

w/o

~~WORKOVER~~  
**Forest Oil Corporation**  
**Pit Closure Summary**

CMU #32

API 30-025-01451

Lea County, NM

UL. P, Sec. 17, T17S, R33E

GPS N32 49.775 W103 40.738

Start date: 12Mar09

Finish date: 23Mar09

**RECEIVED**

MAR 30 2009

HOBBSOCD

FINAL

**Prepared By: Vernon K. Black**

Environmental Technician

Hungry Horse Environmental, LLC

PO Box 1058

Hobbs, NM 88240

(575)-393-3386



# **Table of Contents**

<b>1.0 Introduction</b>	<b>pg. 1</b>
<b>2.0 Area Description</b>	<b>pg. 1</b>
<b>3.0 Pit Closure Process</b>	<b>pg. 1</b>
<b>Diagram of Pit/Location Area</b>	<b>pg. 2</b>

## **Attachments**

<b>Attachment 1 – Overhead View</b>
<b>Attachment 2 – Lab Analytical &amp; Chain of Custody</b>
<b>Attachment 3 – One call</b>
<b>Attachment 4 – Photos of Progress</b>
<b>Attachment 5 – Proof of Closure Notice</b>
<b>Attachment 6 – Plot Plan</b>
<b>Attachment 7 – C 144 w/Closure Plan</b>
<b>Attachment 8 – C 144 Final</b>

## 1.0 Introduction

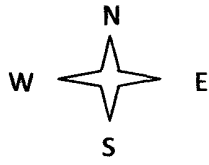
This report addresses the pit (work over) closure at Forest Oil Corporation's CMU #32 injection well. Analytical results, photos of the project, an overhead map, and a general scope of the work conducted are included in this document as attachments. The project manager for Hungry Horse Environmental Services was David Carter.

## 2.0 Area Description

This geographical area is primarily caliche/caliche rock base covered with sand. Vegetation present in this area is mesquite, yucca plants, and a variety of range grasses and weeds. The depth to the ground water is >150' based on the Lea County Depth to Ground Water Map. There are no water wells or surface bodies of water within a half of a mile of this location. This location is in rural Lea County, NM near Maljamar west of Humming Bird approximately two miles north of the intersection of Mescalero and Humming Bird Roads.

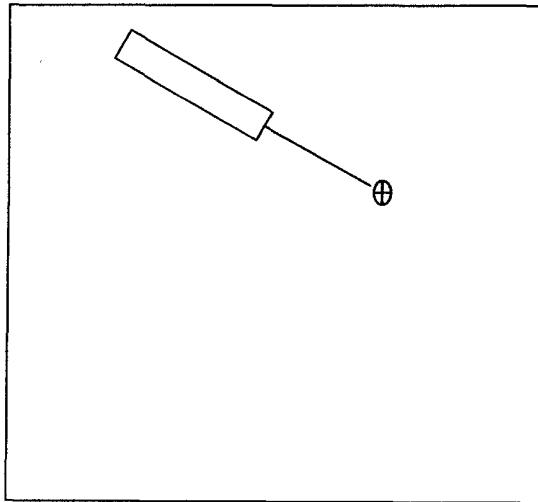
## 3.0 Pit Closure Process

This pit closure was accomplished using the Waste Excavation and Removal Process. The work over pit was 15'L x 8'W X 5'D and was lined with a synthetic liner. The pit contents, along with the liner, and material from underneath the liner as well as the pit walls were excavated and removed. The final depth of the excavation was seven feet. All material removed was disposed of at Lea Land SWM 131401. A five-point composite soil sample was obtained and taken to Cardinal Labs for analysis. Lab results indicated that chlorides, TPH, GRO/DRO, Benzene, and BTEX were all well below the limits set forth by NM OCD. Larry Johnson, NM OCD, was notified of the results and advised that backfilling could commence. The excavated area was backfilled using clean material from a nearby source and contoured to match the existing grade of the location. All work was conducted on the existing location; therefore no seeding or cover design off location was conducted.



