

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-14  
Revised October 10, 2001

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

**Release Notification and Corrective Action**

**OPERATOR**

☒ Initial Report ☐ Final Report

Name of Company: Elm Ridge Exploration	Contact: Amy Mackey	
Address: PO Box 156, Bloomfield, NM 87413	Telephone No.: (505) 632-3476 Ext 201	
Facility Name: Bisti Coal 7 COM 2	Facility Type: Gas Well	
Surface Owner: Federal	Mineral Owner:	Lease No.: SF-078056

**LOCATION OF RELEASE**

Unit Letter H	Section 7	Township 25N	Range 12W	Feet from the 1745	North/South Line FNL	Feet from the 1045	East/West Line FEL	County San Juan
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Latitude: 36.418159 Longitude: -108.147329

**NATURE OF RELEASE**

Type of Release: Produced Water	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Earth Pit	Date and Hour of Occurrence: Historical	Date and Hour of Discovery: NA
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Produced Water from a gas well at the mentioned location formerly discharged into an earthen pit on location. The well has been altered to no longer drain into an earthen pit.

Describe Area Affected and Cleanup Action Taken.\*

Blow sand was removed from the earthen pit, and approximately three (3) cubic yards of 'production sludge' was removed from the earthen pit. A five (5)-point composite sample was collected from approximately one (1) foot below the earthen pit once it was removed. The sample was analyzed in the field for total petroleum hydrocarbons (TPH) via USEPA Method 418.1, and in Envirotech's laboratory for benzene and BTEX via USEPA Method 8021 and for total chlorides via USEPA Method 4500B. The sample returned results below the 'Pit Rule' standards of 100 mg/kg TPH, 0.2 mg/kg benzene, 50 mg/kg BTEX and 250 mg/kg total chlorides, confirming that a release had not occurred. Analytical results are attached for your reference.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

**OIL CONSERVATION DIVISION**

Signature:

Printed Name: Ms. Amy Mackey

Title: Administrative Manager

E-mail Address: amackey1@elmridge.net

Date: 10/22/09 Phone: 505-632-3476 Ext 201

Approved by District Supervisor:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☐

\* Attach Additional Sheets If Necessary

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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**

- 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

Operator: Elm Ridge Exploration OGRID #: 149052  
Address: P.O. Box 156; Bloomfield, NM 87413  
Facility or well name: Bisti Coal 7 COM 2  
API Number: 3004528386 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr H Section 7 Township 25N Range 12W County: San Juan  
Center of Proposed Design: Latitude 36.418159 Longitude -108.147329 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 \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_

☐ String-Reinforced

Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_ Volume: \_\_\_\_\_ bbl Dimensions: L 10' x W 10' x D 2'

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 ☐ Not labeled

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.

☐ Yes ☐ No

Within 500 feet of a wetland.

☐ 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.

☐ Yes ☐ No

FEMA map

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  
☐ 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 ☐ AlternativeProposed 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

☐ Yes ☐ No

☐ 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

☐ Yes ☐ No

☐ 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

☐ Yes ☐ No

☐ 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

☐ Yes ☐ 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

☐ Yes ☐ 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

☐ 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

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:** \_\_\_\_\_ **Approval Date:** \_\_\_\_\_

**Title:** \_\_\_\_\_ **OCD Permit Number:** \_\_\_\_\_

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.*

☒ **Closure Completion Date:** 8/24/09

22.

**Closure Method:**

☒ 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: Envirotech Landfarm #2 Disposal Facility Permit Number: NM-01-0011

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.*

- ☒ Proof of Closure Notice (surface owner and division) **See Attached**  
☐ Proof of Deed Notice (required for on-site closure)  
☐ Plot Plan (for on-site closures and temporary pits)  
☒ Confirmation Sampling Analytical Results (if applicable) **See Attached**  
☐ Waste Material Sampling Analytical Results (required for on-site closure)  
☒ Disposal Facility Name and Permit Number **Envirotech Landfarm #2, NM-01-0011**  
☒ Soil Backfilling and Cover Installation **See Attached**  
☒ Re-vegetation Application Rates and Seeding Technique **Pursuant to the BLM MOU**  
☒ Site Reclamation (Photo Documentation) **See Attached**

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): Ms. Amy Mackey Title: Administrative Manager

Signature: \_\_\_\_\_ Date: 10/22/09

E-mail address: amackey1@elmridge.net Telephone: (505) 632-3476 Ext. 201

**Earthen Pit Closure Checklist**

- 1) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close all former earthen pits prior to the closure date agreed upon by the New Mexico Oil Conservation Division (NMOCD) of December 31, 2009.  
**Closure date for the earth pit located at the Bisti Coal 7 COM 2 well site is August 24, 2009.**
- 2) In accordance with Subsection A of 19.15.17.13 NMAC, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close any earthen pits at a date the division requires because of imminent danger to fresh water, public health or the environment.  
**None of the earthen pits to be closed by Elm Ridge Exploration are deemed an imminent risk to the environment, public health, or to fresh or public water.**
- 3) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close earthen pits first which seem to pose a greater risk to fresh water, public health, or the environment. This will be determined by the locations proximity to surface water sources and distance to groundwater.  
**None of the earthen pits to be closed by Elm Ridge Exploration are deemed an imminent risk to the environment, public health, or to fresh or public water.**
- 4) No less than 60 days prior to any earthen pit closure activities, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the Santa Fe NMOCD office as well as a schedule of on-site activities, as in accordance with 19.15.17.13 Subsection J Paragraph (3) NMAC.  
**Notification was provided to Mr. Brad Jones of the NMOCD Santa Fe Office on August 4, 2009, along with a schedule of on-site activities; see attached *Notification Letter*.**
- 5) No less than 24 hours and no greater than one (1) week prior to earthen pit removal, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the appropriate surface owner as well as a schedule of on-site activities, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the surface owner by certified mail, return receipt requested, that the operator plans to close an earthen pit. The return receipt will be used to ensure that the surface owner has received written notification no less than 24 hours and no greater than one (1) week prior to the beginning of the earthen pit closure activities. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement. Closure activities that will take place on tribal land will have notifications sent by certified mail, return receipt requested, to the appropriate tribal office. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the Bureau of Land Management (BLM) of closure activities for wells located on federal land per a Sundry Notice, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. All notices will be sent in such a way that the surface owner will receive notice at least 24 hours prior to the beginning of closure activities.  
**Notification was provided to the Bureau of Land Management on August 19, 2009; see attached *Sundry Notice and Return Receipt*.**



- 6) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all liquids and/or sludge, to visual extents, prior to closure sampling. Material will be disposed of at Envirotech's Landfarm #2, Permit # NM-01-0011, TNT Environmental Inc. Landfarm, Permit # NM-01-0008, Industrial Ecosystems Inc. (IEI) Landfarm, Permit # NM-01-0010B, or Basin Disposal, Permit # NM-01-0005, depending on the consistence of the material removed, as in accordance with 19.15.17.13 Subsection C Paragraph (1) NMAC.

**On August 24, 2009, approximately three (3) cubic yards of production sludge was removed from the earthen pit and disposed of at Envirotech's NMOC permitted soil remediation facility, Landfarm #2, Permit # NM-01-0011; see attached *Bill of Lading*.**

- 7) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all on-site equipment associated with this earthen pit unless it is required for some other purpose, as in accordance with 19.15.17.13 Subsection C Paragraph (2) NMAC. The equipment that meets the requirements of 19.15.9.712 Subsection A NMAC and 19.15.9.712 Subsection D Paragraph (1) will be disposed of at San Juan County Regional Landfill. Waste that is classified by 19.15.9.712 Subsection D Paragraph (2) will be sampled accordingly to determine acceptance of this material at the San Juan County Regional Landfill. Waste that is unable to be accepted at the San Juan County Regional Landfill will be submitted to the OCD on a case-by-case basis in accordance with Paragraph (3) of Subsection D of 19.15.9.712.

**All on-site equipment will be used for the continued operation of the Bisti Coal 7 COM 2 well site; see attached *Field Sheet* and *Site Photographs*.**

- 8) Once the earthen pit is removed to visual extents of contamination, a five (5)-point composite sample will be collected from directly below the liner(s) or at native soil. Additional discrete samples will be collected from any area that is wet, discolored or show other evidence of a release. All samples being collected will be analyzed for benzene and total BTEX via USEPA Method 8021B, TPH via USEPA Method 418.1, and chlorides via USEPA 300.1, as in accordance with 19.15.17.13 Subsection C Paragraph (3) NMAC.

**A five (5)-point composite sample was collected of native soil beneath the earthen pit and analyzed in the field for total petroleum hydrocarbons (TPH) via USEPA Method 418.1, and analyzed in the laboratory for benzene and BTEX via USEPA Method 8021B and for total chlorides via USEPA Method 4500B. The sample returned results below the 100 mg/kg TPH standard, the 0.2 mg/kg benzene standard, the 50 mg/kg BTEX standard and the 250 mg/kg total chloride standard, confirming that a release did NOT occur.**

NAME	Benzene	BTEX	Chlorides	TPH
Pit Rule Standard	0.2 mg/kg	50 mg/kg	250 mg/kg	100 mg/kg
Earth Pit Comp 1' Below Pit	< 0.0009 mg/kg	< 0.005 mg/kg	240 mg/kg	92 mg/kg



9) Depending on soil sample results the area will be either backfilled or the area will be excavated.

1) If soil samples do not exceed the regulatory standards of 0.2 mg/kg benzene, 50 mg/kg BTEX, 100 mg/kg TPH, and 250 mg/kg or background concentration of chlorides, as in accordance with 19.15.17.13 Subsection C Paragraph (3) NMAC.

i. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, shall submit a Form C-141 with the laboratory results so that the division may review the results to determine if additional delineation is required in accordance with Paragraph (4) of Subsection C of 19.15.17.13 NMAC.

**Completed Form C-141 is attached for your review.**

ii. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will backfill the excavation or impacted area with non-waste containing earthen material, in accordance with 19.15.17.13 Subsection E Paragraph (6) NMAC. A soil cover shall be installed for all backfilled excavations consisting of the background thickness of topsoil or one (1) foot of suitable material to establish vegetation at the site, whichever is greater in accordance with Subsections H of 19.15.17.13 NMAC. The operator shall construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material.

**Elm Ridge Exploration has backfilled the excavated area with non-waste containing earthen material, and installed a soil cover of at least one (1) foot thick of suitable material to establish vegetation at this site. The soil cover has been graded in such a way that it conforms to the grade of the natural surroundings, and will prevent ponding of water and erosion of the cover material; see attached *Site Photographs*.**

iii. All areas of the well site that are no longer utilized on a day to day basis for the production of oil and/or gas, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will substantially restore, recontour and re-vegetate the areas, in accordance with 19.15.17.13 Subsections G and I NMAC. The operator shall notify the division when it has been re-seeded and when it has achieved successful re-vegetation.

**Elm Ridge Exploration has restored, recontoured and re-seeded the excavated area in accordance with BLM standards as outlined in the Memorandum of Understanding (MOU).**

2) If soil samples exceed the regulatory standards stated above:

i. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, shall submit a Form C-141 with the laboratory results so that the division may review the results to determine if additional delineation is required in accordance with Paragraph (4) of Subsection C of 19.15.17.13 NMAC.

**The five (5)-point composite sample of native soil beneath the earthen pit returned results below the 100 mg/kg TPH standard, the 0.2 mg/kg benzene standard, the 50 mg/kg BTEX standard and the 250 mg/kg total chloride standard, confirming that a release did NOT occur.**

- 10) Elm Ridge Exploration will submit a closure report within 60 days following the earthen pit closure. The closure report will consist of a form C-144 with all supporting data and a form C-141 with all supporting data. The supporting data will include proof of closure notice to the surface owner and the OCD, confirmation sampling analytical results, a site diagram, soil backfilling and cover installation, re-vegetation rates, re-seeding techniques, and site reclamation photo documentation if applicable, along with all other information related to the onsite activities.

**See attached C-144 Closure Form and attached Form C-141 Release Notification Form. Closure report has been submitted prior to October 24, 2009.**


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## Track & Confirm

### Search Results

Label/Receipt Number: 7007 1490 0000 5398 9312

Service(s): Certified Mail™

Status: Delivered

Your item was delivered at 8:54 AM on August 19, 2009 in FARMINGTON, NM 87401.

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U.S. Postal Service CERTIFIED MAIL™ RECEIPT (Domestic Mail Only, No Insurance Coverage Provided)	
For delivery information visit our website at <a href="http://www.usps.com">www.usps.com</a> .	
<b>OFFICIAL USE</b>	
Postage	\$ 1.56
Certified Fee	2.80
Restricted Delivery Fee (Endorsement Required)	2.30
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Total Postage & Fees	\$ 6.66
Send to	Mr. Mark Kelly Bureau of Land Management 1235 La Plata Hwy, Ste. A Farmington, NM 87401
Street, Apt. No., or PO Box No. City, State, ZIP+4	
PS Form 3811, August 2004	PSN 7500-01-000-9000

7007 1490 0000 5398 9312

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Bisti Coal 9-1  
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 Bisti Coal 8L COM 2  
 03056-0186  
 Bisti Coal 8 COM  
 03056-0185  
 Bisti Coal 6-2  
 03056-0182  
 Bisti Coal 6-1  
 03056-0181  
 Bisti Coal 7 COM 2  
 03056-0184  
 Bisti Coal 7-1  
 03056-0183

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
1. Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. 2. Print your name and address on the reverse so that we can return the card to you. 3. Attach this card to the back of the mailpiece, or on the front if space permits.	A. Signature x Ashley Dye B. Received by (Print Name) ASHLEY DYE C. Date of Delivery 8/19/09 D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If YES, enter delivery address below:
1. Article Addressed to:  Mr. Mark Kelly Bureau of Land Management 1235 La Plata Hwy, Ste. A Farmington, NM 87401	E. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. F. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2. Article Number (Transit from service label) 7007 1490 0000 5398 9312	
PS Form 3811, February 2004	Domestic Return Receipt

102505-02-M-1540

2009-08-20



August 17, 2009

Project No. 03056-0184

Mr. Mark Kelly  
Bureau of Land Management  
1235 La Plata Highway, Suite A  
Farmington, New Mexico 87401

Phone: (505) 599-8900

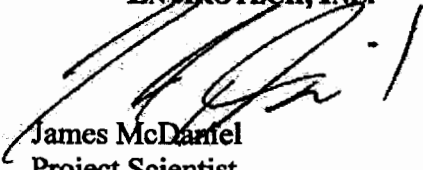
**RE: BISTI COAL 7 COM 2 EARTH PIT CLOSURE NOTIFICATION**

Dear Mr. Kelly,

Please accept this letter and attached Sundry Notice as the necessary surface owner notification for earth pit closure activities at the Bisti Coal 7 COM 2 well site, owned and operated by Elm Ridge Exploration. The Bisti Coal 7 COM 2 well site is located in Unit H, Section 7, Township 25N, Range 12W, San Juan County, New Mexico. Closure activities are scheduled to begin on August 24, 2009 and continue through August 28, 2009.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,  
**ENVIROTECH, INC.**

  
James McDaniel  
Project Scientist  
[jmcdaniel@envirotech-inc.com](mailto:jmcdaniel@envirotech-inc.com)

Enclosure: Sundry Notice

Cc: Client File No. 03056

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals.**

5. Lease Serial No.  
SF-078056

6. If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE -- Other instructions on page 2.**

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator  
Elm Ridge Exploration

7. If Unit of CA/Agreement, Name and/or No.

8. Well Name and No.  
Bisti Coal 7 COM 2

3a. Address  
PO Box 158  
Bloomfield, NM 87413

3b. Phone No. (include area code)  
(505) 632-3476

9. API Well No.  
30-045-28386

10. Field and Pool or Exploratory Area

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
1745 FNL 1045 FEL, H-7-25N-12W, Lat. 36.4161599 long. -108.1473289

11. Country or Parish, State  
San Juan County, NM

**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Closure of an Earth Pit
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Elm Ridge Exploration plans to begin closure activities for an earthen pit located at the above mentioned site. All formal notifications have been made. Closure activities are scheduled to begin on Monday, August 24, 2009 and last through August 28, 2009.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)  
Ms. Army Mackey

Title Administrative Manager

Signature

Date 08/17/2009

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

## GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

## SPECIFIC INSTRUCTIONS

*Item 4* - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

*Item 13* - Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment.

