TETRA TECH

October 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 4B Header Release
Unit Letter O, Section 23, Township 17 South, Range 32 East
Lea County, New Mexico
Incident ID# nAPP2111950687

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips to assess a release that occurred due to a trunk line failure approximately 1,675 feet northwest of the Maljamar Cooperative Agreement (MCA) 4B Header. The release footprint is located in Public Land Survey System (PLSS) Unit Letter O, Section 23, Township 17 South, Range 32 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.815249°, -103.734255°, 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 April 17, 2021. The release occurred as the result of a trunk line failure. Approximately 10.2 barrels (bbls) of produced water and 1.4 bbls of oil were released, of which 0 bbls of fluid were reported recovered. The New Mexico Oil Conservation Division (NMOCD) received the C-141 report form for the release on April 29, 2021. The release was subsequently assigned the Incident ID for this release is nAPP2111950687.

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 19.15.09 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 located within an 800-meter (approximately ½-mile) radius of the release location. However, there are four water wells within a 3,500-meter radius with an average depth to groundwater at 107 feet below ground surface (bgs).

The remediation action levels proposed for the site are largely dependent upon depth to groundwater. As such, the OCD focuses upon depth to water estimation. Thus, 19.15.11(A)(2) NMAC allows for various means of determining depth to groundwater. For this release, as the available water level information was from wells further than ½ mile away from the site, COP reviewed adjacent release sites with approved Work Plans for the possibility of associated borings which could provide a means for determining depth to groundwater in the nAPP2111950687 release area. As such, subsurface data from the MCA 123 Injection Line Release Site (nJXK1621825385) was reviewed.

Tetra Tech
901 West Wall St., Suite 100, Midland, TX 79701
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

Two borings (BH-1 and BH-4) drilled as a portion of the MCA 123 release characterization were identified as located within roughly a ½ mile radius of the MCA 4B Header release footprint. A review of the associated boring logs indicates that boring BH-4 does not define depth to groundwater but was dry to greater than 51 feet bgs. Similarly, boring BH-1 was dry at 50' bgs. Thus, based on this data, COP proposes to use the 51 feet-100 feet criteria listed in Table I of 19.15.29.12 NMAC. The boring logs from the MCA 123 investigation are included in Appendix B. The remainder of the site characterization data is also included in Appendix B.

REGULATORY FRAMEWORK

Based upon the release footprint location 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 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 (GRO+DRO+ORO)	2,500 mg/kg
BTEX	50 mg/kg
Benzene	10 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 requirements for surface soils (0-4 feet bgs) outside of active oil and gas operations are as follows:

Constituent	Reclamation Requirements
Chloride	600 mg/kg
TPH (GRO+DRO+ORO)	100 mg/kg

INITIAL RESPONSE AND ASSESSMENT ACTIVITIES

In June 2021, Tetra Tech personnel were onsite to oversee initial response excavation activities and simultaneously characterize the release footprint. Visually impacted soils within the release extent were first scraped to 6-inches bgs, and excavated soils were transported offsite for proper disposal. Approximately 30 cubic yards of material were transported to the R360 facility in Hobbs, New Mexico. Photos of the scraped area are provided in Appendix C. Copies of the waste manifests are included in Appendix D.

While onsite, Tetra Tech personnel installed a total of eight (8) hand auger borings to achieve vertical and horizontal delineation of the release. Two (2) borings (AH-1 and AH-2) were installed within the release extent to depths of 6 and 9 feet bgs, respectively, to vertically delineate the release. Six (6) borings (AH-3 through AH-8) were installed along the perimeter of the release extent to 3 feet bgs to achieve horizontal delineation. Soils at the Site consist of light brown to tan loose silty sands from the surface down to 9 feet bgs. All samples were field screened for salinity using an ExTech EC400 ExStik and for total hydrocarbons using a photoionization detector (PID) to measure volatile organics.

A total of twenty-two (22) samples were collected from the eight (8) borings and submitted to Pace Analytical (Pace) to be analyzed for TPH (DRO and ORO) by EPA Method 8015, TPH Low Fraction (GRO) by EPA Method 8015D, BTEX by EPA Method 8260B, and chlorides by EPA Method 300.0. Sample locations, along with the release extent and scraped area, are shown in Figure 3.

SUMMARY OF SAMPLING RESULTS

Results from the June 2021 soil sampling event are summarized in Table 1. The analytical results associated with AH-1 and AH-2 sample locations exceed the Site reclamation requirements for chloride and TPH in soils in the top 4 feet within the release footprint. The results associated with perimeter sample locations AH-3 through AH-8 were below the Site reclamation requirements for chloride, TPH and BTEX in all analyzed samples. After review of the analytical results from the sampling event, both horizontal and vertical delineation was achieved during the June 2021 soil assessment activities. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix E.

REMEDIATION WORK PLAN

Based on the analytical results from the assessment, ConocoPhillips proposes to remove the impacted material within the release extent as shown in Figure 4. Impacted soils will be excavated using heavy equipment (backhoes, mini-excavators, and track hoes) to a maximum depth of 4 feet below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the Site RRALs. Heavy equipment will come no more than 3 ft from any pressurized lines. Impacted soils within the vicinity of the surface and subsurface lines which intersect the release footprint will be dug by hand to the maximum extent practicable.

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 analytical 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 335 cubic yards.

ALTERNATIVE CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, COP proposes the following alternative confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 5. Six (6) confirmation floor samples and nine (9) confirmation sidewall samples are proposed for verification of remedial activities. In accordance with Subsection D of 19.15.29.12 NMAC, the COP will notify the appropriate division district office prior to conducting confirmation sampling. The proposed excavation encompasses a surface area of approximately 2,250 square feet.

These confirmation sidewall and floor samples will be representative of no more than approximately 500 square feet 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

Post-remediation, the backfilled areas will be seeded (in the next 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 F. Final reclamation will create a landform that approximates and blends in with the surrounding landform, while controlling erosion.

CONCLUSION

ConocoPhillips proposes to begin remediation activities at the Site within 120 days of NMOCD plan approval. Upon completion of the proposed work, a final closure report detailing the remediation activities and the results of the confirmation sampling 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.
Project Manager

Christian M, Llull, P.G.
Program Manager

cc:
Ms. Jenni Fortunato, RMR – ConocoPhillips

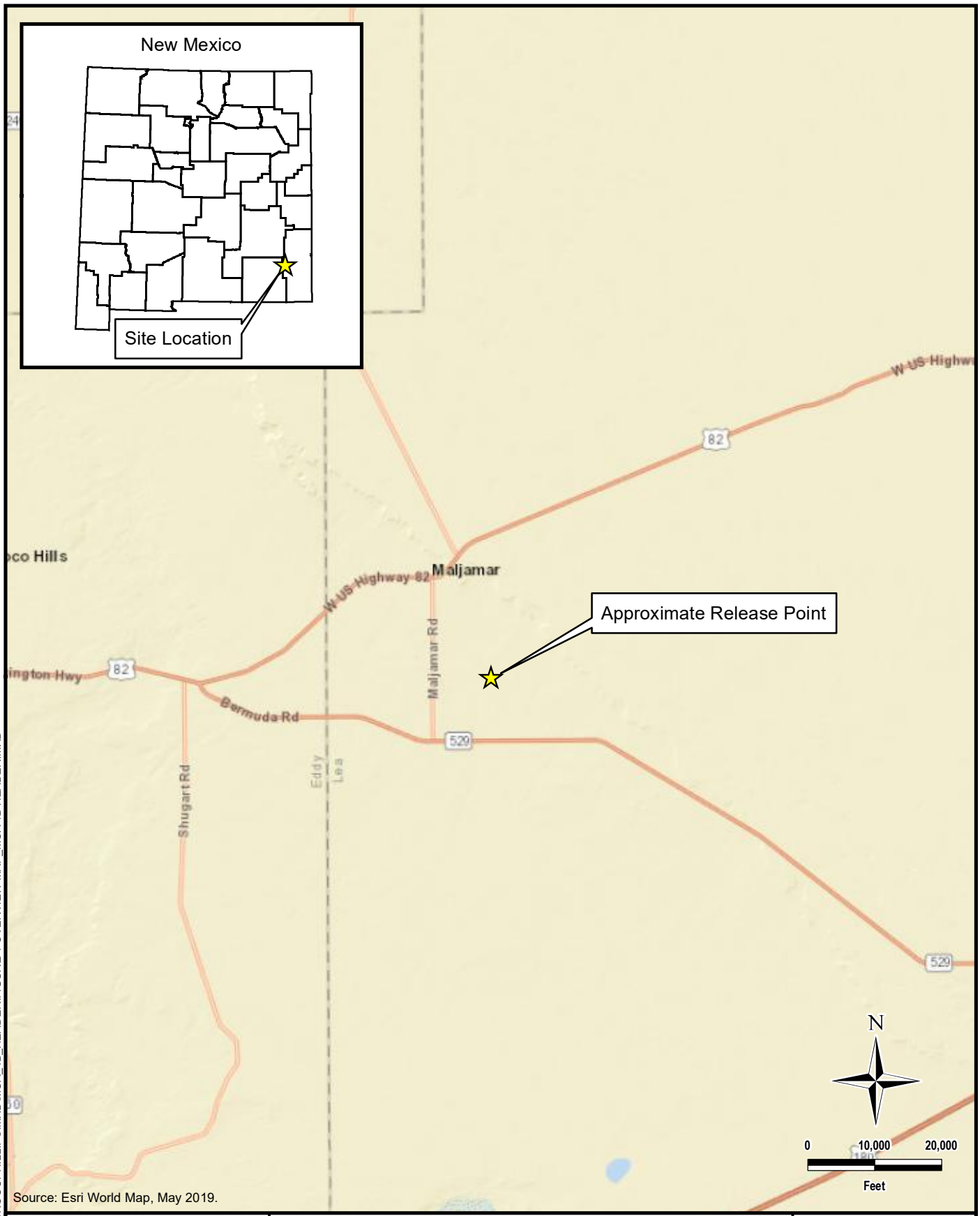
LIST OF ATTACHMENTS

Figures:

Tables:

Appendices:

FIGURES



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\MCA_4B_HEADER\FIGURE 1 OVERVIEW MAP_MCA 4B HEADER.MXD

TETRA TECH
www.tetratech.com
901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

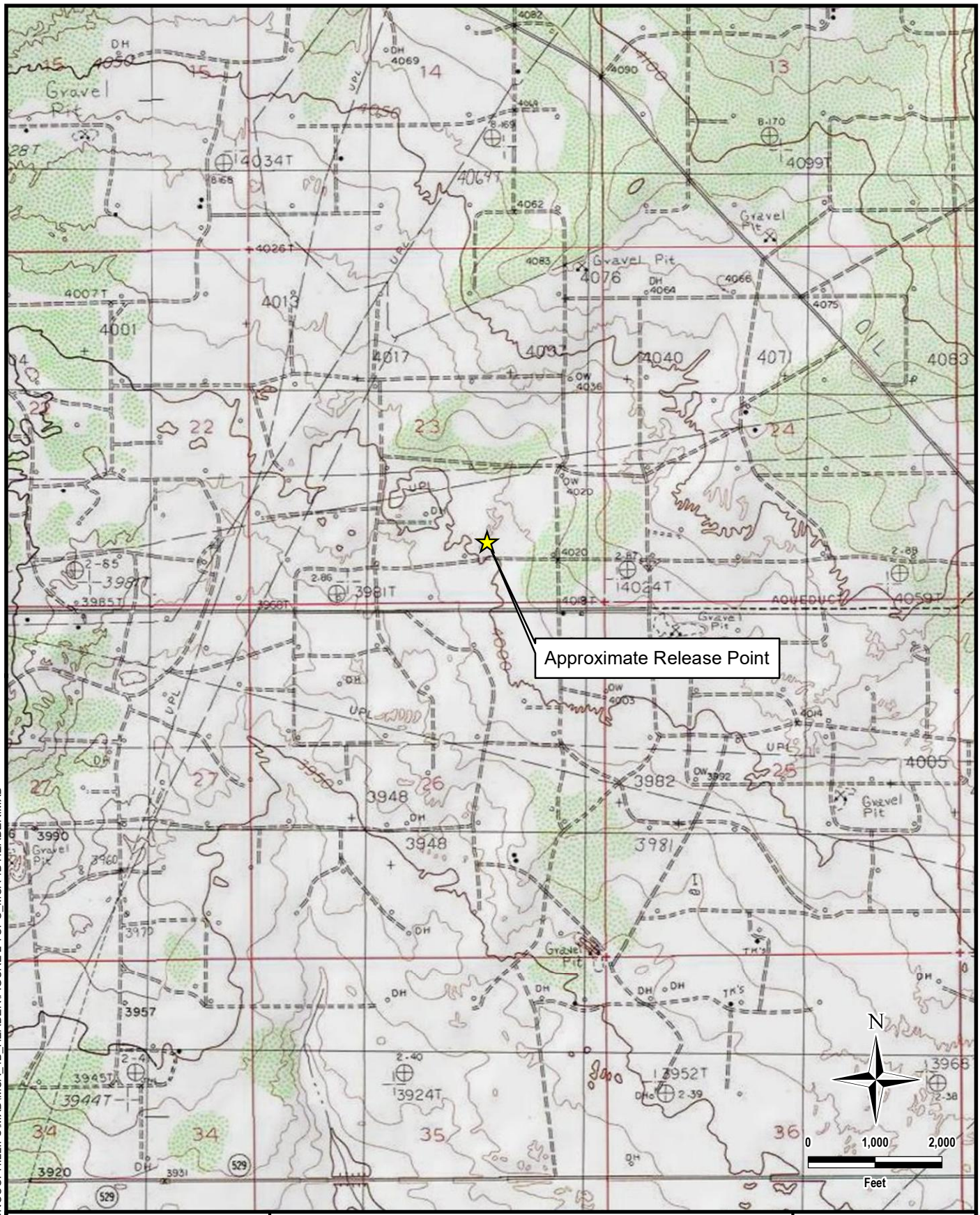
CONOCOPHILLIPS

NAPP2111950687
(32.815249°, -103.734255°)
LEA COUNTY, NEW MEXICO

MCA 4B HEADER RELEASE
SITE LOCATION MAP

PROJECT NO.:	212C-MD-02537
DATE:	JULY 12, 2021
DESIGNED BY:	AAM

Figure No.
1



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\MCA_4B_HEADER\FIGURE 2 TOPO_MCA 4B HEADER.MXD

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Midland, Texas 79701
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CONOCOPHILLIPS

