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-147
Revised April 3, 2017

pCS1904337267

Recycling Facility and/or Recycling Containment

Type of Facility: ☒ Recycling Facility ☒ Recycling Containment*

Type of action: ☐ Permit ☐ Registration ☐ Modification ☐ Extension ☒ Closure ☐ Other (explain) _____

*** At the time C-147 is submitted to the division for a Recycling Containment, a copy shall be provided to the surface owner.**

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** (For multiple operators attach page with information) OGRID #: **372286**

Address: **200 Energy Court, Farmington, New Mexico 87401**

Facility or well name (include API# if associated with a well): **Rodeo 511H Facility**

OCD Permit Number: **3RF-44** (For new facilities the permit number will be assigned by the district office)

U/L or Qtr/Qtr **N** Section **25** Township **23N** Range **9W** County: **San Juan**

Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.

☒ **Recycling Facility:**

Location of recycling facility (if applicable): Latitude **36.191179** Longitude **-107.744800** NAD83

Proposed Use: ☒ Drilling* ☒ Completion* ☒ Production* ☒ Plugging *

The re-use of produced water may NOT be used until fresh water zones are cased and cemented

☐ Other, ***requires permit for other uses. Describe use, process, testing, volume of produced water and ensure there will be no adverse impact on groundwater or surface water.***

☒ Fluid Storage

☒ Above ground tanks ☒ Recycling containment ☐ Activity permitted under 19.15.17 NMAC explain type _____

☐ Activity permitted under 19.15.36 NMAC explain type: _____ ☐ Other explain _____

☒ For multiple or additional recycling containments, attach design and location information of each containment

☒ **Closure Report (required within 60 days of closure completion):** ☒ Recycling Facility Closure Completion Date: **9/11/2019**

3.

☒ **Recycling Containment:**

☐ Annual Extension after initial 5 years (attach summary of monthly leak detection inspections for previous year)

Center of Recycling Containment (if applicable): Latitude **36.191179** Longitude **-107.744800** NAD83

☒ For multiple or additional recycling containments, attach design and location information of each containment

☒ Lined ☐ Liner type: Thickness **45** mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other _____

☒ String-Reinforced

Liner Seams: ☒ Welded ☐ Factory ☐ Other _____ Volume: **40,280** bbl Dimensions: Radius **80'** x Height **10'**

☒ Recycling Containment Closure Completion Date: **9/11/2019**

NMOCD

SEP 27 2019

DISTRICT III

25

4.

Bonding:

☒ Covered under bonding pursuant to 19.15.8 NMAC per 19.15.34.15(A)(2) NMAC **(These containments are limited to only the wells owned or operated by the owners of the containment.)**

☐ Bonding in accordance with 19.15.34.15(A)(1). Amount of bond $_____ **(work on these facilities cannot commence until bonding amounts are approved)**

☐ Attach closure cost estimate and documentation on how the closure cost was calculated.

5.

Fencing:

☒ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☐ Alternate. Please specify_____

6.

Signs:

☒ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☐ Signed in compliance with 19.15.16.8 NMAC

7.

Variances:

Justifications and/or demonstrations that the proposed variance will afford reasonable protection against contamination of fresh water, human health, and the environment.

Check the below box only if a variance is requested:

☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. If a Variance is requested, include the variance information on a separate page and attach it to the C-147 as part of the application.

If a Variance is requested, it must be approved prior to implementation.

8.

Siting Criteria for Recycling Containment

Instructions: The applicant must provide attachments that demonstrate compliance for each siting criteria below as part of the application. Potential examples of the siting attachment source material are provided below under each criteria.

General siting	
Ground water is less than 50 feet below the bottom of the Recycling Containment. 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. - Written confirmation or verification from the municipality; written approval obtained from the municipality	☐ Yes ☒ No ☐ NA
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Minerals 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
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

9.
Recycling Facility and/or Containment Checklist:
Instructions: Each of the following items must be attached to the application. Indicate, by a check mark in the box, that the documents are attached.

