3R - 263

GENERAL CORRESPONDENCE

YEAR(S):
1998-1994

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

October 19, 1998

CERTIFIED MAIL
RETURN RECEIPT NO. Z-274-520-572

Mr. W. J. Holcomb
Holcomb Oil & Gas
3001 Northridge Dr.
Farmington, New Mexico 87401

RE: GROUND WATER CONTAMINATION
OSBORN #1 WELL SITE

Dear Mr. Holcomb:

On August 23, 1994 and July 10, 1998, the New Mexico Oil Conservation Division (OCD) requested information from Merrion Oil & Gas (Merrion) regarding ground water contamination at the Osborn #1 well site. On July 21, 1998 Merrion informed the OCD that Holcomb Oil & Gas (Holcomb) is currently the operator of the Osborn #1 well site.

As the current operator of the site, the OCD requires that Holcomb submit a ground water investigation and remediation report to the OCD by December 18, 1998. The report will be submitted to the OCD Santa Fe Office with a copy provided to the OCD Aztec District Office. The report will contain the following information:

1. A description of all investigation, sampling and remediation activities conducted to date including conclusions and recommendations.

2. A site map showing the location of the pit, any excavated/remediated areas, all ground water sample locations, the direction of the hydraulic gradient and any other relevant site features.

3. Summary tables containing the laboratory analytic results of all soil and water quality sampling including copies of the laboratory data sheets and associated quality assurance/quality control (QA/QC) data.

4. A geologic log and well completion diagram for any monitor wells.

If you have any questions, please contact me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Denny Foust, OCD Aztec District Office

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

DRUG FREE

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

August 23, 1994

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT NO. P-111-334-157

Ms. Rachel Dunn
Merrion Oil & Gas
P.O. Box 840
Farmington, New Mexico 87499

RE: GROUND WATER CONTAMINATION
OSBORN #1, FAWKES #1, CLU #302, CANADA MESA #3 WELL SITES
SAN JUAN COUNTY, NEW MEXICO

Dear Ms. Dunn:

The New Mexico Oil Conservation Division (OCD) is in the process of reviewing Merrion Oil & Gas' (MOG) June 20, 1994 and April 28, 1994 correspondence. These documents present the results of water quality sampling of ground water during the closure of unlined pits at the Osborn #1, Fawkes #1, CLU #302 and Canada Mesa #3 well sites which are operated by MOG.

In order to complete a review of the above referenced documents, the OCD requests that MOG provide the following information:

1. A map for each well site showing the locations of all soil and ground water sampling points.

2. The ground water sampling procedures used at each site.

3. An explanation for the discrepancy in ground water analytical sampling results between different sampling events at the Osborn #1 and Fawkes #1 well sites.

Submission of the above information will allow the OCD to complete a review of these documents.

If you have any questions, please call me at (505) 827-5885.

Sincerely,

William C. Olson
Hydrogeologist
Environmental Bureau

xc: OCD Aztec District Office

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

July 10, 1998

CERTIFIED MAIL
RETURN RECEIPT NO. Z-235-437-310

Ms. Rachel Dunn
Merrion Oil & Gas
P.O. Box 840
Farmington, New Mexico 87499

RE: GROUND WATER CONTAMINATION
OSBORN #1, CLU #302 AND CANADA MESA #3 WELL SITES

Dear Ms. Dunn:

On August 23, 1994, the New Mexico Oil Conservation Division (OCD) requested information from Merrion Oil & Gas (MOG) regarding ground water contamination at the Osborn #1, CLU #302 and Canada Mesa #3 well sites. A review of the OCD's files shows that to date the OCD has not received this requested information.

The OCD requires that MOG submit this previously required information to the OCD by August 7, 1998. The information will be submitted to the OCD Santa Fe Office with a copy provided to the OCD Aztec District Office.

If you have any questions, please contact me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Denny Foust, OCD Aztec District Office

MERRION

Oil & Gas

July 21, 1998

Mr. William C. Olson, Hydrologist
Environmental Bureau
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505

RE: Osborn #1, CLU #302, Canada Mesa #3 Soil Contamination

Dear Mr. Olson

Attached please find laboratory analyses which indicate that the groundwater was not contaminated at the two subject sites, the CLU #302 and the Canada Mesa #3. The water samples were tested for TPH and BTEX and the results from both tests at both sites were within acceptable levels. Closure reports have not been filed for the pits at either site because the soil remediation is not complete.

The Osborn #1 was sold to Holcomb Oil & Gas, 3001 Northridge Dr., Farmington, NM 87401, phone (505)326-0550, who assumed all environmental liability associated with the site.

