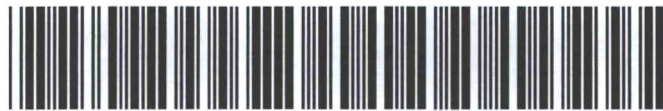




AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.



App Number: pVF1735633618

144B - 16144

ENDURING RESOURCES,LLC

DEC 29 2017

Form C-144
Revised April 3, 2017

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

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

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

Instructions: Please submit one application (Form C-144) per individual pit, 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: Enduring Resources, LLC OGRID
#: (303) 350-5718
Address: 511 Sixteenth Street, Suite 700, Denver, CO 80202
Facility or well name: Vaca Compressor Station
API Number: NA OCD Permit Number: _____
U/L or Qtr/Qtr NE/NE Section 2 Township 29N Range 10W County: San Juan County
Center of Proposed Design: Latitude 36.758766 Longitude -107.846493 NAD83
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☐ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC
Temporary: ☐ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☐ no
☐ Lined ☐ Unlined Liner type: Thickness _____ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____ bbl Dimensions: L _____ x W _____ x D _____

3.
☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: 45 bbl Type of fluid: Water
Tank Construction material: Steel
☒ 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 _____

4.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.
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 _____

6.
Netting: Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

☐ Screen ☐ Netting ☒ Other Vented Steel Top w/ man way hatch

☐ Monthly inspections (If netting or screening is not physically feasible)

7.
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 19.15.16.8 NMAC

8.
Variances 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:

☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

9.
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. Siting criteria does not apply to drying pads or above-grade tanks.

General siting

Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.

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

☐ Yes ☒ No
☐ NA

Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit.

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

☐ Yes ☐ No
☒ NA

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. (**Does not apply to below grade tanks**)

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

☐ Yes ☐ No

Within the area overlying a subsurface mine. (**Does not apply to below grade tanks**)

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

☐ Yes ☐ No

Within an unstable area. (**Does not apply to below grade tanks**)

- 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. (**Does not apply to below grade tanks**)

- FEMA map

☐ Yes ☐ No

Below Grade Tanks

Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).

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

☐ Yes ☒ No

Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;

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

☐ Yes ☒ No

Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)

Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)

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

☐ Yes ☐ No

Within 300 feet from a occupied 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 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.

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

☐ Yes ☐ No

Within 100 feet of a wetland.

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

☐ Yes ☐ No

Temporary Pit Non-low chloride drilling fluid

Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any 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 spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;

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

☐ Yes ☐ No

Within 300 feet of a wetland.

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

☐ Yes ☐ No

Permanent Pit or Multi-Well Fluid Management Pit

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 1000 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 spring or a fresh water well used for domestic or stock watering purposes, 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 500 feet of a wetland.

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

☐ Yes ☐ No

10.

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: _____

11.

Multi-Well Fluid Management Pit 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.

- ☐ 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
- ☐ A List of wells with approved application for permit to drill associated with the pit.
- ☐ 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
- ☐ Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12.

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

13.

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 ☐ Multi-well Fluid Management Pit
☐ 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

14.

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 C 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 H of 19.15.17.13 NMAC
☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15.

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 require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 25 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 25-50 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 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 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, 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 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, 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
Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 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 incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	<input type="checkbox"/> Yes <input type="checkbox"/> No

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 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

16. **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 E of 19.15.17.13 NMAC
☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K 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 19.15.17.13 NMAC
☐ Waste Material Sampling Plan - based upon the appropriate requirements 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 H of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17. **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): JT Conley Title: VP OPERATIONS

Signature: [Signature] Date: 11-21-2017

e-mail address: jconley@enduringresources.com Telephone: 303-573-1222

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

OCD Representative Signature: [Signature] Approval Date: 1/3/2018

Title: Environmental Specialist OCD Permit Number: _____

19. **Closure Report (required within 60 days of closure completion):** 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: _____

20. **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.

21. **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 for private land only)
☐ 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

22.

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: _____

BELOW GRADE TANK (BGT) DESIGN AND CONSTRUCTION PLAN

SUBMITTED TO:

ENVIRONMENTAL BUREAU,
NEW MEXICO OIL CONSERVATION DIVISION

ON BEHALF OF:

ENDURING RESOURCES

332 ROAD 3100
AZTEC, NEW MEXICO 87410
(505) 646-9720



Enduring Resources
San Juan Basin
Below Grade Tank Design and Construction Plan

INTRODUCTION

In accordance with NMAC §§ 19.15.17.9(B)(4) and 19.15.17.11 Enduring Resources submits this Design and Construction Plan for below grade tanks (BGTs) in New Mexico. This Plan contains standard conditions that attach to multiple BGTs.