- ☐ Design Plan - based upon the appropriate requirements.
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements.
- ☒ Closure Plan - based upon the appropriate requirements.
- ☐ Site Specific Groundwater Data -
- ☐ Siting Criteria Compliance Demonstrations –
- ☒ **Certify that notice of the C-147 (only) has been sent to the surface owner(s)**

10.
Operator Application Certification:
I hereby certify that the information and attachments submitted with this application are true, accurate and complete to the best of my knowledge and belief.

Name (Print): **James McDaniel** Title: **HSE Supervisor**

Signature: Date: **9/26/2018**

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

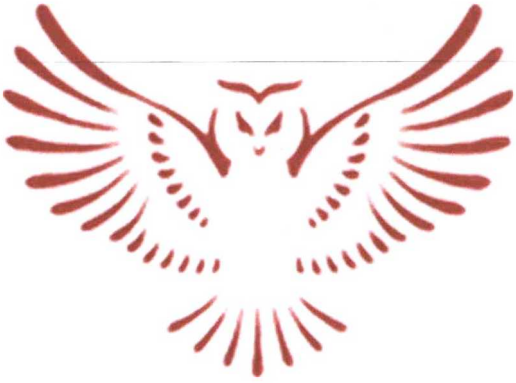
11.
OCD Representative Signature: **Approval Date:** 10/7/19

Title: Environmental Specialist **OCD Permit Number:** 3RF-44

- ☐ OCD Conditions
- ☐ Additional OCD Conditions on Attachment

Closure Documentation

Rodeo 511H Water Recycle Facility



Enduring Resources, LLC
200 Energy Court
Farmington, New Mexico 87401

Prepared by:
James McDaniel
HSE Supervisor

Introduction
This closure plan is designed to meet the requirements of NMAC 19.15.34.14, which outlines the requirements for closure of a produced water recycling containment.

Closure Plan

1. **Upon cessation of operations (Defined as the use of less than 20% of the pond's total fluid capacity), Enduring will remove all fluids within 60 days of the official date of cessation.**
   The final date of use was July 19, 2019. All fluids were removed from the containment on July 19, 2019.

2. **Enduring will close the produced water containment within six (6) months from the official date of cessation. If Enduring will require more than 6 months to complete closure activities, an extension request will be filed prior to the six (6) month time limit for closure.**
   The containment was disassembled, and closure sampling was conducted on August 30, 2019.

3. **Within 60 days of final closure completion, Enduring will submit a closure report on form C-147, including required attachments, to document all closure activities including sampling results. The closure report will certify that all information in the report and attachments is correct and that Enduring has complied with all applicable closure requirements and conditions specified in divisions rules of directives.**
   This closure report is submitted within 60 days of the documented closure date of 9/11/2019.

4. **Closure activities will consist of the following:**
   a. **Removal of all containment contents**
      All containments were removed on August 30, 2019.
   b. **Removal of liners and associated leak detection equipment for disposal at a division approved facility.**
      All liner and leak detection materials were removed and disposed of at Bondad Landfill.
   c. **Removal of all equipment associated with the continued operation of the recycling containment.**
      All equipment associated with the continued operation of the recycling containment has been removed from the site.
   d. **Enduring will test the soils beneath the containment for contamination with a five-point composite sample which includes wet or stained soils, if any, and that sample shall be analyzed for the constituents listed in *Table I*.**
      One (1) 5-point composite was collected beneath the location of each of the two (2) above grade storage tanks that made up the recycling facility on 8/30/2019; see attached *Field Notes*. Each sample was analyzed for the constituents listed in Table I. No wet or stained areas were observed during the sampling event.
   e. **If the closure sample(s) collected return results equal to or less than the values listed in *Table I*, closure will be completed and backfill will begin with non-waste containing, uncontaminated, earthen material**
      Both 5-point composite samples collected returned results below the limits listed in Table I for sites with groundwater from 51'-100' below ground surface; see attached *Results Table*. No backfill is required, as no excavation was needed.
   f. **If the closure sample(s) collected indicate concentrations are higher than the values listed in Table I, Enduring will report the elevated sample values to the NMOCD, and additional delineation may be required at this time.**
      Both 5-point composite samples collected returned results below the limits listed in Table I for sites with groundwater from 51'-100' below ground surface; see attached *Results Table*.

