

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: West Bisti Coal 22 COM 1	Facility Type: Gas Well

Surface Owner: Navajo	Mineral Owner:	Lease No.: NM 80506
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LOCATION OF RELEASE

Unit Letter B	Section 22	Township 25N	Range 13W	Feet from the 1250	North/South Line FNL	Feet from the 1850	East/West Line FEL	County San Juan
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Latitude 36.390518 Longitude -108.203804

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.*

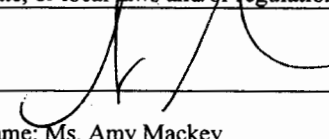
Describe Cause of Problem and Remedial Action Taken.*

Produced water from a gas well at the above 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 four-hundred and twenty-two (422) cubic yards of 'production sludge' was removed from the earthen pit. A five (5)-point composite sample was collected from beneath the 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: 		OIL CONSERVATION DIVISION	
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:	
Date: <u>11/19/09</u> Phone: 505-632-3476 Ext 201		Attached <input type="checkbox"/>	

* 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.
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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: West Bisti Coal 22 COM 1
API Number: 3004528916 OCD Permit Number: _____
U/L or Qtr/Qtr B Section 22 Township 25N Range 13W County: San Juan
Center of Proposed Design: Latitude 36.390518 Longitude -108.203804 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 25' x W 20' x D 12'

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).0.

- 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

☐ 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 H₂S, Prevention Plan
☐ Emergency Response Plan
☐ Oil Field Waste Stream Characterization
☐ Monitoring and Inspection Plan
☐ Erosion Control Plan
☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14.

Proposed Closure: 19.15.17.13 NMAC**Instructions:** Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Closed-loop System
☐ Alternative

Proposed Closure Method: ☐ Waste Excavation and Removal
☐ Waste Removal (Closed-loop systems only)
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
☐ In-place Burial ☐ On-site Trench Burial
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.

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

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

16.

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)

Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please provide the information below) ☐ No

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

☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.

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

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

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

18.

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

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

19.

Operator Application Certification:

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

Name (Print): _____ Title: _____

Signature: _____ Date: _____

E-mail address: _____ Telephone: _____

20.

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

OCD Representative Signature: _____ **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:** 10/14/09

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 **Per 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: 11/19/09

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 West Bisti Coal 22 COM 1 well site is October 14, 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 Navajo Nation on September 16, 2009; see attached *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 September 21, 2009, approximately four-hundred and twenty-two (422) 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 West Bisti Coal 22 COM 1 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.

Due to a misunderstanding with field personnel, a closure sample was not collected at the time of excavation. On October 14, 2009, an Envirotech scientist returned to the site and collected a sample from the opened excavation. Once the sample was collected, the excavation was backfilled and recontoured. 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
Closure Sample	< 0.0009 mg/kg	0.0293 mg/kg	160 mg/kg	40 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 samples 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 December 14, 2009.

8693 8147 6355

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2 Your Internal Billing Reference

03056-0291

3 To

Recipient's Name Brad Jones

Phone (505) 476-3487

Company N. M. Oil Conservation Division

Recipient's

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519

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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		

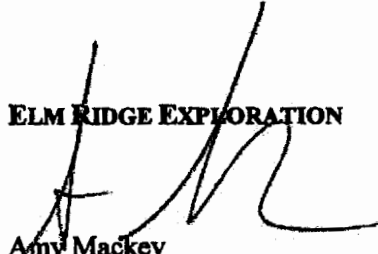
Elm Ridge Exploration is proposing to close the earthen pits at the above listed well locations based on the attached closure schedule.

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

ELM RIDGE EXPLORATION


Amy Mackey
Administrative Manager
amackey1@elmridge.net

Attachments: Closure Schedule

August 2009

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
2	3	4	5	6	7	8
9	10 Blatt Coal 20-2 Blatt Coal 21-1 Blatt Coal 21 COM 2 Blatt Coal 22-2 Blatt Coal 28-1	11 Blatt Coal 20-2 Blatt Coal 21-1 Blatt Coal 21 COM 2 Blatt Coal 22-2 Blatt Coal 28-1	12 Blatt Coal 20-2 Blatt Coal 21-1 Blatt Coal 21 COM 2 Blatt Coal 22-2 Blatt Coal 28-1	13 Blatt Coal 20-2 Blatt Coal 21-1 Blatt Coal 21 COM 2 Blatt Coal 22-2 Blatt Coal 28-1	14 Blatt Coal 20-2 Blatt Coal 21-1 Blatt Coal 21 COM 2 Blatt Coal 22-2 Blatt Coal 28-1	15
16	17 Blatt Coal 29-1 Blatt Coal 29-2 Blatt Coal 30 COM 1 Blatt Coal 31-1 Blatt Coal 4-1 Blatt Coal 4 COM 2 Blatt Coal 5 COM 1 Blatt Coal 5K COM 2 Blatt Coal 16-2	18 Blatt Coal 29-1 Blatt Coal 29-2 Blatt Coal 30 COM 1 Blatt Coal 31-1 Blatt Coal 4-1 Blatt Coal 4 COM 2 Blatt Coal 5 COM 1 Blatt Coal 5K COM 2 Blatt Coal 16-2	19 Blatt Coal 29-1 Blatt Coal 29-2 Blatt Coal 30 COM 1 Blatt Coal 31-1 Blatt Coal 4-1 Blatt Coal 4 COM 2 Blatt Coal 5 COM 1 Blatt Coal 5K COM 2 Blatt Coal 16-2	20 Blatt Coal 29-1 Blatt Coal 29-2 Blatt Coal 30 COM 1 Blatt Coal 31-1 Blatt Coal 4-1 Blatt Coal 4 COM 2 Blatt Coal 5 COM 1 Blatt Coal 5K COM 2 Blatt Coal 16-2	21 Blatt Coal 29-1 Blatt Coal 29-2 Blatt Coal 30 COM 1 Blatt Coal 31-1 Blatt Coal 4-1 Blatt Coal 4 COM 2 Blatt Coal 5 COM 1 Blatt Coal 5K COM 2 Blatt Coal 16-2	22
23	24 Blatt Coal 6-1 Blatt Coal 6-2 Blatt Coal 7-1 Blatt Coal 7 COM 2 Blatt Coal 8 COM 1 Blatt Coal 8L COM 2 Blatt Coal 9-1 Blatt Coal 9 COM 2	25 Blatt Coal 6-1 Blatt Coal 6-2 Blatt Coal 7-1 Blatt Coal 7 COM 2 Blatt Coal 8 COM 1 Blatt Coal 8L COM 2 Blatt Coal 9-1 Blatt Coal 9 COM 2	26 Blatt Coal 6-1 Blatt Coal 6-2 Blatt Coal 7-1 Blatt Coal 7 COM 2 Blatt Coal 8 COM 1 Blatt Coal 8L COM 2 Blatt Coal 9-1 Blatt Coal 9 COM 2	27 Blatt Coal 6-1 Blatt Coal 6-2 Blatt Coal 7-1 Blatt Coal 7 COM 2 Blatt Coal 8 COM 1 Blatt Coal 8L COM 2 Blatt Coal 9-1 Blatt Coal 9 COM 2	28 Blatt Coal 6-1 Blatt Coal 6-2 Blatt Coal 7-1 Blatt Coal 7 COM 2 Blatt Coal 8 COM 1 Blatt Coal 8L COM 2 Blatt Coal 9-1 Blatt 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 Blatt Coal 6-1 Carson Unit 15 COM 323 Carson Unit 206					

September 2009

Sun Monday Tuesday Wednesday Thursday Friday Saturday

		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 Blati 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 Blati 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 Blati 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 Blati Coal 6-1 Carson Unit 15 COM 323 Carson Unit 206	5
6	7 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	8 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	9 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	10 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	11 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	12
13	14 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	15 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	16 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	17 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	18 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	19
20	21 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 Sheila Hixon 1	22 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 Sheila Hixon 1	23 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 Sheila Hixon 1	24 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 Sheila Hixon 1	25 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 Sheila Hixon 1	26
27	28	29	30			


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03056 - 0215

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Sent To: Ms. Rita Whitehorse-Larsen
Street, Apt. No., or PO Box No.: The Navajo Nation EPA
City, State, ZIP+4: P.O. Box 339 Window Rock, AZ 86515

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- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the back of a separate permit.