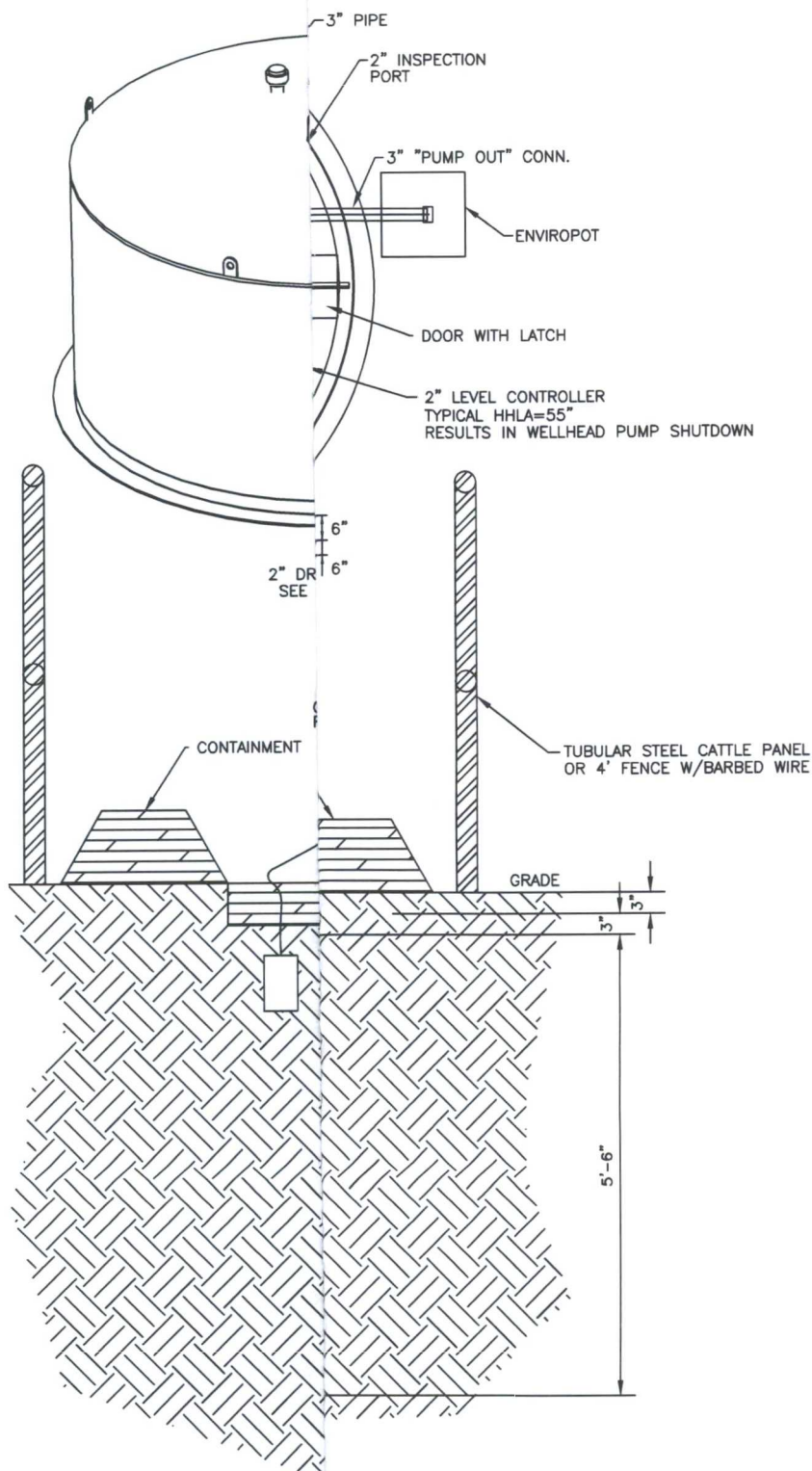
1. Enduring Resources will design and construct a BGT to contain liquids and solids, prevent contamination of fresh water, and protect public health and the environment. NMAC § 19.15.17.11(A).
2. Enduring Resources will post an upright sign not less than 12 inches by 24 inches with lettering not less than two inches in height in a conspicuous place on the fence surrounding the BGT, unless the BGT is located on a site where there is an existing well, signed in compliance with NMAC § 19.15.16.8, that is operated by Enduring Resources. Enduring Resources will post the sign in a manner and location such that a person can easily read the legend. The sign will provide the following information: Enduring Resources's name; the location of the site by quarter-quarter or unit letter, section, township and range; and emergency telephone numbers. NMAC § 19.15.17.11(C).
3. Enduring Resources will fence or enclose a BGT in a manner that prevents unauthorized access and will maintain the fences in good repair. Fences are not required if there is an adequate surrounding perimeter fence that prevents unauthorized access to the well site or facility, including the BGT. NMAC § 19.15.17.11(D)(1).
4. Enduring Resources will fence or enclose a BGT located within 1000 feet of a permanent residence, school, hospital, institution or church with a chain link security fence, at least six feet in height with at least two strands of barbed wire at the top. Enduring Resources will close and lock all gates associated with the fence when responsible personnel are not on-site. NMAC § 19.15.17.11(D)(2).
5. Enduring Resources will fence BGTs to exclude livestock with a four foot fence that has at least four strands of barbed wire evenly spaced in the interval between one foot and four feet above ground level. NMAC § 19.15.17.11(D)(3). Enduring Resources may install tubular steel cattle panels, as it determines appropriate (photo of cattle

panel fence submitted to NMOCD, 24 June 2009). As illustrated on the attach photo.

