

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

Form C-144
June 1, 2004

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

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: Elm Ridge Resources Telephone: (505) 632-3476 e-mail address: amackey1@elmridge.net

Address: P.O. Box 156, Bloomfield, New Mexico, 87413

Facility or well name: State of New Mexico No. 36-43 API #: 3004524904 U/L or Qtr/Qtr I Sec 36 T 24N R 8W

County: San Juan Latitude 36.268445 Longitude -107.6254 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 bbl

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.)

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.)

Yes

(20 points)

No

(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

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 Envirotech Landfarm #2. (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:

Maximum reasonable extent due to bedrock. BTEX results attached

Bottom of excavation sprayed with potassium permanganate

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: 8/30/06

Printed Name/Title Ms. Amy Mackey, Production Technician

Signature Amy Mackey

Your certification and NMOCD approval of this application/closure does not relieve the operator of 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 Brandon Russell

Signature Brandon Russell

Date: AUG 30 2006

CLIENT: _____	ENVIROTECH INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS 5796 U.S. HIGHWAY 64-3014 FARMINGTON, NEW MEXICO 87401 PHONE: (505) 632-0615	LOCATION NO: _____ COC NO: _____
---------------	---	---

FIELD REPORT: CLOSURE VERIFICATION	PAGE No: <u>1</u> of <u>1</u>
---	-------------------------------

LOCATION: NAME: <u>State of NM 36</u> WELL #: <u>43</u> PIT: <u>Separator</u> QUAD/UNIT: <u>NE/SE</u> SEC: <u>36</u> TWP: <u>24N</u> RNG: <u>8W</u> PM: <u>NMPM</u> CNTY: <u>SJ</u> ST: <u>NM</u> QTR/FOOTAGE: _____ CONTRACTOR: <u>Franks</u>	DATE STARTED: <u>7/18/06</u> DATE FINISHED: <u>7/18/06</u> ENVIRONMENTAL SPECIALIST: <u>GWL</u>
--	---

EXCAVATION APPROX <u>11</u> FT. x <u>18</u> FT. x <u>4</u> FT. DEEP.	CUBIC YARDAGE: <u>24</u>	DISPOSAL FACILITY: <u>Envirotech LF #2</u>
LAND USE: _____	LEASE: _____	REMEDIALATION METHOD: <u>Landfarm</u>
FORMATION: _____		

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>122</u> FT. <u>165°</u> FROM WELLHEAD. DEPTH TO GROUNDWATER: <u>50-100</u> NEAREST WATER SOURCE: <u>>1000</u> NEAREST SURFACE WATER: <u>200-1000</u> NMOC D RANKING SCORE: <u>20</u> NMOC D TPH CLOSURE STD: <u>100</u> PPM
------------------------	---

SOIL AND EXCAVATION DESCRIPTION:	CHECK ONE : ☐ PIT ABANDONED ☒ STEEL TANK INSTALLED
----------------------------------	---

Approx. 24 cubic yards of soil was excavated & hauled to Envirotech's Landfarm #2

FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
0840	Wall composite		5.0	20 (.1)	10	330	61.8
0845	Bottom Comp		5.0	20 (1A)	10	330	22,208
	std					.11	190.85



PIT PERIMETER

OVM RESULTS

PIT PROFILE

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 Wall	0
2 Bottom	102
3	
4	
5	

LAB SAMPLES		
SAMPLE ID	ANALYSIS	TIME

x - bottom sample
o - wall sample

TRAVEL NOTES:	CALLOUT: _____	ONSITE: _____
---------------	----------------	---------------

ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS QUALITY ASSURANCE REPORT

Client:	Elm Ridge Resources	Project #:	03056-040-043
Sample ID:	QA/QC	Date Reported:	7/19/2006
Laboratory Number:	01-24-TPH.QA/QC	Date Sampled:	N/A
Sample Matrix:	Freon-113	Date Analyzed:	1/24/2005
Preservative:	N/A	Date Extracted:	1/24/2005
Condition:	N/A	Analysis Needed:	TPH

Calibration	I-Cal Date	C-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
	05-22-04	1/24/2005	1,735	1,695	2.3%	+/- 10%

Blank Conc. (mg/Kg)	Concentration	Detection Limit
TPH	ND	5.0

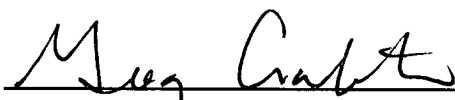
Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
TPH	2,471	2,352	4.8%	+/- 30%

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
TPH	2,471	2,000	5,030	112.5%	80 - 120%

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: QA/QC for State of NM 36-43


Analyst


Review

ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

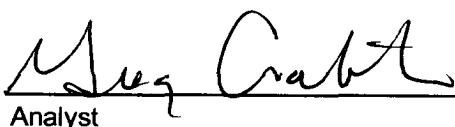
Client:	Elm Ridge Resources	Project #:	03056-040-043
Sample No.:	1	Date Reported:	7/19/2006
Sample ID:	Bottom Composite @ 4' BGS	Date Sampled:	7/18/2006
Sample Matrix:	Soil	Date Analyzed:	7/18/2006
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	22,200	50.0

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: State of NM 36-43


Analyst


Review

ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Elm Ridge Resources	Project #:	03056-040-043
Sample No.:	2	Date Reported:	7/19/2006
Sample ID:	Wall Composite	Date Sampled:	7/18/2006
Sample Matrix:	Soil	Date Analyzed:	7/18/2006
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