1. Article Addressed to:

Ms. Rita Whitehorse-Larsen
The Navajo Nation EPA
P.O. Box 339
Window Rock, AZ 86515

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September 14, 2009

Project No. 03056-0215

Ms. Rita Whitehorse-Larsen
The Navajo Nation EPA
P.O. Box 339
Window Rock, AZ 86515

Phone: (928) 871-7692

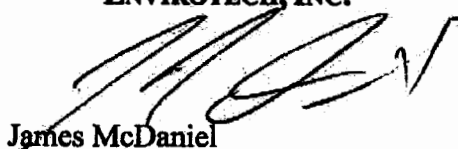
RE: WEST BISTI COAL 22 COM 1 EARTH PIT CLOSURE NOTIFICATION

Dear Ms. Whitehorse-Larsen,

Please accept this letter as the necessary surface owner notification for earth pit closure activities at the West Bisti Coal 22 COM 1 well site, owned and operated by Elm Ridge Exploration. The West Bisti Coal 22 COM 1 well site is located in Unit B, Section 22, Township 25N, Range 13W, San Juan County, New Mexico. Closure activities are scheduled to begin on September 21, 2009 and continue through September 25, 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

Cc: Client File No. 03056

ELM RIDGE EXPLORATION
WEST BISTI COAL 22 COM 1
SEC. 22, TWN. 25N, RNG. 13W
PROJECT NO. 03056-0215

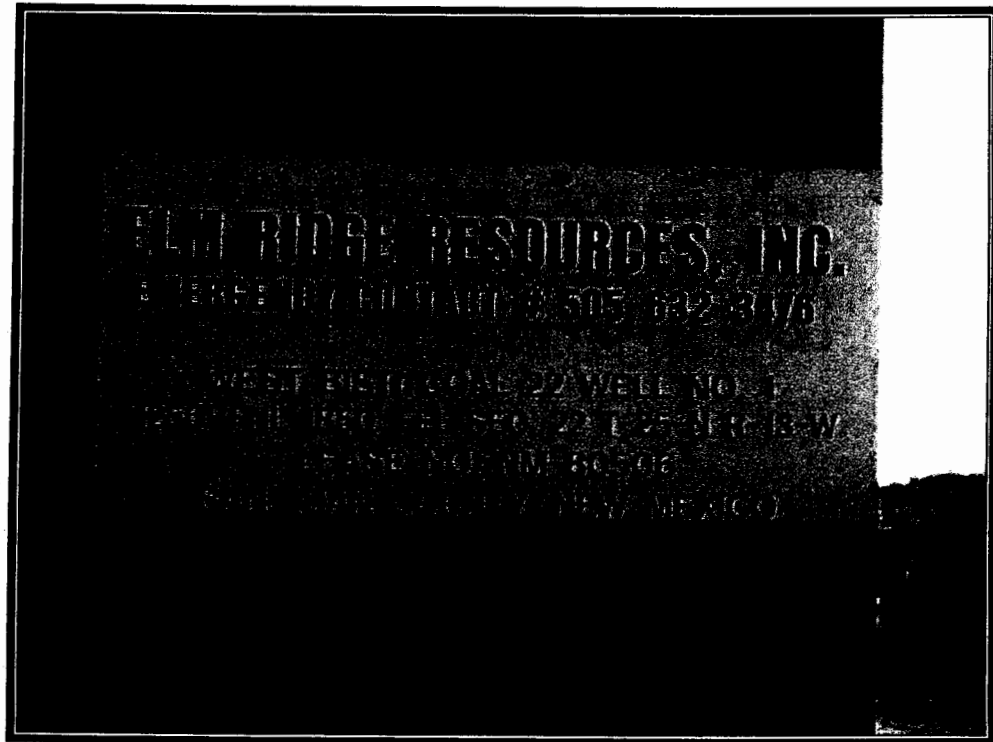


Photo 1: West Bisti Coal 22 COM 1 Well Site

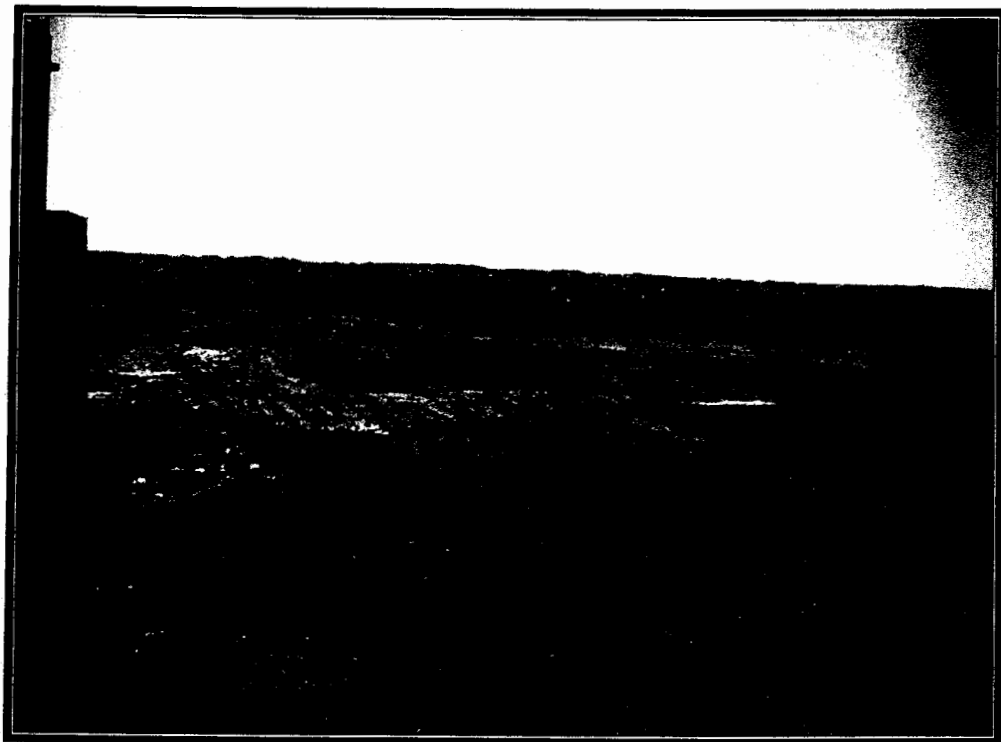


Photo 2: Excavated Area after Backfilling and Recontouring



EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client:	Elm Ridge Exploration	Project #:	03056-0215
Sample No.:	1	Date Reported:	10/28/2009
Sample ID:	Closure Sample	Date Sampled:	10/14/2009
Sample Matrix:	Soil	Date Analyzed:	10/14/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----------	--------------------------	--------------------------

Total Petroleum Hydrocarbons	40	5.0
------------------------------	----	-----

ND = Parameter not detected at the stated detection limit.

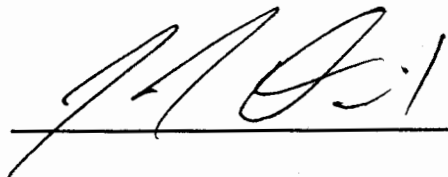
References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **West Bisti Coal 22 COM 1**

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: 14-Oct-09

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	201
	200	
	500	
	1000	

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

Toni McKnight
Analyst

10/28/09
Date

Toni McKnight
Print Name

[Signature]
Review

10/28/09
Date

James McDaniel
Print Name

Client:	Elm Ridge	Project #:	03056-0215
Sample ID:	Closure Sample	Date Reported:	10-25-09
Laboratory Number:	52110	Date Sampled:	10-14-09
Chain of Custody:	8203	Date Received:	10-15-09
Sample Matrix:	Soil	Date Analyzed:	10-21-09
Preservative:	Cool	Date Extracted:	10-20-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	4.8	1.0
Ethylbenzene	2.5	1.0
p,m-Xylene	19.4	1.2
o-Xylene	2.6	0.9
Total BTEX	29.3	

ND - Parameter not detected at the stated detection limit.