5. **Enduring will reclaim the containment location to a safe and stable condition that blends the surrounding undisturbed area. Top soils and subsoils will be replaced to their original relative positions and recontoured to achieve erosion control, long term stability and preservation of surface water flow patterns. The disturbed area will be re-seeded in the first favorable growing season. The impacted surface area will be restored to the condition that existed prior to the condition that existed prior to construction.**
The pad area will be reclaimed to meet the standards of the surface owner, the Bureau of Land Management. Enduring will submit notice to the NMOCD when recontouring and re-seeding activities have been completed.

6. **Reclamation of all disturbed areas no longer in use shall be considered complete when all ground disturbing activities have been completed, and a uniform vegetative cover has been established that reflects a life-form ratio of fifty percent of pre-disturbance levels and total percent plant cover of at least seventy percent of pre-disturbance levels excluding noxious weeds.**
The pad area will be reclaimed to meet the standards of the surface owner, the Bureau of Land Management. Enduring will submit notice to the NMOCD when the required vegetative cover requirements have been met.

7. **Soil cover and revegetation as required in 19.15.34.14 NMAC will be met in addition to the reclamation requirements of the BLM as surface owner, which provides for more stringent requirements.**
The pad area will be reclaimed to meet the standards of the surface owner, the Bureau of Land Management.

Table I
Closure Criteria for Recycling Containments

Depth below bottom of containment to groundwater less than 10,000 mg/l TDS	Constituent	Method*	Limit**
51 feet - 100 feet	Chloride	EPA 300.0	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	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

* Or other test methods approved by the division.
** Numerical limits or natural background level, whichever is greater.
[19.15.34.14 NMAC - N, 3/31/15]

Results Table - Rodeo 511H

Sample Description	Date	Chlorides (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	TPH (DRO+GRO) (mg/kg)	MRO (mg/kg)	TPH (DRO+GRO+MRO) (mg/kg)	Benzene (mg/kg)	Xylene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	BTEX (mg/kg)
TABLE I STANDARDS	*NA*	*10,000*	*NA*	*NA*	*1,000*	*NA*	*2,500*	*10*	*NA*	*NA*	*NA*	*50*
AST 1 Composite	8/30/2019	53.8	< 0.119	< 4.77	< 4.89	< 4.77	< 9.66	< 0.000596	< 0.00596	< 0.000596	< 0.00179	< 0.008952
AST 2 Composite	8/30/2019	851	< 0.124	6.61	6.61	< 4.91	6.61	< 0.000620	< 0.00620	< 0.000620	< 0.00187	< 0.00931

