

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

Form C-144  
Revised April 3, 2017

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

- 16510
- 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
- PLS 1900848231

**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 #: 372286  
Address: 200 Energy Court, Farmington, New Mexico 87401 NMOCD  
Facility or well name: WLU 2309 24N Recycling Facility DEC 19 2018  
API Number: NA OCD Permit Number: 3RF-29  
U/L or Qtr/Qtr \_\_\_\_\_ Section 24 Township 23N Range 9W County: San Juan DISTRICT III  
Center of Proposed Design: Latitude 36.205958 Longitude -107.740891 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: 20 bbl Type of fluid: Produced 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 8' chain link fence around entire location

6.

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

Screen  Netting  Other \_\_\_\_\_

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

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.

**Variations 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 H<sub>2</sub>S, Prevention Plan
- Emergency Response Plan
- Oil Field Waste Stream Characterization
- Monitoring and Inspection Plan
- Erosion Control Plan
- Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

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

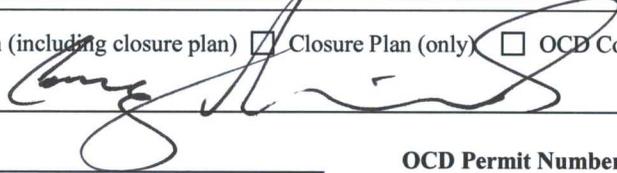
17.  
**Operator Application Certification:**  
 I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): James McDaniel Title: HSE Supervisor

Signature:  Date: 12/18/18

e-mail address: jmcdaniel@enduringresources.com Telephone: 505-636-9731

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

OCD Representative Signature:  Approval Date: 1/8/19

Title: Environmental Spec. OCD Permit Number: 16510

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

**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: \_\_\_\_\_

# **Enduring Resources, LLC**

## **Below Grade Tank**

### **Closure Plan**

**Lease Name:** WLU 2309 24N

**OCD Num.:** 3RF-29

**Description:** Section 24, Township 23N, Range 9W, San Juan County

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure requirements of below-grade tanks on Enduring Resources, LLC. (Enduring) locations. This is Enduring's standard procedure for all below-grade tanks. A separate plan will be submitted for any below-grade tank which does not conform to this plan.

#### **General Plan**

1. Enduring will obtain approval of this closure plan prior to commencing closure of the below grade tank at this location pursuant to 19.15.17.13.C (1) NMAC
2. Enduring will notify the surface owner by certified mail, return receipt requested, that the operator plans closure operations at least 72 hours, but no more than one week, prior to any closure operation. Notice will include:
  - a. Well Name
  - b. API
  - c. Well Location\*Enduring will notify government agencies by email of closure activities.
3. Enduring will notify the NMOCD Aztec Office by email that the operator plans closure operations at least 72 hours, but no more than one week, prior to any closure operation. Notice will include:
  - a. Well Name
  - b. API
  - c. Well Location
4. Within 60 days of cessation of operations, Enduring will remove all liquids and sludge from below grade tanks prior to implementing closure activities, and will dispose of the liquids and sludge at a division approved facility. Approved facilities and waste streams include:
  - a. Soils, tank bottoms, produced sands, pit sludge and other exempt wastes impacted by petroleum hydrocarbon will be disposed of at:  
*Envirotech: Permit #NM01-0011 and IEI: Permit #NM01-0010B*
  - b. Produced water will be disposed of at:  
*Basin Disposal: Permit #NM01-005, Agua Moss: Permit #NM-009, and Enduring owned disposal wells.*
5. Within six (6) months of cessation of operations, Enduring will 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 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.

6. Enduring will collect a closure sample of the soil beneath the location of the below grader tank or liner that is being closed. The closure sample will consist of a five-point composite sample to include any obvious stained or wet soils, or other evidence of contamination. The closure sample will be analyzed for all constituents listed in Table I below, including DRO+GRO, chlorides, TPH (C6-C36), benzene and BTEX.

Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
≤ 50 feet	Chloride***	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
51 feet-100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	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 8260B	10 mg/kg
>100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	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 8260B	10 mg/kg

7. Enduring will close this BGT based on the requirements for groundwater over 100 feet.
8. If any contaminant concentration is higher than the parameters listed in Table I above, the release will be closed pursuant to 19.15.29 NMAC, Releases. If all contaminant concentrations are less

than, or equal to, the parameters listed in Table I above, the operator can proceed to backfill with non-waste containing, uncontaminated earthen material.

9. After closure has occurred, Enduring will reclaim the former BGT area, if it is no longer being utilized for the continued extraction of oil and gas, by substantially restoring the surface area to the condition that existed prior to oil and gas operations. Enduring will construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover materials. The soil cover shall consist of the background thickness of topsoil, or one foot of suitable materials to establish vegetation at the site, whichever is greater. All areas will be reclaimed as early as practicable, and as close to their original condition or land use as possible. They shall be maintained in such a way as to control dust and to minimize erosion.
10. Enduring will complete reclamation of all disturbed areas according to BLM requirements for this location, since the facility is on BLM surface.
11. Within 60 days of closure of the below-grade tank, Enduring will submit a closure report to the Aztec office of the NMOCD. Closure report will be filed on form C-144 and include the following:
  - Proof of closure notice to division and surface owner;
  - Confirmation sampling analytical results;
  - Soil backfilling and cover installation;
  - Photo documentation of the site reclamation.
  - Alternative Table I groundwater criteria request, groundwater information, and received approval (If Needed)

**Enduring Resources, LLC**  
**Below Grade Tank**  
**General Design and Construction Plan**

**Lease Name:** WLU 2309 24N

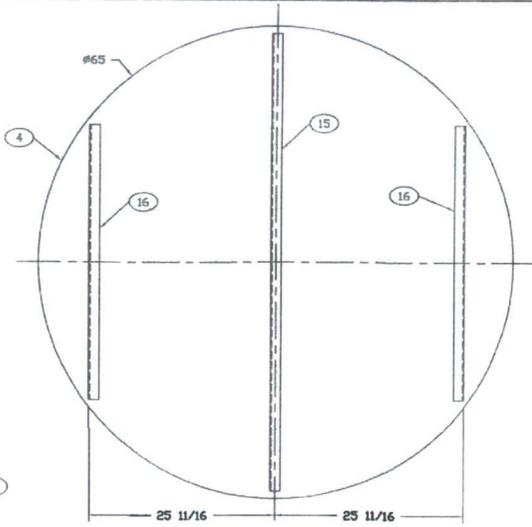
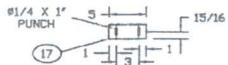
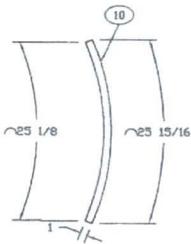
**OCD Num.:** 3RF-29

**Description:** Section 24, Township 23N, Range 9W, San Juan County

In accordance with Rule 19.15.17.12 NMAC the following information describes the design and construction plan for this below grade.