6. Enduring Resources will screen the permanent opening on the tank top with expanding steel mesh in order to render it non-hazardous to wildlife, including migratory birds. NMAC § 19.15.17.11(E).
7. Enduring Resources's BGTs will be constructed with the design features illustrated on the attached drawing.
8. Only double-walled, double-bottomed BGTs will be installed.
9. Enduring Resources will use 3/16" carbon steel which is resistant to the anticipated contents and resistant to damage from sunlight. NMAC § 19.15.17.11(I)(1).
10. Enduring Resources will construct a BGT foundation on a level base free of rocks, debris, sharp edges or irregularities to help prevent punctures, cracks or indentations of the liner or tank bottom. NMAC § 19.15.17.11(I)(2).
11. Enduring Resources will construct a BGT to prevent overflow and the collection of surface water run-on. NMAC § 19.15.17.11(I)(3). Enduring Resources, or a contractor representing Enduring Resources, will install a level control device to help prevent overflow from the BGT and will use berms and/or a diversion ditch to prevent surface run on from entering the BGT. NMAC §§ 19.15.17.11(I)(3), 19.15.17.12(A)(7), and 19.15.17.12(D)(1).
12. All BGTs, in which the side walls are not open for visible inspection for leaks, will be double walled with leak detection capability. NMAC § 19.15.17.11(I)(4)(b).
13. Enduring Resources, as the operator of a below-grade tank constructed and installed prior to June 16, 2008 that does not meet all the requirements in Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC and is not included in Paragraph (6) of Subsection I of 19.15.17.11 NMAC, is not required to equip or retrofit the below-grade tank to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC so long as it demonstrates integrity. If the existing below-grade tank does not demonstrate integrity, the operator shall promptly remove that below-grade tank and install a below-grade tank that complies with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, as illustrated in the approved drawing. Enduring Resources shall comply with the operational requirements of 19.15.17.12 NMAC.

14. Enduring Resources, as the operator of a below-grade tank constructed and installed prior to June 16, 2008 that is single walled and where any portion of the tank sidewall is below the ground surface and not visible, shall equip or retrofit the below-grade tank to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, or close it, within five years after June 16, 2008. If the existing below-grade tank does not demonstrate integrity, Enduring Resources shall promptly remove that below-grade tank and install a below-grade tank that complies with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, as illustrated in the approved drawing. Enduring Resources shall comply with the operational requirements of 19.15.17.12 NMAC.


P. 2 PLACES)



ELEVATION
SCALE 1"=1'-0"

NOTES:

1. FABRICATOR TO PRESSURE TEST THE AREA BETWEEN THE TANKS.
2. TANK TO BE CONSTRUCTED OF 3/16" THK. ASTM A36 STEEL.
3. DOUBLE WALL DOUBLE BOTTOM.
4. DEPENDING ON THE ORIENTATION OF THE EQUIPMENT ON LC, THE TANKS MAY BE REQUIRED TO HAVE A DIFFUSER. ANY OF THE FOUR 2" STUBS THAT ARE NOT CONNECTED TO THE TANKS MAY BE USED FOR THIS PURPOSE.
5. UNDERGROUND TANK CONNECTIONS AND TRANSFER LINES ARE TO BE PROTECTED BY A FUSION BONDED EPOXY (FBE) COATING OR SIMILAR.
6. Enduring WILL CONSTRUCT A BGT FOUNDATION ON A LEVEL SURFACE TO HELP PREVENT PUNCTURES, CRACKS OR INDENTATIONS ON THE TANKS.

CHEV	APPROV	DATE	Enduring Resources, LLC						 ENDURING RESOURCES LLC			
			95 BBL									
			STANDARD BELOW GRADE TANK									
			DATE DRAWN: 05/15/06		SCALE: AS NOTED		PROJ. NO: 12088		OWN. NO:		REV:	
			DRAWN BY: J. FUNK	ENGINEER:	FILE:	BLOWDOWN TANK				110	D	
			EXCH. NO:									

BELOW GRADE TANK (BGT) OPERATING AND MAINTENANCE PLAN

SUBMITTED TO:

ENVIRONMENTAL BUREAU,
NEW MEXICO OIL CONSERVATION DIVISION

ON BEHALF OF:

ENDURING RESOURCES

332 ROAD 3100

AZTEC, NEW MEXICO 87410

(505) 636-9720



ENDURING RESOURCES

San Juan Basin

Below Grade Tank Operating and Maintenance Plan

INTRODUCTION

In accordance with NMAC §§ 19.15.17.9(B)(4) and 19.15.17.12 Enduring Resources submits this Operating and Maintenance Plan (O&M Plan) for below grade tanks (BGTs) in New Mexico. This O&M Plan contains standard conditions that attach to multiple BGTs. If needed for a particular BGT, a modified O&M Plan will be submitted to the New Mexico Oil Conservation Division (NMOCD or the division) for approval prior to implementation.