Hummingbird Road →

CMU #32  
Center of Pit is 45' NW from Wellhead

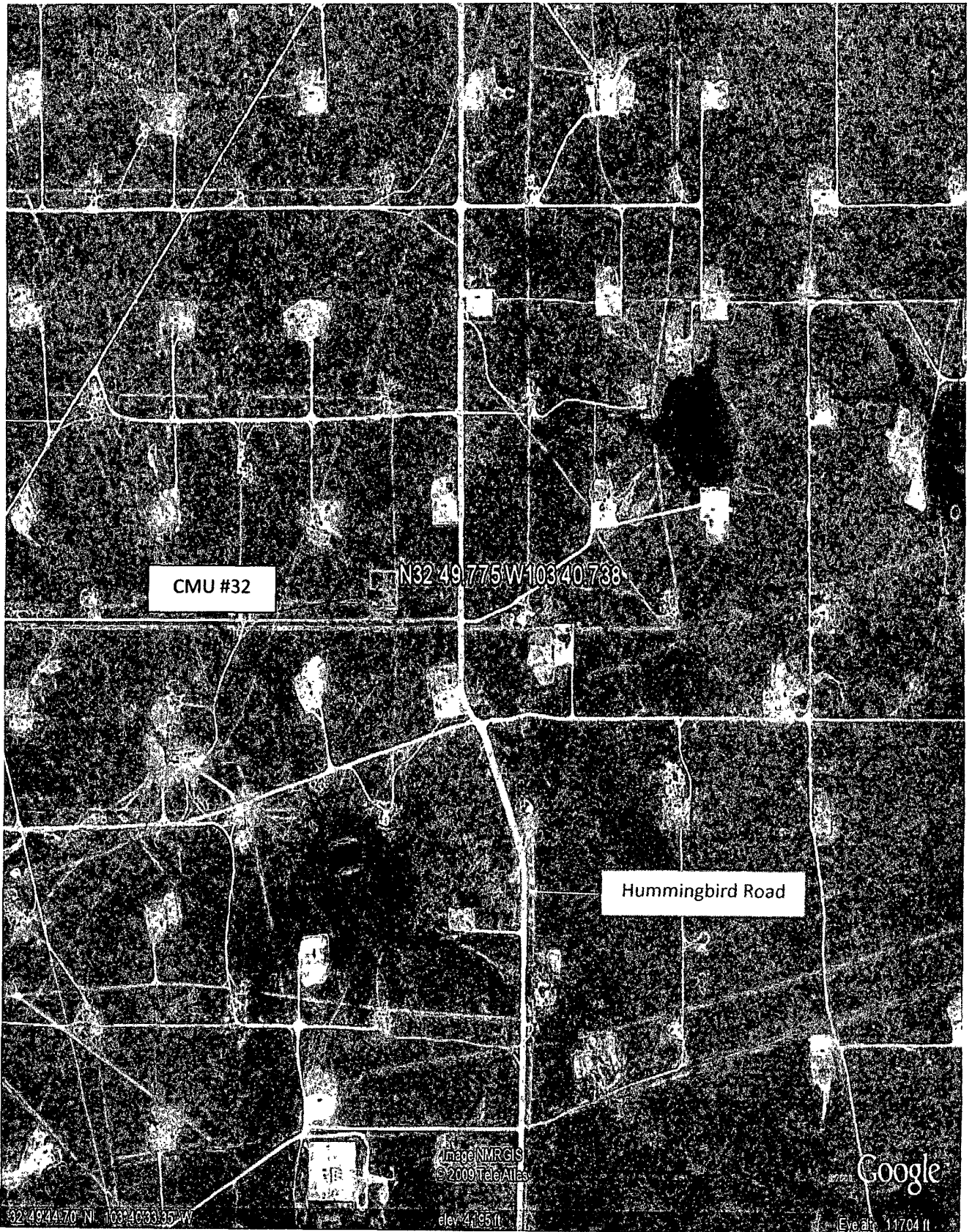


Two-Track Road  
↓

Note: Drawing is not to Scale



# Attachment 1



CMU #32

N32 49.775 W103 40.738

Hummingbird Road

Google

32:49:44.70" N, 103:40:33.35" W

ImageNMRGIS  
© 2009 TeleAtlas

elev 4,195 ft

Eye alt 11704 ft



## Attachment 2



PHONE (575) 393-2328 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
HUNGRY HORSE ENVIRONMENTAL SERVICES  
ATTN: VERNON K. BLACK  
P.O. BOX 1058  
HOBBS, NM 88241  
FAX TO: (575) 391-4585

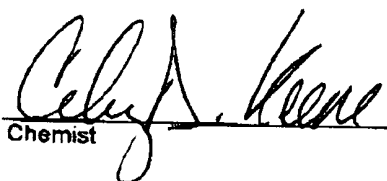
Receiving Date: 03/19/09  
Reporting Date: 03/23/09  
Project Owner: FOREST OIL  
Project Name: CMU #32  
Project Location: LEA COUNTY, NM

Sampling Date: 03/18/09  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: ML  
Analyzed By: ZL

LAB NUMBER	SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE					
H17081-1	COMPOSITE 5 BGS	03/20/09 <0.050	03/20/09 <0.050	03/20/09 <0.050	03/20/09 <0.300
Quality Control					
True Value QC		0.049	0.050	0.049	0.149
% Recovery		0.050	0.050	0.050	0.150
Relative Percent Difference		98.0	100	98.0	99.3
		1.8	3.4	3.4	4.8

METHOD: EPA SW-846 8021B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
AND TOTAL XYLENES.

  
Chemist

  
Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal regardless of whether such claim is based upon any of the above-stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.





PHONE (575) 393-2326 • 101 E MARLAND • HOBBS, NM 88240

Receiving Date: 03/19/09  
Reporting Date: 03/23/09  
Project Owner: FOREST OIL  
Project Name: CMU #32  
Project Location: LEA COUNTY, NM

Sampling Date: 03/18/09  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: AB  
Analyzed By: AB/TR

