

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

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

Form C-144
July 21, 2008

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

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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.

1.
Operator: E.G. L Resources OGRID #: 173413
Address: PO Box 10886, Midland, Texas 79702
Facility or well name: Lusk 31 Federal #3
API Number: 30-025-39593 OCD Permit Number: PI-01553
U/L or Qtr/Qtr NW/SE Section 31 Township 18S Range 32E County: Lea
Center of Proposed Design: Latitude 32 42 07.04 Longitude -103 48 13.75 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 20 mil LLDPE HDPE PVC Other _____
 String-Reinforced
Liner Seams: Welded Factory Other _____ Volume: 16,700 bbl Dimensions: L 136 x W 104 x D 6-10

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 ___ Not Applicable _____
- 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 checked="" 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 checked="" type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to temporary, emergency, or cavitation pits and below-grade tanks</i>) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input checked="" 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	<input type="checkbox"/> Yes <input checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input checked="" 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 - **PREVIOUSLY SUBMITTED**
- Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC - **PREVIOUSLY SUBMITTED**
- 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): John Stark Title: President

Signature: [Signature] Date: 7/27/11

e-mail address: john@eglsources.com Telephone: 432-687 6560

20.

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

OCD Representative Signature: _____ Approval Date: _____

Title: _____ OCD Permit Number: P1-01553

21.

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

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

Closure Completion Date: _____

22.

Closure Method:

Waste Excavation and Removal On-Site Closure Method Alternative Closure Method Waste Removal (Closed-loop systems only)

If different from approved plan, please explain.

23.

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

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

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

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

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

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

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

24.

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

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

On-site Closure Location: Latitude _____ Longitude _____ NAD: 1927 1983

25.

Operator Closure Certification:

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

Name (Print): JOHN Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

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**C-144 Supplemental Documentation for Drilling Pit Closure Plan
Lusk Federal #3 – API 30-025-39593**

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**THE OPERATOR, EGL RESOURCES INC., WILL ADHERE TO THE
APPROPRIATE MANDATES OF NMOCD RULES INCLUDING:**

- Using appropriate engineering principles and practices
- Following applicable liner manufacturers' requirements.

This plan includes:

- A Burial Trench Construction and Design Plan
- A closure plan and
- Previously-submitted hydrogeologic data associated with the approved permit

The closure plan describes the proposed closure method and the proposed procedures and protocols to implement and complete the closure. The operator anticipates in-place closure of the outer horse shoe and trench burial of the inner horse shoe.

If waste sampling results suggest that one or both on-site closure standards are not met for the preferred alternative (in-place closure of the outer horse shoe and trench burial of the inner horse shoe), the operator will evaluate the sampling results and implement the most logical of the following closure methods described in this plan:

- Trench burial for the inner and outer horse shoe (the entire pit)
- In-place closure for the outer horse shoe and excavation and removal of the inner shoe as part of a waste excavation and removal closure method
- Trench burial for the outer shoe and excavation and removal of the inner shoe
- Excavation and removal of the entire pit (inner and outer horse shoe) as part of a waste excavation and removal closure method.

Hydrogeologic Data

The information identified in item 10, "Siting Criteria" of the previously-approved C-144 is attached. These are:

1. Figure 1a –presents data from the Office of the State Engineer (OSE) database and USGS database. This figure shows the location of the nearest registered water supply wells and available depth to ground water data. Figure 1b reproduces Figure 16 from *Collection of Hydrologic Data – Eastside Roswell Range EIS Area – New Mexico* (Geohydrology Associates, Inc., 1978), which provides additional depth to ground water data for the area.
2. Figure 2- USGS topographic map of the area. These maps show locations of any significant watercourse the locations of windmills and other wells that may not be registered with the OSE
3. Figure 3 – recent aerial photograph showing the presence of structures, which in this area are oil wells and tank batteries
4. Figure 4 - is a street map that also shows the location of the nearest incorporated municipal boundary

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5. Figure 5 – shows the no wetlands are identified in the area directly surrounding the site
6. Figure 6 – shows the location of the nearest identified subsurface mine
7. Figure 7 – shows the area in relation to identified unstable areas

A FEMA floodplain map of the area does not yet exist, according to the information presented in Figure 8. After contacting FEMA, the phone representative confirmed that no map exists and no flood hazard evaluation has been conducted by FEMA. However, Figure 2 and our site visit confirm that this sand dune area is not within a floodplain nor any arroyo or other such drainage system. There is no evidence of flooding at or near the site that would endanger the temporary pit or burial trench. Our analysis agrees with the evaluation of NMOCD through the approved permit for the pit and in-place burial.

