

NM - 35

INSPECTIONS & DATA

BARBER OIL, INC.
111 West Mermod
Post Office Box 1658
CARLSBAD, NEW MEXICO 88220
(505) 887-2566

FACSIMILE COVER PAGE

DATE 12/15/93

TO: OCD - ENVIRONMENTAL DEPT

ATTN: ROGER ANDERSON

FAX # 827-5741

FROM: MIKE GARRINGER

FAX # (505) 887-5251

NUMBER OF PAGES INCLUDING COVER PAGE 3

COMMENTS: PLEASE CALL ME AT 887-2566

AFTER YOU HAVE REVIEWED THE

ENCLOSED - THANKS

**ARDINAL
LABORATORIES**

PHONE (815) 673-7001 • 2111 BEECHWOOD • ABILENE, TEXAS 79602

PHONE (505) 593-2326 • 101 E. MARLAND • HOBBS, NEW MEXICO 88240

FINAL ANALYSIS REPORT

Company: Baker Performance Chemicals
Address: P.O. Box 250
City, State: Lovington, NM 88261-0250

Date: 12/15/83
Lab#: H1456

Project Name: Barber Lease

Project Location: Barber Oil Co.

Sampled by: JL

Date:

Time:

Analyzed by: HM

Date: 8/15/93

Time: 10:00

Type of Samples: Water

Sample Condition: GS

Units: mg/l

Samp	Field	LEAD	CHROMIUM
#	Code		

1	Barber Lease	0.31	0.04
---	--------------	------	------


Michael R. Fowler

Date

11/14/84

12-15-1993 01:21PM

BARBER/RESMGT/NNEDG

15053332475

CARDINAL LABS

1 505 887 5251 P.03/03
86 P02 DEC 15 '93 11:28**CARDINAL
LABORATORIES**

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TEXAS 79603

PHONE (505) 390-2328 • 101 E. MARLAND • MORGAN, NEW MEXICO 88240

FINAL ANALYSIS REPORTCompany: Baker Performance Chemicals
Address: P.O. Box 250
City, State: Lovington, NM 88261-0250Date: 12/15/93
Lab#: H1436

Project Name: Barber Lease

Project Location: Barber Oil Co.

Sampled by: JL

Date:

Time:

Analyzed by: NM

Date: 12/15/93

Time: 10:00

Type of Samples: Water

Sample Condition: GS

Units: mg/l

Samp #	Field Code	BENZENE	TOLUENE	ETHYL BENZENE	PARA-XYLENE	META-XYLENE	ORTHO-XYLENE	MTHC
1	Barber Lease	0.081	0.207	0.071	0.084	0.157	0.134	4.369

QC Recovery	0.857	0.774	0.817	0.809	0.803	0.893	0.675
QC Spike	0.881	0.867	0.874	0.877	0.869	0.893	0.757
Accuracy	97.3%	89.3%	93.5%	92.2%	92.4%	95.5%	89.2%
Air Blank	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Methods - AUTOMATED HEADSPACE GC
- EPA SW-846; EPA METHODS 8020
Michael R. Fowler

Date



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

ANALYSIS REQUEST FORM

Contract Lab SWL

Contract No. _____

OCD Sample No. 042119921510

Collection Date	Collection Time	Collected by —Person/Agency	
4/21/92	1510	C. EUSTICE - OCD	OCD

SITE INFORMATION

Sample location

Collection Site Description

Sample from the water tank that holds waste water
to be injected into disposal well

Township, Range, Section, Tract:

| | | + | | + | + | |

SEND
FINAL
REPORT
TO ↓ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

SAMPLE FIELD TREATMENT — Check proper boxes

No. of samples submitted:

- ☒ NF: Whole sample (Non-filtered)
☐ F: Filtered in field with 0.45 μ m membrane filter
☐ PF: Pre-filtered w/45 μ m membrane filter

- ☐ NA: No acid added
☐ A: HCL
☐ A: 2ml H₂SO₄/L added
- ☐ A: 5ml conc. HNO₃ added
☐ A: 4ml fuming HNO₃ added

FIELD COMMENTS:

L. Squires complaint against Barber Oil

LAB ANALYSIS REQUESTED:

ITEM	DESC	METHOD	ITEM	DESC	METHOD	ITEM	DESC	METHOD
☐ 001	VOA	8020	☐ 013	PHENOL	604	☐ 026	Cd	713
☐ 002	VOA	802	☐ 014	VOC	8240	☐ 027	Pb	742
☐ 003	VOH	8010	☐ 015	VOC	624	☐ 028	Hg(L)	747
☐ 004	VOH	601	☐ 016	SVOC	8250	☐ 031	Se	774
☐ 005	SUITE	8010-8020	☐ 017	SVOC	625	☐ 032	ICAP	601
☐ 006	SUITE	601-602	☐ 018	VOC	8260	☒ 033	CATIONS/ANIONS	
☐ 007	HEADSPACE		☐ 019	SVOC	8270	☐ 034	N SUITE	
☐ 008	PAH	8100	☐ 020	O&G	9070	☐ 035	NITRATE	
☐ 009	PAH	610	☐ 022	AS	7060	☐ 036	NITRITE	
☐ 010	PCB	8080	☐ 023	Ba	7080	☐ 037	AMMONIA	
☐ 011	PCB	608	☐ 024	Cr	7190	☐ 038	TKN	
☐ 012	PHENOL	8040	☐ 025	Cr6	7198	☐	OTHER	



SOUTHWESTERN LABORATORIES

Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services
1703 West Industrial Avenue • P.O. Box 2150 • Midland, Texas 79702
RECEIVED

Report of tests on Water
Client New Mexico Oil Conservation
Division
Delivered by Chris Eustice

File No. 6308150
Report No. 77736-1
Report Date 5-12-92
Date Received 4-22-92

Identification Barber Oil, Disposal Well, No. 042119921510
Sampled 4-22-92 by C. Eustice

REPORT OF CHEMICAL ANALYSIS

<u>Parameters</u>	<u>Results mg/L</u>	<u>Date Performed</u>	<u>Analyst</u>	<u>Standard Methods, 17th Edition</u>
Calcium	920	5-1-92	W. Jaycox	3500-Ca, D
Magnesium	462	5-1-92	W. Jaycox	3500-Mg, E
Sodium	12800	4-24-92	G. Bunch	3500-Na, D
Potassium	290	4-24-92	G. Bunch	3500-K, D
Carbonate	0	4-30-92	W. Jaycox	2320-B
Bicarbonate	1940	4-30-91	W. Jaycox	2320-B
Sulfate	2392	5-4-92	W. Jaycox	4500-SO ₄ , C
Chloride	20069	4-30-92	W. Jaycox	4500-Cl, B
Total Dissolved Solids, @ 180°C	38280	5-4-92	W. Jaycox	2540-C
Total Hardness as CaCO ₃	4200	5-1-92	W. Jaycox	2340-C
pH	7.72	4-30-92	W. Jaycox	4500-H

Copies: New Mexico Oil Conservation Divison, Attn: Roger Anderson
1cc: Chris Eustice, P. O. Box 1980, Hobbs, NM 88240-1980

SSS
Reviewed by

SOUTHWESTERN LABORATORIES
Albert B. Eustice



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

ANALYSIS REQUEST FORM

Contract Lab SWL Contract No. _____OCD Sample No. 042119921515

Collection Date	Collection Time	Collected by — Person/Agency
	<u>1515</u>	<u>C. Eustice</u>

OCD

SITE INFORMATION

Sample location

Collection Site Description

Sampled from pond close to Barber Oil Co.
disposal well.

Township, Range, Section, Tract:

20 + 30 + 20 + 1SEND
FINAL
REPORT
TO ↓ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

SAMPLE FIELD TREATMENT — Check proper boxes

No. of samples submitted:

- ☒ NF: Whole sample (Non-filtered)
☐ F: Filtered in field with 0.45 μ m membrane filter
☐ PF: Pre-filtered w/45 μ m membrane filter

- ☐ NA: No acid added
☐ A: HCL
☐ A: 2ml H_2SO_4 /L added
- ☐ A: 5ml conc. HNO_3 added
☐ A: 4ml fuming HNO_3 added

FIELD COMMENTS:

L. Squires complaint against Barber Oil

LAB ANALYSIS REQUESTED:

ITEM	DESC	METHOD	ITEM	DESC	METHOD	ITEM	DESC	METHOD
☐ 001	VOA	8020	☐ 013	PHENOL	604	☐ 026	Cd	713
☐ 002	VOA	602	☐ 014	VOC	8240	☐ 027	Pb	742
☐ 003	VOH	8010	☐ 015	VOC	624	☐ 028	Hg(L)	747
☐ 004	VOH	601	☐ 016	SVOC	8250	☐ 031	Se	774
☐ 005	SUITE	8010-8020	☐ 017	SVOC	625	☐ 032	ICAP	601
☐ 006	SUITE	601-602	☐ 018	VOC	8260	☒ 033	CATIONS/ANIONS	
☐ 007	HEADSPACE		☐ 019	SVOC	8270	☐ 034	N SUITE	
☐ 008	PAH	8100	☐ 020	O&G	9070	☐ 035	NITRATE	
☐ 009	PAH	610	☐ 022	AS	7060	☐ 036	NITRITE	
☐ 010	PCB	8080	☐ 023	Ba	7080	☐ 037	AMMONIA	
☐ 011	PCB	608	☐ 024	Cr	7190	☐ 038	TKN	
☐ 012	PHENOL	8040	☐ 025	Cr6	7198	☐	OTHER	



SOUTHWESTERN LABORATORIES

Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services

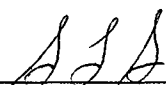
1703 West Industrial Avenue • P.O. Box 2150 • Midland, Texas 79702

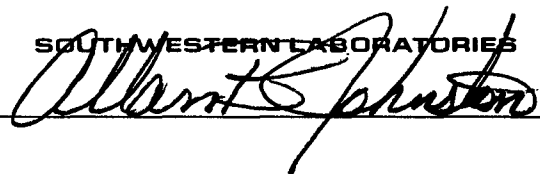
Report of tests on	Water	File No.	6308150
Client	New Mexico Oil Conservation	Report No.	77736-2
	Division	Report Date	5-12-92
Delivered by	Chris Eustice	Date Received	4-22-92
Identification	Barber Oil, Pond, No. 042119921515		
	Sampled 4-22-92 by C. Eustice		

REPORT OF CHEMICAL ANALYSIS

<u>Parameters</u>	<u>Results</u> <u>mg/L</u>	<u>Date</u> <u>Performed</u>	<u>Analyst</u>	<u>Standard Methods,</u> <u>17th Edition</u>
Calcium	3880	5-1-92	W. Jaycox	3500-Ca, D
Magnesium	680	5-1-92	W. Jaycox	3500-Mg, E
Sodium	5600	4-24-92	G. Bunch	3500-Na, D
Potassium	210	4-24-92	G. Bunch	3500-K, D
Carbonate	0	4-30-92	W. Jaycox	2320-B
Bicarbonate	61	4-30-91	W. Jaycox	2320-B
Sulfate	2016	5-4-92	W. Jaycox	4500-SO ₄ , C
Chloride	16169	5-5-92	W. Jaycox	4500-Cl, B
Total Dissolved Solids, @ 180°C	32300	5-4-92	W. Jaycox	2540-C
Total Hardness as CaCO ₃	12500	5-1-92	W. Jaycox	2340-C
pH	6.86	4-30-92	W. Jaycox	4500-H

