

3R - 291

**GENERAL
CORRESPONDENCE**

YEAR(S):

1994



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

August 23, 1994

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

ANITA LOCKWOOD
CABINET SECRETARY

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

MERRION

OIL & GAS

WATER DIVISION

25

JUN 20 1994

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

TOTAL PETROLEUM HYDROCARBONS
EPA METHOD 418.1Fawkes #1
FileMerrion Oil and GlassProject: Osborn #1 and Fawkes #1
Matrix: Water
Condition: Intact/CoolDate 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: Austin HallReviewed: mh

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID:	Osborn 1 and Fawkes 1	Report Date:	05/17/94
Sample ID:	Fawkes 1	Date Sampled:	05/03/94
Lab ID:	G00340 Pond NE of pit	Date Received:	05/03/94
Sample Matrix:	Water	Date Extracted:	NA
Condition:	Cool/Intact	Date Analyzed:	05/07/94

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:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	95.9	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:

Austin Wal
Analyst

mh
Review

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Osborn 1 and Fawkes 1
Sample ID: Fawkes 2
Lab ID: G00341
Sample Matrix: Water
Condition: Cool/Intact

Pond NW of pit

Report Date: 05/17/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: NA
Date Analyzed: 05/07/94

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 99.3 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:

Antoni
Analyst

mh
Review

**TOTAL PETROLEUM HYDROCARBONS
EPA METHOD 418.1****Merrion Oil and Gas**

Project: Fawkes 1
Matrix: Water/Soil
Condition: Cool/Intact

Date Reported: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: 05/18/94
Date Analyzed: 05/18/94

Sample ID	Lab ID	Result (mg/L)	Detection Limit
Fawkes 3	G00347	ND	1
Fawkes 4	G00348	ND	1
Fawkes 5	G00349	ND	1
Fawkes 6	G00350	ND	1
Fawkes 7	G00351	ND	6
Fawkes 8	G00352	ND	8
Fawkes 9	G00353	ND	8

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: Austin Hall

Reviewed: mh

Ground water sample 20' West of pit

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Fawkes 1
Sample ID: Fawkes 3
Lab ID: G00347
Sample Matrix: Water
Condition: Cool/Intact

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: NA
Date Analyzed: 05/06/94

clean

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND	0.2
Toluene	0.2	0.2
Ethylbenzene	ND	0.2
m,p-Xylenes	1.3	0.2
o-Xylene	1.6	0.2

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	102.4	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:

Austin Wal-
Analyst

mh
Review

Ground water sample center at p. -

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Fawkes 1
Sample ID: Fawkes 4
Lab ID: G00348
Sample Matrix: Water
Condition: Cool/Intact

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: 05/03/94
Date Analyzed: 05/06/94

clean

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	1.4	0.2
Toluene	0.9	0.2
Ethylbenzene	4.1	0.2
m,p-Xylenes	12.6	0.2
o-Xylene	32.0	0.2

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	*Bromofluorobenzene	130.2	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: * Surrogate high due to matrix interference

Anstine Wolf
Analyst

mh
Review

Water sample 20' East of pit

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Fawkes 1
Sample ID: Fawkes 5
Lab ID: G00349
Sample Matrix: Water
Condition: Cool/Intact

Clean

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: NA
Date Analyzed: 05/12/94

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:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	92.6	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:

Austin Wal
Analyst

mh
Review

Water 40' North of pit (Downgradient)

VOLATILE AROMATIC HYDROCARBONS**Merrion Oil and Gas**

Project ID: Fawkes 1
Sample ID: Fawkes 6
Lab ID: G00350
Sample Matrix: Water
Condition: Cool/Intact

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: NA
Date Analyzed: 05/07/94

Clean

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:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	90.4	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:

Justin Leaf
Analyst

mh
Review

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Fawkes 1
Sample ID: Fawkes 7
Lab ID: G00351
Sample Matrix: Soil
Condition: Cool/Intact

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: 05/17/94
Date Analyzed: 05/17/94

Clean

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	34.7 <i>sl</i>	8.9
Toluene	64.2	8.9
Ethylbenzene	11.8	8.9
m,p-Xylenes	73.0	8.9
o-Xylene	34.2	8.9

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	110.7	74 -121%

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:

Antoni L. ...