If you need further information, please call me at the number listed below, ext. 126.

Sincerely

Connie Dinning, Contract Engineer

Attachments

CC: Denny Foust, OCD Aztec District Office w/ abbreviated attachments

610 Reilly Avenue • Farmington, New Mexico 87401-2634 • 505-327-9801 / 505 326-5900 (Fax)

MERRION

OIL & GAS

June 20, 1994

Mr. Bill Olson
NMOCD
PO Box 2088
Santa Fe, NM 87504

Dear Mr. Olson:

As you requested, I am sending you a list of wells that we have encountered ground water on along with the laboratory results.

1. **Osborn #1:** The first water samples taken were analyzed by Envirotech. We feel that these samples are not accurate due to improper sampling procedures. (Dirt in the sample jars.) The second set of samples were taken to Intermountain Lab, these show a small amount of contamination.

2. **Fawkes #1:** The first set of samples on this well were also taken to Envirotech and we feel are not accurate due to sampling procedures. The second set of samples taken to Intermountain Lab show no contamination in the ground water. We have already submitted a closure report for this well.

3. **CLU #302:** One ground water sample was taken from the center of the pit, this shows contamination. A second ground water sample was taken from the center of the pit which shows slight contamination and a third water sample taken approx. 10' down gradient shows no contamination.

4. **Canada Mesa #3:** (See attached location diagram). Over 800 cubic yards of stained soil was excavated from the large pit and composted on location. Ground water sample at location #1 showed a small amount of contamination and sample #2 showed no contamination. We estimated that the hydrocarbons hit the ground water and moved along the water surface approx. 30' in all directions from the pit. Since the water samples were not overly contaminated we feel that the water itself did not absorb the heavy hydrocarbons.

Sincerely,

Margi Sullivan
Engineering Technician

Cc: *Denny Foust*

Attachments

610 Reilly Avenue • P.O. Box 840 • Farmington, New Mexico 87499 • 505-327-9801 / 505-326-5900 (Fax)

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

TOTAL PETROLEUM HYDROCARBONS
EPA METHOD 418.1

Merrion Oil and Glass

Project: Osborn #1 and Fawkes #1 Osborn 1
Matrix: Water
Condition: Intact/Cool

Date Reported: 05/17/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: 05/17/94
Date Analyzed: 05/17/94

Sample ID	Lab ID	Result (mg/L)	Detection Limit
Osborn #1	G00337	ND	1
Osborn #2	G00338	161	50
Osborn #3	G00339	ND	1
Fawkes #1	G00340	ND	1
Fawkes #2	G00341	ND	1

ND - Analyte not detected at stated detection level.

References:

Method 418.1: Petroleum Hydrocarbons, Total Recoverable, USEPA Chemical Analysis of Water and Waste, 1978.

Method 3510: Separatory Funnel Liquid - Liquid Extraction, USEPA SW-846, Test Methods for Evaluating Solid Waste, Rev. 1, July. 1992.

Analyst: [signature]

Reviewed: mh

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID:	Osborn 1 and Fawkes 1	Report Date:	05/17/94
Sample ID:	Osborn 1 Taken from Ditch	Date Sampled:	05/03/94
Lab ID:	G00337	Date Received:	05/03/94
Sample Matrix:	Water	Date Extracted:	NA
Condition:	Cool/Intact	Date Analyzed:	05/05/94

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND	0.2
Toluene	ND	0.2
Ethylbenzene	ND	0.2
m,p-Xylenes	ND	0.2
o-Xylene	ND	0.2

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Bromofluorobenzene	91.9	86 -115%

Reference: Method 5030, Purge and Trap; Method 8020, Aromatic Volatile Organics; Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, September 1986.

Comments:

Analyst

mh
Review

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID:	Osborn 1 and Fawkes 1	Report Date:	05/17/94
Sample ID:	Osborn 2 Between	Date Sampled:	05/03/94
Lab ID:	G00338	Date Received:	05/03/94
Sample Matrix:	Water Pit & Ditch,	Date Extracted:	NA
Condition:	Cool/Intact	Date Analyzed:	05/06/94

most contaminated looking area

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND	10
Toluene	19 ok	10
Ethylbenzene	23 ok	10
m,p-Xylenes	153 ok	10
o-Xylene	62	10

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Bromofluorobenzene	94.3	86 -115%

Reference: Method 5030, Purge and Trap; Method 8020, Aromatic Volatile Organics; Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, September 1986.