GENERAL PLAN:

1. Enduring Resources, or a contractor representing Enduring Resources, will operate and maintain a BGT to contain liquids and solids to prevent contamination of fresh water and to protect public health and environment. NMAC § 19.15.17.12(A)(1).
2. Enduring Resources will not discharge into or store any hazardous waste in a BGT. NMAC § 19.15.17.12(A)(3).
3. If a BGT develops a leak or is penetrated below the liquid surface, Enduring Resources will remove liquid above the damage within 48 hours, notify the appropriate division district office within 48 hours of discovery and will promptly repair the BGT. If a BGT develops a leak Enduring Resources will remove liquid above the damage within 48 hours, notify the appropriate division district office within 48 hours of discovery and will promptly repair or replace the BGT. If replacement is required, the BGT will meet all specification included in the attached approved design drawing and comply with 19.15.17.11(I)(1-4).
4. If Enduring Resources as an operator of a below-grade tank that was constructed and installed prior to June 16, 2008 that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC and discovers that the below-grade tank does not demonstrate integrity or that the below-grade tank develops any of the conditions identified in Paragraph (5) of Subsection A of 19.15.17.12 NMAC, then Enduring Resources or their representative shall close the existing below-grade tank pursuant to the closure requirements of 19.15.17.13 NMAC and install a below-grade tank that complies with the requirements of Paragraphs

(1) through (4) of Subsection I of 19.15.17.11 NMAC. NMAC § 19.15.17.12(D)(5). If replacement is required, the BGT will meet all specification included in the attached approved design drawing.

5. If Enduring Resources as the operator of the below-grade tank that was constructed and installed prior to June 16, 2008 that does not comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC and equips or retrofits the existing tank to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, then Enduring Resources or their representative shall visually inspect the area beneath the below-grade tank during the retrofit and document any areas that are wet, discolored or showing other evidence of a release on form C-141. Enduring Resources shall demonstrate to the division whether the evidence of contamination indicates that an imminent threat to fresh water, public health, safety or the environment exists. If the division determines that the contamination does not pose an imminent threat to fresh water, public health, safety or the environment, the operator shall complete the retrofit or the replacement of the below-grade tank. If Enduring Resources or division determines that the contamination poses an imminent threat to fresh water, public health, safety or the environment, then Enduring Resources shall close the existing below-grade tank pursuant to the closure requirements of 19.15.17.13 NMAC prior to initiating the retrofit or replacement. NMAC § 19.15.17.12(D)(6). If replacement is required, the BGT will meet all specification included in the attached approved design drawing.
6. Enduring Resources, or a contractor representing Enduring Resources, will use berms and/or diversion ditches to prevent surface run-on from entering the BGT by diverting surface water run-on away from the bermed area. NMAC §§ 19.15.17.12(A)(7) and 19.15.17.12(D)(1).
7. Enduring Resources, or a contractor representing Enduring Resources, will not allow a BGT to overflow and will maintain adequate freeboard on existing BGTs by routine inspections utilizing pumper trucks whose routes are timed based on known production rates. Fluid is pumped out on this schedule. For newly constructed BGTs Enduring Resources, or a contractor representing Enduring Resources, will maintain adequate freeboard by installing level control devices that automatically shut off inflow to alleviate potential overtopping. NMAC § 19.15.17.12(D)(1) and 19.15.17.12(D)(4).
8. Enduring Resources, or a contractor representing Enduring Resources, will remove a visible or measurable layer of oil from the fluid surface of a BGT. NMAC § 19.15.17.12(D)(2).
9. Enduring Resources, or a contractor representing Enduring Resources, will inspect the BGT to assess compliance with NMAC § 19.15.17.12, Operational Requirements, at least once monthly and maintain a written record of each inspection for at least five (5) years. The approved inspection form is attached.

BELOW GRADE TANK (BGT) CLOSURE PLAN

SUBMITTED TO:

ENVIRONMENTAL BUREAU,
NEW MEXICO OIL CONSERVATION DIVISION

ON BEHALF OF:

ENDURING RESOURCES

332 ROAD 3100
AZTEC, NEW MEXICO 87410
(505) 646-9720



**Enduring Resources
San Juan Basin
Below Grade Tank Closure Plan**

INTRODUCTION

In accordance with NMAC §§ 19.15.17.9(B)(4) and 19.15.17.13, Enduring Resources submits this Closure Plan for below grade tanks (BGTs) in New Mexico. This Closure Plan contains standard conditions that attach to multiple BGTs. If needed for a particular BGT, a modified Closure Plan for a proposed alternative closure will be submitted to the New Mexico Oil Conservation Division (NMOCD or the division) for approval prior to closure.

CLOSURE PLAN PROCEDURES AND PROTOCOLS (NMAC §§ 19.15.17.9(C) and 19.15.17.13).