Analyst

mh

Review

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Fawkes 1
Sample ID: Fawkes 8
Lab ID: G00352
Sample Matrix: Soil
Condition: Cool/Intact

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: 05/17/94
Date Analyzed: 05/17/94

clean

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND <i>ok</i>	9.4
Toluene	26.9	9.4
Ethylbenzene	ND	9.4
m,p-Xylenes	31.0	9.4
o-Xylene	10.4	9.4

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	110.8	74 -121%

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:

Austin Lee
Analyst

mh
Review

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Fawkes 1
Sample ID: Fawkes 9
Lab ID: G00353
Sample Matrix: Soil
Condition: Cool/Intact

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: 05/17/94
Date Analyzed: 05/17/94

clean

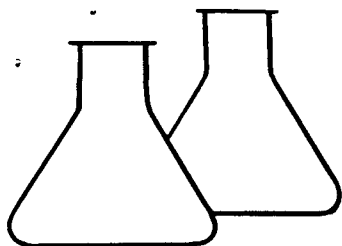
Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND <i>sk</i>	9.8
Toluene	90.8	9.8
Ethylbenzene	ND	9.8
m,p-Xylenes	71.9	9.8
o-Xylene	22.9	9.8

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	104.2	74 -121%

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:*Antonia Lopez*
Analyst*mh*
Review



ENVIROTECH LABS

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

Water sample taken at 10' 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:	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) - ppb	Det. Limit (ug/L)
Benzene	ND	1.0
Toluene	52 - ok	3.0
Ethylbenzene	730 - ok	1.0
p,m-Xylene	4,020	1.5
o-Xylene	3,860	1.0

high
possibly
bad sample

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

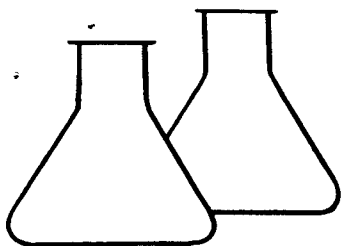
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

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

Kevin L. Jensen
Analyst

Morris S. Young
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:	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 high	0.1

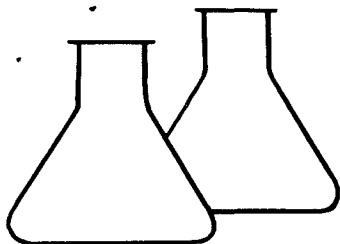
Method: Method 8015, Nonhalogenated Volatile Organics,
Test Methods for Evaluating Solid Waste, SW-846, USEPA
July 1992.

ND - Parameter not detected at the stated detection limit.

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

Shirley L. Jensen
Analyst

Merrion D. Young
Review



ENVIROTECH LABS

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

Water sample taken at 10' 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:	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 - ok	3.0
Ethylbenzene	830 - high	1.0
p,m-Xylene	4.980	1.5
o-Xylene	4.680	1.0

possibly bad
sample

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

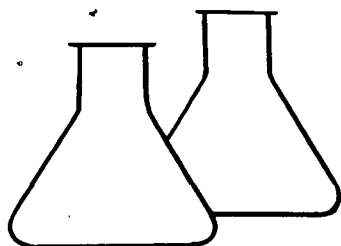
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

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

Kevin L. Ciemer
Analyst

Margaret Young
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:	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 <i>high</i>	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 29N, 13W

Shirley L. Jensen
Analyst

Merrion Young
Review

Santa Fe

District I

P.O. Box 1980, Hobbs, NM

District II

P.O. Drawer DD, Artesia, NM 88211

District III

1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICE

RECEIVED

PIT REMEDIATION AND CLOSURE REPORT

JUN 15 1994

OIL CONSERVATION DIV.
SANTA FE

Operator: Merrion Oil & Gas Corporation **Telephone:** (505) 327-9801

Address: P.O. Box 840, Farmington, NM 87499

Facility Or: Fawkes #1
Well Name

Location: Unit or Qtr/Qtr Sec P Sec 18 T 29N R 13W County San Juan

Pit Type: Separator Dehydrator Other Blow off pit

Land Type: BLM , State , Fee X, Other

Pit Location: Pit dimensions: length 10', width 10', depth 4'
(Attach diagram)