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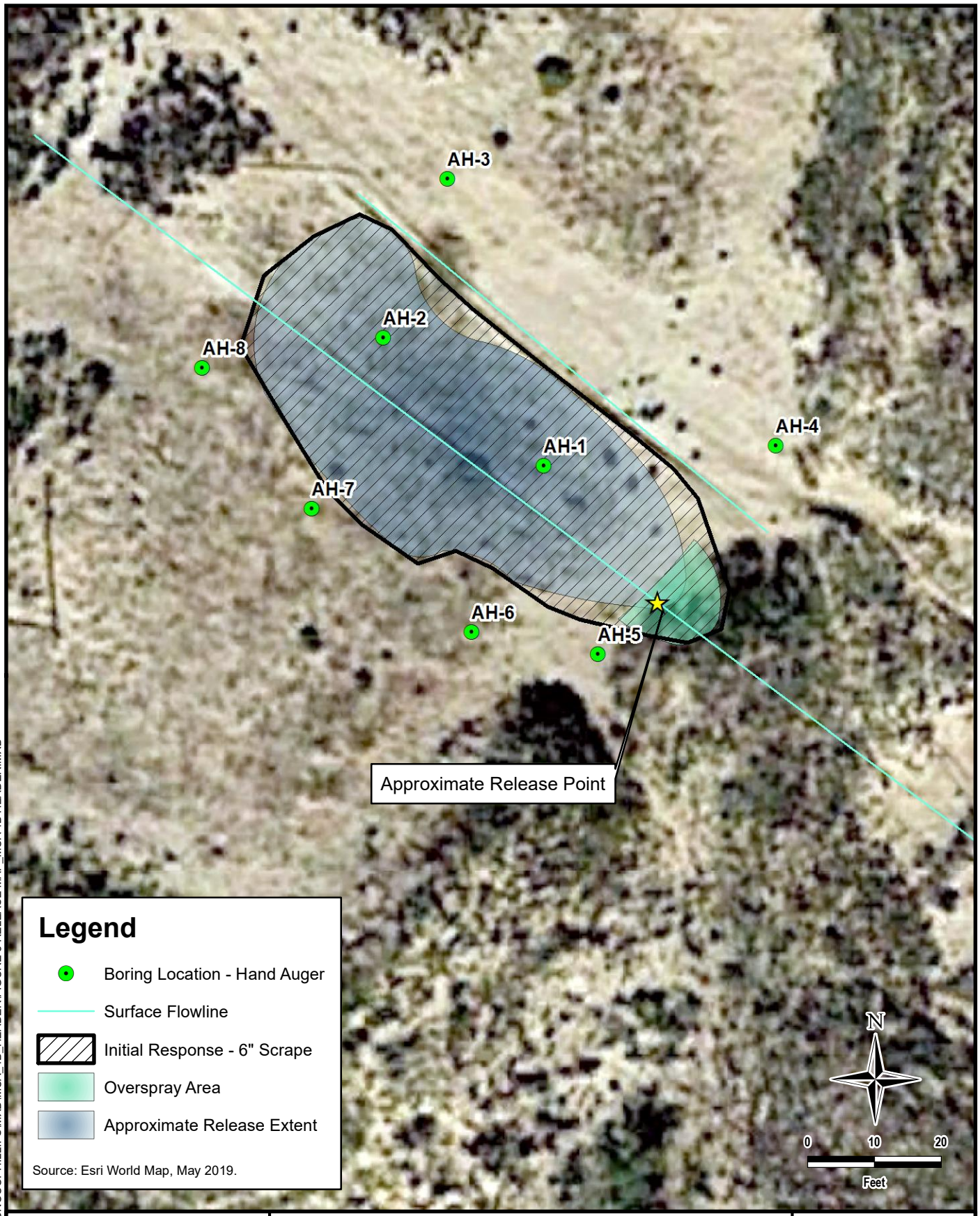
LEA COUNTY, NEW MEXICO

MCA 4B HEADER RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02537
DATE:	JULY 12, 2021
DESIGNED BY:	AAM

Figure No.

2



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\MCA_4B_HEADER\FIGURE 3 RELEASE MAP_MCA 4B HEADER.MXD

TETRA TECH

www.tetratech.com

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

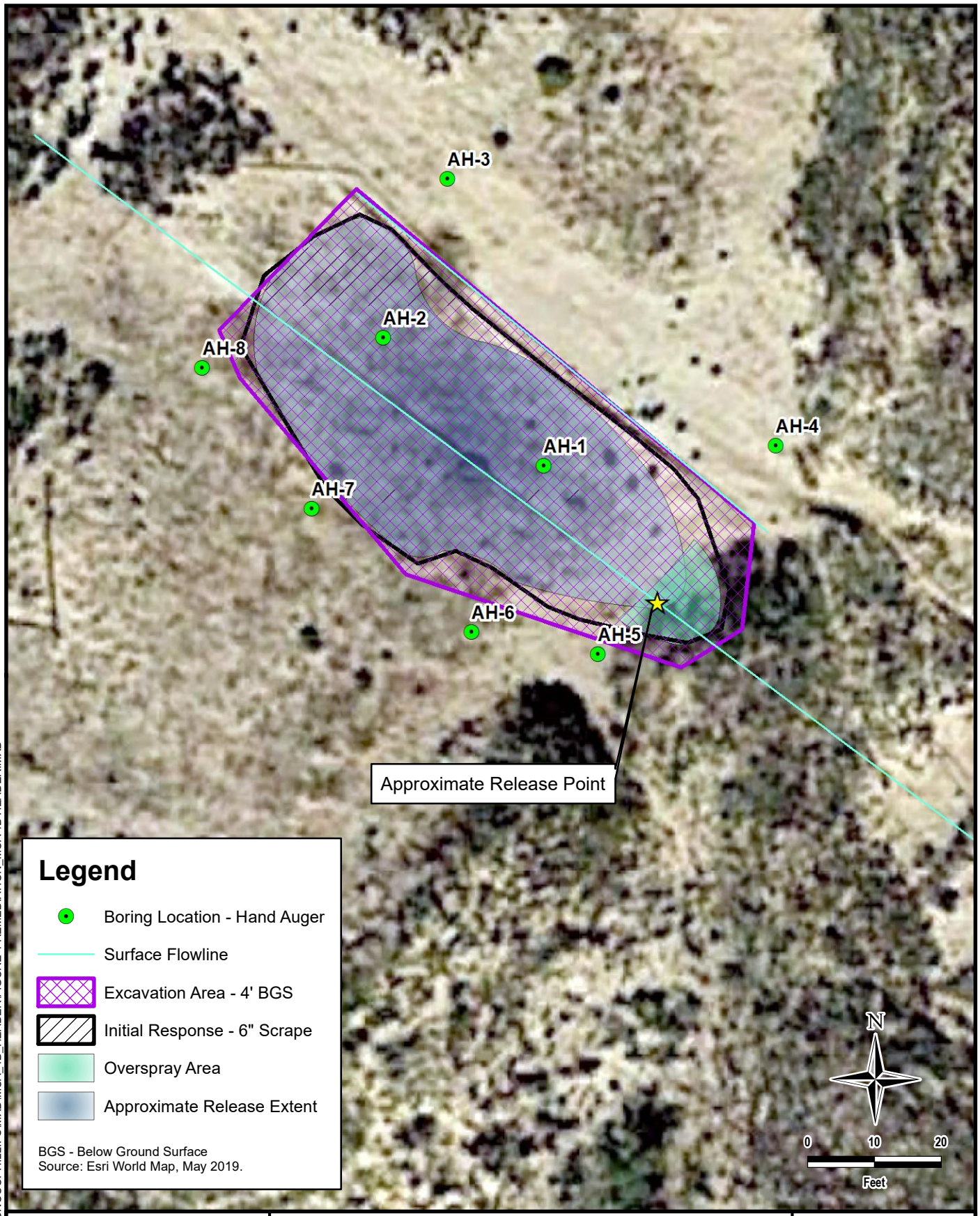
CONOCOPHILLIPS

NAPP2111950687
(32.815249°, -103.734255°)
LEA COUNTY, NEW MEXICO

MCA 4B HEADER RELEASE
RELEASE EXTENT AND SAMPLE LOCATIONS

PROJECT NO.:	212C-MD-02537
DATE:	AUGUST 19, 2021
DESIGNED BY:	AAM

Figure No.
3



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\MCA_4B_HEADER\FIGURE 4 REMEDIATION_MCA 4B HEADER.MXD

TETRA TECH
www.tetratech.com
901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

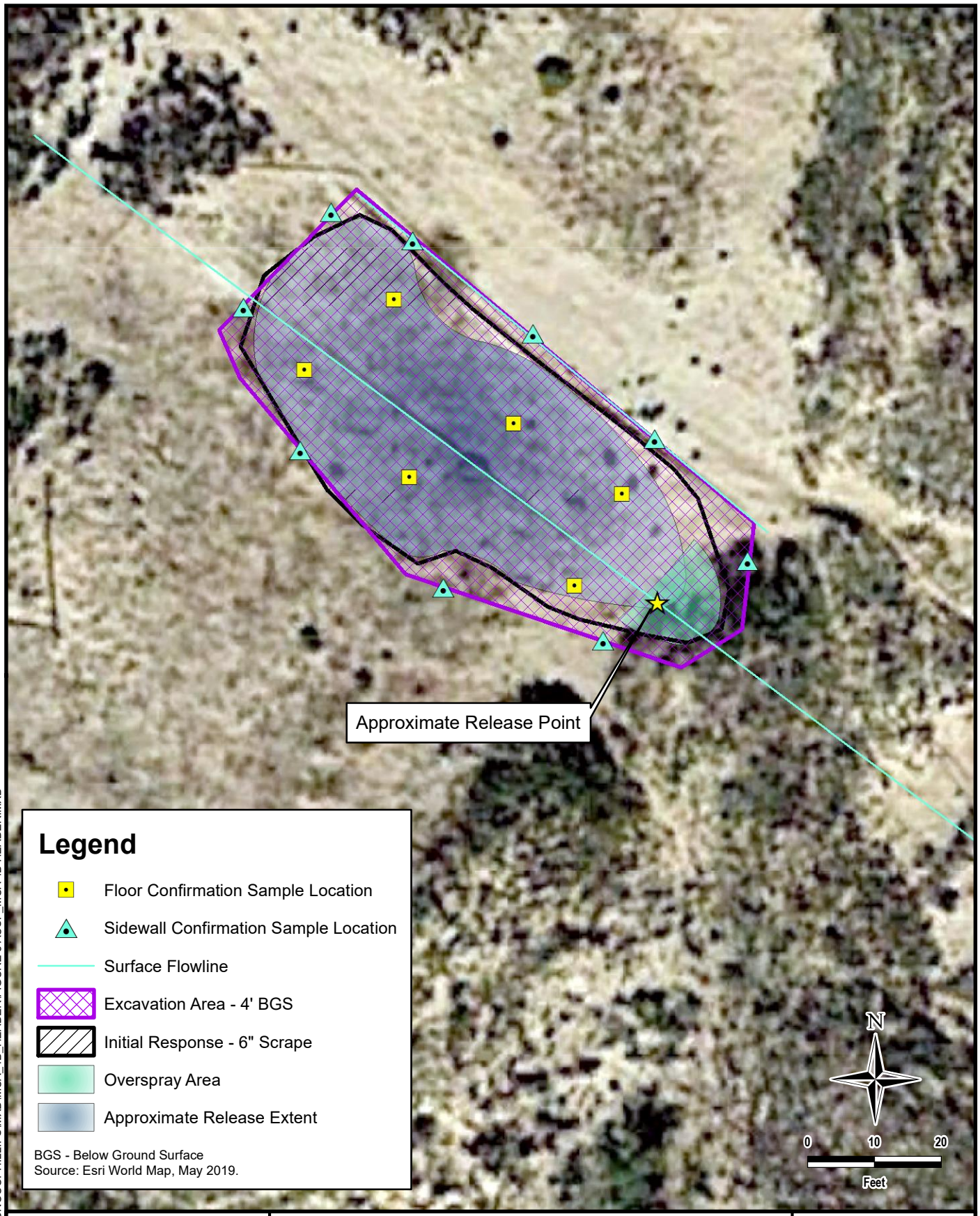
CONOCOPHILLIPS

NAPP2111950687
(32.815249°, -103.734255°)
LEA COUNTY, NEW MEXICO

MCA 4B HEADER RELEASE
PROPOSED REMEDIATION EXTENT

PROJECT NO.:	212C-MD-02537
DATE:	AUGUST 19, 2021
DESIGNED BY:	AAM

Figure No.
4



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\MCA_4B_HEADER\FIGURE 5 ACSP_MCA 4B HEADER.MXD

TETRA TECH
www.tetratech.com
901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

CONOCOPHILLIPS

NAPP2111950687
(32.815249°, -103.734255°)
LEA COUNTY, NEW MEXICO

MCA 4B HEADER RELEASE
ALTERNATIVE CONFIRMATION SAMPLING PLAN

PROJECT NO.:	212C-MD-02537
DATE:	AUGUST 19, 2021
DESIGNED BY:	AAM

Figure No.
5

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT - nAPP2111950687
CONOCOPHILLIPS
MCA 4B HEADER RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Field Screening Results		Chloride[1]		BTEX[2]									TPH[3]						
			Chloride	PID			Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX	GRO[4] C_3 - C_{10}		DRO C_{10} - C_{28}		ORO C_{28} - C_{40}		Total TPH (GRO+DRO+ORO)
		ft. bgs	ppm		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
AH-1	6/30/2021	0.5-1.5	646	-	***752***		0.864		16.1		24.9		24.6		***66.5***	1,440		12,500		6,180		***20,120***
		2-3	743	-	***2,120***		0.124		3.40		15.3		9.55		28.4	519		5,610		2,820		***8,949***
		3-4	302	-	282		< 0.0118		0.284		1.64		2.31		4.23	72.5		1,570		810		***2,453***
		5-6	314	-	195		0.00151		0.00451	J	0.00219	J	0.0709		0.0776	7.64		91.2		65.6		164
AH-2	6/30/2021	0.5-1.5	279	-	229	J	0.0438	J	0.171	J	0.0890	J	8.06		8.36	848		3,380		1,940		***6,168***
		2-3	2520	-	***2,650***		0.266		4.45		23.9		15.5		44.1	1,020		11,100		5,350		***17,470***
		3-4	1870	-	***3,570***		0.244		5.86		22.1		14.8		43.0	1,240		11,300		5,420		***17,960***
		5-6	1360	-	3,290		0.000910	J	0.00176	J	0.00130	J	0.0106		0.0146	0.502		35.0	J6	25.3		60.8
		7-8	1260	-	3,700		< 0.00138		< 0.00692		< 0.00346		< 0.00899		-	0.118	J	9.26		8.13		17.5
		8-9	2350	-	4,720		< 0.00137		< 0.00684		< 0.00342		0.00141	J	0.00141	0.933		63.7		46.9		112
AH-3	6/30/2021	0-1	175	-	84.8	J	< 0.00124		< 0.00618		< 0.00309		< 0.00804		-	0.0829	B J	< 4.47		1.32	J	1.40
		2-3	191	-	209		< 0.00119		< 0.00595		< 0.00298		< 0.00774		-	0.0705	B J	< 4.38		0.760	J	0.760
AH-4	6/30/2021	0-1	36.5	-	46.7		< 0.00102		< 0.00508		< 0.00254		< 0.00661		-	0.0614	B J	12.8		44.2		57.1
		2-3	334	-	316		< 0.00128		< 0.00640		< 0.00320		< 0.00832		-	0.0841	B J	7.42		20.2		27.7
AH-5	6/30/2021	0-1	10.3	-	< 24.9		< 0.00149		< 0.00746		< 0.00373		< 0.00970		-	0.0676	B J	< 4.98		< 4.98		0.0676
		2-3	101	-	65.2		< 0.00158		< 0.00788		< 0.00394		< 0.0102		-	0.0822	B J	< 5.15		1.38	J	1.46
AH-6	6/30/2021	0-1	16.1	-	< 23.7		< 0.00137		< 0.00686		< 0.00343		< 0.00892		-	0.0931	B J	< 4.74		2.21	J	2.30
		2-3	35.6	-	< 21.7		< 0.00117		< 0.00583		< 0.00292		< 0.00758		-	0.0655	B J	< 4.33		1.45	J	1.52
AH-7	6/30/2021	0-1	18.1	-	< 24.7		< 0.00147		< 0.00737		< 0.00368		< 0.00958		-	0.0739	B J	< 4.95		1.05	J	1.12
		2-3	24.2	-	< 24.5		< 0.00145		< 0.00723		< 0.00362		< 0.00940		-	0.0602	B J	< 4.89	J3 J6	0.465	J	0.525
AH-8	6/30/2021	0-1	104	-	13.8	J	< 0.00111		< 0.00557		< 0.00279		< 0.00724		-	0.0614	B J	15.2		25.5		40.8
		2-3	52.6	-	< 20.5		< 0.00105		< 0.00525		< 0.00262		< 0.00682		-	0.0411	B J	< 4.10		1.32	J	1.36

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

1 EPA Method 300.0

2 EPA Method 8260B

3 EPA Method 8015

4 EPA Method 8015D/GRO

Bold and italicized values indicate exceedance of proposed Remediation RRALs and/or Reclamation Requirements.

