

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator: Merrion Oil & Gas Telephone: (505)324-5326 e-mail address: cdinning@merrion.bz
Address: 610 Reilly Ave., Farmington, NM 87401
Facility or well name: Frontier No. 1 API #: 30-045-06033 U/L or Qtr/Qtr ne/sw Sec 5 T 26N R 12W
County: San Juan Latitude _____ Longitude _____ NAD: 1927 ☐ 1983 ☐ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

Pit

Type: Drilling ☐ Production ☒ Disposal ☐

Workover ☐ Emergency ☐

Lined ☐ Unlined ☒

Liner type: Synthetic ☐ Thickness _____ mil Clay ☐

Pit Volume 962 bbl 30' X 30' X 6'

Below-grade tank

Volume: _____ bbl Type of fluid: _____

Construction material: _____

Double-walled, with leak detection? Yes ☐ If not, explain why not. _____

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) Estimate greater than 50', no data

Less than 50 feet	(20 points)	
50 feet or more, but less than 100 feet	(10 points)	
100 feet or more	(0 points)	10

Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)

No	(20 points)	
	(0 points)	0

Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet	(20 points)	
200 feet or more, but less than 1000 feet	(10 points)	
1000 feet or more	(0 points)	10

Ranking Score (Total Points)		20
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If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☒ offsite ☐ If offsite, name of facility _____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☒ Yes ☐ If yes, show depth below ground surface _____ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: The pit was located about 100' from the wellhead, roughly 45° east of south.

JAN 2006

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: January 17, 2006

Printed Name/Title Connie Dinning/ Production Engineer

Signature _____

Your certification and NMOCD approval of this application/closure does not relieve the operator or liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval: **DEPUTY OIL & GAS INSPECTOR, DIST. IV**

Printed Name/Title _____

Signature Denny Farris

Date: JAN 18 2006

Frontier No. 1
Pit Closure, Case Narrative
January 17, 2006

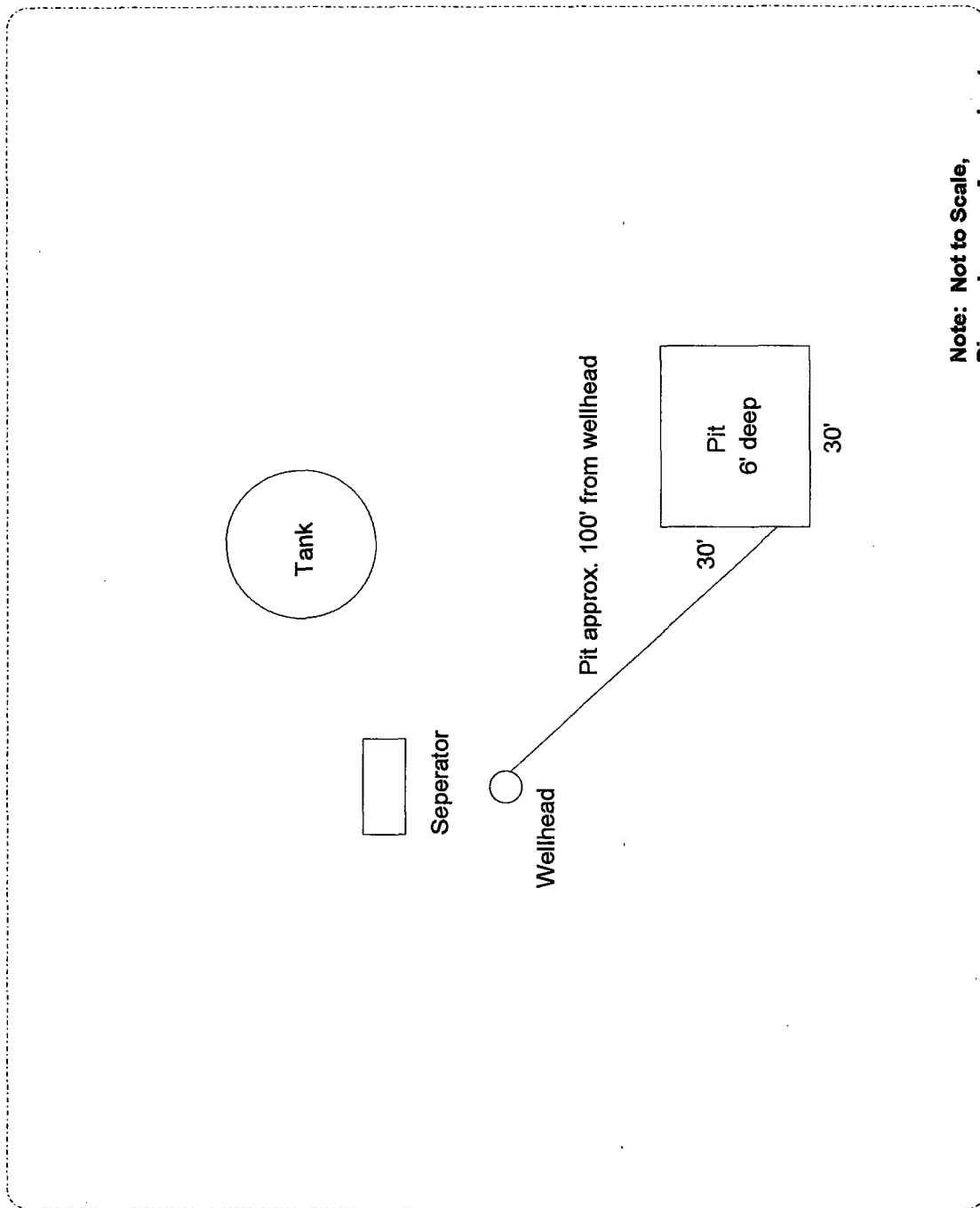
The unlined earthen pit was originally excavated on June 15, 1994. Approximately 150 yds³ of contaminated soil were removed and landfarmed on site. The lab analysis of the soil on the bottom of the pit indicated a TPH of 120 ppm. A fiberglass pit was placed in the original excavation.