Reference: wellhead X, other

Footage from reference: 20'

Direction from reference: 45 Degrees X East North X
of
 West South

Depth To Ground Water:	Less than 50 feet	(20 points)	
(Vertical distance from	50 feet to 99 feet	(10 points)	
contaminants to seasonal	Greater than 100 feet	(0 Points)	<u>20</u>
high water elevation of			
ground water)			

Wellhead Protection Area:	Yes (20 points)	
(Less than 200 feet from a private	No (0 points)	<u>0</u>
domestic water source, or; less than		
1000 feet from all other water sources)		

Distance To Surface Water:	Less than 200 feet	(20 points)	
Horizontal distance to perennial	200 feet to 1000 feet	(10 points)	
lakes, ponds, rivers, streams, creeks,	Greater than 1000 feet	(0 points)	<u>20</u>
irrigation canals and ditches)			

RANKING SCORE (TOTAL POINTS): 40

Date Remediation Started: 4-18-94 Dated Completed: 5-3-94

Remediation Method: Excavation _____ Approx. cubic yards _____
(Check all appropriate sections) Landfarmed _____ Insitu Bioremediation _____
Other _____

Remediation Location: Onsite _____ Offsite _____
(ie. landfarmed onsite, name and location of offsite facility)

General Description Of Remedial Action: Sampled soil and ground water for closure.

Ground Water Encountered: No _____ Yes X Depth 10'

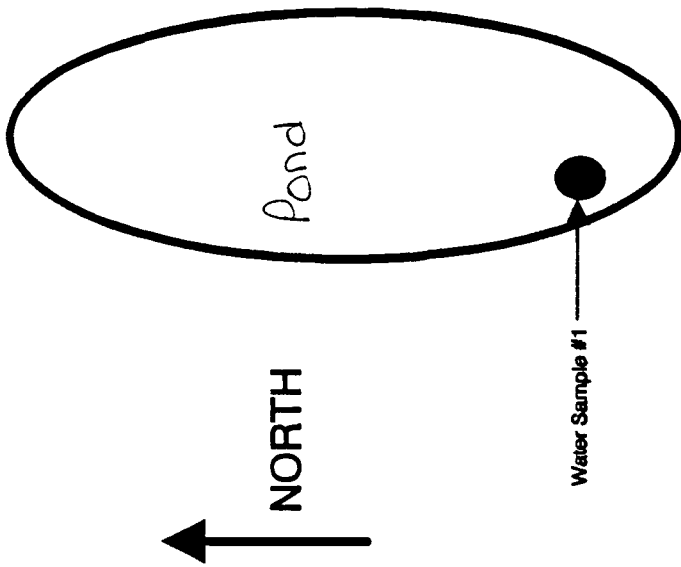
Final Pit: Sample location See Attached
Closure Sampling: _____
(if multiple samples, attach sample results and diagram of sample locations and depths)
Sample depth _____
Sample date _____ Sample time _____
Sample Results
Benzene (ppm) _____
Total BTEX (ppm) _____
Field headspace (ppm) _____
TPH _____

Ground Water Sample: Yes X No _____ (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 6-13-94
SIGNATURE Margi Sullivan PRINTED NAME Margi Sullivan
AND TITLE Engr. Tech.