Copies: New Mexico Oil Conservation Divison, Attn: Roger Anderson
1cc: Chris Eustice, P. O. Box 1980, Hobbs, NM 88240-1980


Reviewed by


SOUTHWESTERN LABORATORIES



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

ANALYSIS REQUEST FORM

Contract Lab SWL Contract No. _____OCD Sample No. 042119Z1530

Collection Date	Collection Time	Collected by — Person/Agency
<u>4/21/92</u>	<u>1530</u>	<u>C. EUSTICE</u>

OCD

SITE INFORMATION

Sample location

Collection Site Description

Potash Pond beside NM St Hwy 360
around 2 mi marker

Township, Range, Section, Tract:

20 + 30 + 20 + 1SEND
FINAL
REPORT
TO

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

SAMPLE FIELD TREATMENT — Check proper boxes

No. of samples submitted: _____

- ☒ NF: Whole sample (Non-filtered)
☐ F: Filtered in field with 0.45 μ membrane filter
☐ PF: Pre-filtered w/45 μ membrane filter

- | | |
|--|---|
| ☐ NA: No acid added | ☐ A: 5ml conc. HNO ₃ added |
| ☐ A: HCL | ☐ A: 4ml fuming HNO ₃ added |
| ☐ A: 2ml H ₂ SO ₄ added | |

FIELD COMMENTS:

SAMPLING CONDITIONS

- ☐ Bailed ☐ Pump
☒ Dipped ☐ Tap

pH(00400)

Water Temp. (00010)

Water level

Discharge

Sample type

Conductivity (Uncorrected)

Conductivity at 25° C

1 mho1 mho

Sample pertains to L. Squires complaint about Barber Oil
Co

LAB ANALYSIS REQUESTED:

ITEM	DESC	METHOD	ITEM	DESC	METHOD	ITEM	DESC	METHOD
☐ 001	VOA	8020	☐ 013	PHENOL	604	☐ 026	Cd	7130
☐ 002	VOA	602	☐ 014	VOC	8240	☐ 027	Pb	7420
☐ 003	VOH	8010	☐ 015	VOC	624	☐ 028	Hg(L)	7470
☐ 004	VOH	601	☐ 016	SVOC	8250	☐ 031	Se	7740
☐ 005	SUITE	8010-8020	☐ 017	SVOC	625	☐ 032	ICAP	6010
☐ 006	SUITE	601-602	☐ 018	VOC	8260	☒ 033	CATIONS/ANIONS	
☐ 007	HEADSPACE		☐ 019	SVOC	8270	☐ 034	N SUITE	
☐ 008	PAH	8100	☐ 020	O&G	9070	☐ 035	NITRATE	
☐ 009	PAH	610	☐ 022	AS	7060	☐ 036	NITRITE	
☐ 010	PCB	8080	☐ 023	Ba	7080	☐ 037	AMMONIA	
☐ 011	PCB	608	☐ 024	Cr	7190	☐ 038	TKN	
☐ 012	PHENOL	8040	☐ 025	Cr6	7198	☐	OTHER	



SOUTHWESTERN LABORATORIES

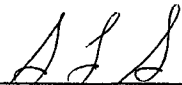
Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services
1703 West Industrial Avenue • P.O. Box 2150 • Midland, Texas 79702

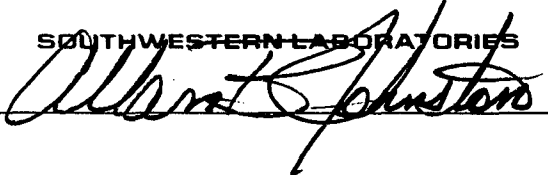
Report of tests on	Water	File No.	6308150
Client	New Mexico Oil Conservation	Report No.	77736-3
	Division	Report Date	5-12-92
Delivered by	Chris Eustice	Date Received	4-22-92
Identification	Barber Oil, Potask Lake, No. 042119921530 Sampled 4-22-92 by C. Eustice		

REPORT OF CHEMICAL ANALYSIS

<u>Parameters</u>	<u>Results</u> <u>mg/L</u>	<u>Date</u> <u>Performed</u>	<u>Analyst</u>	<u>Standard Methods,</u> <u>17th Edition</u>
Calcium	4520	5-1-92	W. Jaycox	3500-Ca, D
Magnesium	2138	5-1-92	W. Jaycox	3500-Mg, E
Sodium	20400	4-24-92	G. Bunch	3500-Na, D
Potassium	950	4-24-92	G. Bunch	3500-K, D
Carbonate	0	4-30-92	W. Jaycox	2320-B
Bicarbonate	95	4-30-91	W. Jaycox	2320-B
Sulfate	3469	5-4-92	W. Jaycox	4500-SO ₄ , C
Chloride	42265	5-5-92	W. Jaycox	4500-Cl, B
Total Dissolved Solids, @ 180°C	77200	5-4-92	W. Jaycox	2540-C
Total Hardness as CaCO ₃	20100	5-1-92	W. Jaycox	2340-C
pH	7.44	4-30-92	W. Jaycox	4500-H

Copies: New Mexico Oil Conservation Divison, Attn: Roger Anderson
1cc: Chris Eustice, P. O. Box 1980, Hobbs, NM 88240-1980


Reviewed by

SOUTHWESTERN LABORATORIES


GRB 4:15 8/26/97
Properties Inc.

J Sec 15 T20S R30E

Keyes Federal

Eddy Co. NM LC-029171-C

A series of un lind pits
Accepting Brine Some Look
to have been Filled or Filled.

Nothing up open

Followed Poly Brine to a Sink
Pony with Flow to

Keyes LC-029171-C

2310/N 2310/W

Sec 15, T20S, R30E

to a Cast Iron that went
underground Cool & Flowing

Poly pipe Continued to West Across
Lease Road Along power line

ESSR -

3 pictures

Land farm cells build

8/26/97 3:30

GRB Properties

Ray Smith

Mary Kiehl

1 ~~Be~~ TransFormers removed

2) Dike in Place Used Contaminated
soils

3 Spill covered with Dirt Bleeding oil

4 holes Back of Shed Filled.

5 New Spill Not Reported

6 Several pictures taken

7 Pipe with Asphalt pad in Brush By lane

8 Leaking pump pipe

Sign location

4:00 pm

Mary Kiehl

GRB PROPERTIES TREATING PLANT INSPECTION (PHOTOS BY OCD)



PHOTO NO. 1 DATE: 04/31/97



PHOTO NO. 2 DATE: 04/31/97

GRB PROPERTIES TREATING PLANT INSPECTION (PHOTOS BY OCD)



PHOTO NO. 3

DATE: 04/31/97

PHOTO NO. 4

DATE: 04/31/97



GRB PROPERTIES TREATING PLANT INSPECTION (PHOTOS BY OCD)



PHOTO NO. 5 DATE: 04/31/97



PHOTO NO. 6 DATE: 04/31/97

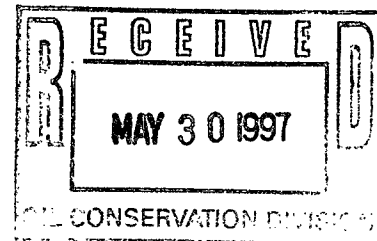
American Environmental Network, Inc.

AEN I.D.

705316

May 28, 1997

NM OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NM 87505



Project Name GRB PROPERTIES
Project Number (none)

Attention: BILL OLSON

On 5/2/97 American Environmental Network (NM), Inc. (ADHS License No. AZ0015), received a request to analyze aqueous samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

EPA method 8010/8020 was performed by American Environmental Network (NM) Inc., Albuquerque, NM.

EPA method 8310 was performed by American Environmental Network (FL) Inc., 11 East Olive Road, Pensacola, FL.

All other analyses were performed by American Environmental Network (AZ) Inc, 9830 S. 51st Street, Suite B-113, Phoenix, AZ.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

A handwritten signature in black ink, appearing to read "Kim McNeill".

Kimberly D. McNeill
Project Manager

A handwritten signature in black ink, appearing to read "H. Mitchell Rubenstein".

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: mt

2709-D Pan American Freeway, NE • Albuquerque, NM 87107 • (505) 344-3777 • Fax (602) 344-4413

American Environmental Network Inc

CLIENT	: NM OIL CONSERVATION DIVISION	AEN I.D.	: 705316
PROJECT #	: (none)	DATE RECEIVED	: 5/2/97
PROJECT NAME	: GRB PROPERTIES	REPORT DATE	: 5/28/97

AEN			DATE
ID. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	(EAST PIT) 9705020815	AQ	5/2/97
02	(WEST POND) 9705020845	AQ	5/2/97
03	(PLAYA IN) 9705021000	AQ	5/2/97

American Environmental Network Inc

CLIENT : AMERICAN ENV. NETWORK OF NM, INC.
PROJECT # : 705316
PROJECT NAME : N.M. OIL

ATI I.D. : 705063

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	705316-02	AQUEOUS	05/02/97
02	705316-03	AQUEOUS	05/02/97

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	2

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

American Environmental Network Inc

GENERAL CHEMISTRY RESULTS

ATI I.D. : 705063

CLIENT : AMERICAN ENV. NETWORK OF NM, INC.
PROJECT # : 705316
PROJECT NAME : N.M. OIL

PARAMETER	UNITS	01	02
CARBONATE (CACO3)	MG/L	<1	<1
BICARBONATE (CACO3)	MG/L	59	128
HYDROXIDE (CACO3)	MG/L	<1	<1
TOTAL ALKALINITY (AS CACO3)	MG/L	59	128
BROMIDE (EPA 300.0)	MG/L	20	160
CHLORIDE (EPA 325.2)	MG/L	10000	180000
CONDUCTIVITY, (UMHOS/CM)		28800	560000
FLUORIDE (EPA 340.2)	MG/L	0.12	0.85
PH (EPA 150.1)	UNITS	7.5	7.4
SULFATE (EPA 375.2)	MG/L	1200	4200
T. DISSOLVED SOLIDS (160.1)	MG/L	13000	270000

American Environmental Network Inc

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : AMERICAN ENV. NETWORK OF NM, INC.
 PROJECT # : 705316
 PROJECT NAME : N.M. OIL

