

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: 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: Federal 3 No. 23 API #: 3004524519 U/L or Qtr/Qtr K Sec 3 T 23N R 8W
County: San Juan Latitude 36.25386 Longitude -107.67126 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 20 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
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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 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 reached at 6' BGS at shale layer, laboratory BTEX results attached

Approximately 290 cubic yards of contaminated soil was transported to Envirotech's NMOCD permitted landfarm for remediation

Bedrock Shale

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: 5/15/06

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:

Printed Name/Title

Signature *Dennis Felt*

Date: MAY 18 2006

REGIONAL OIL & GAS INSPECTOR, DIST. I

CLIENT: Elm Ridge

ENVIROTECH INC.
ENVIRONMENTAL SCIENTISTS & ENGINEERS
5796 U.S. HIGHWAY 64-3014
FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615

LOCATION NO: _____
C.O.C. NO: _____

FIELD REPORT: CLOSURE VERIFICATION

PAGE No: 1 of 1

LOCATION: NAME: Federal 3 WELL #: 23 PIT: Sep
QUAD/UNIT: K SEC: 3 TWP: 23N RNG: 8W PM: NMNM CNTY: ST ST: NM
QTR/FOOTAGE: 1760 FSC 1785 FWL CONTRACTOR: Franks

DATE STARTED: 4/10/06
DATE FINISHED: 4/15/06
ENVIRONMENTAL SPECIALIST: GWC

EXCAVATION APPROX. 22 FT. x 27 FT. x 6 FT. DEEP. CUBIC YARDAGE: 240
DISPOSAL FACILITY: Envirotech Landfarm #2 REMEDIATION METHOD: Landfarm
LAND USE: Grazing LEASE: _____ FORMATION: _____

FIELD NOTES & REMARKS:
PIT LOCATED APPROXIMATELY 130 FT. 20° FROM WELLHEAD.
DEPTH TO GROUNDWATER: 50-100 NEAREST WATER SOURCE: >100 NEAREST SURFACE WATER: 280-100
NMOC D RANKING SCORE: 20 NMOC D TPH CLOSURE STD: 100 PPM

CHECK ONE :
☐ PIT ABANDONED
☒ STEEL TANK INSTALLED

SOIL AND EXCAVATION DESCRIPTION:
Maximum reasonable extent reached at 6' AT Shale layer.
Laboratory BTEX results Attached.

FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
	See 418.1 Analysis Log						

SCALE
0 FT

PIT PERIMETER

OVM RESULTS

PIT PROFILE

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1	See 418.1 Analysis
2	
3	
4	
5	

LAB SAMPLES		
SAMPLE ID	ANALYSIS	TIME

TRAVEL NOTES: CALLOUT: _____ ONSITE: _____

Method 418.1 Analysis Log Total Petroleum Hydrocarbons

Date 4/10/06 - 4/12/06

Analyst G. Crabtree

Location Federal 3 No. 23

Instrument Infracal

Job No. 03056-040-033

Sample No.	Sample Description	Sample Wt. (g)	Volume Freon (mL)	Dilution Factor	Abs. Reading	TPH (mg/kg)	OVM (mg/kg)
4/10 1	Bottom 6' BGS (shale)	5.0	20	40	161	6,440	367
2	Wall composite	5.0	20	40	416	16,640	149
4/12 1	Wall composite	5.0	20	4	13	52	3

Infrared Spectrophotometer Calibration

New Freon _____

Date Standards Prepared _____

Standard Concentration (mg/L)	Absorbance
100	<u>115 / 113</u>
200	_____
500	_____
1000	_____

I-CAL RF: _____

C-CAL RF: _____

RSD: _____ %

% Difference: _____ %

QA/QC Acceptance Criteria: I-CAL RSD +/- 20%

C-Cal Difference +/- 10%

EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client:	Elm Ridge Resources	Project #:	03056-040-035
Sample No.:	1	Date Reported:	4/12/2006
Sample ID:	Composite sample of bottom at 6'	Date Sampled:	4/10/2006
Sample Matrix:	Soil	Date Analyzed:	4/10/2006
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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Total Petroleum Hydrocarbons	6,440	50.0
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ND = Parameter not detected at the stated detection limit.

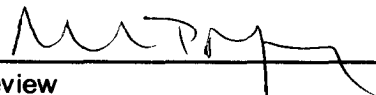
References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Federal 3 No. 23**

Instrument callibration checked against 100 ppm standard. Zeroed before each sample



Analyst



Review

**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Elm Ridge Resources	Project #:	03056-040-035
Sample No.:	2	Date Reported:	4/12/2006
Sample ID:	Composite sample of walls	Date Sampled:	4/10/2006
Sample Matrix:	Soil	Date Analyzed:	4/10/2006
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	16,600.0	50.0

ND = Parameter not detected at the stated detection limit.

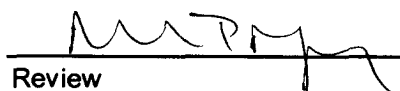
References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Federal 3 No. 23**

Instrument calibration checked against 100 ppm standard. Zeroed before each sample



Analyst



Review

EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client:	Elm Ridge Resources	Project #:	03056-040-035
Sample No.:	1	Date Reported:	4/12/2006
Sample ID:	Composite sample of walls	Date Sampled:	4/12/2006
Sample Matrix:	Soil	Date Analyzed:	4/12/2006
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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Total Petroleum Hydrocarbons

52

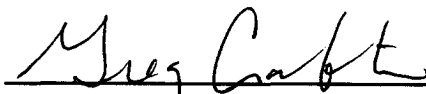
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ND = Parameter not detected at the stated detection limit.

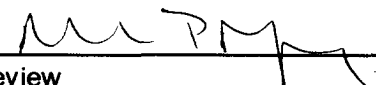
References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Federal 3 No. 23**

Instrument calibration checked against 100 ppm standard. Zeroed before each sample



Analyst



Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Elm Ridge	Project #:	03056-040-035
Sample ID:	Bottom at 6'	Date Reported:	04-11-06
Laboratory Number:	36733	Date Sampled:	04-10-06
Chain of Custody:	15795	Date Received:	04-10-06
Sample Matrix:	Soil	Date Analyzed:	04-11-06
Preservative:	Cool	Date Extracted:	04-10-06
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	1.8
Toluene	16.8	1.7
Ethylbenzene	37.0	1.5
p,m-Xylene	413	2.2
o-Xylene	141	1.0
Total BTEX	608	

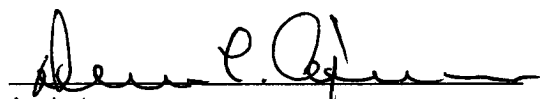
ND - Parameter not detected at the stated detection limit.

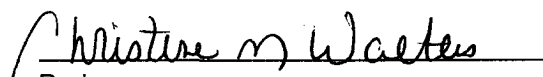
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.0 %
	1,4-difluorobenzene	98.0 %
	Bromochlorobenzene	98.0 %

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: Federal 3 No ²³~~43~~.


Analyst


Review