

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

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

BGT #2

**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: 332 Road 3100, Aztec, New Mexico 87410  
Facility or well name: Rincon Unit 80  
API Number: 30-039-07086 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr B Section 18 Township 27N Range 6W County: Rio Arriba  
Center of Proposed Design: Latitude 36.5781767 Longitude -107.505367 NAD83  
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

NMOCD  
SEP 27 2018  
DISTRICT III

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 \_\_\_\_\_

\*Release Confine Additional  
C-141 Req.

3.  
☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC  
Volume: 45 bbl Type of fluid: Produced Water  
Tank Construction material: Galvanized  
☐ 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 \_\_\_\_\_

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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.

**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 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

☐ Yes ☐ No

Within the area overlying a subsurface mine.

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

☐ Yes ☐ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

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): \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

18.

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

OCD Representative Signature:  Approval Date: 11/26/18

Title: Environmental Spec 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: 8/08/2018

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): Chad Snell Title: HSE TECH  
Signature:  Date: 9/25/2018  
e-mail address: csnell@enduringresources.com Telephone: 505-444-0586



# **Enduring Resources, LLC**

## **Below Grade Tank**

### **Closure Report**

**Lease Name: Rincon Unit #80**

**API No.: 30-039-07086**

**Description: Unit B, Section 18, Township 27N, Range 6W, Rio Arriba 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 close below-grade tanks within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment.  
**Closure Date is July 30, 2018**
2. Enduring will close a below-grade tank that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after June 16, 2008, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.  
**Closure Date is July 30, 2018**
3. Enduring will close a permitted below-grade tank within 60 days of cessation of the below-grade tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves. The closure report will be filed on form C-144.  
**Required C-144 Form is attached to this document.**
4. Enduring will remove liquids and sludge from below-grade tanks prior to implementing a closure method and will dispose of the liquids and sludge in a division-approved facility. Approved facilities and waste streams include:
  - Envirotech Permit No. NM01-0011 and IEI Permit No. NM 01-0010B
    - Soil contaminated by exempt petroleum hydrocarbons
    - Produced sand, pit sludge and contaminated bottoms from storage of exempt wastes
  - Basin Disposal Permit No. NM01-005
    - Produced water**All liquids and sludge were removed from the tank prior to closure activities.**
5. 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 division district office approves.  
**Enduring has removed the below grade tank, and will dispose of it at a division approved facility, or recycle, reclaim or reuse it in a manner that is approved by the division.**

6. Enduring will remove any on-site equipment associated with a below-grade tank unless the equipment is required for some other purpose.  
**This location is still in production. All other on-site equipment will be utilized in the continued production of oil and gas.**
7. Enduring will test the soils beneath the below-grade tank to determine whether a release has occurred. At a minimum 5 point composite sample 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 that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 8015M or other EPA method that the division approves, does not exceed 100mg/kg; and the chloride concentration, as determined by EPA method 9056A or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. Enduring will notify the division of its results on form C-141.

**A five point composite sample was taken of the pit using sampling tools and all samples tested per Subsection B of 19.15.17.1 3(B)(1)(b). (Sample results attached). Sampling was witness by Cory Smith, NMOCD Aztec.**

Components	Test Method	Limit (mg/Kg)	Results
Benzene	EPA SW-846 8021B or 8260B	0.2	< 0.00100 mg/kg
BTEX	EPA SW-846 8021B or 8260B	50	< 0.139
TPH	EPA SW-846 8015M	100	< 99.138 mg/kg
Chlorides	EPA 9056A	250 or background	53.3 mg/kg

8. If Enduring or the division determines that a release has occurred, Enduring will comply with 19.15.3.116 NMAC and 19.15.1.19NMAC as appropriate.  
**Release had occurred due to a leak formed in the bottom allowing some residual water to be released. Approximately 3CY of impacted soil was removed and a sample was collected. Returned samples are below the closure requirements for this location.**
9. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, Enduring will backfill the excavation with compacted, non-waste containing, earthen material; construct a division prescribed soil cover; recontour and re-vegetate the site.  
**The site has been backfilled, and will be recontoured and revegetated upon P&A of the wellsite.**
10. Notice of Closure operations will be given to the Aztec Division District III office between 72 hours and one week prior to the start of closure activities via email or verbally.  
The notification will include the following:
- i. Operator's name
  - ii. Well Name and API Number
  - iii. Location by Unit Letter, Section, Township, and Range
- Notification was provided to Mr. Cory Smith with the Aztec office of the OCD via email on July 23, 2018; see attached email printout.**



The surface owner shall be notified of Enduring's proposal to close the BGT as per the approved closure plan using certified mail, return receipt requested.