LAB NUMBER SAMPLE ID	GRO	DRO	418.1 TOTAL	CI*
	(C <sub>6</sub> -C <sub>10</sub> ) (mg/kg)	(>C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)	TPH (mg/kg)	
ANALYSIS DATE	03/20/09	03/20/09	03/20/09	03/19/09
H17081-1 COMPOSITE 5' BGS	<10.0	<10.0	<100	352
Quality Control	473	535	319	500
True Value QC	500	500	300	500
% Recovery	94.6	107	106	100
Relative Percent Difference	0.7	2.9	2.7	< 0.1

**METHODS.** TPH GRO & DRO: EPA SW-846 8015 M; EPA 418.1; CI: Std. Methods 4500-CI-B  
\*Analysis performed on a 1:4 w:v aqueous extract.

**Chemist**

Date \_\_\_\_\_

H17081 TPH2CL HHE

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# CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240  
(878) 393-2326 Fax (878) 393-2476

Page \_\_\_\_ of \_\_\_\_

Company Name: Hungry Horse Environmental Services  
Project Manager: Vernon K. Black  
Address: PO Box 1058  
City: Hobbs State: NM Zip: 88241  
Phone #: 575-393-3386 Fax #: 575-391-4585  
Project #: \_\_\_\_\_ Project Owner: Forest Oil  
Project Name: CMU # 32  
Project Location: Lea County NM  
Sampler Name: Vernon K. Black

**BILL TO**  
P.O. #:  
Company: SAME  
Attn:  
Address:  
City:  
State: Zip:  
Phone #:  
Fax #:

## ANALYSIS REQUEST

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

H17081-1

Workover Pit  
Composite 5'665

MATRIX	PRESERV.	SAMPLING	DATE	TIME
GROUNDWATER				
WASTEWATER				
SOIL				
OIL				
SLUDGE				
OTHER				
ACIDBASE				
ICE / COOL				
OTHER				

Chlorides

BTEX

TPH

Geo/Deo

X

X

X

X

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Terms and Conditions: There will be charged on all accounts more than 30 days past due at the rate of 2 1/2% per annum from the original date of invoice, and all costs of collection, including attorney's fees.