Shaded rows indicate intervals proposed for excavation.

QUALIFIERS:

B The same analyte is found in the associated blank.

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.

J6 The sample matrix interfered with the ability to make any accurate determination; spike value is low.

APPENDIX A
C-141 Forms

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAPP2111950687
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party ConocoPhillips Company	OGRID 217817
Contact Name Kelsy Waggaman	Contact Telephone 505-577-9071
Contact email Kelsy.Waggaman@ConocoPhillips.com	Incident # *(assigned by OCD)* nAPP2111950687
Contact mailing address 29 Vacuum Complex Lane, Lovington, NM 88260	

Location of Release Source

Latitude 32.815433 Longitude -103.734441
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: 4B Header Production Line	Site Type: Pasture
Date Release Discovered 4/17/21	API# *(if applicable)* N/A

Unit Letter	Section	Township	Range	County
O	23	17S	32E	Lea

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:*)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☒ Crude Oil	Volume Released (bbls) 1.4	Volume Recovered (bbls) 0
☒ Produced Water	Volume Released (bbls) 10.2	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

4B header trunk line failure.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2111950687
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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: Kelsy Waggaman Title: Environmental Coordinator

Signature: [signature] Date: 4/29/21

email: Kelsy.Waggaman@ConocoPhillips.com Telephone: 505-577-9071

OCD Only

Received by: Ramona Marcus Date: 5/10/2021

L48 Spill Volume Estimate Form

Release Discovery Date & Time:	4/17/2021 4:00PM
Release Type:	Oil Mixture
Provide any known details about the event:	Trunk line Leak

Spill Calculation - Subsurface Spill - Rectangle

Was the release on pad or off-pad?	On Pad - 10.5%; Off Pad - 15.12% soil spilled-fluid saturation factor
Has it rained at least a half inch in the last 24 hours?	Yes, On Pad - 8%; Off Pad - 13.57% soil spilled-fluid saturation factor; if No, use factors above.

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	50.0	25.0	2.00	15.12%	37.083	5.607	11.67%	0.654	4.953
Rectangle B	50.0	25.0	2.00	15.12%	37.083	5.607	11.67%	0.654	4.953
Rectangle C	15.0	15.0	0.50	15.12%	1.669	0.252	11.67%	0.029	0.223
Rectangle D					0.000	0.000		0.000	0.000
Rectangle E					0.000	0.000		0.000	0.000
Rectangle F					0.000	0.000		0.000	0.000
Rectangle G					0.000	0.000		0.000	0.000
Rectangle H					0.000	0.000		0.000	0.000
Rectangle I					0.000	0.000		0.000	0.000
Rectangle J					0.000	0.000		0.000	0.000
					Total Volume Release:	11.466		1.338	10.128

District I
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 26358

CONDITIONS OF APPROVAL

Operator:			OGRID:	Action Number:	Action Type:
CONOCOPHILLIPS COMPANY	600 W. Illinois Avenue	Midland, TX79701	217817	26358	C-141

OCD Reviewer	Condition
rmarcus	None

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?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☐ 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)?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☐ 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?	☐ Yes ☐ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☐ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☐ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☐ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☐ 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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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: _____ Date: _____

email: _____ Telephone: _____

OCD Only

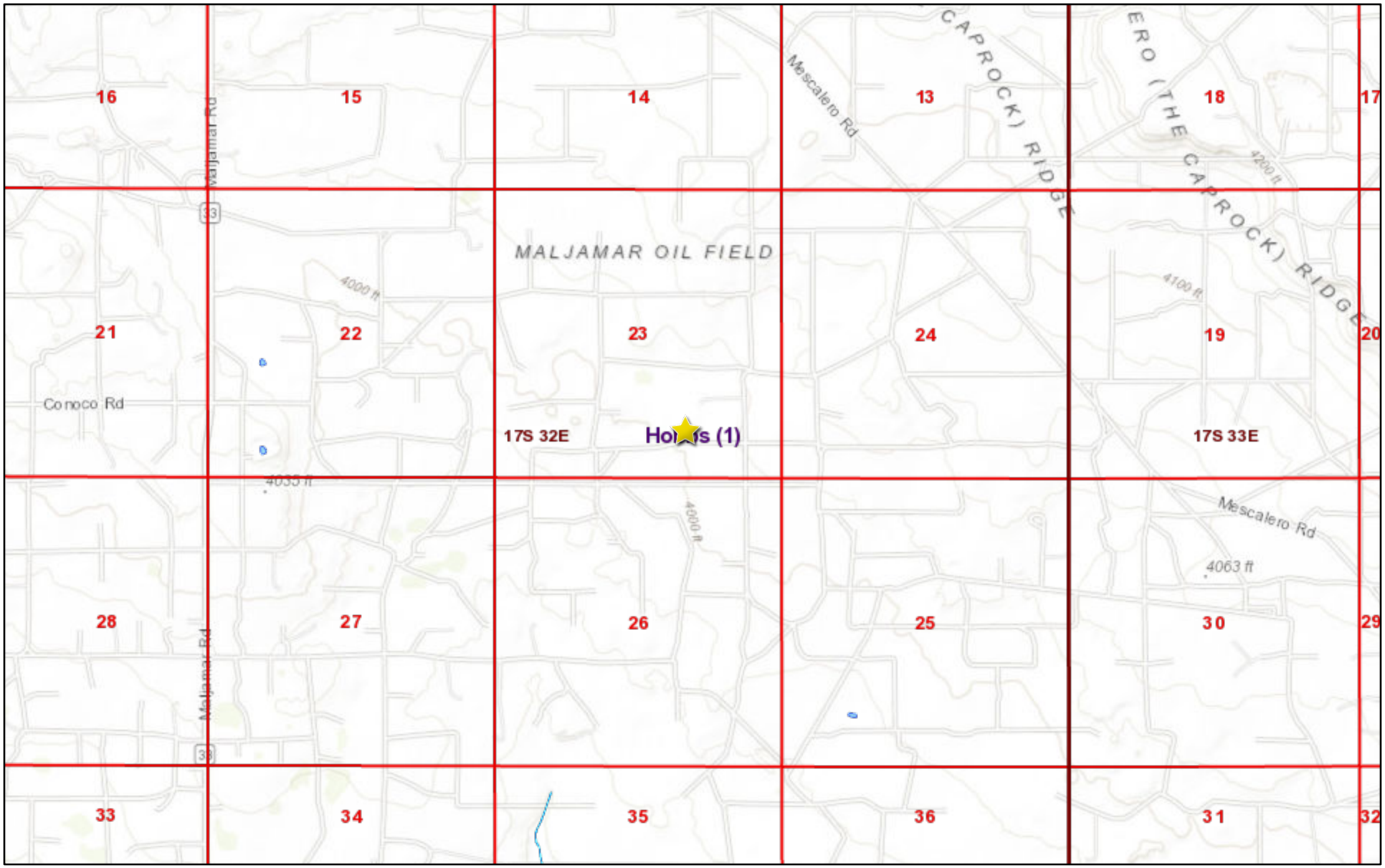
Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

APPENDIX B
Site Characterization Data

MCA 4B Header



7/12/2021, 5:03:14 PM

1:36,112

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

Override 1

OCD Districts

OCD District Offices

PLSS First Division

PLSS Townships

OSE Water-bodies

PLJV Probable Playas

OSE Streams

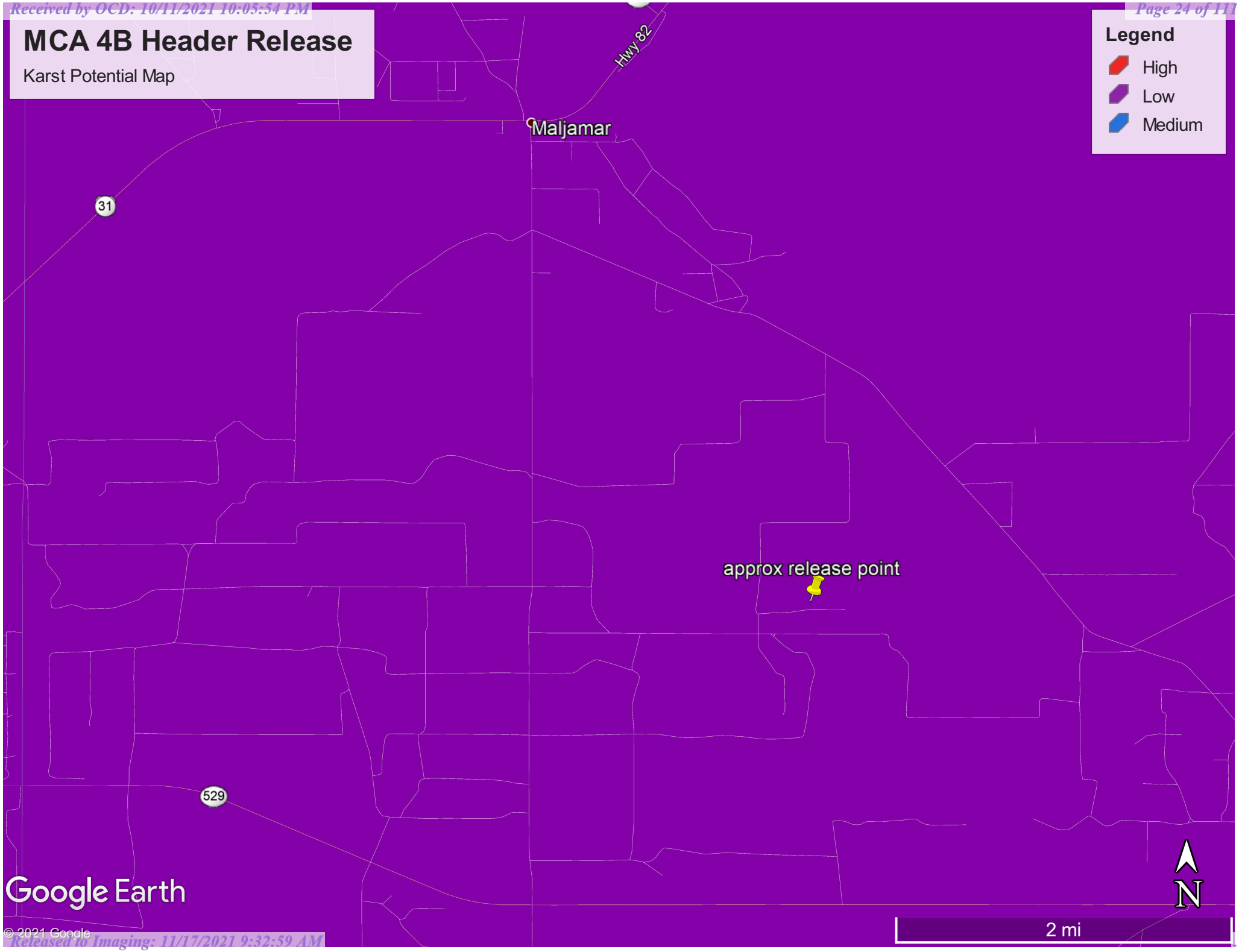
Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin,

New Mexico Oil Conservation Division

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

MCA 4B Header Release

Karst Potential Map



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

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 618484.43 **Northing (Y):** 3631520.18 **Radius:** 800

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-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 11911 POD1	RA	LE	1	3	1	24	17S	32E	619192	3632296	1050	35		
RA 11957 POD1	RA	LE	3	4	1	19	17S	33E	621177	3632200	2777	55		
RA 11937 POD1	RA	LE	1	4	1	19	17S	33E	621244	3632281	2862	95		
RA 11936 POD1	RA	LE	1	4	1	19	17S	33E	621246	3632321	2875	92		
L 12974 POD1	L	LE	3	4	3	18	17S	33E	621233	3632940	3093	140	130	10
RA 12721 POD5	RA	LE	2	4	4	28	17S	32E	615650	3629961	3234	130	124	6
RA 12521 POD1	RA	LE	3	3	4	21	17S	32E	615127	3631271	3366	105	92	13
RA 12020 POD3	RA	LE	2	1	2	28	17S	32E	615152	3631019	3369	112	83	29
RA 12721 POD3	RA	LE	2	3	4	28	17S	32E	615417	3629979	3432	115		

Average Depth to Water: **107 feet**

Minimum Depth: **83 feet**

Maximum Depth: **130 feet**

Record Count: 9

UTMNAD83 Radius Search (in meters):

Easting (X): 618484.43 **Northing (Y):** 3631520.18 **Radius:** 3500

212C-MD-02067 | TETRA TECH | **LOG OF BORING BH-1** | Page 1 of 2

Project Name: MCA 123 Injection Line Release

Borehole Location: GPS: 32.810737°, -103.742845° | Surface Elevation: 3974 ft

Borehole Number: BH-1 | Borehole Diameter (in.): 8 | Date Started: 3/23/2020 | Date Finished: 3/23/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			132	1.4								**-SM-** SILTY SAND; Brown, medium dense, dry, with no odor, with no staining.		BH-1 (0'-1')
			177	1.6									3	BH-1 (2'-3')
			191	1.2								**-SM-** SILTY SAND; Light brown, dense, dry, with no odor, with no staining.		BH-1 (3'-4')
5			1.48	1.3										BH-1 (4'-5')
			1.47	0.9										BH-1 (6'-7')
10			3.05	2.1										BH-1 (9'-10')
15			>10000	2.2										BH-1 (14'-15')
			7.97	1.8									19	
20												**-SM-** SILTY SAND; Brown, dense, dry, with no odor, with no staining.		BH-1 (19'-20')
25			4.53	3.1										BH-1 (24'-25')

Sampler Types: Split Spoon, Shelby, Bulk Sample, Grab Sample, Acetate Liner, Vane Shear, California, Test Pit

Operation Types: Mud Rotary, Continuous Flight Auger, Wash Rotary, Hand Auger, Air Rotary, Direct Push, Core Barrel

Notes:
Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Devin Dominguez | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02067 | TETRA TECH | **LOG OF BORING BH-1** | Page 2 of 2

Project Name: MCA 123 Injection Line Release

Borehole Location: GPS: 32.810737°, -103.742845° | Surface Elevation: 3974 ft

Borehole Number: BH-1 | Borehole Diameter (in.): 8 | Date Started: 3/23/2020 | Date Finished: 3/23/2020

WATER LEVEL OBSERVATIONS
While Drilling ▽ DRY ft Upon Completion of Drilling ▽ DRY ft
Remarks:

DEPTH (ft)	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
					29	
30	⊠	8.30	1.1	**-SM-** SILTY SAND; Tan, dense, dry, with no odor, with no staining.		BH-1 (29'-30')
					34	
35	⊠	7.50	1.2	**-SM-** SILTY SAND; Brown, dense, dry, with gravel, with no odor, with no staining.		BH-1 (34'-35')
40						
					44	
45	⊠	515	0.9	**-CL-** CLAYSTONE; Red, moderately hard, moist, with no odor, with no staining.		BH-1 (44'-45')
50	⊠	210	0.8		50	BH-1 (49'-50')

Sampler Types: Split Spoon, Shelby, Bulk Sample, Grab Sample, Acetate Liner, Vane Shear, California, Test Pit

Operation Types: Mud Rotary, Continuous Flight Auger, Wash Rotary, Hand Auger, Air Rotary, Direct Push, Core Barrel

Notes:
Bottom of borehole at 50.0 feet.
Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Devin Dominguez | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02067 | TETRA TECH | **LOG OF BORING BH-4** | Page 1 of 3

Project Name: MCA 123 Injection Line Release

Borehole Location: GPS: 32.810847°, -103.743217° | Surface Elevation: 3973 ft

Borehole Number: BH-4 | Borehole Diameter (in.): 8 | Date Started: 3/23/2020 | Date Finished: 3/23/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			208	1.6								**-SM-** SILTY SAND; Brown, dense, dry, with no odor, with no staining.		BH-4 (0'-1')
			361	1.7										BH-4 (2'-3')
			657	1.9										BH-4 (3'-4')
													4	
5			2.0	2.1								**-SM-** SILTY SAND; Tan, dense, dry, with no odor, with no staining.		BH-4 (4'-5')
			2.03	1.9										BH-4 (6'-7')
10			1.95	2										BH-4 (9'-10')
													14	
15			9.45	3.1								**-SM-** SILTY SAND; Light brown, dense, dry, with no odor, with no staining.		BH-4 (14'-15')
20			3.75	3.2										BH-4 (19'-20')
25			2.81	1.4										BH-4 (24'-25')

Sampler Types: Split Spoon, Shelby, Bulk Sample, Grab Sample, Acetate Liner, Vane Shear, California, Test Pit

Operation Types: Mud Rotary, Continuous Flight Auger, Wash Rotary, Hand Auger, Air Rotary, Direct Push, Core Barrel

Notes:

Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Devin Dominguez | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02067	TETRA TECH	**LOG OF BORING BH-4**	Page 2 of 3

Project Name: MCA 123 Injection Line Release

Borehole Location: GPS: 32.810847°, -103.743217° | Surface Elevation: 3973 ft

Borehole Number: BH-4 | Borehole Diameter (in.): 8 | Date Started: 3/23/2020 | Date Finished: 3/23/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
					29	
30		1.87	1.7	**-SM-** SILTY SAND; Tan, dense, dry, with no odor, with no staining.		BH-4 (29'-30')
35						BH-4 (34'-35')
					39	
40		1.67	1.8	**-CL-** CLAYSTONE; Red, moderately hard, moist, with no odor, with no staining.		BH-4 (39'-40')
45						
50		587	1.7			BH-4 (49'-50')

SAMPLE RECOVERY (%) | MOISTURE CONTENT (%) | DRY DENSITY (pcf) | LIQUID LIMIT LL | PLASTICITY INDEX PI | MINUS NO. 200 (%) | GRAPHIC LOG

Sampler Types: Split Spoon, Shelby, Bulk Sample, Grab Sample, Acetate Liner, Vane Shear, California, Test Pit

Operation Types: Mud Rotary, Continuous Flight Auger, Wash Rotary, Hand Auger, Air Rotary, Direct Push, Core Barrel

Notes:
Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Devin Dominguez | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02067 | TETRA TECH | **LOG OF BORING BH-4** | Page 3 of 3

Project Name: MCA 123 Injection Line Release

Borehole Location: GPS: 32.810847°, -103.743217° | Surface Elevation: 3973 ft

Borehole Number: BH-4 | Borehole Diameter (in.): 8 | Date Started: 3/23/2020 | Date Finished: 3/23/2020

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
55														
60			491	1.4									60	BH-4 (59'-60')

Bottom of borehole at 60.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

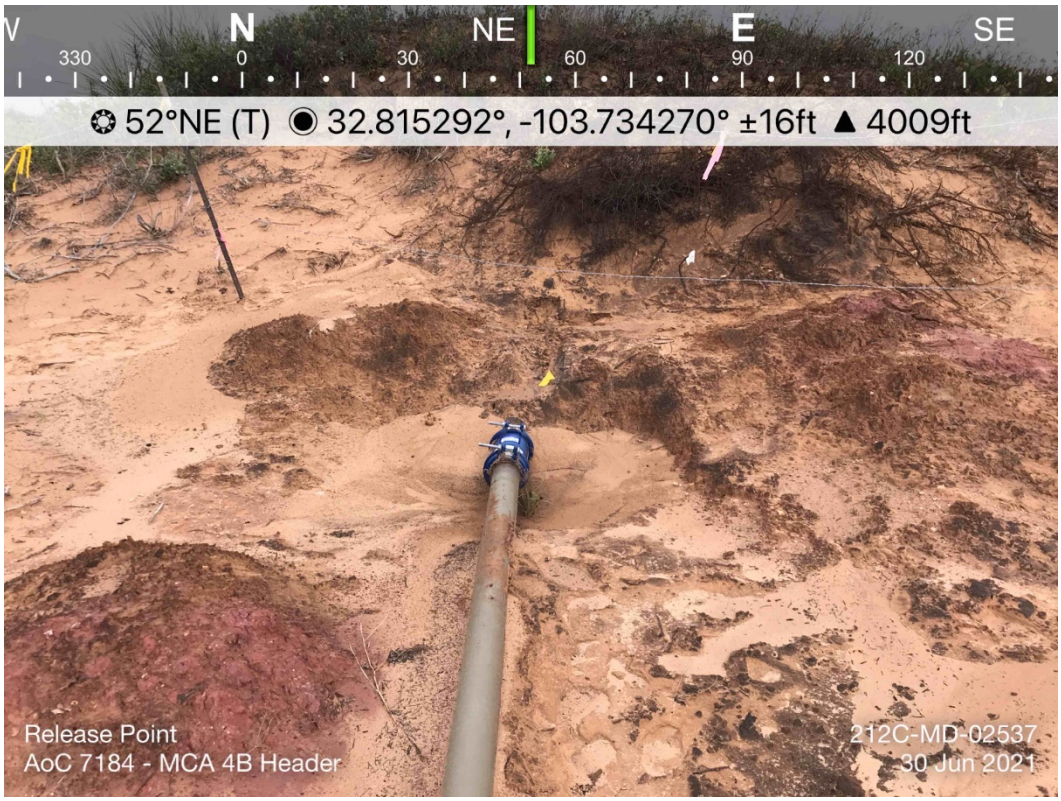
Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:

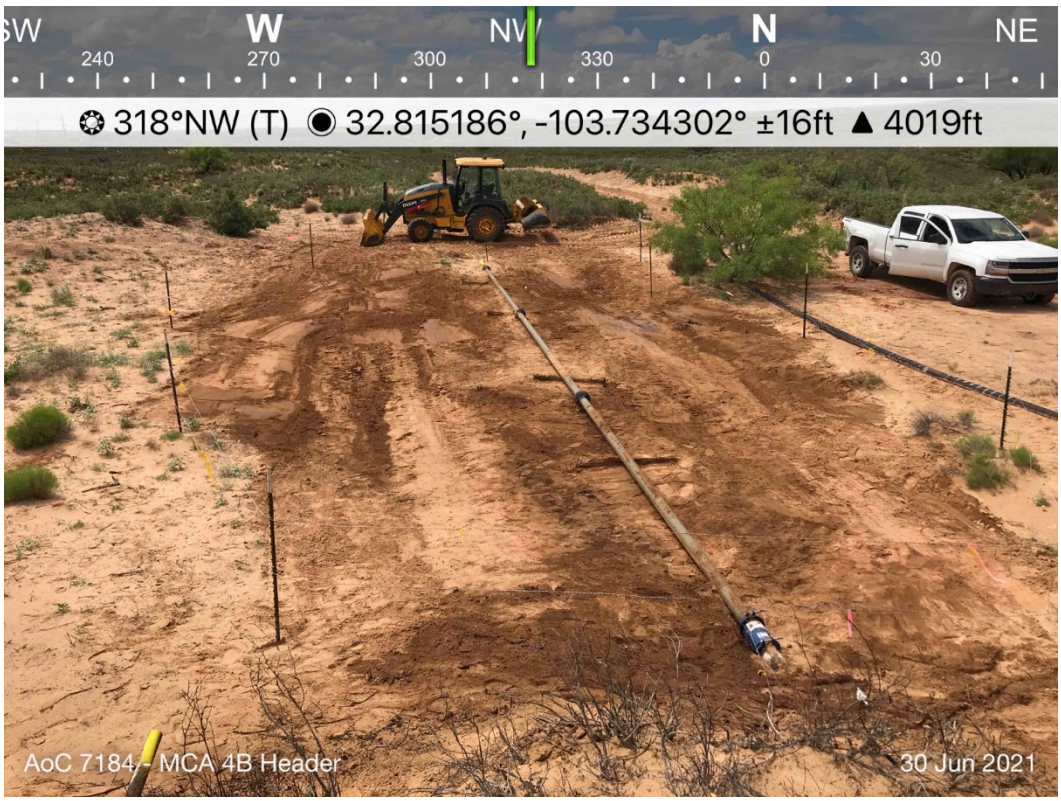
Analytical samples are shown in the "Remarks" column.
Surface elevation is an estimated value.

Logger: Devin Dominguez | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

APPENDIX C
Photographic Documentation



TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View northeast of the release point.	1
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021



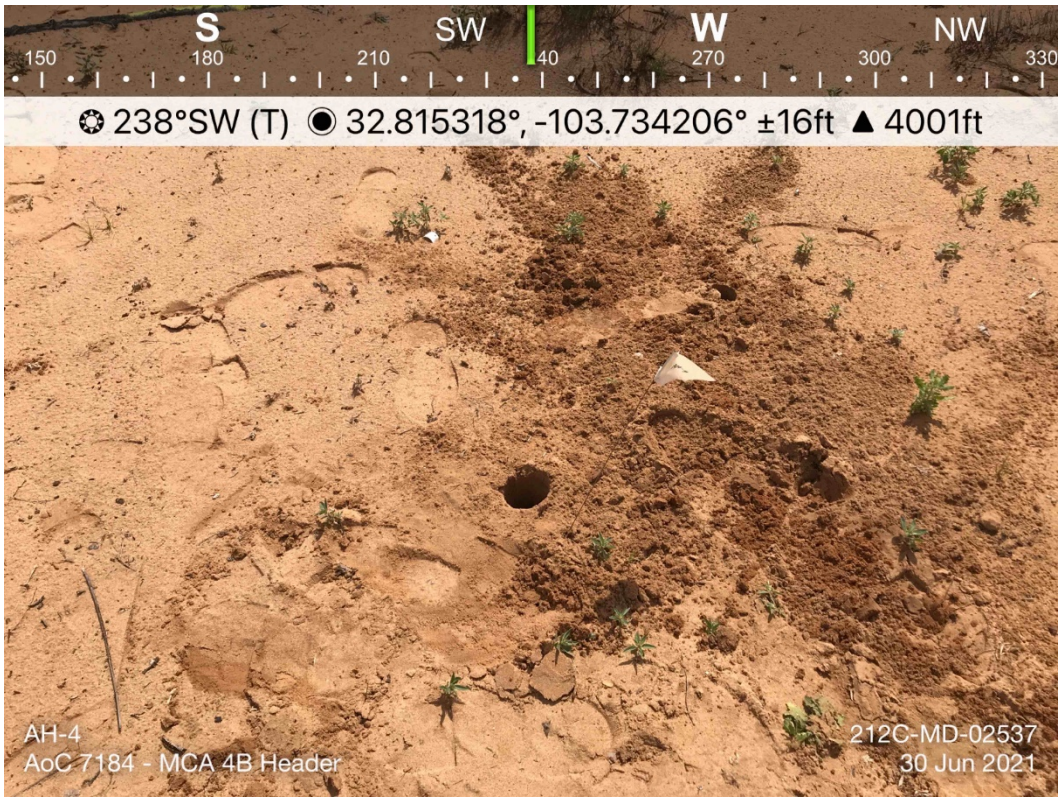
TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View northwest of the release point, release extent and surface flowline with cribbing.	2
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View north of the release point, release extent and surface flowline with cribbing.	3
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021

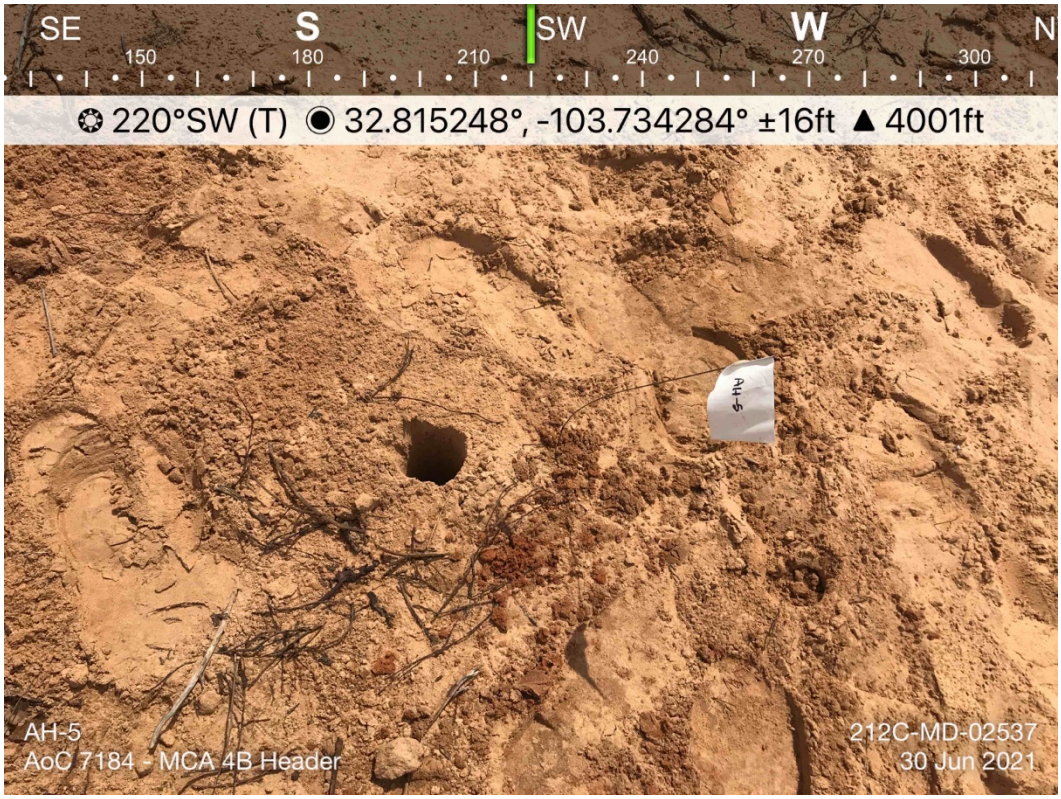
TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View of backfilled boring AH-1 and surface flowline with cribbing.	4
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View of boring AH-2 and surface flowline.	5
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View of boring AH-3.	6
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View of boring AH-4.	7
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021