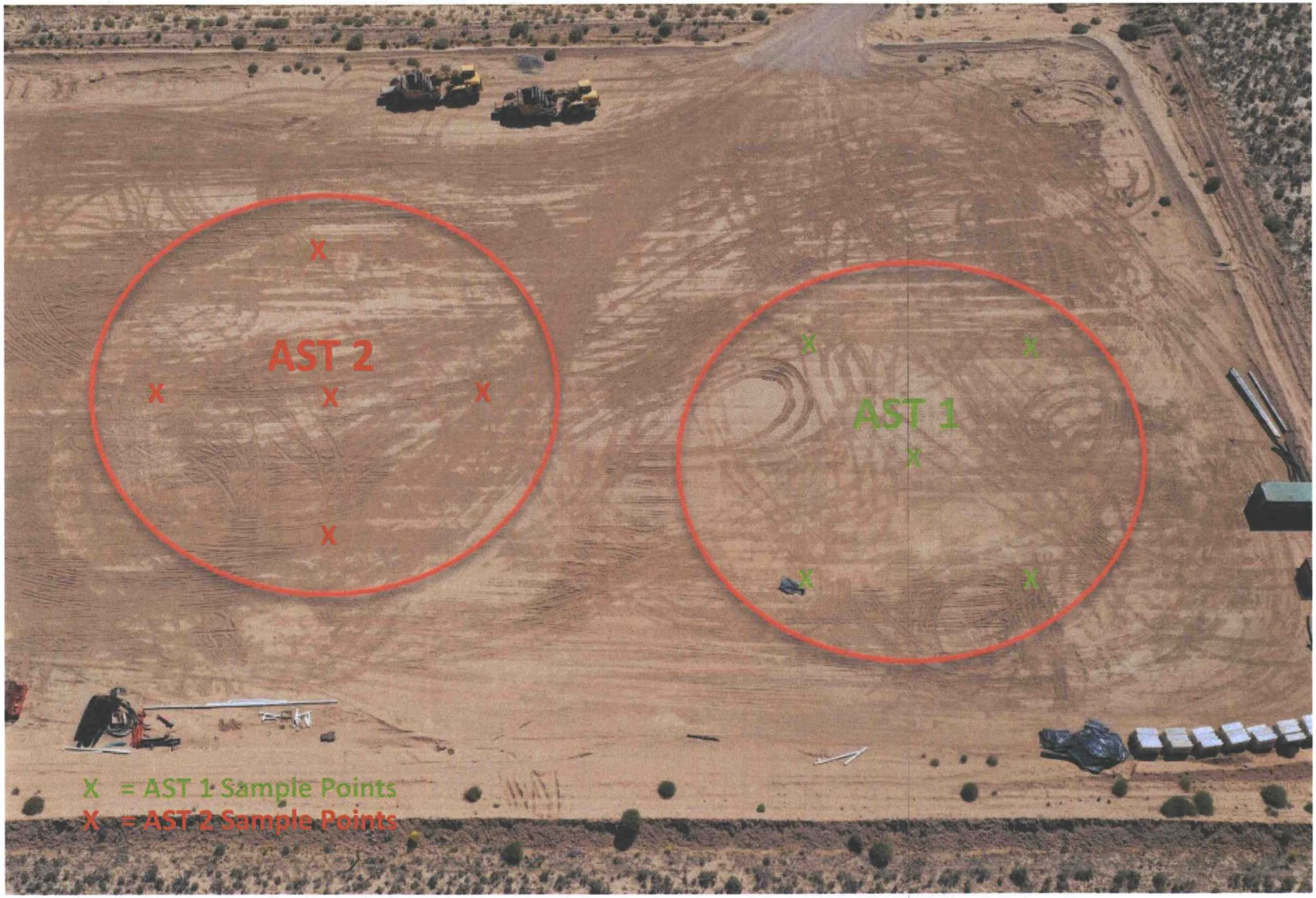
James McDaniel

From: James McDaniel
Sent: Tuesday, August 27, 2019 8:23 AM
To: 'Smith, Cory, EMNRD'; Powell, Brandon, EMNRD
Cc: Chad Snell
Subject: Rodeo 511 Recycling Facility 3RF-44

Cory,

Please accept this email as the required 48 hour notice for closure sampling activities to take place at the Rodeo 511 Recycling Facility, 3RF-44. The ASTs have been taken down and the facility is ready to begin the closure process. Closure sampling will take place on Friday, August 30th after the liner inspection at the Chaco 2408 32P 114H. Thank you for your time in regards to this matter.