Siting Criteria Compliance Demonstration

As designated in the C-144 the location of the pit and burial trench meet the criteria of NMOCD Rules. We believe the data presented in Figures 1-7 demonstrate that:

Ground water is GREATER than 100 feet below the bottom of the temporary pit and proposed burial trench

Figure 1 shows all wells in the OSE database, wells with depth to water data from the USGS database from the Petroleum Recovery Research Center (PRRC). The map presents information typically employed by NMOCD to determine the depth to water.

Because the OSE and USGS depth to water data are sparse, we elected to include Figure 1b from *Collection of Hydrologic Data – Eastside Roswell Range EIS Area – New Mexico* (Geohydrology Associates, Inc., 1978). This map, which is based upon considerably more data than the USGS and OSE database, shows that depth to ground water at the location is about 180 feet from land surface.

The pit, excavated material and burial trench is NOT 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).

The approved permit for in-place burial, Figure 2-3 and Attachment A confirm this statement.

The pit and burial trench is NOT within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

The approved permit, Figure 2-3 and Attachment A confirm this statement.

The pit and burial trench is NOT within 500 feet of a private, domestic fresh water well or spring used by less than five households for domestic or stock watering purposes, it is NOT within 1,000 feet of any other fresh water well or spring.

The approved permit, Figures 1-3 and Attachment A support this statement.

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The pit and burial trench is NOT 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.

The approved permit for in-place burial and Figure 4 confirm this statement.

The pit and burial trench is NOT within 500 feet of a wetland.

The approved permit for in-place burial, Figure 5 and Attachment A confirm this statement.

The pit, excavated material and burial trench is NOT within an area overlying a subsurface mine.

The approved permit for in-place burial and Figure 6 confirm this statement. The closest underground mine is shown in the southeast corner of Figure 6, many miles south of the site.

The pit and burial trench is NOT within an unstable area.

Our inquiry confirms the opinion suggested by the approved permit for in-place burial, that the pit (and proposed burial trench) is not in an unstable area. Figure 7 shows that the area is not within any karst area, which is a strong indicator of unstable areas. Our site visit and our examination of the geology of the area (see Figure 1) allow us to provide a professional opinion that the site is not in an unstable area.

The pit, excavated material and burial trench is NOT within a 100-year floodplain.

The approved permit for in-place burial, Figure 2 and our site visit confirm this statement. The location of the pit is not in or near an active watercourse. No FEMA map has been created for this area, so our professional judgment is based on observations of the site location and other available data.

Closure Plan- General Conditions

Protocols and Procedures

The operator will use the following procedures and protocols to implement the closure:

- The operator has notified the landowner that the operator plans on-site closure of the temporary pit (see Attachment B).
- The operator of the temporary pit will notify the Artesia division district office verbally or by email at least 72 hours, but not more than one week, prior to any closure operation. The notice will include the operator's name and the location to be closed by unit letter, section, township and range, well's name, number, the API number.
- The operator of the temporary pit has removed all liquids from the temporary pit prior and disposed of the liquids in a division-approved facility.

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- Fluids on and entrained in the drilling waste have been removed from the pit for re-use or disposal.
- Fluids pumped from the outer horse shoe drainage system were transferred to the inner shoe.
- The operator removed all free liquids from the temporary pit within 30 from the date that the operator released the drilling rig. The operator noted the date of the drilling rig's release on form C-105 or C-103 upon well completion. The operator requested an extension of up to three months from the appropriate division district office if necessary to allow for rinsing of drilling waste solids and the recovery of water for possible re-use.
- After removal of all standing water, drilling pit drainage began as water from the outer horse shoe drainage system discharges to the surface of the inner shoe.
- Within 60 days of closure completion, the operator will submit a closure report on form C-144, with necessary attachments to document all closure activities including sampling results; information required by 19.15.17 NMAC; a plot plan; and details on back-filling, capping and covering, where applicable.
- In the closure report, the operator will certify that all information in the report and attachments is correct and that the operator has complied with all applicable closure requirements and conditions specified in the approved closure plan.
- The operator will provide a plat of the pit location on form C-105 with the closure report within 60 days of closing the temporary pit.

