 mg/l
Total hardness (as CaCO₃)..... 1080.01 mg/l
Lab pH..... 7.26
Lab conductivity..... 5000 umhos/cm @ 25C
Lab resistivity..... 2.0000 ohm-cm

	mg/l	meq/l
Acidity (as CaCO ₃).....	<1.0	<0.01
Bicarbonate (as HCO ₃).....	457.79	7.50
Carbonate (as CO ₃).....	0.00	0.00
Chloride.....	477.92	13.48
Sulfate.....	1750.93	36.48
Calcium.....	418.10	20.86
Magnesium.....	8.96	0.74
Potassium.....	2.44	0.06
Sodium.....	801.60	34.87
Major cations.....		56.53
Major anions.....		57.46
Anion/cation % difference.....		0.82 %


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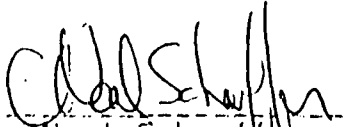
Client: GCL #8906131745
Site: GBR-32
IML #: F1572

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

iml



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Tel. (505) 326-4737

Client: GCL #8906131745
Site: GBR-32
IML #: F1572

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	3.9 (1.0)	ug/l
TRANS-1,2-DICHLOROETHENE	ND (1.0)	ug/l
CHLOROFORM	3.0 (1.0)	ug/l
1,2-DICHLOROETHANE	ND (1.0)	ug/l
1,1,1-TRICHLOROETHANE	1.5 (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	12.2 (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	17.3 (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: BU20 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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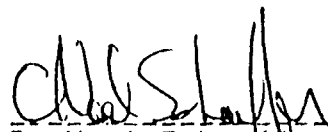
Client: GCL #0906140800
Site: GBR-49
IML #: F1573

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 (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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2506 West Main Street
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Client: GCL #0906140800
Site: GBR-49
IML #: F1573

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.

C. Neal Schaeffer
Senior Organic Chemist

Client: GCL #8906140800
Site: GBR-49
IML #: F1573

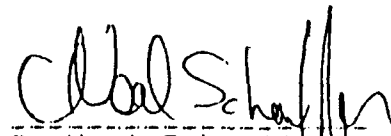
Date of report: 06/23/89
Date sampled: 06/14/89
Date received: 06/14/89

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	2.7 (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	4.2 (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.

** Chromatographic evidence of about 100-200ug/l cis-1,2-dichloroethene.


C. Neal Schaeffer
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Quality control data, duplicate analysis.

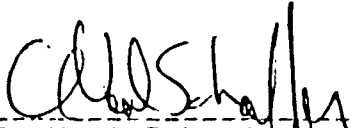
Client: GCL #89D6121632
Site: GBR-51
JML #: F1562

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

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	1.9 (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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Quality control data, duplicate analysis.

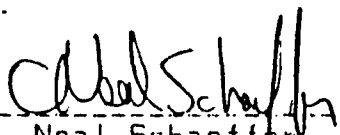
Client: GCL #B9D6121632
Site: GBR-51
IML #: F1562

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	2.0 (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	1.0 (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



2506 West Main Street
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Quality control data, duplicate analysis.

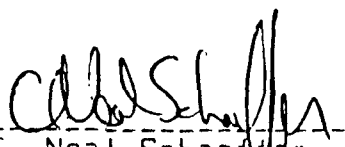
Client: GCL #8906121700
Site: GBR-52
IML #: F1563

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

Parameter	Concentration	Units
BENZENE	5.4 (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

Quality control data, duplicate analysis.

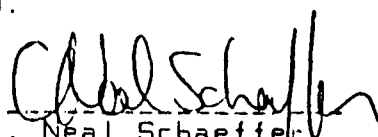
Client: GCL #8906121700
Site: GBR-52
IML #: F1563

Date of report: 06/23/89
Date sampled: 06/12/87
Date received: 06/13/87

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	1.3 (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



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Quality control data, matrix spike analysis.

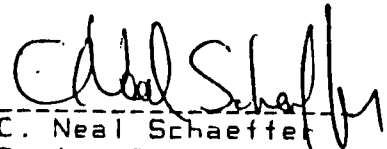
Client: GCL #8906131650
Site: GBR-48
IML #: F1570

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	20	0.0 ug/l	20.7	104
TOLUENE	20	0.0 ug/l	21.9	110
ETHYLBENZENE	20	0.0 ug/l	20.4	102
CHLOROBENZENE	20	0.0 ug/l	19.7	98.6
m,p-XYLENE	20	0.0 ug/l	20.7	103
o-XYLENE	20	0.0 ug/l	20.7	103
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
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Quality control data, matrix spike analysis.