ATI I.D. : 705063

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CARBONATE	MG/L	70500301	<1	<1	NA	NA	NA	NA
BICARBONATE	MG/L		353	351	0.6	NA	NA	NA
HYDROXIDE	MG/L		<1	<1	NA	NA	NA	NA
TOTAL ALKALINITY	MG/L		353	351	0.6	NA	NA	NA
CARBONATE	MG/L	70506302	<1	<1	NA	NA	NA	NA
BICARBONATE	MG/L		134	132	2	NA	NA	NA
HYDROXIDE	MG/L		<1	<1	NA	NA	NA	NA
TOTAL ALKALINITY	MG/L		134	132	2	NA	NA	NA
BROMIDE	MG/L	70506301	20	20	0	31	10	110
CHLORIDE	MG/L	70506301	10000	10000	0	20000	10000	100
CONDUCTIVITY (UMHOS/CM)		70505501	462	466	0.9	NA	NA	NA
FLUORIDE	MG/L	70506301	0.12	0.11	9	0.48	0.50	72
PH	UNITS	70504401	8.6	8.6	0	NA	NA	NA
SULFATE	MG/L	70504401	250	250	0	450	200	100
TOTAL DISSOLVED SOLIDS	MG/L	70506301	13000	13000	0	NA	NA	NA

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

American Environmental Network Inc

METALS RESULTS

ATI I.D. : 705063

CLIENT : AMERICAN ENV. NETWORK OF NM, INC.
PROJECT # : 705316
PROJECT NAME : N.M. OIL

PARAMETER	UNITS	01	02
SILVER (EPA 200.7/6010)	MG/L	<0.050	-
ALUMINUM (EPA 200.7/6010)	MG/L	<0.25	-
ARSENIC (EPA 206.2/7060)	MG/L	0.003	-
BORON (EPA 200.7/6010)	MG/L	<0.5	-
BARIUM (EPA 200.7/6010)	MG/L	0.335	-
BERYLLIUM (EPA 200.7/6010)	MG/L	<0.020	-
CALCIUM (EPA 200.7/6010)	MG/L	3140	1710
CADMIUM (EPA 213.2/7131)	MG/L	<0.0005	-
COBALT (EPA 200.7/6010)	MG/L	<0.050	-
CHROMIUM (EPA 200.7/6010)	MG/L	<0.050	-
COPPER (EPA 200.7/6010)	MG/L	<0.050	-
IRON (EPA 200.7/6010)	MG/L	0.299	-
POTASSIUM (EPA 200.7/6010)	MG/L	185	27000
MAGNESIUM (EPA 200.7/6010)	MG/L	529	3470
MANGANESE (EPA 200.7/6010)	MG/L	0.525	-
MOLYBDENUM (EPA 200.7/6010)	MG/L	<0.10	-
SODIUM (EPA 200.7/6010)	MG/L	2760	112000
NICKEL (EPA 200.7/6010)	MG/L	<0.100	-
LEAD (EPA 239.2/7421)	MG/L	<0.002	-
ANTIMONY (EPA 200.7/6010)	MG/L	<0.30	-
SELENIUM (EPA 270.2/7740)	MG/L	<0.005	-
SILICON (EPA 200.7/6010)	MG/L	<0.5	-
THALLIUM (EPA 279.2/7841)	MG/L	<0.005	-
VANADIUM (EPA 200.7/6010)	MG/L	<0.100	-
ZINC (EPA 200.7/6010)	MG/L	<0.250	-

American Environmental Network Inc

METALS - QUALITY CONTROL

CLIENT : AMERICAN ENV. NETWORK OF NM, INC.
PROJECT # : 705316
PROJECT NAME : N.M. OIL

ATI I.D. : 705063

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
SILVER	MG/L	70508901	<0.010	<0.010	NA	0.466	0.500	93
ALUMINUM	MG/L	70599910	0.33	0.33	0	1.35	1.00	102
ARSENIC	MG/L	70510501	<0.003	0.003	NA	0.058	0.050	116
BORON	MG/L	70508901	0.5	0.4	22	1.4	1.0	90
BARIUM	MG/L	70599910	0.093	0.095	2	1.03	1.00	94
BERYLLIUM	MG/L	70508901	<0.004	<0.004	NA	0.493	0.500	99
CALCIUM	MG/L	70510502	60.4	59.1	2	104	50.0	87
CADMIUM	MG/L	70510501	<0.0005	<0.0005	NA	0.0050	0.0050	100
COBALT	MG/L	70599910	<0.010	<0.010	NA	0.924	1.00	92
CHROMIUM	MG/L	70508901	<0.010	<0.010	NA	0.976	1.00	98
COPPER	MG/L	70508901	<0.010	<0.010	NA	0.500	0.500	100
IRON	MG/L	70599910	<0.050	<0.050	NA	0.998	1.00	100
POTASSIUM	MG/L	70510502	15.8	15.7	0.6	68.6	50.0	106
MAGNESIUM	MG/L	70510502	19.7	19.4	2	43.2	25.0	94
MANGANESE	MG/L	70508901	<0.010	<0.010	NA	0.968	1.00	97
MOLYBDENUM	MG/L	70508901	<0.02	<0.02	NA	1.02	1.00	102
SODIUM	MG/L	70510502	343	342	0.3	624	250	112
NICKEL	MG/L	70508901	<0.020	<0.020	NA	0.951	1.00	95
LEAD	MG/L	70510501	<0.002	<0.002	NA	0.052	0.050	104
ANTIMONY	MG/L	70599910	<0.06	<0.06	NA	1.03	1.00	103
SELENIUM	MG/L	70510501	<0.005	<0.005	NA	0.027*W	0.050	54*W
SILICON	MG/L	70599909	10.4	10.2	2	19.6	10.0	92
THALLIUM	MG/L	70599901	<0.005	<0.005	NA	0.023*W	0.050	46*W
VANADIUM	MG/L	70599910	<0.020	<0.020	NA	0.984	1.00	98
ZINC	MG/L	70508901	<0.050	<0.050	NA	0.485	0.500	97

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

* Result out of limits due to sample matrix interference

American Environmental Network Inc

DATE: 05-20-97

ION BALANCE

AEN ACCESSION NUMBER: 70506301
 SAMPLE IDENTIFICATION: 705316-02
 CLIENT: AMERICAN ENV. NETWORK OF NM, INC.

ANIONS	RESULT MG/L	FACTOR ME/L	TOTAL
ALKALINITY (AS CaCO ₃)	59.000	0.02000	1.18000
CHLORIDE	10000.000	0.02821	282.10000
FLUORIDE	0.120	0.05264	0.00632
NITRATE AS N (NO ₃ (NO ₃ -N X 4.43)	NA	0.01613	0.00000
SiO ₃ (SILICON X 2.71)	NA	0.02629	0.00000
SULFATE	1200.000	0.02082	24.98400

TOTAL ANIONS 308.2703

CATIONS	RESULT	FACTOR	TOTAL
CALCIUM	3140.000	0.04990	156.686
POTASSIUM	185.000	0.02558	4.73230
MAGNESIUM	529.000	0.08229	43.53141
SODIUM	2760.000	0.04350	120.06000

TOTAL CATIONS 325.0097

		%RPD (<10%)*	-5.29
TOTAL ANIONS/CATIONS	(CALCULATED)	17849.520	
TOTAL DISSOLVED SOLIDS	(ANALYZED)	13000	%RPD (<15%)* 31.44
ELECTRICAL COND.		28800	TDS/EC RATIO (0.65+/-0.10) 0.45

* If either Total Cations or Total Anions <10, then the %RPD Limit is not applicable.

American Environmental Network Inc

DATE: 05-20-97

ION BALANCE

AEN ACCESSION NUMBER: 70506302
 SAMPLE IDENTIFICATION: 705316-03
 CLIENT: AMERICAN ENV. NETWORK OF NM, INC.

ANIONS	RESULT MG/L	FACTOR ME/L	TOTAL
ALKALINITY (AS CaCO_3)	128.000	0.02000	2.56000
CHLORIDE	18000.000	0.02821	5077.80000
FLUORIDE	0.850	0.05264	0.04474
NITRATE AS N ($\text{NO}_3(\text{NO}_3\text{-N} \times 4.43)$)	NA	0.01613	0.00000
SiO_3 (SILICON $\times 2.71$)	NA	0.02629	0.00000
SULFATE	4200.000	0.02082	87.44400

TOTAL ANIONS 5167.849

CATIONS	RESULT	FACTOR	TOTAL
CALCIUM	1710.000	0.04990	85.329
POTASSIUM	27000.000	0.02558	690.66000
MAGNESIUM	3470.000	0.08229	285.54630
SODIUM	112000.000	0.04350	4872.00000

TOTAL CATIONS 5933.535

		%RPD (<10%)*	-13.79
TOTAL ANIONS/CATIONS	(CALCULATED)	328457.650	
TOTAL DISSOLVED SOLIDS	(ANALYZED)	270000	%RPD (<15%)* 19.54
ELECTRICAL COND.		560000	TDS/EC RATIO (0.65+/-0.10) 0.48

* If either Total Cations or Total Anions <10, then the %RPD Limit is not applicable.

GAS CHROMATOGRAPHY RESULTS

TEST : PURGEABLE HALOCARBONS / AROMATICS (EPA 8010/8020)
 CLIENT : NM OIL CONSERVATION DIVISION
 PROJECT # : (none)
 PROJECT NAME : GRB PROPERTIES

AEN I.D.: 705316

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	(EAST PIT) 9705020815	AQUEOUS	5/2/97	NA	5/5/97	1
02	(WEST POND) 9705020845	AQUEOUS	5/2/97	NA	5/5/97	1

PARAMETER	DET. LIMIT	UNITS	01	02
BENZENE	0.5	UG/L	0.5	< 0.5
BROMODICHLORMETHANE	0.2	UG/L	< 0.2	< 0.2
BROMOFORM	0.5	UG/L	< 0.5	< 0.5
BROMOMETHANE	1.0	UG/L	< 1.0	< 1.0
CARBON TETRACHLORIDE	0.2	UG/L	< 0.2	< 0.2
CHLOROBENZENE	0.5	UG/L	< 0.5	< 0.5
CHLOROETHANE	0.5	UG/L	< 0.5	< 0.5
CHLOROFORM	0.5	UG/L	< 0.5	< 0.5
CHLOROMETHANE	1.0	UG/L	< 1.0	< 1.0
DIBROMOCHLOROMETHANE	0.2	UG/L	< 0.2	< 0.2
1,2-DIBROMOETHANE (EDB)	0.2	UG/L	< 0.2	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.5	< 0.5
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.5	< 0.5
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.5	< 0.5
1,1-DICHLOROETHANE	0.3	UG/L	< 0.3	< 0.3
1,2-DICHLOROETHANE (EDC)	0.5	UG/L	< 0.5	< 0.5
1,1-DICHLOROETHENE	0.2	UG/L	< 0.2	< 0.2
cis-1,2-DICHLOROETHENE	0.2	UG/L	< 0.2	< 0.2
trans-1,2-DICHLOROETHENE	1.0	UG/L	< 1.0	< 1.0
1,2-DICHLOROPROPANE	0.2	UG/L	< 0.2	< 0.2
cis-1,3-DICHLOROPROPENE	0.2	UG/L	< 0.2	< 0.2
trans-1,3-DICHLOROPROPENE	0.2	UG/L	< 0.2	< 0.2
ETHYLBENZENE	0.5	UG/L	< 0.5	< 0.5
METHYL-t-BUTYL ETHER	2.5	UG/L	< 2.5	< 2.5
METHYLENE CHLORIDE	2.0	UG/L	< 2.0	< 2.0
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.5	< 0.5
TETRACHLOROETHENE	0.5	UG/L	< 0.5	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5
1,1,1-TRICHLOROETHANE	1.0	UG/L	< 1.0	< 1.0
1,1,2-TRICHLOROETHANE	0.2	UG/L	< 0.2	< 0.2
TRICHLOROETHENE	0.3	UG/L	< 0.3	< 0.3
TRICHLOROFLUOROMETHANE	0.2	UG/L	< 0.2	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.5	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5	< 0.5