Additional Protocols and Procedures for On-Site Closure

- The operator has provided the surface owner notice of the operator's proposal of an on-site closure (see Attachment B) as required in 19.15.17.13.F(1)(b).
- Upon receipt of NMOCD approval for on-site closure, the operator will notify the surface owner (BLM) by certified mail, return receipt requested, that the operator plans to close the pit and where the operator has approval for on-site closure. Evidence of mailing of the notice will demonstrate compliance with this requirement.
- The operator will place a steel marker at the center of an on-site burial. The steel marker will be not less than four inches in diameter and will be cemented in a three-foot deep hole at a minimum. The steel marker will extend at least four feet above mean ground level and at least three feet below ground level. The operator name, lease name and well number and location, including unit letter, section, township and range, and that the marker designates an on-site burial location will be welded, stamped or otherwise permanently engraved into the metal of the steel marker.
- The operator will report the exact location of the on-site burial on form C-105 filed with the division.
- Because the surface is owned by the Federal Government and administered by the BLM, no deed exists, the land is held in trust. Therefore, the operator cannot file a deed notice identifying the exact location of the on-site burial with

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the county clerk in the county. The exact location of the on-site burial will be transmitted to the BLM by copy of the form C-105 discussed above.

If waste sampling results suggest that one or both closure standards are not met for the preferred alternative (in-place closure of the outer horse shoe and trench burial of the inner horse shoe), the operator will evaluate the sampling results and implement the most logical of the following closure methods described in this plan:

- Trench burial for the inner and outer horse shoe (the entire pit)
- In-place closure for the outer horse shoe and excavation and removal of the inner shoe as part of a waste excavation and removal closure method
- Trench burial for the outer shoe and excavation and removal of the inner shoe
- Excavation and removal of the entire pit (inner and outer horse shoe) as part of a waste excavation and removal closure method.

Site Reclamation Plan

After the operator has closed the pit, the operator will reclaim the pit location and all areas associated with the pit, including associated access roads to a safe and stable condition that blends with the surrounding undisturbed area. The operator will substantially restore the impacted surface area to the condition that existed prior to oil and gas operations by placement of the soil cover as provided in Subsection H of 19.15.17.13 NMAC, recontour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography and re-vegetate according to Subsection I of 19.15.17.13 NMAC.

Soil Cover Design Plan

If the operator removes the pit contents or remediates any contaminated soil to the division's satisfaction the soil cover will consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.

The soil cover for the in-place burial or trench burial will consist of a minimum of four feet of compacted, non-waste containing, earthen material. The soil cover will include either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.

The operator will construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material.

Re-vegetation Plan

1. The first growing season after the operator closes the pit, including access roads, the operator will seed or plant the disturbed areas.
2. The operator will accomplish seeding by drilling on the contour whenever practical.

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3. The operator will obtain vegetative cover that equals 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation).
4. The operator will follow BLM mandates for the seed mixture (see Attachment B) not including noxious weeds, and maintain that cover through two successive growing seasons.
5. During the two growing seasons that prove viability, there will be no artificial irrigation of the vegetation.
6. The operator will repeat seeding or planting until it successfully achieves the required vegetative cover.
7. If conditions are not favorable for the establishment of vegetation, such as periods of drought, the operator may request that the division allow the operator to delay seeding or planting until soil moisture conditions become favorable or may require the operator to use additional cultural techniques such as mulching, fertilizing, irrigating, fencing or other practices.
8. The operator will notify the division when it has seeded or planted and when it successfully achieves re-vegetation.

In-place Closure Plan

In the event that sampling of the drilling waste suggests that the outer horse shoe of the drilling pit meets the criteria for in-place closure, the operator will proceed with in-place closure for the outer horse shoe. This submittal proposes closure of the inner horse shoe by trench burial or excavation and removal, depending upon the result of waste sample results, as described in this submittal.

Siting Criteria Compliance Demonstration for In-Place Burial

The Siting Criteria Compliance Demonstration for the temporary pit show that the requirements of 19.15.17.10 NMAC are met for in-place closure.

Waste Material Sampling Plan for In-place Burial

Because the ground water is more than 100 feet below the bottom of the buried waste (see above), the operator will collect at a minimum, a five point, composite sample of the contents of the temporary pit after treatment or stabilization.

