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
#2 - 30-039-22542
#3 - 30-039-22599
Facility or well name: South Blanco Federal 6 Tank Battery API #: 4-30-039-22586 U/L or Qtr/Qtr ___ Sec 6 T 23N R 7W
County: Rio Arriba Latitude 36.25919 Longitude -107.61252 NAD: 1927 ☒ 1983 ☐
Surface Owner: Federal ☒ State ☐ Private ☐ Indian ☐

RECEIVED
MAY 2006
OIL CONS. DIV.
DIST. 3

Pit	**Below-grade tank**		
Type: Drilling ☐ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☐ Unlined ☒ Liner type: Synthetic ☐ Thickness ____mil Clay ☐ Pit Volume ____bbl	Volume: 40 bbl Type of fluid: produced water and incidental oil Construction material: Double-walled, with leak detection? Yes ☐ If not, explain why not. No. Tank in Place prior to rule 50		
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) (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 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 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (0 points)	0
	Ranking Score (Total Points)		10

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 your 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:
Approximately 690 cubic yards of contaminated soil was transported to Envirotech's NMOCD permitted landfarm for remediation
Maximum reasonable extent of excavation was reached at 23' BGS due to underground piping. Underground compressed gas piping surrounds excavated area not allowing
Trackhoe to bench down for further excavation. Laboratory results of BTEX from bottom sample are attached.

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 DEPUTY OIL & GAS INSPECTOR, DIST. #3 Signature Tonny Text Date: MAY 15 2006

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: South Blanco Federal 6 WELL #: [illegible]1,2,3,4 PIT: TB/Dehy
QUAD/UNIT: K SEC: 9 TWP: 23N RNG: 7W PM: NMPM CNTY: RA ST: NM
QTR/FOOTAGE: _____ CONTRACTOR: Franks

DATE STARTED: 4/10/06
DATE FINISHED: 4/12/06
ENVIRONMENTAL SPECIALIST: GWC

EXCAVATION APPROX. 35 FT. x 35 FT. x 23 FT. DEEP. CUBIC YARDAGE: 690
DISPOSAL FACILITY: Envirotech Landfarm #2 REMEDIATION METHOD: Landfarm
LAND USE: Grazing LEASE: _____ FORMATION: _____

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 120 FT. 10° FROM WELLHEAD.
DEPTH TO GROUNDWATER: 50-100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000
NMOCD RANKING SCORE: 10 NMOCD TPH CLOSURE STD: 1000 PPM

CHECK ONE:
___ PIT ABANDONED
X STEEL TANK INSTALLED

SOIL AND EXCAVATION DESCRIPTION:

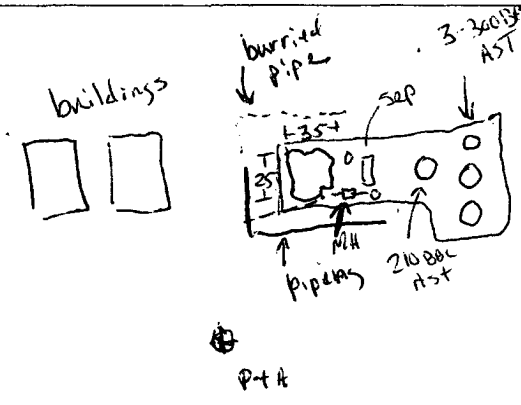
Approximately 690 cubic yards of contaminated soil was transported to envirotech's Landfarm #2 for Remediation. Maximum reasonable extent was reached at 23' Due to underground piping.

FIELD 418.1 CALCULATIONS

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

SCALE
0 FT

PIT PERIMETER



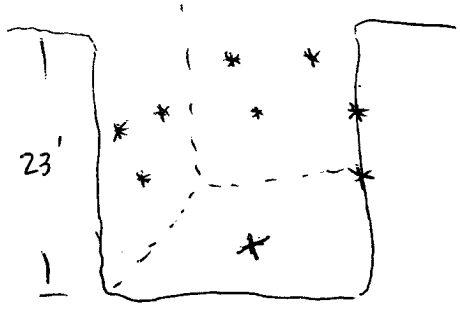
OVM RESULTS

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

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

PIT PROFILE



TRAVEL NOTES: CALLOUT: _____ ONSITE: _____

ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Method 418.1 Analysis Log
Total Petroleum Hydrocarbons

Date 4/10/06 - 4/12/06 Analyst G. Crabtree

Location S. Blanco Fed Instrument Infracal

Job No. 03056-040-036

Sample No.	Sample Description	Sample Wt. (g)	Volume Freon (mL)	Dilution Factor	Abs. Reading	TPH (mg/kg)	OVM (mg/kg)
1	Bottom at 14'	5.0	20	40	254	10,160	1055
2	Wall composite	5.0	20	4	788	3,150	118

Infrared Spectrophotometer Calibration

New Freon _____

Date Standards Prepared _____

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

I-CAL RF: _____ C-CAL RF: _____

RSD: _____ % % Difference: _____ %

QA/QC Acceptance Criteria: I-CAL RSD +/- 20% C-Cal Difference +/- 10%

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ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

Method 418.1 Analysis Log
Total Petroleum Hydrocarbons

Date 4/12/06 Analyst G. Crabtree

Location S. Blanco Federal 6 TB Instrument Infracal

Job No. 03056-040-034

Sample No.	Sample Description	Sample Wt. (g)	Volume Freon (mL)	Dilution Factor	Abs. Reading	TPH (mg/kg)	OVM (mg/kg)
1	East wall	5.0	20	4	19	76	11
2	North wall	5.0	20	4	14	56	89
3	West wall	5.0	20	4	16	64	4
4	South wall	5.0	20	4	11	44	6
5	bottom at 23'	5.0	20	40	603	24,120	679

Infrared Spectrophotometer Calibration

New Freon _____

Date Standards Prepared _____

Standard Concentration (mg/L)	Absorbance
100	_____
200	_____
500	_____
1000	_____

I-CAL RF: _____ C-CAL RF: _____

RSD: _____ % % Difference: _____ %

QA/QC Acceptance Criteria: I-CAL RSD +/- 20% C-Cal Difference +/- 10%

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ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Elm Ridge Resources	Project #:	03056-040-034
Sample No.:	1	Date Reported:	4/12/2006
Sample ID:	Composite Sample of East Wall	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)
Total Petroleum Hydrocarbons	**76.0**	**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: **South Blanco Federal Tank Battery**

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

Analyst

Review

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ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Elm Ridge Resources	Project #:	03056-040-034
Sample No.:	2	Date Reported:	4/12/2006
Sample ID:	Composite sample North Wall	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)
Total Petroleum Hydrocarbons	**56.0**	**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: **South Blanco Federal Tank Battery**

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

Analyst

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ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Elm Ridge Resources	Project #:	03056-040-034
Sample No.:	3	Date Reported:	4/12/2006
Sample ID:	Composite Sample of West Wall	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)
Total Petroleum Hydrocarbons	**64.0**	**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: **South Blanco Federal Tank Battery**

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

Analyst

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ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Elm Ridge Resources	Project #:	03056-040-034
Sample No.:	4	Date Reported:	4/12/2006
Sample ID:	Composite sample South Wall	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)
Total Petroleum Hydrocarbons	**44.0**	**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: **South Blanco Federal Tank Battery**

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

Analyst

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ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Elm Ridge Resources	Project #:	03056-040-034
Sample No.:	5	Date Reported:	4/12/2006
Sample ID:	Composite sample of bottom at 23'	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)
Total Petroleum Hydrocarbons	**24,100.0**	**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: **South Blanco Federal Tank Battery**

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

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Elm Ridge	Project #:	03056-040-034
Sample ID:	Bottom @ 23' BGS	Date Reported:	04-14-06
Laboratory Number:	36771	Date Sampled:	04-12-06
Chain of Custody:	15806	Date Received:	04-12-06
Sample Matrix:	Soil	Date Analyzed:	04-14-06
Preservative:	Cool	Date Extracted:	04-13-06
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**1,950**	**1.8**
Toluene	**9,830**	**1.7**
Ethylbenzene	**6,330**	**1.5**
p,m-Xylene	**13,050**	**2.2**
o-Xylene	**6,500**	**1.0**
Total BTEX	**37,660**	

ND - Parameter not detected at the stated detection limit.

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: **South Blanco Federal 6 Tank Battery.**

Analyst

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