**Procedures**

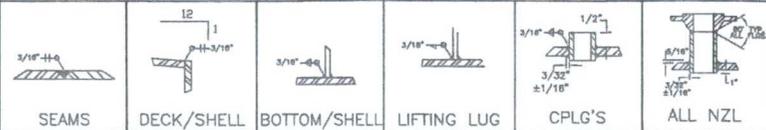
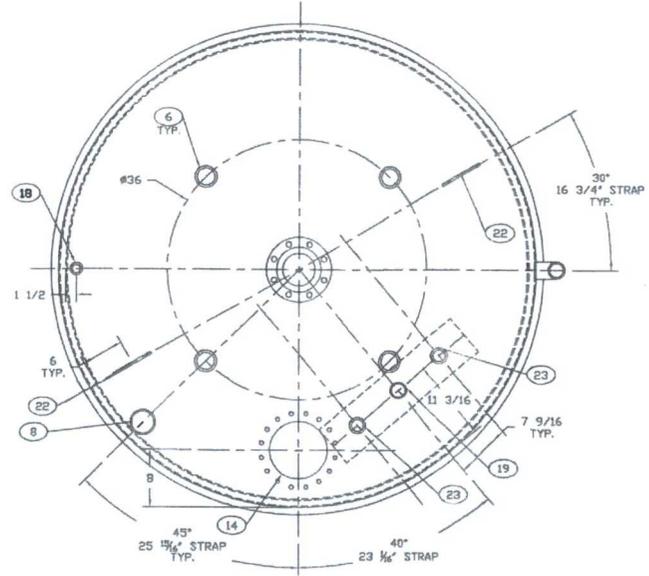
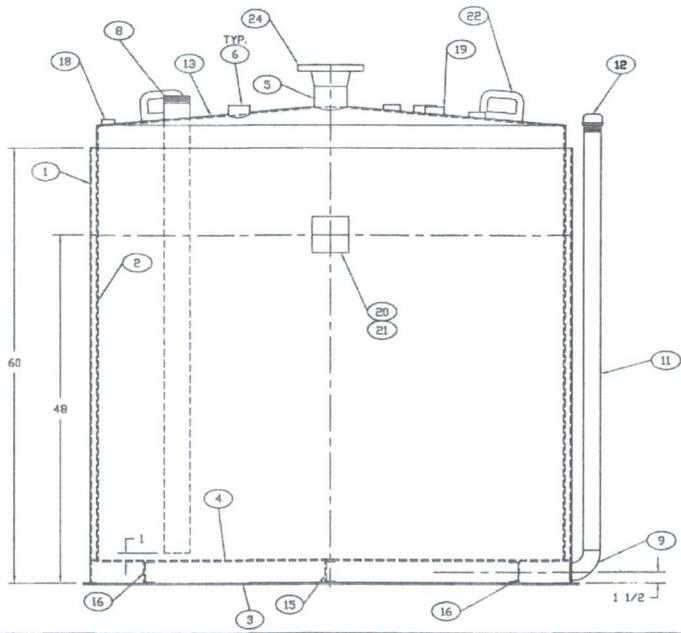
1. The tank will be a double-walled, 20 bbls below grade tank. The tank will be constructed of steel, and the sidewall of the tank exterior will be buried.
2. Enduring will equip the below grade tank with manual controls to prevent overflows.
3. The top of the below grade tank will be above ground level to prevent the collection of surface water and run on into the tank.
4. Enduring shall construct the below grade tank with a solid cone top.
5. The tank will be placed on a foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures or cracks in the tank bottom.
6. Enduring will post a facility sign that meets the criteria listed in 19.15.16.8 NMAC.
7. Enduring is requesting approval of alternative fencing to be used around the below grade tank. This location has an existing 8' fence around the location, which will provide adequate protection to livestock and wildlife from the below grade tank. No specific fencing will be utilized for this below grade tank.



MATERIAL SPECIFICATION					
ITEM	QTY.	PART #	DESCRIPTION	GRADE	WEIGHT
1	1	RS31886	CS PL 3/16" X 80" X 207 3/16" LG (ROLL TO 66" OD)	SA-36	660
2	1	RS31884	CS PL 3/16" X 80" X 200 7/8" LG (ROLL TO 64" OD)	SA-36	640
3	1	BOT-1458	BOTTOM 1/4" X 86" OD	SA-36	237
4	1	BOT-31865	CS PL 3/16" X 86" OD	SA-36	176
5	1	PH412237	PIPE 4" X 2.37" X 4" LG SCH 40 ERW	SA-530	4
6	4	89680	FS CPLG 3" 3000# HALF THD	SA-105	8
7					
8	1	PP3216	PIPE 3" X .216" X 63" LG STD ERW T.O.E	SA-536	40
9	1	3683	WELD ELL 2" X 2.16" 90 LR STD	SA-234WPB	2
10	8	SP3155R	CS PL 3/16" X 1" X 28 15/16" LG	SA-36	88
11	1	PP232218	PIPE 2" X 2.18" X 66 3/4" LG STD SMLS	SA-105B	24
12	1	3885	MALLEABLE CAP 2" 150# THD	SA-197	2
13	1	TP-31655	CONE TOP 3/16" X 9"-9" OD	SA-36	178
14	1	J1-8	THIEF WATCH JAYCO J1-8	ALUM	12
15	1	SC341	CS CHANNEL 3" 4.14 X 83" LG	SA-36	22
16	2	SC341	CS CHANNEL 3" 4.14 X 37 3/4" LG	SA-36	26
17	2	-	CS ANGLE 2" X 2" X 1/8" X 5" LG	SA-36	26
18	1	89659	FS CPLG 1" 3000# HALF THD	SA-105	1
19	1	89599.5	FS CPLG 1 1/2" 3000# HALF THD	SA-105	1
20	1	CONNPLTBRKT	NAME PLATE BRACKET	SA-36	1
21	1	T-NMPLBET	NAME PLATE FOR PRODUCTION TANKS	ALUM	1
22	2	LE-3846	LIFTING EYE 3/8" X 4" X 6" LG	SA-36	4
23	1	89563	FS CPLG 1 1/4" 3000# HALF THD (CUT IN HALF)	SA-105	2
24	1	4160RPHSTD	FS FLANGE 4" 150# RPMN STD BORE	SA-105	32