SURROGATE:

BROMOCHLOROMETHANE (%)		103	110
SURROGATE LIMITS	(73 - 117)		
TRIFLUOROTOLUENE (%)		101	97
SURROGATE LIMITS	(69 - 117)		

CHEMIST NOTES:

N/A

GAS CHROMATOGRAPHY RESULTS

REAGENT BLANK

TEST	: PURGEABLE HALOCARBONS / AROMATICS (EPA 8010/8020)		
BLANK I.D.	: 050597	AEN I.D.	: 705316
CLIENT	: NM QIL CONSERVATION DIVISION	DATE EXTRACTED	: N/A
PROJECT #	: (none)	DATE ANALYZED	: 5/5/97
PROJECT NAME	: GRB PROPERTIES	SAMPLE MATRIX	: AQUEOUS

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
BROMODICHLORMETHANE	UG/L	<0.2
BROMOFORM	UG/L	<0.5
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2
CHLOROBENZENE	UG/L	<0.5
CHLOROETHANE	UG/L	<0.5
CHLOROFORM	UG/L	<0.5
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5
1,1-DICHLOROETHANE	UG/L	<0.3
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2
cis-1,2-DICHLOROETHENE	UG/L	<0.2
trans-1,2-DICHLOROETHENE	UG/L	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2
cis-1,3-DICHLOROPROPENE	UG/L	<0.2
trans-1,3-DICHLOROPROPENE	UG/L	<0.2
ETHYLBENZENE	UG/L	<0.5
METHYL -t-BUTYL ETHER	UG/L	<2.5
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.5
TETRACHLOROETHENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2
TRICHLOROETHENE	UG/L	<0.3
TRICHLOROFLUOROMETHANE	UG/L	<0.2
VINYL CHLORIDE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5
SURROGATE:		
BROMOCHLOROMETHANE (%)		112
SURROGATE LIMITS	(73 - 117)	
TRIFLUOROTOLUENE (%)		104
SURROGATE LIMITS	(69 - 117)	

CHEMIST NOTES:
N/A

GAS CHROMATOGRAPHY RESULTS

REAGENT BLANK

TEST	: PURGEABLE HALOCARBONS / AROMATICS (EPA 8010-601/8020-602)		
BLANK I.D.	: 050797	AEN I.D.	: 705316
CLIENT	: NM OIL CONSERVATION DIVISION	DATE EXTRACTED	: N/A
PROJECT #	: (none)	DATE ANALYZED	: 5/7/97
PROJECT NAME	: GRB PROPERTIES	SAMPLE MATRIX	: AQUEOUS

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
BROMODICHLORMETHANE	UG/L	<0.2
BROMOFORM	UG/L	<0.5
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2
CHLOROBENZENE	UG/L	<0.5
CHLOROETHANE	UG/L	<0.5
CHLOROFORM	UG/L	<0.5
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5
1,1-DICHLOROETHANE	UG/L	<0.3
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2
cis-1,2-DICHLOROETHENE	UG/L	<0.2
trans-1,2-DICHLOROETHENE	UG/L	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2
cis-1,3-DICHLOROPROPENE	UG/L	<0.2
trans-1,3-DICHLOROPROPENE	UG/L	<0.2
ETHYLBENZENE	UG/L	<0.5
METHYL -t-BUTYL ETHER	UG/L	<2.5
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.5
TETRACHLOROETHENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2
TRICHLOROETHENE	UG/L	<0.3
TRICHLOROFLUOROMETHANE	UG/L	<0.2
VINYL CHLORIDE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5

SURROGATE:		
BROMOCHLOROMETHANE (%)		110
SURROGATE LIMITS	(73 - 117)	
TRIFLUOROTOLUENE (%)		105
SURROGATE LIMITS	(69 - 117)	

CHEMIST NOTES:

N/A

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST : PURGEABLE HALOCARBONS / AROMATICS (EPA 8010/8020)
MSMSD # : 050797 AEN I.D. : 705316
CLIENT : NM OIL CONSERVATION DIVISION DATE EXTRACTED : N/A
PROJECT # : (none) DATE ANALYZED : 5/7/97
PROJECT NAME : GRB PROPERTIES SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	10.0	8.5	85	8.6	86	1	(82 - 128)	20
TOLUENE	<0.5	10.0	8.6	86*	8.9	89	3	(87 - 128)	20
1,1-DICHLOROETHENE	<0.2	10.0	9.4	94	9.5	95	1	(44 - 99)	20
TRICHLOROETHENE	<0.3	10.0	11.1	111	11.2	112	1	(89 - 127)	20
CHLOROBENZENE	<0.5	10.0	11.8	118	12.3	123	4	(87 - 124)	20

CHEMIST NOTES:

* SEE OOC

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

American Environmental Network Inc

"FINAL REPORT FORMAT - SINGLE"

Accession: 705043
 Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
 Project Number: 705316
 Project Name: NM OIL LONS. DIV.
 Project Location: GRB PROPERTIES
 Test: POLYNUCLEAR AROMATICS BY 8310
 Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Matrix: WATER
 QC Level: II

Lab Id: 001 Sample Date/Time: 02-MAY-97 0845
 Client Sample Id: 705316-02 Received Date: 06-MAY-97
 Batch: PAW094 Extraction Date: 07-MAY-97
 Blank: B Dry Weight %: N/A Analysis Date: 13-MAY-97

Parameter:	Units:	Results:	Rpt Lmts:	Q:
ACENAPHTHENE	UG/L	ND	1	
ACENAPHTHYLENE	UG/L	ND	1	
ANTHRACENE	UG/L	ND	1	
BENZO(a) ANTHRACENE	UG/L	ND	1	
BENZO(a) PYRENE	UG/L	ND	1	
BENZO(b) FLUORANTHENE	UG/L	ND	1	
BENZO(g, h, i) PERYLENE	UG/L	ND	1	
BENZO(k) FLUORANTHENE	UG/L	ND	1	
CHRYSENE	UG/L	ND	1	
DIBENZO(a, h) ANTHRACENE	UG/L	ND	1	
FLUORANTHENE	UG/L	ND	1	
FLUORENE	UG/L	ND	1	
INDENO(1, 2, 3-cd) PYRENE	UG/L	ND	1	
NAPHTHALENE	UG/L	ND	1	
PHENANTHRENE	UG/L	ND	1	
PYRENE	UG/L	ND	1	
1-METHYLNAPHTHALENE	UG/L	ND	1	
2-METHYLNAPHTHALENE	UG/L	ND	1	
2-CHLOROANTHRACENE	%REC/SURR	81	28-138	
ANALYST	INITIALS	JBT		

Comments:

American Environmental Network Inc

"QC Report"

Title: Water Blank
Batch: PAW094
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Blank Id: B Date Analyzed: 13-MAY-97 Date Extracted: 07-MAY-97

Parameters:	Units:	Results:	Reporting Limits:
ACENAPHTHENE	UG/L	ND	1
ACENAPHTHYLENE	UG/L	ND	1
ANTHRACENE	UG/L	ND	1
BENZO (a) ANTHRACENE	UG/L	ND	1
BENZO (a) PYRENE	UG/L	ND	1
BENZO (b) FLUORANTHENE	UG/L	ND	1
BENZO (g, h, i) PERYLENE	UG/L	ND	1
BENZO (k) FLUORANTHENE	UG/L	ND	1
CHRYSENE	UG/L	ND	1
DIBENZO (a, h) ANTHRACENE	UG/L	ND	1
FLUORANTHENE	UG/L	ND	1
FLUORENE	UG/L	ND	1
INDENO (1, 2, 3-cd) PYRENE	UG/L	ND	1
NAPHTHALENE	UG/L	ND	1
PHENANTHRENE	UG/L	ND	1
PYRENE	UG/L	ND	1
1-METHYLNAPHTHALENE	UG/L	ND	1
2-METHYLNAPHTHALENE	UG/L	ND	1
2-CHLOROANTHRACENE	%REC/SURR	97	28-138
ANALYST	INITIALS	JBT	

Comments:

American Environmental Network Inc

"QC Report"

Title: Water Reagent
Batch: PAW094
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

RS Date Analyzed: 08-MAY-97
RSD Date Analyzed: 08-MAY-97

RS Date Extracted: 06-MAY-97
RSD Date Extracted: 06-MAY-97

Parameters:	Spike Added	Sample Conc	RS Conc	RS %Rec	RSD Conc	RSD %Rec	RPD	RPD Lmts	Rec Lmts
ACENAPHTHYLENE	10.0	<1	7.5	75	7.7	77	3	35	45-127
BENZO (k) FLUORANTHENE	10.0	<1	7.3	73	7.5	75	3	23	68-131
CHRYSENE	10.0	<1	9.7	97	9.9	99	2	24	69-131
PHENANTHRENE	10.0	<1	9.8	98	11.0	110	12	26	63-124
PYRENE	10.0	<1	8.7	87	9.1	91	4	25	61-126
Surrogates:									
2-CHLOROANTHRACENE				83		88			28-138

Comments:

Notes:

N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE
PROGRAM AND REFERENCED METHOD.

American Environmental Network Inc

"QC Report"

Title: Water Matrix
Batch: PAW094
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Dry Weight %: N/A
Sample Spiked: 705045-2

MS Date Analyzed: 13-MAY-97
MSD Date Analyzed: 13-MAY-97

MS Date Extracted: 06-MAY-97
MSD Date Extracted: 06-MAY-97

Parameters:	Spike Added	Sample Conc	MS Conc	MS %Rec	MSD Conc	MSD %Rec	RPD	Rec Lmts	Rec Lmts
ACENAPHTHYLENE	10.0	<1	2.3	23	3.0	30	26	51	18-146
BENZO(k) FLUORANTHENE	10.0	<1	9.2	92	8.7	87	6	40	26-137
CHRYSENE	10.0	<1	11.8	118	11.7	117	1	69	16-156
PHENANTHRENE	10.0	1.4	9.4	80	9.1	77	4	36	30-145
PYRENE	10.0	1.9	9.6	77	8.7	68	12	41	39-137

Surrogates:
2-CHLOROANTHRACENE 113 104 28-138

Comments:

Notes:

N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT

UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.

* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

American Environmental Network Inc

Common notation for Organic reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
D = DILUTED OUT
UG = MICROGRAMS
UG/L = PARTS PER BILLION.
UG/KG = PARTS PER BILLION.
MG/M3 = MILLIGRAM PER CUBIC METER.
PPMV = PART PER MILLION BY VOLUME.
MG/KG = PARTS PER MILLION.
MG/L = PARTS PER MILLION.
< = LESS THAN DETECTION LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS
Y = IMPROPER PRESERVATION, NO PRESERVATIVE PRESENT IN SAMPLE UPON RECEIPT.

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

ORGANIC SOILS ARE REPORTED ON A DRYWEIGHT BASIS.

ND = NOT DETECTED ABOVE REPORTING LIMIT.

RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

AEN/GC/FID
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME IONIZATION DETECTOR (FID).

AEN/GC/FIX
AEN GAS CHROMATOGRAPHIC METHOD FOR ANALYSIS OF FIXED GASES EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD) AND FLAME IONIZATION DETECTOR (FID).

AEN/GC/FPD
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME PHOTOMETRIC DETECTOR (FPD) IN SULFUR-SPECIFIC MODE.

AEN/GC/PID
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH PHOTOIONIZATION DETECTOR (PID).

AEN/GC/TCD
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD).

SW-846 METHOD 9020
PARTICULATE MATTER IS REMOVED BY ALLOWING PARTICULATES TO SETTLE IN THE SAMPLE CONTAINER AND DECANTING THE SUPERNATANT LIQUID. EXCESSIVE PARTICULATES ARE REMOVED BY FILTRATION OF THE SUPERNATANT LIQUID.

AEN-PN USES THE MOST CURRENT PROMULGATED METHODS CONTAINED IN THE REFERENCE MANUALS.

SW = STEVE WILHITE
PL = PAUL LESCHENSKY
RW = ROBERT WOLFE
KS = KENDALL SMITH
KL = KERRY LEMONT
RP = ROB PEREZ
JBT = JENNIFER TORRANCE
LP = LAVERNE PETERSON
PLD = PAULA DOUGHTY

CHAIN OF CUSTODY

DATE: 05-02-97 PAGE: 1 OF 1

ANALYSIS REQUEST

AEN LAB ID: 705316
 705316

SHADED AREAS ARE FOR LAB USE ONLY

PROJECT MANAGER: Bill Olson
 COMPANY: NM Oil Conservation Division
 ADDRESS: 2040 S. Pacheco
 PHONE: (505) 827-7154
 FAX: (505) 827-8177
 BILL TO: Same
 COMPANY:
 ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct/Inject	(M8015) Gas/Purge & Trap	Gasoline/BTEX & MTBE (M8015/8020)	BTXE/MTBE (8020)	BTEX & Chlorinated Aromatics (602/8020)	BTEX/MTBE/EDC & EDB (8020/8010/Short)	Chlorinated Hydrocarbons (601/8010)	504 EDB / DBCP	Polynuclear Aromatics (610/8310)	Volatile Organics (624/8240) GC/MS	Volatile Organics (8260) GC/MS	Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	General Chemistry: Item #25	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals: FCAP (6010)	Hg by AA	NUMBER OF CONTAINERS
East pit 9705020815	5/2/97	0845	water	01						2-2																	
West pond 9705020815	5/2/97	0845	"	02						2-2																	
Alga In 9705021000	5/2/97	1000	"	03																							

PROJECT INFORMATION

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

PROJ. NO.: 02 (RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒

PROJ. NAME: GRB Reporters CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER

P.O. NO.: METHANOL PRESERVATION ☐

SHIPPED VIA: COMMENTS: FIXED FEE ☐

RELINQUISHED BY: 1

RELINQUISHED BY: 2

Signature: [Signature] Time: 1820
 Printed Name: Bill Olson Date: 5/2/97

Signature: [Signature] Time: [Blank]
 Printed Name: [Blank] Date: [Blank]

Signature: [Signature] Time: [Blank]
 Printed Name: [Blank] Date: [Blank]

Signature: [Signature] Time: [Blank]
 Printed Name: [Blank] Date: [Blank]

Signature: [Signature] Time: [Blank]
 Printed Name: [Blank] Date: [Blank]

PLEASE FILL THIS FORM IN COMPLETELY.

AMERICAN ENVIRONMENTAL NETWORK OF FLORIDA
PROJECT SAMPLE INSPECTION FORM

Lab Accession #: 705043

Date Received: 06-MAY-97

- | | |
|---|--|
| <p>1. Was there a Chain of Custody? ☒ Yes ☐ No*</p> <p>2. Was Chain of Custody properly filled out and relinquished? ☒ Yes ☐ No*</p> <p>3. Were samples received cold? ☒ Yes ☐ No* N/A
(Criteria: 1° - 4°C: AEN-SOP 1055)</p> <p>4. Were all samples properly labeled and identified? ☒ Yes ☐ No*</p> <p>5. Did samples require splitting? Yes* ☒ No
Req By: PM Client Other*</p> <p>6. Were samples received in proper containers for analysis requested? ☒ Yes ☐ No*</p> <p>7. Were all sample containers received intact? ☒ Yes ☐ No*</p> | <p>8. Were samples checked for preservative? ☒ Yes ☐ No* N/A
(Check pH of all H₂O requiring preservative except VOA vials that require zero headspace)*</p> <p>9. Is there sufficient volume for analysis requested? ☒ Yes ☐ No*</p> <p>10. Were samples received within Holding Time? ☒ Yes ☐ No*
(REFER TO AEN-SOP 1040)</p> <p>11. Is Headspace visible > ¼" in diameter in VOA vials? * If any headspace is evident, comment in out-of-control section. Yes* No ☒ N/A</p> <p>12. If sent, were matrix spike bottles returned? Yes No* ☒ N/A</p> <p>13. Was Project Manager notified of problems? (initials: _____) Yes No* ☒ N/A</p> |
|---|--|

Airbill Number(s): 185 6689064

Shipped By: FEDEX

Cooler Number(s): N/A

Shipping Charges: N/A

Cooler Weight(s): N/A

Cooler Temp(s) (°C): 1°C - CCA-3

(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

(USE BACK OF PSIF FOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: PE Date: 5/6/97 Logged By: PE Date: 5/6/97

- * Note all Out-of-Control and/or questionable events on Comment Section of this form.
- * Note who requested the splitting of samples on the Comment Section of this form.
- * All preservatives for the State of North Carolina, the State of New York, and other requested samples are to be recorded on the sheet provided to record pH results (AEN-SOP 938, section 2.2.9).
- * According to EPA, ¼" of headspace is allowed in 40 ml vials requiring volatile analysis, however, AEN makes it policy to record any headspace as out-of-control (AEN-SOP 938, section 2.2.12).

Interlab Chain of Custody

705043 DATE: 05-05-92 PAGE: 1 OF 1

NETWORK PROJECT MANAGER: KIMBERLY D. MCNEILL

COMPANY: American Environmental Network
ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87107

CLIENT PROJECT MANAGER:

Kim McNeill

SAMPLE ID DATE TIME MATRIX LAB ID

705316 05/05/92 0815 HQ 1

03 1000 0

Metals - TAL
Metals - PP List
Metals - RCRA
RCRA Metals by TCLP (1311)

TOX
TOC
Gen Chemistry

Oil and Grease
BOD
COD
Pesticides/PCB (608/8080)
Herbicides (615/8150)
Base/Neutral Acid Compounds GC/MS (625/8270)
Volatile Organics GC/MS (624/8240)
Polynuclear Aromatics (610/8310)
8240 (TCLP 1311) ZHE
8270 (TCLP 1311)

TO-14
Gross Alpha/Beta

NUMBER OF CONTAINERS

PROJECT INFORMATION

PROJECT NUMBER: 705316

PROJECT NAME: NM BIL. cont. Div

OC LEVEL: STD IV

OC REQUIRED: MS MSD BLANK

IAI: STANDARD RUSH

DUE DATE: 05-29-92

RUSH SURCHARGE:

CLIENT DISCOUNT:

SPECIAL CERTIFICATION REQUIRED: ☐ YES ☐ NO

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SEALS

INTACT?

RECEIVED GOOD COND./COLD

LAB NUMBER

SAMPLES SENT TO:

SAN DIEGO

Paragon

RENTON

PENSACOLA

PORTLAND

PHOENIX

RELINQUISHED BY:

Signature: [Signature] Time: 1700

Printed Name: Brian Price Date: 05-05-92

Albuquerque

RECEIVED BY: NM

Signature: [Signature] Time: 0830

Printed Name: R. ELSTERMAN Date: 5/6/92

Company: AEMEL

RELINQUISHED BY:

Signature: [Signature] Time: 5/6/92

Printed Name: [Signature] Date: 5/6/92

Comp: [Signature]

RECEIVED BY: (LAB)

Signature: [Signature] Time: 0830

Printed Name: R. ELSTERMAN Date: 5/6/92

Company: AEMEL

for help
SAMPLE NOT
SEND.

CHAIN OF CUSTODY

DATE: 05-02-97 PAGE: 1 OF 1

PROJECT MANAGER: Bill Olson

COMPANY: NM Oil Conservation Division
 ADDRESS: 2040 S. Pacheco
 PHONE: (505) 827-7154
 FAX: (505) 827-8177

BILL TO: Same

COMPANY: ADDRESS:

DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct/Inject	(M8015) Gas/Purge & Trap	Gasoline/BTEX & MTBE (M8015/8020)	BTXE/MTBE (8020)	BTEX & Chlorinated Aromatics (602/8020)	BTEX/MTBE/EDC & EDB (8020/8010/Short)	Chlorinated Hydrocarbons (601/8010)	504 EDB / DBCP	Polynuclear Aromatics (610/8310)	Volatile Organics (624/8240) GC/MS	Volatile Organics (8260) GC/MS	Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	General Chemistry: Item #25	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals: ICP (6010)	Hg by FA
5/2/97	0845	water	1085						2	2			2											1	
5/2/97	0845	"	"																						
5/2/97	1000	"	"																						

PROJECT INFORMATION

PROJ. NO.: 02

PROJ. NAME: GRS Properties

P.O. NO.:

SHIPPED VIA:

PRION AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒ X

CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

RECEIVED BY: [Signature] Time: 1820

DATE: 5/2/97

COMPANY: NMACO

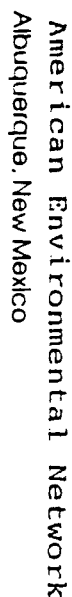
Signature: Time:

Printed Name: Date:

Company:

PLEASE FILL THIS FORM IN COMPLETELY.

SHADED AREAS FOR LABEL USE ONLY



Interlab Chain of Custody

DATE: 05-05-77 PAGE: 1 (14)

[illegible]

SHADED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

[illegible]

Safety & Environmental Solutions, Inc.