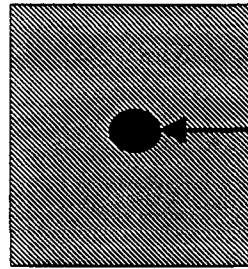
FAWKES #1 LOCATION DIAGRAM



Water Sample #1

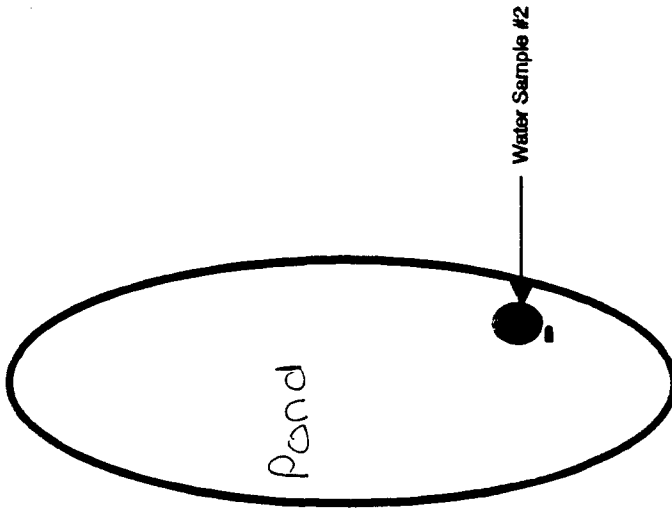
Water Sample #8

OLD EARTHEN PIT



Water Sample #4
Soil Sample #7
Soil Sample #8
Soil Sample #9

Water Sample #5



Water Sample #2

Water Sample #3



WELLHEAD

TOTAL PETROLEUM HYDROCARBONS
EPA METHOD 418.1Fawkes #1
FileMerrion Oil and GlassProject: Osborn #1 and Fawkes #1
Matrix: Water
Condition: Intact/CoolDate 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: *Antoni*Reviewed: *mn*

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Osborn 1 and Fawkes 1
Sample ID: Fawkes 1
Lab ID: G00340
Sample Matrix: Water
Condition: Cool/Intact

Pond NE of pit

Report Date: 05/17/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: NA
Date Analyzed: 05/07/94

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:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	95.9	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:

Austin Wal
Analyst

mh
Review

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Osborn 1 and Fawkes 1
Sample ID: Fawkes 2
Lab ID: G00341
Sample Matrix: Water
Condition: Cool/Intact

*Pond NLC
of pit*

Report Date: 05/17/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: NA
Date Analyzed: 05/07/94

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 99.3 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:

Austin
Analyst

m
Review

TOTAL PETROLEUM HYDROCARBONS
EPA METHOD 418.1Merrion Oil and GasProject: Fawkes 1
Matrix: Water/Soil
Condition: Cool/IntactDate Reported: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: 05/18/94
Date Analyzed: 05/18/94

Sample ID	Lab ID	Result (mg/L)	Detection Limit
Fawkes 3	G00347	ND	1
Fawkes 4	G00348	ND	1
Fawkes 5	G00349	ND	1
Fawkes 6	G00350	ND	1
Fawkes 7	G00351	ND	6
Fawkes 8	G00352	ND	8
Fawkes 9	G00353	ND	8

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: Austin LeeReviewed: mh

Ground water sample 20 1020 31 p.

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Fawkes 1
Sample ID: Fawkes 3
Lab ID: G00347
Sample Matrix: Water
Condition: Cool/Intact

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: NA
Date Analyzed: 05/06/94

clear

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND	0.2
Toluene	0.2	0.2
Ethylbenzene	ND	0.2
m,p-Xylenes	1.3	0.2
o-Xylene	1.6	0.2

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	102.4	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:

Austin Wal-
Analyst

mh
Review

Ground water sample container # 1 -

VOLATILE AROMATIC HYDROCARBONSMerrion Oil and Gas

Project ID: Fawkes 1
Sample ID: Fawkes 4
Lab ID: G00348
Sample Matrix: Water
Condition: Cool/Intact

clean

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: 05/03/94
Date Analyzed: 05/06/94

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	1.4	0.2
Toluene	0.9	0.2
Ethylbenzene	4.1	0.2
m,p-Xylenes	12.6	0.2
o-Xylene	32.0	0.2

ND - Analyte not detected at the stated detection limit.