Comments:

Analyst

mh
Review

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID:	Osborn 1 and Fawkes 1	Report Date:	05/17/94
Sample ID:	Osborn 3 Taken 30' south	Date Sampled:	05/03/94
Lab ID:	G00339	Date Received:	05/03/94
Sample Matrix:	Water	Date Extracted:	NA
Condition:	Cool/Intact of pit	Date Analyzed:	05/06/94

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND	0.2
Toluene	ND	0.2
Ethylbenzene	ND	0.2
m,p-Xylenes	ND	0.2
o-Xylene	ND	0.2

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Bromofluorobenzene	98.0	86 -115%

Reference: Method 5030, Purge and Trap; Method 8020, Aromatic Volatile Organics; Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, September 1986.

Comments:

Analyst

mh
Review

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

4½' down center of pit

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	2	Date Reported:	04-19-94
Laboratory Number:	7239	Date Sampled:	04-18-94
Sample Matrix:	Soil	Date Received:	04-18-94
Preservative:	Cool	Date Extracted:	04-19-94
Condition:	Cool & Intact	Date Analyzed:	04-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	339 ok	19.9
Toluene	3,430	60
Ethylbenzene	2,760	19.9
p,m-Xylene	16,740	29.9
o-Xylene	1,460 ok	19.9

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	96 %
Bromofluorobenzene	100 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 22, T30N, R12W

Analyst

Review

ENVIROTECH LABS

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PHONE: (505) 632-0615 • FAX: (505) 632-1865

MODIFIED EPA METHOD 8015
NONHALOGENATED VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	2	Date Reported:	04-20-94
Laboratory Number:	7239	Date Sampled:	04-18-94
Sample Matrix:	Soil	Date Received:	04-18-94
Preservative:	Cool	Date Analyzed:	04-19-94
Condition:	Cool and Intact	Analysis Requested:	TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	540	0.1
Diesel Range (C10 - C28)	144	0.1
C28 - C36 Range	ND	0.1
Total Petroleum Hydrocarbons	680 high	0.1

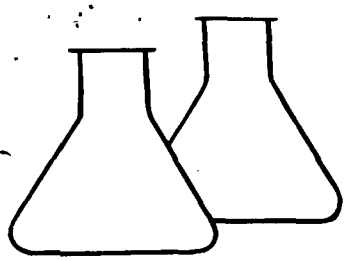
Method: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 22, T30N, R12W

Analyst

Review



ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

12" down center of pit

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	1	Date Reported:	04-19-94
Laboratory Number:	7238	Date Sampled:	04-18-94
Sample Matrix:	Soil	Date Received:	04-18-94
Preservative:	Cool	Date Extracted:	04-19-94
Condition:	Cool & Intact	Date Analyzed:	04-19-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	510 ok	19.4
Toluene	5,400	58
Ethylbenzene	1,000	19.4
p,m-Xylene	16,100	29.1
o-Xylene	4,470	19.4

ok

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	99 %
	Bromofluorobenzene	100 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 22, T30N, R12W

Analyst

Review

ENVIROTECH LABS
5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

MODIFIED EPA METHOD 8015
NONHALOGENATED VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	1	Date Reported:	04-20-94
Laboratory Number:	7238	Date Sampled:	04-18-94
Sample Matrix:	Soil	Date Received:	04-18-94
Preservative:	Cool	Date Analyzed:	04-19-94
Condition:	Cool and Intact	Analysis Requested:	TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	13.2	0.1
Diesel Range (C10 - C28)	0.8	0.1
C28 - C36 Range	ND	0.1
Total Petroleum Hydrocarbons	14.0	0.1

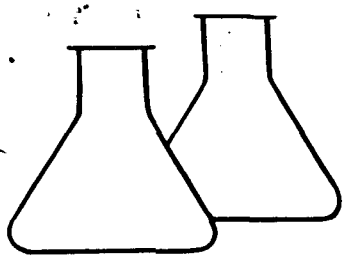
Method: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 22, T30N, R12W

Analyst

Review



ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	3	Date Reported:	04-19-94
Laboratory Number:	7240	Date Sampled:	04-18-94
Sample Matrix:	Water	Date Received:	04-18-94
Preservative:	HgCl & Cool	Date Analyzed:	04-19-94
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)		Det. Limit (ug/L)
Benzene	21.4	high	1.0
Toluene	3.5	ok	3.0
Ethylbenzene	4.2	ok	1.0
p,m-Xylene	11.4		1.5
o-Xylene	12.1	ok	1.0

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	99 %
Bromofluorobenzene	99 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

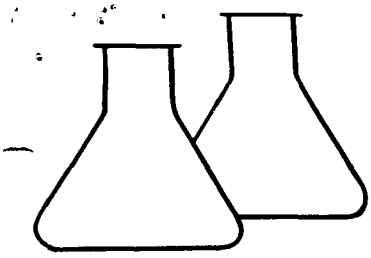
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 22, T30N, R12W