The purpose of the sampling after the waste material is stabilized is to demonstrate that:

- Benzene, as determined by EPA SW 846 method 8021B or 8260B, does not exceed 0.2 mg/kg;
- Total BTEX, as determined by EPA SW-846 method 8021B or 8260B, does not exceed 50 mg/kg;
- The GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg;
- TPH, as determined by EPA method 418.1 does not exceed 2,500 mg/kg;
- Chloride, as determined by EPA method 300.1, does not exceed 1,000 mg/kg or the background concentration, whichever is greater.

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Protocols and Procedures for In-Place Burial

In addition to the General Conditions Protocols and Procedures and the Additional Protocols and Procedures for On-site Closure listed above, the operator will execute the following steps for in-place closure of the pit.

- A. The operator will measure the distance between the top of the drilling waste and existing grade to determine if stabilized drilling waste (see stabilization methods, below) will be at least 4-feet below existing grade to allow installation of the soil cover (see soil cover design, above).
- B. The operator will stabilize or solidify the contents of the pit to a bearing capacity sufficient to support the temporary pit's final cover. However, the operator will not mix the pit contents with soil or other material at a mixing ratio of greater than 3:1, (3 parts soil or other material to 1 part drilling waste).
- C. Specifically, the drilling waste will be stabilized in the pit by adding no more than 3 parts clean fill derived from the excavation of the pit to 1 part drilling waste.
- D. After stabilization such that the waste material will support the soil cover, the mixture will be sampled pursuant to NMOCD Rules (see waste sampling plan, above).
- E. If sample results show that stabilized waste in:
 - a. The outer horse shoe of the pit satisfy the regulatory standards for in-place burial and the inner horse shoe meets the standards for trench burial,
 - i. the operator will measure the distance between the stabilized waste and existing grade and, if necessary, calculate the volume of waste that must be removed to the burial trench (see below) to allow for placement of the soil cover (see soil cover design criteria, above) over the outer horse shoe.
 - ii. The operator will proceed with trench burial of the waste in the inner horse shoe as described below, building a trench sufficiently large to accommodate any waste that must be removed from the outer shoe.
 - b. The outer horse shoe of the pit exceeds the regulatory standards for in-place burial but the inner and outer shoe meet the standards for trench burial, the operator will proceed with trench burial of the waste as described below.
 - c. The outer horse shoe of the pit satisfies the regulatory standards for in-place burial but the inner horse shoe exceeds the standards for trench burial, the operator will measure the distance between the stabilized waste and existing grade and, if necessary, remove stabilized waste from the outer horse shoe to allow for placement of the soil cover (see soil cover design criteria, above) over the outer horse shoe. The operator will proceed with excavation and removal of the inner shoe (and excess outer stabilized waste, if any) as part of a waste excavation and removal closure method.

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- d. The outer horse shoe of the pit exceeds the criteria for in-place burial but satisfies the regulatory standards for trench burial and the inner horse shoe exceeds the standards for trench burial, the operator will proceed with excavation and removal of the inner shoe and implement trench burial for the outer shoe waste.
 - e. The outer horse shoe and inner horse shoe of the pit exceed the regulatory standards for trench burial, the operator will proceed with excavation and removal closure method of the inner and outer horse shoe .
- F. Cover the geomembrane lined, filled, temporary pit with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site as described in this plan. Specifically, a 4-foot thick soil cover consistent with NMOCD Rules will be placed over the stabilized waste.
- G. Any excess liner above the stabilized waste will be removed for re-use or disposal.

On-Site Trench Burial Plan

In the event that sampling of the drilling waste suggests that the outer cell of the drilling pit does not meet the criteria for in-place closure, the operator may elect to construct and use an on-site trench for closure of both cells (inner and outer horse shoe).

Siting Criteria Compliance Demonstration for Trench Burial

The Siting Criteria Compliance Demonstration Section, above, shows that the requirements of 19.15.17.10 NMAC are met for trench burial of the temporary pit. The trench will be no deeper than 20-feet below existing grade, resulting in a distance between the bottom of the trench and the potentiometric surface of more than 150 feet.