- 1) Enduring Resources, or a contractor acting on behalf of Enduring Resources, will close a BGT within the time periods provided in NMAC § 19.15.17.13(A), or by an earlier date required by NMOCD to prevent an imminent danger to fresh water, public health, or the environment. NMAC § 19.15.17.13(A).
- 2) Enduring Resources, or a contractor acting on behalf of Enduring Resources, will close an existing BGT that does not meet the requirements of NMAC § 19.15.17.11(I)(1 through 4) or is not included in NMAC § 19.15.17.11(I)(5) within five years after June 16, 2008, if not retrofitted to comply with § 19.15.17.11(I)(1 through 4). NMAC § 19.15.17.13(A)(4).
- 3) Enduring Resources shall close an existing below-grade tank that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, if not retrofitted to comply with Paragraphs 1) through (4) of Subsection I of 19.15.17.11 NMAC, prior to any sale or change of operator pursuant to 19.15.9.9 NMAC.
- 4) Enduring Resources, or a contractor acting on behalf of Enduring Resources, will close a permitted BGT within 60 days of cessation of the BGT's operation or as required by the transitional provisions of NMAC § 19.15.17.17(B) in accordance with a closure plan that the appropriate division district office approves. NMAC §§ 19.15.17.13(A)(9) and 19.15.17.9(C).
- 5) In accordance with NMAC § 19.15.17.13(J)(1), Enduring Resources will notify the surface owner by certified mail, return receipt requested, of its plans to close a BGT prior to beginning 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. Enduring Resources will also notify the appropriate division district office verbally or by other means at least 72 hours, but not more than one week, prior to any closure operation. The notice shall include the operator's name and the location to be closed by unit letter, section, township and range. If the closure is associated with a particular well, then the notice shall also include the well's name, number and API number. NMAC § 19.15.17.13(J)(2).

- 6) Enduring Resources, or a contractor acting on behalf of Enduring Resources, will remove liquids and sludge from a BGT prior to implementing a closure method and will dispose of the liquids and sludge in a division approved facility. NMAC § 19.15.17.13(E)(1). A list of Enduring Resources currently approved disposal facilities is included at the end of this document.
- 7) The proposed method of closure for this Closure Plan is waste excavation and removal. NMAC §§ 19.15.17.13 (E)(1).
- 8) Enduring Resources, or a contractor acting on behalf of Enduring Resources, shall remove the below-grade tank and dispose of it in a division-approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves. When required, prior approval for disposal will be obtained. NMAC § 19.15.17.13(E)(2). Documentation regarding disposal of the BGT and its associated liner, if any, will be included in the closure report.
- 9) Waste generated during closure will be handled and disposed of in accordance with applicable laws. NMAC § 19.15.35.8(C)(1)(m) provides that plastic pit liners may be disposed at a solid waste facility without testing before disposal, provided they are cleaned well.
- 10) Enduring Resources, or a contractor acting on behalf of Enduring Resources, will remove on-site equipment associated with a BGT unless the equipment is required for some other purpose. NMAC § 19.15.17.13(E)(3).
- 11) Enduring Resources, or a contractor acting on behalf of Enduring Resources, will test the soils beneath the BGT to determine whether a release has occurred. At a minimum, 5 point composite samples will be collected along with individual grab samples from any area that is wet, discolored, or showing other evidence of a release. Samples will be analyzed for BTEX, TPH and chlorides to demonstrate compliance with Table 1 (see below) of 19.15.17.13 NMAC.

Table I Closure Criteria for Soils Beneath Below-Grade Tanks, Drying Pads Associated with Closed-Loop Systems and Pits where Contents are Removed			
Depth below bottom of pit to groundwater less than 10,000 mg/l TDS	Constituent	Method*	Limit**
≤50 feet	Chloride	EPA 300.0	600 mg/kg
	TPH	EPA SW-846 Method 418.1	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg
51 feet-100 feet	Chloride	EPA 300.0	10,000 mg/kg
	TPH	EPA SW-846 Method 418.1	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg
> 100 feet	Chloride	EPA 300.0	20,000 mg/kg
	TPH	EPA SW-846 Method 418.1	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg

- 12) If Enduring Resources or the division determines that a release has occurred, Enduring Resources will comply with NMAC §§ 19.15.29 and 19.15.30, as appropriate. NMAC § 19.15.17.13(E)(5).
- 13) If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in NMAC § 19.15.17.13(E)(4), Enduring Resources will backfill the excavation with compacted, non-waste containing, earthen materials; construct a division prescribed soil cover; re-contour and re-vegetate the site. The division-prescribed soil cover, recontouring and re-vegetation requirements shall comply with NMAC § 19.15.17.13)(G, H and I). NMAC § 19.15.17.13(E)(6).
- 14) As per NMAC § 19.15.17.13(G)(1), once Enduring Resources has closed a BGT or is no longer using the BGT or an area associated with the BGT, Enduring Resources will reclaim the BGT location and all areas associated with it including associated access roads not needed by the surface estate owner to a safe and stable condition that blends with the surrounding undisturbed area. Enduring Resources will substantially restore impacted surface area to the condition that existed prior to its oil and gas operations by placement of soil cover as provided in NMAC § 19.15.17.13(H) (see below), re-contour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography, and re-vegetate according to NMAC § 19.15.17.13(I). NMAC § 19.15.17.13(G)(1).
- 15) Enduring Resources may propose an alternative to the re-vegetation requirement of NMAC § 19.15.17.13(G)(1) if it demonstrates that the proposed alternative effectively prevents erosion, and protects fresh water, human health and the environment. The proposed alternative must be agreed upon in writing by the surface owner. Enduring Resources will submit the proposed alternative, with written documentation that the surface owner agrees to the alternative, to the division for approval. NMAC § 19.15.17.13(G)(2).
- 16) Soil cover for closures where Enduring Resources has removed the pit contents or remediated the contaminated soil to the division's satisfaction will consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. NMAC § 19.15.17.13(H)(1).
- 17) Enduring Resources will construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material. NMAC § 19.15.17.13(H)(3).
- 18) As per NMAC § 19.15.17.13(I)(1) and 19.15.17.13(G)(2), Enduring Resources will seed or plant disturbed areas during the first growing season after it is no longer using a BGT or an area associated with the BGT including access roads unless needed by the surface estate owner as evidenced by a written agreement with the surface estate owner, if any and written approval by NMOCD.