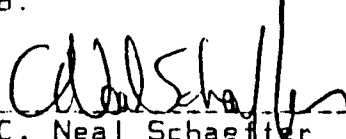
Client: GCL #8906131650
Site: GBR-48
IML #: F1570

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	20	5.2 ug/l	22.4	86.0
TRANS-1,2-DICHLOROETHENE	0.0	0.0 ug/l	0.0	
CHLOROFORM	0.0	0.0 ug/l	0.0	
1,2-DICHLOROETHANE	0.0	0.0 ug/l	0.0	
1,1,1-TRICHLOROETHANE	20	2.4 ug/l	17.1	74.8
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	20	14.7 ug/l	30.4	81.1
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	26.1 ug/l	40.0	69.6
CHLOROBENZENE	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	
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



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

Quality control data, matrix spike analysis.

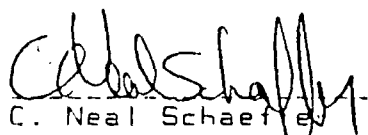
Client: GCL #8906140800
Site: GBR-49
IML #: F1573

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

Parameter	Spike added	Sample amount (prev. run)	Result	Percent recovery
BENZENE	10	0.0 ug/l	9.5	95.2
TOLUENE	10	0.0 ug/l	10.0	100
ETHYLBENZENE	10	0.0 ug/l	9.5	95.0
CHLOROBENZENE	10	0.0 ug/l	12.5	125
m,p-XYLENE	10	0.0 ug/l	9.4	94.1
p-XYLENE	10	0.0 ug/l	9.1	91.3
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 Schaefer
Senior Organic Chemist



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

Quality control data, matrix spike analysis.

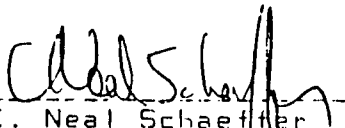
Client: GCL #89D614D8DD
Site: GBR-49
IML #: F1573

Date of report: 06/23/89
Date sampled: 06/14/89
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	0.0	0.0 ug/l	0.0	
1,1,1-TRICHLOROETHANE	0.0	0.0 ug/l	0.0	
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	10	2.7 ug/l	10.8	80.8
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	10	4.2 ug/l	12.9	86.6
CHLOROBENZENE	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	
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

Analytical Report
12/22/89

RECEIVED DEC 25 1989

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
P. O. Box 201088
Austin, TX 78720-1088

512/454-4797

Client Services Coordinator: WLBROWN

Certified by: *David L. King*

PROJECT INFORMATION		SAMPLE RECEIPT		RELINQUISHED BY		RELINQUISHED BY		RELINQUISHED BY	
PROJECT	TOTAL NO. OF CONTAINERS	1.	2.	3.	1.	2.	3.	1.	2.
PROJECT: <i>M4A</i>	17	<i>M. Lee</i>							
PROJECT DIRECTOR: <i>N/E/E</i>	CHAIN OF CUSTODY SEALS	<i>M. Lee</i>							
CHARGE CODE NO. <i>448006</i>	REC'D GOOD CONDITION/COLD	<i>M. Lee</i>							
SHIPPING ID NO. <i>3381863800</i>	CONFORMS TO RECORD	<i>M. Lee</i>							
VIA: <i>Red 85</i>	LAB NO.	<i>M. Lee</i>							
SPECIAL INSTRUCTIONS/COMMENTS:									
		RECEIVED BY		RECEIVED BY		RECEIVED BY		RECEIVED BY	
		(Signature)	(Time)	(Signature)	(Time)	(Signature)	(Time)	(Signature)	(Time)
		<i>P. Wise</i>	<i>12-12-87</i>						
		(Printed Name)	(Date)	(Printed Name)	(Date)	(Printed Name)	(Date)	(Printed Name)	(Date)
		<i>Kedlar</i>							
		(Company)	(Company)	(Company)	(Company)	(Company)	(Company)	(Company)	(Company)

RECEIVED DEC 14 1989

DISTRIBUTION:

WHITE, CANARY, LABORATORY, PINK, GEOSCIENCE CONSULTANTS, LTD.

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

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	95	104	88	110	127	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.

 (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: 89-12-089

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.