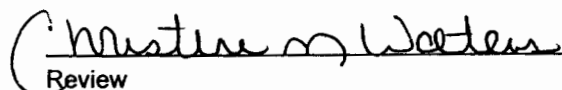
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	97.0 %
	1,4-difluorobenzene	97.0 %
	Bromochlorobenzene	97.0 %

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: **West Bisti Coal 22 Com 1.**


 Analyst


 Review

Client:	N/A	Project #:	N/A
Sample ID:	10-21-BT QA/QC	Date Reported:	10-25-09
Laboratory Number:	52161	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-21-09
Condition:	N/A	Analysis:	BTEX

Benzene	8.7584E+005	8.7760E+005	0.2%	ND	0.1
Toluene	8.0092E+005	8.0253E+005	0.2%	ND	0.1
Ethylbenzene	7.2781E+005	7.2927E+005	0.2%	ND	0.1
p,m-Xylene	1.7982E+006	1.8018E+006	0.2%	ND	0.1
o-Xylene	6.8304E+005	6.8441E+005	0.2%	ND	0.1

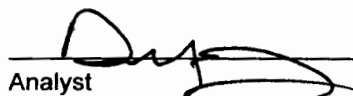
Benzene	6.1	6.0	1.6%	0 - 30%	0.9
Toluene	24.2	23.8	1.7%	0 - 30%	1.0
Ethylbenzene	21.8	21.7	0.5%	0 - 30%	1.0
p,m-Xylene	69.5	68.2	1.9%	0 - 30%	1.2
o-Xylene	26.3	26.0	1.1%	0 - 30%	0.9

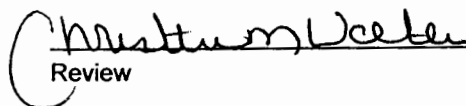
Benzene	6.1	50.0	57.3	102%	39 - 150
Toluene	24.2	50.0	75.2	101%	46 - 148
Ethylbenzene	21.8	50.0	72.8	101%	32 - 160
p,m-Xylene	69.5	100	168	99.1%	46 - 148
o-Xylene	26.3	50.0	78.8	103%	46 - 148

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 52110, 52161- 52164, 52173, and 52180 - 52183.


 Analyst


 Review

Client:	Elm Ridge	Project #:	03056-0215
Sample ID:	Closure Sample	Date Reported:	10-25-09
Lab ID#:	52110	Date Sampled:	10-14-09
Sample Matrix:	Soil	Date Received:	10-15-09
Preservative:	Cool	Date Analyzed:	10-16-09
Condition:	Intact	Chain of Custody:	8203

Parameter	Concentration (mg/Kg)
-----------	-----------------------

Total Chloride**160**

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: **West Bisti Coal 22Com1.**

Analyst

Review

Client:	Elm Ridge	Project #:	03056-0215
Sample ID:	Background	Date Reported:	10-25-09
Lab ID#:	52111	Date Sampled:	10-14-09
Sample Matrix:	Soil	Date Received:	10-15-09
Preservative:	Cool	Date Analyzed:	10-16-09
Condition:	Intact	Chain of Custody:	8203


Parameter	Concentration (mg/Kg)
-----------	-----------------------

Total Chloride**5**

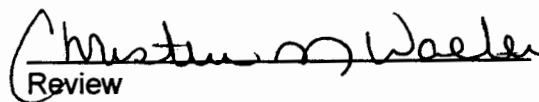
Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **West Bisti Coal 22Com1.**

Analyst



Review



8203

[illegible]**envirotech**
Analytical Laboratory

PAGE NO: 1 OF 1**envirotech**(505) 632-0615 (800) 362-1879
5786 U.S. Hwy 64, Farmington, NM 87401

ENVIRONMENTAL SPECIALIST:

R Jores

DATE STARTED: 9/21/09

DATE FINISHED: 9/21/09

LAT:

LONG:

FIELD REPORT: BGT / PIT CLOSURE VERIFICATION

LOCATION: NAME: West Bisti Cal ^{22 cam} WELL #: 1 TEMP PIT: PERMANENT PIT: X BGT:
 LEGAL ADD: UNIT: SEC: 22 TWP: 25N RNG: 13W PM: NM/M
 QTR/FOOTAGE: 1250' FNL 1850' FEL CNTY: SS ST: NM

EXCAVATION APPROX: 20 FT. X 25 FT. X 12 FT. DEEP CUBIC YARDAGE:

DISPOSAL FACILITY: REMEDIATION METHOD:

LAND OWNER: API: BGT / PIT VOLUME:

CONSTRUCTION MATERIAL: DOUBLE-WALLED, WITH LEAK DETECTION:

LOCATION APPROXIMATELY: FT. FROM WELLHEAD

DEPTH TO GROUNDWATER:

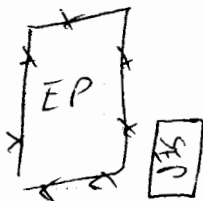
TEMPORARY PIT - GROUNDWATER 50-100 FEET DEEPBENZENE \leq 0.2 mg/kg, BTEX \leq 50 mg/kg, GRO & DRO FRACTION (8015) \leq 500 mg/kg, TPH (418.1) \leq 2500 mg/kg, CHLORIDES \leq 500 mg/kg**TEMPORARY PIT - GROUNDWATER \geq 100 FEET DEEP**BENZENE \leq 0.2 mg/kg, BTEX \leq 50 mg/kg, GRO & DRO FRACTION (8015) \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		-	-	-	200	
	<u>Bottom</u>	<u>1</u>	<u>S.C</u>	<u>20</u>	<u>7</u>	<u>14</u>	<u>56</u>
<u>Closure</u>	<u>Bottom</u>	<u>2</u>	<u>S.C</u>	<u>20</u>	<u>7</u>	<u>12</u>	<u>48</u>
		<u>3</u>					
		<u>4</u>					
		<u>5</u>					
		<u>6</u>					

PERIMETER**FIELD CHLORIDES RESULTS****PROFILE**

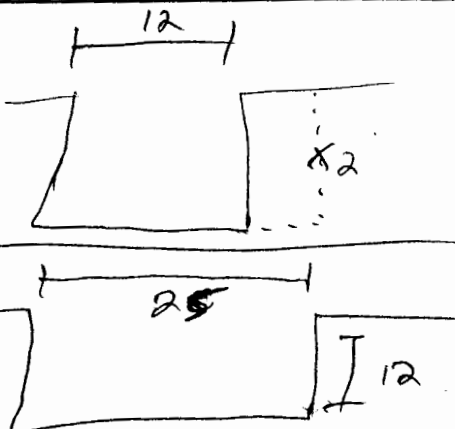
MR

9 N



⊕ PS

SAMPLE ID	READING	CALC. (mg/kg)
<u>Comp</u>		<u>986</u>
<u>Background</u>		<u>527</u>
<u>Bottom (1)</u>		<u>624</u>
<u>Bottom (2)</u>		<u>72</u>
<u>E wall</u>		<u>249</u>
<u>W wall</u>		<u>149</u>
PID RESULTS chlor		
SAMPLE ID	RESULTS (ppm)	
<u>S wall</u>	<u>227</u>	
<u>N wall</u>	<u>542</u>	
<u>N wall (2)</u>	<u>230</u>	

**LAB SAMPLES****NOTES:**

SAMPLE ID	ANALYSIS	RESULTS
	BENZENE	
	BTEX	
	GRO & DRO	
	CHLORIDES	

WORKORDER #

WHO ORDERED

Method 418.1 Analysis Log Total Petroleum Hydrocarbons

Date 10/14/04

Analyst RLM

Location West Bisti Coal 22 com 1

Instrument Intrepid

Job No. 03056-0215

Sample No.	Sample Description	Weight (g)	mL Freon	Dilution	Reading	Calc. TPH (ppm)	OVM (ppm)
1	Closure Sample	5.0	20	4	10	40	0.0