RECEIVED

March 25, 1997

MAR 27 1997

OIL CON. DIV.
DIST. 2

New Mexico Oil Conservation Division
1st Street
Artesia, NM 88201
Attention:

Mr. Tim Gum
Mr. Ray Smith
Mr. Brian Arrandt

Dyke A. Browning
P.O. Box 1633
Hobbs, NM 88240

Gentlemen:

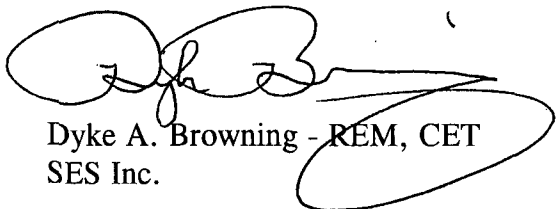
Enclosed please find the site assessment recently completed by my company on the GRB Properties recent leak. As per my conversation with Mr. Gum on 3/25/97, they are going to begin proper remediation procedures using the contaminated soils to berm the location.

Safety & Environmental Solutions, Inc. will produce an acceptable work plan, and after review by GRB Properties, will submit this work plan to the OCD. If modifications are required at that time, GRB Properties has agreed to comply with modifications requested by OCD.

If you have any questions, please feel free to call me at my office, or to call Mr. Gary Bailey at:

GRB Properties, Inc.
Building Two, Suite 100
3300 North "A" St.
Midland, TX 79705
(915) 685-1980

Yours in Safety,



Dyke A. Browning - REM, CET
SES Inc.



Safety & Environmental Solutions, Inc.

RECEIVED

APR 08 1997

Environmental Bureau
Oil Conservation Division

GRB Properties, Inc.

State A Leak Site Assessment
Eddy County, New Mexico

RECEIVED

MAR 27 1997

OIL CON. DIV.
DIST. 2

Safety & Environmental Solutions, Inc.
703 E. Clinton Suite 103
Hobbs, New Mexico 88240
(505) 397-0510

TABLE OF CONTENTS

Physical Description	<u>1</u>
Background	<u>1</u>
Contaminant and Size of Leak	<u>1</u>
Vertical and Horizontal Extent of Contamination	<u>1</u>
Surface Water and Waterways	<u>2</u>
Groundwater	<u>2</u>
Soil Information	<u>2</u>
Maps and Figures	<u>2</u>

I. Physical Description

The leak is located on the State A lease. The legal description of the lease is in the E/2, E/2SW/4 and SW/4SW/4 of Section 16: S/2N/2, N/2SW/4 or Section 17: SE/4 of Section 18; NW/4NE/4, SE/4NE/4, N/2SE/4 and SW/4SE/4 of Section 19; S/2SW/4 of Section 20; W/2NW/4 of Section 29; NE/4 of Section 30; all in Township 20S Range 30 E, Eddy County, New Mexico. The elevation is approximately 3250 feet above sea level. (Vicinity Map) The land is owned by the Bureau of Land Management.

II. Background

The site is located on a production vessel location belonging to GRB Properties, Inc. The lease was drilled beginning in 1928 and wooden tanks are still on site. Evidence of historical contamination exists throughout the location and has turned to asphalt/hardpan.

III. Contaminant and Size of Leak

The leak was a result of an overflow of and storage vessel. The leak was basically contained to the location in an area 228' X 419'. A vacuum truck was onsite and was used to pick up free crude. The only contamination outside the fence are two small tendrils on the south end of the location. (Site Plan)

IV. Vertical and Horizontal Extent of Contamination

On August 6, 1996 two test holes were hand augured at points on the leak site to determine the horizontal extent of the contamination. (Site Plan) The first test hole was augured to a depth of 48" where groundwater was encountered and the second test hole was augured to a depth of 11' and did not encounter groundwater.

The technician sample the soils from the bottom of each test hole, groundwater from test hole #1, and the water in the nearby lake. The samples were packed in glass jars, cooled and transported under chain of custody to Cardinal Laboratories for analysis. The soils were analyzed for Total Petroleum Hydrocarbons (TPH) and BTEX. The water was analyzed for TPH, BTEX, Chlorides and Total Dissolved Solids (TDS). The results of the soil analysis showed TPH under 100 ppm and BTEX under 0.002 ppm. The groundwater analysis showed TPH under 1 ppm, BTEX under 2 ppb, TDS of 18380 mg/L and Chlorides of 7447 mg/L. The results of the analysis of the lake water showed TPH of under 1 ppm, BTEX under 2 ppb, TDS of 13420 mg/L and Chlorides of 4898 mg/L. (See analytical results)

The vertical extent of the contamination is limited to 0 - 12 inches due to the red clay formation just under the surface at this site. The horizontal extent is an area 228' X 419' and was determined by visual inspection of the surface and immediate subsurface. The horizontal extent of contamination was largely controlled by the contour of the surface.

V. Surface Water and Waterways

The distance to the nearest surface water is in approximately 150 feet. The leak, however, has not reached the small lake to the southeast of the location. (See analytical results)

VI. Groundwater

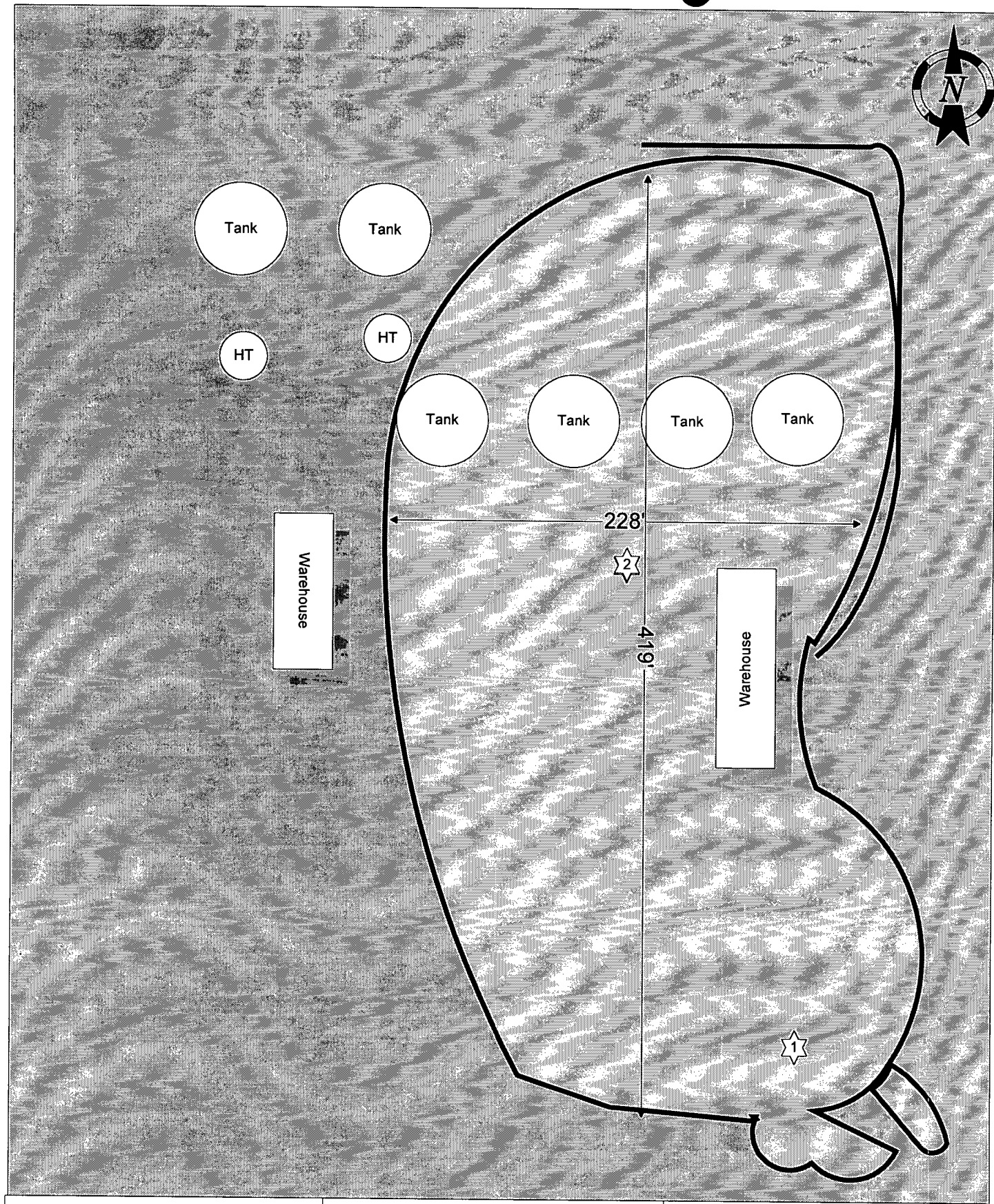
The groundwater is approximately 3' in depth at this location. This depth was confirmed with the encounter of groundwater in test hole #1 at 42". Sample holes were plugged with bentonite and grout.

VII. Soil Information

United States Soil Conservation Service Soil Survey of Eddy County, New Mexico was not available at the time of this assessment.

VIII. Maps and Figures

7.5 minute Quadrangle Map
Water Resource Map
Site Plan
Analytical Results



GRB Properties, Inc.