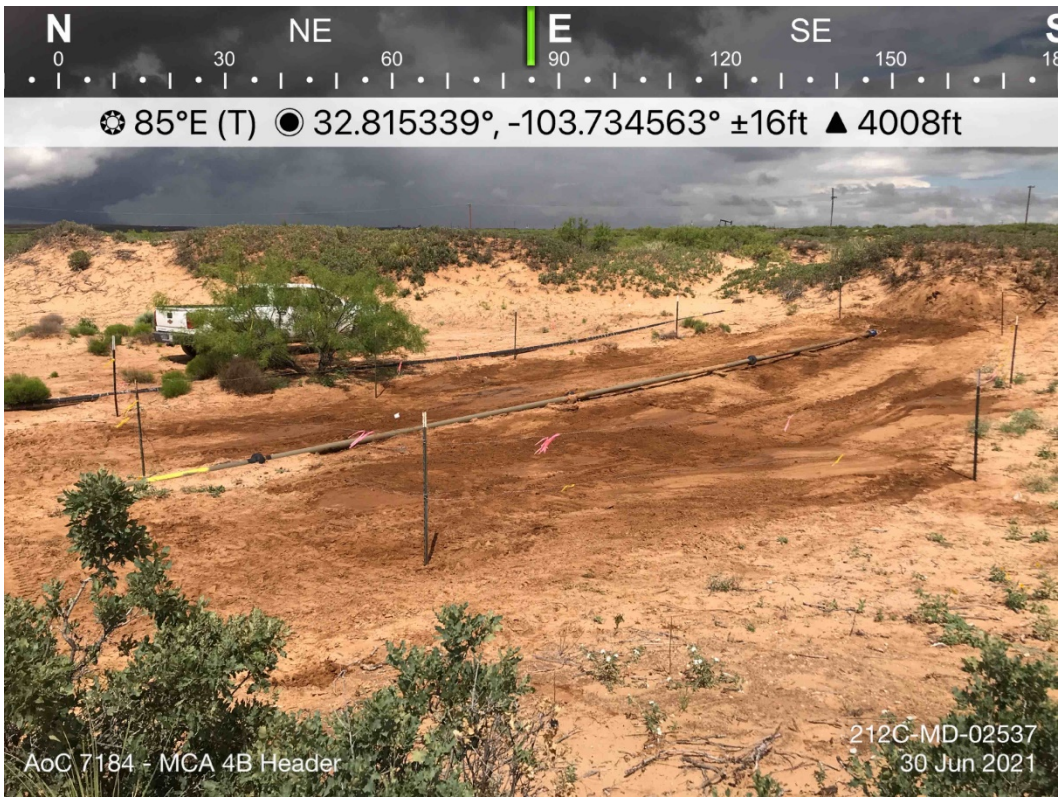


TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View of boring AH-5.	8
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View of boring AH-6.	9
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021

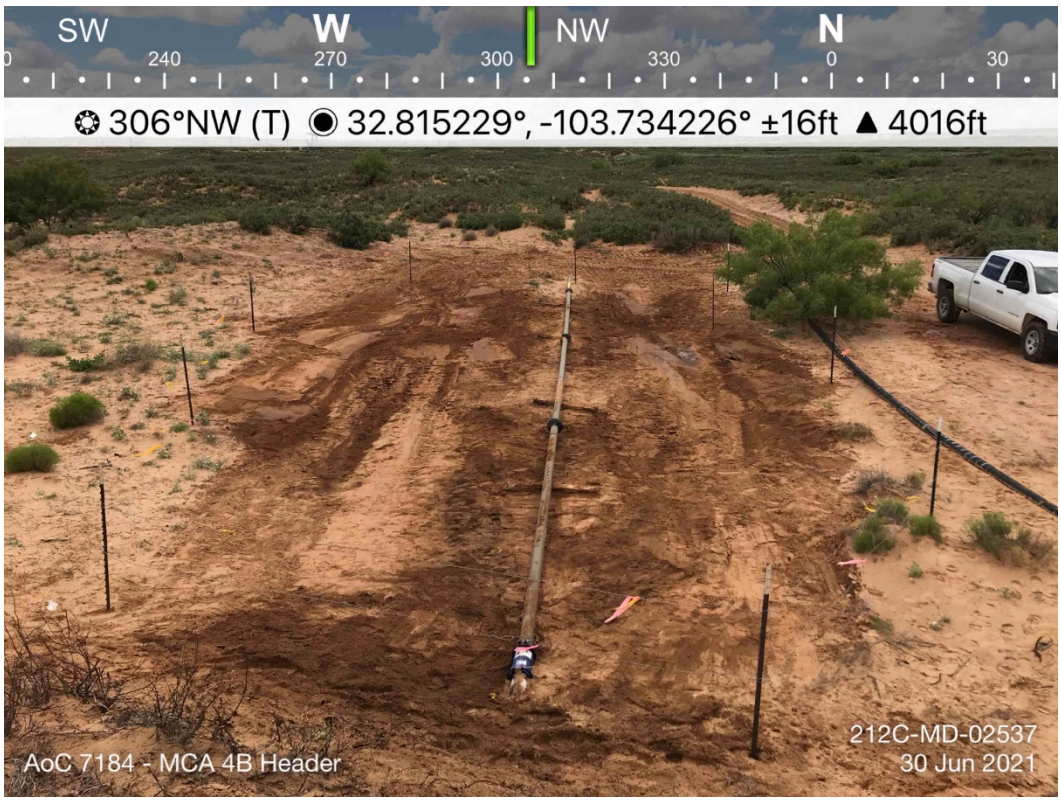
TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View of boring AH-7.	10
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View of boring AH-8.	11
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View east of the surface flowline and completed 6-inch scrape.	12
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View east southeast of the surface flowline and completed 6-inch scrape.	13
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02537	DESCRIPTION	View northwest of the surface flowline and completed 6-inch scrape.	14
	SITE NAME	ConocoPhillips MCA 4B Header Release	6/30/2021

APPENDIX D
Waste Manifests

TRANSPORTER'S MANIFEST

MANIFEST # 01

SHIPPING FACILITY NAME & ADDRESS:
ConocoPhillips Company
935 N. Eldridge Pkwy., Houston, TX 77079
Attn. Jenni Fortunato
Jenni.Fortunato@conocophillips.com
832.486.2477

ACCOUNTING INFORMATION
MCA 4B Header Release – RMR Project
GL Account No.: 702000
WBS Element: 4AO.000.7184.00.RM

LOCATION OF MATERIAL:
ConocoPhillips Company

MCA 4B Header Release (AoC 7184)
Unit Letter O, Section 23, Township 17 South, Range 32 East
Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners
4008 N. Grimes
Hobbs, New Mexico 88240
575.397.0050

DESCRIPTION OF WASTE:
Impacted Soil

TRUCK CAPACITY: 18 **APPROXIMATE % FULL**

APPROXIMATE VOLUME HAULED OFF 15

FACILITY CONTACT:
Date: 30 June 21 Signature of Contact: (Agent for ConocoPhillips)

NAME OF TRANSPORTER (Driver):

Date: Signature Driver:

DISPOSAL SITE:

R360
P.O. Box 388
4507 W Carlsbad Hwy
Hobbs, New Mexico 88241

Date: 6/30/21 Representative Signature

M-32

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	ANDREW GARCIA
AFE #:	
PO #:	
Manifest #:	01
Manif. Date:	6/30/2021
Hauler:	MCNABB PARTNERS
Driver	GUMER
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-1220451
Bid #:	O6UJ9A000HH0
Date:	6/30/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	MCA 4 B HEADER
Well #:	
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	15.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

__ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

TRANSPORTER'S MANIFEST

MANIFEST # 02

SHIPPING FACILITY NAME & ADDRESS:
ConocoPhillips Company
935 N. Eldridge Pkwy., Houston, TX 77079
Attn. Jenni Fortunato
Jenni.Fortunato@conocophillips.com
832.486.2477

ACCOUNTING INFORMATION
MCA 4B Header Release – RMR Project
GL Account No.: 702000
WBS Element: 4AO.000.7184.00.RM

LOCATION OF MATERIAL:
ConocoPhillips Company

MCA 4B Header Release (AoC 7184)
Unit Letter O, Section 23, Township 17 South, Range 32 East
Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners
4008 N. Grimes
Hobbs, New Mexico 88240
575.397.0050

DESCRIPTION OF WASTE:
Impacted Soil

TRUCK CAPACITY: 18 **APPROXIMATE % FULL**

APPROXIMATE VOLUME HAULED OFF 15

FACILITY CONTACT:
Date: 30 June 21 Signature of Contact: (Agent for ConocoPhillips)

NAME OF TRANSPORTER (Driver):

Date: Signature Driver:

DISPOSAL SITE:

R360
P.O. Box 388
4507 W Carlsbad Hwy
Hobbs, New Mexico 88241

Date: 6/30/21 Representative Signature

M-32 D.T.

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	ANDREW GARCIA
AFE #:	
PO #:	
Manifest #:	02
Manif. Date:	6/30/2021
Hauler:	MCNABB PARTNERS
Driver	GUMER
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-1220484
Bid #:	O6UJ9A000HH0
Date:	6/30/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	MCA 4 B HEADER
Well #:	
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	15.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

_ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

APPENDIX E
Laboratory Analytical Data

Pace Analytical®

ANALYTICAL REPORT

July 20, 2021

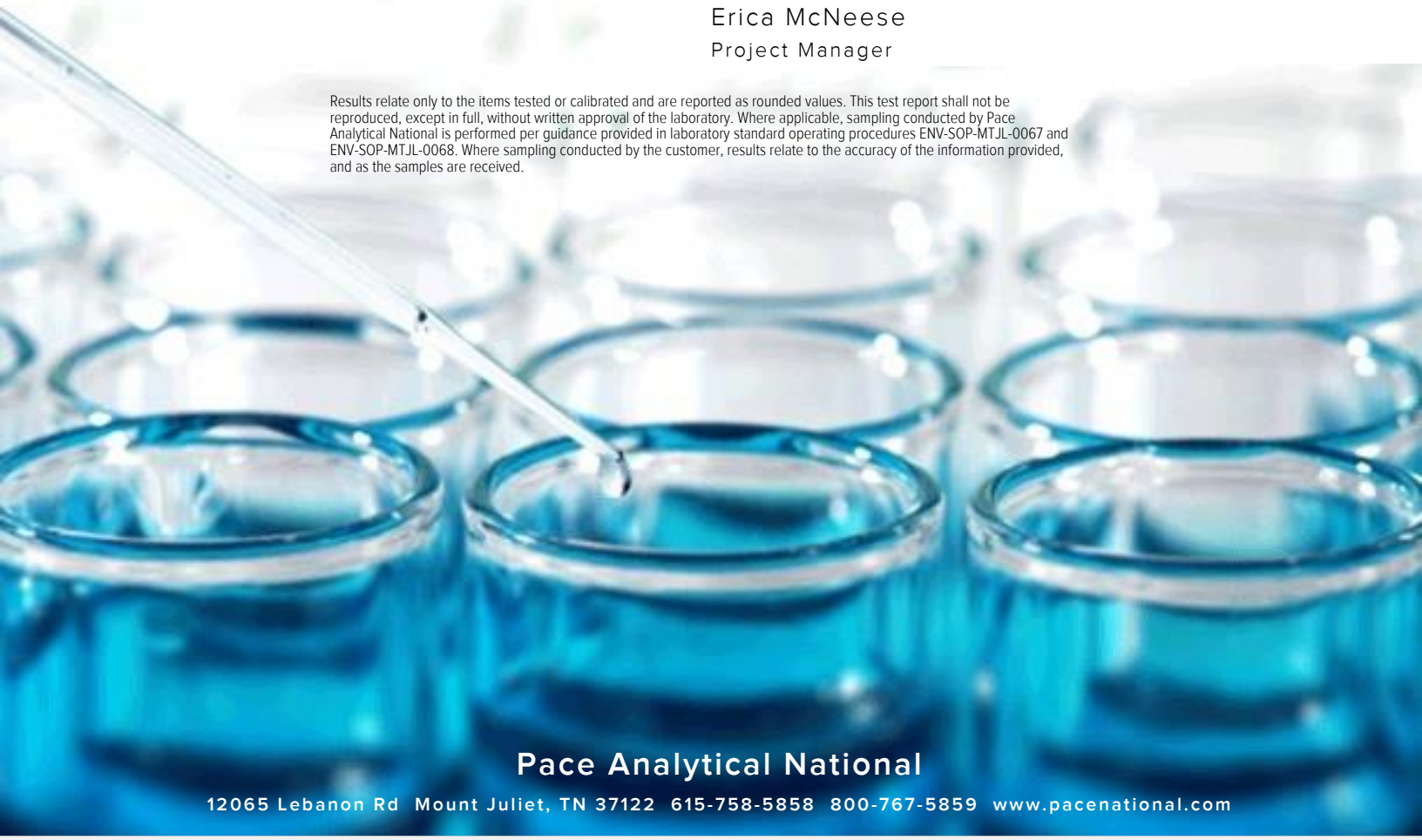
ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1373875
Samples Received:	07/02/2021
Project Number:	212C-MD-02537
Description:	MCA 4B Header Release

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

Entire Report Reviewed By: Erica McNeese

Erica McNeese
Project Manager



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

TABLE OF CONTENTS

AH-1(0.5'-1.5') L1373875-01 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 08:30 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701089	1	07/08/21 08:15	07/08/21 08:38	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	10	07/19/21 00:15	07/19/21 03:11	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	200	07/06/21 07:55	07/11/21 13:48	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	20	07/06/21 07:55	07/07/21 16:37	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702461	40	07/09/21 08:28	07/12/21 02:35	CAG	Mt. Juliet, TN

AH-1(2'-3') L1373875-02 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 08:45 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701089	1	07/08/21 08:15	07/08/21 08:38	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	20	07/19/21 00:15	07/19/21 03:20	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	200	07/06/21 07:55	07/11/21 14:11	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	20	07/06/21 07:55	07/07/21 16:56	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702461	40	07/09/21 08:28	07/12/21 00:46	CAG	Mt. Juliet, TN

AH-1(3'-4') L1373875-03 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 09:00 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701089	1	07/08/21 08:15	07/08/21 08:38	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	1	07/19/21 00:15	07/19/21 03:29	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1705390	25	07/06/21 07:55	07/14/21 17:18	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	8	07/06/21 07:55	07/07/21 17:15	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702461	20	07/09/21 08:28	07/12/21 00:19	CAG	Mt. Juliet, TN

AH-1(5'-6') L1373875-04 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 09:15 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701089	1	07/08/21 08:15	07/08/21 08:38	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	1	07/19/21 00:15	07/19/21 03:39	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	1	07/06/21 07:55	07/11/21 08:00	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1702599	1	07/06/21 07:55	07/09/21 13:45	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702461	1	07/09/21 08:28	07/11/21 23:51	CAG	Mt. Juliet, TN

AH-2(0.5'-1.5') L1373875-05 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 09:30 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701089	1	07/08/21 08:15	07/08/21 08:38	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	10	07/19/21 00:15	07/19/21 03:48	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	500	07/06/21 07:55	07/11/21 14:59	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	40	07/06/21 07:55	07/07/21 17:53	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702461	20	07/09/21 08:28	07/12/21 01:13	CAG	Mt. Juliet, TN