Quality Control: Surrogate Percent Recovery Acceptance Limits

*Bromofluorobenzene 130.2 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: * Surrogate high due to matrix interference

Asuncion Lopez
Analyst

mh
Review

*Water Sample of the***VOLATILE AROMATIC HYDROCARBONS**Merrion Oil and Gas

Project ID: Fawkes 1
Sample ID: Fawkes 5
Lab ID: G00349
Sample Matrix: Water
Condition: Cool/Intact

Clean

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: NA
Date Analyzed: 05/12/94

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:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	92.6	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:

Austin Wal

Analyst

mh

Review

Water 40 mg/L ± 10% / Comparison
VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Fawkes 1
Sample ID: Fawkes 6
Lab ID: G00350
Sample Matrix: Water
Condition: Cool/Intact

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: NA
Date Analyzed: 05/07/94

Clean

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:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	90.4	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
Analyst

mh
Review

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Fawkes 1
Sample ID: Fawkes 7
Lab ID: G00351
Sample Matrix: Soil
Condition: Cool/Intact

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: 05/17/94
Date Analyzed: 05/17/94

Clear

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	34.7 <i>sl</i>	8.9
Toluene	64.2	8.9
Ethylbenzene	11.8	8.9
m,p-Xylenes	73.0	8.9
o-Xylene	34.2	8.9

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	110.7	74 -121%

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:

Antoni G. J. -
Analyst

mh
Review

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Fawkes 1
Sample ID: Fawkes 8
Lab ID: G00352
Sample Matrix: Soil
Condition: Cool/Intact

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: 05/17/94
Date Analyzed: 05/17/94

110.8

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND <i>OK</i>	9.4
Toluene	26.9	9.4
Ethylbenzene	ND	9.4
m,p-Xylenes	31.0	9.4
o-Xylene	10.4	9.4

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	110.8	74 -121%

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:

Antoni Lopez
Analyst

mh
Review

VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Fawkes 1
Sample ID: Fawkes 9
Lab ID: G00353
Sample Matrix: Soil
Condition: Cool/Intact

Report Date: 05/24/94
Date Sampled: 05/03/94
Date Received: 05/03/94
Date Extracted: 05/17/94
Date Analyzed: 05/17/94

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND 56	9.8
Toluene	90.8	9.8
Ethylbenzene	ND	9.8
m,p-Xylenes	71.9	9.8
o-Xylene	22.9	9.8

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	104.2	74 -121%

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:

Ashton Carl
Analyst

mh
Review

MERRION OIL & GAS CORPORATION

610 REILLY AVE. • P. O. BOX 840

FARMINGTON, NEW MEXICO 87499

OIL CONSERVATION DIVISION
RECEIVED

APR 28 1994 8 50

April 28, 1994

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

Dear Mr. Foust:

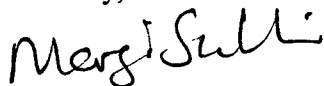
As you requested during our phone conversation today, I am sending you a copy of the laboratory analysis of the water samples taken on the Osborne #1 and the Fawkes #1. These samples were taken on April 18, 1994 and preserved in ice prior to being taken to Envirotech Lab.

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 fwl. 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.

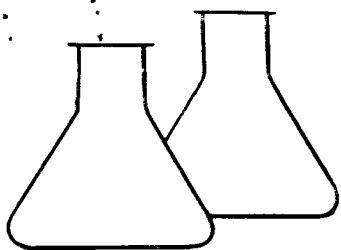
Sincerely,



Margi Sullivan
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:	04-13-94
Preservative:	HgCl & Cool	Date Analyzed:	04-19-94
Condition:	Cool & Intact	Analysis Requested:	3TEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	11.4	1.0
Toluene	0.6	0.0
Ethylbenzene	1.2	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 8030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

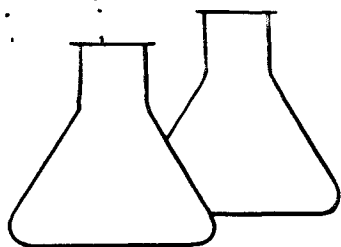
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ID - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 12, 130N, 112W

David L. Gerner
Analyst

Maris De Young
Reviewer



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)	32	0.1
C28 - C44 Range	ND	0.1
Total Petroleum Hydrocarbons	137	0.1

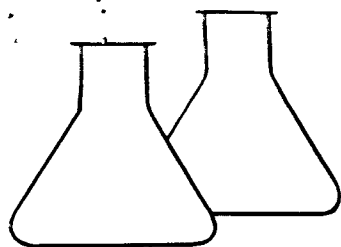
Method: Method 8015, Nonhalogenated Volatile Organics,
Test Methods for Evaluating Solid Waste, SW-846, USEPA
July 1992.

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 12. 120N, 312W

Kevin L. Jensen
Analyst

Merrion D. Young
Review



ENVIROTECH LABS

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

EPA METHOD 3020 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:	3TEX

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	1.5
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

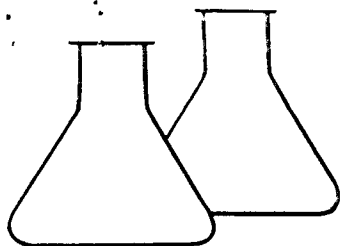
Method 2020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 12, 120N, R12W

Dennis L. Cramer
Analyst

Mavis D. Young
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:	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	18.5	0.1

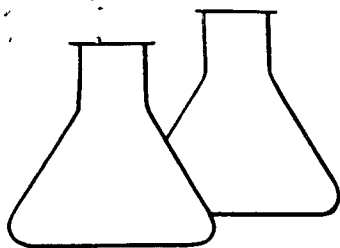
Method: Method 8015, Nonhalogenated Volatile Organics,
Test Methods for Evaluating Solid Waste, SW-846, USEPA
July 1992.

ND - Parameter not detected at the stated detection limit.

Comments: Osborne #1 Sec. 10, 100N, R12W

Dennis L. Jensen
Analyst

Mavis D. Young
Review



ENVIROTECH LABS

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

EPA METHOD 3020 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:	3TEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	1.0
Toluene	32	0.0
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

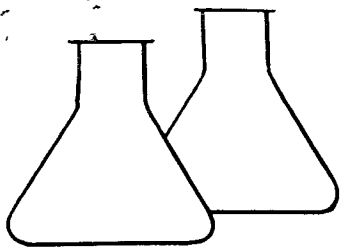
Method 3020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: Fawkes #1 Sec. 13 12M, 12W

Kevin L. Clemen
Analyst

Morris B. Young
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:	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	ID	0.1
Total Petroleum Hydrocarbons	510	0.1

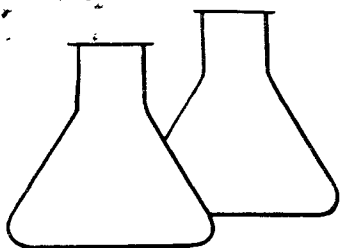
Method: Method 8015, Nonhalogenated Volatile Organics,
Test Methods for Evaluating Solid Waste, SW-846, USEPA
July 1992.

ND - Parameter not detected at the stated detection limit.

Comments: Fawkes #1 Sec. 13 BBN, BOW

Shirley L. Giesen
Analyst

Morris D. Young
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:	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:	3TEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	1.0
Toluene	79	1.0
Ethylbenzene	330	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 8030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

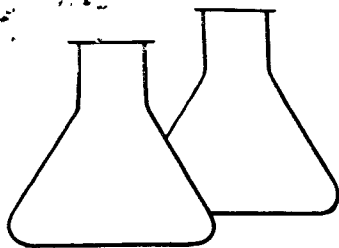
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

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

Kevin L. Gerner
Analyst

Maria D. Young
Review



ENVIROTECH LABS

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

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)	128	0.1
C28 - C44 Range	ND	0.1
Total Petroleum Hydrocarbons	1,230	0.1

Method: Method 3015, 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 Dec. 13 1991. LSW

Dennis L. Givener
Analyst

Merrion Young
Review