- 19) Seeding will be accomplished by drilling on the contour whenever practical or by other division approved methods. Enduring Resources 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) 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, Enduring Resources will not artificially irrigate the vegetation. NMAC § 19.15.17.13(I)(2).
- 20) Enduring Resources will notify the division when it has seeded or planted and when it successfully achieves re-vegetation. NMAC § 19.15.17.13(I)(5).
- 21) Seeding or planting will be repeated until Enduring Resources successfully achieves the required vegetative cover. NMAC § 19.15.17.13(I)(3).
- 22) When conditions are not favorable for the establishment of vegetation, such as periods of drought, the division may allow Enduring Resources to delay seeding or planting until soil moisture conditions become favorable or may require Enduring Resources to use additional cultural techniques such as mulching, fertilizing, irrigating, fencing or other practices. NMAC § 19.15.17.13(I)(4).
- 23) As per NMAC § 19.15.17.13(K), within 60 days of closure completion, Enduring Resources will submit a closure report containing the elements required by NMAC § 19.15.17.13(K) including:
 - i) Confirmation sampling results,
 - ii) A plot plan ,
 - iii) Details on back-filling, capping and covering, where applicable, including revegetation application rates and seeding technique,
 - iv) Proof of closure notice to the surface owner, if any, and the division,
 - v) Name and permit number of disposal facility, and
 - vi) Photo documentation.
- 24) The closure report will be filed on NMOCD Form C-144. Enduring Resources will certify that all information in the closure report and attachments is correct and that it has complied with all applicable closure requirements and conditions specified in the approved closure plan. NMAC § 19.15.17.13(K).
- 25) As requested, the following are the current Enduring Resources approved Waste Disposal Sites for the identified waste streams:

Soils and Sludges

Solids Envirotech Inc. Soil Remediation Facility, Permit No. NM-01-0011

 - i) San Juan County Regional Land Fill (NMAC § 19.15.35.8 items only, with prior NMOCD approval when required)

Liquids

 - i) Key Energy Disposal Facility, Permit No. NM-01-0009
 - ii) Basin Disposals Facility, Permit No. NM-01-005.

- 26) These waste disposal sites are subject to change if their certification is lost or they are closed or other more appropriate, equally protective sites become available. Enduring will provide notice if such a change is affected.
- 27) Within six months of cessation of operations, the operator shall remove the below-grade tank and dispose of it in a division-approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves. If there is any equipment associated with a below-grade tank, then the operator shall remove the equipment, unless the equipment is required for some other purpose. NMAC § 19.15.17.13(G)(4)b.

**SITING CRITERIA
SUMMARY INFORMATION SHEET
19.15.17.10 NMAC**



LT Environmental Inc.
348 East 2nd Avenue
Durango, Colorado 81301
719-285-1006

GENERAL INFORMATION

Site Name: Vaca Compressor Station

Pit Type: Below Grade Tank

Operator: Enduring Resources, LLC

Date: 11/20/2017

Prepared by: LT Environmental, Inc.

GENERAL SITE LOCATION INFORMATION

Geologic Formation: Nacimiento Formation

Soil Type: Gypsiorthids-Badland-Stumble

Annual Precipitation: 8.71"

SEC: 2 **TWN:** 29N **RNG:** 10W

Latitude: 36.758598 **Longitude:** -107.846504

GENERAL SITING CRITERIA

Is groundwater less than 25 feet below the bottom of below grade tank? Greater than 100 feet
See Figure 3 and attached iWaters Data

BELOW GRADE TANK SITING CRITERIA

Within 100 feet of a continuously flowing watercourse? NO See Figure 1

The site is located approximately 1.82 miles northwest of the San Juan River

Within 100 feet of a significant watercourse? NO See Figure 1 and Figure 3

The site is located approximately 755 feet east of the main channel of Wright Canyon.

Within 100 feet of a lakebed, playa lake, or sinkhole? NO See Figure 2

NA

Within 200 horizontal feet of a spring or a freshwater well used for public or livestock consumption? NO See Figure 3 and attached iWaters data

NA

ATTACHED DOCUMENTS:

Hydrogeologic Report

Figure 1: Topographic Map

Figure 2: Aerial Photograph

Figure 3: Water Well and Surface Water Features

iWaters Data

ADDITIONAL COMMENTS:



Vaca Compressor Station Hydrogeologic Report for Siting Criteria

General Geology and Hydrology

The San Juan Basin is a typical Rocky Mountain basin with a gently dipping southern flank and a steeply dipping northern flank. Asymmetrically layered Tertiary sandstones and shales, along with Quaternary alluvial deposits, dominate surficial geology (Dane and Bachman, 1965). The below-grade tank is located in Mansfield Canyon, northeast of Blanco, New Mexico. The Nacimiento Formation of Tertiary age is exposed, along with Quaternary alluvial and aeolian sands within dry washes and arroyos.