Waste Material Sampling Plan for On-Site Trench Burial

Because the ground water is more than 100 feet below the bottom of the buried waste (see siting criteria above), the operator will collect at a minimum, a five point, composite sample of the waste materials scheduled for trench burial after treatment or stabilization. Stabilization of the waste is described below. As described in this submittal, the waste materials scheduled for trench burial may be from the inner horse shoe or the entire pit. The purpose of the sampling after the waste material is stabilized is to demonstrate that:

- The TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 2,500 mg/kg.
- The stabilized waste passes the paint filter liquids test (EPA SW-846, method 9095)
- Using EPA SW-846 method 1312:

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- The chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 3,000 mg/L or the background concentration, whichever is greater,
- The concentrations of the inorganic water contaminants specified in Subsection A of 20.6.2.3103 NMAC as determined by appropriate EPA methods do not exceed the standards specified in Subsection A of 20.6.2.3103 NMAC or the background concentration, whichever is greater, and
- The concentrations of the organic water contaminants specified in Subsection A of 20.6.2.3103 NMAC as determined by appropriate EPA methods do not exceed the standards specified in Subsection A of 20.6.2.3103 NMAC, unless otherwise specified in Part 17 of NMOCD Rules.

If sampling shows that the waste material in the outer and inner horse shoe requires trench burial, the operator will construct a burial trench outside of the footprint of the drilling pit and within 100-feet of the drilling pit as required by NMOCD Rules. If sampling shows that the waste from the inner and/or outer horse shoe does not meet the criteria for trench burial, the operator will implement the waste excavation and removal method as discussed in this submittal.

Construction/Design of Burial Trench

The operator will design and construct on-site trench for closure as specified in 19.15.17.11.J NMAC. Specifically:

- I. The operator will excavate a separate trench to an appropriate depth (less than 20 feet below existing grade) and width that allows for re-establishment of existing grade after the installation of the geomembrane bottom liner, burial of the drilling waste, installation of the upper geomembrane liner cover and the 4-foot thick division-prescribed soil cover to existing grade required pursuant to 19.15.17.13.H NMAC.
- II. The on-site trench will have a properly constructed foundation and side walls consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear.
- III. Geotextile will be placed under the liner where needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity.
- IV. The on-site trench will be constructed with a geomembrane liner that consists of a 20-mil string reinforced LLDPE liner
- V. The geomembrane liner is composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material will be resistant to ultraviolet light. Liner compatibility will comply with EPA SW-846 method 9090A.
- VI. The contractor for the operator will minimize liner seams and orient them up and down, not across a slope. The operator will use factory welded seams where possible. Prior to field seaming, the operator will overlap liners four to

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- six inches, and orient liner seams parallel to the line of maximum slope, *i.e.*, oriented along, not across, the slope. The operator will minimize the number of field seams in corners and irregularly shaped areas.
- VII. Qualified personnel will perform field seaming. The contractor will weld field liner seams.
 - VIII. The contractor for the operator will install sufficient liner material to reduce stress-strain on the liner.
 - IX. The operator will ensure that the outer edges of all liners are secured for the placement of the excavated waste material into the on-site trench.
 - X. The excavated waste material will be placed in the trench so that it is mounded in the middle and slopes slightly downwards towards the walls of the trench. After placement of the material in the trench, the contractor for the operator will fold the outer edges of the on-site trench liner to overlap the waste material in the on-site trench prior to the installation of the geomembrane cover.
 - XI. The contractor for the operator will install a geomembrane cover over the slightly mounded waste material in the lined trench. Due to the geometry of the installation, the operator will install the geomembrane cover in a manner that prevents the collection of infiltration water in the lined trench and on the geomembrane cover after the soil cover is in-place.
 - XII. The geomembrane cover will consist of a 20-mil string reinforced LLDPE liner. The geomembrane cover will be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. Cover compatibility will comply with EPA SW-846 method 9090A.

To construct a separate burial trench within the footprint of the inner horse shoe to accommodate stabilized waste from the inner shoe (and possibly some waste from the outer shoe as described earlier):

- i.) Stabilize the drilling waste solids in the inner horse shoe by adding less than 3 parts dry dirt to one part waste. Stabilization will not exceed a 3:1 mixing ratio (3 parts soil or other material to 1 part drilling waste),
- ii.) Move the stabilized drilling waste on the suction side of the inner horse shoe to the discharge side
- iii.) Collect waste samples as described in the Waste Materials Sampling Plan for laboratory testing to confirm that the stabilized waste meets the criteria for trench burial – including the paint filter test (EPA SW-846, method 9095). If sample results show that the criteria for trench burial are not met, excavate and remove the waste (see Excavation and Removal Closure Plan section, below).
- iv.) Remove the exposed liner from the suction side of the inner horse shoe.
- v.) Conduct the confirmation sampling (described in the next section of this submittal) below the pit liner within the footprint of the suction side of the brine cell,