Analyst

Review



ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

Water sample 5' down center of pit

MODIFIED EPA METHOD 8015
NONHALOGENATED VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	3	Date Reported:	04-20-94
Laboratory Number:	7240	Date Sampled:	04-18-94
Sample Matrix:	Water	Date Received:	04-18-94
Preservative:	Cool - HCl	Date Analyzed:	04-20-94
Condition:	Cool and Intact	Analysis Requested:	TPH

Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	85	0.1
Diesel Range (C10 - C28)	52	0.1
C28 - C44 Range	ND	0.1
Total Petroleum Hydrocarbons	137 high	0.1

Method: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA July 1992.

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 22, T30N, R12W

Analyst

Review

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	4	Date Reported:	04-19-94
Laboratory Number:	7241	Date Sampled:	04-18-94
Sample Matrix:	Water	Date Received:	04-18-94
Preservative:	HgCl & Cool	Date Analyzed:	04-19-94
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)		Det. Limit (ug/L)
Benzene	10.3	-just barely ok	1.0
Toluene	37.7	ok	3.0
Ethylbenzene	263	ok	1.0
p,m-Xylene	464	Little high	1.5
o-Xylene	570		1.0

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	99 %
	Bromofluorobenzene	99 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

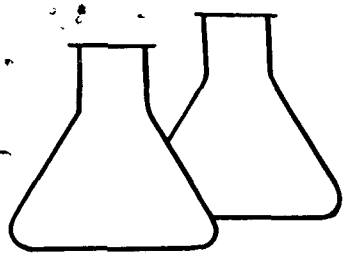
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 22, T30N, R12W

Analyst

Review



ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

Water sample 5' down center of pit

MODIFIED EPA METHOD 8015
NONHALOGENATED VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	4	Date Reported:	04-20-94
Laboratory Number:	7241	Date Sampled:	04-18-94
Sample Matrix:	Water	Date Received:	04-18-94
Preservative:	Cool - HCl	Date Analyzed:	04-20-94
Condition:	Cool and Intact	Analysis Requested:	TPH

Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	15.7	0.1
Diesel Range (C10 - C28)	2.9	0.1
C28 - C44 Range	ND	0.1
Total Petroleum Hydrocarbons	18.6 ok	0.1

Method: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA July 1992.

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 22, T30N, R12W

Analyst

Review

These Envirotech samples are not very accurate:

FAX 505-326-5900

PH. 505-327-9801

MERRION OIL & GAS CORPORATION

610 REILLY AVE. • P. O. BOX 840

FARMINGTON, NEW MEXICO 87499

OIL CONSERVATION DIVISION
RECEIVED

'94 MAY 2 AM 8 50

April 28, 1994

Mr. Denny Foust
Oil Conservation Division
1000 Rio Brazos Rd.
Aztec, NM 87410

Dear Mr. Foust:

As you requested during our phone conversation today, I am sending you a copy of the laboratory analysis of the water samples taken on the Osborne #1 and the Fawkes #1. These samples were taken on April 18, 1994 and preserved in ice prior to being taken to Envirotech Lab.

The **Osborne #1** is located in Flora Vista, Sec. 22, T30N, R12W, 790 fsl, 900 fwl. Two water samples were taken once ground water was reached (around 6'). Both samples exceeded the limit on Benzene and one sample exceeded the limit on Xylene. We feel that more sampling needs to be done to verify the ground water contamination, and try to determine the extent of contamination before deciding what remediation method to use. We plan to take these samples on Tuesday, May 3, 1994 and if ground water contamination exists a closure plan will be submitted within 90 days of the sampling.

The **Fawkes #1** is located just south of Farmington along the San Juan River, Sec. 18, T29N, R13W, 740 fsl, 790 fel. Two water samples were taken once ground water was encountered (approximately 10'). These samples gave an unusually high level of Xylene which may be due to the manor in which the samples were taken. We plan to conduct more sampling, on May 3rd or 4th, to verify the water contamination, and determine the extent of contamination. A background water sample will also be taken. Once the extent of contamination is determined a closure plan will be submitted within 90 days of the sampling.

Thank you for your cooperation on this matter. If you have any questions regarding these samples please contact me at (505) 327-9801.