Infrared Spectrophotometer Calibration

New Freon _____

Date Standards Prepared _____

Standard Concentration (ppm)

100 _____
200 201

500 _____
1000 _____

I-Cal RF: _____

C-Cal RF: _____

RSD: _____

% Difference: _____

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

C-Cal Difference +/- 10%



34278

MANIFEST #

DATE 9-22-09 JOB# 03056-0215

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	ELm ridge Bistacom 22#	LFH	Coal	E26	25		4-4	74	952	Robert Branda
2	"	"	"	E24	15		4-4	178	952	Robert Branda
3	"	"	"	E26	24		4-4	74	1156	Robert Branda
4	"	"	"	E24	15		4-4	178	1158	Robert Branda
5	"	"	"	E26	24		4-4	74	149	Robert Branda
6	"	"	"	E24	15		4-4	78		Robert Branda
7	"	"	"	E26	20		4-4	24	1503	Robert Branda
8	"	"	"	E26	25		4-4	74	1551	Robert Branda
9	"	"	"	E24	15		4-4	178	1551	Robert Branda
					178					
RESULTS:		LANDFARM EMPLOYEE:		NOTES:						
298	CHLORIDE TEST	9	Garry Robinson							
	PAINT FILTER TEST	9								
ENTERED SEP 24 2009										

"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 T. McKinnel COMPANY E/M Bridge SIGNATURE [Signature]

COMPANY CONTACT mmk PHONE 322-2711 DATE 9-22-09



Bill of Lading

34279

MANIFEST #

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

DATE 9-22-09 JOB# 03056-025

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBL'S	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Envirotech LE#	Sumridge Basticool com 22 #1	Clean Fill Soil	-	20	-	4-4	74	952	Rick Brown
2	"	"	"	-	12	-	4-4	178	952	Graham
3	"	"	"	-	20	-	4-4	74	1156	Rick Brown
4	"	"	"	-	12	-	4-4	178	1158	Graham
5	"	"	"	-	20	-	4-4	24	1245	Steve Bul
6	"	"	"	-	20	-	4-4	74	149	Rick Brown
7	"	"	"	-	12	-	4-4	178	157	Johann
					20					
					116					
RESULTS:				Gary Robinson		NOTES: ENTERED SEP 24 2009				
	CHLORIDE TEST									
	PAINT FILTER TEST									

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."

JAMES T. MCKINNEY COMPANY SIGNATURE 

COMPANY CONTACT *max* PHONE *327-2211* DATE *9-22-09*



PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

LOAD	COMPLETE DESCRIPTION OF SHIPMENT	TRANSPORTING COMPANY
------	----------------------------------	----------------------

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DISTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Empire Chemical 22 #1	LFI	cont soic	E-24	12	-	4-4	178	8:40	[Signature]
2	W Bistaco 22 #1	" "	" "	E-26	20	-	4-4	24	8:55	[Signature]
3	" "	" "	" "	E-24	12	-	4-4	178	10:46	[Signature]
4	" "	" "	" "	E-26	20	-	4-4	24	11:05	[Signature]
5	" "	" "	" "	E-26	20	-	4-4	74	11:47	[Signature]
6	" "	" "	" "	E-26	20	-	4-4	24	1:55	[Signature]
7	" "	" "	" "	E-25	20	-	4-4	74	2:16	[Signature]
8	" "	" "	" "	E-25	20	-	4-4	24	3:50	[Signature]
					144					
RESULTS:		NOTES:								
2298	CHLORIDE TEST	8	ENTERED SEP 24 2009							
	PAINT FILTER TEST	8								

"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 J. McKinney COMPANY Elm Ridge SIGNATURE [Signature]

COMPANY CONTACT mrk PHONE 327-2711 DATE 9-23-09



34295

34295

DATE 9-23-09 JOB# 03056-0215

NOTES: Word line 1

ENTERED SEP 24 2009

NAME J. McKinney COMPANY E/M Ridge SIGNATURE [Signature]

COMPANY CONTACT max PHONE 322-2711 DATE 9-23-09



34305

MANIFEST #

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

DATE 9-24-09 JOB# 03054-0215

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT					TRANSPORTING COMPANY				
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Elm Ridge W.B. St. 1224	LF-#	cont soil	E-25	20	-	4-4	74	8:45	Robert Brown
2	"	"	"	E-25	20	-	4-4	74	9:00	Staff B
3	"	LF-#	"	E-25	20	-	4-4	24	11:45	Staff B
4	"	LF-#	"	E-25	20	-	4-4	24	2:15	Staff B
5	"	LF-#	"	E-25	20	-	4-4	74	2:25	Staff B
					100					
RESULTS:						NOTES:				
2298	CHLORIDE TEST	5	LANDFARM EMPLOYEE:			ENTERED SEP 2 5 2009				
	PAINT FILTER TEST	5								

"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 Robert Brannley COMPANY Four Four SIGNATURE Robert Brannley

COMPANY CONTACT *Mack* PHONE _____ DATE *9/24/09*



34307

MANIFEST #

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

DATE 9-24-05 JOB# 03056-025

[illegible]

RESULTS:

CHLORIDE TEST

**LANDFARM
EMPLOYEE:**

NOTES:

ENTERED SEP 25 2009

"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 Robert Browlee

COMPANY *For For*

SIGNATURE 

DATE 8/24/09

PHONE

COMPANY CONTACT *Mark*

PHONE



34321

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

[illegible]

ENTERED SEP 29 2009

ORIDE TESTS

"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."

DATE 9-25-09

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 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>West Bisti Coal 22 COM 1</u>	
API Number: <u>3004528916</u>	OCD Permit Number:
U/L or Qtr/Qtr <u>B</u> Section <u>22</u> Township <u>25N</u> Range <u>13W</u> County: <u>San Juan</u>	
Center of Proposed Design: Latitude <u>36.390518</u> Longitude <u>-108.203804</u> NAD: <input type="checkbox"/> 1927 <input checked="" type="checkbox"/> 1983	
Surface Owner: <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input checked="" type="checkbox"/> Tribal Trust or Indian Allotment	

2. ☒ **Pit:** Subsection F or G of 19.15.17.11 NMAC **Ceased emptying into in October 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 45' x W 29' x D 3'

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 4' tall hog wire fencing with pipe railing

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>)	<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.	<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 H₂S, 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 indentify 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: Emmanuel D. Dugue

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

Disposal Facility Name: _____

Disposal Facility Permit Number: _____

Disposal Facility Name: _____

Disposal Facility Permit Number: _____

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

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

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

24.

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

- ☐ 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: _____



MR

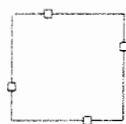
Earth Pit

SEP



PUMP
JACK

LEGEND



4' Tall Hogwire
Fencing



Berm



Well Head

SITE MAP ELM RIDGE EXPLORATION WEST BISTI COAL 22 COM 1 SEC 22, TWN 25N, RGE 13W SAN JUAN COUNTY, NEW MEXICO

SCALE: NTS

PROJECT N003056-0136

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:

**WEST BISTI COAL 22 COM 1
UNIT LETTER B, SECTION 22, TOWNSHIP 25N, RANGE 13W
SAN JUAN COUNTY, NEW MEXICO
LATITUDE 36.390518 LONGITUDE -108.203804**

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**

MARCH 2009

**EARTHEN PIT CLOSURE PLAN
ELM RIDGE EXPLORATION
WEST BISTI COAL 22 COM 1
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 West Bisti Coal 22 COM 1 well site located in the NW ¼ NE ¼ of Section 22, Township 25N, Range 13W, 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 West Bisti Coal 22 COM 1 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 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 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 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 shows other evidence of a release. All samples 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 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 12 inches in depth. After ripping, water bars will be installed. All ripped surfaces will 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: West Bisti Coal 22 COM 1	Facility Type: Gas Well	
Surface Owner: Navajo	Mineral Owner:	Lease No.: NM 80506

LOCATION OF RELEASE

Unit Letter B	Section 22	Township 25N	Range 13W	Feet from the 1250	North/South Line FNL	Feet from the 1850	East/West Line FEL	County San Juan
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Latitude 36.390518 Longitude -108.203804