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- vi.) Provided that confirmation samples demonstrate that a leak from the pit has not occurred, excavate a separate trench below the suction side of the brine cell. If confirmation samples document a release from the pit, the separate trench must be excavated outside of the footprint of the drilling pit but within 100 feet of the drilling pit to comply with NMOCD Rules,
- vii.) The stabilized waste will be buried by appropriate steps (See On-Site Trench Burial Plan, above and Confirmation Sampling Plan for On-site Trench Burial, below) including:
 - a. Lining the separate trench pursuant to the Rule and this plan.
 - b. Transferring the stabilized waste to the lined burial trench and
 - c. Completing the on-site trench burial as outlined in the plan

After the stabilized waste has been properly buried in the on-site trench, confirmation sampling of the discharge side of the inner horse shoe will be conducted according to the plan described below to determine if a release on that side of the pit has occurred.

Confirmation Sampling Plan for On-Site Trench Burial

The operator will test the soils beneath the temporary pit after excavation and prior to installing the burial trench to determine whether a release has occurred. If the burial trench is excavated within the footprint of the inner horse shoe (as described above) conformation sampling will occur beneath the suction side of the inner shoe first and the discharge side of the inner shoe second. To determine if a release has occurred, the operator and/or qualified contractor will collect, at a minimum:

- A five point, composite sample and
- Individual grab samples from any area that is wet, discolored or showing other evidence of a release.

The purpose of this sampling is to demonstrate that:

1. Benzene, as determined by EPA SW-846 method 8021B or 8260B does not exceed 0.2 mg/kg;
2. Total BTEX, as determined by EPA SW-846 method 8021B or 8260B does not exceed 50 mg/kg;
3. The GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg;
4. The TPH, as determined by EPA method 418.1 does not exceed 2,500 mg/kg;
and
5. Chloride, as determined by EPA method 300.1, does not exceed 1,000 mg/kg or the background concentration, whichever is greater.

Reporting

The operator shall notify the division of its results on form C-141. If the operator or the division determines that a release has occurred, then the operator will comply with 19.15.29 NMAC and 19.15.30 NMAC, as appropriate.

Excavation and Removal Closure Plan

IF THE CRITERIA FOR ON-SITE CLOSURE (IN-PLACE BURIAL AND/OR TRENCH BURIAL) FOR SOME OR ALL OF THE TEMPORARY PIT ARE NOT MET, THE OPERATOR WILL ADHERE TO NMOCD RULES AND IMPLEMENT THE FOLLOWING ACTIONS FOR THE MATERIALS THAT DO NOT MEET CRITERIA FOR ON-SITE CLOSURE:

Protocols and Procedures for Excavation and Removal

The operator will close the temporary pit by excavating all contents and any synthetic pit liners that cannot be re-used and transferring those materials to one of the division-approved facilities listed below:

Controlled Recovery, Inc.	NM-01-0006
Lea Land, LLC	NM-01-0035

If the sampling program described below demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Subparagraph (b.ii) of Paragraph (1) of Subsection B of 19.15.17.13 NMAC, then the operator will:

1. Backfill the temporary pit excavation with compacted, non-waste containing, earthen material;
2. Construct a division-prescribed soil cover to existing grade as described in the Soil Cover Plan (above);
3. Recontour and re vegetate the site as described in the Revegetation Plan (above).

Confirmation Sampling Plan for Excavation and Removal

The operator will test the soils beneath the temporary pit after excavation to determine whether a release has occurred. To determine if a release has occurred, the operator and/or qualified contractor will collect, at a minimum:

- A five point, composite sample and;
- Individual grab samples from any area that is wet, discolored or showing other evidence of a release

The purpose of this sampling is to demonstrate that:

- Benzene, as determined by EPA SW-846 method 8021B or 8260B does not exceed 0.2 mg/kg;
- Total BTEX, as determined by EPA SW-846 method 8021B or 8260B does not exceed 50 mg/kg;
- The GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg;
- The TPH, as determined by EPA method 418.1 does not exceed 2,500 mg/kg; and
- Chloride, as determined by EPA method 300.1, does not exceed 1,000 mg/kg or the background concentration, whichever is greater.

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Reporting

The operator shall notify the division of its results on form C-141. If the operator or the division determines that a release has occurred, then the operator will comply with 19.15.29 NMAC and 19.15.30 NMAC, as appropriate.