Site Plan State A

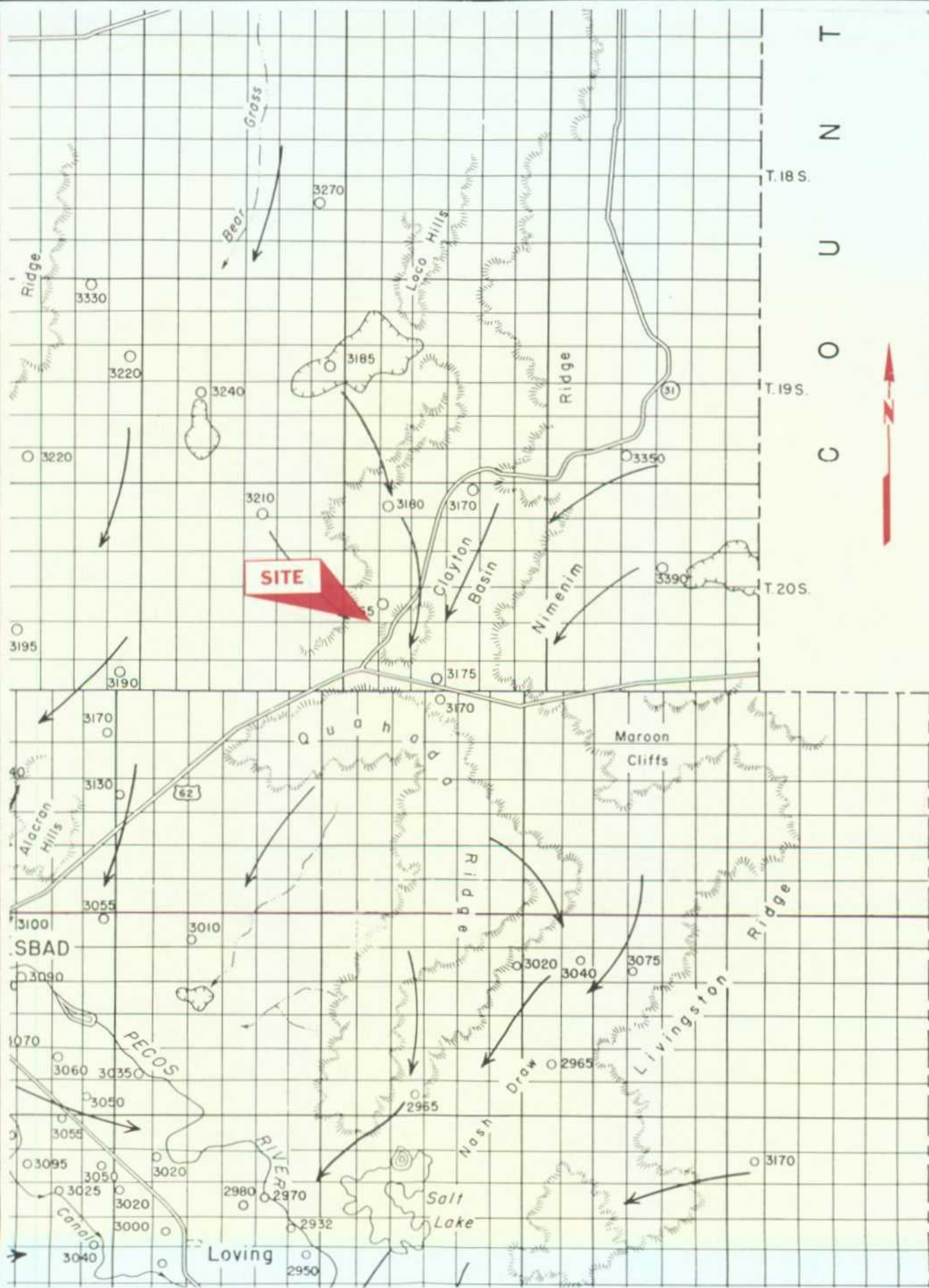
Safety & Environmental Solutions, Inc.
Hobbs, New Mexico

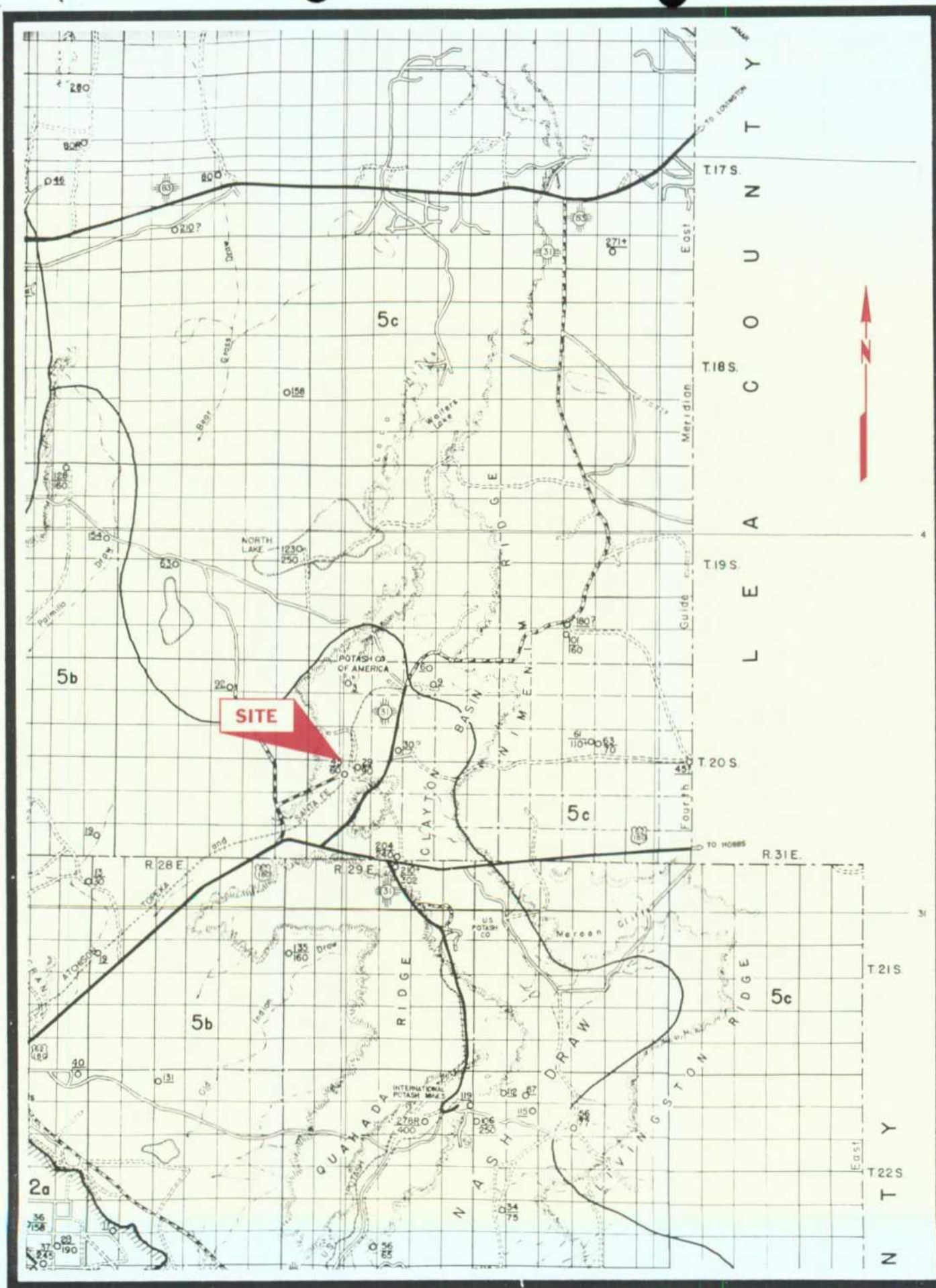
T
N
U
O
C

T. 18 S.

T. 19 S.

T. 20 S.







PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2325 • 171 E. MARLAND • HOBBS, NM 88240

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

Company Name: Safety & Environmental Solutions
Project Manager: Dyke Browning
Address: _____
City: _____ State: _____ Zip: _____
Phone #: _____
Fax #: _____
Project #: _____
Project Name: GRB Resources
Project Location: Carlsbad, NM

BILL TO PO #:

Company: SES, Inc.

Attn: Dyke

Address: _____

City: _____

State: _____

Phone #: _____

Fax #: _____

LAB ID. #	Sample I.D.	# CONTAINERS	MATRIX				PRESERVATION		DATE	TIME	ANALYSIS REQUEST				
			GROUNDWATER	WASTEWATER	SOIL	SLUDGE	ACID	ICE / COOL			OTHER	BTEX	TPH	Chlorides	Total Dissolved Solids
H2833-1	State A #1 Lake #2 Lake	G 2				X			3/7	4:10p	X	X	X		
H2833-2	State A Groundwater 1-2	G 2							3/7	4:10p	X	X	X		
H2833-3	State A Test Hole 1 (South)	G 1							3/7	4:10p	X	X	X		
H2833-4	State A Test Hole #2 (North)	G 1							3/7	4:10p	X	X	X		

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client. This limitation shall apply to all analyses and to all successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated causes of action or otherwise.

Sampler Relinquished: 3/7/97 Received By: _____

Date: 3/7/97

Time: 4:16pm

Date: _____

Time: _____

Received By: (Lab Staff) _____

Signature: _____

Delivered By: (Circle One)

UPS - Fed Ex - Bus - Other: Hand delivered

Sample Condition

Cool ☒ Intact ☒
Yes ☒ No ☐

CHECKED BY:

(Initials)

Phone Result ☐ Yes ☐ No Additional Fax #: _____

Fax Results: ☐ Yes ☐ No

REMARKS:

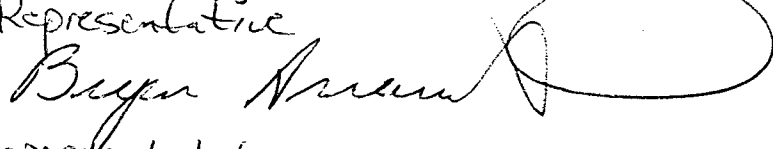
Company Name: <u>Safety Environmental Solutions</u>		BILL TO		PO #:	
Project Manager: <u>Dye Browning</u>		Company: <u>SES, Inc</u>			
Address:		Attn: <u>Dye</u>			
City:	State:	ZIP:			
Phone #:	Address:				
Fax #:	City:	State:	ZIP:		
Project #:	Phone #:				
Project Name: <u>GRB Resources</u>		Fax #:			
Project Location: <u>Carlsbad, NM</u>					

LAB I.D. #	Sample I.D.	COMP(C) OR GRAB(G)	# CONTAINERS	MATRIX					PRESERVATION	SAMPLING	ANALYSIS REQUEST							
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE			OTHER: LAKE	ACID:	ICE / COOL	OTHER :	DATE	TIME	BTEX	TPH
	State A#1 Lake 1 #2 Lake	G	2	X							3/7	4:10p	X	X	X	X		
	State A Groundwater 1 #2 G	G	2	X							3/7	4:10p	X	X	X	X		
	State A Test Hole 1 (South) G	G	1								3/7	4:10p	X	X	X	X		
	State A Test Hole #2 (North) G	G	1								3/7	4:10p	X	X	X	X		

PLEASE NOTE: Liability and Damages. Cardinal's liability and damages are limited to the amount of the fee for the analysis. In no event shall Cardinal be liable for any consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits. The fee for the analysis is non-refundable. The fee for the analysis is non-refundable. The fee for the analysis is non-refundable.

Sample Relinquished: <u>[Signature]</u> Relinquished By:	Date: <u>3/7/97</u> Time: <u>4:16pm</u>	Received By: <u>[Signature]</u> Received By: (Lab Staff)	Date: <u>3/7/97</u> Time: <u>4:16pm</u>
Delivered By: (Circle One) UPS - Fed Ex - Bus - Other: <u>Hand delivered</u>	Sample Condition Cool ☒ Yes ☐ No Intact ☒ Yes ☐ No	CHECKED BY: (Initials)	Phone Result ☐ Yes ☐ No Fax Results: ☐ Yes ☐ No Additional Fax #:
REMARKS:			

Safety & Environmental Solutions, Inc
collected a water sample consisting
of two (2) quart jars from a
hand-augered hole in the approximate
middle of the leak at the "State A" south
side (see A) GFB resources near Carlsbad. on
3/7/97. EPA SW 846 sampling techniques
were used, & 0 headspace maintained
as near as possible & samples were
put on ice.