**The BLM was notified on July 23, 2018 via email; see attached email printout.**

11. Re-contouring of location will match fit, shape, line, form and texture of the surrounding area. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be placed in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.  
**This site will be recontoured and revegetated once plugging and abandoning activities have been completed. The site will be recontoured to match the above mentioned specifications.**
12. A minimum of 4 feet of cover shall be achieved and the cover shall include 1 foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.  
**The area has been backfilled to match these specifications.**
13. Enduring will seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will be used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) 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. Repeat seeding or planting will be continued until successful vegetative growth occurs.  
**The site will be re-seeded per the BLM specifications once plugging and abandoning activities have been completed.**
14. All closure activities will include proper documentation and be available for review upon request and will be submitted in closure report form to OCD within 60 days of closure of the below-grade tank. Closure report will be filed on form C-144 and incorporate the following:
  - Proof of closure notice to division and surface owner; **attached**
  - Details on capping and covering, where applicable; **per OCD Specifications**
  - Confirmation sampling analytical results; **attached**
  - Disposal facility name(s) and permit number(s); **attached**
  - Soil backfilling and cover installation; **per OCD Specifications**
  - Re-vegetation application rates and seeding techniques, (or approved alternative to re-vegetation requirements if applicable); **pursuant to BLM Specifications**
  - Photo documentation of the site reclamation. **attached**

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**



**James McDaniel**

---

**From:** James McDaniel  
**Sent:** Monday, July 23, 2018 5:01 PM  
**To:** 'Smith, Cory, EMNRD'; Fields, Vanessa, EMNRD  
**Cc:** 'Thomas, Leigh'; Chad Snell  
**Subject:** Rincon Unit 57 and 80 BGT Closures

Too all concerned parties,

Please accept the following email as the required notification for BGT closure activities being performed on the following well sites:

Rincon 57 – API 30-039-06732  
Section 1, Township 26N, Range 7W, Rio Arriba County, NM

Rincon 80 – API 30-039-07086  
Section 18, Township 27N, Range 6W, Rio Arriba County, NM

Both pits are being closed for maintenance upgrades.

Closure activities will be performed on Monday, July 30<sup>th</sup> at 9:00 AM at the Rincon 57, then the crew will mobilize to the Rincon 80 immediately following sampling at the Rincon 57. Thank you for your time in regards to this matter.

**James McDaniel**  
**HSE Supervisor**  
**Enduring Resources**  
CSP #30009  
CHMM #15676  
*Office:* 505-636-9731  
*Cell:* 505-444-3004  
[jmcdaniel@enduringresources.com](mailto:jmcdaniel@enduringresources.com)





Enduring Resources, LLC  
BGT Closure Report  
Rincon Unit 80  
30-039-07086

PHOTOS: New Above Grade Tank Set





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

*Tank 2*  
Form C-141  
Revised April 3, 2017  
Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: <b>Enduring Resources, LLC</b>	Contact: <b>Chad Snell</b>
Address: <b>332 Road 3100, Aztec, New Mexico 87410</b>	Telephone No.: <b>505-444-0586</b>
Facility Name: <b>Rincon Unit 80</b>	Facility Type: <b>Well Site (Gas)</b>

Surface Owner: <b>BLM/Federal</b>	Mineral Owner: <b>BLM/Federal</b>	API No. <b>30-039-07086</b>
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#### LOCATION OF RELEASE

Unit Letter <b>B</b>	Section <b>18</b>	Township <b>27N</b>	Range <b>6W</b>	Feet from the <b>1090</b>	North/South Line <b>NORTH</b>	Feet from the <b>1840</b>	East/West Line <b>East</b>	County <b>Rio Arriba</b>
-------------------------	----------------------	------------------------	--------------------	------------------------------	----------------------------------	------------------------------	-------------------------------	-----------------------------

Latitude **36.5781767** Longitude **-107.505367** NAD83

#### NATURE OF RELEASE

Type of Release: <b>Produced Water</b>	Volume of Release: <b>UNK</b>	Volume Recovered: <b>NA</b>
Source of Release: <b>BGT Bottom</b>	Date and Hour of Occurrence: <b>7/30/2018</b>	Date and Hour of Discovery: <b>7/30/2018</b>
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	



If a Watercourse was Impacted, Describe Fully.\*  
**NOT IMPACTED**

Describe Cause of Problem and Remedial Action Taken.\*  
**During BGT closure activities a release was noticed once pit was removed. Confirming a release had occurred.**

Describe Area Affected and Cleanup Action Taken.\*

**Affected area was directly under BGT.**

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	<u><b>OIL CONSERVATION DIVISION</b></u>	
Printed Name: <b>Chad Snell</b>	Approved by Environmental Specialist: 	
Title: <b>HSE Tech</b>	Approval Date:	Expiration Date:
E-mail Address: <b>csnell@enduringresources.com</b>	Conditions of Approval:	
Date: <b>9/25/2018</b> Phone: <b>505-444-0586</b>	Attached <input type="checkbox"/>	

\* Attach Additional Sheets If Necessary

*NCS 183303 6318*

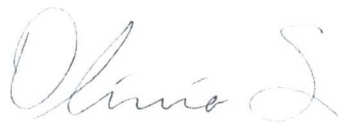
# ANALYTICAL REPORT

August 08, 2018

## Enduring Resources

Sample Delivery Group: L1014209  
Samples Received: 08/02/2018  
Project Number:  
Description: BGT Closure  
Site: RINCON UNIT 80  
Report To: James McDaniel  
332 County Road 3100  
Aztec, NM 87410

Entire Report Reviewed By:



Olivia Studebaker  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.





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<sup>1</sup> Ss

<sup>2</sup> Cn

<sup>3</sup> Sr

<sup>4</sup> Qc

<sup>5</sup> Gl

<sup>6</sup> Al

<sup>7</sup> Sc

# SAMPLE SUMMARY

ONELABEL NATIONWIDE



## 5BBL BGT BOTTOM L1014209-01 Solid

Collected by  
Chad Snel

Collected datetime  
08/03/18 11:30

Received datetime  
08/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1148414	1	08/07/18 12:38	08/07/18 12:50	JD
Wet Chemistry by Method 9056A	WG1147229	1	08/03/18 11:30	08/03/18 20:18	MCG
Volatile Organic Compounds (GC) by Method 8015/8021	WG1147621	1	08/02/18 19:54	08/06/18 12:21	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1147714	1	08/04/18 10:13	08/04/18 18:06	AAT

Tc

Cn

## 95 BBL BGT BOTTOM L1014209-02 Solid

Collected by  
Chad Snel

Collected datetime  
08/03/18 11:05

Received datetime  
08/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1148414	1	08/07/18 12:38	08/07/18 12:50	JD
Wet Chemistry by Method 9056A	WG1147229	1	08/03/18 11:30	08/03/18 20:36	MCG
Volatile Organic Compounds (GC) by Method 8015/8021	WG1147160	1	08/02/18 19:54	08/03/18 20:02	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1147714	1	08/04/18 10:13	08/04/18 18:19	AAT

Sr

Qc

Gl

Al

Sc



# CASE NARRATIVE

HOME LAB NATIONWIDE



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Olivia Studebaker  
Project Manager

Tc

Ss

Sr

Qc

Gl

Al

Sc

## 5BBL BGT BOTTOM

Collected date/time: 08/01/18 11:30

## SAMPLE RESULTS - 01

L1014209

HOME LAB NATIONWIDE



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.2		1	08/07/2018 12:50	WG1148414

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	53.3		11.2	1	08/03/2018 20:18	WG1147229

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.00100		0.000561	1	08/06/2018 12:21	WG1147621
Toluene	ND		0.00561	1	08/06/2018 12:21	WG1147621
Ethylbenzene	ND		0.000561	1	08/06/2018 12:21	WG1147621
Total Xylene	ND		0.00168	1	08/06/2018 12:21	WG1147621
TPH (GC/FID) Low Fraction	0.138		0.112	1	08/06/2018 12:21	WG1147621
(S) o,a,o-Trifluorotoluene(FID)	81.0		77.0-120		08/06/2018 12:21	WG1147621
(S) o,a,o-Trifluorotoluene(PID)	84.3		75.0-128		08/06/2018 12:21	WG1147621

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	29.2		4.49	1	08/04/2018 18:06	WG1147714
C28-C40 Oil Range	69.8		4.49	1	08/04/2018 18:06	WG1147714
(S) o-Terphenyl	80.3		18.0-148		08/04/2018 18:06	WG1147714



## 95 BBL BGT BOTTOM

Collected Date/Time: 08/01/18 11:05

## SAMPLE RESULTS - 02

L1014209

ONE LAB NATIONWIDE



## Total Solids by Method: 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.3		1	08/07/2018 12:50	WG1148414

## Wet Chemistry by Method: 9056A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	59.5		11.7	1	08/03/2018 20:36	WG1147229

## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.000586	1	08/03/2018 20:02	WG1147160
Toluene	ND		0.00586	1	08/03/2018 20:02	WG1147160
Ethylbenzene	ND		0.000586	1	08/03/2018 20:02	WG1147160
Total Xylene	0.0105		0.00176	1	08/03/2018 20:02	WG1147160
TPH (GC/FID) Low Fraction	2.73		0.117	1	08/03/2018 20:02	WG1147160
(S) o,a,a-Trifluorotoluene(FID)	97.0		77.0-120		08/03/2018 20:02	WG1147160
(S) o,a,a-Trifluorotoluene(PID)	96.3		75.0-128		08/03/2018 20:02	WG1147160

## Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	16.4		4.69	1	08/04/2018 18:19	WG1147714
C28-C40 Oil Range	36.5		4.69	1	08/04/2018 18:19	WG1147714
(S) o-Terphenyl	56.3		18.0-148		08/04/2018 18:19	WG1147714

WG1148414

Total Solids by Method 2540 G-2011

## QUALITY CONTROL SUMMARY

L1014209-01.02

ONE LAB. NATIONWIDE.



## Method Blank (MB)

(MB) R3331783-1 08/07/18 12:50

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00100			

## L1014247-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1014247-01 08/07/18 12:50 • (DUP) R3331783-3 08/07/18 12:50

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	82.8	81.7	1	1.31		10

## Laboratory Control Sample (LCS)

(LCS) R3331783-2 08/07/18 12:50

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	





WG1147229

Wet Chemistry by Method 9056A

## QUALITY CONTROL SUMMARY

L1014209-01.02

ONE LAB NATIONWIDE



## Method Blank (MB)

(MB) R3330948-1 08/03/18 19:00

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	U		0.795	10.0

## L1014209-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1014209-01 08/03/18 20:18 • (DUP) R3330948-6 08/03/18 20:27

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	53.3	55.5	1	4.11		15

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3330948-2 08/03/18 19:09 • (LCSD) R3330948-3 08/03/18 19:17

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Chloride	200	205	204	102	102	80.0-120			0.422	15

## L1014207-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1014207-01 08/03/18 19:52 • (MS) R3330948-4 08/03/18 20:01 • (MSD) R3330948-5 08/03/18 20:10

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	588	251	844	793	101	92.3	1	80.0-120			6.19	15





## Method Blank (MB)

(MB) R3330928-5 08/03/18 13:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	0.000247	J	0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) o,p,m-Trifluorotoluene(FID)	100			77.0-120
(S) o,p,m-Trifluorotoluene(PID)	100			75.0-128

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3330928-1 08/03/18 11:27 • (LCSD) R3330928-2 08/03/18 11:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0532	0.0538	106	108	71.0-121			1.05	20
Toluene	0.0500	0.0514	0.0515	103	103	72.0-120			0.165	20
Ethylbenzene	0.0500	0.0533	0.0535	107	107	76.0-121			0.525	20
Total Xylene	0.150	0.168	0.167	112	111	75.0-124			0.778	20
(S) o,p,m-Trifluorotoluene(FID)				100	100	77.0-120				
(S) o,p,m-Trifluorotoluene(PID)				98.6	99.3	75.0-128				

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3330928-3 08/03/18 12:15 • (LCSD) R3330928-4 08/03/18 12:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.87	5.94	107	108	70.0-136			1.23	20
(S) o,p,m-Trifluorotoluene(FID)				106	106	77.0-120				
(S) o,p,m-Trifluorotoluene(PID)				109	109	75.0-128				

