



March 11, 2021

District Supervisor
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

**Re: Release Characterization and Remediation Work Plan
ConocoPhillips
MCA 265 Test Line Release
Unit Letter L, Section 20, Township 17 South, Range 32 East
Lea County, New Mexico
1RP-2756
nGRL1131428247**

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a historical release that occurred from a steel test line approximately 100 feet (ft) north of the Maljamar Cooperative Agreement (MCA) 265 well (API No. 30-025-23686). The release footprint is located in Public Land Survey System (PLSS) Unit Letter L, Section 20, Township 17 South, Range 32 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.817169°, -103.793412°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report (Appendix A), the release was discovered on October 25, 2011. The release occurred as the result of a test line rupture and affected a 25-ft by 60-ft by 10-inch area of pasture. As noted in the C-141, the release location was approximately 100' north of the MCA 265. The release consisted of approximately 6 barrels (bbls) of produced water and 8 bbls of oil, and none were recovered. A vacuum truck was called, but no trucks were available to pick up standing fluids. The New Mexico Oil Conservation District (NMOCD) received the C-141 report form for the release on October 28, 2011. The release was subsequently assigned the Remediation Permit (RP) number 1RP-2756 and the Incident ID nGRL1131428247.

SITE CHARACTERIZATION

A site characterization was performed and no watercourses, sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, playa lakes, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the distances specified in 19.15.29 New Mexico Administrative Code (NMAC). The Site is in an area of low karst potential.

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are no water wells within 800 meters (approximately ½ mile) of the Site. However, there are nine (9) water wells within a 2,400-meter radius (approximately 1.5 miles) of the Site. The average depth to groundwater is 85 ft below ground surface (bgs). The site characterization data is included in Appendix B.

REGULATORY FRAMEWORK

Based upon the release footprint and in accordance with Subsection E of 19.15.29.12 NMAC, per 19.15.29.11 NMAC, the site characterization data was used to determine recommended remedial action

Tetra Tech

901 West Wall St., Suite 100, Midland, TX 79701

Tel 432.682.4559

Fax 432.682.3946

www.tetrattech.com

levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil.

Based on the site characterization and in accordance with Table I of 19.15.29.12 NMAC, the remediation RRALs for the Site are as follows:

Constituent	Remediation RRAL
Chloride	10,000 mg/kg
TPH	2,500 mg/kg
BTEX	50 mg/kg

Additionally, in accordance with the NMOCD guidance *Procedures for Implementation of the Spill Rule (19.15.29 NMAC)* (September 6, 2019), the following reclamation RRALs for surface soils (0-4 ft bgs) outside of active oil and gas operations are as follows:

Constituent	Reclamation RRAL
Chloride	600 mg/kg
TPH	100 mg/kg
BTEX	50 mg/kg

SITE ASSESSMENT

The C-141 provided the approximate location of the release. Given the age of this release, a desktop review of available historical imagery indicated discoloration of soils in the vicinity of the release area in post-2012 imagery, and no additional evidence of remedial activities conducted in the area in the subsequent imagery. On behalf of COP, Tetra Tech conducted a visual Site inspection in July 2020 to evaluate current Site conditions. Surficial staining and asphaltic soil were noted in the identified release area footprint in the pasture, as well as distressed and dead vegetation. Photographic documentation of the July 2020 Site visit is included in Appendix C.

In order to achieve horizontal and vertical delineation of the release extent, Tetra Tech personnel conducted soil sampling on December 10, 2020 on behalf of COP. The release area footprint was inaccessible with a drilling rig due to the abundance of surface and subsurface lines. A total of six (6) hand auger borings (AH-1 through AH-6) were advanced, four (4) (AH-1 through AH-4) along the perimeter of the release extent (to the north, east, south and west, respectively) and two (2) (AH-5 and AH-6) within the release footprint. The perimeter borings (AH-1 through AH-4) were installed to depths of 2 ft bgs each. Interior boring AH-6 was installed to a depth of 5 ft bgs, but interior boring AH-5 was terminated at a depth of 3 ft bgs due to the auger refusal. Soils at the Site consist of light brown to tan loose silty sands from the surface down to 5 ft bgs in the vicinity of boring location AH-6, while in the vicinity of boring location AH-5 soils are underlain by a lithified sandstone layer at 3 ft bgs. Figure 3 depicts the release extent and the 2020 soil boring locations, and GPS coordinates for the boring locations are presented in Table 1.

A total of thirteen (13) samples were collected from the six (6) borings (AH-1 through AH-6) and submitted to Pace Analytical National Center for Testing & Innovation (Pace) in Nashville, Tennessee to be analyzed for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix D.

SUMMARY OF SAMPLING RESULTS

Results from the December 2020 soil sampling event are summarized in Table 2. The analytical results exceeded the Site TPH reclamation RRAL of 100 mg/kg in the 0-1 ft bgs and 2-3 ft bgs sample intervals at location AH-5 as well as in the 0-1 ft bgs sample interval at location AH-6. There were no other analytical results which exceeded the TPH remediation or reclamation RRALs during the assessment. The analytical results associated with the remainder of the samples analyzed were below the chloride and BTEX Site reclamation RRALs of 600 mg/kg and 50 mg/kg, respectively.

Although the analytical results for TPH were well above both the reclamation (100 mg/kg) and remediation (2,500 mg/kg) RRALs in the terminal sample (2-3 ft bgs) at sample location AH-5, the release extent was vertically delineated in the deeper interior boring location AH-6. The presence of the hard sandstone layer encountered at 3 ft bgs at boring location AH-5 would essentially hinder the downward migration of contaminants in this area. Therefore, vertical and horizontal delineation was considered achieved during the December 2020 Site assessment.

REMEDATION WORK PLAN

Based on the analytical results, ConocoPhillips proposes to remove the remaining impacted material as shown in Figure 4. Impacted soils will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to a maximum depth of 4 ft below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the RRALs. The northern area of the release extent that contains steel surface lines will be hand-dug to a depth of 4 ft or the maximum extent practicable and heavy equipment will come no more than 3 ft from any pressurized lines (see Figure 4).

Excavated soils will be transported offsite and disposed of at an NMOCD-approved or permitted facility. Confirmation bottom and sidewall samples will be collected for verification of remedial activities, and analyzed for TPH, BTEX, and chlorides. Once results are received, NMOCD will be notified and the excavation will then be backfilled with clean material to surface grade. The estimated volume of material to be remediated is approximately 315 cubic yards.

ALTERNATIVE CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, ConocoPhillips proposes the following alternative confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 5. Five (5) confirmation floor samples and nine (9) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses a surface area of approximately 2,120 square feet (SF).

These confirmation sidewall and floor samples will be representative of no more than approximately 500 SF of excavated area. Confirmation samples will be sent to an accredited laboratory for analysis of TPH (Method 8015 modified), BTEX (Method 8260B), and chloride (USEPA Method 300.0). Once results are received, NMOCD will be notified and the excavation will then be backfilled with clean material to surface grade.

SITE RECLAMATION AND RESTORATION PLAN

The backfilled areas will be seeded in Spring 2021 (first favorable growing season) to aid in revegetation. Based on the soils at the site, the New Mexico State Land Office (NMSLO) Sandy (S) Sites Seed Mixture will be used for seeding and will be planted in the amount specified in the pounds pure live seed (PLS) per acre. The seed mixture will be spread by a drill equipped with a depth regulator or a hand-held broadcaster and raked. If a hand-held broadcaster is used for dispersal, the pounds pure live seed per acre will be doubled.

Site inspections will be performed to assess the revegetation progress and evaluate the site for the presence of primary or secondary noxious weeds. If noxious weeds are identified, the NMSLO will be contacted to determine an effective method for eradication. If the site does not show revegetation after one growing season, the area will be reseeded as appropriate. The NMSLO seed mixture details and corresponding pounds pure live seed per acre are included in Appendix E.

CONCLUSION

ConocoPhillips proposes to begin remediation activities at the Site within 1 year of NMOCD plan approval. The MCA 265 Test Line Release (1RP-2756) is included in an Agreed Compliance Order-Releases (ACO-R) between COP and the NMOCD signed on May 7 and 9, 2019, respectively. COP is dedicated to

Release Characterization and Remediation Work Plan
March 11, 2021

ConocoPhillips

addressing and closing all historical releases included in the ACO-R, and given the number of releases to be addressed, 1 year is anticipated to be a practicable timeline.

Upon completion of the proposed work, a final closure report detailing the remediation and reclamation activities will be submitted to NMOCD. If you have any questions concerning the soil assessment or the proposed remediation activities for the Site, please call me at (512) 739-7874 or Christian at (512) 338-2861.

Sincerely,
Tetra Tech, Inc.



Samantha K. Abbott, P.G.
Senior Staff Geologist



Christian M. Llull, P.G.
Project Manager

cc:
Mr. Marvin Soriwei, RMR – ConocoPhillips
Mr. Charles Beauvais, GPBU – ConocoPhillips

LIST OF ATTACHMENTS

Figures:

- Figure 1 – Site Location Map
- Figure 2 – Topographic Map
- Figure 3 – Release Extent and Site Assessment
- Figure 4 – Proposed Remediation Extent
- Figure 5 – Alternative Confirmation Sampling Plan

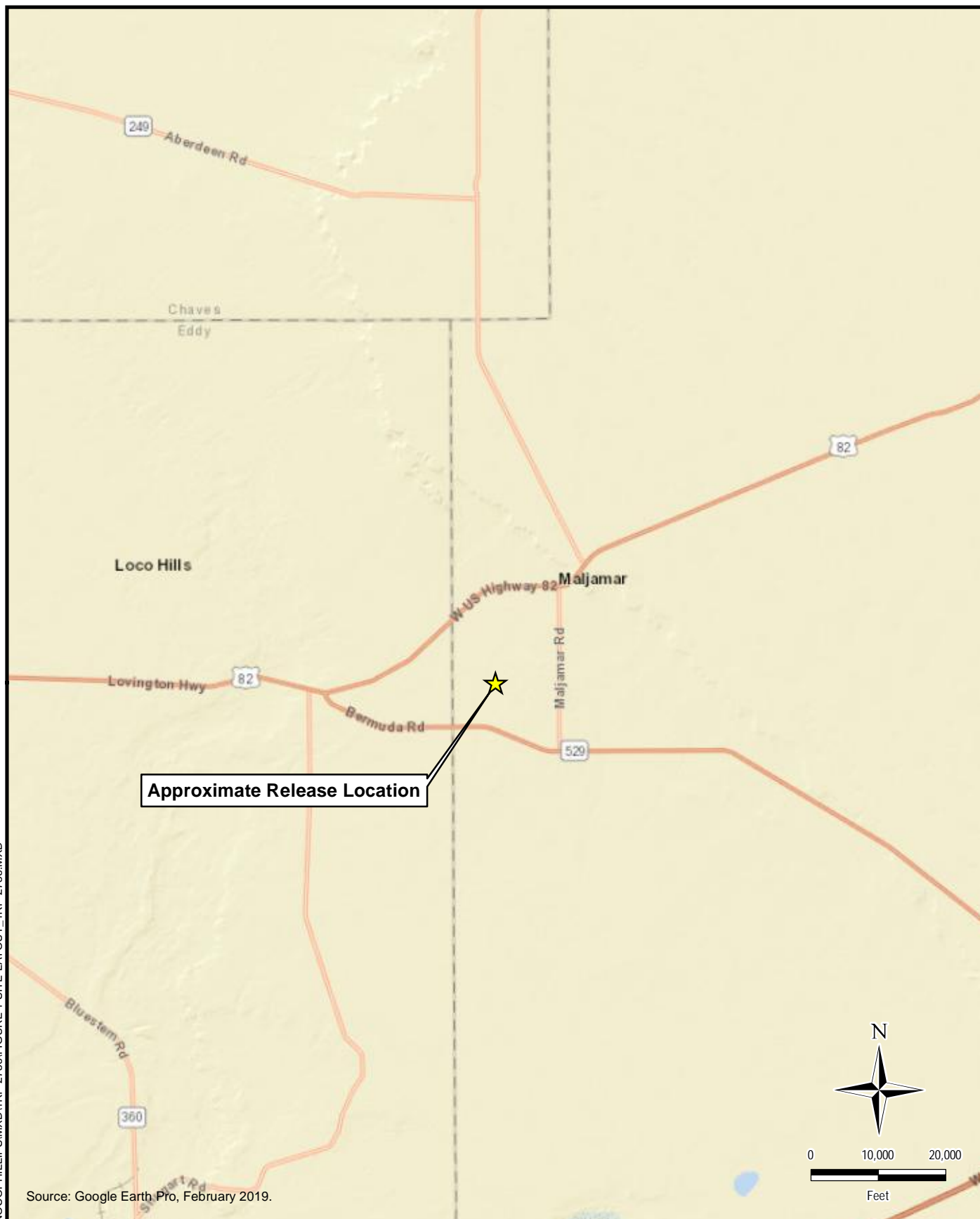
Tables:

- Table 1 – Boring Location Coordinates
- Table 2 – Summary of Analytical Results – Soil Assessment

Appendices:

- Appendix A – C-141 Forms
- Appendix B – Site Characterization Data
- Appendix C – Photographic Documentation
- Appendix D – Laboratory Analytical Data
- Appendix E – NMSLO Seed Mixture Details

FIGURES



Source: Google Earth Pro, February 2019.



TETRA TECH

www.tetrattech.com

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Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

CONOCOPHILLIPS

1RP-2756
(32.817169°, -103.793412°)
LEA COUNTY, NEW MEXICO

**MCA 265 TEST LINE RELEASE
SITE LOCATION MAP**

PROJECT NO.: 212C-MD-02334

DATE: JANUARY 13, 2021

DESIGNED BY: AAM

Figure No.

1



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-2756\FIGURE 2 TOPO_1RP-2756.MXD


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 Midland, Texas 79701
 Phone: (432) 682-4559
 Fax: (432) 682-3946

CONOCOPHILLIPS

1RP-2756

(32.817169°, -103.793412°) LEA COUNTY, NEW MEXICO

**MCA 265 TEST LINE RELEASE
 TOPOGRAPHIC MAP**

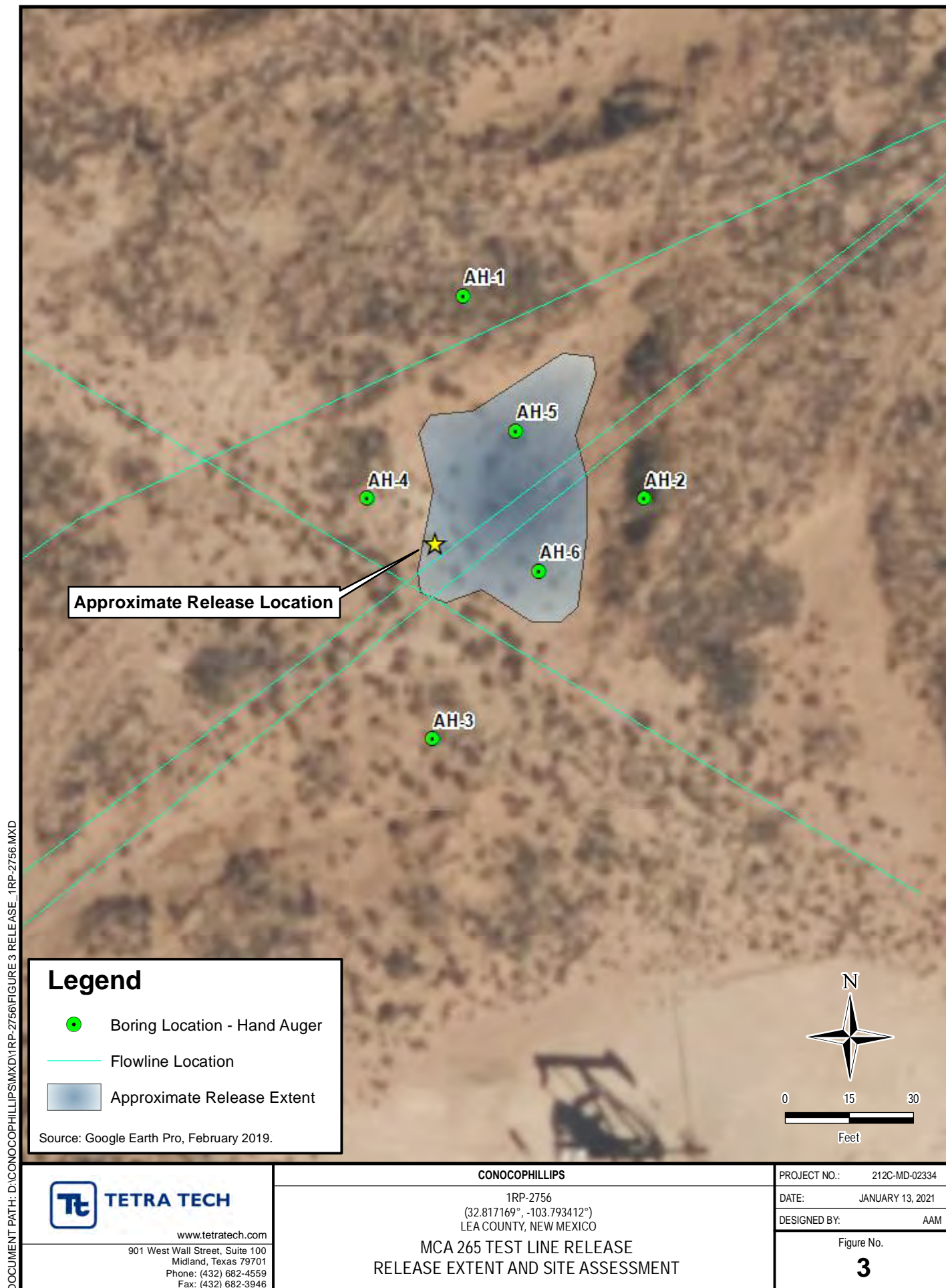
PROJECT NO.: 212C-MD-02334

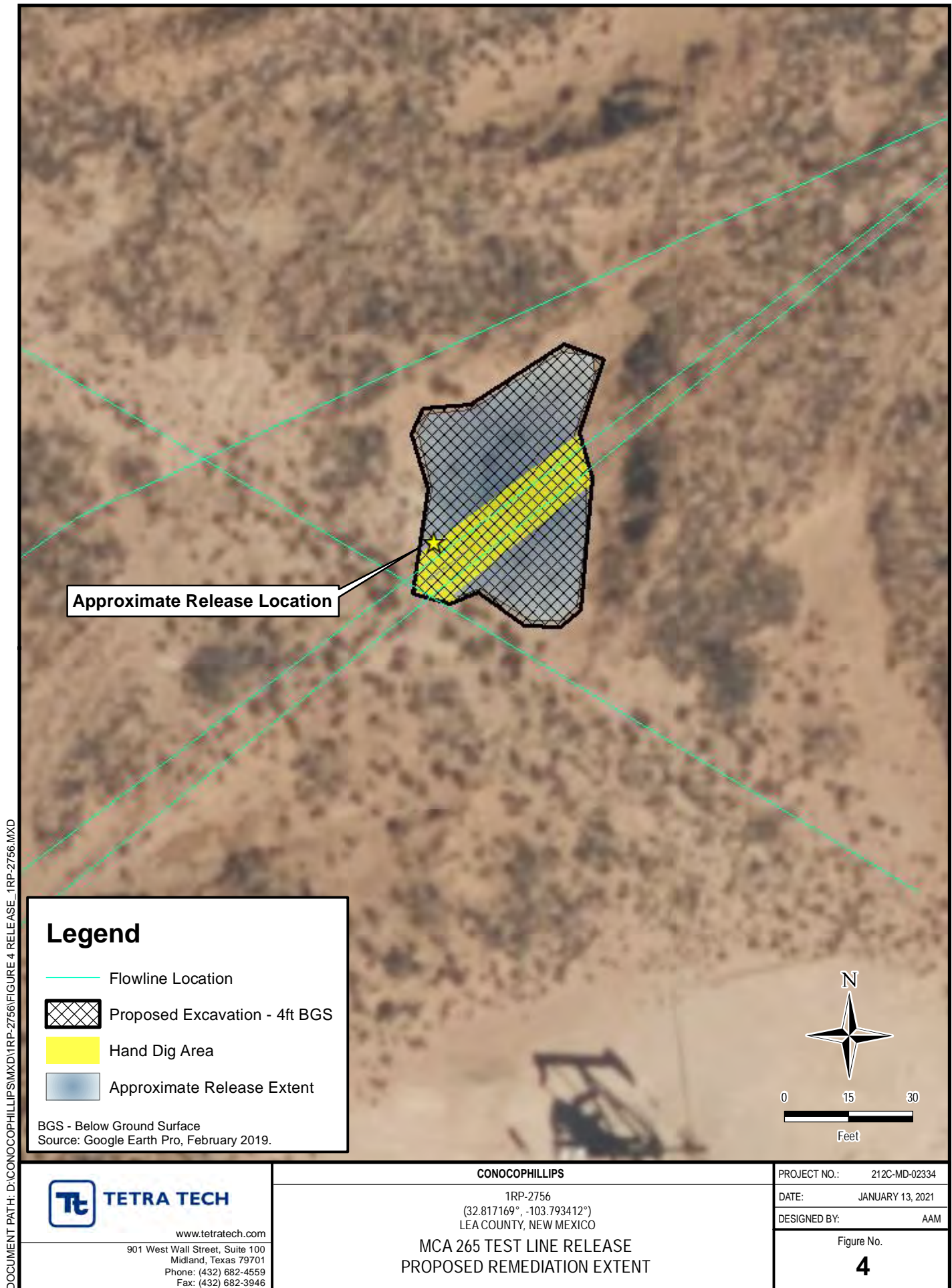
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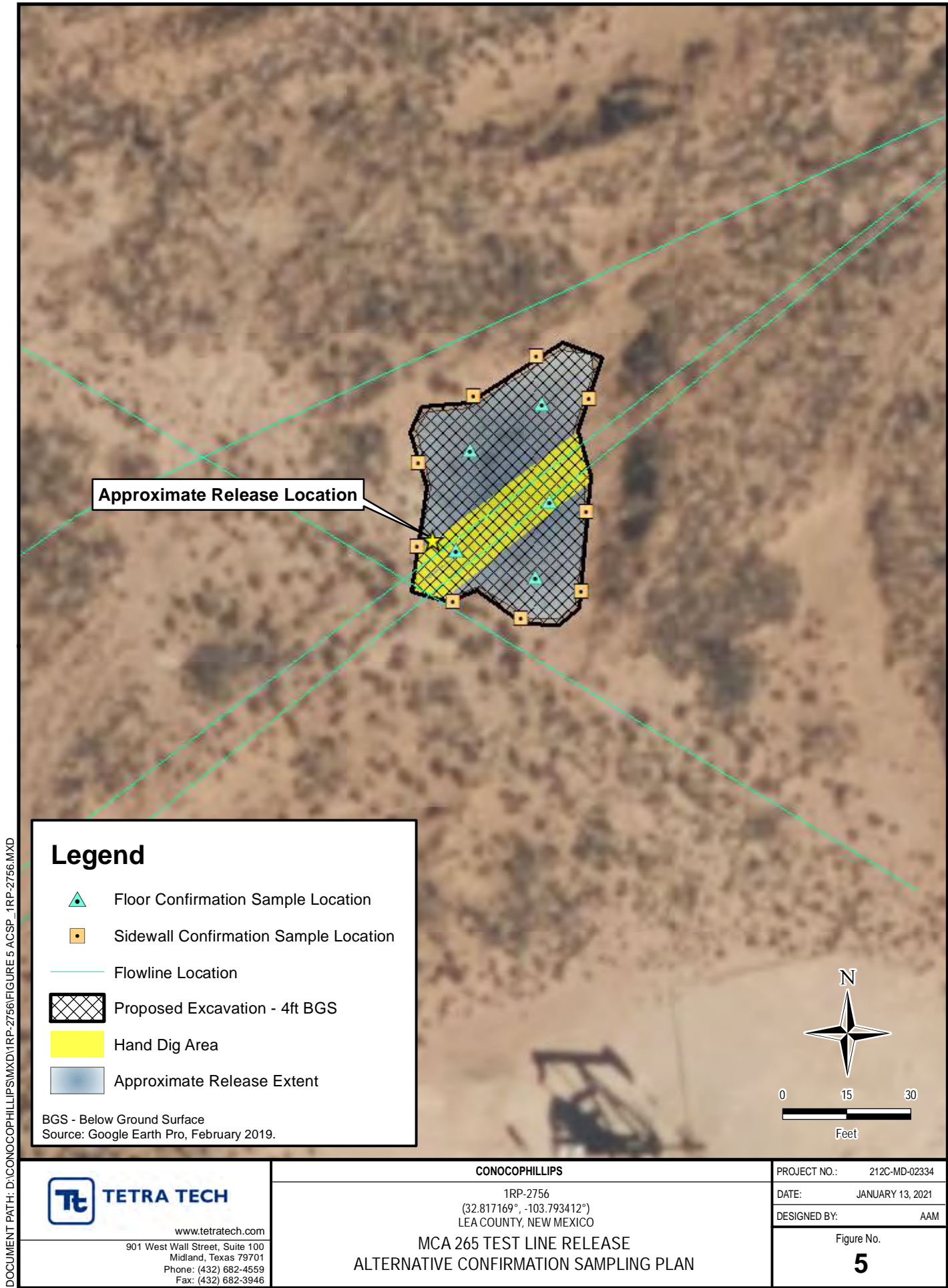
DESIGNED BY: AAM

Figure No.

2







TABLES

TABLE 1
BORING LOCATION COORDINATES
SOIL ASSESSMENT - 1RP-2756
CONOCOPHILLIPS
MCA 265 TEST LINE RELEASE
LEA COUNTY, NM

Boring ID	Latitude	Longitude
AH-1	32.817328	-103.793389
AH-2	32.817197	-103.793252
AH-3	32.817044	-103.793414
AH-4	32.817199	-103.793463
AH-5	32.817241	-103.793350
AH-6	32.817151	-103.793333

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT - 1RP-2756
CONOCOPHILLIPS
MCA 265 TEST LINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Chloride ¹		BTEX ²								TPH ³								
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX	GRO ⁴		DRO		ORO		Total TPH (GRO+DRO+ORO)	
														C ₃ - C ₁₀		C ₁₀ - C ₂₈		C ₂₈ - C ₄₀			
		ft. bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg		
AH-1	12/10/2020	0-1	< 24.5		< 0.00273		< 0.0136		< 0.00682		< 0.0178		-		< 6.82		2.10	J	6.67		8.77
		1-2	< 21.6		< 0.00121		< 0.00606		< 0.00303		< 0.00788		-		< 3.03		7.67		27.0		34.7
AH-2	12/10/2020	0-1	< 20.1		< 0.00101		0.00311	J	< 0.00253		0.00182	J	0.00493		< 2.53		2.98	J	12.6		15.6
		1-2	< 24.4		< 0.00146		0.00202	J	< 0.00366		< 0.00952		0.00202		< 3.66		8.77		39.4		48.2
AH-3	12/10/2020	0-1	< 24.3		< 0.00146		< 0.00731		< 0.00366		< 0.00951		-		< 3.66		5.67	J3	6.01		11.7
		1-2	< 23.2		< 0.00134		< 0.00671		< 0.00336		< 0.00872		-		< 3.36		23.4		10.3		33.7
AH-4	12/10/2020	0-1	< 24.5		< 0.00149		< 0.00744		< 0.00372		< 0.00967		-		< 3.72		< 4.91		0.686	J	0.686
		1-2	< 24.4		< 0.00151		< 0.00753		< 0.00377		< 0.00979		-		< 3.77		< 4.87		0.723	J	0.723
AH-5	12/10/2020	0-1	< 24.4		< 0.00146		< 0.00729		< 0.00365		< 0.00948		-		< 3.65		422		1700		2122
		2-3	< 232		0.743		1.31		17.8		30.7		50.6		839		11800		9970		22609
AH-6	12/10/2020	0-1	< 20.2		< 0.00204		0.00346	J	0.0209		0.0388		0.0632	1.35	J	3630		3760		7391	
		2-3	113		< 0.00128		0.00209	J	0.00205	J	0.00567	J	0.00981	< 3.20		22.7		33.1		55.8	
		4-5	2350		< 0.00226		< 0.0113		< 0.00566		< 0.0147		-		< 5.66		162		143		305

NOTES:

ft. Feet
bgs Below ground surface
ppm Parts per million
mg/kg Milligrams per kilogram
TPH Total Petroleum Hydrocarbons
GRO Gasoline range organics
DRO Diesel range organics
ORO Oil range organics

Bold and italicized values indicate exceedance of proposed RRALs

Shaded rows indicate intervals proposed for excavation.

- 1 EPA Method 300.0
2 EPA Method 8260B
3 EPA Method 8015
4 EPA Method 8015D/GRO

QUALIFIERS:

J The identification of the analyte os acceptable; the reported value is an estimate.

APPENDIX A C-141 Forms

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

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

HOBBS OCD

OCT 28 2011

RECEIVED

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company ConocoPhillips Company	Contact John W. Gates
Address 3300 North A St. Bldg 6, Midland, TX 79705-5406	Telephone No. 505.391.3158
Facility Name MCA	Facility Type Oil and Gas

Surface Owner Federal	Mineral Owner Federal	Lease No 029405B
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LOCATION OF RELEASE *NEARBY WELL*
MCA #265 - 30-025-23686

Unit Letter L	Section 20	Township 17S	Range 32E	Feet from the	North/South Line 100' North of MCA 265	Feet from the	East/West Line	County Lea
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Latitude Longitude

NATURE OF RELEASE

Type of Release Crude Oil & Produced Water	Volume of Release 14bbl (8oil, 6water)	Volume Recovered (0oil, 0water)
Source of Release Hole in a 2 7/8" steel test line	Date and Hour of Occurrence 10/25/11 1200	Date and Hour of Discovery 10/25/11 1600
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input 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.*		

Describe Cause of Problem and Remedial Action Taken.*

Hole in a 2 7/8" steel test line due to age/fatigue. Vacuum truck was called but no trucks were available to respond to pick up standing fluids

Describe Area Affected and Cleanup Action Taken.*

Area affected is a 25' X 60' X 10" area of pasture land. ConocoPhillips MSO installed emergency repair clamp until permanent repairs can be made.

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: <i>John W. Gates</i>	OIL CONSERVATION DIVISION	
Printed Name: John W. Gates	ENV. ENGINEER: Approved by District Supervisor: <i>Jeff Labrum</i>	
Title: HSER Lead	Approval Date: 11/09/11	Expiration Date: 01/09/12
E-mail Address: John.W.Gates@conocophillips.com	Conditions of Approval: DELINATE HUR & VERT EXTENT OF CONTAMINATION. SUBMIT FINAL C-141	
Date: 10/28/11 Phone: 505.391.3158	Attached <input type="checkbox"/> IR-11-11-2756	

• Attach Additional Sheets If Necessary

BY 01/09/12.

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	_____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release 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?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: _____ Title: _____

Signature: Charles R. Beauvais II Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 04/25/2023

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: _____ Title: _____

Signature: Charles R. Beauvais II Date: _____

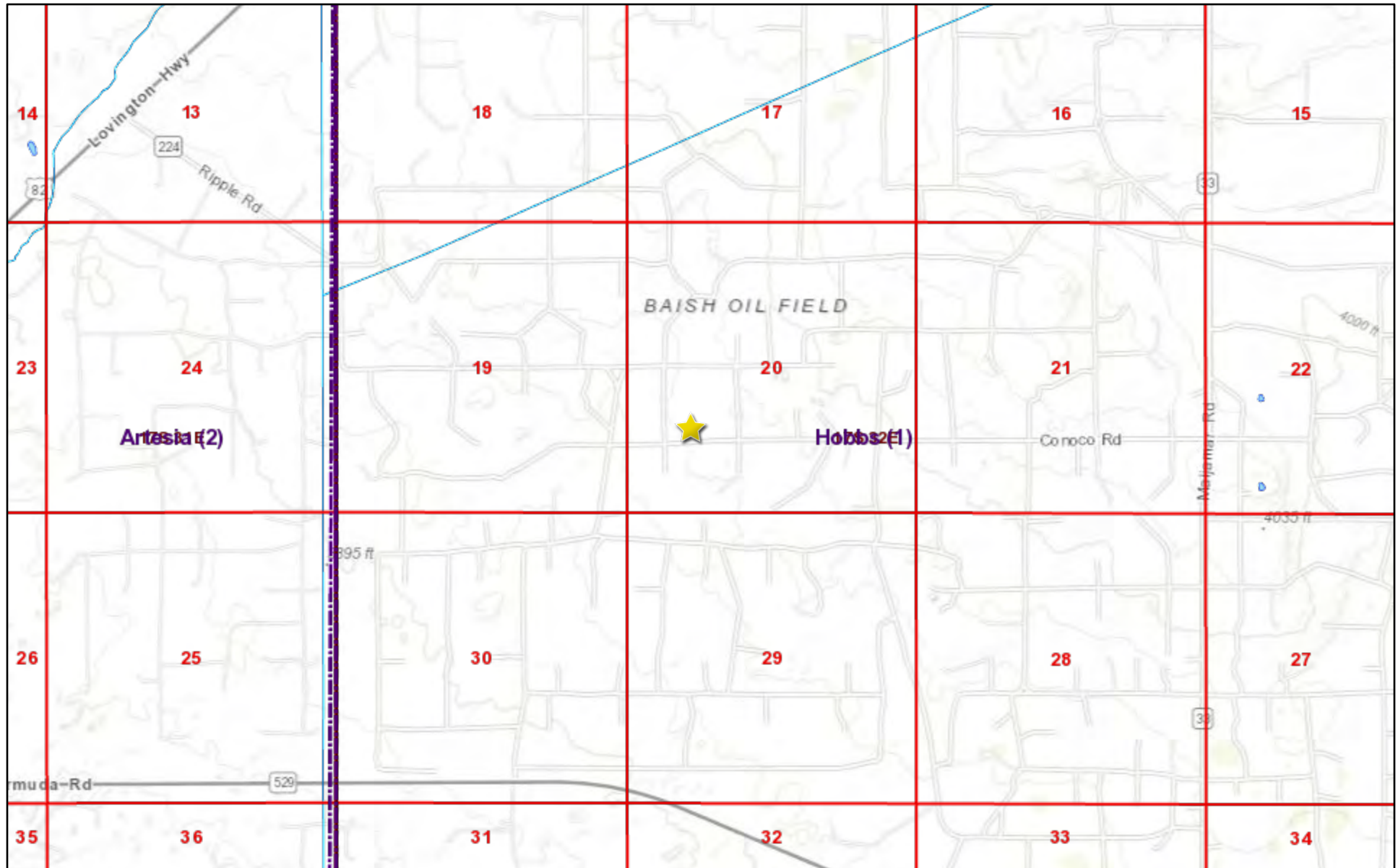
email: _____ Telephone: _____

OCD OnlyReceived by: Jocelyn Harimon Date: 04/25/2023☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral ApprovedSignature:  Date: 04/25/2023