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

AH-2(2'-3') L1373875-06 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 09:45 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701089	1	07/08/21 08:15	07/08/21 08:38	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	100	07/19/21 00:15	07/19/21 03:58	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	500	07/06/21 07:55	07/11/21 15:23	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	40	07/06/21 07:55	07/07/21 18:11	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702461	40	07/09/21 08:28	07/12/21 01:41	CAG	Mt. Juliet, TN

AH-2(3'-4') L1373875-07 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 10:00 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701089	1	07/08/21 08:15	07/08/21 08:38	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	100	07/19/21 00:15	07/19/21 04:08	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	500	07/06/21 07:55	07/11/21 15:46	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	40	07/06/21 07:55	07/07/21 18:30	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702461	40	07/09/21 08:28	07/12/21 02:08	CAG	Mt. Juliet, TN

AH-2(5'-6') L1373875-08 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 10:15 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701089	1	07/08/21 08:15	07/08/21 08:38	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	10	07/19/21 00:15	07/19/21 04:17	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1705390	1	07/06/21 07:55	07/14/21 17:40	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	1	07/06/21 07:55	07/07/21 12:29	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702577	1	07/09/21 16:43	07/10/21 18:24	CAG	Mt. Juliet, TN

AH-2(7'-8') L1373875-09 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 10:45 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701094	1	07/08/21 10:18	07/08/21 10:26	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	10	07/19/21 00:15	07/19/21 04:46	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1705390	1	07/06/21 07:55	07/14/21 18:02	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	1	07/06/21 07:55	07/07/21 12:49	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702577	1	07/09/21 16:43	07/10/21 17:19	CAG	Mt. Juliet, TN

AH-2(8'-9') L1373875-10 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 11:15 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701094	1	07/08/21 10:18	07/08/21 10:26	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	10	07/19/21 00:15	07/19/21 04:55	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	1	07/06/21 07:55	07/11/21 09:11	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	1	07/06/21 07:55	07/07/21 13:08	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702577	1	07/09/21 16:43	07/10/21 19:04	CAG	Mt. Juliet, TN

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

AH-3(0'-1') L1373875-11 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 11:30 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701094	1	07/08/21 10:18	07/08/21 10:26	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	5	07/19/21 00:15	07/19/21 05:05	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	1	07/06/21 07:55	07/11/21 09:36	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	1	07/06/21 07:55	07/07/21 13:27	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702577	1	07/09/21 16:43	07/10/21 17:32	CAG	Mt. Juliet, TN

AH-3(2'-3') L1373875-12 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 11:45 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701094	1	07/08/21 10:18	07/08/21 10:26	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	1	07/19/21 00:15	07/19/21 05:43	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	1	07/06/21 07:55	07/11/21 09:59	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	1	07/06/21 07:55	07/07/21 13:46	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702577	1	07/09/21 16:43	07/10/21 17:45	CAG	Mt. Juliet, TN

AH-4(0'-1') L1373875-13 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 12:00 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701094	1	07/08/21 10:18	07/08/21 10:26	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	1	07/19/21 00:15	07/19/21 06:02	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	1	07/06/21 07:55	07/11/21 10:23	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	1	07/06/21 07:55	07/07/21 14:05	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702577	1	07/09/21 16:43	07/10/21 19:30	CAG	Mt. Juliet, TN

AH-4(2'-3') L1373875-14 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 13:30 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701094	1	07/08/21 10:18	07/08/21 10:26	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	5	07/19/21 00:15	07/19/21 06:11	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	1	07/06/21 07:55	07/11/21 10:47	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	1	07/06/21 07:55	07/07/21 14:24	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702577	1	07/09/21 16:43	07/12/21 00:02	CAG	Mt. Juliet, TN

AH-5(0'-1') L1373875-15 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 14:00 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701094	1	07/08/21 10:18	07/08/21 10:26	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	1	07/19/21 00:15	07/19/21 06:40	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	1	07/06/21 07:55	07/11/21 11:10	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	1	07/06/21 07:55	07/07/21 14:43	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702577	1	07/09/21 16:43	07/10/21 17:58	CAG	Mt. Juliet, TN

AH-5(2'-3') L1373875-16 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 14:30 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701094	1	07/08/21 10:18	07/08/21 10:26	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	1	07/19/21 00:15	07/19/21 06:49	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	1	07/06/21 07:55	07/11/21 11:34	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	1	07/06/21 07:55	07/07/21 15:02	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702577	1	07/09/21 16:43	07/10/21 18:11	CAG	Mt. Juliet, TN

AH-6(0'-1') L1373875-17 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 15:00 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701094	1	07/08/21 10:18	07/08/21 10:26	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	1	07/19/21 00:15	07/19/21 06:59	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	1	07/06/21 07:55	07/11/21 11:58	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	1	07/06/21 07:55	07/07/21 15:21	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702595	1	07/09/21 16:55	07/11/21 06:13	CAG	Mt. Juliet, TN

AH-6(2'-3') L1373875-18 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 15:30 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701094	1	07/08/21 10:18	07/08/21 10:26	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	1	07/19/21 00:15	07/19/21 07:08	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	1	07/06/21 07:55	07/11/21 12:36	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701301	1	07/06/21 07:55	07/07/21 15:40	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702595	1	07/09/21 16:55	07/11/21 06:27	CAG	Mt. Juliet, TN

AH-7(0'-1') L1373875-19 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 16:00 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701095	1	07/08/21 09:54	07/08/21 10:14	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	1	07/19/21 00:15	07/19/21 07:18	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702884	1	07/06/21 07:55	07/11/21 13:00	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701007	1	07/06/21 07:55	07/07/21 01:34	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702595	1	07/09/21 16:55	07/11/21 06:41	CAG	Mt. Juliet, TN

AH-7(2'-3') L1373875-20 Solid

Collected by: Andrew Garcia | Collected date/time: 06/30/21 16:30 | Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701095	1	07/08/21 09:54	07/08/21 10:14	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707461	1	07/19/21 00:15	07/19/21 07:27	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1703082	1	07/06/21 07:55	07/10/21 19:44	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701007	1	07/06/21 07:55	07/07/21 01:54	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702595	1	07/09/21 16:55	07/11/21 06:54	CAG	Mt. Juliet, TN

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

SAMPLE SUMMARY

AH-8(0'-1') L1373875-21 Solid

Collected by: Andrew Garcia
Collected date/time: 06/30/21 17:00
Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701095	1	07/08/21 09:54	07/08/21 10:14	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707467	1	07/18/21 21:00	07/19/21 04:31	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1703082	1	07/06/21 07:55	07/10/21 20:07	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701007	1	07/06/21 07:55	07/07/21 02:15	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702595	1	07/09/21 16:55	07/11/21 17:29	CAG	Mt. Juliet, TN

AH-8(2'-3') L1373875-22 Solid

Collected by: Andrew Garcia
Collected date/time: 06/30/21 17:15
Received date/time: 07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701095	1	07/08/21 09:54	07/08/21 10:14	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1707467	1	07/18/21 21:00	07/19/21 04:47	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1703082	1	07/06/21 07:55	07/10/21 20:31	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701007	1	07/06/21 07:55	07/07/21 02:35	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1702595	1	07/09/21 16:55	07/11/21 07:35	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.

Erica McNeese
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.7		1	07/08/2021 08:38	WG1701089

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	752		110	239	10	07/19/2021 03:11	WG1707461

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	1440		6.03	27.8	200	07/11/2021 13:48	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*106*			*77.0-120*		*07/11/2021 13:48*	WG1702884

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	0.864		0.0130	0.0278	20	07/07/2021 16:37	WG1701301
Toluene	16.1		0.0361	0.139	20	07/07/2021 16:37	WG1701301
Ethylbenzene	24.9		0.0204	0.0695	20	07/07/2021 16:37	WG1701301
Total Xylenes	24.6		0.0245	0.181	20	07/07/2021 16:37	WG1701301
(S) Toluene-d8	*100*			*75.0-131*		*07/07/2021 16:37*	WG1701301
(S) 4-Bromofluorobenzene	*108*			*67.0-138*		*07/07/2021 16:37*	WG1701301
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*		*07/07/2021 16:37*	WG1701301

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	12500		76.9	191	40	07/12/2021 02:35	WG1702461
C28-C36 Motor Oil Range	6180		13.1	191	40	07/12/2021 02:35	WG1702461
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*07/12/2021 02:35*	WG1702461

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.9		1	07/08/2021 08:38	WG1701089

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	2120		227	495	20	07/19/2021 03:20	WG1707461

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	519		6.39	29.5	200	07/11/2021 14:11	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*106*			*77.0-120*		*07/11/2021 14:11*	WG1702884

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	0.124		0.0138	0.0295	20	07/07/2021 16:56	WG1701301
Toluene	3.40		0.0383	0.147	20	07/07/2021 16:56	WG1701301
Ethylbenzene	15.3		0.0217	0.0737	20	07/07/2021 16:56	WG1701301
Total Xylenes	9.55		0.0259	0.192	20	07/07/2021 16:56	WG1701301
(S) Toluene-d8	*103*			*75.0-131*		*07/07/2021 16:56*	WG1701301
(S) 4-Bromofluorobenzene	*116*			*67.0-138*		*07/07/2021 16:56*	WG1701301
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*07/07/2021 16:56*	WG1701301

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5610		79.6	198	40	07/12/2021 00:46	WG1702461
C28-C36 Motor Oil Range	2820		13.6	198	40	07/12/2021 00:46	WG1702461
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*07/12/2021 00:46*	WG1702461

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.9		1	07/08/2021 08:38	WG1701089

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	282		11.4	24.7	1	07/19/2021 03:29	WG1707461

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	72.5		0.800	3.68	25	07/14/2021 17:18	WG1705390
(S) a,a,a-Trifluorotoluene(FID)	*94.6*			*77.0-120*		*07/14/2021 17:18*	WG1705390

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		0.00551	0.0118	8	07/07/2021 17:15	WG1701301
Toluene	0.284		0.0153	0.0589	8	07/07/2021 17:15	WG1701301
Ethylbenzene	1.64		0.00869	0.0295	8	07/07/2021 17:15	WG1701301
Total Xylenes	2.31		0.0104	0.0766	8	07/07/2021 17:15	WG1701301
(S) Toluene-d8	*104*			*75.0-131*		*07/07/2021 17:15*	WG1701301
(S) 4-Bromofluorobenzene	*108*			*67.0-138*		*07/07/2021 17:15*	WG1701301
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*07/07/2021 17:15*	WG1701301

Sample Narrative:

L1373875-03 WG1701301: Elevated RL due to sample matrix.

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1570		39.8	98.9	20	07/12/2021 00:19	WG1702461
C28-C36 Motor Oil Range	810		6.77	98.9	20	07/12/2021 00:19	WG1702461
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*07/12/2021 00:19*	WG1702461

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.6		1	07/08/2021 08:38	WG1701089

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	195		11.6	25.1	1	07/19/2021 03:39	WG1707461

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	7.64		0.0273	0.126	1	07/11/2021 08:00	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*99.4*			*77.0-120*		*07/11/2021 08:00*	WG1702884

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		0.000706	0.00151	1	07/09/2021 13:45	WG1702599
Toluene	0.00451	J	0.00197	0.00756	1	07/09/2021 13:45	WG1702599
Ethylbenzene	0.00219	J	0.00111	0.00378	1	07/09/2021 13:45	WG1702599
Total Xylenes	0.0709		0.00133	0.00983	1	07/09/2021 13:45	WG1702599
(S) Toluene-d8	*105*			*75.0-131*		*07/09/2021 13:45*	WG1702599
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*07/09/2021 13:45*	WG1702599
(S) 1,2-Dichloroethane-d4	*65.1*	J2		*70.0-130*		*07/09/2021 13:45*	WG1702599

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	91.2		2.02	5.02	1	07/11/2021 23:51	WG1702461
C28-C36 Motor Oil Range	65.6		0.344	5.02	1	07/11/2021 23:51	WG1702461
(S) o-Terphenyl	*49.8*			*18.0-148*		*07/11/2021 23:51*	WG1702461

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.3		1	07/08/2021 08:38	WG1701089

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	229	J	113	246	10	07/19/2021 03:48	WG1707461

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	848		15.9	73.0	500	07/11/2021 14:59	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*108*			*77.0-120*		*07/11/2021 14:59*	WG1702884

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	0.0438	J	0.0273	0.0584	40	07/07/2021 17:53	WG1701301
Toluene	0.171	J	0.0759	0.292	40	07/07/2021 17:53	WG1701301
Ethylbenzene	0.0890	J	0.0430	0.146	40	07/07/2021 17:53	WG1701301
Total Xylenes	8.06		0.0514	0.379	40	07/07/2021 17:53	WG1701301
(S) Toluene-d8	*102*			*75.0-131*		*07/07/2021 17:53*	WG1701301
(S) 4-Bromofluorobenzene	*112*			*67.0-138*		*07/07/2021 17:53*	WG1701301
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*07/07/2021 17:53*	WG1701301

Sample Narrative:

L1373875-05 WG1701301: Non-target compounds too high to run at a lower dilution.

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3880		39.6	98.3	20	07/12/2021 01:13	WG1702461
C28-C36 Motor Oil Range	1940		6.74	98.3	20	07/12/2021 01:13	WG1702461
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*07/12/2021 01:13*	WG1702461

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.6		1	07/08/2021 08:38	WG1701089

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	2650		1110	2420	100	07/19/2021 03:58	WG1707461

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	1020		15.5	71.0	500	07/11/2021 15:23	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*105*			*77.0-120*		*07/11/2021 15:23*	WG1702884

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	0.266		0.0266	0.0568	40	07/07/2021 18:11	WG1701301
Toluene	4.45		0.0739	0.284	40	07/07/2021 18:11	WG1701301
Ethylbenzene	23.9		0.0419	0.142	40	07/07/2021 18:11	WG1701301
Total Xylenes	15.5		0.0500	0.369	40	07/07/2021 18:11	WG1701301
(S) Toluene-d8	*102*			*75.0-131*		*07/07/2021 18:11*	WG1701301
(S) 4-Bromofluorobenzene	*115*			*67.0-138*		*07/07/2021 18:11*	WG1701301
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*07/07/2021 18:11*	WG1701301

Sample Narrative:

L1373875-06 WG1701301: Non-target compounds too high to run at a lower dilution.

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	11100		77.9	194	40	07/12/2021 01:41	WG1702461
C28-C36 Motor Oil Range	5350		13.3	194	40	07/12/2021 01:41	WG1702461
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*07/12/2021 01:41*	WG1702461

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.0		1	07/08/2021 08:38	WG1701089

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	3570		1110	2410	100	07/19/2021 04:08	WG1707461

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	1240		15.4	70.5	500	07/11/2021 15:46	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*07/11/2021 15:46*	WG1702884

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	0.244		0.0264	0.0564	40	07/07/2021 18:30	WG1701301
Toluene	5.86		0.0733	0.282	40	07/07/2021 18:30	WG1701301
Ethylbenzene	22.1		0.0416	0.141	40	07/07/2021 18:30	WG1701301
Total Xylenes	14.8		0.0496	0.366	40	07/07/2021 18:30	WG1701301
(S) Toluene-d8	*104*			*75.0-131*		*07/07/2021 18:30*	WG1701301
(S) 4-Bromofluorobenzene	*113*			*67.0-138*		*07/07/2021 18:30*	WG1701301
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*07/07/2021 18:30*	WG1701301

Sample Narrative:

L1373875-07 WG1701301: Non-target compounds too high to run at a lower dilution.

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	11300		77.5	193	40	07/12/2021 02:08	WG1702461
C28-C36 Motor Oil Range	5420		13.2	193	40	07/12/2021 02:08	WG1702461
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*07/12/2021 02:08*	WG1702461

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.4		1	07/08/2021 08:38	WG1701089

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	3290		102	221	10	07/19/2021 04:17	WG1707461

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	0.502		0.0240	0.111	1	07/14/2021 17:40	WG1705390
(S) a,a,a-Trifluorotoluene(FID)	*94.9*			*77.0-120*		*07/14/2021 17:40*	WG1705390

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	0.000910	J	0.000566	0.00121	1	07/07/2021 12:29	WG1701301
Toluene	0.00176	J	0.00158	0.00606	1	07/07/2021 12:29	WG1701301
Ethylbenzene	0.00130	J	0.000894	0.00303	1	07/07/2021 12:29	WG1701301
Total Xylenes	0.0106		0.00107	0.00788	1	07/07/2021 12:29	WG1701301
(S) Toluene-d8	*105*			*75.0-131*		*07/07/2021 12:29*	WG1701301
(S) 4-Bromofluorobenzene	*98.7*			*67.0-138*		*07/07/2021 12:29*	WG1701301
(S) 1,2-Dichloroethane-d4	*97.2*			*70.0-130*		*07/07/2021 12:29*	WG1701301

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	35.0	J6	1.78	4.42	1	07/10/2021 18:24	WG1702577
C28-C36 Motor Oil Range	25.3		0.303	4.42	1	07/10/2021 18:24	WG1702577
(S) o-Terphenyl	*28.4*			*18.0-148*		*07/10/2021 18:24*	WG1702577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.9		1	07/08/2021 10:26	WG1701094

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	3700		110	238	10	07/19/2021 04:46	WG1707461

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	0.118	J	0.0259	0.119	1	07/14/2021 18:02	WG1705390
(S) a,a,a-Trifluorotoluene(FID)	*94.9*			*77.0-120*		*07/14/2021 18:02*	WG1705390

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		0.000646	0.00138	1	07/07/2021 12:49	WG1701301
Toluene	U		0.00180	0.00692	1	07/07/2021 12:49	WG1701301
Ethylbenzene	U		0.00102	0.00346	1	07/07/2021 12:49	WG1701301
Total Xylenes	U		0.00122	0.00899	1	07/07/2021 12:49	WG1701301
(S) Toluene-d8	*107*			*75.0-131*		*07/07/2021 12:49*	WG1701301
(S) 4-Bromofluorobenzene	*97.4*			*67.0-138*		*07/07/2021 12:49*	WG1701301
(S) 1,2-Dichloroethane-d4	*96.9*			*70.0-130*		*07/07/2021 12:49*	WG1701301

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	9.26		1.92	4.77	1	07/10/2021 17:19	WG1702577
C28-C36 Motor Oil Range	8.13		0.326	4.77	1	07/10/2021 17:19	WG1702577
(S) o-Terphenyl	*39.3*			*18.0-148*		*07/10/2021 17:19*	WG1702577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.5		1	07/08/2021 10:26	WG1701094

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	4720		109	237	10	07/19/2021 04:55	WG1707461

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	0.933		0.0257	0.118	1	07/11/2021 09:11	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*07/11/2021 09:11*	WG1702884

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		0.000639	0.00137	1	07/07/2021 13:08	WG1701301
Toluene	U		0.00178	0.00684	1	07/07/2021 13:08	WG1701301
Ethylbenzene	U		0.00101	0.00342	1	07/07/2021 13:08	WG1701301
Total Xylenes	0.00141	J	0.00120	0.00889	1	07/07/2021 13:08	WG1701301
(S) Toluene-d8	*108*			*75.0-131*		*07/07/2021 13:08*	WG1701301
(S) 4-Bromofluorobenzene	*97.4*			*67.0-138*		*07/07/2021 13:08*	WG1701301
(S) 1,2-Dichloroethane-d4	*90.3*			*70.0-130*		*07/07/2021 13:08*	WG1701301

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	63.7		1.91	4.74	1	07/10/2021 19:04	WG1702577
C28-C36 Motor Oil Range	46.9		0.324	4.74	1	07/10/2021 19:04	WG1702577
(S) o-Terphenyl	*50.8*			*18.0-148*		*07/10/2021 19:04*	WG1702577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.4		1	07/08/2021 10:26	WG1701094

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	84.8	J	51.4	112	5	07/19/2021 05:05	WG1707461

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	0.0829	B J	0.0243	0.112	1	07/11/2021 09:36	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*108*			*77.0-120*		*07/11/2021 09:36*	WG1702884

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		0.000577	0.00124	1	07/07/2021 13:27	WG1701301
Toluene	U		0.00161	0.00618	1	07/07/2021 13:27	WG1701301
Ethylbenzene	U		0.000911	0.00309	1	07/07/2021 13:27	WG1701301
Total Xylenes	U		0.00109	0.00804	1	07/07/2021 13:27	WG1701301
(S) Toluene-d8	*107*			*75.0-131*		*07/07/2021 13:27*	WG1701301
(S) 4-Bromofluorobenzene	*95.3*			*67.0-138*		*07/07/2021 13:27*	WG1701301
(S) 1,2-Dichloroethane-d4	*96.8*			*70.0-130*		*07/07/2021 13:27*	WG1701301

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.80	4.47	1	07/10/2021 17:32	WG1702577
C28-C36 Motor Oil Range	1.32	J	0.306	4.47	1	07/10/2021 17:32	WG1702577
(S) o-Terphenyl	*40.0*			*18.0-148*		*07/10/2021 17:32*	WG1702577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.3		1	07/08/2021 10:26	WG1701094

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	209		10.1	21.9	1	07/19/2021 05:43	WG1707461

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	0.0705	B J	0.0238	0.110	1	07/11/2021 09:59	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*108*			*77.0-120*		*07/11/2021 09:59*	WG1702884

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		0.000556	0.00119	1	07/07/2021 13:46	WG1701301
Toluene	U		0.00155	0.00595	1	07/07/2021 13:46	WG1701301
Ethylbenzene	U		0.000878	0.00298	1	07/07/2021 13:46	WG1701301
Total Xylenes	U		0.00105	0.00774	1	07/07/2021 13:46	WG1701301
(S) Toluene-d8	*108*			*75.0-131*		*07/07/2021 13:46*	WG1701301
(S) 4-Bromofluorobenzene	*96.1*			*67.0-138*		*07/07/2021 13:46*	WG1701301
(S) 1,2-Dichloroethane-d4	*91.7*			*70.0-130*		*07/07/2021 13:46*	WG1701301

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.76	4.38	1	07/10/2021 17:45	WG1702577
C28-C36 Motor Oil Range	0.760	J	0.300	4.38	1	07/10/2021 17:45	WG1702577
(S) o-Terphenyl	*47.7*			*18.0-148*		*07/10/2021 17:45*	WG1702577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.2		1	07/08/2021 10:26	WG1701094

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	46.7		9.28	20.2	1	07/19/2021 06:02	WG1707461

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	0.0614	B J	0.0219	0.101	1	07/11/2021 10:23	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*107*			*77.0-120*		*07/11/2021 10:23*	WG1702884

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		0.000475	0.00102	1	07/07/2021 14:05	WG1701301
Toluene	U		0.00132	0.00508	1	07/07/2021 14:05	WG1701301
Ethylbenzene	U		0.000749	0.00254	1	07/07/2021 14:05	WG1701301
Total Xylenes	U		0.000895	0.00661	1	07/07/2021 14:05	WG1701301
(S) Toluene-d8	*107*			*75.0-131*		*07/07/2021 14:05*	WG1701301
(S) 4-Bromofluorobenzene	*97.6*			*67.0-138*		*07/07/2021 14:05*	WG1701301
(S) 1,2-Dichloroethane-d4	*93.6*			*70.0-130*		*07/07/2021 14:05*	WG1701301

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	12.8		1.62	4.03	1	07/10/2021 19:30	WG1702577
C28-C36 Motor Oil Range	44.2		0.276	4.03	1	07/10/2021 19:30	WG1702577
(S) o-Terphenyl	*48.9*			*18.0-148*		*07/10/2021 19:30*	WG1702577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.8		1	07/08/2021 10:26	WG1701094

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	316		52.4	114	5	07/19/2021 06:11	WG1707461

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	0.0841	B J	0.0247	0.114	1	07/11/2021 10:47	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*107*			*77.0-120*		*07/11/2021 10:47*	WG1702884

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		0.000597	0.00128	1	07/07/2021 14:24	WG1701301
Toluene	U		0.00166	0.00640	1	07/07/2021 14:24	WG1701301
Ethylbenzene	U		0.000943	0.00320	1	07/07/2021 14:24	WG1701301
Total Xylenes	U		0.00113	0.00832	1	07/07/2021 14:24	WG1701301
(S) Toluene-d8	*107*			*75.0-131*		*07/07/2021 14:24*	WG1701301
(S) 4-Bromofluorobenzene	*96.7*			*67.0-138*		*07/07/2021 14:24*	WG1701301
(S) 1,2-Dichloroethane-d4	*95.8*			*70.0-130*		*07/07/2021 14:24*	WG1701301

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	7.42		1.83	4.56	1	07/12/2021 00:02	WG1702577
C28-C36 Motor Oil Range	20.2		0.312	4.56	1	07/12/2021 00:02	WG1702577
(S) o-Terphenyl	*51.2*			*18.0-148*		*07/12/2021 00:02*	WG1702577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.3		1	07/08/2021 10:26	WG1701094

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		11.5	24.9	1	07/19/2021 06:40	WG1707461

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	0.0676	B J	0.0270	0.125	1	07/11/2021 11:10	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*108*			*77.0-120*		*07/11/2021 11:10*	WG1702884

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		0.000697	0.00149	1	07/07/2021 14:43	WG1701301
Toluene	U		0.00194	0.00746	1	07/07/2021 14:43	WG1701301
Ethylbenzene	U		0.00110	0.00373	1	07/07/2021 14:43	WG1701301
Total Xylenes	U		0.00131	0.00970	1	07/07/2021 14:43	WG1701301
(S) Toluene-d8	*108*			*75.0-131*		*07/07/2021 14:43*	WG1701301
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*07/07/2021 14:43*	WG1701301
(S) 1,2-Dichloroethane-d4	*98.5*			*70.0-130*		*07/07/2021 14:43*	WG1701301

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		2.00	4.98	1	07/10/2021 17:58	WG1702577
C28-C36 Motor Oil Range	U		0.341	4.98	1	07/10/2021 17:58	WG1702577
(S) o-Terphenyl	*45.1*			*18.0-148*		*07/10/2021 17:58*	WG1702577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	77.6		1	07/08/2021 10:26	WG1701094

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	65.2		11.8	25.8	1	07/19/2021 06:49	WG1707461

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	0.0822	B J	0.0279	0.129	1	07/11/2021 11:34	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*108*			*77.0-120*		*07/11/2021 11:34*	WG1702884

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		0.000736	0.00158	1	07/07/2021 15:02	WG1701301
Toluene	U		0.00205	0.00788	1	07/07/2021 15:02	WG1701301
Ethylbenzene	U		0.00116	0.00394	1	07/07/2021 15:02	WG1701301
Total Xylenes	U		0.00139	0.0102	1	07/07/2021 15:02	WG1701301
(S) Toluene-d8	*104*			*75.0-131*		*07/07/2021 15:02*	WG1701301
(S) 4-Bromofluorobenzene	*96.4*			*67.0-138*		*07/07/2021 15:02*	WG1701301
(S) 1,2-Dichloroethane-d4	*93.6*			*70.0-130*		*07/07/2021 15:02*	WG1701301

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		2.07	5.15	1	07/10/2021 18:11	WG1702577
C28-C36 Motor Oil Range	1.38	J	0.353	5.15	1	07/10/2021 18:11	WG1702577
(S) o-Terphenyl	*47.8*			*18.0-148*		*07/10/2021 18:11*	WG1702577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.3		1	07/08/2021 10:26	WG1701094

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		10.9	23.7	1	07/19/2021 06:59	WG1707461

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	0.0931	B J	0.0257	0.119	1	07/11/2021 11:58	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*107*			*77.0-120*		*07/11/2021 11:58*	WG1702884

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		0.000641	0.00137	1	07/07/2021 15:21	WG1701301
Toluene	U		0.00178	0.00686	1	07/07/2021 15:21	WG1701301
Ethylbenzene	U		0.00101	0.00343	1	07/07/2021 15:21	WG1701301
Total Xylenes	U		0.00121	0.00892	1	07/07/2021 15:21	WG1701301
(S) Toluene-d8	*106*			*75.0-131*		*07/07/2021 15:21*	WG1701301
(S) 4-Bromofluorobenzene	*97.1*			*67.0-138*		*07/07/2021 15:21*	WG1701301
(S) 1,2-Dichloroethane-d4	*94.4*			*70.0-130*		*07/07/2021 15:21*	WG1701301

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.91	4.74	1	07/11/2021 06:13	WG1702595
C28-C36 Motor Oil Range	2.21	J	0.325	4.74	1	07/11/2021 06:13	WG1702595
(S) o-Terphenyl	*28.3*			*18.0-148*		*07/11/2021 06:13*	WG1702595

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.3		1	07/08/2021 10:26	WG1701094

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		9.97	21.7	1	07/19/2021 07:08	WG1707461

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	0.0655	B J	0.0235	0.108	1	07/11/2021 12:36	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*107*			*77.0-120*		*07/11/2021 12:36*	WG1702884

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		0.000545	0.00117	1	07/07/2021 15:40	WG1701301
Toluene	U		0.00152	0.00583	1	07/07/2021 15:40	WG1701301
Ethylbenzene	U		0.000860	0.00292	1	07/07/2021 15:40	WG1701301
Total Xylenes	U		0.00103	0.00758	1	07/07/2021 15:40	WG1701301
(S) Toluene-d8	*106*			*75.0-131*		*07/07/2021 15:40*	WG1701301
(S) 4-Bromofluorobenzene	*96.8*			*67.0-138*		*07/07/2021 15:40*	WG1701301
(S) 1,2-Dichloroethane-d4	*94.7*			*70.0-130*		*07/07/2021 15:40*	WG1701301

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.74	4.33	1	07/11/2021 06:27	WG1702595
C28-C36 Motor Oil Range	1.45	J	0.297	4.33	1	07/11/2021 06:27	WG1702595
(S) o-Terphenyl	*44.3*			*18.0-148*		*07/11/2021 06:27*	WG1702595

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.9		1	07/08/2021 10:14	WG1701095

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		11.4	24.7	1	07/19/2021 07:18	WG1707461

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	0.0739	B J	0.0268	0.124	1	07/11/2021 13:00	WG1702884
(S) a,a,a-Trifluorotoluene(FID)	*108*			*77.0-120*		*07/11/2021 13:00*	WG1702884