James McDaniel
HSE Supervisor
Enduring Resources
CSP #30009
CHMM #15676
CET #13805
Office: 505-636-9731
Cell: 505-444-3004
jmcdaniel@enduringresources.com


AST 2
AST 1
X = AST 1 Sample Points
X = AST 2 Sample Points

ENDURING RESOURCES

ON-SITE FORM

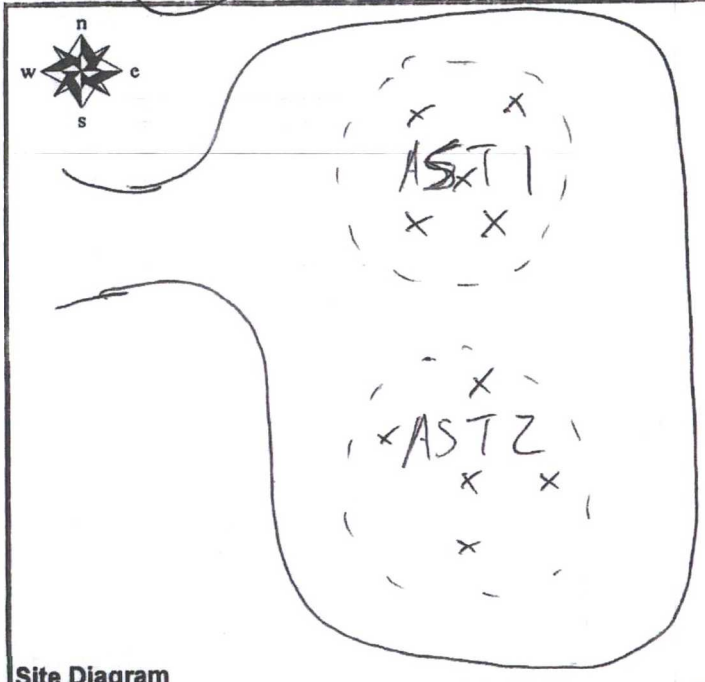
Well Name Rodeo SWI Facility API # ~~3~~RF-44

Section 25 Township 23N Range 9W County Sandoval State NM

Contractors On-Site None Time On-Site 927 Time Off-Site 1015

Spill Amount — bbls Spilled (Oil/Produced Water/Other —) Recovered —

Land Use (Range / Residential / Tribe —) Spill Area — x — x — deep



Site Diagram

Sample Location

Sample Location

*Jonathan Kelly, NMOCD on-site
- Equipment being moved off-sit

Comments

Samples

Time	Sample #	Sample Description	Characteristics	OVM (ppm)	Analysis Requested
	NA	100 Standard	NA		NA
945	1	AST 1 Composite	Dry, Brown Sandy loam	—	8015, 8021, Chlorides
1000	2	AST 2 Composite	Dry, Brown Sandy loam		8015, 8021, Chlorides