**GENERAL NOTES**

1. ALL STRAP DIMENSIONS ARE FROM OD OF TANK.
2. ALL DIMENSIONS ARE HOLD UNLESS OTHERWISE NOTED.
3. DESIGN PRESSURE 16 DUNCES.
4. AIR TEST PRESSURE 2 POUNDS.
5. TOTAL APPROXIMATE WEIGHT = 2300#±.



REV	DESCRIPTION	BY	DATE
CUSTOMER			
BENCHMARK EQUIPMENT & TANK			
326 N. BERGIN LANE			
BLOOMFIELD, N.M. 87413			
(505)-632-9030			
ALL INFORMATION CONTAINED IN THIS DRAWING WHETHER PATENTABLE OR NON-PATENTABLE IS OF A PROPRIETARY NATURE AND IS THE SOLE PROPERTY OF BET INC. PRODUCTION EQUIPMENT, REPRODUCTION OR ANY OTHER USE WITHOUT THE EXPRESSED WRITTEN CONSENT OF BET INC. IS STRICTLY PROHIBITED.			
OWN BY/CHK BY:	OC BY:	ENG:	DATE: DRAWING #
BBB			05-27-15 PT-20BBLDWBDC
TITLE: 20BBL PIT TANK			REV: 0
5'-6" OD X 5' TALL			SCALE: 3/4"=1'-0"
DOUBLE BOTTOM, DOUBLE WALL			PAGE: 1
CONE TOP			1 OF 1
BET PART #PT-20BBLDWBDC			

# **Enduring Resources, LLC**

## **Below Grade Tank**

### **Operations and Maintenance Plan**

**Lease Name:** WLU 2309 24N

**OCD Num.:** 3RF-29

**Description:** Section 24, Township 23N, Range 9W, San Juan County

In accordance with Rule 19.15.17.12 NMAC the following information describes the operations and maintenance requirements of below-grade tanks on Enduring Resources, LLC. (Enduring) locations. This is Enduring's standard procedure for all below-grade tanks.

#### **Procedures**

1. Enduring will operate below grade tanks in such a way as to contain liquids, and maintain the integrity of the secondary containment system. Enduring will operate the below grade tank in such a way as to prevent the contamination of freshwater, and protect public health and the environment.
2. Enduring will not discharge into or store any hazardous waste into a below grade tank.
3. In the event of a leak in the below grade tank, Enduring will:
  - a. Remove all liquids above the leak within 48 hours
  - b. Notify the Aztec Office of the NMOCD of the leak within 48 hours
  - c. Repair the leak, or replace the below grade tank, as necessary
4. All below grade tanks will be installed and operated in such a way as to prevent surface water run-on or collection.
5. Enduring will remove any measurable layer of oil from the fluid surface of a below grade tank as soon as practicable.
6. Enduring will inspect the below grade tank for leaks and damage at least monthly, documenting the inspections, and maintaining a record of inspection for five (5) years. The leak detection space in double walled tanks will be checked during this monthly inspection
7. Enduring will operate the below grade tank in such a way as to maintain adequate freeboard to prevent over topping of the below grade tank.
8. In the event the below grade tank no longer demonstrates integrity, Enduring will close the below grade tank in accordance with the closure plan submitted with this registration.

# 7. IWATERS REPORT



## New Mexico Office of the State Engineer Water Column/Average Depth to Water

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

(R=POD has been replaced.

O=orphaned.

C=the file is closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	Sub-basin	County	Q Q Q	Sec	Tws	Rng	X	Y	DepthWell	DepthWater	Water Column
<a href="#">S101716</a>	SJ	SJ	SJ	1 3 25	23N	09W	252985	4009203*	550	173	377	
										Average Depth to Water:	173 feet	
										Minimum Depth:	173 feet	
										Maximum Depth:	173 feet	

Record Count: 1

**PLSS Search:**

Sections: 13, 14, 15, 22, 23, 24, 25, 26, 27 Township: 23N Range: 09W

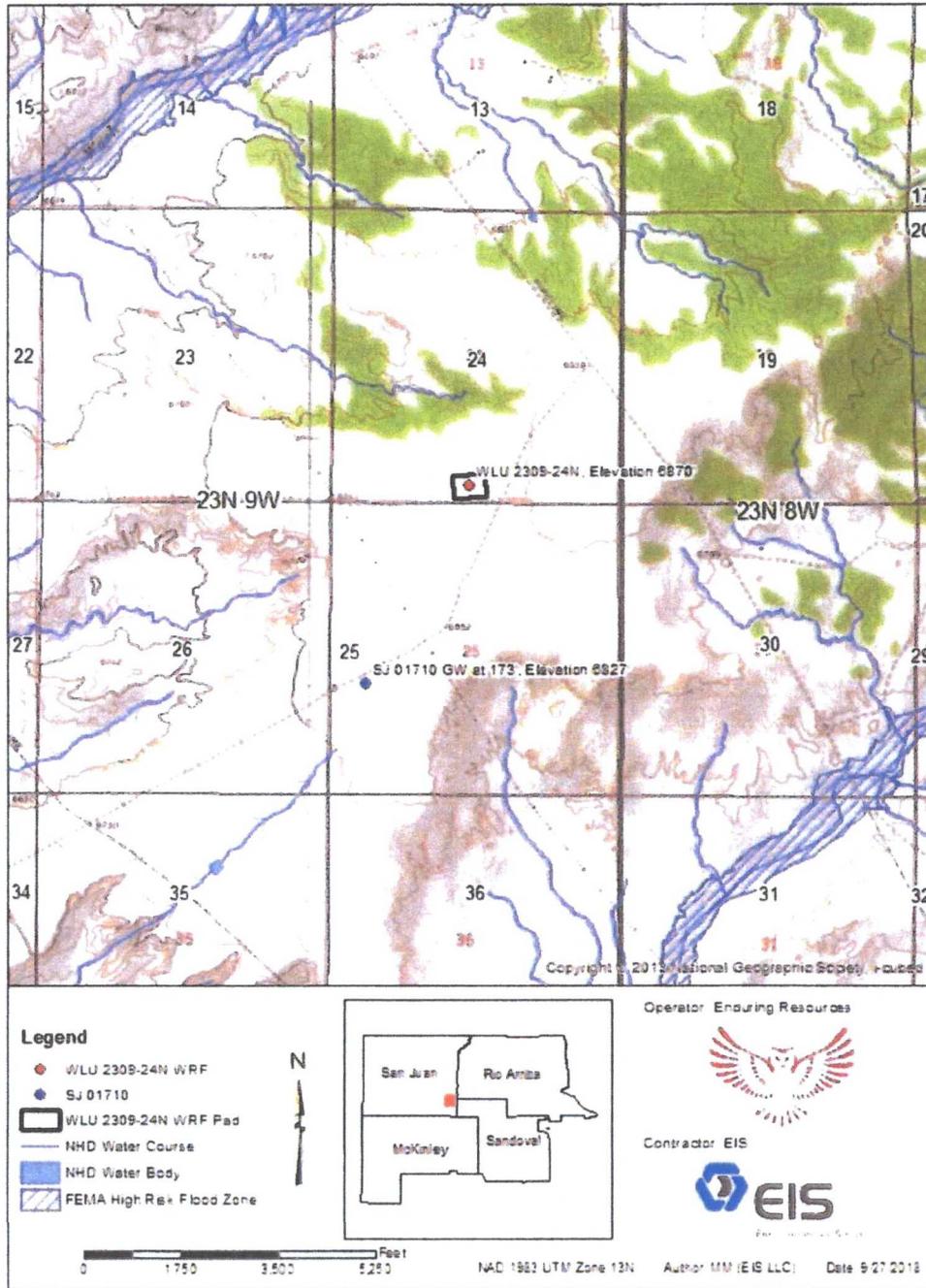
\*UTM location was derived from PLSS - see Help

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

9/26/18 2:15 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

# 9. TOPO MAP



## 12. HYDROLOGY REPORT

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### *Hydrogeological Report for WLU 2309-24N Water Recycle Facility*

#### **Regional Geological context:**

The Nacimiento Formation is of Paleocene age (Baltz, 1967, p. 35). It crops out in a broad band inside the southern and western margins of the central basin and in a narrow band along the west face of the Nacimiento Uplift. The Nacimiento is a nonresistant unit and typically erodes to low, rounded hills or forms badland topography.

The Nacimiento Formation occurs in approximately only the southern two-thirds of the San Juan Basin where it conformably overlies and intertongues with the Ojo Alamo Sandstone (Fassett, 1974, p. 229). The Nacimiento Formation grades laterally into the main part of the Animas Formation (Fassett and Hinds, 1971, p. 34); thus, in this area, the two formations occupy the same stratigraphic interval.

Strata of the Nacimiento Formation were deposited in lakebeds in the central basin area with lesser deposition in stream channels (Brimhall, 1973, p. 201). In general, the Nacimiento consists of drab, interbedded black and gray shale with discontinuous, white, medium- to very coarse grained arkosic sandstone (Stone et al., 1983, p.30). Stone et al. indicated that the formation may contain more sandstone than commonly reported because some investigators assume the slope-forming strata in the unit area shales, whereas in many places the strata actually are poorly consolidated sandstones. Total thickness of the Nacimiento Formation ranges from about 500 to 1,300 feet. The unit generally thickens from the basin margins toward the basin center (Steven et al., 1974). The sandstone deposits within the Nacimiento Formation are much thinner than the total thickness of the formation because their environment of deposition was localized stream channels (Brimhall, 1973, p. 201). The thickness of the combined San Jose, Animas, and Nacimiento Formations ranges from 500 to more than 3,500 feet.

#### **Hydraulic Properties:**

**Reported well yields** for 53 wells completed in either the Animas or Nacimiento Formations range from 2 to 90 gallons per minute and the median yield is 7.5 gallons per minute. The primary use of water from Nacimiento and Animas Formations is domestic and livestock supplies. There are no known aquifer tests for the Animas or Nacimiento Formations, but specific capacities reported for six wells range from 0.24 to 2.30 gallons per minute per foot of drawdown (Levings et al., 1990).

The Animas and Nacimiento Formations are in many ways hydrologically similar to the San Jose Formation because sands in both units produce approximately the same quantities of water. However, the greater percentage of fine materials in the Animas and Nacimiento Formations may restrict downward vertical leakage to the Ojo Alamo Sandstone or Kirtland Shale. The poorly cemented fine material is highly erodible, forms a badland terrain, and supports only spotty vegetation. These conditions are more conducive to runoff than retention of precipitation.

#### **References:**

- Baltz, E.H., 1967, Stratigraphy and regional tectonic implications of part of Upper Cretaceous rocks, east-central San Juan Basin, New Mexico: USGS Professional Paper 552, 101 p.
- Brimhall, R.M., 1973, Ground-water hydrology of Tertiary rocks of the San Juan Basin, New Mexico, in Fassett, J.E., ed., Cretaceous and Tertiary rocks of the Southern Colorado Plateau: Four Corners Geological Society Memoir, p. 197-207.
- Fassett, J.E., 1974, Cretaceous and Tertiary rocks of the eastern San Juan Basin, New Mexico and Colorado, in Guidebook of Ghost Ranch, central-northern New Mexico: New Mexico Geological Society, 25th Field Conference, p. 225-230.
- Fassett, J.E., and Hinds, J.S., 1971, Geology and fuel resources of the Fruitland Formation and Kirtland Shale of the San Juan Basin, New Mexico and Colorado: USGS Professional Paper 676, 76 p.
- Levings, G.W., Craigg, S.d., Dam, W.L., Kernodle, J.M., and Thorn, C.R., 1990, Hydrogeology of the San Jose, Nacimiento, and Animas Formations in the San Juan structural basin, New Mexico, Colorado, Arizona, and Utah: USGS Hydrologic Investigations Atlas HA-720-A, 2 sheets.
- Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983, Hydrogeology and water resources of San Juan Basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Hydrologic Report 6.



1,620 Feet

7890

WLU 2209 24N

Mr. Cory Smith  
Oil Conservation Division  
1000 Rio Brazos Rd.  
Aztec, New Mexico 87410  
Email: cory.smith@state.nm.us  
Phone (505) 334-6178 Ext 115

Re: Variance Request for 19.15.17 NMAC Table I and Table II

Mr. Smith,

Please accept this letter as a variance request as outlined in 19.15.17.15(A) NMAC. Enduring Resources, LLC (Enduring) would like to request the replacement of USEPA Method 418.1 for the analysis of Total Petroleum Hydrocarbons (TPH) for USEPA Method 8015M, measuring carbon ranges C6-C36, for all sampling associated with closures and confirmations samples in relation to 19.15.17 NMAC, both in Table I and Table II (2103) and the 'pit rule' passed in 2008. Enduring is requesting this variance on the grounds that USEPA Method 418.1 is an outdated analytical method that reports a full range of hydrocarbons from C5 through C40 (*Reference: American Petroleum Institute*).

The attached table demonstrates the carbon ranges, and the typical hydrocarbon products that can be found in those ranges. As you can see, lube oil ranges from C28-C35. Analytical Method USEPA 418.1 extends past lube oils from C35 through C40. This range of hydrocarbons is above the range that can reasonably be expected to be found in our field in both drilling pits and beneath below grade tanks. USEPA Method 8015M (GRO/DRO + extended analysis) will report hydrocarbons ranging from C6-C10 for GRO, C10- C28 for DRO, and C28-C36 for extended analysis. This information was provided by Environmental Science Corporation Laboratories. As the information demonstrates, the 8015M analytical method reports as low as C6, reporting lower than USEPA Method 418.1. Utilizing analytical method 8015M, lighter range hydrocarbons will be reported instead of higher range, heavy hydrocarbons that may not be reasonably expected to be found in our field. Utilization of USEPA Method 8015M will better protect groundwater resources by identifying lighter, more mobile hydrocarbons that USEPA Method 418.1 cannot identify. The heavier range hydrocarbons, C36-C40, that are not identified by USEPA Method 8015M are not a mobile form of hydrocarbon, and are not a threat to human health and the environment. With your acceptance of this variance request, Enduring Resources will begin utilizing USEPA Method 8015M in place of USEPA Method 418.1 for all sampling activities associated with 19.15.17 NMAC, both from the rules passed in 2008 and 2013.

Respectfully Submitted,



James McDaniel, CHMM #15676  
HSE Supervisor  
Enduring Resources, LLC

### **Carbon Ranges of Typical Hydrocarbons**

#### **Hydrocarbon Carbon Range**

**Condensate C2-C12**  
**Aromatics C5-C7**  
**Gasoline C7-C11**  
**Kerosene C6-C16**  
**Diesel Fuel C8-C21**  
**Fuel Oil #1 C9-C16**  
**Fuel Oil #2 C11-C20**  
**Heating Oil C14-C20**  
**Lube Oil C28-C35**