## NOTICES

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

**PRINCIPAL PURPOSE:** The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

**ROUTINE USES:** Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

**EFFECT OF NOT PROVIDING THE INFORMATION:** Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240



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**Direct or Indirect**

Rev. Date 10/06-Part 1 of 10/27/06 1004-2006 FOLIO-PUBLISHED IN U.S.A. ©1996





August 4, 2009

Project No. 03056-0241

Mr. Brad Jones  
New Mexico Oil Conservation Division  
1220 South St. Francis Street  
Santa Fe, New Mexico 87505

Phone (505) 476-3487

**RE: EARTH PIT CLOSURE NOTIFICATIONS AND PROPOSED CLOSURE SCHEDULE**

Dear Mr. Jones,

Envirotech, Inc., on the behalf of Elm Ridge Exploration, would like to submit this notification to begin closure activities at the below mentioned locations. Attached to this document is a proposed closure schedule for the months of August and September of 2009. Should this schedule be approved by your office, closure activities will begin as scheduled, with surface owner notifications being made at a minimum of 24 hours prior to the beginning of closure activities and a maximum of one (1) week prior to closure activities. Additional closure notifications and schedules will be made prior to beginning any closure activities. This letter will act as the closure notification for the following sites:

Bisti Coal 20-2	Bisti Coal 6-1	Bisti Coal 6-2	Bisti Coal 7-1
Bisti Coal 7 COM 2	Bisti Coal 8 COM 1	Bisti Coal 8L COM 2	Bisti Coal 9-1
Bisti Coal 9 COM 2	Bisti Coal 21-1	Bisti Coal 21 COM 2	Bisti Coal 22-2
Bisti Coal 28-1	Bisti Coal 29-1	Bisti Coal 29-2	Bisti Coal 30 COM 1
Bisti Coal 31-1	Bisti Coal 4-1	Bisti Coal 4 COM 2	Bisti Coal 5 COM 1
Bisti Coal 5K COM 2	Carson 10-332	Buena Suerte 3 G COM 1	Buena Suerte 3 L COM 1
Buena Suerte 32 G COM 1	East Bisti Coal 6-1	Buena Suerte 4 L COM 1	Carson Unit 15 COM 323
Carson Unit 206	Carson Unit 313	Pete Morrow 1	Pete Morrow 2
North Bisti Coal 32M COM 2	North Bisti Coal 31-1	Sam Jackson State COM 1	Jeter COM 2
West Bisti Coal 11 F COM 1	West Bisti Coal 12-1	West Bisti Coal 13-1	West Bisti Coal 11-2
West Bisti Coal 10-2	West Bisti Coal 15-1	West Bisti Coal 14 COM 1	West Bisti Coal 15-2
West Bisti Coal 22-2	West Bisti Coal 23-1	West Bisti Coal 22 COM 1	West Bisti Coal 24-1
West Bisti Coal 24 COM 2	West Bisti Coal 25-1	West Bisti Coal 25 2Y	Jicarilla Apache I-11
Sheila Hixon 1	Bisti Coal 16-2		

Elm Ridge Exploration is proposing to close the earthen pits at the above listed well locations based on the attached closure schedule.


We appreciate the opportunity to be of service. Should you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,

ENVIROTECH, INC.

  
James McDaniel  
Project Scientist  
[jmcdaniel@envirotech-inc.com](mailto:jmcdaniel@envirotech-inc.com)

ELM RIDGE EXPLORATION

  
Amy Mackey  
Administrative Manager  
[amackey1@elmridge.net](mailto:amackey1@elmridge.net)

Attachments: Closure Schedule

# August 2009

Sunday	Monday	Tuesday	Wed	Thurs	Friday	Sat
2	3	4	5	6	7	8
9	10 Bisti Coal 20-2 Bisti Coal 21-1 Bisti Coal 21 COM 2 Bisti Coal 22-2 Bisti Coal 28-1	11 Bisti Coal 20-2 Bisti Coal 21-1 Bisti Coal 21 COM 2 Bisti Coal 22-2 Bisti Coal 28-1	12 Bisti Coal 20-2 Bisti Coal 21-1 Bisti Coal 21 COM 2 Bisti Coal 22-2 Bisti Coal 28-1	13 Bisti Coal 20-2 Bisti Coal 21-1 Bisti Coal 21 COM 2 Bisti Coal 22-2 Bisti Coal 28-1	14 Bisti Coal 20-2 Bisti Coal 21-1 Bisti Coal 21 COM 2 Bisti Coal 22-2 Bisti Coal 28-1	15
16	17 Bisti Coal 29-1 Bisti Coal 29-2 Bisti Coal 30 COM 1 Bisti Coal 31-1 Bisti Coal 4-1 Bisti Coal 4 COM 2 Bisti Coal 5 COM 1 Bisti Coal 5K COM 2 Bisti Coal 16-2	18 Bisti Coal 29-1 Bisti Coal 29-2 Bisti Coal 30 COM 1 Bisti Coal 31-1 Bisti Coal 4-1 Bisti Coal 4 COM 2 Bisti Coal 5 COM 1 Bisti Coal 5K COM 2 Bisti Coal 16-2	19 Bisti Coal 29-1 Bisti Coal 29-2 Bisti Coal 30 COM 1 Bisti Coal 31-1 Bisti Coal 4-1 Bisti Coal 4 COM 2 Bisti Coal 5 COM 1 Bisti Coal 5K COM 2 Bisti Coal 16-2	20 Bisti Coal 29-1 Bisti Coal 29-2 Bisti Coal 30 COM 1 Bisti Coal 31-1 Bisti Coal 4-1 Bisti Coal 4 COM 2 Bisti Coal 5 COM 1 Bisti Coal 5K COM 2 Bisti Coal 16-2	21 Bisti Coal 29-1 Bisti Coal 29-2 Bisti Coal 30 COM 1 Bisti Coal 31-1 Bisti Coal 4-1 Bisti Coal 4 COM 2 Bisti Coal 5 COM 1 Bisti Coal 5K COM 2 Bisti Coal 16-2	22
23	24 Bisti Coal 6-1 Bisti Coal 6-2 Bisti Coal 7-1 Bisti Coal 7 COM 2 Bisti Coal 8 COM 1 Bisti Coal 8L COM 2 Bisti Coal 9-1 Bisti Coal 9 COM 2	25 Bisti Coal 6-1 Bisti Coal 6-2 Bisti Coal 7-1 Bisti Coal 7 COM 2 Bisti Coal 8 COM 1 Bisti Coal 8L COM 2 Bisti Coal 9-1 Bisti Coal 9 COM 2	26 Bisti Coal 6-1 Bisti Coal 6-2 Bisti Coal 7-1 Bisti Coal 7 COM 2 Bisti Coal 8 COM 1 Bisti Coal 8L COM 2 Bisti Coal 9-1 Bisti Coal 9 COM 2	27 Bisti Coal 6-1 Bisti Coal 6-2 Bisti Coal 7-1 Bisti Coal 7 COM 2 Bisti Coal 8 COM 1 Bisti Coal 8L COM 2 Bisti Coal 9-1 Bisti Coal 9 COM 2	28 Bisti Coal 6-1 Bisti Coal 6-2 Bisti Coal 7-1 Bisti Coal 7 COM 2 Bisti Coal 8 COM 1 Bisti Coal 8L COM 2 Bisti Coal 9-1 Bisti Coal 9 COM 2	29
30	31 Carson 10-332 Buena Suerte 3 G COM 1 Buena Suerte 3 L COM 1 Buena Suerte 32 G COM 1 Buena Suerte 4 L COM 1 East Bisti Coal 6-1 Carson Unit 15 COM 323 Carson Unit 206					

Sun Monday Tuesday Wednesday Thursday Friday Saturday

September 2009						
		1	2	3	4	5
		Carson 10-332 Buena Suerte 3 G COM 1 Buena Suerte 3 L COM 1 Buena Suerte 32 G COM 1 Buena Suerte 4 L COM 1 East Blati Coal 6-1 Carson Unit 15 COM 323 Carson Unit 208	Carson 10-332 Buena Suerte 3 G COM 1 Buena Suerte 3 L COM 1 Buena Suerte 32 G COM 1 Buena Suerte 4 L COM 1 East Blati Coal 6-1 Carson Unit 15 COM 323 Carson Unit 208	Carson 10-332 Buena Suerte 3 G COM 1 Buena Suerte 3 L COM 1 Buena Suerte 32 G COM 1 Buena Suerte 4 L COM 1 East Blati Coal 6-1 Carson Unit 15 COM 323 Carson Unit 208	Carson 10-332 Buena Suerte 3 G COM 1 Buena Suerte 3 L COM 1 Buena Suerte 32 G COM 1 Buena Suerte 4 L COM 1 East Blati Coal 6-1 Carson Unit 15 COM 323 Carson Unit 208	
6	7	8	9	10	11	12
	Carson Unit 313 Pete Morrow 1 Pete Morrow 2 North Blati Coal 32M COM 2 Sam Jackson State COM 1 North Blati Coal 31-1 West Blati Coal 11 F COM 1 Jeter COM 2	Carson Unit 313 Pete Morrow 1 Pete Morrow 2 North Blati Coal 32M COM 2 Sam Jackson State COM 1 North Blati Coal 31-1 West Blati Coal 11 F COM 1 Jeter COM 2	Carson Unit 313 Pete Morrow 1 Pete Morrow 2 North Blati Coal 32M COM 2 Sam Jackson State COM 1 North Blati Coal 31-1 West Blati Coal 11 F COM 1 Jeter COM 2	Carson Unit 313 Pete Morrow 1 Pete Morrow 2 North Blati Coal 32M COM 2 Sam Jackson State COM 1 North Blati Coal 31-1 West Blati Coal 11 F COM 1 Jeter COM 2	Carson Unit 313 Pete Morrow 1 Pete Morrow 2 North Blati Coal 32M COM 2 Sam Jackson State COM 1 North Blati Coal 31-1 West Blati Coal 11 F COM 1 Jeter COM 2	
13	14	15	16	17	18	19
	West Blati Coal 12-1 West Blati Coal 13-1 West Blati Coal 11-2 West Blati Coal 10-2 West Blati Coal 14 COM 1 West Blati Coal 15-1 West Blati Coal 15-2 West Blati Coal 22-2	West Blati Coal 12-1 West Blati Coal 13-1 West Blati Coal 11-2 West Blati Coal 10-2 West Blati Coal 14 COM 1 West Blati Coal 15-1 West Blati Coal 15-2 West Blati Coal 22-2	West Blati Coal 12-1 West Blati Coal 13-1 West Blati Coal 11-2 West Blati Coal 10-2 West Blati Coal 14 COM 1 West Blati Coal 15-1 West Blati Coal 15-2 West Blati Coal 22-2	West Blati Coal 12-1 West Blati Coal 13-1 West Blati Coal 11-2 West Blati Coal 10-2 West Blati Coal 14 COM 1 West Blati Coal 15-1 West Blati Coal 15-2 West Blati Coal 22-2	West Blati Coal 12-1 West Blati Coal 13-1 West Blati Coal 11-2 West Blati Coal 10-2 West Blati Coal 14 COM 1 West Blati Coal 15-1 West Blati Coal 15-2 West Blati Coal 22-2	
20	21	22	23	24	25	26
	West Blati Coal 22 COM 1 West Blati Coal 23-1 West Blati Coal 24-1 West Blati Coal 24 COM 2 West Blati Coal 25-1 West Blati Coal 25 2Y Jicarilla Apache I-11 Shella Hixon 1	West Blati Coal 22 COM 1 West Blati Coal 23-1 West Blati Coal 24-1 West Blati Coal 24 COM 2 West Blati Coal 25-1 West Blati Coal 25 2Y Jicarilla Apache I-11 Shella Hixon 1	West Blati Coal 22 COM 1 West Blati Coal 23-1 West Blati Coal 24-1 West Blati Coal 24 COM 2 West Blati Coal 25-1 West Blati Coal 25 2Y Jicarilla Apache I-11 Shella Hixon 1	West Blati Coal 22 COM 1 West Blati Coal 23-1 West Blati Coal 24-1 West Blati Coal 24 COM 2 West Blati Coal 25-1 West Blati Coal 25 2Y Jicarilla Apache I-11 Shella Hixon 1	West Blati Coal 22 COM 1 West Blati Coal 23-1 West Blati Coal 24-1 West Blati Coal 24 COM 2 West Blati Coal 25-1 West Blati Coal 25 2Y Jicarilla Apache I-11 Shella Hixon 1	
27	28	29	30			

ELM RIDGE EXPLORATION  
BISTI COAL 7 COM 2  
SEC. 7, TWN. 25N, RNG. 12W  
PROJECT NO. 03056-0184



Photo 1: Bisti Coal 7 COM 2 Well Site



Photo 2: Excavated Area After Backfilling and Recontouring



**EPA METHOD 418.1  
TOTAL PETROLEUM  
HYDROCARBONS**

Client:	Elm Ridge Exploration	Project #:	03056-0184
Sample No.:	1	Date Reported:	9/17/2009
Sample ID:	Earth Pit Comp @1' Below	Date Sampled:	8/24/2009
Sample Matrix:	Soil	Date Analyzed:	8/24/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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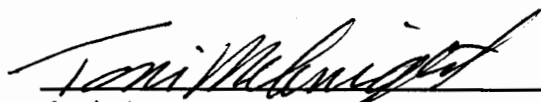
<b>Total Petroleum Hydrocarbons</b>	<b>92</b>	<b>5.0</b>
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ND = Parameter not detected at the stated detection limit.

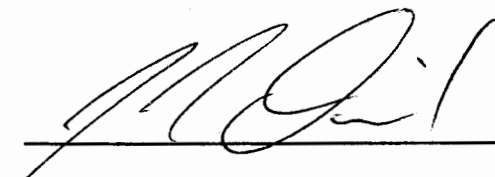
References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Bisti Coal 7 COM 2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

  
\_\_\_\_\_  
Analyst

Toni McKnight  
Printed

  
\_\_\_\_\_  
James McDaniel

James McDaniel  
Printed



CONTINUOUS CALIBRATION  
EPA METHOD 418.1  
TOTAL PETROLEUM  
HYDROCARBONS

Cal. Date: 24-Aug-09

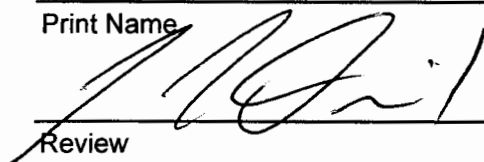
Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	202
	200	
	500	
	1000	

The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.

  
\_\_\_\_\_  
Analyst

9/17/09  
\_\_\_\_\_  
Date

Toni McKnight  
\_\_\_\_\_  
Print Name

  
\_\_\_\_\_  
Review

9/17/09  
\_\_\_\_\_  
Date

James McDaniel  
\_\_\_\_\_  
Print Name

Client:	Elm Ridge Resources	Project #:	03056-0184
Sample ID:	1' BGS of Pit	Date Reported:	08-28-09
Laboratory Number:	51398	Date Sampled:	08-24-09
Chain of Custody:	7815	Date Received:	08-24-09
Sample Matrix:	Soil	Date Analyzed:	08-27-09
Preservative:	Cool	Date Extracted:	08-26-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	ND	1.0
Ethylbenzene	ND	1.0
p,m-Xylene	ND	1.2
o-Xylene	ND	0.9
<b>Total BTEX</b>	<b>ND</b>	

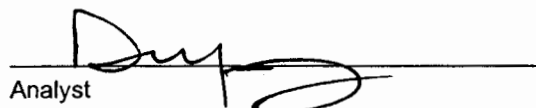
ND - Parameter not detected at the stated detection limit.

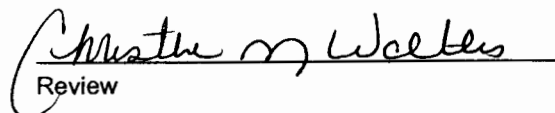
Surrogate Recoveries:	Parameter	Percent Recovery
	<b>Fluorobenzene</b>	<b>98.0 %</b>
	<b>1,4-difluorobenzene</b>	<b>98.0 %</b>
	<b>Bromochlorobenzene</b>	<b>98.0 %</b>

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: Earth Pit Closure / Bisti Coal 7 Com 2.**

  
 Analyst

  
 Review



Client:	N/A	Project #:	N/A
Sample ID:	08-27-BTEX QA/QC	Date Reported:	08-28-09
Laboratory Number:	51388	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-27-09
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF	Q-Cal RF	%Diff	Blank Conc.	Detected Limit
	Accept Range 0 - 15%				
Benzene	3.1192E+006	3.1254E+006	0.2%	ND	0.1
Toluene	2.8947E+006	2.9005E+006	0.2%	ND	0.1
Ethylbenzene	2.5459E+006	2.5510E+006	0.2%	ND	0.1
p,m-Xylene	6.5578E+006	6.5709E+006	0.2%	ND	0.1
o-Xylene	2.4389E+006	2.4438E+006	0.2%	ND	0.1


Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff	Accept Range	Detected Limit
Benzene	9.9	9.6	3.0%	0 - 30%	0.9
Toluene	51.4	50.9	1.0%	0 - 30%	1.0
Ethylbenzene	37.7	37.6	0.3%	0 - 30%	1.0
p,m-Xylene	158	153	3.3%	0 - 30%	1.2
o-Xylene	74.1	73.4	0.9%	0 - 30%	0.9

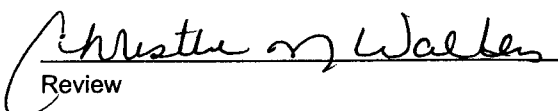
Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	9.9	50.0	59.4	99.2%	39 - 150
Toluene	51.4	50.0	96.3	95.0%	46 - 148
Ethylbenzene	37.7	50.0	85.6	97.6%	32 - 160
p,m-Xylene	158	100	256	99.1%	46 - 148
o-Xylene	74.1	50.0	117	94.3%	46 - 148

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 51388, 51389, 51397 - 51400, 51402, 51403, 51409 and 51412.**

Analyst 

Review 

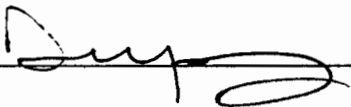
Client:	Elm Ridge Resources	Project #:	03056-0184
Sample ID:	1' BGS of Pit	Date Reported:	08-28-09
Lab ID#:	51398	Date Sampled:	08-24-09
Sample Matrix:	Soil	Date Received:	08-24-09
Preservative:	Cool	Date Analyzed:	08-26-09
Condition:	Intact	Chain of Custody:	7815

**Parameter****Concentration (mg/Kg)****Total Chloride****240**

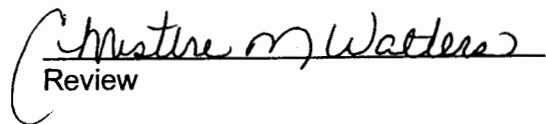
Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.  
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Earth Pit Closure / Bisti Coal 7 Com 2.**

Analyst



Review



5  
4  
3  
2

[illegible]

PAGE NO: 1 OF 1

## ENVIROTECH IN

ENVIRONMENTAL SCIENTISTS &amp; ENGINEERS

5796 U.S. HIGHWAY 64 - 3014

FARMINGTON, NEW MEXICO 87401

PHONE: (505) 632-0615

ENVIRONMENTAL SPECIALIST

DATE STARTED: 8/24/09DATE FINISHED: 8/24/09LAT: N 36°25.0873LONG: W 108°08.8427

## FIELD REPORT: BGT / PIT CLOSURE VERIFICATION

LOCATION: NAME: Bisti Coal 7 Compwell #. 2 TEMP PIT: PERMANENT PIT: X BGT:  
LEGAL ADD: UNIT: 4 SEC: 7 TWP: 25N RNG: 12W PM: NM  
QTR/FOOTAGE: 1745' FNL + 1045' FEL CNTY: San Juan ST: New Mexico

EXCAVATION APPROX: 10 FT. X 10 FT. X 3 FT. DEEP CUBIC YARDAGE: 3DISPOSAL FACILITY: Envirotech REMEDIATION METHOD: LandfarmLAND OWNER: Federal API: 30045-28386 BGT / PIT VOLUME: 929 H3CONSTRUCTION MATERIAL: Earth DOUBLE-WALLED, WITH LEAK DETECTION: N/ALOCATION APPROXIMATELY: 90 FT. 2890 FROM WELLHEADDEPTH TO GROUNDWATER: >100'

TEMPORARY PIT - GROUNDWATER 50-100 FEET DEEP

BENZENE  $\leq 0.2$  mg/kg, BTEX  $\leq 50$  mg/kg, GRO & DRO FRACTION (8015)  $\leq 500$  mg/kg, TPH (418.1)  $\leq 2500$  mg/kg, CHLORIDES  $\leq 500$  mg/kgTEMPORARY PIT - GROUNDWATER  $\geq 100$  FEET DEEPBENZENE  $\leq 0.2$  mg/kg, BTEX  $\leq 50$  mg/kg, GRO & DRO FRACTION (8015)  $\leq 500$  mg/kg, TPH (418.1)  $\leq 2500$  mg/kg, CHLORIDES  $\leq 1000$  mg/kg☒ PERMANENT PIT OR BGTBENZENE  $\leq 0.2$  mg/kg, BTEX  $\leq 50$  mg/kg, TPH (418.1)  $\leq 100$  mg/kg, CHLORIDES  $\leq 250$  mg/kg

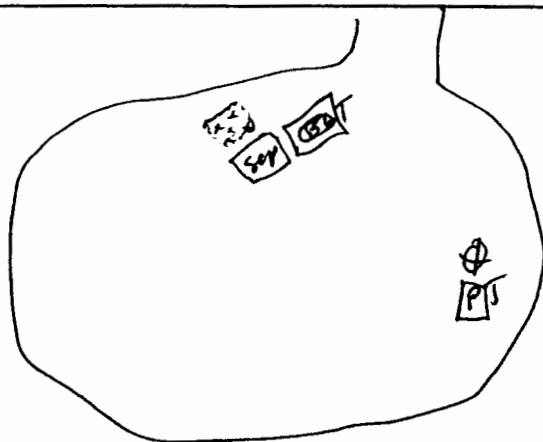
## FIELD 418.1 ANALYSIS

TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (mg/kg)
8:30	200 STD	-	-	-	-	202	202
10:39	5pt@1'	1	5	20	4	150	600
10:54	5pt@2'	2	5	20	4	32	128
11:30	1' Below Pit	3	5	20	4	2.3	9.2
		4					
		5					
		6					

## PERIMETER

## FIELD CHLORIDES RESULTS

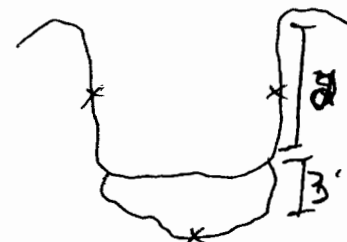
## PROFILE



SAMPLE ID	READING	CALC. (mg/kg)
5pt@2'	644	(7.6) 644
1' Below Pit	5	243

## PID RESULTS

SAMPLE ID	RESULTS (ppm)
5pt@100	98
5pt@1' - 0.1' - 0.2' - 0.3' - 0.4' - 0.5' - 0.6' - 0.7' - 0.8' - 0.9' - 1.0' - 1.1' - 1.2' - 1.3' - 1.4' - 1.5' - 1.6' - 1.7' - 1.8' - 1.9' - 2.0' - 2.1' - 2.2' - 2.3' - 2.4' - 2.5' - 2.6' - 2.7' - 2.8' - 2.9' - 3.0' - 3.1' - 3.2' - 3.3' - 3.4' - 3.5' - 3.6' - 3.7' - 3.8' - 3.9' - 4.0' - 4.1' - 4.2' - 4.3' - 4.4' - 4.5' - 4.6' - 4.7' - 4.8' - 4.9' - 5.0' - 5.1' - 5.2' - 5.3' - 5.4' - 5.5' - 5.6' - 5.7' - 5.8' - 5.9' - 6.0' - 6.1' - 6.2' - 6.3' - 6.4' - 6.5' - 6.6' - 6.7' - 6.8' - 6.9' - 7.0' - 7.1' - 7.2' - 7.3' - 7.4' - 7.5' - 7.6' - 7.7' - 7.8' - 7.9' - 8.0' - 8.1' - 8.2' - 8.3' - 8.4' - 8.5' - 8.6' - 8.7' - 8.8' - 8.9' - 9.0' - 9.1' - 9.2' - 9.3' - 9.4' - 9.5' - 9.6' - 9.7' - 9.8' - 9.9' - 10.0'	0.0
5pt@2' - 0.1' - 0.2' - 0.3' - 0.4' - 0.5' - 0.6' - 0.7' - 0.8' - 0.9' - 1.0' - 1.1' - 1.2' - 1.3' - 1.4' - 1.5' - 1.6' - 1.7' - 1.8' - 1.9' - 2.0' - 2.1' - 2.2' - 2.3' - 2.4' - 2.5' - 2.6' - 2.7' - 2.8' - 2.9' - 3.0' - 3.1' - 3.2' - 3.3' - 3.4' - 3.5' - 3.6' - 3.7' - 3.8' - 3.9' - 4.0' - 4.1' - 4.2' - 4.3' - 4.4' - 4.5' - 4.6' - 4.7' - 4.8' - 4.9' - 5.0' - 5.1' - 5.2' - 5.3' - 5.4' - 5.5' - 5.6' - 5.7' - 5.8' - 5.9' - 6.0' - 6.1' - 6.2' - 6.3' - 6.4' - 6.5' - 6.6' - 6.7' - 6.8' - 6.9' - 7.0' - 7.1' - 7.2' - 7.3' - 7.4' - 7.5' - 7.6' - 7.7' - 7.8' - 7.9' - 8.0' - 8.1' - 8.2' - 8.3' - 8.4' - 8.5' - 8.6' - 8.7' - 8.8' - 8.9' - 9.0' - 9.1' - 9.2' - 9.3' - 9.4' - 9.5' - 9.6' - 9.7' - 9.8' - 9.9' - 10.0'	0.0
1' Below Pit	0.0



..... Earth Pit

## LAB SAMPLES

SAMPLE ID	ANALYSIS	RESULTS
	BENZENE	
	BTEX	
	GRO & DRO	
	CHLORIDES	

NOTES: SF - 079056  
Earth Pit Visible - dug out what was drilling mud on  
sludge - Dark Brown in color - Sand Below  
Pit - Pit covered w/ clean Dirt

WORKORDER #

WHO ORDERED



MANIFEST #

34120

DATE 8-24-09 JOB# 03056-0184

"I certify the material hauled from the above location has not been added to or mixed with, and is the same material received from the above mentioned Generator, and that no additional materials have been added."

NAME John McKinley COMPANY E. W. Riche SIGNATURE [Signature]

COMPANY CONTACT Mark PHONE 327-2271 DATE 8-24-89

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  
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**

- 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.

Operator: Elm Ridge Exploration OGRID #: 149052  
Address: P.O. Box 156; Bloomfield, NM 87413  
Facility or well name: Bisti Coal 7 COM 2  
API Number: 3004528386 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr H Section 7 Township 25N Range 12W County: San Juan  
Center of Proposed Design: Latitude 36.418229 Longitude -108.147197 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 **Ceased emptying into prior to June 16, 2008.**  
Temporary: ☐ Drilling ☐ Workover  
☒ Permanent ☐ Emergency ☐ Cavitation ☐ P&A  
☐ Lined ☒ Unlined Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
☐ String-Reinforced  
Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_ Volume: \_\_\_\_\_ bbl Dimensions: L 12' x W 12' x D 2'

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*)

☐ 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.

☐ Yes ☐ No

Within 500 feet of a wetland.

☐ Yes ☐ No

Within the area overlying a subsurface mine.

☐ 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  
☐ 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

☐ Yes ☐ No  
☐ 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

☐ Yes ☐ No  
☐ 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

☐ Yes ☐ No  
☐ 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

☐ Yes ☐ 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

☐ Yes ☐ 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

☐ 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

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): Ms. Amy MackeyTitle: Administrative Manager

Signature: \_\_\_\_\_

Date: 3-2-09E-mail address: amackey1@elmridge.netTelephone: (505) 632-3476 Ext.201

20.

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

OCD Representative Signature: \_\_\_\_\_

Approval Date: 2/10/10Title: Environmental Engineer

OCD Permit Number: \_\_\_\_\_

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.

☐ Closure Completion Date: \_\_\_\_\_

22.

**Closure Method:**

☐ 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 identify 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.

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

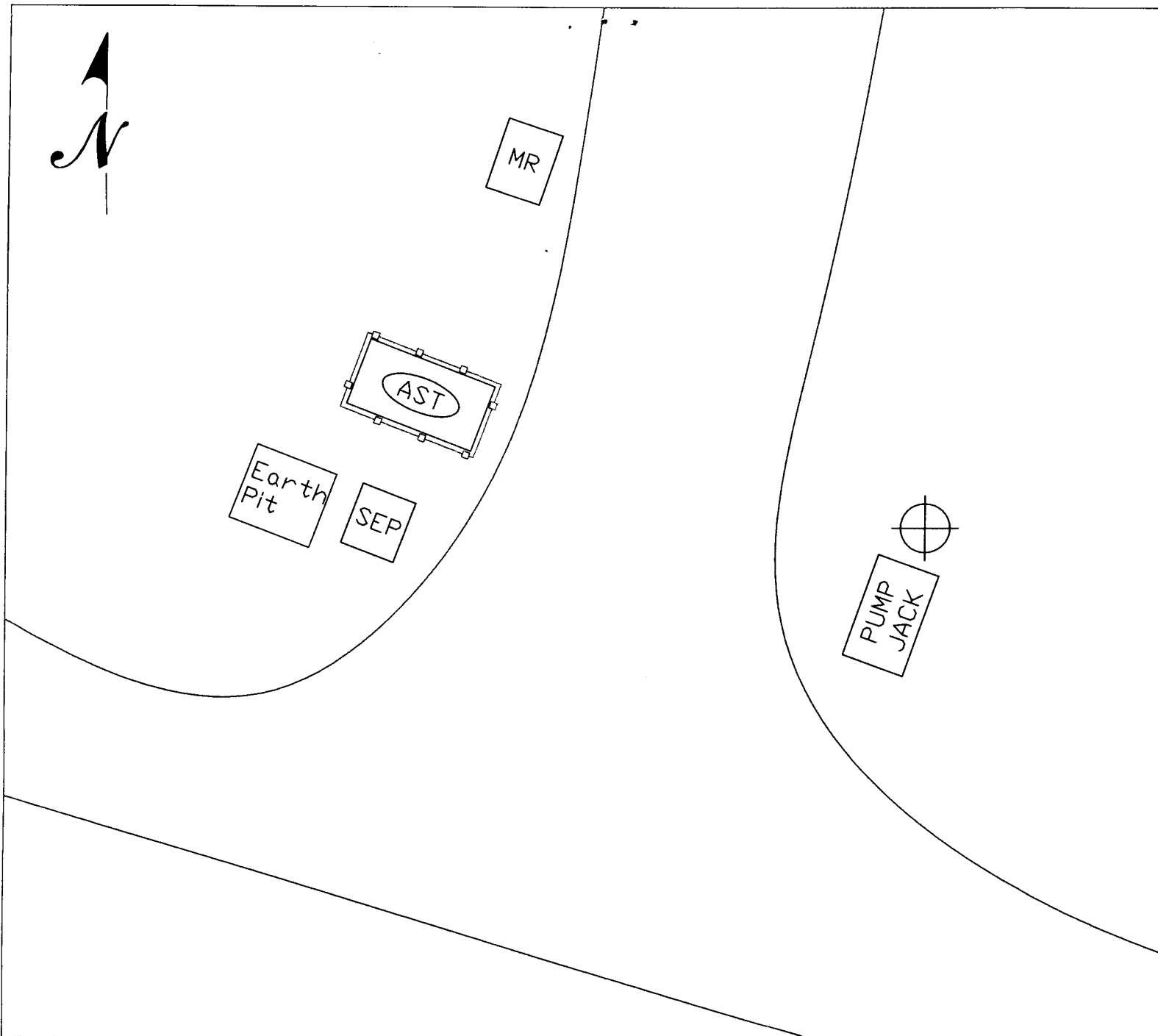
Title: \_\_\_\_\_

Signature: \_\_\_\_\_

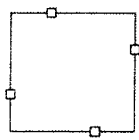
Date: \_\_\_\_\_

E-mail address: \_\_\_\_\_

Telephone: \_\_\_\_\_



# LEGEND



4' Tall Hogwire Fencing



Berm



Well Head

## SITE MAP ELM RIDGE EXPLORATION BISTI COAL 7 COM 2 SEC 7 TWN 25N RGE 12W SAN JUAN COUNTY, NEW MEXICO

SCALE: NTS

PROJECT NO03056-0136

FIGURE NO. A

REV

### REVISIONS

NO.	DATE	BY	DESCRIPTION
MAP DRWN	JPM	1/16/09	BASE DRWN

ENVIRONMENTAL SCIENTISTS & ENGINEERS  
**ENVIROTECH**

5796 U.S. HIGHWAY 64, FARMINGTON, NM 87410 505-632-0615

# **EARTHEN PIT CLOSURE PLAN**

**SITE NAME:**

**BISTI COAL 7 COM 2  
UNIT LETTER H, SECTION 7, TOWNSHIP 25N, RANGE 12W  
SAN JUAN COUNTY, NEW MEXICO  
LATITUDE 36.418229 LONGITUDE -108.147197**

**SUBMITTED TO:**

**MR. WAYNE PRICE  
NEW MEXICO OIL CONSERVATION DIVISION  
1220 SOUTH ST. FRANCIS DRIVE  
SANTA FE, NEW MEXICO 87505  
(505) 476-3490**

**SUBMITTED BY:**

**MS. AMY MACKEY  
ELM RIDGE EXPLORATION  
P.O. BOX 156  
BLOOMFIELD, NEW MEXICO 87413  
(505) 632-3476 EXT. 201**

**FEBRUARY 2009**

**EARTHEN PIT CLOSURE PLAN  
ELM RIDGE EXPLORATION  
BISTI COAL 7 COM 2  
SAN JUAN COUNTY, NEW MEXICO**

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## **INTRODUCTION**

Elm Ridge Exploration would like to submit a closure plan for the earthen pit at the Bisti Coal 7 COM 2 well site located in the SE ¼ NE ¼ of Section 7, Township 25N, Range 12W, San Juan County, New Mexico. This closure plan has been prepared in conformance with the closure requirements of 19.15.17.13 NMAC.

## **SCOPE OF CLOSURE ACTIVITIES**

The purpose of this closure plan is to provide the details of activities involved in the closure of the permanent unlined pit at the Bisti Coal 7 COM 2 well site. The following scope of closure activities has been designed to meet this objective:

- 1) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close all former earthen pits prior to the closure date agreed upon by the New Mexico Oil Conservation Division of December 31, 2009.
- 2) In accordance with of Subsection A of 19.15.17.13 NMAC, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close any earthen pits at a date the division requires because of imminent danger to fresh water, public health, or the environment.
- 3) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close earthen pits first which seem to pose a greater risk to fresh water, public health, or the environment. This will be determined by the locations proximity to surface water sources and distance to groundwater.
- 4) No less than 60 days prior to any earthen pit closure activities, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the Santa Fe NMOCD office as well as a schedule of on-site activities, as in accordance with 19.15.17.13 Subsection J Paragraph (3) NMAC.
- 5) No less than 24 hours and no greater than one (1) week prior to any earthen pit closure Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the appropriate surface owner as well as a schedule of on-site activities, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the surface owner by certified mail, return receipt requested, that the operator plans to close an earthen pit. The return receipt will be used to ensure that the surface owner has received written notification no less than 24 hours and no greater than one (1) week prior to the beginning of earthen pit closure activities. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement. Closure activities that will take place on tribal land will have notifications sent by certified mail, return receipt requested, to the appropriate tribal office. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the Bureau of Land Management (BLM) of closure activities for wells located on federal land per a Sundry Notice, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. All notices will be sent in such a way that the surface owner received notice at least 24 hours prior to the beginning of



closure activities.

- 6) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all liquids, and/or sludge, to visual extents, prior to closure sampling. Material will be disposed of at Envirotech's Landfarm #2, Permit # NM-01-0011, TNT Environmental Inc. Landfarm, Permit # NM-01-0008, Industrial Ecosystems Inc. (IEI) Landfarm, Permit # NM-01-0010B or Basin Disposal, Permit # NM-01-0005, depending on the consistence of the material removed, as in accordance with 19.15.17.13 Subsection C Paragraph (1) NMAC .
- 7) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all on-site equipment associated with this earthen pit unless it is required for some other purpose, as in accordance with 19.15.17.13 Subsection C Paragraph (2) NMAC. The equipment that meets the requirements of 19.15.9.712 Subsection A NMAC and 19.15.9.712 Subsection D Paragraph (1) will be disposed of at San Juan County Regional Landfill. Waste that is classified by 19.15.9.712 Subsection D Paragraph (2) will be sampled accordingly to determine acceptance of this material at the San Juan County Regional Landfill. Waste that is unable to be accepted at the San Juan County Regional Landfill will be submitted to the OCD on a case-by-case basis in accordance with Paragraph (3) of Subsection D of 19.15.9.712.
- 8) Once the earthen pit is removed to visual extents of contamination, a five (5)-point composite sample will be collected from directly below the liner(s) or at native soil. Additional discrete samples will be collected from any area that is wet, discolored, or show other evidence of a release. All samples being collected will be analyzed for benzene, and total BTEX via USEPA Method 8021B, TPH via USEPA Method 418.1, and chlorides via USEPA 300.1, as in accordance with 19.15.17.13 Subsection C Paragraph (3) NMAC.
- 9) Depending on soil sample results the area will be either backfilled or the area will be excavated.
  - a. If soil samples do not exceed the regulatory standards of 0.2 mg/kg benzene, 50 mg/kg BTEX, 100 mg/kg TPH, and 250 mg/kg or background concentration of chlorides, as in accordance with 19.15.17.13 Subsection C Paragraph (3) NMAC.
    - i. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, shall submit a Form C-141 with the laboratory results so that the division may review the results to determine if additional delineation is required in accordance with Paragraph (4) of Subsection C of 19.15.17.13 NMAC.
    - ii. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will backfill the excavation or impacted area with non-waste containing, earthen material, in accordance with 19.15.17.13 Subsection E Paragraph (6) NMAC. A soil cover shall be installed for all backfilled excavations consisting of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater in accordance with Subsections H of 19.15.17.13 NMAC. The operator shall construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material.
    - iii. All areas of the well site that are no longer utilized on a day to day basis for the production of oil and/or gas, Elm Ridge Exploration, or a

contractor, acting on behalf of Elm Ridge Exploration, will substantially restore, re-contour, and re-vegetate the areas, in accordance with 19.15.17.13 Subsections G and I NMAC. The operator shall notify the division when it has been re-seeded and when it has achieved successful re-vegetation. For re-vegetation methods, please see attached re-vegetation plan.

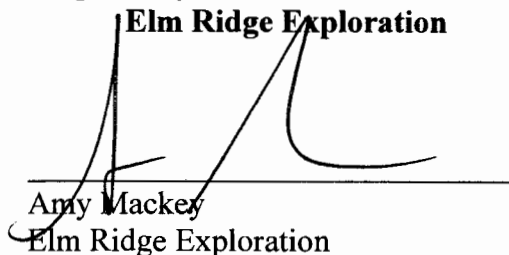
- b. If soil samples exceed the regulatory standards stated above.
  - i. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, shall submit a Form C-141 with the laboratory results so that the division may review the results to determine if additional delineation is required in accordance with Paragraph (4) of Subsection C of 19.15.17.13 NMAC.
  - ii. Activities beyond this point will be in accordance with 19.15.3.116 NMAC and 19.15.11.19 NMAC.

### **REPORTING**

Elm Ridge Exploration will submit a closure report within 60 days following the earthen pit closure. The closure report will consist of a form C-144 with all supporting data and a form C-141 with all supporting data. The supporting data will include proof of closure notice to the surface owner and the OCD, confirmation sampling analytical results, a site diagram, soil backfilling and cover installation, re-vegetation rates, re-seeding techniques, and site reclamation photo documentation, if applicable, along with all other information related to the onsite activities.

We appreciate the opportunity to be of service. If you have any questions or require further information, please do not hesitate to contact our office at (505) 632-3476 Ext 201.

Respectfully Submitted:

**Elm Ridge Exploration**  
  
Amy Mackey  
Elm Ridge Exploration

## **Elm Ridge Exploration**

### **Re-Seeding Techniques and Seed Mixture Ratios**

These applied practices by Elm Ridge Exploration will at a minimum comply with the New Mexico Oil Conservation Divisions rule 19.15.17.13, Subsection I NMAC Elm Ridge Exploration has adopted these re-seeding application techniques, ratios and mixtures as their standard operating procedures.

1. The first growing season after closure of a below grade tank or pit, all areas of the well site not utilized for the production of oil and/or gas on a daily basis will be re-seeded with the specified seed mixture.
2. The seed mixture used will be certified with no primary or secondary noxious weeds in seed mixtures. The seed labels from each bag shall be available for inspection while seed is being sown.
3. The operator shall accomplish seeding by drilling on the contour whenever practical or by other division-approved methods. The operator shall obtain vegetative cover that equals 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.
4. Hand seeding with hydro-mulch, excelsior netting or mulch with netting is required on the cut/fill slopes. Mulch will be spread at a rate of 2,000-3,000 pounds per acre.
5. Compacted areas determined by visual inspection will be ripped to a depth of twelve (12) inches below ground surface and disked to a depth of six (6) inches before seeding. Seeding shall be done with a disk type drill with two (2) boxes for various seed sizes. The drill rows shall be eight (8) to ten (10) inches apart. Seed shall be planted at no less than one-half (1/2) inch deep or more than one (1) inch deep. The seeder shall be followed with a drag, packer, or roller to ensure uniform coverage of the seed and adequate compaction. Drilling shall be done on the contour where possible, but not up and down the slope.
6. Where slopes are too steep for contour drilling a hand seeder shall be used. Seed shall be covered to the depth stated above by whatever means is practical. If the seed is unable to be covered by the means listed above, the prescribed seed mixture amount will be doubled.

7. Elm Ridge Exploration shall repeat seeding or planting until it successfully achieves the required vegetative cover of 70% of the native perennial vegetation cover.
8. Upon abandonment of a well site, if the retention of the access road is not considered necessary for the management and multiple uses of the natural resources, or by the surface owner, it will be ripped a minimum of twelve (12) inches in depth. After ripping, water bars will be installed. All ripped surfaces are to be protected from vehicular travel by construction of a dead end ditch and earthen barricade at the entrance to these ripped areas. Re-seeding of areas affected by the ditch and barriers will be re-seeded if necessary.
9. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will inform the division once successful re-vegetation has occurred.

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-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Elm Ridge Exploration	Contact: Amy Mackey
Address: PO Box 156, Bloomfield, NM 87413	Telephone No.: (505) 632-3476 Ext 201
Facility Name: Bisti Coal 7 COM 2	Facility Type: Gas Well

Surface Owner: Federal	Mineral Owner:	Lease No.: SF-078056
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#### LOCATION OF RELEASE

Unit Letter H	Section 7	Township 25N	Range 12W	Feet from the 1745	North/South Line FNL	Feet from the 1045	East/West Line FEL	County San Juan
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Latitude: 36.418159 Longitude: -108.147329

#### NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Earth Pit	Date and Hour of Occurrence: Historical	Date and Hour of Discovery: NA
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Produced Water from a gas well at the mentioned location formerly discharged into an earthen pit on location. The well has been altered to no longer drain into an earthen pit.

Describe Area Affected and Cleanup Action Taken.\*

Blow sand was removed from the earthen pit, and approximately three (3) cubic yards of 'production sludge' was removed from the earthen pit. A five (5)-point composite sample was collected from approximately one (1) foot below the earthen pit once it was removed. The sample was analyzed in the field for total petroleum hydrocarbons (TPH) via USEPA Method 418.1, and in Envirotech's laboratory for benzene and BTEX via USEPA Method 8021 and for total chlorides via USEPA Method 4500B. The sample returned results below the 'Pit Rule' standards of 100 mg/kg TPH, 0.2 mg/kg benzene, 50 mg/kg BTEX and 250 mg/kg total chlorides, confirming that a release had not occurred. Analytical results are attached for your reference.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	<b>OIL CONSERVATION DIVISION</b>		
Printed Name: Ms. Amy Mackey	Approved by District Supervisor:		
Title: Administrative Manager	Approval Date:	Expiration Date:	
E-mail Address: amackey1@elmridge.net	Conditions of Approval:		Attached <input type="checkbox"/>
Date: <u>10/22/09</u> Phone: 505-632-3476 Ext 201			

\* Attach Additional Sheets If Necessary

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  
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**

- 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.

Operator: <u>Elm Ridge Exploration</u>		OGRID #: <u>149052</u>
Address: <u>P.O. Box 156; Bloomfield, NM 87413</u>		
Facility or well name: <u>Bisti Coal 7 COM 2</u>		
API Number: <u>3004528386</u>		OCD Permit Number:
U/L or Qtr/Qtr <u>H</u>	Section <u>7</u>	Township <u>25N</u> Range <u>12W</u> County: <u>San Juan</u>
Center of Proposed Design: Latitude <u>36.418159</u> Longitude <u>-108.147329</u>		NAD: <input type="checkbox"/> 1927 <input checked="" type="checkbox"/> 1983
Surface Owner: <input checked="" type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> 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 \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_

☐ String-Reinforced

Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_ Volume: \_\_\_\_\_ bbl Dimensions: L 10' x W 10' x D 2'

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 ☐ Not labeled

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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<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. ( <i>Applies to temporary, emergency, or cavitation pits and below-grade tanks</i> ) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. ( <i>Applies to permanent pits</i> ) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<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.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 500 feet of a wetland.	<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

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
- ☐ 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

☐ Yes ☐ No  
☐ 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

☐ Yes ☐ No  
☐ 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

☐ Yes ☐ No  
☐ 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

☐ Yes ☐ 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

☐ Yes ☐ 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

☐ 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

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: \_\_\_\_\_ Approval Date: \_\_\_\_\_

Title: \_\_\_\_\_ OCD Permit Number: \_\_\_\_\_

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.*

☒ Closure Completion Date: 8/24/09

22.

**Closure Method:**

☒ 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 identify 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: Envirotech Landfarm #2 Disposal Facility Permit Number: NM-01-0011

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.*

- ☒ Proof of Closure Notice (surface owner and division) **See Attached**  
☐ Proof of Deed Notice (required for on-site closure)  
☐ Plot Plan (for on-site closures and temporary pits)  
☒ Confirmation Sampling Analytical Results (if applicable) **See Attached**  
☐ Waste Material Sampling Analytical Results (required for on-site closure)  
☒ Disposal Facility Name and Permit Number **Envirotech Landfarm #2, NM-01-0011**  
☒ Soil Backfilling and Cover Installation **See Attached**  
☒ Re-vegetation Application Rates and Seeding Technique **Pursuant to the BLM MOU**  
☒ Site Reclamation (Photo Documentation) **See Attached**

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): Ms. Amy Mackey Title: Administrative Manager

Signature: \_\_\_\_\_ Date: 10/22/09

E-mail address: amackey1@elmridge.net Telephone: (505) 632-3476 Ext. 201

### **Earthen Pit Closure Checklist**

- 1) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close all former earthen pits prior to the closure date agreed upon by the New Mexico Oil Conservation Division (NMOCD) of December 31, 2009.  
**Closure date for the earth pit located at the Bisti Coal 7 COM 2 well site is August 24, 2009.**
- 2) In accordance with Subsection A of 19.15.17.13 NMAC, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close any earthen pits at a date the division requires because of imminent danger to fresh water, public health or the environment.  
**None of the earthen pits to be closed by Elm Ridge Exploration are deemed an imminent risk to the environment, public health, or to fresh or public water.**
- 3) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close earthen pits first which seem to pose a greater risk to fresh water, public health, or the environment. This will be determined by the locations proximity to surface water sources and distance to groundwater.  
**None of the earthen pits to be closed by Elm Ridge Exploration are deemed an imminent risk to the environment, public health, or to fresh or public water.**
- 4) No less than 60 days prior to any earthen pit closure activities, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the Santa Fe NMOCD office as well as a schedule of on-site activities, as in accordance with 19.15.17.13 Subsection J Paragraph (3) NMAC.  
**Notification was provided to Mr. Brad Jones of the NMOCD Santa Fe Office on August 4, 2009, along with a schedule of on-site activities; see attached *Notification Letter*.**
- 5) No less than 24 hours and no greater than one (1) week prior to earthen pit removal, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the appropriate surface owner as well as a schedule of on-site activities, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the surface owner by certified mail, return receipt requested, that the operator plans to close an earthen pit. The return receipt will be used to ensure that the surface owner has received written notification no less than 24 hours and no greater than one (1) week prior to the beginning of the earthen pit closure activities. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement. Closure activities that will take place on tribal land will have notifications sent by certified mail, return receipt requested, to the appropriate tribal office. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the Bureau of Land Management (BLM) of closure activities for wells located on federal land per a Sundry Notice, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. All notices will be sent in such a way that the surface owner will receive notice at least 24 hours prior to the beginning of closure activities.  
**Notification was provided to the Bureau of Land Management on August 19, 2009; see attached *Sundry Notice and Return Receipt*.**

- 6) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all liquids and/or sludge, to visual extents, prior to closure sampling. Material will be disposed of at Envirotech's Landfarm #2, Permit # NM-01-0011, TNT Environmental Inc. Landfarm, Permit # NM-01-0008, Industrial Ecosystems Inc. (IEI) Landfarm, Permit # NM-01-0010B, or Basin Disposal, Permit # NM-01-0005, depending on the consistence of the material removed, as in accordance with 19.15.17.13 Subsection C Paragraph (1) NMAC.

**On August 24, 2009, approximately three (3) cubic yards of production sludge was removed from the earthen pit and disposed of at Envirotech's NMOCD permitted soil remediation facility, Landfarm #2, Permit # NM-01-0011; see attached *Bill of Lading*.**

- 7) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all on-site equipment associated with this earthen pit unless it is required for some other purpose, as in accordance with 19.15.17.13 Subsection C Paragraph (2) NMAC. The equipment that meets the requirements of 19.15.9.712 Subsection A NMAC and 19.15.9.712 Subsection D Paragraph (1) will be disposed of at San Juan County Regional Landfill. Waste that is classified by 19.15.9.712 Subsection D Paragraph (2) will be sampled accordingly to determine acceptance of this material at the San Juan County Regional Landfill. Waste that is unable to be accepted at the San Juan County Regional Landfill will be submitted to the OCD on a case-by-case basis in accordance with Paragraph (3) of Subsection D of 19.15.9.712.

**All on-site equipment will be used for the continued operation of the Bisti Coal 7 COM 2 well site; see attached *Field Sheet* and *Site Photographs*.**

- 8) Once the earthen pit is removed to visual extents of contamination, a five (5)-point composite sample will be collected from directly below the liner(s) or at native soil. Additional discrete samples will be collected from any area that is wet, discolored or show other evidence of a release. All samples being collected will be analyzed for benzene and total BTEX via USEPA Method 8021B, TPH via USEPA Method 418.1, and chlorides via USEPA 300.1, as in accordance with 19.15.17.13 Subsection C Paragraph (3) NMAC.

**A five (5)-point composite sample was collected of native soil beneath the earthen pit and analyzed in the field for total petroleum hydrocarbons (TPH) via USEPA Method 418.1, and analyzed in the laboratory for benzene and BTEX via USEPA Method 8021B and for total chlorides via USEPA Method 4500B. The sample returned results below the 100 mg/kg TPH standard, the 0.2 mg/kg benzene standard, the 50 mg/kg BTEX standard and the 250 mg/kg total chloride standard, confirming that a release did NOT occur.**

NAME	Benzene	BTEX	Chlorides	TPH
<b>Pit Rule Standard</b>	<b>0.2 mg/kg</b>	<b>50 mg/kg</b>	<b>250 mg/kg</b>	<b>100 mg/kg</b>
Earth Pit Comp 1' Below Pit	< 0.0009 mg/kg	< 0.005 mg/kg	240 mg/kg	92 mg/kg

- 9) Depending on soil sample results the area will be either backfilled or the area will be excavated.

1) If soil samples do not exceed the regulatory standards of 0.2 mg/kg benzene, 50 mg/kg BTEX, 100 mg/kg TPH, and 250 mg/kg or background concentration of chlorides, as in accordance with 19.15.17.13 Subsection C Paragraph (3) NMAC.

- i. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, shall submit a Form C-141 with the laboratory results so that the division may review the results to determine if additional delineation is required in accordance with Paragraph (4) of Subsection C of 19.15.17.13 NMAC.

**Completed Form C-141 is attached for your review.**

- ii. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will backfill the excavation or impacted area with non-waste containing earthen material, in accordance with 19.15.17.13 Subsection E Paragraph (6) NMAC. A soil cover shall be installed for all backfilled excavations consisting of the background thickness of topsoil or one (1) foot of suitable material to establish vegetation at the site, whichever is greater in accordance with Subsections H of 19.15.17.13 NMAC. The operator shall construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material.

**Elm Ridge Exploration has backfilled the excavated area with non-waste containing earthen material, and installed a soil cover of at least one (1) foot thick of suitable material to establish vegetation at this site. The soil cover has been graded in such a way that it conforms to the grade of the natural surroundings, and will prevent ponding of water and erosion of the cover material; see attached *Site Photographs*.**

- iii. All areas of the well site that are no longer utilized on a day to day basis for the production of oil and/or gas, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will substantially restore, recontour and re-vegetate the areas, in accordance with 19.15.17.13 Subsections G and I NMAC. The operator shall notify the division when it has been re-seeded and when it has achieved successful re-vegetation.

**Elm Ridge Exploration has restored, recontoured and re-seeded the excavated area in accordance with BLM standards as outlined in the Memorandum of Understanding (MOU).**

- 2) If soil samples exceed the regulatory standards stated above:

- i. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, shall submit a Form C-141 with the laboratory results so that the division may review the results to determine if additional delineation is required in accordance with Paragraph (4) of Subsection C of 19.15.17.13 NMAC.

**The five (5)-point composite sample of native soil beneath the earthen pit returned results below the 100 mg/kg TPH standard, the 0.2 mg/kg benzene standard, the 50 mg/kg BTEX standard and the 250 mg/kg total chloride standard, confirming that a release did NOT occur.**

Elm Ridge Exploration  
Bisti Coal 7 COM 2  
Earth Pit Closure  
Project No. 03056-0184  
Closure Date: 8/24/09

- 10) Elm Ridge Exploration will submit a closure report within 60 days following the earthen pit closure. The closure report will consist of a form C-144 with all supporting data and a form C-141 with all supporting data. The supporting data will include proof of closure notice to the surface owner and the OCD, confirmation sampling analytical results, a site diagram, soil backfilling and cover installation, re-vegetation rates, re-seeding techniques, and site reclamation photo documentation if applicable, along with all other information related to the onsite activities.

**See attached C-144 Closure Form and attached Form C-141 Release Notification Form. Closure report has been submitted prior to October 24, 2009.**


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## Track & Confirm

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Kendra  
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Here  
8.18.09  
- Alm

Gateway

Sent to: **Mr. Mark Kelly**  
Bureau of Land Management  
1235 La Plata Hwy, Ste. A  
Farmington, NM 87401

PS Form 3800, August 2006 See Reverse for Instructions

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#### 1. Article Addressed to:

**Mr. Mark Kelly**  
Bureau of Land Management  
1235 La Plata Hwy, Ste. A  
Farmington, NM 87401

#### 2. Article Number

(Transfer from service label)

7007 1490 0000 5398 9312

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1640

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x Ashley Dye

☐ Agent  
☐ Addressee

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ASHLEY DYE

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8/19/09

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☐ Insured Mail ☐ C.O.D.

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☐ Yes

Bisti Coal 9-1

03056-0187

Bisti Coal 8L COM 2.

03056-0186

Bisti Coal 8 COM

03056-0185

Bisti Coal 6-2

03056-0182

Bisti Coal 6-1

03056-0181

Bisti Coal 7 COM 2

03056-0184

Bisti Coal 7-1

03056-0183



August 17, 2009

Project No. 03056-0184

Mr. Mark Kelly  
Bureau of Land Management  
1235 La Plata Highway, Suite A  
Farmington, New Mexico 87401

Phone: (505) 599-8900

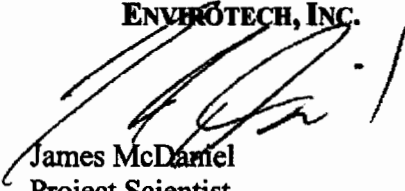
**RE: BISTI COAL 7 COM 2 EARTH PIT CLOSURE NOTIFICATION**

Dear Mr. Kelly,

Please accept this letter and attached Sundry Notice as the necessary surface owner notification for earth pit closure activities at the Bisti Coal 7 COM 2 well site, owned and operated by Elm Ridge Exploration. The Bisti Coal 7 COM 2 well site is located in Unit H, Section 7, Township 25N, Range 12W, San Juan County, New Mexico. Closure activities are scheduled to begin on August 24, 2009 and continue through August 28, 2009.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,  
**ENVIROTECH, INC.**

  
James McDaniel  
Project Scientist  
[jmcdaniel@envirotech-inc.com](mailto:jmcdaniel@envirotech-inc.com)

Enclosure: Sundry Notice

Cc: Client File No. 03056



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
***Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals.***

5. Lease Serial No.  
SF-078056

6. If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE – Other instructions on page 2.**

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator  
Elm Ridge Exploration

7. If Unit of CA/Agreement, Name and/or No.

8. Well Name and No.  
Bisti Coal 7 COM 2

9. API Well No.  
30-045-28386

3a. Address  
PO Box 158  
Bloomfield, NM 87413

3b. Phone No. (include area code)  
(505) 632-3476

10. Field and Pool or Exploratory Area

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
1745 FNL 1045 FEL, H-7-25N-12W, Lat. 36.4181599 long. -108.1473289

11. Country or Parish, State  
San Juan County, NM

**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Closure of an Earth Pit
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Elm Ridge Exploration plans to begin closure activities for an earthen pit located at the above mentioned site. All formal notifications have been made. Closure activities are scheduled to being on Monday, August 24, 2009 and last through August 28, 2009.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)  
Ms. Amy Mackey

Title Administrative Manager

Signature

Date 08/17/2009

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

## GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

## SPECIFIC INSTRUCTIONS

*Item 4* - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

*Item 13* - Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment.

## NOTICES

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

**PRINCIPAL PURPOSE:** The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

**ROUTINE USES:** Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

**EFFECT OF NOT PROVIDING THE INFORMATION:** Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

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Company ENVIROTECH

Address 3795 HIGHWAY 64

City FARMINGTON State NM ZIP 87401

2 Your Internal Billing Reference 03056-0241

3 To Recipient's Name Brad Jones Phone (505) 476-3487

Company N.M. Oil Conservation Division

Recipient's Address 1220 So. St. Francis Drive

City Santa Fe State NM ZIP 87505

0401655191



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August 4, 2009

Project No. 03056-0241

Mr. Brad Jones  
New Mexico Oil Conservation Division  
1220 South St. Francis Street  
Santa Fe, New Mexico 87505

Phone (505) 476-3487

**RE: EARTH PIT CLOSURE NOTIFICATIONS AND PROPOSED CLOSURE SCHEDULE**

Dear Mr. Jones,

Envirotech, Inc., on the behalf of Elm Ridge Exploration, would like to submit this notification to begin closure activities at the below mentioned locations. Attached to this document is a proposed closure schedule for the months of August and September of 2009. Should this schedule be approved by your office, closure activities will begin as scheduled, with surface owner notifications being made at a minimum of 24 hours prior to the beginning of closure activities and a maximum of one (1) week prior to closure activities. Additional closure notifications and schedules will be made prior to beginning any closure activities. This letter will act as the closure notification for the following sites:

Bisti Coal 20-2	Bisti Coal 6-1	Bisti Coal 6-2	Bisti Coal 7-1
Bisti Coal 7 COM 2	Bisti Coal 8 COM 1	Bisti Coal 8L COM 2	Bisti Coal 9-1
Bisti Coal 9 COM 2	Bisti Coal 21-1	Bisti Coal 21 COM 2	Bisti Coal 22-2
Bisti Coal 28-1	Bisti Coal 29-1	Bisti Coal 29-2	Bisti Coal 30 COM 1
Bisti Coal 31-1	Bisti Coal 4-1	Bisti Coal 4 COM 2	Bisti Coal 5 COM 1
Bisti Coal 5K COM 2	Carson 10-332	Buena Suerte 3 G COM 1	Buena Suerte 3 L COM 1
Buena Suerte 32 G COM 1	East Bisti Coal 6-1	Buena Suerte 4 L COM 1	Carson Unit 15 COM 323
Carson Unit 206	Carson Unit 313	Pete Morrow 1	Pete Morrow 2
North Bisti Coal 32M COM 2	North Bisti Coal 31-1	Sam Jackson State COM 1	Jeter COM 2
West Bisti Coal 11 F COM 1	West Bisti Coal 12-1	West Bisti Coal 13-1	West Bisti Coal 11-2
West Bisti Coal 10-2	West Bisti Coal 15-1	West Bisti Coal 14 COM 1	West Bisti Coal 15-2
West Bisti Coal 22-2	West Bisti Coal 23-1	West Bisti Coal 22 COM 1	West Bisti Coal 24-1
West Bisti Coal 24 COM 2	West Bisti Coal 25-1	West Bisti Coal 25 2Y	Jicarilla Apache I-11
Sheila Hixon 1	Bisti Coal 16-2		

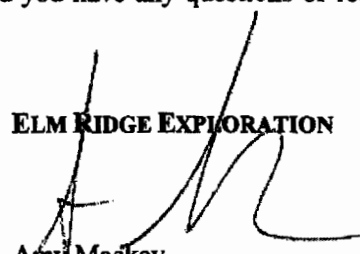
Elm Ridge Exploration is proposing to close the earthen pits at the above listed well locations based on the attached closure schedule.

We appreciate the opportunity to be of service. Should you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,  
**ENVIROTECH, INC.**

  
James McDaniel  
Project Scientist  
[jmcdaniel@envirotech-inc.com](mailto:jmcdaniel@envirotech-inc.com)

**ELM RIDGE EXPLORATION**

  
Amy Mackey  
Administrative Manager  
[amackey1@elmridge.net](mailto:amackey1@elmridge.net)

Attachments: Closure Schedule

# August 2009

Sunday	Monday	Tuesday	Wed	Thurs	Friday	Sat
2	3	4	5	6	7	8
9	10 Bisti Coal 20-2 Bisti Coal 21-1 Bisti Coal 21 COM 2 Bisti Coal 22-2 Bisti Coal 28-1	11 Bisti Coal 20-2 Bisti Coal 21-1 Bisti Coal 21 COM 2 Bisti Coal 22-2 Bisti Coal 28-1	12 Bisti Coal 20-2 Bisti Coal 21-1 Bisti Coal 21 COM 2 Bisti Coal 22-2 Bisti Coal 28-1	13 Bisti Coal 20-2 Bisti Coal 21-1 Bisti Coal 21 COM 2 Bisti Coal 22-2 Bisti Coal 28-1	14 Bisti Coal 20-2 Bisti Coal 21-1 Bisti Coal 21 COM 2 Bisti Coal 22-2 Bisti Coal 28-1	15
16	17 Bisti Coal 29-1 Bisti Coal 29-2 Bisti Coal 30 COM 1 Bisti Coal 31-1 Bisti Coal 4-1 Bisti Coal 4 COM 2 Bisti Coal 5 COM 1 Bisti Coal 5K COM 2 Bisti Coal 16-2	18 Bisti Coal 29-1 Bisti Coal 29-2 Bisti Coal 30 COM 1 Bisti Coal 31-1 Bisti Coal 4-1 Bisti Coal 4 COM 2 Bisti Coal 5 COM 1 Bisti Coal 5K COM 2 Bisti Coal 16-2	19 Bisti Coal 29-1 Bisti Coal 29-2 Bisti Coal 30 COM 1 Bisti Coal 31-1 Bisti Coal 4-1 Bisti Coal 4 COM 2 Bisti Coal 5 COM 1 Bisti Coal 5K COM 2 Bisti Coal 16-2	20 Bisti Coal 29-1 Bisti Coal 29-2 Bisti Coal 30 COM 1 Bisti Coal 31-1 Bisti Coal 4-1 Bisti Coal 4 COM 2 Bisti Coal 5 COM 1 Bisti Coal 5K COM 2 Bisti Coal 16-2	21 Bisti Coal 29-1 Bisti Coal 29-2 Bisti Coal 30 COM 1 Bisti Coal 31-1 Bisti Coal 4-1 Bisti Coal 4 COM 2 Bisti Coal 5 COM 1 Bisti Coal 5K COM 2 Bisti Coal 16-2	22
23	24 Bisti Coal 6-1 Bisti Coal 6-2 Bisti Coal 7-1 Bisti Coal 7 COM 2 Bisti Coal 8 COM 1 Bisti Coal 8L COM 2 Bisti Coal 9-1 Bisti Coal 9 COM 2	25 Bisti Coal 6-1 Bisti Coal 6-2 Bisti Coal 7-1 Bisti Coal 7 COM 2 Bisti Coal 8 COM 1 Bisti Coal 8L COM 2 Bisti Coal 9-1 Bisti Coal 9 COM 2	26 Bisti Coal 6-1 Bisti Coal 6-2 Bisti Coal 7-1 Bisti Coal 7 COM 2 Bisti Coal 8 COM 1 Bisti Coal 8L COM 2 Bisti Coal 9-1 Bisti Coal 9 COM 2	27 Bisti Coal 6-1 Bisti Coal 6-2 Bisti Coal 7-1 Bisti Coal 7 COM 2 Bisti Coal 8 COM 1 Bisti Coal 8L COM 2 Bisti Coal 9-1 Bisti Coal 9 COM 2	28 Bisti Coal 6-1 Bisti Coal 6-2 Bisti Coal 7-1 Bisti Coal 7 COM 2 Bisti Coal 8 COM 1 Bisti Coal 8L COM 2 Bisti Coal 9-1 Bisti Coal 9 COM 2	29
30	31 Carson 10-332 Buena Suerte 3 G COM 1 Buena Suerte 3 L COM 1 Buena Suerte 32 G COM 1 Buena Suerte 4 L COM 1 East Bisti Coal 6-1 Carson Unit 15 COM 323 Carson Unit 206					

# September 2009

Sun	Monday	Tuesday	Wednesday	Thursday	Friday	Sat
		1 Carson 10-332 Buena Suerte 3 G COM 1 Buena Suerte 3 L COM 1 Buena Suerte 32 G COM 1 Buena Suerte 4 L COM 1 East Blisti Coal 6-1 Carson Unit 15 COM 323 Carson Unit 206	2 Carson 10-332 Buena Suerte 3 G COM 1 Buena Suerte 3 L COM 1 Buena Suerte 32 G COM 1 Buena Suerte 4 L COM 1 East Blisti Coal 6-1 Carson Unit 15 COM 323 Carson Unit 206	3 Carson 10-332 Buena Suerte 3 G COM 1 Buena Suerte 3 L COM 1 Buena Suerte 32 G COM 1 Buena Suerte 4 L COM 1 East Blisti Coal 6-1 Carson Unit 15 COM 323 Carson Unit 206	4 Carson 10-332 Buena Suerte 3 G COM 1 Buena Suerte 3 L COM 1 Buena Suerte 32 G COM 1 Buena Suerte 4 L COM 1 East Blisti Coal 6-1 Carson Unit 15 COM 323 Carson Unit 206	5
6	7 Carson Unit 313 Pete Morrow 1 Pete Morrow 2 North Blisti Coal 32M COM 2 Sam Jackson State COM 1 North Blisti Coal 31-1 West Blisti Coal 11 F COM 1 Jeter COM 2	8 Carson Unit 313 Pete Morrow 1 Pete Morrow 2 North Blisti Coal 32M COM 2 Sam Jackson State COM 1 North Blisti Coal 31-1 West Blisti Coal 11 F COM 1 Jeter COM 2	9 Carson Unit 313 Pete Morrow 1 Pete Morrow 2 North Blisti Coal 32M COM 2 Sam Jackson State COM 1 North Blisti Coal 31-1 West Blisti Coal 11 F COM 1 Jeter COM 2	10 Carson Unit 313 Pete Morrow 1 Pete Morrow 2 North Blisti Coal 32M COM 2 Sam Jackson State COM 1 North Blisti Coal 31-1 West Blisti Coal 11 F COM 1 Jeter COM 2	11 Carson Unit 313 Pete Morrow 1 Pete Morrow 2 North Blisti Coal 32M COM 2 Sam Jackson State COM 1 North Blisti Coal 31-1 West Blisti Coal 11 F COM 1 Jeter COM 2	12
13	14 West Blisti Coal 12-1 West Blisti Coal 13-1 West Blisti Coal 11-2 West Blisti Coal 10-2 West Blisti Coal 14 COM 1 West Blisti Coal 15-1 West Blisti Coal 15-2 West Blisti Coal 22-2	15 West Blisti Coal 12-1 West Blisti Coal 13-1 West Blisti Coal 11-2 West Blisti Coal 10-2 West Blisti Coal 14 COM 1 West Blisti Coal 15-1 West Blisti Coal 15-2 West Blisti Coal 22-2	16 West Blisti Coal 12-1 West Blisti Coal 13-1 West Blisti Coal 11-2 West Blisti Coal 10-2 West Blisti Coal 14 COM 1 West Blisti Coal 15-1 West Blisti Coal 15-2 West Blisti Coal 22-2	17 West Blisti Coal 12-1 West Blisti Coal 13-1 West Blisti Coal 11-2 West Blisti Coal 10-2 West Blisti Coal 14 COM 1 West Blisti Coal 15-1 West Blisti Coal 15-2 West Blisti Coal 22-2	18 West Blisti Coal 12-1 West Blisti Coal 13-1 West Blisti Coal 11-2 West Blisti Coal 10-2 West Blisti Coal 14 COM 1 West Blisti Coal 15-1 West Blisti Coal 15-2 West Blisti Coal 22-2	19
20	21 West Blisti Coal 22 COM 1 West Blisti Coal 23-1 West Blisti Coal 24-1 West Blisti Coal 24 COM 2 West Blisti Coal 25-1 West Blisti Coal 25 2Y Jicarilla Apache I-11 Shelia Hixon 1	22 West Blisti Coal 22 COM 1 West Blisti Coal 23-1 West Blisti Coal 24-1 West Blisti Coal 24 COM 2 West Blisti Coal 25-1 West Blisti Coal 25 2Y Jicarilla Apache I-11 Shelia Hixon 1	23 West Blisti Coal 22 COM 1 West Blisti Coal 23-1 West Blisti Coal 24-1 West Blisti Coal 24 COM 2 West Blisti Coal 25-1 West Blisti Coal 25 2Y Jicarilla Apache I-11 Shelia Hixon 1	24 West Blisti Coal 22 COM 1 West Blisti Coal 23-1 West Blisti Coal 24-1 West Blisti Coal 24 COM 2 West Blisti Coal 25-1 West Blisti Coal 25 2Y Jicarilla Apache I-11 Shelia Hixon 1	25 West Blisti Coal 22 COM 1 West Blisti Coal 23-1 West Blisti Coal 24-1 West Blisti Coal 24 COM 2 West Blisti Coal 25-1 West Blisti Coal 25 2Y Jicarilla Apache I-11 Shelia Hixon 1	26
27	28	29	30			



**ELM RIDGE EXPLORATION  
BISTI COAL 7 COM 2  
SEC. 7, TWN. 25N, RNG. 12W  
PROJECT NO. 03056-0184**



**Photo 1: Bisti Coal 7 COM 2 Well Site**



**Photo 2: Excavated Area After Backfilling and Recontouring**



**EPA METHOD 418.1  
TOTAL PETROLEUM  
HYDROCARBONS**

Client:	Elm Ridge Exploration	Project #:	03056-0184
Sample No.:	1	Date Reported:	9/17/2009
Sample ID:	Earth Pit Comp @1' Below	Date Sampled:	8/24/2009
Sample Matrix:	Soil	Date Analyzed:	8/24/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	92	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: **Bisti Coal 7 COM 2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

  
Analyst

Toni McKnight  
Printed



James McDaniel  
Printed





CONTINUOUS CALIBRATION  
EPA METHOD 418.1  
TOTAL PETROLEUM  
HYDROCARBONS

Cal. Date: 24-Aug-09

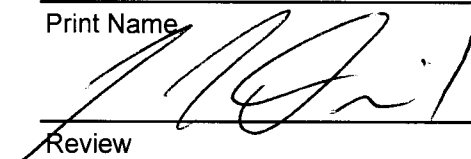
Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	202
	200	
	500	
	1000	

The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.

  
\_\_\_\_\_  
Analyst

9/17/09  
\_\_\_\_\_  
Date

Toni McKnight  
\_\_\_\_\_  
Print Name

  
\_\_\_\_\_  
Review

9/17/09  
\_\_\_\_\_  
Date

James McDaniel  
\_\_\_\_\_  
Print Name

Client:	Elm Ridge Resources	Project #:	03056-0184
Sample ID:	1' BGS of Pit	Date Reported:	08-28-09
Laboratory Number:	51398	Date Sampled:	08-24-09
Chain of Custody:	7815	Date Received:	08-24-09
Sample Matrix:	Soil	Date Analyzed:	08-27-09
Preservative:	Cool	Date Extracted:	08-26-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	ND	1.0
Ethylbenzene	ND	1.0
p,m-Xylene	ND	1.2
o-Xylene	ND	0.9
<b>Total BTEX</b>	<b>ND</b>	

ND - Parameter not detected at the stated detection limit.

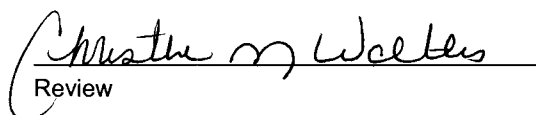
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.0 %
	1,4-difluorobenzene	98.0 %
	Bromochlorobenzene	98.0 %

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:** Earth Pit Closure / Bisti Coal 7 Com 2.

  
 Analyst

  
 Review

Client:	N/A	Project #:	N/A
Sample ID:	08-27-BTEX QA/QC	Date Reported:	08-28-09
Laboratory Number:	51388	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-27-09
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	3.1192E+006	3.1254E+006	0.2%	ND	0.1
Toluene	2.8947E+006	2.9005E+006	0.2%	ND	0.1
Ethylbenzene	2.5459E+006	2.5510E+006	0.2%	ND	0.1
p,m-Xylene	6.5578E+006	6.5709E+006	0.2%	ND	0.1
o-Xylene	2.4389E+006	2.4438E+006	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	9.9	9.6	3.0%	0 - 30%	0.9
Toluene	51.4	50.9	1.0%	0 - 30%	1.0
Ethylbenzene	37.7	37.6	0.3%	0 - 30%	1.0
p,m-Xylene	158	153	3.3%	0 - 30%	1.2
o-Xylene	74.1	73.4	0.9%	0 - 30%	0.9

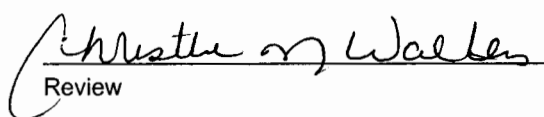
Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	9.9	50.0	59.4	99.2%	39 - 150
Toluene	51.4	50.0	96.3	95.0%	46 - 148
Ethylbenzene	37.7	50.0	85.6	97.6%	32 - 160
p,m-Xylene	158	100	256	99.1%	46 - 148
o-Xylene	74.1	50.0	117	94.3%	46 - 148

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 51388, 51389, 51397 - 51400, 51402, 51403, 51409 and 51412.**

Analyst 

Review 

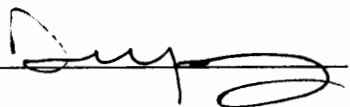
Client:	Elm Ridge Resources	Project #:	03056-0184
Sample ID:	1' BGS of Pit	Date Reported:	08-28-09
Lab ID#:	51398	Date Sampled:	08-24-09
Sample Matrix:	Soil	Date Received:	08-24-09
Preservative:	Cool	Date Analyzed:	08-26-09
Condition:	Intact	Chain of Custody:	7815

**Parameter****Concentration (mg/Kg)****Total Chloride****240**

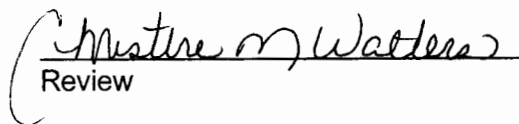
Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.  
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Earth Pit Closure / Bisti Coal 7 Com 2.**

Analyst



Review



*(continued from page 8)*

Client: Elm Ridge Resources				Project Name/ Location: Bisti Coal 7 Com 2 Earth P.T. Closures / HBS of Pit				ANALYSIS / PARAMETERS										
Client Address:				Sampler Name: Toni-McKnight				ANALYSIS / PARAMETERS										
Client Phone No.:				Client No.: 03056-0184				ANALYSIS / PARAMETERS										
Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative HgCl <sub>2</sub> HO	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE	Date	Time
11 BGS of Pit	8/24/09	11:30	51348	Soil Solid	1/40z	✓	✓	✓									8/24/09	16:40
				Sludge Aqueous														
				Soil Solid														
				Sludge Aqueous														
				Soil Solid														
				Sludge Aqueous														
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**envirotech**  
Analytical Laboratory

5796 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • lab@envirotech-inc.com

PAGE NO: <u>1</u> OF <u>1</u>	<b>ENVIROTECH INC</b> ENVIRONMENTAL SCIENTISTS & ENGINEERS 5796 U.S. HIGHWAY 64 - 3014 FARMINGTON, NEW MEXICO 87401 PHONE: (505) 632-0615	ENVIRONMENTAL SPECIALIST:
DATE STARTED: <u>8/24/09</u>		LAT: <u>N 36° 25.0873</u>
DATE FINISHED: <u>8/24/09</u>		LONG: <u>W 108° 08.8427</u>

### FIELD REPORT: BGT / PIT CLOSURE VERIFICATION

LOCATION: NAME: <u>Bisti Coal</u> WELL #: <u>2</u>	TEMP PIT:	PERMANENT PIT: <u>X</u>	BGT:
LEGAL ADD: UNIT: <u>H</u> SEC: <u>7</u> TWP: <u>25N</u> RNG: <u>12W</u> PM: <u>NM</u>			
QTR/FOOTAGE: <u>1745' FNL + 1045' FEL</u> CNTY: <u>San Juan</u> ST: <u>New Mexico</u>			
EXCAVATION APPROX: <u>10</u> FT. X <u>10</u> FT. X <u>3'</u> FT. DEEP	CUBIC YARDAGE: <u>3</u>		
DISPOSAL FACILITY: <u>Envirotech</u>	REMEDIALATION METHOD: <u>Landfarm</u>		
LAND OWNER: <u>Federal</u>	API: <u>30045-28386</u>	BGT / PIT VOLUME: <u>929 ft<sup>3</sup></u>	
CONSTRUCTION MATERIAL: <u>Earth</u>	DOUBLE-WALLED, WITH LEAK DETECTION: <u>N/A</u>		

LOCATION APPROXIMATELY: <u>90</u> FT. <u>2890</u> FROM WELLHEAD
DEPTH TO GROUNDWATER: <u>&gt; 100'</u>

TEMPORARY PIT - GROUNDWATER 50-100 FEET DEEP BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, GRO & DRO FRACTION (8015) ≤ 500 mg/kg, TPH (418.1) ≤ 2500 mg/kg, CHLORIDES ≤ 500 mg/kg
TEMPORARY PIT - GROUNDWATER ≥ 100 FEET DEEP BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, GRO & DRO FRACTION (8015) ≤ 500 mg/kg, TPH (418.1) ≤ 2500 mg/kg, CHLORIDES ≤ 1000 mg/kg
<input checked="" type="checkbox"/> PERMANENT PIT OR BGT BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, TPH (418.1) ≤ 100 mg/kg, CHLORIDES ≤ 250 mg/kg

#### FIELD 418.1 ANALYSIS

TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (mg/kg)
8:30	200 STD	—	—	—	—	202	202
10:39	5pt@1'	1	5	20	4	150	600
10:54	5pt@2'	2	5	20	4	32	128
11:30	1' Below Pit	3	5	20	4	23	92
		4					
		5					
		6					

#### PERIMETER

#### FIELD CHLORIDES RESULTS

#### PROFILE

	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>SAMPLE ID</th> <th>READING</th> <th>CALC. (mg/kg)</th> </tr> </thead> <tbody> <tr> <td>5pt@2'</td> <td>644</td> <td>(7.6) 644</td> </tr> <tr> <td>1' Below Pit</td> <td>5</td> <td>243</td> </tr> </tbody> </table>	SAMPLE ID	READING	CALC. (mg/kg)	5pt@2'	644	(7.6) 644	1' Below Pit	5	243		
SAMPLE ID	READING	CALC. (mg/kg)										
5pt@2'	644	(7.6) 644										
1' Below Pit	5	243										
<b>PID RESULTS</b>												
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>SAMPLE ID</th> <th>RESULTS (ppm)</th> </tr> </thead> <tbody> <tr> <td>5pt@100</td> <td>98</td> </tr> <tr> <td>5pt@1' - 0.11 sludge</td> <td>0.0</td> </tr> <tr> <td>5pt@2' - 0.11 sludge</td> <td>0.0</td> </tr> <tr> <td>1' Below Pit</td> <td>0.0</td> </tr> </tbody> </table>		SAMPLE ID	RESULTS (ppm)	5pt@100	98	5pt@1' - 0.11 sludge	0.0	5pt@2' - 0.11 sludge	0.0	1' Below Pit	0.0	
SAMPLE ID	RESULTS (ppm)											
5pt@100	98											
5pt@1' - 0.11 sludge	0.0											
5pt@2' - 0.11 sludge	0.0											
1' Below Pit	0.0											

<b>LAB SAMPLES</b> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>SAMPLE ID</th> <th>ANALYSIS</th> <th>RESULTS</th> </tr> </thead> <tbody> <tr><td></td><td>BENZENE</td><td></td></tr> <tr><td></td><td>BTEX</td><td></td></tr> <tr><td></td><td>GRO &amp; DRO</td><td></td></tr> <tr><td></td><td>CHLORIDES</td><td></td></tr> </tbody> </table>	SAMPLE ID	ANALYSIS	RESULTS		BENZENE			BTEX			GRO & DRO			CHLORIDES		NOTES: SF - 079056 Earth Pit Visible - dug out what was drilling mud on sludge - Dark Brown in color - Sand Below Pit - Pit covered w/ clean dirt
SAMPLE ID	ANALYSIS	RESULTS														
	BENZENE															
	BTEX															
	GRO & DRO															
	CHLORIDES															
WORKORDER #	WHO ORDERED															



# Bill of Lading

MANIFEST #

DATE 8-24-09 JOB# 03056-0184

[illegible]

"I certify the material hauled from the above location has not been added to or mixed with, and is the same material received from the above mentioned Generator, and that no additional materials have been added."

NAME John McKinley COMPANY Enterprise SIGNATURE John McKinley

COMPANY CONTACT Mark PHONE 327-2711 DATE 8-24-09

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, 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-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

**Release Notification and Corrective Action**

**OPERATOR**

☒ Initial Report ☐ Final Report

Name of Company: Elm Ridge Exploration	Contact: Amy Mackey	
Address: PO Box 156, Bloomfield, NM 87413	Telephone No.: (505) 632-3476 Ext 201	
Facility Name: Bisti Coal 7 COM 2	Facility Type: Gas Well	
Surface Owner: Federal	Mineral Owner:	Lease No.: NMSF-0788056

**LOCATION OF RELEASE**

Unit Letter H	Section 7	Township 25N	Range 12W	Feet from the 1745	North/South Line FNL	Feet from the 1045	East/West Line FEL	County San Juan
------------------	--------------	-----------------	--------------	-----------------------	-------------------------	-----------------------	-----------------------	--------------------

Latitude 36.418160 Longitude -108.147329

**NATURE OF RELEASE**

Type of Release: Produced Water	Volume of Release: NA	Volume Recovered: NA
Source of Release: Earth Pit	Date and Hour of Occurrence: NA	Date and Hour of Discovery: NA
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

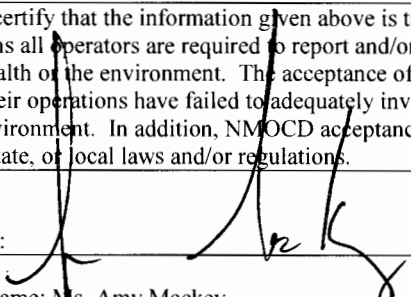
Describe Cause of Problem and Remedial Action Taken.\*

Produced Water from gas well at the mentioned location formerly discharged into an earthen pit on location. The well has been altered to no longer drain into an earthen pit, but instead into an Above Ground Storage Tank (AST).

Describe Area Affected and Cleanup Action Taken.\*

Earthen pit was dry and has not been discharged into since prior to June 16, 2008. A sample was collected from the earthen pit and the sample results are attached to this document for reference. The sample was analyzed in the field for Total Petroleum Hydrocarbons (TPH) via USEPA Method 418.1 and in Envirotech's laboratory for benzene and total BTEX via USEPA Method 8021, TPH via USEPA Method 8015, and for total chlorides via USEPA Method 4500B. The sample returned results that were below the 0.2 ppm benzene standard and the 50 ppm BTEX standard, but above the 250 ppm total chloride standard and the 100 ppm TPH standard, confirming that a release had occurred. The site was then ranked pursuant to the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases. The site was ranked a 10 due to groundwater being greater than 50 feet below ground surface, but less than 100 feet. This set the closure standards to 1000 ppm TPH, 10 ppm benzene and 50 ppm BTEX. There is no closure standard for total chlorides per the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases. All analytical results were below the closure standards determined for this site. TPH was below the 1000 ppm standard via USEPA Method 8015.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Ms. Amy Mackey		Approved by District Supervisor:	
Title: Administrative Manager		Approval Date:	Expiration Date:
E-mail Address: amackey1@elmridge.net		Conditions of Approval:	Attached <input type="checkbox"/>
Date:	Phone:		

\* Attach Additional Sheets If Necessary



# ENVIROTECH INC

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

ENVIRONMENTAL  
SPECIALIST:

LAT: 36.418160  
LONG: -108.147329

PAGE NO: 1 OF 1

DATE STARTED: 10/8/08

DATE FINISHED: 10/8/08

## FIELD REPORT: BGT / PIT CLOSURE VERIFICATION

LOCATION: NAME: 504 Coal 700M WELL #: 2 TEMP PIT: PERMANENT PIT: ☒ BGT:  
LEGAL ADD: UNIT: H SEC: 7 TWP: 25N RNG: 12W PM: NMPM  
QTR/FOOTAGE: 1745' FNL X 1045' FEL CNTY: San Juan ST: NM

EXCAVATION APPROX: FT. X FT. X FT. DEEP CUBIC YARDAGE:  
DISPOSAL FACILITY: REMEDIATION METHOD:  
LAND OWNER: Federal API: 3004528386 BGT / PIT VOLUME: 17' X 17' X 5'  
CONSTRUCTION MATERIAL: EARTH DOUBLE-WALLED, WITH LEAK DETECTION:

LOCATION APPROXIMATELY: 93' FT. 260° FROM WELLHEAD  
DEPTH TO GROUNDWATER: 7' 100'

### TEMPORARY PIT - GROUNDWATER 50-100 FEET DEEP

BENZENE  $\leq$  0.2 mg/kg, BTEX  $\leq$  50 mg/kg, GRO & DRO FRACTION (8015)  $\leq$  500 mg/kg, TPH (418.1)  $\leq$  2500 mg/kg, CHLORIDES  $\leq$  500 mg/kg

### TEMPORARY PIT - GROUNDWATER $\geq$ 100 FEET DEEP

BENZENE  $\leq$  0.2 mg/kg, BTEX  $\leq$  50 mg/kg, GRO & DRO FRACTION (8015)  $\leq$  500 mg/kg, TPH (418.1)  $\leq$  2500 mg/kg, CHLORIDES  $\leq$  1000 mg/kg

### PERMANENT PIT OR BGT

BENZENE  $\leq$  0.2 mg/kg, BTEX  $\leq$  50 mg/kg, TPH (418.1)  $\leq$  100 mg/kg, CHLORIDES  $\leq$  250 mg/kg

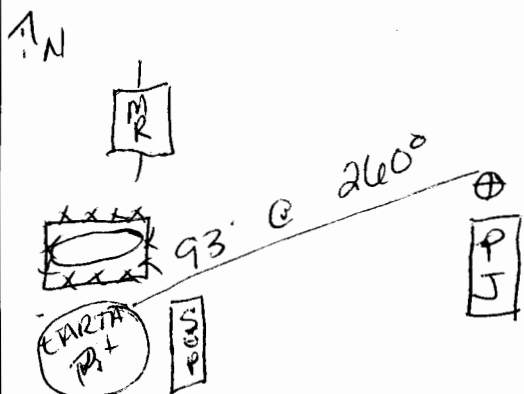
### FIELD 418.1 ANALYSIS

TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (mg/kg)
	200 STD						
15:38	5pt 0mm	1	5	20	4	1216	192
		2					4864
		3					
		4					
		5					
		6					

### PERIMETER

### FIELD CHLORIDES RESULTS

### PROFILE

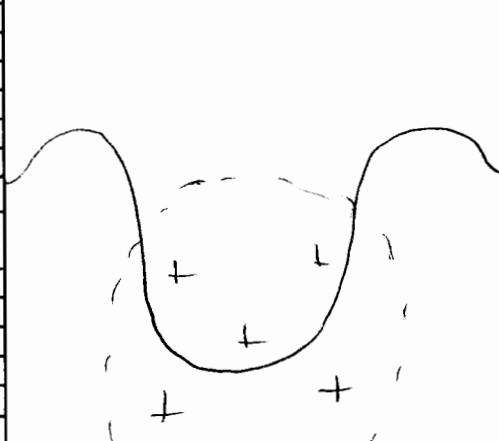


SAMPLE ID READING CALC. (mg/kg)


### PID RESULTS

SAMPLE ID	RESULTS (mg/kg)
5pt 0mm	58

17' X 17' X 5'



### LAB SAMPLES

SAMPLE ID	ANALYSIS	RESULTS
	BENZENE	
	BTEX	
	GRO & DRO	
	CHLORIDES	

### NOTES:

WORKORDER #

WHO ORDERED

Client: <div style="font-size: 1.2em; font-family: cursive;">Elm Ridge Res.</div>	<b>ENVIROTECH INC</b> ENVIRONMENTAL SCIENTISTS & ENGINEERS 5796 U.S. HIGHWAY 64 - 3014 FARMINGTON, NEW MEXICO 87401 PHONE: (505) 632-0615	Location No: <div style="font-size: 1.2em; font-family: cursive;">Bisti Coal 70cm #2</div> C.O.C. No:
--	---	---

<b>FIELD REPORT: SPILL CLOSURE VERIFICATION</b>		PAGE NO: <u>1</u> OF <u>1</u>
LOCATION: NAME: <u>Bisti Coal 70cm</u> WELL #: <u>2</u>	DATE STARTED: <u>10/8/08</u> DATE FINISHED: <u>10/8/08</u>	
QUAD/UNIT: <u>H</u> SEC: <u>7</u> TWP: <u>25N</u> RNG: <u>6W</u> PM: <u>NM</u> CNTY: <u>SJ</u> ST: <u>NM</u>	ENVIRONMENTAL SPECIALIST: <u>ST</u>	
QTR/FOOTAGE: <u>145' FNL X 1045' FEL</u>	CONTRACTOR: _____	

EXCAVATION APPROX: _____ FT. X _____ FT. X _____ FT. DEEP CUBIC YARDAGE: _____
DISPOSAL FACILITY: _____ REMEDIATION METHOD: _____
LAND USE: <u>Ranch</u> LEASE: <u>SF-078056</u> LAND OWNER: _____
CAUSE OF RELEASE: <u>Earth</u> METERRAIL RELEASED: <u>Water + Industrial Oil</u>
SPILL LOCATED APPROXIMATELY: <u>93'</u> FT. <u>260°</u> FROM <u>Wellhead</u>
DEPTH TO GROUNDWATER: <u>100</u> NEAREST WATER SOURCE: <u>71000</u> NEAREST SURFACE WATER: <u>71000</u>
NMOCD RANKING SCORE: <u>10</u> NMOCD TPH CLOSURE STD: <u>1000</u> PPM
<u>SOIL AND EXCAVATION DESCRIPTION:</u>

TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. ppm
15:38	200 Sd 510cmup	1	5	20	4	192 1216	21804

SPILL PERIMETER

OV  
RESULTS

SPILL PROFILE

MR  
 93' @ 260°  
 EARTH Pit  
 SPT

P  
 J

SAMPLE ID	FIELD HEADSPACE PID (ppm)

17' x 17' x 5' deep

TRAVEL NOTES: _____	CALLED OUT: _____	ONSITE: _____
---------------------	-------------------	---------------



CONTINUOUS CALIBRATION  
EPA METHOD 418.1  
TOTAL PETROLEUM  
HYDROCARBONS

Cal. Date: 8-Oct-08

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	192
	200	
	500	
	1000	

The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.

Toni McKnight for Sharon Putt  
Analyst

2-10-09  
Date

Sharon Putt

Print Name

[Signature]  
Review

2/10/09  
Date

James McDaniel

Print Name



EPA METHOD 418.1  
TOTAL PETROLEUM  
HYDROCARBONS

Client:	Elm Ridge Exploration	Project #:	03056-0184
Sample No.:	1	Date Reported:	2/10/2009
Sample ID:	5 Point Composite	Date Sampled:	10/8/2008
Sample Matrix:	Soil	Date Analyzed:	10/8/2008
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	4860	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: **Bisti Coal 7 COM 2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

Toni McDaniel for Sharon Putt  
Analyst

Sharon Putt  
Printed

James McDaniel  
Reviewed

James McDaniel  
Printed



**EPA METHOD 8015 Modified  
Nonhalogenated Volatile Organics  
Total Petroleum Hydrocarbons**

Client:	Elmridge	Project #:	03056-0136
Sample ID:	Bisti Coal 7 Com 002	Date Reported:	11-04-08
Laboratory Number:	47931	Date Sampled:	10-29-08
Chain of Custody No:	5654	Date Received:	10-29-08
Sample Matrix:	Soil	Date Extracted:	10-31-08
Preservative:	Cool	Date Analyzed:	11-03-08
Condition:	Intact	Analysis Requested:	8015 TPH

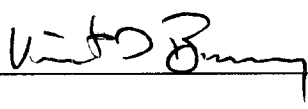
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	333	0.1
Total Petroleum Hydrocarbons	333	0.2

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: **Earth Pit Samples, 5pt Comp.**

Analyst 

Review 

**Quality Assurance Report**

Client:	QA/QC	Project #:	N/A
Sample ID:	11-03-08 QA/QC	Date Reported:	11-04-08
Laboratory Number:	47923	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-03-08
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	05-07-07	9.9278E+002	9.9318E+002	0.04%	0 - 15%
Diesel Range C10 - C28	05-07-07	1.0226E+003	1.0230E+003	0.04%	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	15.5	15.4	0.7%	0 - 30%
Diesel Range C10 - C28	9,140	9,090	0.6%	0 - 30%

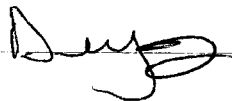
Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	15.5	250	262	98.5%	75 - 125%
Diesel Range C10 - C28	9,140	250	9,370	99.8%	75 - 125%

ND - Parameter not detected at the stated detection limit.

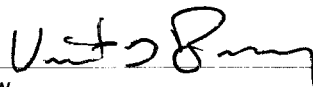
References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: QA/QC for Samples 47923 - 47926, 47928, 47929, 47931, 47932, 47942 and 47943.

Analyst



Review



# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## Chloride

Client:	Elm Ridge Res.	Project #:	03056-0136
Sample ID:	Bisti Coal 7 Com #2	Date Reported:	10-25-08
Lab ID#:	47675	Date Sampled:	10-08-08
Sample Matrix:	Soil	Date Received:	10-08-08
Preservative:	Cool	Date Analyzed:	10-15-08
Condition:	Intact	Chain of Custody:	5501

### Parameter

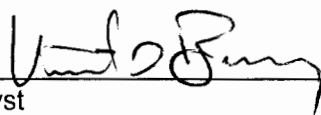
### Concentration (mg/Kg)

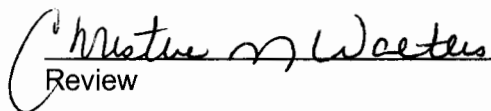
Total Chloride

535

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.  
Standard Method For The Examination of Water and Waste Water", 18th ed., 1992.

Comments: Earth Pit Samples.

  
\_\_\_\_\_  
Analyst

  
\_\_\_\_\_  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Elm Ridge Resources	Project #:	03056-0136
Sample ID:	Bisti Coal 7 Com #2	Date Reported:	10-23-08
Laboratory Number:	47675	Date Sampled:	10-08-08
Chain of Custody:	5501	Date Received:	10-08-08
Sample Matrix:	Soil	Date Analyzed:	10-15-08
Preservative:	Cool	Date Extracted:	10-14-08
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	22.5	0.9
Toluene	40.5	1.0
Ethylbenzene	18.3	1.0
p,m-Xylene	28.7	1.2
o-Xylene	23.1	0.9
Total BTEX	133	

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.

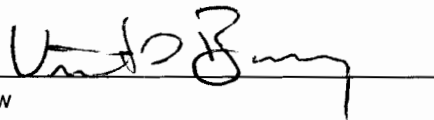
Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Earth Pit Samples, 5pt Composite.

Analyst



Review





# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	10-15-BT QA/QC	Date Reported:	10-23-08
Laboratory Number:	47675	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-15-08
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	5.3045E+007	5.3151E+007	0.2%	ND	0.1
Toluene	3.6704E+007	3.6778E+007	0.2%	ND	0.1
Ethylbenzene	2.8638E+007	2.8695E+007	0.2%	ND	0.1
p,m-Xylene	6.3900E+007	6.4028E+007	0.2%	ND	0.1
o-Xylene	2.9367E+007	2.9426E+007	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	22.5	22.4	0.4%	0 - 30%	0.9
Toluene	40.5	40.6	0.2%	0 - 30%	1.0
Ethylbenzene	18.3	18.4	0.5%	0 - 30%	1.0
p,m-Xylene	28.7	29.0	1.0%	0 - 30%	1.2
o-Xylene	23.1	22.8	1.3%	0 - 30%	0.9

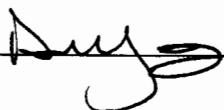
Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	22.5	50.0	71.5	98.6%	39 - 150
Toluene	40.5	50.0	85.4	94.4%	46 - 148
Ethylbenzene	18.3	50.0	66.3	97.1%	32 - 160
p,m-Xylene	28.7	100	121	93.7%	46 - 148
o-Xylene	23.1	50.0	70.1	95.9%	46 - 148

ND - Parameter not detected at the stated detection limit.

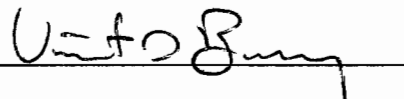
References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.  
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 47669 - 47672, 47675 - 47677, 47682 and 47683.

Analyst



Review



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**ENVIROTECH INC.**