Sampler Relinquished:

Date:

Received By:

Time:

Phone Result:

Fax Result:

REMARKS:

No

No

Add'l Phone #:

Add'l Fax #:

Relinquished By:

Date:

Received By:

Time:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Sample Condition

Cool Intact

Yes No

Yes No

CHECKED BY:

(Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

e-mail & fax

# Attachment 3

NEW MEXICO ONE CALL  
Locate Request Confirmation

Ticket #:2009110610  
Work to Begin Date:

03/11/2009

Reason Code:STANDARD LOCATE  
Time: 03:19:00 PM

CALLER INFORMATION

DAVID CARTER  
HUNGRY HORSE LLC

Excavator Type:CONTRACTOR  
Tel.: (575)441-5264

DIG LOCATION

City:RURAL LEA  
Subdivision:  
Address : To:  
Street : CMMU #032  
Nearest Intersecting Street :  
Second Intersecting Street :

Additional Dig Information:

WORK OVER PIT HAUL OFF = FROM MALJAMAR @ HWY 82 &  
MALJAMAR RD - S ON MALJAMAR RD 0.6MI - E ON  
MESCALERO 6.0MI - N ON HUMMINGBIRD 1.8MI - E 0.1MI  
TO LOCATION  
>>>SPOT 50FT RADIUS OF WORK OVER PIT

Remarks:

Township: 17S Range: 33E Section 1/4: 17 SW

Type of Work: OIL/GAS-NEW WELL LOCATION

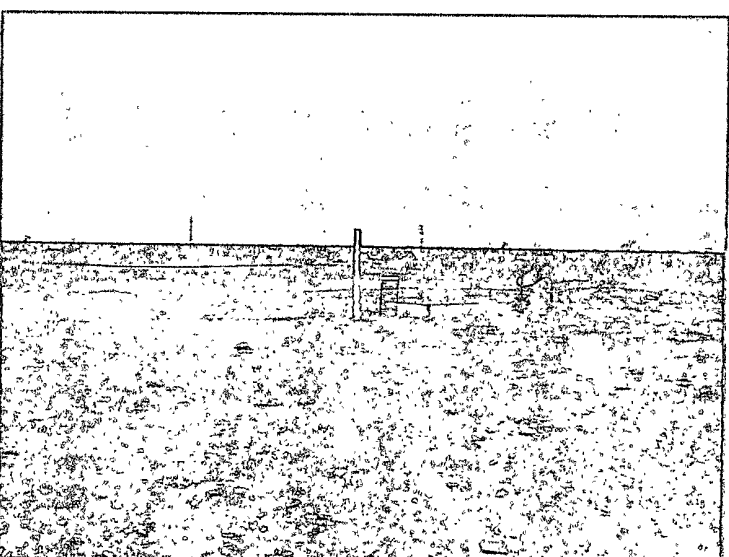
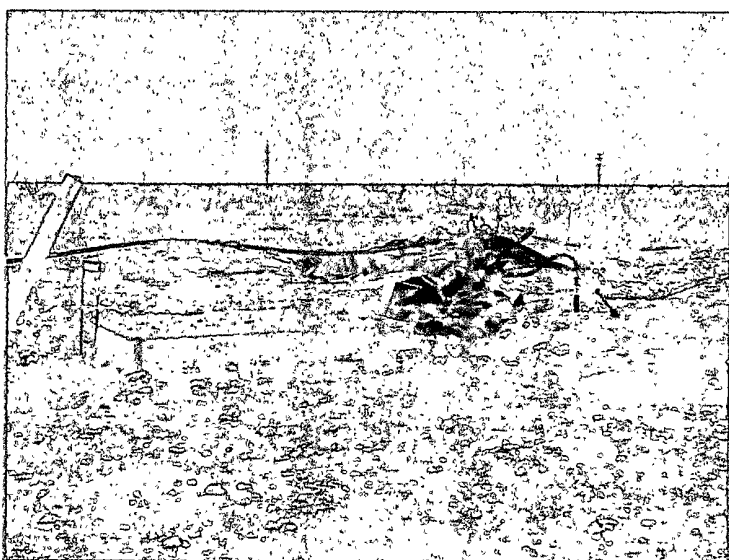
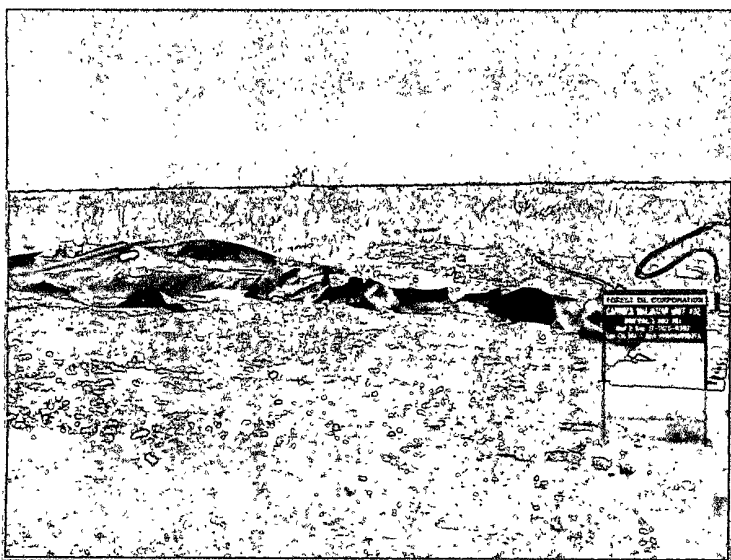
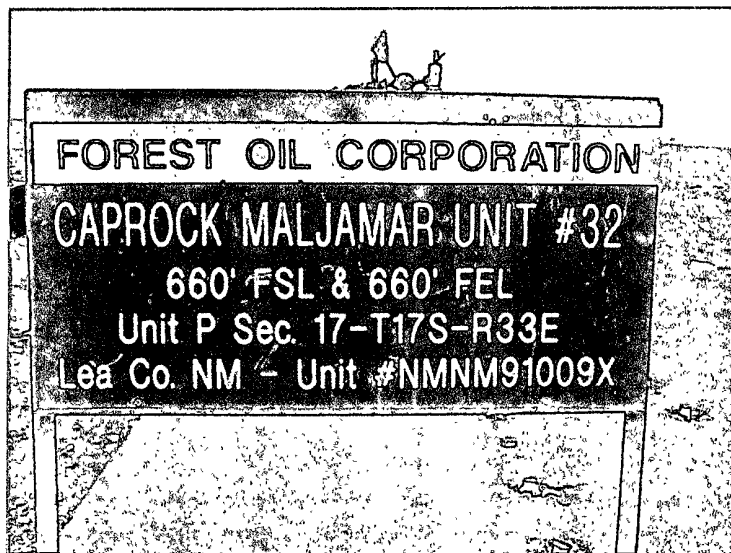
The following utility owners have been notified of  
your proposed excavation site:

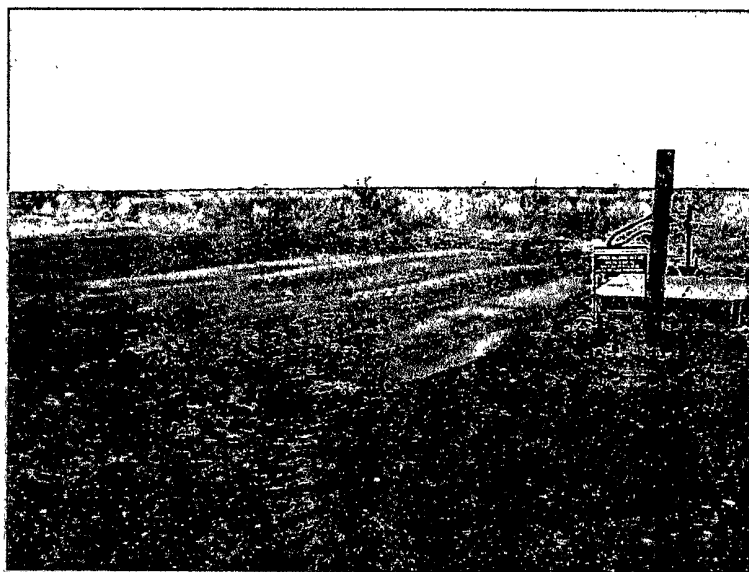
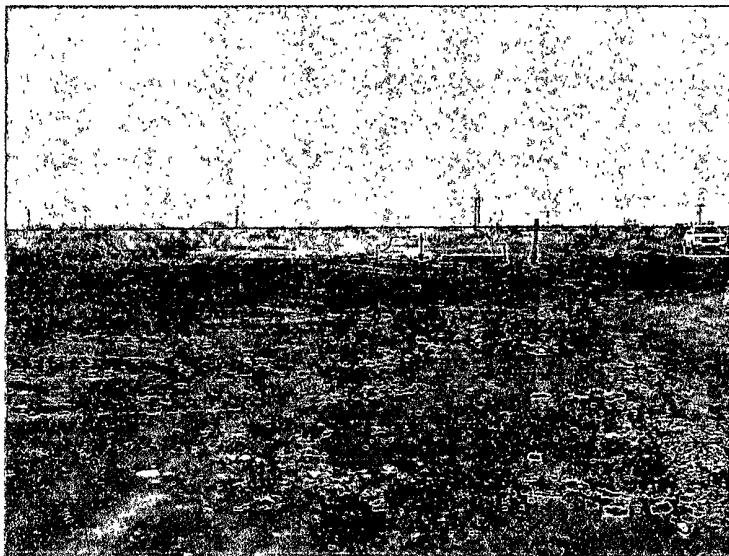
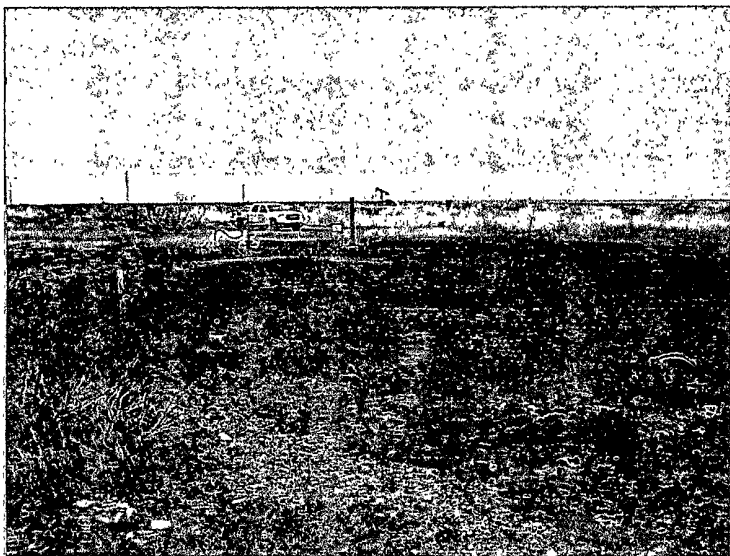
CENTURION PIPELINE, LP  
CHEVRON-HOBBS  
DCP MIDSTREAM - LINUM  
PLAINS PIPELINE - HOBBS

IMPORTANT CONFIRMATION NOTICE

Your fax request has been received and processed. It is your  
responsibility to review the information provided on this faxback  
confirmation ticket and ensure it has been correctly interpreted from  
your request. Notify us immediately of any corrections or errors.  
Acceptance of this faxback confirmation ticket means you accept  
responsibility for the accuracy of the information contained in the  
ticket and you agree to indemnify New Mexico One Call Systems, Inc. of  
all liability, claims, fees, or damages, including reasonable attorney  
fees arising from or resulting from the use of the information provided  
on this confirmation ticket.