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.*

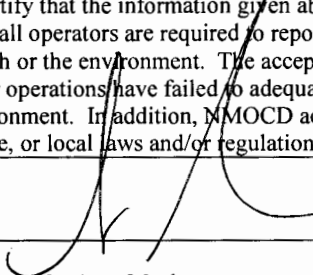
Describe Cause of Problem and Remedial Action Taken.*

Produced water from a gas well at the above 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 four-hundred and twenty-two (422) cubic yards of 'production sludge' was removed from the earthen pit. A five (5)-point composite sample was collected from beneath the 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: 		OIL CONSERVATION DIVISION	
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:	
Date: <u>11/19/09</u> Phone: 505-632-3476 Ext 201		Attached <input type="checkbox"/>	

* 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>West Bisti Coal 22 COM 1</u>		
API Number: <u>3004528916</u>		OCD Permit Number:
U/L or Qtr/Qtr <u>B</u>	Section <u>22</u>	Township <u>25N</u> Range <u>13W</u> County: <u>San Juan</u>
Center of Proposed Design: Latitude <u>36.390518</u>		Longitude <u>-108.203804</u> NAD: <input type="checkbox"/> 1927 <input checked="" type="checkbox"/> 1983
Surface Owner: <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input checked="" 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 25' x W 20' x D 12'

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	<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).0. - 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>) (<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.	<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
	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<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 H₂S, 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: 10/14/09

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 **Per 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: 11/19/09

E-mail address: amackey1@elmr ridge.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 West Bisti Coal 22 COM 1 well site is October 14, 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 Navajo Nation on September 16, 2009; see attached *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 September 21, 2009, approximately four-hundred and twenty-two (422) cubic yards of production sludge was removed from the earthen pit and disposed of at Envirotech's NMOC D 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 West Bisti Coal 22 COM 1 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.

Due to a misunderstanding with field personnel, a closure sample was not collected at the time of excavation. On October 14, 2009, an Envirotech scientist returned to the site and collected a sample from the opened excavation. Once the sample was collected, the excavation was backfilled and recontoured. 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
Closure Sample	< 0.0009 mg/kg	0.0293 mg/kg	160 mg/kg	40 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 samples 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
West Bisti Coal 22 COM 1
Earth Pit Closure
Project No. 03056-0215
Closure Date: 10/14/09

- 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 December 14, 2009.



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

ELM RIDGE EXPLORATION


Amy Mackey
Administrative Manager
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

Saturday

		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 Shella 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 Shella 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 Shella 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 Shella 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 Shella Hixon 1	26
27	28	29	30			


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Track & Confirm

Search Results

Label/Receipt Number: 7007 1490 0000 5398 9428

Service(s): Certified Mail™

Status: Delivered

Your item was delivered at 1:47 PM on September 16, 2009 in WINDOW ROCK, AZ 86515.

Detailed Results:

- Delivered, September 16, 2009, 1:47 pm, WINDOW ROCK, AZ 86515
- Notice Left, September 15, 2009, 10:26 am, WINDOW ROCK, AZ 86515

Notification Options

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No FEAR Act EEO Data

FOIA

West Bisti Coal 22 Com 1
03056 - 0215

U.S. Postal Service CERTIFIED MAIL - RECEIPT (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

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Postage	\$.44
Certified Fee	2.80
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Restricted Delivery Fee (Endorsement Required)	—
Total Postage & Fees	\$ 5.54

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Here

9-14-09

12m

Sent To: Ms. Rita Whitehorse-Larsen
The Navajo Nation EPA
P.O. Box 339
City, State, ZIP+4: Window Rock, AZ 86515

PS Form 3800, August 2006

See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Ms. Rita Whitehorse-Larsen
The Navajo Nation EPA
P.O. Box 339
Window Rock, AZ 86515

COMPLETE THIS SECTION ON DELIVERY

- A. Signature *[Signature]* ☐ Agent ☐ Addressee
- B. Received by (Printed Name) *[Signature]* C. Date of Delivery *SEP 16 2009*
- D. Is delivery address different from item 1? ☐ Yes ☐ No
- E. If Yes, enter delivery address below:

RECEIVED

SEP 18 2009

3. Service Type *Ret. Rept.*
- ☒ Certified Mail ☐ Express Mail
- ☐ Registered ☐ Return Receipt for Merchandise
- ☐ Insured Mail ☐ C.O.D.
4. Restricted Delivery? (Extra Fee) ☐ Yes



September 14, 2009

Project No. 03056-0215

Ms. Rita Whitehorse-Larsen
The Navajo Nation EPA
P.O. Box 339
Window Rock, AZ 86515

Phone: (928) 871-7692

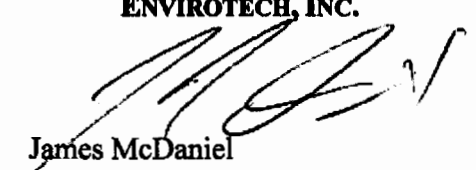
RE: WEST BISTI COAL 22 COM 1 EARTH PIT CLOSURE NOTIFICATION

Dear Ms. Whitehorse-Larsen,

Please accept this letter as the necessary surface owner notification for earth pit closure activities at the West Bisti Coal 22 COM 1 well site, owned and operated by Elm Ridge Exploration. The West Bisti Coal 22 COM 1 well site is located in Unit B, Section 22, Township 25N, Range 13W, San Juan County, New Mexico. Closure activities are scheduled to begin on September 21, 2009 and continue through September 25, 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

Cc: Client File No. 03056

**ELM RIDGE EXPLORATION
WEST BISTI COAL 22 COM 1
SEC. 22, TWN. 25N, RNG. 13W
PROJECT NO. 03056-0215**

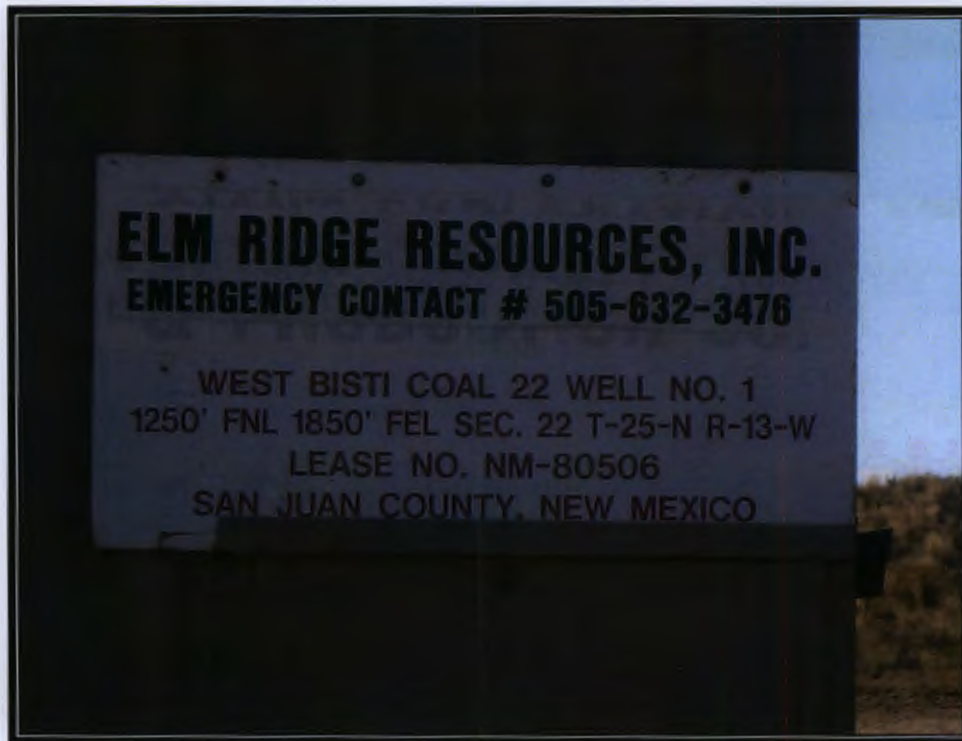


Photo 1: West Bisti Coal 22 COM 1 Well Site



Photo 2: Excavated Area after Backfilling and Recontouring



EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client:	Elm Ridge Exploration	Project #:	03056-0215
Sample No.:	1	Date Reported:	10/28/2009
Sample ID:	Closure Sample	Date Sampled:	10/14/2009
Sample Matrix:	Soil	Date Analyzed:	10/14/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	40	5.0

ND = Parameter not detected at the stated detection limit.