APPENDIX B

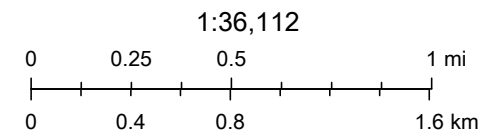
Site Characterization Data

1RP-2756 Water Bodies



2/22/2021, 6:37:50 PM

- ★ Override 1
 ★ OCD District Offices
 PLSS Townships
 PLJV Probable Playas
 OCD Districts
 PLSS First Division
 OSE Water-bodies
— OSE Streams



Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin,

New Mexico Oil Conservation Division

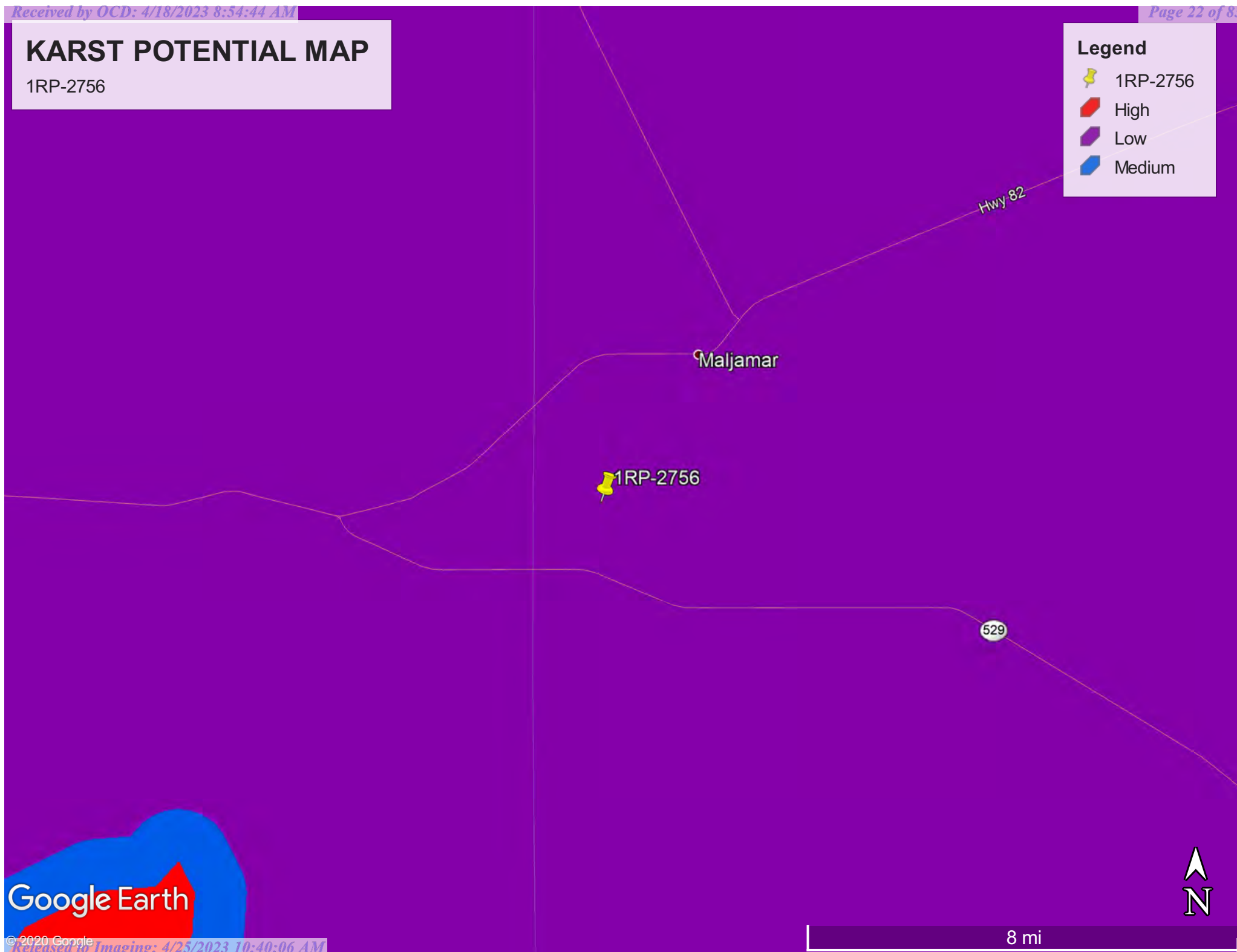
NM OCD Oil and Gas Map. <http://nm-ernrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75>: New Mexico Oil Conservation Division

KARST POTENTIAL MAP

1RP-2756

Legend

-  1RP-2756
-  High
-  Low
-  Medium



Google Earth

© 2020 Google

Released to Imaging: 4/25/2023 10:40:06 AM

8 mi



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

(R=POD has been replaced, O=orphaned, C=the file is closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 10175	RA	LE		2	1	28	17S	32E		614814	3631005*	1975	158		
RA 12042 POD1	RA	LE		2	2	1	28	17S	32E	614891	3631181	1998	400		
RA 12020 POD1	RA	LE		2	2	1	28	17S	32E	614828	3630954	2005	120	81	39
RA 12522 POD1	RA	LE		3	3	4	21	17S	32E	614941	3631122	2061	100		
RA 12522 POD2	RA	LE		2	2	1	28	17S	32E	614949	3631098	2075	100		
RA 12522 POD3	RA	LE		4	4	3	28	17S	32E	614980	3631093	2107	100		
RA 12521 POD1	RA	LE		3	3	4	21	17S	32E	615127	3631271	2210	105	92	13
RA 12721 POD1	RA	LE		3	2	3	28	17S	32E	614645	3630141	2275	125		
RA 12020 POD3	RA	LE		2	1	2	28	17S	32E	615152	3631019	2292	112	83	29

Average Depth to Water: **85 feet**

Minimum Depth: **81 feet**

Maximum Depth: **92 feet**

Record Count: 9

UTM NAD83 Radius Search (in meters):

Easting (X): 612951

Northing (Y): 3631661

Radius: 2400

*UTM location was derived from PLSS - see Help

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

10/27/20 8:43 AM

Page 1 of 1

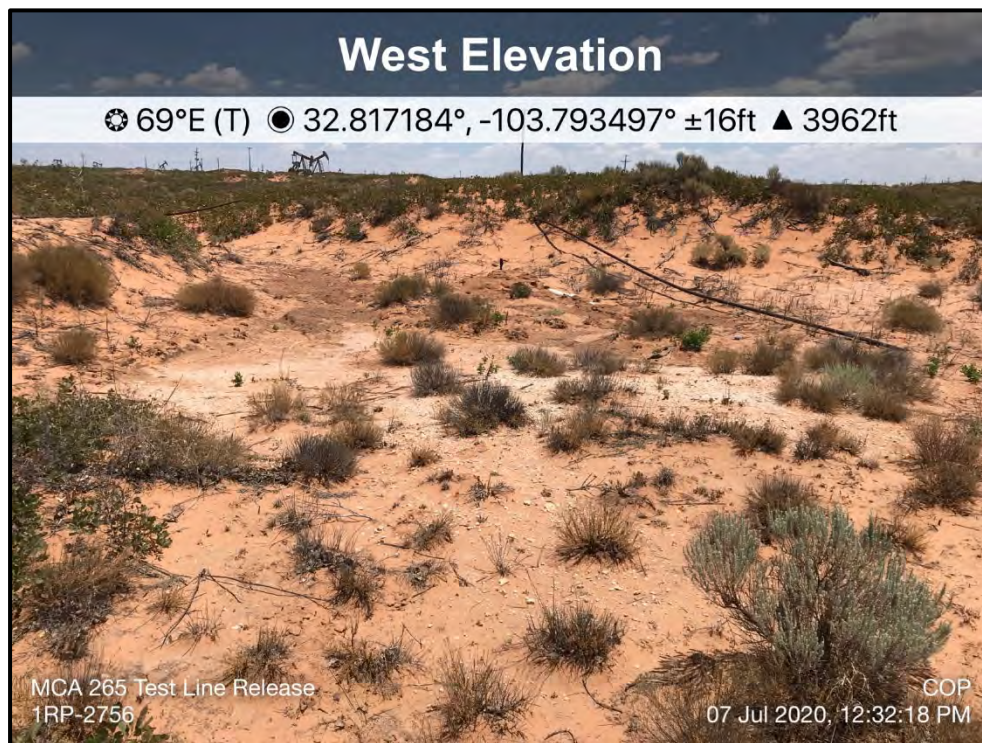
WATER COLUMN/ AVERAGE
DEPTH TO WATER

APPENDIX C

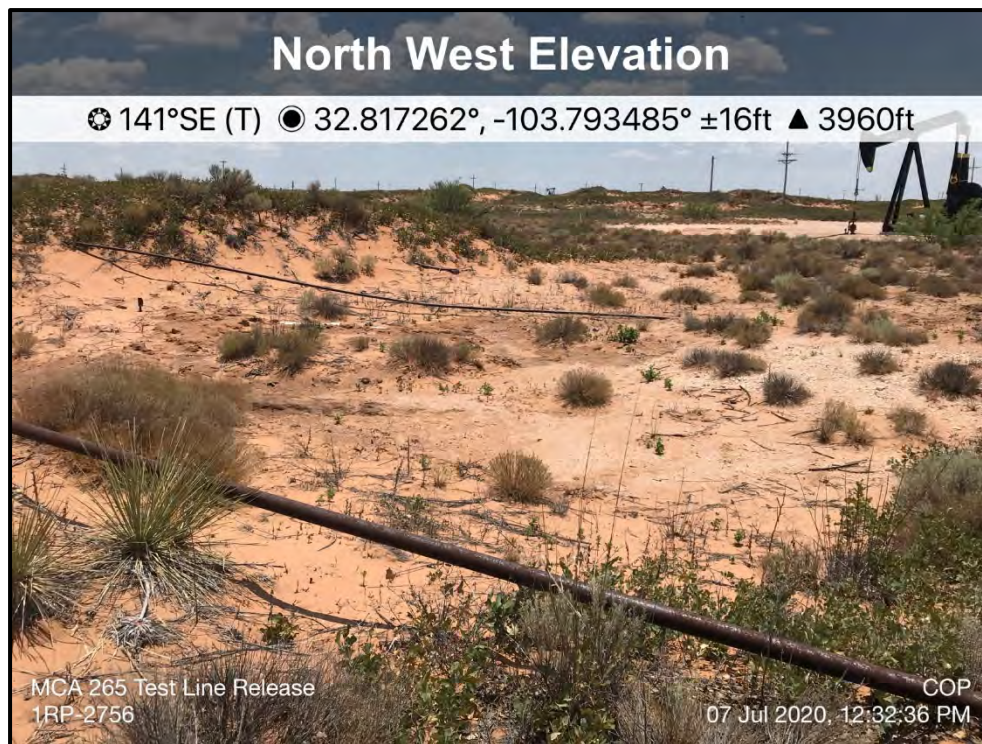
Photographic Documentation



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing northeast of lease signage.	1
	SITE NAME	MCA 265 Test Line Release	7/7/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing east of release area.	2
	SITE NAME	MCA 265 Test Line Release	7/7/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing southeast of release area.	3
	SITE NAME	MCA 265 Test Line Release	7/7/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing south of release area.	4
	SITE NAME	MCA 265 Test Line Release	7/7/2020



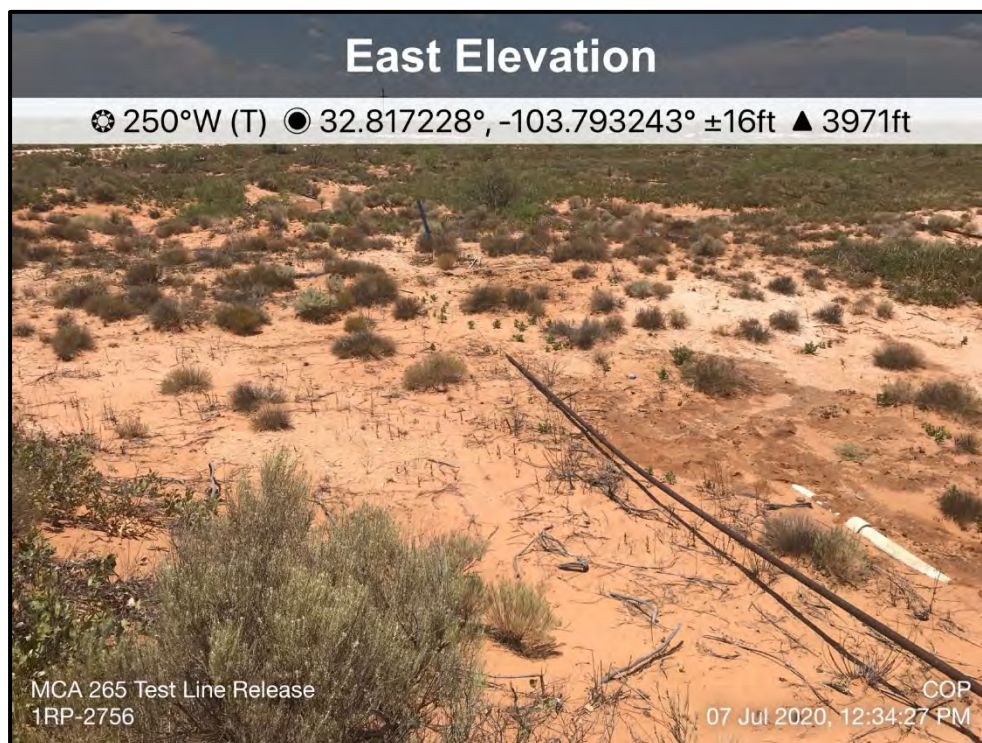
TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing southwest of release area.	5
	SITE NAME	MCA 265 Test Line Release	7/7/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing southwest of release area.	6
	SITE NAME	MCA 265 Test Line Release	7/7/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing northwest of release area.	7
	SITE NAME	MCA 265 Test Line Release	7/7/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing west of release area.	8
	SITE NAME	MCA 265 Test Line Release	7/7/2020

APPENDIX D

Laboratory Analytical Data



ANALYTICAL REPORT

December 24, 2020

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1296835
Samples Received: 12/15/2020
Project Number: 212C-MD-02334 TASK24
Description: MCA 265 Test Line Release (IRP-2756)

Report To: Christian Llull
901 West Wall
Suite 100
Midland, TX 79701

Entire Report Reviewed By:

Chris McCord
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.

**Pace Analytical National**

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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AH-1 (0'-1') L1296835-01 Solid

Collected by
Joe Tyler

Collected date/time
12/10/20 10:00

Received date/time
12/15/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595509	1	12/22/20 13:08	12/22/20 13:16	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1595619	1	12/22/20 23:50	12/23/20 04:21	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1595195	51	12/10/20 10:00	12/21/20 06:44	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593760	2.04	12/10/20 10:00	12/18/20 02:47	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	1	12/22/20 07:03	12/23/20 06:21	CAG	Mt. Juliet, TN

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

AH-1 (1'-2') L1296835-02 Solid

Collected by
Joe Tyler

Collected date/time
12/10/20 10:30

Received date/time
12/15/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595510	1	12/22/20 11:35	12/22/20 11:43	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1595619	1	12/22/20 23:50	12/23/20 04:54	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1595195	25	12/10/20 10:30	12/21/20 07:05	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593760	1	12/10/20 10:30	12/18/20 03:06	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	1	12/22/20 07:03	12/23/20 07:54	CAG	Mt. Juliet, TN

AH-2 (0'-1') L1296835-03 Solid

Collected by
Joe Tyler

Collected date/time
12/10/20 11:00

Received date/time
12/15/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595510	1	12/22/20 11:35	12/22/20 11:43	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1595619	1	12/22/20 23:50	12/23/20 05:16	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1595195	25	12/10/20 11:00	12/21/20 07:26	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593760	1	12/10/20 11:00	12/18/20 03:24	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	1	12/22/20 07:03	12/23/20 09:00	CAG	Mt. Juliet, TN

AH-2 (1'-2') L1296835-04 Solid

Collected by
Joe Tyler

Collected date/time
12/10/20 11:30

Received date/time
12/15/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595510	1	12/22/20 11:35	12/22/20 11:43	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1595619	1	12/22/20 23:50	12/23/20 05:27	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1595195	25	12/10/20 11:30	12/21/20 07:46	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593760	1	12/10/20 11:30	12/18/20 03:43	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	1	12/22/20 07:03	12/23/20 08:07	CAG	Mt. Juliet, TN

AH-3 (0'-1') L1296835-05 Solid

Collected by
Joe Tyler

Collected date/time
12/10/20 12:00

Received date/time
12/15/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595510	1	12/22/20 11:35	12/22/20 11:43	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1595619	1	12/22/20 23:50	12/23/20 05:38	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1595195	25	12/10/20 12:00	12/21/20 08:07	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593760	1	12/10/20 12:00	12/18/20 04:02	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	1	12/22/20 07:03	12/23/20 07:14	CAG	Mt. Juliet, TN

AH-3 (1'-2') L1296835-06 Solid

Collected by
Joe Tyler

Collected date/time
12/10/20 12:30

Received date/time
12/15/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595510	1	12/22/20 11:35	12/22/20 11:43	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1595619	1	12/22/20 23:50	12/23/20 05:49	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1595195	25	12/10/20 12:30	12/21/20 08:28	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593760	1	12/10/20 12:30	12/18/20 04:21	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	1	12/22/20 07:03	12/23/20 08:20	CAG	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

AH-4 (0'-1') L1296835-07 Solid

Collected by
Joe Tyler

Collected date/time
12/10/20 13:00

Received date/time
12/15/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595510	1	12/22/20 11:35	12/22/20 11:43	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1595619	1	12/22/20 23:50	12/23/20 06:00	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1595195	25	12/10/20 13:00	12/21/20 08:48	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593760	1	12/10/20 13:00	12/18/20 04:40	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	1	12/22/20 07:03	12/23/20 06:34	CAG	Mt. Juliet, TN

5Sr

6Qc

7Gl

8Al

AH-4 (1'-2') L1296835-08 Solid

Collected by
Joe Tyler

Collected date/time
12/10/20 13:30

Received date/time
12/15/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595510	1	12/22/20 11:35	12/22/20 11:43	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1595619	1	12/22/20 23:50	12/23/20 06:32	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1595195	25	12/10/20 13:30	12/21/20 09:09	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593760	1	12/10/20 13:30	12/18/20 05:00	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	1	12/22/20 07:03	12/23/20 06:48	CAG	Mt. Juliet, TN

9Sc

AH-5 (0'-1') L1296835-09 Solid

Collected by
Joe Tyler

Collected date/time
12/10/20 14:00

Received date/time
12/15/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595510	1	12/22/20 11:35	12/22/20 11:43	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1595619	1	12/22/20 23:50	12/23/20 06:43	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1595195	25	12/10/20 14:00	12/21/20 09:30	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593760	1	12/10/20 14:00	12/18/20 05:19	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	40	12/22/20 07:03	12/23/20 15:31	CAG	Mt. Juliet, TN

AH-5 (2'-3') L1296835-10 Solid

Collected by
Joe Tyler

Collected date/time
12/10/20 14:20

Received date/time
12/15/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595510	1	12/22/20 11:35	12/22/20 11:43	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1595619	10	12/22/20 23:50	12/23/20 06:54	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1595195	500	12/10/20 14:20	12/21/20 11:53	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593760	40	12/10/20 14:20	12/18/20 08:29	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	40	12/22/20 07:03	12/23/20 15:17	CAG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	80	12/22/20 07:03	12/23/20 20:46	CAG	Mt. Juliet, TN

AH-6 (0'-1') L1296835-11 Solid

Collected by
Joe Tyler

Collected date/time
12/10/20 14:40

Received date/time
12/15/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595510	1	12/22/20 11:35	12/22/20 11:43	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1595619	1	12/22/20 23:50	12/23/20 07:05	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1596710	25	12/10/20 14:40	12/23/20 15:00	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1596115	2	12/10/20 14:40	12/22/20 16:33	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	20	12/22/20 07:03	12/23/20 15:04	CAG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	40	12/22/20 07:03	12/23/20 20:32	CAG	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

AH-6 (2'-3') L1296835-12 Solid

Collected by
Joe Tyler

Collected date/time
12/10/20 15:00

Received date/time
12/15/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595512	1	12/22/20 10:53	12/22/20 11:07	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1595619	1	12/22/20 23:50	12/23/20 07:16	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1595195	28.2	12/10/20 15:00	12/21/20 09:49	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593760	1.13	12/10/20 15:00	12/18/20 05:38	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	1	12/22/20 07:03	12/23/20 08:34	CAG	Mt. Juliet, TN

AH-6 (4'-5') L1296835-13 Solid

Collected by
Joe Tyler

Collected date/time
12/10/20 16:00

Received date/time
12/15/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1595512	1	12/22/20 10:53	12/22/20 11:07	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1595619	5	12/22/20 23:50	12/23/20 07:27	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1595195	42	12/10/20 16:00	12/21/20 10:10	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1593760	1.68	12/10/20 16:00	12/18/20 05:57	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	1	12/22/20 07:03	12/23/20 09:40	CAG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1595746	2	12/22/20 07:03	12/23/20 13:14	CAG	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.



Chris McCord
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Collected date/time: 12/10/20 10:00

L1296835

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.5		1	12/22/2020 13:16	WG1595509

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.3	24.5	1	12/23/2020 04:21	WG1595619

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		1.48	6.82	51	12/21/2020 06:44	WG1595195
(S) a,a,a-Trifluorotoluene(FID)	93.3			77.0-120		12/21/2020 06:44	WG1595195

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.00127	0.00273	2.04	12/18/2020 02:47	WG1593760
Toluene	U		0.00354	0.0136	2.04	12/18/2020 02:47	WG1593760
Ethylbenzene	U		0.00201	0.00682	2.04	12/18/2020 02:47	WG1593760
Total Xylenes	U		0.00241	0.0178	2.04	12/18/2020 02:47	WG1593760
(S) Toluene-d8	106			75.0-131		12/18/2020 02:47	WG1593760
(S) 4-Bromofluorobenzene	100			67.0-138		12/18/2020 02:47	WG1593760
(S) 1,2-Dichloroethane-d4	89.8			70.0-130		12/18/2020 02:47	WG1593760

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.10	J	1.97	4.91	1	12/23/2020 06:21	WG1595746
C28-C40 Oil Range	6.67		0.336	4.91	1	12/23/2020 06:21	WG1595746
(S) o-Terphenyl	69.0			18.0-148		12/23/2020 06:21	WG1595746

Collected date/time: 12/10/20 10:30

L1296835

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.5		1	12/22/2020 11:43	WG1595510

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	U		9.94	21.6	1	12/23/2020 04:54	WG1595619

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.658	3.03	25	12/21/2020 07:05	WG1595195
(S) a,a,a-Trifluorotoluene(FID)	95.9			77.0-120		12/21/2020 07:05	WG1595195

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000566	0.00121	1	12/18/2020 03:06	WG1593760
Toluene	U		0.00158	0.00606	1	12/18/2020 03:06	WG1593760
Ethylbenzene	U		0.000893	0.00303	1	12/18/2020 03:06	WG1593760
Total Xylenes	U		0.00107	0.00788	1	12/18/2020 03:06	WG1593760
(S) Toluene-d8	109			75.0-131		12/18/2020 03:06	WG1593760
(S) 4-Bromofluorobenzene	97.5			67.0-138		12/18/2020 03:06	WG1593760
(S) 1,2-Dichloroethane-d4	88.8			70.0-130		12/18/2020 03:06	WG1593760

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	7.67		1.74	4.32	1	12/23/2020 07:54	WG1595746
C28-C40 Oil Range	27.0		0.296	4.32	1	12/23/2020 07:54	WG1595746
(S) o-Terphenyl	79.4			18.0-148		12/23/2020 07:54	WG1595746

Collected date/time: 12/10/20 11:00

L1296835

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	99.4		1	12/22/2020 11:43	WG1595510

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.25	20.1	1	12/23/2020 05:16	WG1595619

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.550	2.53	25	12/21/2020 07:26	WG1595195
(S) a,a,a-Trifluorotoluene(FID)	94.3			77.0-120		12/21/2020 07:26	WG1595195

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000473	0.00101	1	12/18/2020 03:24	WG1593760
Toluene	0.00311	J	0.00132	0.00506	1	12/18/2020 03:24	WG1593760
Ethylbenzene	U		0.000746	0.00253	1	12/18/2020 03:24	WG1593760
Total Xylenes	0.00182	J	0.000891	0.00658	1	12/18/2020 03:24	WG1593760
(S) Toluene-d8	112			75.0-131		12/18/2020 03:24	WG1593760
(S) 4-Bromofluorobenzene	101			67.0-138		12/18/2020 03:24	WG1593760
(S) 1,2-Dichloroethane-d4	86.4			70.0-130		12/18/2020 03:24	WG1593760

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.98	J	1.62	4.02	1	12/23/2020 09:00	WG1595746
C28-C40 Oil Range	12.6		0.276	4.02	1	12/23/2020 09:00	WG1595746
(S) o-Terphenyl	85.9			18.0-148		12/23/2020 09:00	WG1595746

Collected date/time: 12/10/20 11:30

L1296835

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.8		1	12/22/2020 11:43	WG1595510

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.2	24.4	1	12/23/2020 05:27	WG1595619

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.795	3.66	25	12/21/2020 07:46	WG1595195
(S) a,a,a-Trifluorotoluene(FID)	96.5			77.0-120		12/21/2020 07:46	WG1595195

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000684	0.00146	1	12/18/2020 03:43	WG1593760
Toluene	0.00202	J	0.00190	0.00732	1	12/18/2020 03:43	WG1593760
Ethylbenzene	U		0.00108	0.00366	1	12/18/2020 03:43	WG1593760
Total Xylenes	U		0.00129	0.00952	1	12/18/2020 03:43	WG1593760
(S) Toluene-d8	106			75.0-131		12/18/2020 03:43	WG1593760
(S) 4-Bromofluorobenzene	95.8			67.0-138		12/18/2020 03:43	WG1593760
(S) 1,2-Dichloroethane-d4	87.0			70.0-130		12/18/2020 03:43	WG1593760

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	8.77		1.97	4.89	1	12/23/2020 08:07	WG1595746
C28-C40 Oil Range	39.4		0.335	4.89	1	12/23/2020 08:07	WG1595746
(S) o-Terphenyl	78.9			18.0-148		12/23/2020 08:07	WG1595746

Collected date/time: 12/10/20 12:00

L1296835

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.3		1	12/22/2020 11:43	WG1595510

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.2	24.3	1	12/23/2020 05:38	WG1595619

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.794	3.66	25	12/21/2020 08:07	WG1595195
(S) a,a,a-Trifluorotoluene(FID)	96.4			77.0-120		12/21/2020 08:07	WG1595195

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000683	0.00146	1	12/18/2020 04:02	WG1593760
Toluene	U		0.00190	0.00731	1	12/18/2020 04:02	WG1593760
Ethylbenzene	U		0.00108	0.00366	1	12/18/2020 04:02	WG1593760
Total Xylenes	U		0.00129	0.00951	1	12/18/2020 04:02	WG1593760
(S) Toluene-d8	110			75.0-131		12/18/2020 04:02	WG1593760
(S) 4-Bromofluorobenzene	103			67.0-138		12/18/2020 04:02	WG1593760
(S) 1,2-Dichloroethane-d4	91.3			70.0-130		12/18/2020 04:02	WG1593760

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.67	J3	1.96	4.86	1	12/23/2020 07:14	WG1595746
C28-C40 Oil Range	6.01		0.333	4.86	1	12/23/2020 07:14	WG1595746
(S) o-Terphenyl	74.3			18.0-148		12/23/2020 07:14	WG1595746

Collected date/time: 12/10/20 12:30

L1296835

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.1		1	12/22/2020 11:43	WG1595510

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		10.7	23.2	1	12/23/2020 05:49	WG1595619

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.729	3.36	25	12/21/2020 08:28	WG1595195
(S) a,a,a-Trifluorotoluene(FID)	95.7			77.0-120		12/21/2020 08:28	WG1595195

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000627	0.00134	1	12/18/2020 04:21	WG1593760
Toluene	U		0.00174	0.00671	1	12/18/2020 04:21	WG1593760
Ethylbenzene	U		0.000989	0.00336	1	12/18/2020 04:21	WG1593760
Total Xylenes	U		0.00118	0.00872	1	12/18/2020 04:21	WG1593760
(S) Toluene-d8	113			75.0-131		12/18/2020 04:21	WG1593760
(S) 4-Bromofluorobenzene	109			67.0-138		12/18/2020 04:21	WG1593760
(S) 1,2-Dichloroethane-d4	94.4			70.0-130		12/18/2020 04:21	WG1593760

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	23.4		1.87	4.65	1	12/23/2020 08:20	WG1595746
C28-C40 Oil Range	10.3		0.318	4.65	1	12/23/2020 08:20	WG1595746
(S) o-Terphenyl	67.8			18.0-148		12/23/2020 08:20	WG1595746

Collected date/time: 12/10/20 13:00

L1296835

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.5		1	12/22/2020 11:43	WG1595510

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.3	24.5	1	12/23/2020 06:00	WG1595619

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.808	3.72	25	12/21/2020 08:48	WG1595195
(S) a,a,a-Trifluorotoluene(FID)	96.6			77.0-120		12/21/2020 08:48	WG1595195

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000695	0.00149	1	12/18/2020 04:40	WG1593760
Toluene	U		0.00193	0.00744	1	12/18/2020 04:40	WG1593760
Ethylbenzene	U		0.00110	0.00372	1	12/18/2020 04:40	WG1593760
Total Xylenes	U		0.00131	0.00967	1	12/18/2020 04:40	WG1593760
(S) Toluene-d8	109			75.0-131		12/18/2020 04:40	WG1593760
(S) 4-Bromofluorobenzene	105			67.0-138		12/18/2020 04:40	WG1593760
(S) 1,2-Dichloroethane-d4	85.6			70.0-130		12/18/2020 04:40	WG1593760

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.97	4.91	1	12/23/2020 06:34	WG1595746
C28-C40 Oil Range	0.686	J	0.336	4.91	1	12/23/2020 06:34	WG1595746
(S) o-Terphenyl	60.5			18.0-148		12/23/2020 06:34	WG1595746

Collected date/time: 12/10/20 13:30

L1296835

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	82.1		1	12/22/2020 11:43	WG1595510

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		11.2	24.4	1	12/23/2020 06:32	WG1595619

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.818	3.77	25	12/21/2020 09:09	WG1595195
(S) a,a,a-Trifluorotoluene(FID)	95.4			77.0-120		12/21/2020 09:09	WG1595195

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000704	0.00151	1	12/18/2020 05:00	WG1593760
Toluene	U		0.00196	0.00753	1	12/18/2020 05:00	WG1593760
Ethylbenzene	U		0.00111	0.00377	1	12/18/2020 05:00	WG1593760
Total Xylenes	U		0.00133	0.00979	1	12/18/2020 05:00	WG1593760
(S) Toluene-d8	107			75.0-131		12/18/2020 05:00	WG1593760
(S) 4-Bromofluorobenzene	99.9			67.0-138		12/18/2020 05:00	WG1593760
(S) 1,2-Dichloroethane-d4	87.3			70.0-130		12/18/2020 05:00	WG1593760

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.96	4.87	1	12/23/2020 06:48	WG1595746
C28-C40 Oil Range	0.723	J	0.334	4.87	1	12/23/2020 06:48	WG1595746
(S) o-Terphenyl	55.4			18.0-148		12/23/2020 06:48	WG1595746

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

Collected date/time: 12/10/20 14:00

L1296835

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	81.9		1	12/22/2020 11:43	WG1595510

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		11.2	24.4	1	12/23/2020 06:43	WG1595619

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.792	3.65	25	12/21/2020 09:30	WG1595195
(S) a,a,a-Trifluorotoluene(FID)	96.3			77.0-120		12/21/2020 09:30	WG1595195

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000681	0.00146	1	12/18/2020 05:19	WG1593760
Toluene	U		0.00190	0.00729	1	12/18/2020 05:19	WG1593760
Ethylbenzene	U		0.00107	0.00365	1	12/18/2020 05:19	WG1593760
Total Xylenes	U		0.00128	0.00948	1	12/18/2020 05:19	WG1593760
(S) Toluene-d8	111			75.0-131		12/18/2020 05:19	WG1593760
(S) 4-Bromofluorobenzene	104			67.0-138		12/18/2020 05:19	WG1593760
(S) 1,2-Dichloroethane-d4	87.4			70.0-130		12/18/2020 05:19	WG1593760

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	422		78.6	195	40	12/23/2020 15:31	WG1595746
C28-C40 Oil Range	1700		13.4	195	40	12/23/2020 15:31	WG1595746
(S) o-Terphenyl	0.000	J7		18.0-148		12/23/2020 15:31	WG1595746

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	86.1		1	12/22/2020 11:43	WG1595510

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

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		107	232	10	12/23/2020 06:54	WG1595619

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	839		14.7	67.3	500	12/21/2020 11:53	WG1595195
(S) a,a,a-Trifluorotoluene(FID)	84.0			77.0-120		12/21/2020 11:53	WG1595195

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.743		0.0252	0.0539	40	12/18/2020 08:29	WG1593760
Toluene	1.31		0.0700	0.269	40	12/18/2020 08:29	WG1593760
Ethylbenzene	17.8		0.0397	0.135	40	12/18/2020 08:29	WG1593760
Total Xylenes	30.7		0.0474	0.350	40	12/18/2020 08:29	WG1593760
(S) Toluene-d8	106			75.0-131		12/18/2020 08:29	WG1593760
(S) 4-Bromofluorobenzene	117			67.0-138		12/18/2020 08:29	WG1593760
(S) 1,2-Dichloroethane-d4	88.4			70.0-130		12/18/2020 08:29	WG1593760

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	11800		74.8	186	40	12/23/2020 15:17	WG1595746
C28-C40 Oil Range	9970		25.4	372	80	12/23/2020 20:46	WG1595746
(S) o-Terphenyl	0.000	J7		18.0-148		12/23/2020 20:46	WG1595746
(S) o-Terphenyl	0.000	J7		18.0-148		12/23/2020 15:17	WG1595746

Collected date/time: 12/10/20 14:40

L1296835

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	99.2		1	12/22/2020 11:43	WG1595510

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.28	20.2	1	12/23/2020 07:05	WG1595619

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.35	J	0.553	2.55	25	12/23/2020 15:00	WG1596710
(S) a,a,a-Trifluorotoluene(FID)	93.3			77.0-120		12/23/2020 15:00	WG1596710

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000952	0.00204	2	12/22/2020 16:33	WG1596115
Toluene	0.00346	J	0.00265	0.0102	2	12/22/2020 16:33	WG1596115
Ethylbenzene	0.0209		0.00150	0.00509	2	12/22/2020 16:33	WG1596115
Total Xylenes	0.0388		0.00179	0.0132	2	12/22/2020 16:33	WG1596115
(S) Toluene-d8	103			75.0-131		12/22/2020 16:33	WG1596115
(S) 4-Bromofluorobenzene	95.0			67.0-138		12/22/2020 16:33	WG1596115
(S) 1,2-Dichloroethane-d4	104			70.0-130		12/22/2020 16:33	WG1596115

Sample Narrative:

L1296835-11 WG1596115: Lowest possible dilution due to sample foaming.

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	3630		32.5	80.7	20	12/23/2020 15:04	WG1595746
C28-C40 Oil Range	3760		11.1	161	40	12/23/2020 20:32	WG1595746
(S) o-Terphenyl	0.000	J7		18.0-148		12/23/2020 20:32	WG1595746
(S) o-Terphenyl	252	J7		18.0-148		12/23/2020 15:04	WG1595746

Collected date/time: 12/10/20 15:00

L1296835

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.3		1	12/22/2020 11:07	WG1595512

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	113		9.86	21.4	1	12/23/2020 07:16	WG1595619

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.694	3.20	28.2	12/21/2020 09:49	WG1595195
(S) a,a,a-Trifluorotoluene(FID)	89.3			77.0-120		12/21/2020 09:49	WG1595195

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000599	0.00128	1.13	12/18/2020 05:38	WG1593760
Toluene	0.00209	J	0.00167	0.00641	1.13	12/18/2020 05:38	WG1593760
Ethylbenzene	0.00205	J	0.000945	0.00321	1.13	12/18/2020 05:38	WG1593760
Total Xylenes	0.00567	J	0.00113	0.00834	1.13	12/18/2020 05:38	WG1593760
(S) Toluene-d8	111			75.0-131		12/18/2020 05:38	WG1593760
(S) 4-Bromofluorobenzene	98.9			67.0-138		12/18/2020 05:38	WG1593760
(S) 1,2-Dichloroethane-d4	84.7			70.0-130		12/18/2020 05:38	WG1593760

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	22.7		1.72	4.29	1	12/23/2020 08:34	WG1595746
C28-C40 Oil Range	33.1		0.294	4.29	1	12/23/2020 08:34	WG1595746
(S) o-Terphenyl	78.3			18.0-148		12/23/2020 08:34	WG1595746

Collected date/time: 12/10/20 16:00

L1296835

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	82.1		1	12/22/2020 11:07	WG1595512

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	2350		56.0	122	5	12/23/2020 07:27	WG1595619

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		1.23	5.66	42	12/21/2020 10:10	WG1595195
(S) a,a,a-Trifluorotoluene(FID)	96.9			77.0-120		12/21/2020 10:10	WG1595195

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.00106	0.00226	1.68	12/18/2020 05:57	WG1593760
Toluene	U		0.00294	0.0113	1.68	12/18/2020 05:57	WG1593760
Ethylbenzene	U		0.00167	0.00566	1.68	12/18/2020 05:57	WG1593760
Total Xylenes	U		0.00200	0.0147	1.68	12/18/2020 05:57	WG1593760
(S) Toluene-d8	111			75.0-131		12/18/2020 05:57	WG1593760
(S) 4-Bromofluorobenzene	105			67.0-138		12/18/2020 05:57	WG1593760
(S) 1,2-Dichloroethane-d4	86.1			70.0-130		12/18/2020 05:57	WG1593760

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	162		1.96	4.87	1	12/23/2020 09:40	WG1595746
C28-C40 Oil Range	143		0.668	9.75	2	12/23/2020 13:14	WG1595746
(S) o-Terphenyl	56.6			18.0-148		12/23/2020 09:40	WG1595746
(S) o-Terphenyl	66.8			18.0-148		12/23/2020 13:14	WG1595746

Method Blank (MB)

(MB) R3606574-1 12/22/20 13:16

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

L1296820-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1296820-13 12/22/20 13:16 • (DUP) R3606574-3 12/22/20 13:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	81.6	81.9	1	0.293		10

Laboratory Control Sample (LCS)

(LCS) R3606574-2 12/22/20 13:16

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011 [L1296835-02,03,04,05,06,07,08,09,10,11](#)

Method Blank (MB)

(MB) R3606565-1 12/22/20 11:43

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

L1296835-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1296835-10 12/22/20 11:43 • (DUP) R3606565-3 12/22/20 11:43

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	86.1	86.0	1	0.143		10

Laboratory Control Sample (LCS)

(LCS) R3606565-2 12/22/20 11:43

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011 [L1296835-12,13](#)

Method Blank (MB)

(MB) R3606473-1 12/22/20 11:07

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

L1297442-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1297442-01 12/22/20 11:07 • (DUP) R3606473-3 12/22/20 11:07

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	81.2	77.9	1	4.10		10

Laboratory Control Sample (LCS)

(LCS) R3606473-2 12/22/20 11:07

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 300.0

[L1296835-01,02,03,04,05,06,07,08,09,10,11,12,13](#)

Method Blank (MB)

(MB) R3606593-1 12/23/20 01:06

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	U		9.20	20.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1296835-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1296835-02 12/23/20 04:54 • (DUP) R3606593-5 12/23/20 05:05

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	U	U	1	0.000		20

L1299180-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1299180-02 12/23/20 08:10 • (DUP) R3606593-6 12/23/20 08:43

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	1760	1820	5	3.38		20

Laboratory Control Sample (LCS)

(LCS) R3606593-2 12/23/20 01:17

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	205	102	90.0-110	

L1296835-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1296835-01 12/23/20 04:21 • (MS) R3606593-3 12/23/20 04:32 • (MSD) R3606593-4 12/23/20 04:43

	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	613	U	622	622	101	101	1	80.0-120			0.0109	20

Volatile Organic Compounds (GC) by Method 8015D/GRO

L1296835-01,02,03,04,05,06,07,08,09,10,12,13

Method Blank (MB)

(MB) R3606613-3 12/21/20 05:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	93.4			77.0-120

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

(LCS) R3606613-1 12/21/20 04:08 • (LCSD) R3606613-2 12/21/20 04:29

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	4.71	5.42	85.6	98.5	72.0-127			14.0	20
(S) a,a,a-Trifluorotoluene(FID)				100	102	77.0-120				

L1296835-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1296835-01 12/21/20 06:44 • (MS) R3606613-4 12/21/20 12:56 • (MSD) R3606613-5 12/21/20 13:16

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	376	U	420	421	112	112	51	10.0-151			0.318	28
(S) a,a,a-Trifluorotoluene(FID)					111	111		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO [L1296835-11](#)

Method Blank (MB)

(MB) R3606945-2 12/23/20 11:22

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	95.4			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3606945-1 12/23/20 10:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.63	102	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			111	77.0-120	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

[L1296835-01,02,03,04,05,06,07,08,09,10,12,13](#)

Method Blank (MB)

(MB) R3605961-3 12/18/20 02:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	114			75.0-131
(S) 4-Bromofluorobenzene	103			67.0-138
(S) 1,2-Dichloroethane-d4	77.8			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3605961-1 12/18/20 01:13 • (LCSD) R3605961-2 12/18/20 01:31

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	0.125	0.127	0.137	102	110	70.0-123			7.58	20
Ethylbenzene	0.125	0.124	0.141	99.2	113	74.0-126			12.8	20
Toluene	0.125	0.122	0.143	97.6	114	75.0-121			15.8	20
Xylenes, Total	0.375	0.385	0.431	103	115	72.0-127			11.3	20
(S) Toluene-d8				101	106	75.0-131				
(S) 4-Bromofluorobenzene				102	102	67.0-138				
(S) 1,2-Dichloroethane-d4				95.4	96.6	70.0-130				

Volatile Organic Compounds (GC/MS) by Method 8260B [L1296835-11](#)

Method Blank (MB)

(MB) R3606463-3 12/22/20 09:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	107			75.0-131
(S) 4-Bromofluorobenzene	94.4			67.0-138
(S) 1,2-Dichloroethane-d4	97.8			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3606463-1 12/22/20 08:24 • (LCSD) R3606463-2 12/22/20 08:43

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	0.125	0.126	0.128	101	102	70.0-123			1.57	20
Ethylbenzene	0.125	0.124	0.123	99.2	98.4	74.0-126			0.810	20
Toluene	0.125	0.120	0.122	96.0	97.6	75.0-121			1.65	20
Xylenes, Total	0.375	0.381	0.388	102	103	72.0-127			1.82	20
(S) Toluene-d8				97.1	96.0	75.0-131				
(S) 4-Bromofluorobenzene				99.2	102	67.0-138				
(S) 1,2-Dichloroethane-d4				107	108	70.0-130				

Semi-Volatile Organic Compounds (GC) by Method 8015 [L1296835-01,02,03,04,05,06,07,08,09,10,11,12,13](#)

Method Blank (MB)

(MB) R3606575-1 12/23/20 05:28

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	85.3			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3606575-2 12/23/20 05:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	47.8	95.6	50.0-150	
(S) o-Terphenyl			114	18.0-148	