Sincerely,

Margi Sullivan

Margi Sullivan
Engineering Technician

attachment: Laboratory analysis of water samples

cc: Bill Olson

ENVIROTECH LABS
5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	3	Date Reported:	04-19-94
Laboratory Number:	7240	Date Sampled:	04-18-94
Sample Matrix:	Water	Date Received:	04-18-94
Preservative:	HgCl & Cool	Date Analyzed:	04-19-94
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	21.4	1.0
Toluene	3.3	1.0
Ethylbenzene	4.2	1.0
p,m-Xylene	11.4	1.0
o-Xylene	12.1	1.0

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	99 %
Bromofluorobenzene	99 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 12, T30N, R12W

Analyst

Review

ENVIROTECH LABS
5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

MODIFIED EPA METHOD 8015
NONHALOGENATED VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	3	Date Reported:	04-20-94
Laboratory Number:	7240	Date Sampled:	04-18-94
Sample Matrix:	Water	Date Received:	04-18-94
Preservative:	Cool - HCl	Date Analyzed:	04-20-94
Condition:	Cool and Intact	Analysis Requested:	TPH

Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	35	0.1
Diesel Range (C10 - C28)	52	0.1
C28 - C44 Range	ND	0.1
Total Petroleum Hydrocarbons	137	0.1

Method: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA July 1992.

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 12, T30N, R12W

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EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	4	Date Reported:	04-19-94
Laboratory Number:	7241	Date Sampled:	04-18-94
Sample Matrix:	Water	Date Received:	04-18-94
Preservative:	HgCl & Cool	Date Analyzed:	04-19-94
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	10.3	1.0
Toluene	37.7	1.0
Ethylbenzene	263	1.0
p,m-Xylene	464	1.0
o-Xylene	370	1.0

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	99 %
Bromofluorobenzene	99 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 12, T30N, R12W

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MODIFIED EPA METHOD 8015
NONHALOGENATED VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	4	Date Reported:	04-20-94
Laboratory Number:	7241	Date Sampled:	04-18-94
Sample Matrix:	Water	Date Received:	04-18-94
Preservative:	Cool - HCl	Date Analyzed:	04-20-94
Condition:	Cool and Intact	Analysis Requested:	TPH

Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	15.7	0.1
Diesel Range (C10 - C28)	2.9	0.1
C28 - C44 Range	ND	0.1
Total Petroleum Hydrocarbons	18.6	0.1

Method: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA July 1992.

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EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	1	Date Reported:	04-19-94
Laboratory Number:	7236	Date Sampled:	04-18-94
Sample Matrix:	Water	Date Received:	04-18-94
Preservative:	HgCl & Cool	Date Analyzed:	04-19-94
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	1.0
Toluene	52	1.0
Ethylbenzene	730	1.0
p,m-Xylene	4,020	1.5
o-Xylene	3,360	1.0

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	99 %
	Bromofluorobenzene	99 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: Fawkes #1 Sec.18 29N, 13W

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MODIFIED EPA METHOD 8015
NONHALOGENATED VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	1	Date Reported:	04-20-94
Laboratory Number:	7236	Date Sampled:	04-18-94
Sample Matrix:	Water	Date Received:	04-18-94
Preservative:	Cool - HCl	Date Analyzed:	04-20-94
Condition:	Cool and Intact	Analysis Requested:	TPH

Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	353	0.1
Diesel Range (C10 - C28)	158	0.1
C28 - C44 Range	ND	0.1
Total Petroleum Hydrocarbons	510	0.1

Method: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA July 1992.

ND - Parameter not detected at the stated detection limit.

Comments: Fawkes #1 Sec. 13 29N, 13W

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EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	2	Date Reported:	04-19-94
Laboratory Number:	7237	Date Sampled:	04-18-94
Sample Matrix:	Water	Date Received:	04-18-94
Preservative:	HgCl & Cool	Date Analyzed:	04-19-94
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	1.0
Toluene	79	3.0
Ethylbenzene	830	1.0
p,m-Xylene	4,980	1.5
o-Xylene	4,680	1.0

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	100 %
Bromofluorobenzene	102 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: Fawkes #1 Sec.13 29N, 13W

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MODIFIED EPA METHOD 3015
NONHALOGENATED VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	92127
Sample ID:	2	Date Reported:	04-20-94
Laboratory Number:	7237	Date Sampled:	04-18-94
Sample Matrix:	Water	Date Received:	04-18-94
Preservative:	Cool - HCl	Date Analyzed:	04-20-94
Condition:	Cool and Intact	Analysis Requested:	TPH

Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	1,000	0.1
Diesel Range (C10 - C28)	228	0.1
C28 - C44 Range	ND	0.1
Total Petroleum Hydrocarbons	1,230	0.1

Method: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA July 1992.

ND - Parameter not detected at the stated detection limit.

Comments: Fawkes #1 Sec.18 19N, 13W

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