Cretaceous and Tertiary sandstones, as well as Quaternary alluvial deposits, serve as the primary aquifers in the San Juan Basin. In most of the area, the Nacimiento Formation lies at the surface. Thickness of the Nacimiento ranges from 418 feet to 2,232 feet, aquifers within the coarser and continuous sandstone bodies are between 0 feet and 1,000 feet deep in this section of the San Juan Basin (Stone et al., 1983). Groundwater within these aquifers flows toward the nearby San Juan River and its tributaries.

The prominent soil type at the below-ground grade tank are entisols, which are defined as soils that do not show any profile development. Soils are basically unaltered from their parent rock. Miles of arroyos, washes, and intermittent streams exist as part of the drainage network toward the San Juan River (www.emnrd.state.nm.us). These features often cut into soil and other unconsolidated materials, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes soils that cover the area.

Dry and arid weather further prohibit active recharge. The climate of the region is arid, averaging just over 8.71 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from August through October. The heaviest rainfall occurs in the summer in isolated, intense cloudbursts. November through June is relatively dry. Snow generally falls from December to mid-February and averages less than one-half inch in depth. However, most recharge occurs during the winter months during snowmelt periods from the upper elevations (Western Regional Climate Center www.wrcc.dri.edu). The predominant vegetation are sagebrush and grasses with a more restricted pinon-juniper association (Dick-Peddie, 1993).

Site-Specific Hydrogeology

Depth to groundwater is estimated to be greater than 100 feet beneath the below grade tank. This estimation is based on data from Stone and others (1983), the USGS Groundwater Atlas of the United States and depth to groundwater data published on the New Mexico Water Rights



Reporting System website. Local topography, proximity to adjacent channels & spring features at similar elevations nearby are also taken into consideration.

The below-grade tank is located in a region incised by washes, gullies, and arroyos, with the San Juan River being the predominant topographic feature. Groundwater is expected to be shallow within the reaches of the San Juan River, as the Quaternary deposits near the river itself form shallow aquifers. The below-grade tank is located at an elevation of approximately 5,999 feet, which is an elevation difference between the site and the primary channel of the San Juan River of approximately 425 feet suggesting that groundwater is greater than 100 feet beneath the below-grade tank.

The Nacimiento Formation of Paleocene age occurs at the surface in a broad belt at the western and southern edges of the central San Juan Basin and dips beneath the San Jose Formation in the center. The lower part of the Nacimiento Formation is composed of interbedded black, carbonaceous mudstones and white coarse-grained sandstones. The upper part is comprised of mudstone and sandstone. It is generally slope-forming, even within the sandstone units. Thickness of the Nacimiento ranges from 418 to 2,232 feet. Aquifers within the coarser and continuous sandstone bodies of the Nacimiento Formation are between 0 and 1,000 feet deep in this section of the San Juan Basin. Wells within these bodies flow from 16 to 100 gallons per minute (gpm) and transmissivities are expected to be 100 ft²/d (Stone et al, 1983). Groundwater within these aquifers flows toward the San Juan River.

Groundwater data available from the New Mexico Water Rights Reporting System for permitted wells near the proposed site are attached. Groundwater data are sparse in this region; the nearest data point with depth to groundwater information is well number SJ 00584 located 1.44 miles southeast of the BGT with a depth to groundwater of 40 feet below ground surface.



References

Dane, C.H. and G. O.Bachman, 1965, *Geologic Map of New Mexico*: U.S. Geological Survey, 1 sheet, scale 1:500,000.

Dick-Peddie, W.A., 1993, *New Mexico Vegetation – Past, Present and Future*: Albuquerque, New Mexico, University of New Mexico Press, 244 p.

Stone, W.J., F.P. Lyford, P.F. Frenzel, N.H. Mizell, and E.T. Padgett, 1983, *Hydrogeology and Water Resources of the San Juan Basin, New Mexico*: HR-6 New Mexico Bureau of Geology and Mineral Resources Hydrology Report 6.

USGS, Groundwater Atlas of the United States: Arizona, Colorado, New Mexico, Utah, HA 730-C: (<http://www.pubs.usgs.gov>).

Western Region Climate Center, 2008, New Mexico climate summaries: Desert Research Institute at <http://www.wrcc.dri.edu/summary/climsmnm.html>.

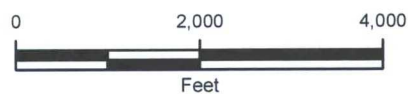
New Mexico Energy, Minerals and Natural Resources Department, www.emnrd.state.nm.us.