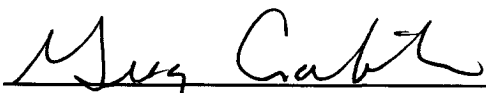
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----------	--------------------------	--------------------------

Total Petroleum Hydrocarbons	61.8	5.0
------------------------------	------	-----

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **State of NM 36-43**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

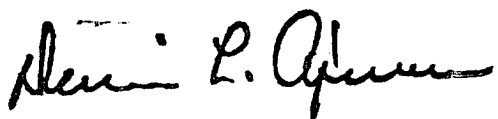
Client:	Elm Ridge Resources	Project #:	03056-040-043
Sample ID:	Bottom Composite	Date Reported:	07-19-06
Laboratory Number:	37860	Date Sampled:	07-18-06
Chain of Custody No:	1213	Date Received:	07-18-06
Sample Matrix:	Soil	Date Extracted:	07-18-06
Preservative:	Cool	Date Analyzed:	07-19-06
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	14.9	0.2
Diesel Range (C10 - C28)	460	0.1
Total Petroleum Hydrocarbons	475	0.2

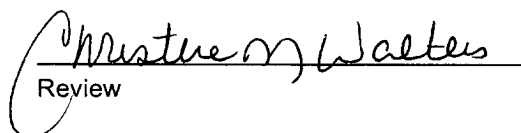
ND - Parameter not detected at the stated detection limit.

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

Comments: **State of NM 36-43.**



Analyst



Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	07-19-06 QA/QC	Date Reported:	07-19-06
Laboratory Number:	37858	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	07-19-06
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	07-11-05	9.9953E+002	1.0005E+003	0.10%	0 - 15%
Diesel Range C10 - C28	07-11-05	1.0052E+003	1.0073E+003	0.20%	0 - 15%

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	ND	ND	0.0%	0 - 30%
Diesel Range C10 - C28	ND	ND	0.0%	0 - 30%

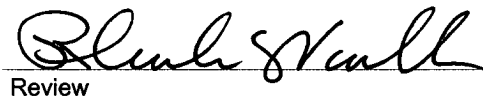
Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	ND	250	250	100.0%	75 - 125%
Diesel Range C10 - C28	ND	250	250	100.0%	75 - 125%

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: QA/QC for Samples 37858 - 37860, 37863 - 37865


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Elm Ridge Resources	Project #:	03056-040-043
Sample ID:	Bottom Composite	Date Reported:	07-19-06
Laboratory Number:	37860	Date Sampled:	07-18-06
Chain of Custody:	1213	Date Received:	07-18-06
Sample Matrix:	Soil	Date Analyzed:	07-19-06
Preservative:	Cool	Date Extracted:	07-18-06
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	13.6	1.8
Toluene	76.5	1.7
Ethylbenzene	82.9	1.5
p,m-Xylene	459	2.2
o-Xylene	107	1.0
Total BTEX	739	

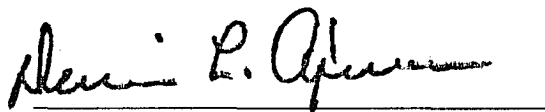
ND - Parameter not detected at the stated detection limit.

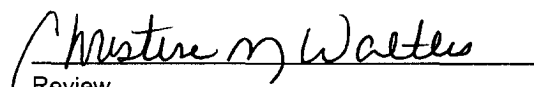
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	99.0 %
	1,4-difluorobenzene	99.0 %
	Bromochlorobenzene	99.0 %

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: State of NM 36-43.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	07-19-BTEX QA/QC	Date Reported:	07-19-06
Laboratory Number:	37860	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	07-19-06
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff.	Blank Conc	Detect. Limit
		Accept. Range	0 - 15%		
Benzene	6.7239E+005	6.7374E+005	0.2%	ND	0.2
Toluene	9.0767E+007	9.0949E+007	0.2%	ND	0.2
Ethylbenzene	4.0658E+007	4.0739E+007	0.2%	ND	0.2
p,m-Xylene	1.5556E+008	1.5587E+008	0.2%	ND	0.2
o-Xylene	8.6379E+007	8.6552E+007	0.2%	ND	0.1

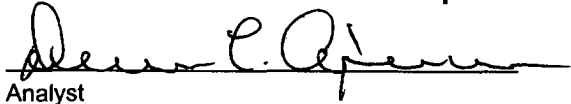
Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect Limit
Benzene	13.6	13.5	0.7%	0 - 30%	1.8
Toluene	76.5	76.4	0.1%	0 - 30%	1.7
Ethylbenzene	82.9	82.8	0.1%	0 - 30%	1.5
p,m-Xylene	459	458	0.2%	0 - 30%	2.2
o-Xylene	107	106	1.0%	0 - 30%	1.0

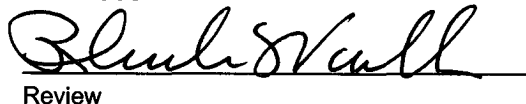
Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	13.6	50.0	63.6	100.0%	39 - 150
Toluene	76.5	50.0	126	99.8%	46 - 148
Ethylbenzene	82.9	50.0	132	99.6%	32 - 160
p,m-Xylene	459	100	558	99.7%	46 - 148
o-Xylene	107	50.0	156	99.9%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 37860 - 37861, 37863 - 37865


Analyst


Review

1213

san juan reproduction 578-129

