

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

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

**Release Notification and Corrective Action**

**OPERATOR**

☒ Initial Report ☐ Final Report

|   |                                       |
|---|---------------------------------------|
| Name of Company: Elm Ridge Exploration    | Contact: Amy Mackey                   |
| Address: PO Box 156, Bloomfield, NM 87413 | Telephone No.: (505) 632-3476 Ext 201 |
| Facility Name: Bisti Coal 5K COM 2        | Facility Type: Gas Well               |

|                              |                |                           |
|------------------------------|----------------|---------------------------|
| Surface Owner: Navajo Nation | Mineral Owner: | Lease No.: 14-20-603-1292 |
|------------------------------|----------------|---------------------------|

**LOCATION OF RELEASE**

|                  |              |                 |              |                       |                         |                       |                       |                    |
|------------------|--------------|-----------------|--------------|-----------------------|-------------------------|-----------------------|-----------------------|--------------------|
| Unit Letter<br>K | Section<br>5 | Township<br>25N | Range<br>12W | Feet from the<br>2510 | North/South Line<br>FSL | Feet from the<br>1850 | East/West Line<br>FWL | County<br>San Juan |
|------------------|--------------|-----------------|--------------|-----------------------|-------------------------|-----------------------|-----------------------|--------------------|

Latitude: 36.4298446629 Longitude: -108.137444609

**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:<br>Historical | Date and Hour of Discovery: NA    |
| Was Immediate Notice Given?<br><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?<br><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.*<br>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.*<br>Blow sand was removed from the earthen pit, and approximately twenty-two (22) cubic yards of 'production sludge' was removed from the earthen pit. A 5-point composite sample was collected from approximately one (1) foot below the earthen pit once it was removed. The sample was analyzed in the field for total petroleum hydrocarbons (TPH) via USEPA Method 418.1, and in Envirotech's laboratory for benzene and BTEX via USEPA Method 8021 and for total chlorides via USEPA Method 4500B. The sample returned results below the 'Pit Rule' standards of 100 mg/kg TPH, 0.2 mg/kg benzene and 50 mg/kg BTEX, but above the 250 mg/kg total chloride standard, confirming that a release had occurred. Elm Ridge Exploration will comply with Rule 29 from this point forward with the local division of the OCD. |  |                                   |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.  |  |                                   |
| Signature:   | <b>OIL CONSERVATION DIVISION</b>           |                                   |
| Printed Name: Ms. Amy Mackey  | Approved by District Supervisor:           |                                   |
| Title: Administrative Manager   | Approval Date:                             | Expiration Date:                  |
| E-mail Address: amackey1@elmridge.net   | Conditions of Approval:                    | Attached <input type="checkbox"/> |
| Date: <u>6-15-10</u> Phone: 505-632-3476 Ext 201  |  |                                   |

\* Attach Additional Sheets If Necessary

### **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 of December 31, 2009.  
**Closure date for the earth pit at the Bisti Coal 5K COM 2 well site is August 19, 2009.**
- 2) In accordance with of Subsection A of 19.15.17.13 NMAC, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close any earthen pits at a date the division requires because of imminent danger to fresh water, public health or the environment.  
**None of the earthen pits to be closed by Elm Ridge Exploration are deemed an imminent risk to the environment, public health of 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 Nations EPA on August 18, 2009; see attached Sundry Notice and Return Receipt.**

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

**On August 19, 2009, approximately twenty-two (22) cubic yards of production sludge was removed from the earthen pit and disposed of at Envirotech's NMOCD permitted soil remediation facility, Landfarm #2, Permit # NM-01-0011; see attached *Bill of Lading*.**

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

**All on-site equipment will be used for the continued operation of the Bisti Coal 5K COM 2 well site; see *Field Sheet* and *Site Photos*.**

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

**A five (5)-point composite sample was collected of native soil beneath the earthen pit and analyzed in the field for total petroleum hydrocarbons (TPH) via USEPA Method 418.1, and analyzed in the laboratory for benzene and BTEX via USEPA Method 8021B, and for total chlorides via USEPA Method 4500B. The sample returned results below the 100 mg/kg TPH standard, the 0.2 mg/kg benzene standard and the 50 mg/kg BTEX standard, but above the 250 mg/kg total chloride standard, confirming that a release did occur. Elm Ridge Exploration will comply with Rule 29 from this point forward with the local division of the OCD.**

| NAME                   | Benzene     | BTEX         | Chlorides | TPH       |
|------------------------|-------------|--------------|-----------|-----------|
| Pit Rule Standard      | 0.2 mg/kg   | 50 mg/kg     | 250 mg/kg | 100 mg/kg |
| Earth Pit Comp 4' Deep | 0.003 mg/kg | 0.0108 mg/kg | 280 mg/kg | < 5 mg/kg |
| Background             | NS          | NS           | 100 mg/kg | NS        |

- 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 *Site Photos*.**

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

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

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

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

**The five (5)-point composite sample of native soil beneath the earthen pit returned results below the 100 mg/kg TPH standard, the 0.2 mg/kg benzene standard and the 50 mg/kg BTEX standard, but above the 250 mg/kg total chloride standard, confirming that a release did occur. Elm Ridge Exploration will follow up with the local division of the OCD in compliance with Rule 29.**

- 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.  
**Elm Ridge Exploration will submit the above mentioned closure documents to the local division of the OCD.**



30-045-28108

March 8, 2010

Project No. 03056-0180

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

Phone (505) 476-3487

**RE: MODIFIED C-141 RELEASE NOTIFICATION FORM FOR THE BISTI COAL 5 K  
COM 2 WELL SITE**

Dear Mr. Jones,

Please find enclosed the modified C-141 Release Notification Form and additional supporting closure documentation for the Bisti Coal 5 K COM 2 well site owned and operated by Elm Ridge Exploration. All closure activities from this point forward will comply with Rule 29 with the district office of the OCD.

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.**

A handwritten signature in black ink, appearing to read 'J. McDaniel', is written over a horizontal line.

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

Enclosure: Modified C-141 Release Notification Form  
Modified Closure Checklist

Cc: Client File No. 03056

RECEIVED OCD  
2010 JUN 18 A 11:16