500 Copper N.W.
Suite 200
Albuquerque, NM 87102
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Suite 706
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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

8912160

3321

Chain of Custody

DATE 12-20-89 PAGE 1 OF 1

ANALYSIS REQUEST

LAB NAME	Radian Analytical	ADDRESS	8501 Mo-Pac Blvd. Austin, TX 78720-1088	TELEPHONE	512/454-4797	SAMPLERS (SIGNATURE)	MATRIX	LOCATION	GC/MS/ 625/8270	GC/MS/ 624/8240	PESTICIDES/PCB	POLYNUCLEAR	AROMATIC 610/8310	PHENOLS, SUB PHENOLS	604/8040	HALOGENATED	VOLATILES 601/8010	AROMATIC VOLATILES	CARBON 415/8060	TOTAL ORGANIC	HALIDES 9020	PETROLEUM	HYDROCARBONS 418.1	TPH	MODIFIED 8015	PRIORITY POLLUTANT	CAM METALS (18)	TTLG/STLC	EP TOX	90W-METALS (18)	HAZARDOUS WASTE	PROFILE
8912181059	water	HP03																														
8912181124	water	GBR-32																														
8912181244	water	HP04																														
8912181455	water	HP05																														
8912190901	water	HP06																														
8912191220	water	HP07																														
8912191645	water	HP08																														
8912201116	water	HP09																														
8912201452	water	HP10																														

PROJECT INFORMATION	SAMPLE RECEIPT	RELINQUISHED BY	RELINQUISHED BY
PROJECT: M9A	TOTAL NO. OF CONTAINERS	1.	2.
PROJECT DIRECTOR: M2e	CHAIN OF CUSTODY SEALS	(Signature) (Time)	(Signature) (Time)
CHARGE CODE NO. 348-006	REC'D GOOD CONDITION/COLD	(Printed Name) (Date)	(Printed Name) (Date)
SHIPPING ID. NO. 33813113511	CONFORMS TO RECORD	(Company)	(Company)
VIA: Federal Express	LAB NO.	RECEIVED BY	RECEIVED BY (LABORATORY)
SPECIAL INSTRUCTIONS/COMMENTS:		(Signature) (Time)	(Signature) (Time)
		(Printed Name) (Date)	(Printed Name) (Date)
		(Company)	(Company)

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.
Radlan 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: SV8020				
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
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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Las Cruces, NM 88004
(505) 524-5364

N^o 3328
Chain of Custody
PAGE 1 OF 1

DATE 12/11/89 PAGE 1 OF 1

ANALYSIS REQUEST

LAB NAME	InterMountain Laboratories		
ADDRESS	2506 West Main Street Farmington, NM 87401		
TELEPHONE	505-326-4737		
SAMPLERS SIGNATURE			
SAMPLE NUMBER	MATRIX	LOCATION	
89111120	Water	G1B20	
8912111240	Water	G1B232	
8912111345	Water	G1B249	
8912111450	Water	G1B2-17	
Trip Blank	Water	m	

ANALYSIS REQUEST		NUMBER OF CONTAINERS	
BASE/NEU/ACID CMPS.		1	
GC/MS/ 625/6270		1	
VOLATILE CMPS.		1	
GC/MS/ 624/6240		1	
PESTICIDES/PCB		1	
608/8080		1	
POLYNUCLEAR		1	
AROMATIC 610/6310		1	
PHENOLS, SUB PHENOLS		1	
604/8040		1	
HALOGENATED		1	
VOLATILES 601/6010		1	
AROMATIC VOLATILES		1	
602/6020		1	
TOTAL ORGANIC		1	
CARBON 415/6060		1	
TOTAL ORGANIC		1	
HALIDES 6020		1	
PETROLEUM		1	
HYDROCARBONS 416.1		1	
TPH		1	
MODIFIED 6018		1	
IONIC, TDS		1	
CONDUCT		1	
PRIORITY POLLUTANT		1	
METALS (13)		1	
CAM METALS (18)		1	
TIC/STIC		1	
EP TOX		1	
METALS (8)		1	
SDWA-INORGANICS		1	
PRIMARY/SECONDARY		1	
HAZARDOUS WASTE		1	
PROFILE		1	

PROJECT INFORMATION		SAMPLE RECEIPT		RELINQUISHED BY	RELINQUISHED BY	RELINQUISHED BY
PROJECT:	HA 17	TOTAL NO. OF CONTAINERS		(Signature)	(Time)	(Time)
PROJECT DIRECTOR	NBE	CHAIN OF CUSTODY SEALS		(Printed Name)	(Date)	(Date)
CHARGE CODE NO.	44000	REC'D GOOD CONDITION/COLD		(Company)		
SHIPPING ID. NO.	NA	CONFORMS TO RECORD		(Signature)	(Time)	(Time)
VIA:	HAND DELIVERED	LAB NO.		(Printed Name)	(Date)	(Date)
SPECIAL INSTRUCTIONS/COMMENTS:			RECEIVED BY	RECEIVED BY (LABORATORY)	RECEIVED BY	RECEIVED BY
			(Signature)	(Signature)	(Signature)	(Signature)
			(Printed Name)	(Printed Name)	(Printed Name)	(Printed Name)
			(Company)	(Company)	(Company)	(Company)

DISTRIBUTION: WHITE CANARY - LABORATORY - PINK - GEOSCIENCE CONSULTANTS LTD.



