

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: <u>Elm Ridge Resources</u> Telephone: <u>(505) 632-3476</u> e-mail address: <u>amackey1@elmridge.net</u>		
Address: <u>#20 CR 5060, Bloomfield, New Mexico, 87413</u>		
Facility or well name: <u>Candado No. 19 A</u> API #: <u>3003921439</u> U/L or Qtr/Qtr <u>L</u> Sec <u>3</u> T <u>26N</u> R <u>7W</u>		
County: <u>Rio Arriba</u> Latitude <u>36.511733</u> Longitude <u>-107.567983</u> NAD: 1927 <input checked="" type="checkbox"/> 1983 <input type="checkbox"/>		
Surface Owner: Federal <input checked="" type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Indian <input type="checkbox"/>		
<b>Pit</b> Type: Drilling <input type="checkbox"/> Production <input checked="" type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input type="checkbox"/> Unlined <input checked="" type="checkbox"/> Liner type: Synthetic <input type="checkbox"/> Thickness <u>      </u> mil Clay <input type="checkbox"/> Pit Volume <u>      </u> bbl	<b>Below-grade tank</b> Volume: <u>      </u> bbl Type of fluid: Construction material: Double-walled, with leak detection? Yes <input type="checkbox"/> 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 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) ( 0 points) 0
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) 10
<b>Ranking Score (Total Points)</b>		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 you are burying in place) onsite ☐ offsite ☒ If offsite, name of facility Envirotech's NMOCD permitted 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:
The Soil sample passed method 418.1 analysis; the sample failed the field OVM headspace test. The sample passed method 8021
Results of BTEX analysis by USEPA method 8021 are attached
Approximately 180 cubic yards of contaminated soil was hauled to Envirotech's NMED permitted Landfarm #2
Maximum reasonable extent of excavation reached at 10' where well consolidated shale layer was encountered.
Bottom of excavation was 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: 3-9-06

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.

Approved: Deputy Oil & Gas Inspector, Dist. 8

Printed Name/Title Wendy Zett Signature Wendy Zett

Date: MAR 16 2006

CLIENT: _____	<b>ENVIROTECH INC.</b> <small>ENVIRONMENTAL SCIENTISTS &amp; ENGINEERS          5796 U.S. HIGHWAY 64-3014          FARMINGTON, NEW MEXICO 87401          PHONE: (505) 632-0615</small>	LOCATION NO: _____  C.O.C. NO: _____
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<b>FIELD REPORT: CLOSURE VERIFICATION</b>	PAGE No: <u>1</u> of <u>1</u>
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LOCATION: NAME: <u>CANDADO</u> WELL #: <u>PA</u> PIT: <u>SEP</u> QUAD/UNIT: <u>NW1/4</u> SEC: <u>3</u> TWP: <u>26N</u> RNG: <u>7W</u> PM: <u>NMPH</u> CNTY: <u>RA</u> ST: <u>NM</u> QTR/FOOTAGE: _____ CONTRACTOR: <u>Franks</u>	DATE STARTED: <u>1/9/06</u> DATE FINISHED: <u>1/13/06</u> ENVIRONMENTAL SPECIALIST: <u>GWC</u>
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EXCAVATION APPROX. <u>20</u> FT. x <u>24</u> FT. x <u>10</u> FT. DEEP.	CUBIC YARDAGE: <u>180</u>	
DISPOSAL FACILITY: <u>Envirotech Landfarm #2</u> REMEDIATION METHOD: <u>Landfarm</u>		
LAND USE: _____	LEASE: _____	FORMATION: _____

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>69'</u> FT. <u>30°</u> FROM WELLHEAD.	
DEPTH TO GROUNDWATER: <u>&gt;100</u>	NEAREST WATER SOURCE: <u>&gt;1000</u>	NEAREST SURFACE WATER: <u>200-1000</u>
NMCD RANKING SCORE: <u>10</u>	NMCD TPH CLOSURE STD: <u>1000</u> PPM	
SOIL AND EXCAVATION DESCRIPTION:		CHECK ONE : <input type="checkbox"/> PIT ABANDONED <input checked="" type="checkbox"/> STEEL TANK INSTALLED

Approximately 180 yd<sup>3</sup> was removed and disposed of at envirotech's Landfarm #2. Bottom of pit was sprayed with potassium permanganate. Maximum reasonable extent was reached at 10' where a well consolidated shale layer was encountered