Name (Print) James McDaniel Date 8/30/19

Name (Signature) [signature] Company Enduring

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 11, 2019

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

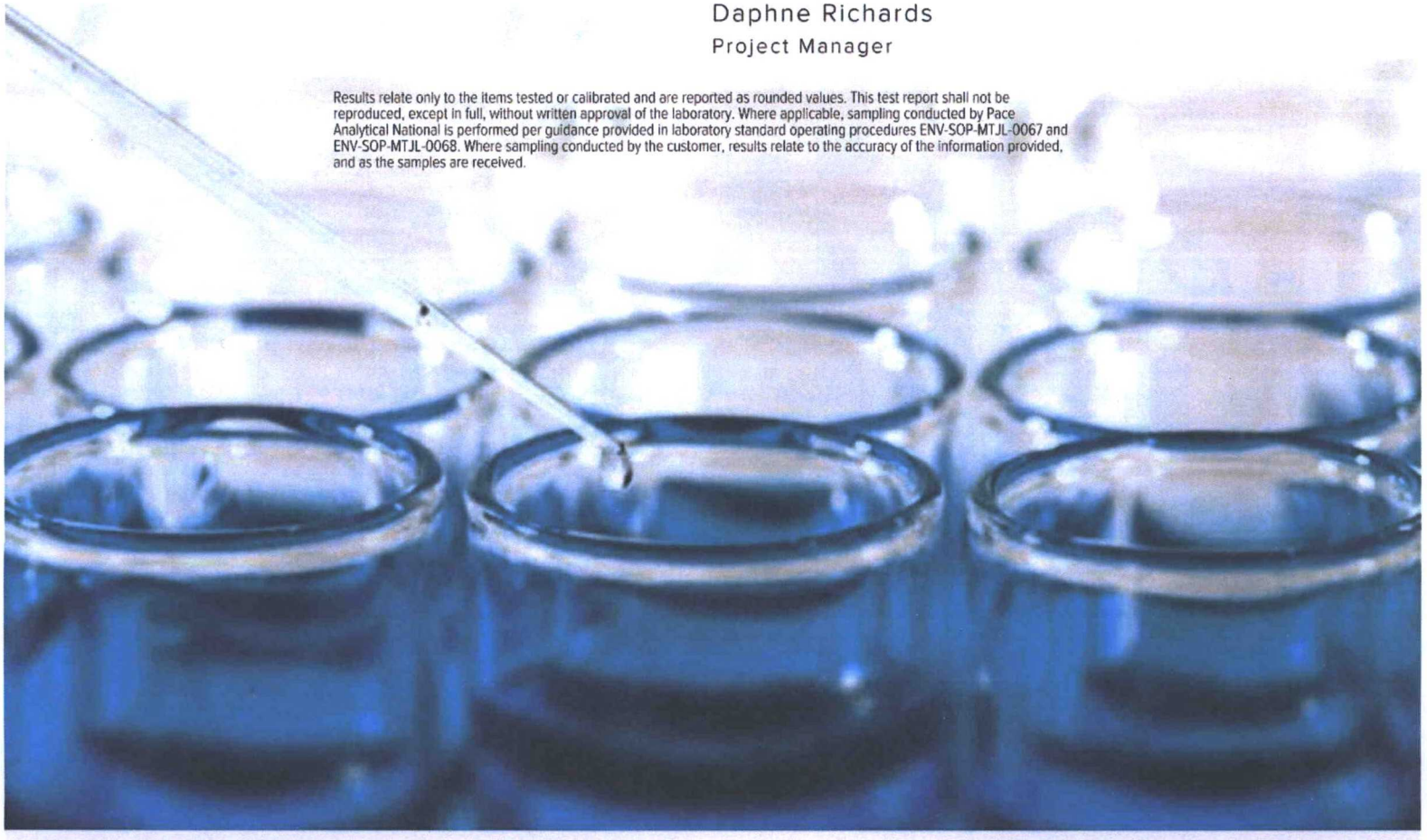
Enduring Resources

Sample Delivery Group:	L1135123
Samples Received:	08/31/2019
Project Number:	
Description:	Rodeo 511 Facility
Site:	RODEO 511
Report To:	James McDaniel
	200 Energy Court
	Farmington, NM 87401

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
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 Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



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ONE LAB. NATIONWIDE.

AST 1 COMPOSITE L1135123-01 Solid

Collected by: James McDaniel | Collected date/time: 08/30/19 09:45 | Received date/time: 08/31/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1342599	1	09/10/19 12:34	09/10/19 12:41	KDW	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1339530	1	09/05/19 10:57	09/05/19 16:41	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1341441	1	09/03/19 18:56	09/09/19 20:34	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1340908	1	09/06/19 12:45	09/07/19 03:24	DMW	Mt. Juliet, TN

AST 2 COMPOSITE L1135123-02 Solid

Collected by: James McDaniel | Collected date/time: 08/30/19 10:00 | Received date/time: 08/31/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1342599	1	09/10/19 12:34	09/10/19 12:41	KDW	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1339530	1	09/05/19 10:57	09/05/19 16:50	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1342870	1.01	09/03/19 18:56	09/10/19 15:22	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1340908	1	09/06/19 12:45	09/07/19 03:40	DMW	Mt. Juliet, TN

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 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.