L1296835-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1296835-05 12/23/20 07:14 • (MS) R3606575-3 12/23/20 07:27 • (MSD) R3606575-4 12/23/20 07:41

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	59.7	5.67	37.6	48.7	53.5	71.7	1	50.0-150		J3	25.6	20
(S) o-Terphenyl					70.9	76.9		18.0-148				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

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.
MDL (dry)	Method Detection Limit.
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.
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

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

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	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
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}	KY90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-20-18
Maine	TN00003	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	998093910
Montana	CERT0086	Wyoming	A2LA

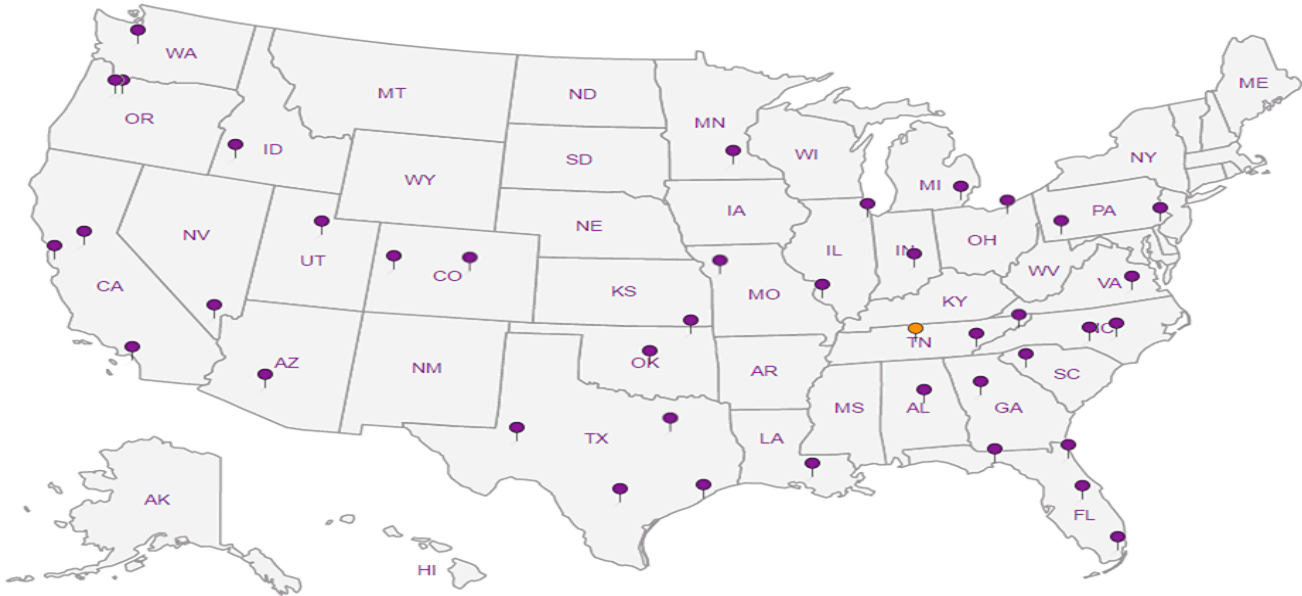
Third Party Federal Accreditations

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.



Analysis Request of Chain of Custody Record

Page: 1 of 2

**Tetra Tech, Inc.**901 West Wall Street, Suite 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

L1296835 D074

Client Name:	Conoco Phillips	Site Manager:	Christian Llull
Project Name:	MCA 265 Test Line Release (1RP-2756)	Contact Info:	Email: christian.llull@tetrattech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-02334, Task No. 24
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	Joe Tyler

Comments: COPTETRA Acctnum

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	ANALYSIS REQUEST (Circle or Specify Method No.)																HOLD						
		YEAR: 2020		WATER	SOIL	HCL	HNO ₃	ICE	NONE			BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS		General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R			
		DATE	TIME																															
	AH-1 (0'-1')	12/10/20	1000	X				X		1	N	X	X													X								
	AH-1 (1'-2')	12/10/20	1030	X				X		1	N	X	X													X								
	AH-2 (0'-1')	12/10/20	1100	X				X		1	N	X	X													X								
	AH-2 (1'-2')	12/10/20	1130	X				X		1	N	X	X													X								
	AH-3 (0'-1')	12/10/20	1200	X				X		1	N	X	X													X								
	AH-3 (1'-2')	12/10/20	1230	X				X		1	N	X	X													X								
	AH-4 (0'-1')	12/10/20	1300	X				X		1	N	X	X													X								
	AH-4 (1'-2')	12/10/20	1330	X				X		1	N	X	X													X								
	AH-5 (0'-1')	12/10/20	1400	X				X		1	N	X	X													X								
	AH-5 (2'-3')	12/10/20	1420	X				X		1	N	X	X													X								

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>[Signature]</i>	12-14-20	13:00	<i>[Signature]</i>	12-14-20	13:00
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>[Signature]</i>	12-14-20	16:30	<i>[Signature]</i>	12-14-20	16:30
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>[Signature]</i>			<i>[Signature]</i>	12/15	05:30

LAB USE ONLY

Sample Temperature

REMARKS:

- ☒ Standard
- ☐ RUSH: Same Day 24 hr. 48 hr. 72 hr.
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____



Tetra Tech, Inc.

901 West Wall Street, Suite 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

4296835

Client Name: Conoco Phillips

Site Manager: Christian Llull

Project Name: MCA 265 Test Line Release (1RP-2756)

Contact Info: Email: christian.llull@tetrattech.com
Phone: (512) 338-1667

Project Location: (county, state)	Lea County, New Mexico
--------------------------------------	------------------------

Project #: 212C-MD-02334, Task No. 24

Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701
-------------	--

Receiving Laboratory: Pace Analytical

Sampler Signature: Joe Tyler

Comments: COPTETRA Acctnum

ANALYSIS REQUEST
(Circle or Specify Method No.)[illegible]

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	U296835		
Cooler Received/Opened On: 12 / 15 / 20	Temperature:	10	
Received By: joey brent			
Signature:			
Receipt Check List	NP	Yes	No
COC Seal Present / Intact?			
COC Signed / Accurate?		/	
Bottles arrive intact?		/	
Correct bottles used?		/	
Sufficient volume sent?		/	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

APPENDIX E

NMSLO Seed Mixture Details



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Lea County, New Mexico**

1RP-2756



December 31, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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 PY—Pyote soils and Dune land..... 14

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map


The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map


Custom Soil Resource Report


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)


Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water


 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip


 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 17, Jun 8, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KM	Kermit soils and Dune land, 0 to 12 percent slopes	0.2	20.9%
PY	Pyote soils and Dune land	0.8	79.1%
Totals for Area of Interest		1.1	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Custom Soil Resource Report

Lea County, New Mexico**KM—Kermit soils and Dune land, 0 to 12 percent slopes****Map Unit Setting**

National map unit symbol: dmpx
Elevation: 3,000 to 4,400 feet
Mean annual precipitation: 10 to 15 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Kermit and similar soils: 46 percent
Dune land: 44 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kermit**Setting**

Landform: Dunes
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear, concave
Across-slope shape: Convex
Parent material: Calcareous sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 8 inches: fine sand
C - 8 to 60 inches: fine sand

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very high (20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 3 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water capacity: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R042XC022NM - Sandhills
Hydric soil rating: No

Custom Soil Resource Report

Description of Dune Land**Setting***Landform:* Dunes*Landform position (two-dimensional):* Shoulder, backslope, footslope*Landform position (three-dimensional):* Side slope*Down-slope shape:* Convex, linear, concave*Across-slope shape:* Convex**Typical profile***A - 0 to 6 inches:* fine sand*C - 6 to 60 inches:* fine sand**Interpretive groups***Land capability classification (irrigated):* None specified*Land capability classification (nonirrigated):* 8e*Hydrologic Soil Group:* A*Hydric soil rating:* No**Minor Components****Palomas***Percent of map unit:* 3 percent*Ecological site:* R042XC003NM - Loamy Sand*Hydric soil rating:* No**Pyote***Percent of map unit:* 3 percent*Ecological site:* R042XC003NM - Loamy Sand*Hydric soil rating:* No**Wink***Percent of map unit:* 2 percent*Ecological site:* R042XC003NM - Loamy Sand*Hydric soil rating:* No**Maljamar***Percent of map unit:* 2 percent*Ecological site:* R042XC003NM - Loamy Sand*Hydric soil rating:* No**PY—Pyote soils and Dune land****Map Unit Setting***National map unit symbol:* dmqr*Elevation:* 3,000 to 4,400 feet*Mean annual precipitation:* 10 to 15 inches*Mean annual air temperature:* 60 to 64 degrees F*Frost-free period:* 190 to 220 days*Farmland classification:* Not prime farmland

Custom Soil Resource Report

Map Unit Composition

Pyote and similar soils: 46 percent

Dune land: 44 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pyote**Setting**

Landform: Depressions

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 30 inches: fine sand

Bt - 30 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Gypsum, maximum content: 1 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water capacity: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 6e

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A

Ecological site: R042XC003NM - Loamy Sand

Hydric soil rating: No

Description of Dune Land**Setting**

Landform: Dunes

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Side slope

Down-slope shape: Linear, convex

Across-slope shape: Convex

Typical profile

A - 0 to 6 inches: fine sand

C - 6 to 60 inches: fine sand

Custom Soil Resource Report

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8e

Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components

Kermi

Percent of map unit: 5 percent

Ecological site: R042XC022NM - Sandhills

Hydric soil rating: No

Maljamar, fine sand

Percent of map unit: 3 percent

Ecological site: R042XC003NM - Loamy Sand

Hydric soil rating: No

Wink

Percent of map unit: 2 percent

Ecological site: R042XC003NM - Loamy Sand

Hydric soil rating: No

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Custom Soil Resource Report

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NMSLO Seed Mix**Sandy (S)****SANDY (S) SITES SEED MIXTURE:**

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Sand bluestem	Elida, VNS, So.	2.0	F
Little bluestem	Cimarron, Pastura	3.0	F
Black grama	VNS, Southern	1.0	D
Sand dropseed	VNS, Southern	4.0	S
Plains bristlegrass	VNS, Southern	2.0	D
Forbs:			
Firewheel (Gaillardia)	VNS, Southern	1.0	D
Annual Sunflower	VNS, Southern	1.0	D
Shrubs:			
Fourwing Saltbush	VNS, Southern	1.0	F
Total PLS/acre		16.0	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box
VNS = Variety Not Stated, PLS = Pure Live Seed

- Seed mixes should be provided in bags separating seed types into the three categories: small (S), standard (D) and fluffy (F).
- VNS, Southern – Seed should be from a southern latitude collection of this species.
- Double seed application rate for broadcast or hydroseeding.
- If one species is not available, contact the SLO for an approved substitute; alternatively the SLO may require other species proportionately increased.
- Additional information on these seed species can be found on the USDA Plants Database website at <http://plants.usda.gov>.



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1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 208644

CONDITIONS

Operator: Maverick Permian LLC 1111 Bagby Street Suite 1600 Houston, TX 77002	OGRID: 331199
	Action Number: 208644
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
jharimon	Workplan/Remediation Plan is approved with the following conditions: • Please make sure the floor confirmation samples are delineated/excavated to meet closure criteria standards for proven depth to water determination. • When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to ground water within a ½ mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for ground water at a depth of 50 feet or less.	4/25/2023
jharimon	• Sidewall samples should be delineated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. • The request for variance for an alternative confirmation sampling plan is not approved.	4/25/2023