FIELD 418.1 CALCULATIONS

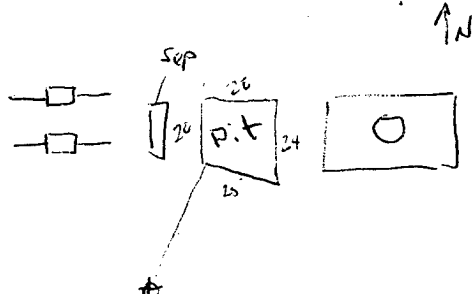
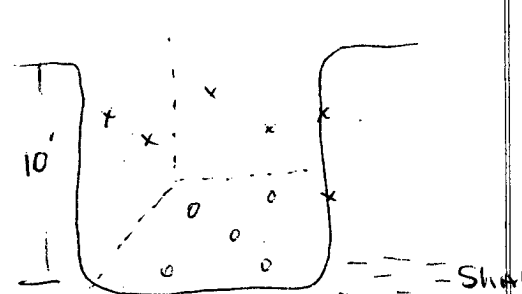
TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
132	Side		5.0	20	4	45	180
144	bottom 10'		5.0	20	4	473	1892

SCALE  
  
 0 FT

PIT PERIMETER

OVM RESULTS

PIT PROFILE

	<table border="1" style="width:100%"> <thead> <tr> <th>SAMPLE ID</th><th>FIELD HEADSPACE PID (ppm)</th></tr> </thead> <tbody> <tr><td>1 Side</td><td>1</td></tr> <tr><td>2 Bottom 10'</td><td>34</td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> <tr><td>5</td><td></td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	SAMPLE ID	FIELD HEADSPACE PID (ppm)	1 Side	1	2 Bottom 10'	34	3		4		5										 <p>o - bottom sample          x - wall sample</p>
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1 Side	1																					
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4																						
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TRAVEL NOTES: CALLOUT: \_\_\_\_\_ ONSITE: \_\_\_\_\_

# ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## Method 418.1 Analysis Log Total Petroleum Hydrocarbons

Date 1/13/06

Analyst \_\_\_\_\_

Location CANDADO 19 A

Instrument \_\_\_\_\_

Job No. \_\_\_\_\_

Sample No.	Sample Description	Sample Wt. (g)	Volume Freon (mL)	Dilution Factor	Abs. Reading	TPH (mg/kg)
1	Wall Composite	5.0	20	4	45	180
2	Bottom Composite At 10 Feet	5.0	20	4	473	1892
3						

g/m

1

34

### Infrared Spectrophotometer Calibration

New Freon \_\_\_\_\_

Date Standards Prepared \_\_\_\_\_

Standard Concentration (mg/L)	Absorbance
100	_____
200	215
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 #:	03056-040-011
Sample No.:	2	Date Reported:	1/16/2006
Sample ID:	Composite sample of walls	Date Sampled:	1/13/2006
Sample Matrix:	Soil	Date Analyzed:	1/13/2006
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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<b>Total Petroleum Hydrocarbons</b>	<b>180.0</b>	<b>20.0</b>
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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: **Candado No. 19A**

Instrument calibration checked against 200 ppm standard. Zeroed before each sample

  
\_\_\_\_\_  
Analyst

  
\_\_\_\_\_  
Review

**EPA METHOD 418.1  
TOTAL PETROLEUM  
HYDROCARBONS**

Client:	Elm Ridge Resources	Project #:	03056-040-011
Sample No.:	3	Date Reported:	1/16/2006
Sample ID:	Composite sample of bottom at 10'	Date Sampled:	1/13/2006
Sample Matrix:	Soil	Date Analyzed:	1/13/2006
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	1,890.0	5.0

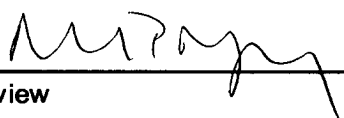
ND = Parameter not detected at the stated detection limit.

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

Comments: **Candado No. 19A**

Instrument calibration checked against 200 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 Resources	Project #:	03056-040-011
Sample ID:	Candado 19A	Date Reported:	01-16-06
Laboratory Number:	35741	Date Sampled:	01-13-06
Chain of Custody:	15376	Date Received:	01-13-06
Sample Matrix:	Soil	Date Analyzed:	01-16-06
Preservative:	Cool	Date Extracted:	01-16-06
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	1.8
Toluene	441	1.7
Ethylbenzene	420	1.5
p,m-Xylene	356	2.2
o-Xylene	60.1	1.0
Total BTEX	1,280	


ND - Parameter not detected at the stated detection limit.

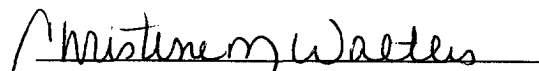
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	99.0 %
	1,4-difluorobenzene	99.0 %
	Bromochlorobenzene	99.0 %

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: Rio Arriba Country Bottom Composite @ 10'.

  
Analyst

  
Review