Daphne R Richards

Daphne Richards
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.8		1	09/10/2019 12:41	WG1342599

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	53.8		11.9	1	09/05/2019 16:41	WG1339530

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		0.000596	1	09/09/2019 20:34	WG1341441
Toluene	ND		0.00596	1	09/09/2019 20:34	WG1341441
Ethylbenzene	ND		0.000596	1	09/09/2019 20:34	WG1341441
Total Xylene	ND		0.00179	1	09/09/2019 20:34	WG1341441
TPH (GC/FID) Low Fraction	ND		0.119	1	09/09/2019 20:34	WG1341441
(S) a,a,a-Trifluorotoluene(FID)	*93.0*		*77.0-120*		*09/09/2019 20:34*	WG1341441
(S) a,a,a-Trifluorotoluene(PID)	*95.8*		*72.0-128*		*09/09/2019 20:34*	WG1341441

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	ND		4.77	1	09/07/2019 03:24	WG1340908
C28-C40 Oil Range	ND		4.77	1	09/07/2019 03:24	WG1340908
(S) o-Terphenyl	*84.1*		*18.0-148*		*09/07/2019 03:24*	WG1340908

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	%				
Total Solids	81.5		1	09/10/2019 12:41	WG1342599

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Chloride	851		12.3	1	09/05/2019 16:50	WG1339530

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Benzene	ND		0.000620	1.01	09/10/2019 15:22	WG1342870
Toluene	ND		0.00620	1.01	09/10/2019 15:22	WG1342870
Ethylbenzene	ND		0.000620	1.01	09/10/2019 15:22	WG1342870
Total Xylene	ND		0.00187	1.01	09/10/2019 15:22	WG1342870
TPH (GC/FID) Low Fraction	ND		0.124	1.01	09/10/2019 15:22	WG1342870
(S) a,a,a-Trifluorotoluene(FID)	*92.6*		*77.0-120*		*09/10/2019 15:22*	WG1342870
(S) a,a,a-Trifluorotoluene(PID)	*96.3*		*72.0-128*		*09/10/2019 15:22*	WG1342870

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
C10-C28 Diesel Range	6.61		4.91	1	09/07/2019 03:40	WG1340908
C28-C40 Oil Range	ND		4.91	1	09/07/2019 03:40	WG1340908
(S) o-Terphenyl	*75.7*		*18.0-148*		*09/07/2019 03:40*	WG1340908

Method Blank (MB)

(MB) R3449265-1 09/10/19 12:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

L1135123-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1135123-01 09/10/19 12:41 • (DUP) R3449265-3 09/10/19 12:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	83.8	84.4	1	0.701		10

Laboratory Control Sample (LCS)

(LCS) R3449265-2 09/10/19 12:41

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

Method Blank (MB)

(MB) R3447685-1 09/05/19 11:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	1.40	J	0.795	10.0

L1135022-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1135022-06 09/05/19 12:52 • (DUP) R3447685-3 09/05/19 13:02

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	21.5	25.2	1	16.0	P1	15

L1135022-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1135022-18 09/05/19 15:34 • (DUP) R3447685-6 09/05/19 16:03

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	ND	9.95	1	0.000		15

Laboratory Control Sample (LCS)

(LCS) R3447685-2 09/05/19 12:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	205	103	80.0-120	

L1135022-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1135022-13 09/05/19 14:28 • (MS) R3447685-4 09/05/19 14:37 • (MSD) R3447685-5 09/05/19 14:47

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	500	57.4	550	567	98.5	102	1	80.0-120			3.02	15

Method Blank (MB)

(MB) R3448969-3 09/09/19 14:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	0.000138	J	0.000120	0.000500
Toluene	0.000201	J	0.000150	0.00500
Ethylbenzene	0.000276	J	0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	0.0349	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*92.8*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*94.8*			*72.0-128*

Laboratory Control Sample (LCS)

(LCS) R3448969-1 09/09/19 11:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0459	91.7	76.0-121	
Toluene	0.0500	0.0450	89.9	80.0-120	
Ethylbenzene	0.0500	0.0467	93.3	80.0-124	
Total Xylene	0.150	0.138	91.8	37.0-160	
(S) a,a,a-Trifluorotoluene(FID)			*93.1*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*95.5*	*72.0-128*	