# Attachment 4





# Attachment 5



**HUNGRY HORSE, LLC**  
**ENVIRONMENTAL SERVICES**

---

Dirt Work      \*      On-Site Remediation      \*      Soil Testing      \*      Excavation

9Mar09

To: John Norris, Norris Cattle Company  
Reference: Pit Closures

Dear Mr. Norris,

I am writing this letter on behalf of Forest Oil Corporation to notify you of their intent to close eight workover pits located on your property. All pits are located on active well locations. The pits will be closed utilizing the waste excavation and removal process following NM OCD guidelines. The pits to be closed are listed below.

Well Name	Legals	API
CMU #39	UL. B, Sec. 19, T17S, R33E	30-025-01479
CMU #283	UL. O, Sec. 28, T17S, R33E	30-025-34193
CMU #58	UL. E, Sec. 21, T17S, R33E	30-025-01509
CMU #93	UL. L, Sec. 28, T17S, R33E	30-025-01526
<u>CMU #32</u>	<u>UL. P, Sec. 17, T17S, R33E</u>	<u>30-025-01451</u>
CMU #17	UL. J, Sec. 18, T17S, R33E	30-025-01460
CMU #3	UL. D, Sec. 17, T17S, R33E	30-025-01442
CMU #26	UL. N, Sec. 18, T17S, R33E	30-025-01466

Should you have any questions, please feel free to contact myself or Mr. Rick Rickman w/Forest Oil Corporation at 575 392 9797.

Sincerely,



Vernon K. Black

HSE

Hungry Horse Environmental Services  
Hobbs, NM



# Attachment 6

The center of the work over pit is 45' NW of the well head.

**GPS N32 49.775 W103 40.738 is center of pit**

Reference the drawing on page 2.

# Attachment 8

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

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State of New Mexico  
Energy Minerals and Natural Resources  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
July 21, 2008

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.  
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or  
Proposed Alternative Method Permit or Closure Plan Application

FINAL

Type of action: ☐ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☒ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☐ Modification to an existing permit  
☐ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

**Instructions:** Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.  
Operator: Forest Oil Corporation \_\_\_\_\_ OGRID #:8041  
Address: 707 17<sup>th</sup> Street Suite 3600 Denver, CO \_\_\_\_\_  
Facility or well name: CMU #32 \_\_\_\_\_  
API Number: 30-025-01451 \_\_\_\_\_ OCD Permit Number: PI-00974  
U/L or Qtr/Qtr P \_\_\_\_\_ Section 17 \_\_\_\_\_ Township 17S \_\_\_\_\_ Range 33E \_\_\_\_\_ County: LEA \_\_\_\_\_  
Center of Proposed Design: Latitude \_\_\_\_\_ Longitude \_\_\_\_\_ NAD: ☐ 1927 ☐ 1983  
Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

2.  
☒ **Pit:** Subsection F or G of 19.15.17.11 NMAC  
Temporary: ☐ Drilling ☒ Workover  
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A  
☒ Lined ☐ Unlined Liner type: Thickness 12 \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
☒ String-Reinforced  
Liner Seams: ☒ Welded ☐ Factory ☐ Other \_\_\_\_\_ Volume: 50 \_\_\_\_\_ bbl Dimensions: L15' \_\_\_\_\_ x W8' \_\_\_\_\_ x D5' \_\_\_\_\_

3.  
☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC  
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)  
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other \_\_\_\_\_  
☐ Lined ☐ Unlined Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_