SES Inc 
OCD Representative

GRB Representative
Mark Olin

Also collected soil sample @ 36" on middle
of location - Field TPH = nil
will submit for TPH & BTEX



ARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: DYKE BROWNINIG
603 E. CLINTON
HOBBS, NM 88240
FAX TO:

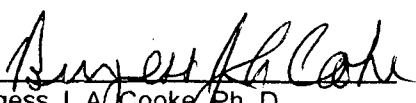
Receiving Date: 03/07/97
Reporting Date: 03/12/96
Project Number: NOT GIVEN
Project Name: GRB RESOURCES
Project Location: CARLSBAD, NM

Sampling Date: 03/07/97
Sample Type: SOIL
Sample Condition: COOL, INTACT
Sample Received By: GP
Analyzed By: JA

LAB NUMBER	SAMPLE ID	TPH (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
------------	-----------	----------------	--------------------	--------------------	-----------------------------	-----------------------------

ANALYSIS DATE:	03/12/97	03/11/97	03/11/97	03/11/97	03/11/97
H2833-3 ST.A, T. HOLE 1 (S)	80.8	<0.002	<0.002	<0.002	<0.006
H2833-4 ST.A, T. HOLE 2 (N)	<10.00	<0.002	<0.002	<0.002	<0.006
Quality Control	185	0.105	0.101	0.097	0.277
True Value QC	203	0.109	0.103	0.105	0.310
% Recovery	91	96	98	92	89
Relative Percent Difference	1	<1	<1	<1	<1

METHODS: TRPHC - EPA 600/7-79-020, 418.1; BTEX - EPA SW-846-8020


Burgess J. A. Cooke, Ph. D.

3/12/97
Date

PLEASE NOTE: **Liability and Damages.** Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. **Cardinal** shall not be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by **Cardinal**, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



ARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: DYKE BROWNING
603 E. CLINTON
HOBBS, NM 88240
FAX TO:

Receiving Date: 03/07/97
Reporting Date: 03/12/96
Project Number: NOT GIVEN
Project Name: GRB RESOURCES
Project Location: CARLSBAD, NM

Sampling Date:
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: GP/AH

LAB NUMBER	SAMPLE ID	TDS (mg/L)	Cl (mg/L)
ANALYSIS DATE:		03/10/97	03/10/97
H2833-1	ST. A, LAKE #1 & #2	13420	4898
H2833-2	ST. A, GRW #1 & #2	18380	7447
Quality Control		NR	496
True Value QC		NR	500
% Accuracy		NR	99.2
Relative Percent Difference		3.3	0

METHODS: EPA 600/4-79-02	160.1	325.3
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Chemist

Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



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ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: DYKE BROWNING
603 E. CLINTON
HOBBS, NM 88240
FAX TO:

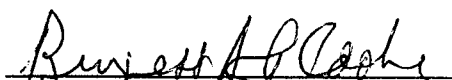
Receiving Date: 03/07/97
Reporting Date: 03/12/96
Project Number: NOT GIVEN
Project Name: GRB RESOURCES
Project Location: CARLSBAD, NM

Sampling Date: 03/07/97
Sample Type: WATER
Sample Condition: COOL, INTACT
Sample Received By: GP
Analyzed By: JA

LAB NUMBER	SAMPLE ID	TPH (ppm)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL BENZENE (ppb)	TOTAL XYLENES (ppb)
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ANALYSIS DATE:	03/12/97	03/11/97	03/11/97	03/11/97	03/11/97
H2833-1 ST.A, LAKE #1 & #2	<1.00	<2.00	<2.00	<2.00	<6.00
H2833-2 ST.A, GRW #1 & #2	<1.00	<2.00	<2.00	<2.00	<6.00
Quality Control	185	105	101	97.0	277
True Value QC	203	109	103	105	310
% Recovery	91	96	98	92	89
Relative Percent Difference	1	<1	<1	<1	<1

METHODS: TRPHC - EPA 600/7-79-020, 418.1; BTEX - EPA SW-846-8020


Burgess A. Cooke, Ph. D.

3/12/97
Date

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GRB Prop.

8/26/97



GRB

8/26/97



8/26/97

GRB



GRB

8/26/97



GRB

8/26/97



GRB

8/26/97



8/26/97

GRB



8/26/97

GRB



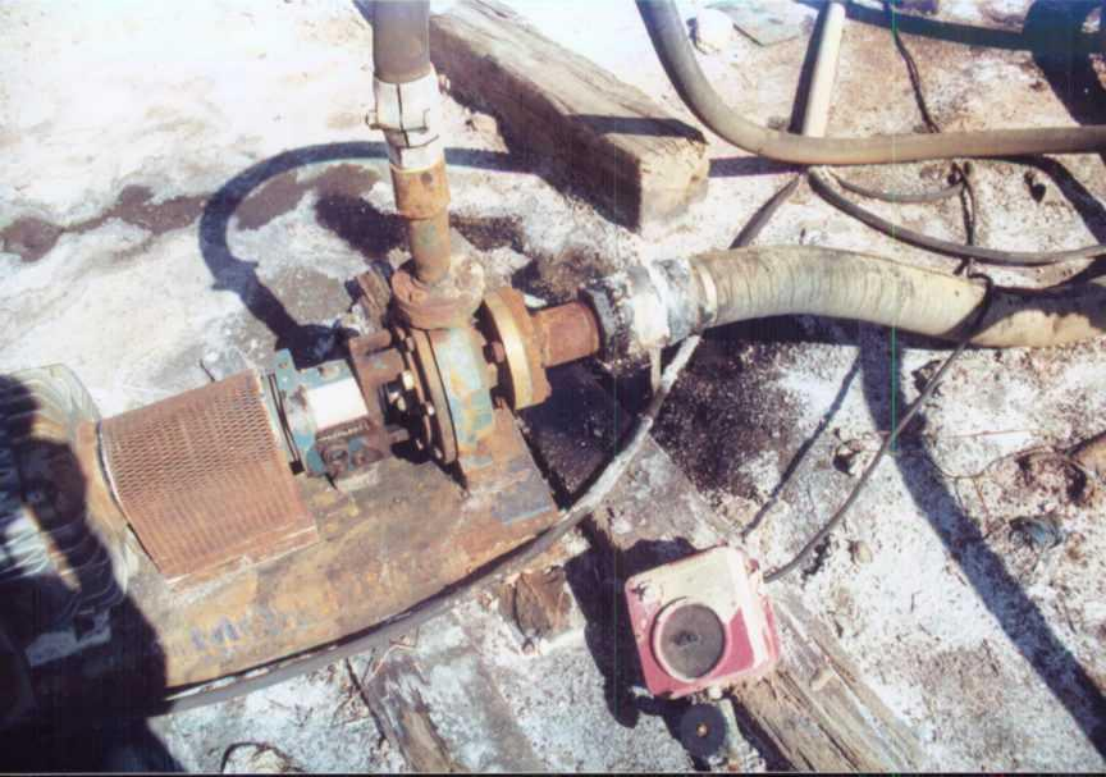
8/26/97

GRB



8/26/97

GRB



8/26/97

GRB



8/26 /97

GRB



8/26/97

GRB



6/26/97

GRB

8/26/97

GRB

**NO
TRESPASSING**
VIOLATORS WILL
BE PROSECUTED

GRB PROPERTIES INC

TANK BAY & DISPOSAL WELL
DOLGLAZIER FEDERAL
STATE B-2386-3
STATE "A" B-2386-3
STOVALL WOOD FILL
O 570.20, T 205, R 30E
L 001 CO., NM LIO-029088

8/26/97

GRB



1658
14.11
1.0
2
210

LPC
43836
107830

6165
14.11
1.0
1
210

OWB PROPERTIES INC.
TERRAZZINI
AEROS FEDERAL
2-SECUR. T 200, R 300
1000 CO. NM - 15-58001-2

GRB

8/26/97



8/20/97



GRB

8/26/97



GRB

8/26/97



GRB

8/26/97



GRB

8/26/97



GRB

8/26/97



GRB

8/26/77



GRB

8/26/97



GND PROPERTIES, INC.
SECTIONS 12-22-05-C
2300'N 2300'W
T23S R30E
2300' CO. N.M.

GRB

8/26/97



6658
14.11
1.0
2
210

LPC
43236
10830

6658
14.11
1.0
2

GRD PROPERTIES INC.
1300 DARTMOUTH
AVENUE FEDERAL
JUDICIAL TOWNSHIP, R 30E
KODY CO., NM 85-000000

GRB Properties

8-26-97

Unit J, Sec 15, T20 S, R30E



GRB Properties Inc.

8-26-97

Unit 3, Sec 15, T20, R30E



GRB Properties

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Unit J Section 15, T 20 S, R 30 E

Potash Area



GRB Properties Inc.

8-26-97

Unit J, Section 15, T20S, R30E



GRB Properties Inc.

8-26-97

Unit J, Sec 15, T20S, R30E



GRB Properties

8-26-97

Unit 5, Sec 15, T 20 S, R 30 E



GRB Properties

8-26-97

Unit J, Section 15, T20S, R30E



GRB Properties

8-26-97

Unit 3 Section 15 T 20 S R 30 E



GRB properties

8-26-97

Unit J, Section 15, T20S, R30 E



GRB Properties

8-26-97

Unit J Sec 15, T20S, R30E

Potash Area



GRB properties Treating Plant

3-31-97



GRB Properties Treating Plant

3-31-97



GRB Properties Treating Plant

3-31-97



61213 properties Treeding Plant

3-31-97



GIB Properties Treating Plant

3-31-97



GRB properties Treating Plant

3-31-97

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TRESPASSING**
VIOLATORS WILL
BE PROSECUTED

GRB PROPERTIES INC

LAND & WATER DEVELOPMENT
10000 S. 10TH AVE.
SUITE 100
DENVER, CO 80231
TEL: 303.733.1234
FAX: 303.733.1235



GRB Properties Inc

8-26-97

Unit C, Sec 20, T 20 S, R 30 E

**NO
TRESPASSING**
VIOLATORS WILL
BE PROSECUTED

GRB PROPERTIES INC

ANK BAY & DISPOSAL WASTE
COLLEATER FEDERAL
STATE 8-2588-3
STATE 7A 8-2588-3
1-00000-0000-000
0-000-000-000-000
00000-000-0000-000



GRB Properties Inc.

8-26-97

Unit C, Section 20, T20S, R30E



GRB Properties

6-26-97

C Sec 20, T 20 S, R 30 E



GRB Properties

8-26-97

C, Sec 20, T 20S, R 30E
,



GRB properties

8-26-97

C Sec 20, T 20S, R 30 E



GRB Properties

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C, Sec 20, T 20 S, R 30 E



GRB Properties

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GRB Properties

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C, Sec 20, T 20 S, R 30 E



GRB Properties

8-26-97

C, Sec 20, T20S, R30E



GRB Properties

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C Sec 20, T 20 S, R 30 E



GRB Properties

8-26-98

C, Sec 20, T 20 S, R 30 E



GRB Properties

06-26-97

C, Sec 20, T20S, R30E



GRB Properties

8-26-97

C, Sec 20, T 20 S. R 30 E



GRB Properties

8-26-97

C, Bec 20, T 20 S, R 30 E



GRB Properties

C, Sec 20, T 20 S, R 30 E



GRB Properties

C, Sec 20, T 20S, R 30E