WG1147621

Volatile Organic Compounds (GC) by Method 8015/8021

## QUALITY CONTROL SUMMARY

L1014209-01

ONE LAB NATIONWIDE



## Method Blank (MB)

(MB) R3331329-5 08/06/18 11:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Benzene	U		0.000120	0.000500
Toluene	0.000190	J	0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S)				
a,a,g-Trifluorotoluene(FID)	94.5			77.0-120
(S)				
a,a,g-Trifluorotoluene(PID)	98.5			75.0-128

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3331329-1 08/06/18 09:39 • (LCSD) R3331329-2 08/06/18 10:00

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Benzene	0.0500	0.0463	0.0501	92.6	100	71.0-121			8.00	20
Toluene	0.0500	0.0488	0.0524	97.6	105	72.0-120			7.04	20
Ethylbenzene	0.0500	0.0482	0.0520	96.4	104	76.0-121			7.54	20
Total Xylene	0.150	0.144	0.155	95.7	103	75.0-124			7.38	20
(S)										
a,a,g-Trifluorotoluene(FID)				93.6	93.8	77.0-120				
(S)										
a,a,g-Trifluorotoluene(PID)				96.0	96.0	75.0-128				

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3331329-3 08/06/18 10:21 • (LCSD) R3331329-4 08/06/18 10:42

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
TPH (GC/FID) Low Fraction	5.50	5.47	5.44	99.5	98.9	70.0-136			0.598	20
(S)										
a,a,g-Trifluorotoluene(FID)				108	107	77.0-120				
(S)										
a,a,g-Trifluorotoluene(PID)				110	109	75.0-128				



WG1147714

Semi-Volatile Organic Compounds (GC) by Method 8015

## QUALITY CONTROL SUMMARY

L1014209-01.02

ONE LAB. NATIONWIDE



## Method Blank (MB)

(MB) R3330969-1 08/04/18 17:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	92.4			18.0-148

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3330969-2 08/04/18 17:41 • (LCSD) R3330969-3 08/04/18 17:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	39.0	39.4	78.1	78.8	50.0-150			0.966	20
(S) o-Terphenyl				96.0	88.6	18.0-148				





## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

## Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.
Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

Blank

Tc

Ss

Cn

Sr

Qc

AI

Sc

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

TC

Ss

 ${}^Z\text{Cn}$ Sr

6 Qc

7  
GI

Sc

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



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# Enduring Resources

332 County Road 3100  
Aztec, NM 87410

Billing Information:  
James McDaniel  
332 County Road 3100  
Aztec, NM 87410

Report to:  
James McDaniel

Email To:

Project Description: B&T Closure

City/State Collected:

Phone: 505-636-9731

Client Project #

Lab Project #

Fax:

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

Immediately

Packed on ice: N Y X

Same Day Five Day  
Next Day 5 Day (Rad Only)  
Two Day 10 Day (Rad Only)  
Three Day

Date Results Needed

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
SBBL B&T Bottom	Comp.	SS	—	8-1-18	11:30am	1
9S B&T B&T Bottom	Comp.	SS	—	8-1-18	11:05am	1

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks:

Samples returned via:

UPS FedEx Courier

Tracking # 4196 3260 1769

Relinquished by (Signature):

Date:

Time:

Received by (Signature):

Trip Blank Received: Yes ☒ No  
HCL / MeOH TBR

Relinquished by (Signature):

Date:

Time:

Received by (Signature):

Temp: °C Bottles Received: 2

Relinquished by (Signature):

Date:

Time:

Received for job by (Signature):

Date: 8/2/18 Time: 8:45

If preservation required by Logis: Date/Time

Hold: Condition: NCF / OK

Analysis / Container / Preservative

Pres Chk

Cool Cool Cool

8021 (BTEX)  
8015 (GRO/PRO/MRO)  
Chlorides

Chain of Custody Page 1 of 1



12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-1850  
Phone: 800-767-1850  
Fax: 615-758-1850



L# L1014209  
E113

Account: ENDRESANM

Template:

Prelogin:

TSR: 288 - Daphne Richards

PR:

Shipped Via:

Re marks

Sample # (Lab only)

-01  
02

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N  
COC Signed/Accurate: ☒ Y ☐ N  
Bottles arrive intact: ☒ Y ☐ N  
Correct bottles used: ☒ Y ☐ N  
Sufficient volume sent: ☒ Y ☐ N  
If Applicable  
VOA Zero Headspace: ☒ Y ☐ N  
Preservation Correct/Checked: ☒ Y ☐ N

L.S MR/HL