InterMountain
Laboratories, Inc.

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

CLIENT: Geoscience Consultants

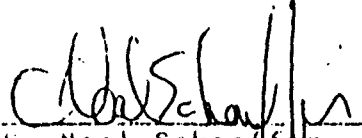
DATE REPORTED: 12/20/89

SITE: GBR-50
LAB NO: F3652

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

Lab pH (s.u.).....	7.30
Lab Conductivity, μ mhos/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.....	209.88
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.....	361.50	15.72
Major Cations.....		32.08
Major Anions.....		32.61
Cation/Anion Difference.....		0.82 %


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-32

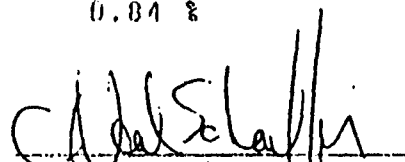
DATE RECEIVED: 12/11/89

LAB NO: F3653

DATE COLLECTED: 12/11/89

Lab pH (s.u.).....	7.44
Lab Conductivity, umhos/cm.....	3721
Lab resistivity, ohm-m.....	2.6874
Total Dissolved Solids (180), mg/l..	2716
Total Dissolved Solids (calc), mg/l.	2720
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 Schaefer
Senior Chemist



Inter-Mountain
Laboratories, Inc.

CLIENT: Geoscience Consultants

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

DATE REPORTED: 12/20/89

SITE: GBR-49

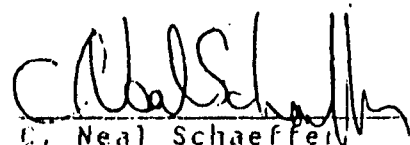
DATE RECEIVED: 12/11/89

LAB NO: F3654

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
Laboratories, Inc.

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

CLIENT: Geoscience Consultants

DATE REPORTED: 12/20/89

SITE: GBR-17

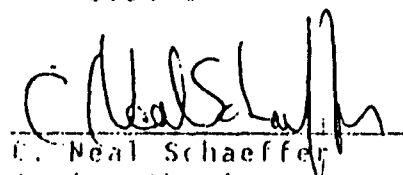
DATE RECEIVED: 12/11/89

LAB NO: F3655

DATE COLLECTED: 12/11/89

Lab pH (s.u.).....	8.24
Lab Conductivity, umhos/cm.....	2850
Lab resistivity, ohm-m.....	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

Received: 07/08/89

RAC Sacramento
Result: 14 Sample

REPORT

Work Order # 89-09-050

SAMPLE ID 890801601 H2O CBL-5 2 ACTION 922 TEST CODE 601 NAME Purviable Halocarbons H2O

Date & Time: Collected 07/07/89

Category

ORGANICS ANALYSIS DATA SHEET - PURVIALE HALOCARBONS (1)

ANALYST	MS	FILE #	D4051812	VERIFIED	JD
INSTRMT	4	FACTOR	1	UNITS	ug/L
CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR	
74-87-2	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	1.1 C	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-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	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: 09/08/87

RAS Sacramento

Result: by Sample

REPORT

Work Order # S9-09-050
Continued From Above

SAMPLE ID 8909071601 H2O

52

FRACTION 03A

TEST CODE 601

NAME Purceable Halocarbons H2O

Date & Time Collected 09/07/87

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.

Received: 07/08/89

RAS Sacramento

REPORT

Work Order # 89-09-050

Results by Sample

SAMPLE ID 8909071601 H2O 52

FRACTION Q3C

TEST CODE 602B

NAME Purgeable Aromatics - H2O

Date & Time Collected 09/07/89

Category

ORGANICS ANALYSIS DATA SHEET - PURGEABLE AROMATICS (1)

ANALYST INSTRMT	MG 4	INJECTD 09/18/89	FILE # E4091815 FACTOR	COMPOUND	RESULT	I UNITS	VERIFIED ug/L	DET LIMIT	FACTOR
		71-43-2		Benzene	ND		0.10		1
		108-98-3		Toluene	ND		0.20		1
		100-41-4		Ethylbenzene	ND		0.10		1
		108-90-7		Chlorobenzene	ND		0.10		1
		1230-20-7		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 106% recovery

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