Laboratory Control Sample (LCS)

(LCS) R3448969-2 09/09/19 13:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.76	105	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*108*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*108*	*72.0-128*	

L1135092-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1135092-03 09/09/19 20:14 • (MS) R3448969-4 09/09/19 20:55 • (MSD) R3448969-5 09/09/19 21:15

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	ND	0.372	0.354	29.8	28.3	25	10.0-155			5.10	32
Toluene	0.0500	ND	0.377	0.367	30.1	29.4	25	10.0-160			2.62	34
Ethylbenzene	0.0500	ND	0.470	0.469	37.6	37.5	25	10.0-160			0.205	32
Total Xylene	0.150	ND	1.31	1.32	34.9	35.1	25	10.0-160	J6	J6	0.838	32
(S) a,a,a-Trifluorotoluene(FID)					*94.8*	*95.1*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*95.2*	*95.2*		*72.0-128*				

L1135091-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1135091-02 09/09/19 18:32 • (MS) R3448969-6 09/09/19 21:36 • (MSD) R3448969-7 09/09/19 21:56

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	6.45	0.0428	3.22	3.08	49.2	47.1	1	10.0-151			4.21	28
(S) a,a,a-Trifluorotoluene(FID)					*95.8*	*93.5*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*99.3*	*95.4*		*72.0-128*				

Cp
Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

Method Blank (MB)

(MB) R3449177-3 09/10/19 14:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	0.000160	J	0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	0.0257	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*95.3*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*98.0*			*72.0-128*

Laboratory Control Sample (LCS)

(LCS) R3449177-1 09/10/19 12:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0442	88.3	76.0-121	
Toluene	0.0500	0.0431	86.3	80.0-120	
Ethylbenzene	0.0500	0.0436	87.2	80.0-124	
Total Xylene	0.150	0.134	89.4	37.0-160	
(S) a,a,a-Trifluorotoluene(FID)			*94.2*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*94.9*	*72.0-128*	

Laboratory Control Sample (LCS)

(LCS) R3449177-2 09/10/19 13:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.36	116	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*108*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*106*	*72.0-128*	

Method Blank (MB)

(MB) R3448251-1 09/06/19 22:51

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	*88.6*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3448251-2 09/06/19 23:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	41.8	83.6	50.0-150	
(S) o-Terphenyl			*100*	*18.0-148*	

L1135078-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1135078-07 09/07/19 01:15 • (MS) R3448251-3 09/07/19 01:31 • (MSD) R3448251-4 09/07/19 01:48

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	64.5	ND	46.3	41.1	71.8	66.3	1	50.0-150			11.9	20
(S) o-Terphenyl					*93.8*	*89.5*		*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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

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.

Billing Information: Enduring Res. 200 Energy Ct. Farmington, NM 87401

Report to: James McDaniel, Chad Snell | Email To: jmcdaniel@enduringresources.com

Project Description: Rodeo 511 Facility | City/State Collected: Lybrook, NM

Phone: — | Client Project # — | Lab Project # —

Collected by (print): James McDaniel | Site/Facility ID # Rodeo 511 | 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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Pres Chk	TPH(DRO/GRO/ORO) 8015	BTEX - 8021	Chlorides										Remarks	Sample # (lab only)
							Cool	Cool	Cool												
AST 1 Composite	Comp	SS	0-6"	8/30/19	945	1		X	X	X											-01
AST 2 Composite	Comp	SS	0-6"	8/30/19	1000	1		X	X	X											02

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace Analytical® National Center for Testing & Innovation

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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1135123
D101

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via:

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__UPS __FedEx __Courier _____

Tracking # 479488827 4056

Sample Receipt Checklist
COC Seal Present/Intact: __NP 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
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/30/19	1250	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No HCL / MeoH TBR

Temp: 3.7+0=3.7 °C Bottles Received: 12

Date: 8/31 Time: 845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK