

Denny ROUST

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

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

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

DEPUTY OIL & GAS INSPECTOR

OCT 20 1995

## PIT REMEDIATION AND CLOSURE REPORT

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:  
(Vertical distance from  
contaminants to seasonal  
high water elevation of  
ground water)

Less than 50 feet	(20 points)	
50 feet to 99 feet	(10 points)	
Greater than 100 feet	(0 Points)	<u>20</u>

Wellhead Protection Area:

(Less than 200 feet from a private  
domestic water source, or; less than  
1000 feet from all other water sources)

Yes	(20 points)	
No	(0 points)	<u>0</u>

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JUN 14 1994

OIL CON. DIV.  
DIST. 3

Distance To Surface Water:

Horizontal distance to perennial  
lakes, ponds, rivers, streams, creeks,  
irrigation canals and ditches)

Less than 200 feet	(20 points)	
200 feet to 1000 feet	(10 points)	
Greater than 1000 feet	(0 points)	<u>20</u>

RANKING SCORE (TOTAL POINTS): 40

Date Remediation Started: 4-18-94

Dated Completed: 5-3-94

Remediation Method: Excavation \_\_\_\_\_  
(Check all appropriate sections)

Approx. cubic yards \_\_\_\_\_

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)

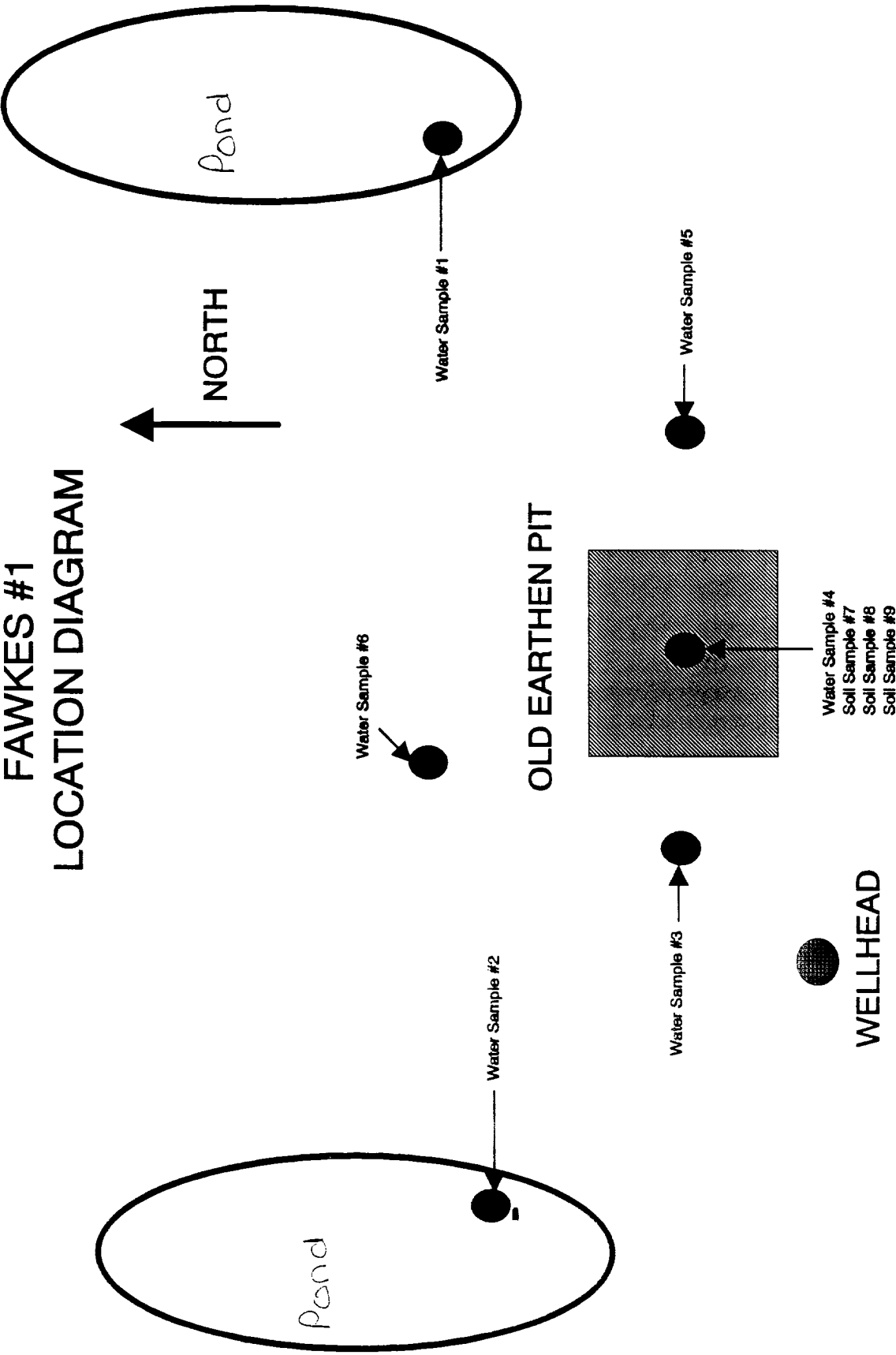
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 6-13-94

SIGNATURE *Margi Sullivan*

PRINTED NAME Margi Sullivan  
AND TITLE Engr. Tech.

FAWKES #1  
LOCATION DIAGRAM



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: *Justin Hall*Reviewed: *mn*

## VOLATILE AROMATIC HYDROCARBONS

Merrion Oil and Gas

Project ID: Osborn 1 and Fawkes 1  
Sample ID: Fawkes 1  
Lab ID: G00340 *Pond NE of pit*  
Sample Matrix: Water  
Condition: Cool/Intact

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                      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	Report Date:	05/17/94
Sample ID:	Fawkes 2	Date Sampled:	05/03/94
Lab ID:	G00341	Date Received:	05/03/94
Sample Matrix:	Water	Date Extracted:	NA
Condition:	Cool/Intact	Date Analyzed:	05/07/94

*Pond NW of pit*

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	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

*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*

Reviewed: *mh*

Ground water sample 20 ml of -

## 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.

<b>Quality Control:</b>	<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 Wel-  
Analyst

mh  
Review



*Ground water sample 05/03/94***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:**      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

*Austin Lopez*  
\_\_\_\_\_  
Analyst

*mh*  
\_\_\_\_\_  
Review

*Water Sample to 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.

<b>Quality Control:</b>	<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:**

*Mountain Lab*  
\_\_\_\_\_  
Analyst

*mh*  
\_\_\_\_\_  
Review

Water 40' North of - / Bourgeois  
**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.

<b>Quality Control:</b>	<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:**

Austin Neal  
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

C-201

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	34.7 <i>sk</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.

<b>Quality Control:</b>	<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:**

*Antonia Cal*  
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

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND <i>o/c</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:

*Arthur 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

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND SL	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: Surrogate Percent Recovery Acceptance Limits

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:

*Asst. Lab. Dir.*  
Analyst

*mh*  
Review