4.  
☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC  
Volume: \_\_\_\_\_ bbl Type of fluid: \_\_\_\_\_  
Tank Construction material: \_\_\_\_\_  
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off  
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other \_\_\_\_\_  
Liner type: Thickness \_\_\_\_\_ mil ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_

5.  
☐ **Alternative Method:**  
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

6.  
**Fencing:** Subsection D of 19.15.17.11 NMAC (*Applies to permanent pits, temporary pits, and below-grade tanks*)

- ☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)
- ☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
- ☐ Alternate. Please specify \_\_\_\_\_

7.  
**Netting:** Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

- ☐ Screen ☐ Netting ☐ Other \_\_\_\_\_
- ☐ Monthly inspections (If netting or screening is not physically feasible)

8.  
**Signs:** Subsection C of 19.15.17.11 NMAC

- ☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
- ☐ Signed in compliance with 19.15.3.103 NMAC

9.  
**Administrative Approvals and Exceptions:**

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

**Please check a box if one or more of the following is requested, if not leave blank:**

- ☐ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.
- ☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.  
**Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

**Instructions:** The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (*Applies to temporary, emergency, or cavitation pits and below-grade tanks*)

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No  
☐ NA

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (*Applies to permanent pits*)

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No  
☐ NA

Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

11.

**Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC  
**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC  
☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC  
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC  
☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_ or Permit Number: \_\_\_\_\_

12.

**Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 NMAC  
☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC  
☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_  
☐ Previously Approved Operating and Maintenance Plan API Number: \_\_\_\_\_ (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

13.

**Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC  
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Climatological Factors Assessment  
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Quality Control/Quality Assurance Construction and Installation Plan  
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan  
☐ Emergency Response Plan  
☐ Oil Field Waste Stream Characterization  
☐ Monitoring and Inspection Plan  
☐ Erosion Control Plan  
☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14.

**Proposed Closure:** 19.15.17.13 NMAC

**Instructions:** Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

- Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Closed-loop System  
☐ Alternative  
 Proposed Closure Method: ☐ Waste Excavation and Removal  
☐ Waste Removal (Closed-loop systems only)  
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)  
☐ In-place Burial ☐ On-site Trench Burial  
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.

**Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)  
☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.

**Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)  
**Instructions:** Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?  
☐ Yes (If yes, please provide the information below) ☐ No

Required for impacted areas which will not be used for future service and operations:

- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.

**Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC

**Instructions:** Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> No

18.

**On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  
☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  
☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)  
☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC



19.

**Operator Application Certification:**

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

20.

**OCD Approval:** ☐ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: [Signature] Approval Date: 3.26.09  
 Title: ENVIRONMENTAL ENGINEER OCD Permit Number: P1-00934

21.

**Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC

**Instructions:** Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

X Closure Completion Date 23Mar09

22.

**Closure Method:**

X Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)  
☐ If different from approved plan, please explain.

23.

**Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**

**Instructions:** Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_  
 Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and operations?  
☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

- ☐ Site Reclamation (Photo Documentation)  
☐ Soil Backfilling and Cover Installation  
☐ Re-vegetation Application Rates and Seeding Technique

24.

**Closure Report Attachment Checklist:** Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.

- X Proof of Closure Notice (surface owner and division)  
☐ Proof of Deed Notice (required for on-site closure)  
 X Plot Plan (for on-site closures and temporary pits)  
 X Confirmation Sampling Analytical Results (if applicable)  
☐ Waste Material Sampling Analytical Results (required for on-site closure)  
 X Disposal Facility Name and Permit Number  
 X Soil Backfilling and Cover Installation  
 X Re-vegetation Application Rates and Seeding Technique  
 X Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude \_\_\_\_\_ Longitude \_\_\_\_\_ NAD: ☐ 1927 ☐ 1983

25.

**Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Rich Rickman Title: H.S.E.  
 Signature: [Signature] Date: 3-25-09  
 e-mail address: rdrickman@forestoil.com Telephone 575 392 9797 office 575 369 6176 cell