On October 20, 2005, the fiberglass pit was removed from the excavation. Additional soil was removed from the bottom of the pit. A composite sample of pit bottom was collected, and another composite of the sides was collected. The lab results for the pit bottom showed 0.3 mg/kg for GRO TPH. The lab results of the side composite, however, showed 133 mg/kg DRO TPH.

On January 3, 2006, more soil was removed from the sides of the excavation, and a composite sample was collected. The attached lab results show non detect for TPH both GRO and DRO. Benzene was ND as well. Total BTEX was 125 µg/Kg.

The pit was backfilled and the small amount of contaminated soil was added to the existing landfarm. The landfarm lab results indicated that it was clean prior to the addition of the contaminated soil added on October 20, 2005 and on January 3, 2006. We anticipate that small amount of contamination will be remediated in a short time. We will continue to work the landfarm.

Merrion Oil & Gas Frontier #1 Site Schematic



Note: Not to Scale,
Dimensions are Approximate

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Merrion	Project #:	03048-009
Sample ID:	Wall Comp.	Date Reported:	01-05-06
Laboratory Number:	35628	Date Sampled:	01-03-05
Chain of Custody:	15279	Date Received:	01-03-06
Sample Matrix:	Soil	Date Analyzed:	01-05-06
Preservative:	Cool	Date Extracted:	01-04-05
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	1.8
Toluene	23.3	1.7
Ethylbenzene	46.7	1.5
p,m-Xylene	31.2	2.2
o-Xylene	23.4	1.0
Total BTEX	125	

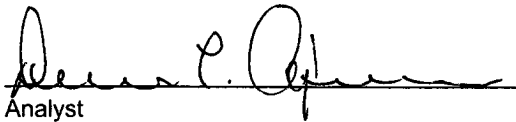
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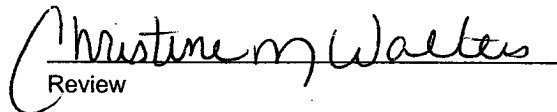
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.0 %
	1,4-difluorobenzene	98.0 %
	Bromochlorobenzene	98.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Frontier #1.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

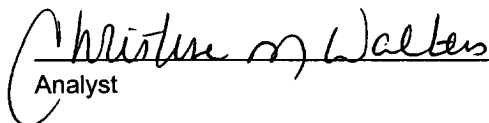
Client:	Merrion Oil & Gas	Project #:	03048-009
Sample ID:	#1 Pit Bottom	Date Reported:	10-24-05
Laboratory Number:	34759	Date Sampled:	10-20-05
Chain of Custody No:	14962	Date Received:	10-21-05
Sample Matrix:	Soil	Date Extracted:	10-24-05
Preservative:	Cool	Date Analyzed:	10-24-05
Condition:	Cool and Intact	Analysis Requested:	8015 TPH


Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	0.3	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	0.3	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Frontier #1.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Merrion Oil & Gas	Project #:	03048-009
Sample ID:	#1 Pit Bottom	Date Reported:	10-24-05
Laboratory Number:	34759	Date Sampled:	10-20-05
Chain of Custody:	14962	Date Received:	10-21-05
Sample Matrix:	Soil	Date Analyzed:	10-24-05
Preservative:	Cool	Date Extracted:	10-24-05
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	1.8
Toluene	41.3	1.7
Ethylbenzene	119	1.5
p,m-Xylene	86.8	2.2
o-Xylene	29.1	1.0
Total BTEX	276	

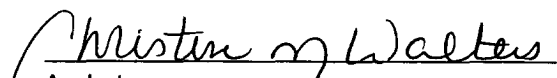
ND - Parameter not detected at the stated detection limit.


Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.0 %
	1,4-difluorobenzene	98.0 %
	Bromochlorobenzene	98.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Frontier #1.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Merrion Oil	Project #:	03048-009
Sample ID:	Middle Composite	Date Reported:	10-07-05
Laboratory Number:	34558	Date Sampled:	10-03-05
Chain of Custody:	14877	Date Received:	10-04-05
Sample Matrix:	Soil	Date Analyzed:	10-07-05
Preservative:	Cool	Date Extracted:	10-06-05
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	1.8
Toluene	12.6	1.7
Ethylbenzene	ND	1.5
p,m-Xylene	150	2.2
o-Xylene	20.9	1.0
Total BTEX	184	

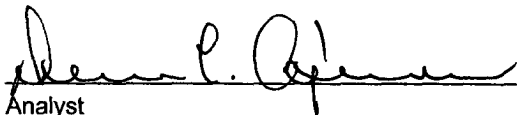
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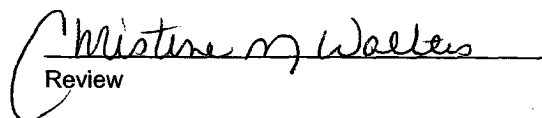
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.0 %
	1,4-difluorobenzene	98.0 %
	Bromochlorobenzene	98.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Frontier #1 Landfarm.


Analyst


Review

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Merrion Oil	Project #:	03048-009
Sample ID:	Side Composite	Date Reported:	10-07-05
Laboratory Number:	34559	Date Sampled:	10-03-05
Chain of Custody:	14877	Date Received:	10-04-05
Sample Matrix:	Soil	Date Analyzed:	10-07-05
Preservative:	Cool	Date Extracted:	10-06-05
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	1.8	1.8
Toluene	159	1.7
Ethylbenzene	33.8	1.5
p,m-Xylene	439	2.2
o-Xylene	76.5	1.0
Total BTEX	710	

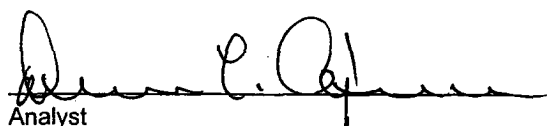
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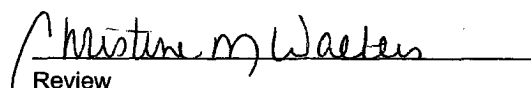
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	97.0 %
	1,4-difluorobenzene	97.0 %
	Bromochlorobenzene	97.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Frontier #1 Landfarm.


Analyst


Review

**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

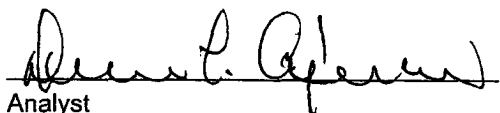
Client:	Merrion Oil	Project #:	03048-009
Sample ID:	Middle Composite	Date Reported:	10-07-05
Laboratory Number:	34558	Date Sampled:	10-03-05
Chain of Custody No:	14877	Date Received:	10-04-05
Sample Matrix:	Soil	Date Extracted:	10-06-05
Preservative:	Cool	Date Analyzed:	10-07-05
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

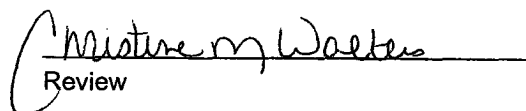
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	0.3	0.2
Diesel Range (C10 - C28)	4.4	0.1
Total Petroleum Hydrocarbons	4.7	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Frontier #1 Landfarm.**


Analyst


Review

**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

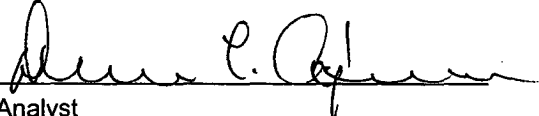
Client:	Merrion Oil	Project #:	03048-009
Sample ID:	Side Composite	Date Reported:	10-07-05
Laboratory Number:	34559	Date Sampled:	10-03-05
Chain of Custody No:	14877	Date Received:	10-04-05
Sample Matrix:	Soil	Date Extracted:	10-06-05
Preservative:	Cool	Date Analyzed:	10-07-05
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

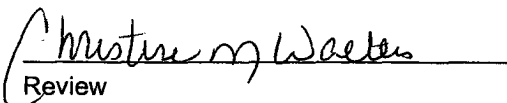
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	0.9	0.2
Diesel Range (C10 - C28)	44.2	0.1
Total Petroleum Hydrocarbons	45.1	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Frontier #1 Landfarm.**


Analyst


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