IMAGE COURTESY OF ESRI/USGS

LEGEND

○ SITE LOCATION



NEW MEXICO

FIGURE 1
TOPOGRAPHIC MAP
VACA COMPRESSOR STATION
L1 SEC 2 T29N R10W
SAN JUAN COUNTY, NEW MEXICO
ENDURING RESOURCES, LLC





IMAGE COURTESY OF ESRI

LEGEND

- BELOW GRADE TANK
- 100-FOOT RADIUS
- 200-FOOT RADIUS

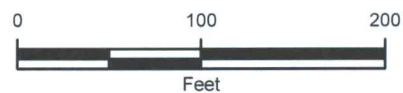


FIGURE 2
AERIAL PHOTOGRAPHIC MAP
VACA COMPRESSOR STATION
L1 SEC 2 T29N R10W
SAN JUAN COUNTY, NEW MEXICO
ENDURING RESOURCES, LLC





IMAGE COURTESY OF ESRI

LEGEND

- WATER WELL
- BELOW GRADE TANK



FIGURE 3
NEARBY WATER WELL MAP
VACA COMPRESSOR STATION
L1 SEC 2 T29N R10W
SAN JUAN COUNTY, NEW MEXICO
ENDURING RESOURCES, LLC





New Mexico Office of the State Engineer Wells with Well Log Information

(A CLW#### in the
POD suffix indicates the
POD has been replaced &
no longer serves a water
right

(R=POD has
been replaced.
O=orphaned.
C=the title is
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

POD										q q q		X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
POD Number	Code	Subbasin	County	Source	6416	4	3	Sec	Tws	Rng											
SJ 00584			SJ	Shallow	4	2	1	34	30N	10W	247886	4070692*	2310	03/14/1978	03/17/1978	03/22/1978	143	40	W J HOOD	717	
SJ 01059			SJ	Shallow	4	2	1	34	30N	10W	243585	4073570*	2870	09/20/1979	09/24/1979	09/28/1979	115	75	HOOD, TERRY	717	
SJ 01132			SJ	Shallow	3	3	1	34	30N	10W	242974	4073183*	3206	05/31/1980	06/05/1980	03/27/2002	235	125		717	
SJ 03892.POD1			SJ	Shallow	2	1	4	07	29N	09W	248425	4069657	3359	09/13/2009	09/13/2009	09/14/2009	24	9	HOOD, TERRY (LD)	717	
SJ 00785			SJ	Shallow	2	4	3	07	29N	09W	247960	4069216*	3362	02/28/1985	02/28/1985	04/11/1980	60		AQUA PUMP, DURANGO, CO/		
SJ 00680			SJ	Shallow	2	2	13	29N	10W	247321	4068735*	3445	07/17/1978	07/20/1978	08/07/1978	40	10	D K MCDONALD	725		
SJ 01176			SJ	Shallow	1	1	08	29N	09W	249182	4070274*	3650	07/11/1980	07/23/1980	07/28/1980	150	70	JOHN GILBERT	666		
SJ 00436			SJ	Shallow	3	1	08	29N	09W	249192	4069879*	3848	09/26/1977	10/03/1977	10/05/1977	150	100	HARGIS, JOHN C	724		
SJ 03536			SJ	Shallow	2	4	4	07	29N	09W	248860	4069194*	3992	05/10/2005	05/10/2005	05/18/2005	19	6	HOOD, TERRY	717	
SJ 04012.POD1			SJ	Shallow	2	4	4	07	29N	09W	248927	4069258	3999	07/09/2012	07/10/2012	07/17/2012	29	14	HOOD, TERRY	717	
SJ 03092			SJ	Shallow	1	1	4	05	29N	09W	249875	4071132*	4042	07/03/2001	07/03/2001	07/19/2001	40	16	HARGIS, BILL	1508	
SJ 03182			SJ	Shallow	1	1	4	05	29N	09W	249875	4071132*	4042	09/21/2002	09/23/2002	09/29/2002	42	18		717	
SJ 03599			SJ	Shallow	1	1	4	05	29N	09W	249875	4071132*	4042	04/22/2005	04/22/2005	05/02/2005	42	20	GILES, DEE III	1479	
SJ 01116			SJ	Shallow	1	2	33	30N	10W	242296	4073713*	4046	03/03/1980	03/07/1980	03/18/1980	105	45	SAVAGE, BOB	847		
SJ 03534			SJ	Shallow	3	1	3	08	29N	09W	249101	4069380*	4057	09/20/2005	09/20/2005	10/04/2005	41	24	TOM GRIFFITH	717	
SJ 03430			SJ	Shallow	1	2	2	18	29N	09W	248654	4068796*	4129	03/08/2004	03/08/2004	03/24/2004	21	1		1479	
SJ 04038.POD1	R		SJ	Shallow	2	2	2	18	29N	09W	248787	4068820	4201	12/28/2013	12/30/2013	01/08/2014	16	7	HOOD, TERRY	717	

Record Count: 17

UTM NAD83 Radius Search (in meters):

Easting (X): 245901.22

Northing (Y): 4071874.43

Radius: 4250

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOS/ISC and is accepted by the recipient with the expressed understanding that the OS/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for a particular purpose of the data.

11/17/17 4:36 PM

WELLS WITH WELL LOG INFORMATION