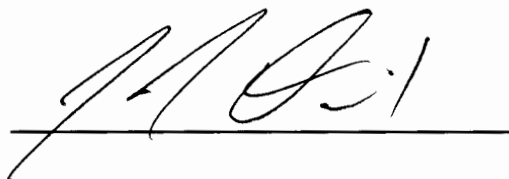
References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **West Bisti Coal 22 COM 1**

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: 14-Oct-09

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	
	200	201
	500	
	1000	

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

Toni McKnight
Analyst

10/28/09
Date

Toni McKnight

Print Name

James McDaniel
Review

10/28/09
Date

James McDaniel

Print Name

Client:	Elm Ridge	Project #:	03056-0215
Sample ID:	Closure Sample	Date Reported:	10-25-09
Laboratory Number:	52110	Date Sampled:	10-14-09
Chain of Custody:	8203	Date Received:	10-15-09
Sample Matrix:	Soil	Date Analyzed:	10-21-09
Preservative:	Cool	Date Extracted:	10-20-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	4.8	1.0
Ethylbenzene	2.5	1.0
p,m-Xylene	19.4	1.2
o-Xylene	2.6	0.9
Total BTEX	29.3	

ND - Parameter not detected at the stated detection limit.

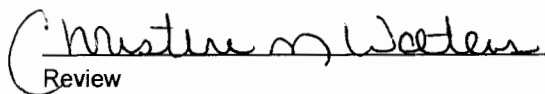
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	97.0 %
	1,4-difluorobenzene	97.0 %
	Bromochlorobenzene	97.0 %

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: West Bisti Coal 22 Com 1.


 Analyst


 Review

Client:	N/A	Project #:	N/A
Sample ID:	10-21-BT QA/QC	Date Reported:	10-25-09
Laboratory Number:	52161	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-21-09
Condition:	N/A	Analysis:	BTEX

					Detect Limit
--	--	--	--	--	--------------

Benzene	8.7584E+005	8.7760E+005	0.2%	ND	0.1
Toluene	8.0092E+005	8.0253E+005	0.2%	ND	0.1
Ethylbenzene	7.2781E+005	7.2927E+005	0.2%	ND	0.1
p,m-Xylene	1.7982E+006	1.8018E+006	0.2%	ND	0.1
o-Xylene	6.8304E+005	6.8441E+005	0.2%	ND	0.1

					Detect Limit
--	--	--	--	--	--------------

Benzene	6.1	6.0	1.6%	0 - 30%	0.9
Toluene	24.2	23.8	1.7%	0 - 30%	1.0
Ethylbenzene	21.8	21.7	0.5%	0 - 30%	1.0
p,m-Xylene	69.5	68.2	1.9%	0 - 30%	1.2
o-Xylene	26.3	26.0	1.1%	0 - 30%	0.9

					Accept Range
--	--	--	--	--	--------------

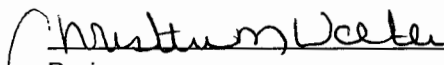
Benzene	6.1	50.0	57.3	102%	39 - 150
Toluene	24.2	50.0	75.2	101%	46 - 148
Ethylbenzene	21.8	50.0	72.8	101%	32 - 160
p,m-Xylene	69.5	100	168	99.1%	46 - 148
o-Xylene	26.3	50.0	78.8	103%	46 - 148

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 52110, 52161- 52164, 52173, and 52180 - 52183.


 Analyst


 Review

Client:	Elm Ridge	Project #:	03056-0215
Sample ID:	Closure Sample	Date Reported:	10-25-09
Lab ID#:	52110	Date Sampled:	10-14-09
Sample Matrix:	Soil	Date Received:	10-15-09
Preservative:	Cool	Date Analyzed:	10-16-09
Condition:	Intact	Chain of Custody:	8203

Parameter**Concentration (mg/Kg)****Total Chloride****160**

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: **West Bisti Coal 22Com1.**

Analyst

Review



Client:	Elm Ridge	Project #:	03056-0215
Sample ID:	Background	Date Reported:	10-25-09
Lab ID#:	52111	Date Sampled:	10-14-09
Sample Matrix:	Soil	Date Received:	10-15-09
Preservative:	Cool	Date Analyzed:	10-16-09
Condition:	Intact	Chain of Custody:	8203

Parameter

Concentration (mg/Kg)

Total Chloride

5

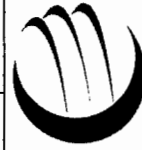
Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **West Bisti Coal 22Com1.**

Analyst

Review

10
11
12
13

[illegible]

envirotech
Analytical Laboratory

FIELD REPORT: BGT / PIT CLOSURE VERIFICATION

LOCATION: NAME: West Bisti Coal 22 car WELL #: 1 TEMP PIT: PERMANENT PIT: X BGT:

LEGAL ADD: UNIT: SEC: 22 TWP: 25N RNG: 13W PM: NM/PM

QTR/FOOTAGE: 1250' FNL 1250' FEL CNTY: SS ST: NM

EXCAVATION APPROX: 20 FT. X 25 FT. X 12 FT. DEEP CUBIC YARDAGE:

DISPOSAL FACILITY: REMEDIATION METHOD:

LAND OWNER: API: BGT / PIT VOLUME:

CONSTRUCTION MATERIAL: DOUBLE-WALLED, WITH LEAK DETECTION:

LOCATION APPROXIMATELY: FT. FROM WELLHEAD

DEPTH TO GROUNDWATER:

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

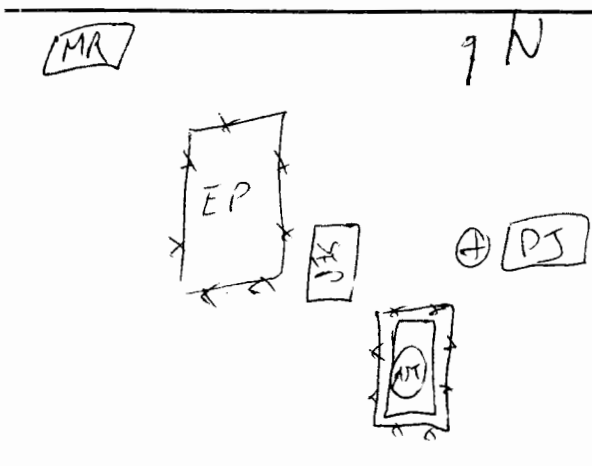
PERMANENT PIT OR BGT
BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, TPH (418.1) ≤ 100 mg/kg, CHLORIDES ≤ 250 mg/kg

FIELD 418.1 ANALYSIS							
TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (mg/kg)
	200 STD		-	-	-	200	
	Bottom	1	S.C	20	4	14	56
Closure	Bottom	2	S.C	20	4	12	48
		3					
		4					
		5					
		6					

PERIMETER

FIELD CHLORIDES RESULTS

PROFILE



SAMPLE ID	READING	CALC. (mg/kg)
Comp		986
Background		<27
Bottom (2)		624
Bottom (12)		72
E wall		249
W wall		149
PID RESULTS Chlor		
SAMPLE ID	RESULTS (ppm)	
S wall	227	
N wall	542	
N wall (2)	230	

Method 418.1 Analysis Log Total Petroleum Hydrocarbons

Date 10/14/04

Analyst TLM

Location West Bisti Coal 22 COM 1

Instrument InfraCal

Job No. 03056-0215

Sample No.	Sample Description	Weight (g)	mL. Freon	Dilution	Reading	Calc. TPH (ppm)	OVM (ppm)
1	Closure Sample	5.0	20	4	10	40	0.0

Infrared Spectrophotometer Calibration

New Freon _____

Date Standards Prepared _____

Standard Concentration (ppm)

100 _____
200 201

500 _____
1000 _____

I-Cal RF: _____

C-Cal RF: _____

RSD: _____

% Difference: _____

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

C-Cal Difference +/- 10%



Bill of Lading

97245

MANIFEST #

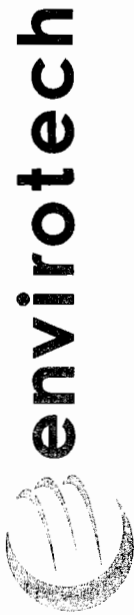
PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

DATE 9.22.09 JOB# 0906-09

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	ENVIROtech LF#	Emridge Bisticon	Clean Fill Soil	-	20	-	4-4	74	952	<i>[Signature]</i>
2	"	com 22#1	"	-	12	-	4-4	178	952	<i>[Signature]</i>
3	"	"	"	-	20	-	4-4	74	1156	<i>[Signature]</i>
4	"	"	"	-	12	-	4-4	178	1156	<i>[Signature]</i>
5	"	"	"	-	20	-	4-4	24	1245	<i>[Signature]</i>
6	"	"	"	-	20	-	4-4	74	149	<i>[Signature]</i>
7	"	"	"	-	12	-	4-4	178	157	<i>[Signature]</i>
					20					
					116					
RESULTS:		LANDFARM EMPLOYEE: <i>Gary Robinson</i>				NOTES: ENTERED SEP 24 2009				
	CHLORIDE TEST									
	PAINT FILTER TEST									

"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 T. McK. COMPANY E/mh SIGNATURE [Signature]
COMPANY CONTACT Mark PHONE 327-2711 DATE 9-22-09



Bill of Lading

34294

MANIFEST #

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

DATE 8-23-09 JOB# 03156-0213

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	envirotech	LFH	cont	E-24	12	-	4-4	178	8:40	Robert Broun
2	Rich coal 22#1	"	501C	E-26	20	-	4-4	24	8:55	Staff Broun
3	Rich coal 22#1	"	"	E-24	12	-	4-4	178	10:46	Staff Broun
4	"	"	"	E-26	20	-	4-4	24	11:05	Staff Broun
5	"	"	"	E-26	20	-	4-4	74	11:47	Robert Broun
6	"	"	"	E-26	20	-	4-4	24	1:55	Staff Broun
7	"	"	"	E-25	20	-	4-4	74	2:46	Robert Broun
8	"	"	"	E-25	20	-	4-4	24	3:50	Staff Broun
					144					

RESULTS:

CHLORIDE TEST

PAINT FILTER TEST

LANDFARM EMPLOYEE:

NOTES:

ENTERED SEP 24 2009

"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 J. M. K. M. M. M.

COMPANY EnviroBridge

SIGNATURE Robert Broun

COMPANY CONTACT MRK

PHONE 327-2711

DATE 9-23-09



envirotech

Bill of Lading

24

DATE 9-23-09 JOB# 6206

[illegible]

NOTES: Void line 1

22

2

"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."

COMPANY E/M Ridge

SIGNATURE John M. Smith

PHONE 322-2711

DATE 9-23-09



LD
OD
ND
ND
ND

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

1030

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Elm Ridge W. 5th & 2nd	LF-H	cont soil	E-25	20	5	4-4	74	8:45	Robert Brown
2	"	"	"	E-25	20	-	4-4	74	9:00	Staff B
3	"	LF-H	"	E-25	20	-	4-4	24	11:45	Staff B
4	"	LF-H	"	E-25	20	-	4-4	24	2:15	Staff B
5	"	LF-H	"	E-25	20	-	4-4	74	2:25	Paul B
					100					
RESULTS:	CHLORIDE TEST		LANDFARM			NOTES: ENTERED SEP 25 2009				

"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 Robert Browley COMPANY First

SIGNATURE 

COMPANY CONTACT *Mack* PHONE _____ DATE *9/24/89*



PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

02323

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Enville	Elm Ridge	Gravel	-	20	-	4-41	74	8:30	[Signature]
2	"	22-1	"	-	20	-	4-41	24	9:30	[Signature]
3	"	"	"	-	20	-	4-41	24	11:45	[Signature]
4	"	"	"	-	20	-	4-41	24	2:15	[Signature]
5	"	"	"	-	20	-	4-21	74	2:25	[Signature]
					100					
RESULTS:		LANDFARM EMPLOYEE:				NOTES:				
	CHLORIDE TEST	[Signature]				ENTERED SEP 2 5 2009				
	PAINT FILTER TEST									

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 Robert Browder COMPANY Four Four SIGNATURE [Signature] DATE 9/24/09

COMPANY CONTACT Mark PHONE

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 Robert Browner

COMPANY Your Your

SIGNATURE 

COMPANY CONTACT Mack

PHONE

DATE 4/24/09



Bill of Lading

ॐ नमो भगवते वासुदेवाय

MANIFEST #

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

DATE 9-25-09

JOB# 046

[illegible]

RESULTS:

NOTES:

**LANDFARM
EMPLOYEE:**

ENTERED SEP 29 2009

CHI SQUARE TEST

PAINT FILTER TEST

"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 Steve Barker

FOUR FOUR COMPANY

SIGNATURE

COMPANY CONTACT *MAK* FROM *714/61* PHONE *327-2711*

DATE 9-25-09

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 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

RECEIVED
2009 MAY 18 PM 2:39

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: West Bisti Coal 22 COM 1	Facility Type: Gas Well

Surface Owner: Tribal	Mineral Owner:	Lease No.: NM-61273
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LOCATION OF RELEASE

Unit Letter B	Section 22	Township 25N	Range 13W	Feet from the 1250	North/South Line FNL	Feet from the 1850	East/West Line FEL	County San Juan
------------------	---------------	-----------------	--------------	-----------------------	-------------------------	-----------------------	-----------------------	--------------------

Latitude 36.390519 Longitude -108.203804

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.*

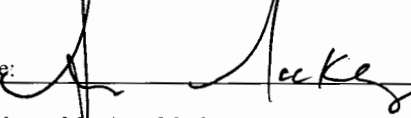
Describe Cause of Problem and Remedial Action Taken.*

Produced Water from 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 in use on 11/3/08, but has not been discharged into since November 2008. A sample was collected from the earthen pit and the sample results are attached to this document for reference. The sample was analyzed for 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 and for total chlorides via USEPA Method 4500B. The sample returned results that were below the 0.2 ppm benzene standard, the 50 ppm BTEX standard and the 100 ppm TPH, but above the 250 ppm total chloride standard, confirming that a release had occurred at this site. 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 but less than 100 feet below the ground. This set the closure standards to 1000 ppm TPH, 10 ppm benzene and 50 ppm total 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.

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: 		OIL CONSERVATION DIVISION	
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: 505-632-3476 Ext 201			

* Attach Additional Sheets If Necessary

PAGE NO: <u>1</u> OF <u>1</u>	ENVIROTECH INC ENVIRONMENTAL SCIENTISTS & ENGINEERS 5796 U.S. HIGHWAY 64 - 3014 FARMINGTON, NEW MEXICO 87401 PHONE: (505) 632-0615	ENVIRONMENTAL SPECIALIST: <u>DBENALLY</u> LAT: <u>36.390519</u> LONG: <u>-108.203604</u>
DATE STARTED: <u>11/3/08</u>		
DATE FINISHED: <u>11/3/08</u>		

FIELD REPORT: BGT / PIT CLOSURE VERIFICATION

LOCATION: NAME: <u>WEST BISTO COAL 22 COIN</u>	WELL #: <u>001</u>	TEMP PIT: <u>PERMANENT PIT: <input checked="" type="checkbox"/> BGT:</u>
LEGAL ADD: UNIT: <u>B</u>	SEC: <u>22</u>	TWP: <u>25N</u>
	RNG: <u>13 W</u>	PM: <u></u>
QTR/FOOTAGE: <u>1350 FNL X 1850' FEL</u>	CNTY: <u>SAN JUAN</u>	ST: <u>NM</u>
EXCAVATION APPROX: <u> </u> FT. X <u> </u> FT. X <u> </u> FT. DEEP	CUBIC YARDAGE: <u> </u>	
DISPOSAL FACILITY: <u> </u>	REMEDICATION METHOD: <u> </u>	
LAND OWNER: <u> </u>	API: <u>3004528916</u>	BGT / PIT VOLUME: <u> </u>
CONSTRUCTION MATERIAL: <u>EARTH</u>	DOUBLE-WALLED, WITH LEAK DETECTION: <u> </u>	
LOCATION APPROXIMATELY: <u>96'</u> FT. <u>280°</u>	FROM WELLHEAD	
DEPTH TO GROUNDWATER: <u>2100</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

☒ 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)
	200 STD						
<u>12:30 PM</u>	<u>50T Comp</u>	<u>1</u>	<u>5</u>	<u>20</u>	<u>4</u>	<u>07</u>	<u>28</u>
		<u>2</u>					
		<u>3</u>					
		<u>4</u>					
		<u>5</u>					
		<u>6</u>					

PERIMETER

FIELD CHLORIDES RESULTS

PROFILE

	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>SAMPLE ID</th> <th>READING</th> <th>CALC. (mg/kg)</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	SAMPLE ID	READING	CALC. (mg/kg)																															<p><u>45' x 29' x 3' DEPTH</u></p>
SAMPLE ID	READING	CALC. (mg/kg)																																	
PID RESULTS																																			
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>SAMPLE ID</th> <th>RESULTS (mg/kg)</th> </tr> <tr> <td><u>50T Comp</u></td> <td><u>0.0 ppm</u></td> </tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>	SAMPLE ID	RESULTS (mg/kg)	<u>50T Comp</u>	<u>0.0 ppm</u>																															
SAMPLE ID	RESULTS (mg/kg)																																		
<u>50T Comp</u>	<u>0.0 ppm</u>																																		

LAB SAMPLES

NOTES:

SAMPLE ID	ANALYSIS	RESULTS
	BENZENE	
	BTEX	
	GRO & DRO	
	CHLORIDES	

WORKORDER #

WHO ORDERED

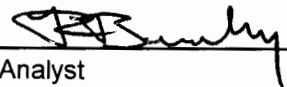


CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 3-Nov-08

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	199
	200	
	500	
	1000	

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


Analyst

2/24/09
Date

Roynell Benally
Print Name


Review

2/24/09
Date

James McDaniel
Print Name



EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client:	Elm Ridge Exploration	Project #:	03056-0215
Sample No.:	1	Date Reported:	2/24/2009
Sample ID:	5 Point Composite	Date Sampled:	11/3/2008
Sample Matrix:	Soil	Date Analyzed:	11/3/2008
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

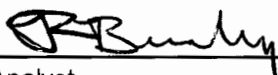
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	64	5.0

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: **West Bisti Coal 22 COM 1 Earthen Pit**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Roynell Benally

Printed



Review

James McDaniel

Printed

Client:	Elmridge	Project #:	03056-0136
Sample ID:	West Bisti Coal 22 Com	Date Reported:	11-10-08
Laboratory Number:	48020	Date Sampled:	11-03-08
Chain of Custody:	5698	Date Received:	11-03-08
Sample Matrix:	Soil	Date Analyzed:	11-07-08
Preservative:	Cool	Date Extracted:	11-06-08
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	2.6	0.9
Toluene	16.5	1.0
Ethylbenzene	6.0	1.0
p,m-Xylene	227	1.2
o-Xylene	28.0	0.9
Total BTEX	280	

ND - Parameter not detected at the stated detection limit.

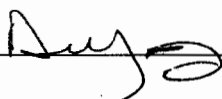
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	96.0 %
	1,4-difluorobenzene	96.0 %
	Bromochlorobenzene	96.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

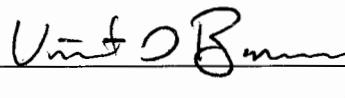
Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Earth Pit Samples/ 5pt Comp.

Analyst



Review



Client:	N/A	Project #:	N/A
Sample ID:	11-07-BT QA/QC	Date Reported:	11-10-08
Laboratory Number:	48015	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-07-08
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	4.6942E+007	4.7036E+007	0.2%	ND	0.1
Toluene	3.4897E+007	3.4967E+007	0.2%	ND	0.1
Ethylbenzene	2.6625E+007	2.6678E+007	0.2%	ND	0.1
p,m-Xylene	5.7845E+007	5.7961E+007	0.2%	ND	0.1
o-Xylene	2.6213E+007	2.6265E+007	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	1.2	1.3	8.3%	0 - 30%	0.9
Toluene	4.7	4.4	6.4%	0 - 30%	1.0
Ethylbenzene	ND	ND	0.0%	0 - 30%	1.0
p,m-Xylene	5.3	6.1	15.1%	0 - 30%	1.2
o-Xylene	6.3	6.1	3.2%	0 - 30%	0.9

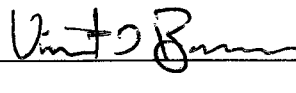
Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	1.2	50.0	50.2	98.0%	39 - 150
Toluene	4.7	50.0	52.4	95.8%	46 - 148
Ethylbenzene	ND	50.0	48.0	96.0%	32 - 160
p,m-Xylene	5.3	100	102	97.1%	46 - 148
o-Xylene	6.3	50.0	53.3	94.7%	46 - 148

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 48015 - 48018, 48020, 48021, 48023, 48024, 48041 and 48042.

Analyst 


Review 

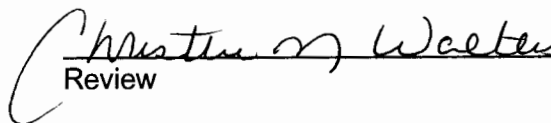
Client:	Elm Ridge	Project #:	03056-0136
Sample ID:	West Bisti Coal 22 Com 001	Date Reported:	11-11-08
Lab ID#:	48020	Date Sampled:	11-03-08
Sample Matrix:	Soil	Date Received:	11-03-08
Preservative:	Cool	Date Analyzed:	11-11-08
Condition:	Intact	Chain of Custody:	5698

Parameter**Concentration (mg/Kg)****Total Chloride****455**

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 Samples / 5 pt Comp.**


Analyst


Review

CHAIN OF CUSTODY RECORD

5698

Client:		Project Name / Location:		ANALYSIS / PARAMETERS																																					
Client Address:		Sampler Name:		Client No.:		Sample Date		Sample Time		Lab No.		Sample Matrix		No./Volume of Containers		Preservative		TPH (Method 8015)		BTEX (Method 8021)		VOC (Method 8260)		RCRA 8 Metals		Cation / Anion		RCI		TCLP with H/P		PAH		TPH (418.1)		CHLORIDE		Sample Cool		Sample Intact	
ENVIRONMENTAL		EARTH DIR SAMPLES / 500 Camp.		03056-0136		10/3/08		10:30am		48016		Soil		Sludge Aqueous		(1) 4.02		HgCl ₂ HCl		X		X												X				✓		✓	
Client Phone No.:		0350-0190		10/3/08		10:30am		48017		Soil		Sludge Aqueous								X		X										X				✓		✓			
				10/3/08		4:20pm		48018		Soil		Sludge Aqueous								X		X										X				✓		✓			
				10/3/08		8:50am		48019		Soil		Sludge Aqueous								X		X										X				✓		✓			
				10/3/08		12:20pm		48020		Soil		Sludge Aqueous								X		X										X				✓		✓			
				10/3/08		1:50pm		48021		Soil		Sludge Aqueous								X		X										X				✓		✓			
				10/3/08		10:59am		48022		Soil		Sludge Aqueous								X		X										X				✓		✓			
				10/3/08		3:00pm		48023		Soil		Sludge Aqueous								X		X										X				✓		✓			
												Soil		Sludge Aqueous																											
												Soil		Sludge Aqueous																											
												Soil		Sludge Aqueous																											

ENVIROTECH INC.