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		0.000688	0.00147	1	07/07/2021 01:34	WG1701007
Toluene	U		0.00192	0.00737	1	07/07/2021 01:34	WG1701007
Ethylbenzene	U		0.00109	0.00368	1	07/07/2021 01:34	WG1701007
Total Xylenes	U		0.00130	0.00958	1	07/07/2021 01:34	WG1701007
(S) Toluene-d8	*108*			*75.0-131*		*07/07/2021 01:34*	WG1701007
(S) 4-Bromofluorobenzene	*95.4*			*67.0-138*		*07/07/2021 01:34*	WG1701007
(S) 1,2-Dichloroethane-d4	*86.2*			*70.0-130*		*07/07/2021 01:34*	WG1701007

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.99	4.95	1	07/11/2021 06:41	WG1702595
C28-C36 Motor Oil Range	1.05	J	0.339	4.95	1	07/11/2021 06:41	WG1702595
(S) o-Terphenyl	*45.6*			*18.0-148*		*07/11/2021 06:41*	WG1702595

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.7		1	07/08/2021 10:14	WG1701095

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	07/19/2021 07:27	WG1707461

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	0.0602	B J	0.0265	0.122	1	07/10/2021 19:44	WG1703082
(S) a,a,a-Trifluorotoluene(FID)	*107*			*77.0-120*		*07/10/2021 19:44*	WG1703082

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		0.000676	0.00145	1	07/07/2021 01:54	WG1701007
Toluene	U		0.00188	0.00723	1	07/07/2021 01:54	WG1701007
Ethylbenzene	U		0.00107	0.00362	1	07/07/2021 01:54	WG1701007
Total Xylenes	U		0.00127	0.00940	1	07/07/2021 01:54	WG1701007
(S) Toluene-d8	*111*			*75.0-131*		*07/07/2021 01:54*	WG1701007
(S) 4-Bromofluorobenzene	*94.8*			*67.0-138*		*07/07/2021 01:54*	WG1701007
(S) 1,2-Dichloroethane-d4	*79.9*			*70.0-130*		*07/07/2021 01:54*	WG1701007

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U	J3 J6	1.97	4.89	1	07/11/2021 06:54	WG1702595
C28-C36 Motor Oil Range	0.465	J	0.335	4.89	1	07/11/2021 06:54	WG1702595
(S) o-Terphenyl	*39.5*			*18.0-148*		*07/11/2021 06:54*	WG1702595

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.6		1	07/08/2021 10:14	WG1701095

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	13.8	J	9.72	21.1	1	07/19/2021 04:31	WG1707467

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	0.0614	B J	0.0229	0.106	1	07/10/2021 20:07	WG1703082
(S) a,a,a-Trifluorotoluene(FID)	*107*			*77.0-120*		*07/10/2021 20:07*	WG1703082

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		0.000520	0.00111	1	07/07/2021 02:15	WG1701007
Toluene	U		0.00145	0.00557	1	07/07/2021 02:15	WG1701007
Ethylbenzene	U		0.000821	0.00279	1	07/07/2021 02:15	WG1701007
Total Xylenes	U		0.000980	0.00724	1	07/07/2021 02:15	WG1701007
(S) Toluene-d8	*108*			*75.0-131*		*07/07/2021 02:15*	WG1701007
(S) 4-Bromofluorobenzene	*96.9*			*67.0-138*		*07/07/2021 02:15*	WG1701007
(S) 1,2-Dichloroethane-d4	*84.8*			*70.0-130*		*07/07/2021 02:15*	WG1701007

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	15.2		1.70	4.23	1	07/11/2021 17:29	WG1702595
C28-C36 Motor Oil Range	25.5		0.290	4.23	1	07/11/2021 17:29	WG1702595
(S) o-Terphenyl	*42.7*			*18.0-148*		*07/11/2021 17:29*	WG1702595

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.6		1	07/08/2021 10:14	WG1701095

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		9.43	20.5	1	07/19/2021 04:47	WG1707467

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	0.0411	B J	0.0222	0.102	1	07/10/2021 20:31	WG1703082
(S) a,a,a-Trifluorotoluene(FID)	*107*			*77.0-120*		*07/10/2021 20:31*	WG1703082

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		0.000490	0.00105	1	07/07/2021 02:35	WG1701007
Toluene	U		0.00136	0.00525	1	07/07/2021 02:35	WG1701007
Ethylbenzene	U		0.000773	0.00262	1	07/07/2021 02:35	WG1701007
Total Xylenes	U		0.000924	0.00682	1	07/07/2021 02:35	WG1701007
(S) Toluene-d8	*106*			*75.0-131*		*07/07/2021 02:35*	WG1701007
(S) 4-Bromofluorobenzene	*94.6*			*67.0-138*		*07/07/2021 02:35*	WG1701007
(S) 1,2-Dichloroethane-d4	*84.3*			*70.0-130*		*07/07/2021 02:35*	WG1701007

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.65	4.10	1	07/11/2021 07:35	WG1702595
C28-C36 Motor Oil Range	1.32	J	0.281	4.10	1	07/11/2021 07:35	WG1702595
(S) o-Terphenyl	*42.3*			*18.0-148*		*07/11/2021 07:35*	WG1702595

Method Blank (MB)

(MB) R3677388-1 07/08/21 08:38

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

L1373875-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1373875-01 07/08/21 08:38 • (DUP) R3677388-3 07/08/21 08:38

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	83.7	82.5	1	1.43		10

Laboratory Control Sample (LCS)

(LCS) R3677388-2 07/08/21 08:38

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

Method Blank (MB)

(MB) R3677439-1 07/08/21 10:26

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

L1373875-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1373875-10 07/08/21 10:26 • (DUP) R3677439-3 07/08/21 10:26

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.5	84.2	1	0.258		10

Laboratory Control Sample (LCS)

(LCS) R3677439-2 07/08/21 10:26

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

Method Blank (MB)

(MB) R3677408-1 07/08/21 10:14

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

L1374280-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1374280-04 07/08/21 10:14 • (DUP) R3677408-3 07/08/21 10:14

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	85.1	81.6	1	4.23		10

Laboratory Control Sample (LCS)

(LCS) R3677408-2 07/08/21 10:14

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

Method Blank (MB)

(MB) R3681266-1 07/19/21 02:14

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

L1373875-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1373875-11 07/19/21 05:05 • (DUP) R3681266-3 07/19/21 05:14

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	84.8	83.1	5	2.04	J	20

L1373875-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1373875-12 07/19/21 05:43 • (DUP) R3681266-6 07/19/21 05:52

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	209	206	1	1.45		20

Laboratory Control Sample (LCS)

(LCS) R3681266-2 07/19/21 02:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	195	97.7	90.0-110	

L1373875-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373875-11 07/19/21 05:05 • (MS) R3681266-4 07/19/21 05:24 • (MSD) R3681266-5 07/19/21 05:33

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 %
Chloride	559	84.8	610	622	93.9	96.0	5	80.0-120			1.88	20

Method Blank (MB)

(MB) R3680991-1 07/18/21 23:40

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

L1373875-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1373875-22 07/19/21 04:47 • (DUP) R3680991-3 07/19/21 05:04

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

L1375623-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1375623-01 07/19/21 07:32 • (DUP) R3680991-6 07/19/21 07:48

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	455	430	1	5.69		20

Laboratory Control Sample (LCS)

(LCS) R3680991-2 07/18/21 23:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	204	102	90.0-110	

L1373875-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373875-22 07/19/21 04:47 • (MS) R3680991-4 07/19/21 05:20 • (MSD) R3680991-5 07/19/21 05:37

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 %
Chloride	512	U	534	536	104	105	1	80.0-120			0.252	20

Method Blank (MB)

(MB) R3679412-2 07/11/21 07:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0301	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*109*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3679412-1 07/11/21 06:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.88	107	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*118*	*77.0-120*	

L1373801-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373801-01 07/11/21 13:24 • (MS) R3679412-3 07/11/21 16:10 • (MSD) R3679412-4 07/11/21 16:45

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	550	81.7	294	348	27.3	34.2	100	10.0-151			16.7	28
(S) a,a,a-Trifluorotoluene(FID)					*110*	*112*		*77.0-120*				

Method Blank (MB)

(MB) R3678292-3 07/10/21 17:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0348	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*109*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3678292-2 07/10/21 15:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.81	106	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*118*	*77.0-120*	

L1373986-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373986-03 07/11/21 02:03 • (MS) R3678292-4 07/11/21 03:38 • (MSD) R3678292-5 07/11/21 04:02

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	1100	280	945	1180	60.5	81.8	200	10.0-151			22.1	28
(S) a,a,a-Trifluorotoluene(FID)					*111*	*115*		*77.0-120*				

Method Blank (MB)

(MB) R3680107-2 07/14/21 16:24

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)	*92.1*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3680107-1 07/14/21 15:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.55	101	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*99.4*	*77.0-120*	

Method Blank (MB)

(MB) R3676612-2 07/06/21 20:04

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	*108*			*75.0-131*
(S) 4-Bromofluorobenzene	*95.9*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*85.0*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3676612-1 07/06/21 19:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.126	101	70.0-123	
Ethylbenzene	0.125	0.115	92.0	74.0-126	
Toluene	0.125	0.127	102	75.0-121	
Xylenes, Total	0.375	0.347	92.5	72.0-127	
(S) Toluene-d8			*104*	*75.0-131*	
(S) 4-Bromofluorobenzene			*97.2*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*92.9*	*70.0-130*	

L1373875-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373875-19 07/07/21 01:34 • (MS) R3676612-3 07/07/21 05:40 • (MSD) R3676612-4 07/07/21 06:01

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 %
Benzene	0.184	U	0.228	0.233	124	126	1	10.0-149			1.92	37
Ethylbenzene	0.184	U	0.214	0.220	116	119	1	10.0-160			2.72	38
Toluene	0.184	U	0.233	0.236	126	128	1	10.0-156			1.26	38
Xylenes, Total	0.552	U	0.616	0.632	111	114	1	10.0-160			2.60	38
(S) Toluene-d8					*108*	*105*		*75.0-131*				
(S) 4-Bromofluorobenzene					*95.4*	*95.9*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*85.5*	*86.9*		*70.0-130*				

Method Blank (MB)

(MB) R3677409-3 07/07/21 10:12

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	*109*			*75.0-131*
(S) 4-Bromofluorobenzene	*95.3*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*96.8*			*70.0-130*

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

(LCS) R3677409-1 07/07/21 08:56 • (LCSD) R3677409-2 07/07/21 09:15

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	0.109	0.109	87.2	87.2	70.0-123			0.000	20
Ethylbenzene	0.125	0.115	0.118	92.0	94.4	74.0-126			2.58	20
Toluene	0.125	0.116	0.117	92.8	93.6	75.0-121			0.858	20
Xylenes, Total	0.375	0.342	0.361	91.2	96.3	72.0-127			5.41	20
(S) Toluene-d8				*103*	*103*	*75.0-131*				
(S) 4-Bromofluorobenzene				*94.6*	*102*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*99.7*	*101*	*70.0-130*				

Method Blank (MB)

(MB) R3680076-3 07/09/21 12:03

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	*108*			*75.0-131*
(S) 4-Bromofluorobenzene	*97.8*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*70.5*			*70.0-130*

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

(LCS) R3680076-1 07/09/21 10:47 • (LCSD) R3680076-2 07/09/21 11:06

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	0.147	0.145	118	116	70.0-123			1.37	20
Ethylbenzene	0.125	0.131	0.127	105	102	74.0-126			3.10	20
Toluene	0.125	0.139	0.140	111	112	75.0-121			0.717	20
Xylenes, Total	0.375	0.387	0.357	103	95.2	72.0-127			8.06	20
(S) Toluene-d8				*104*	*105*	*75.0-131*				
(S) 4-Bromofluorobenzene				*102*	*101*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*79.1*	*77.6*	*70.0-130*				

Method Blank (MB)

(MB) R3678190-1 07/11/21 19:45

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-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*72.1*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3678190-2 07/11/21 19:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.3	78.6	50.0-150	
(S) o-Terphenyl			*79.9*	*18.0-148*	

Method Blank (MB)

(MB) R3678045-1 07/10/21 16:13

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-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*46.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3678045-2 07/10/21 16:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	32.1	64.2	50.0-150	
(S) o-Terphenyl			*65.5*	*18.0-148*	

L1373875-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373875-08 07/10/21 18:24 • (MS) R3678045-3 07/10/21 18:37 • (MSD) R3678045-4 07/10/21 18:50

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	55.0	35.0	40.8	43.5	10.7	15.5	1	50.0-150	J6	J6	6.30	20
(S) o-Terphenyl					*32.9*	*33.7*		*18.0-148*				

Method Blank (MB)

(MB) R3678000-1 07/10/21 12:33

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-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*45.9*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3678000-2 07/10/21 12:46

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	25.7	51.4	50.0-150	
(S) o-Terphenyl			*53.6*	*18.0-148*	

L1373875-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373875-20 07/11/21 06:54 • (MS) R3678000-3 07/11/21 07:08 • (MSD) R3678000-4 07/11/21 07:22

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	60.6	U	28.6	23.1	47.3	39.5	1	50.0-150	J6	J3 J6	21.3	20
(S) o-Terphenyl					*42.0*	*25.5*		*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
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
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

Analysis Request of Chain of Custody Record

D027

Page : 1 of 3

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	MCA 4B Header Release	**Contact Info:**	Email: Christian.Llull@tetratech.com Phone: (512) 565-0190
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02537
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Andrew Garcia
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B 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		HOLD
	AH-1 (0.5'-1.5')	06/30/21	830		X				X			1	N	X		X												X						
	AH-1 (2'-3')	06/30/21	845		X				X			1	N	X		X												X						
	AH-1 (3'-4')	06/30/21	900		X				X			1	N	X		X												X						
	AH-1 (5'-6')	06/30/21	915		X				X			1	N	X		X												X						
	AH-2 (0.5'-1.5')	06/30/21	930		X				X			1	N	X		X												X						
	AH-2 (2'-3')	06/30/21	945		X				X			1	N	X		X												X						
	AH-2 (3'-4')	06/30/21	1000		X				X			1	N	X		X												X						
	AH-2 (5'-6')	06/30/21	1015		X				X			1	N	X		X												X						
	AH-2 (7'-8')	06/30/21	1045		X				X			1	N	X		X												X						
	AH-2 (8'-9')	06/30/21	1115		X				X			1	N	X		X												X						

Relinquished by: Andrew Garcia	Date: 1-Jul-21	Time: 12:00	Received by:	Date: 7-1-21	Time: 12:00
Relinquished by:	Date: 7-1-21	Time: 14:00	Received by: FedEx	Date: 7-1-21	Time: 14:00
Relinquished by:	Date:	Time:	Received by:	Date: 7.2.21	Time: am

ORIGINAL COPY

LAB USE ONLY

Sample Temperature

REMARKS:

- [X] Standard
- [ ] RUSH: Same Day 24 hr. 48 hr. 72 hr.
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

Sa16 124 2833 2.7+1.52.4

Analysis Request of Chain of Custody Record

L1373875

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	MCA 4B Header Release	**Contact Info:**	Email: Christian.Llull@tetratech.com Phone: (512) 565-0190
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02537
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Andrew Garcia
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2021 DATE	TIME	MATRIX WATER	SOIL	PRESERVATIVE METHOD HCL	HNO_3	ICE	NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B 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		HOLD	
	AH-3 (0'-1')	06/30/21	1130		X			X		1	N	X		X												X							-11
	AH-3 (2'-3')	06/30/21	1145		X			X		1	N	X		X												X							-12
	AH-4 (0'-1')	06/30/21	1200		X			X		1	N	X		X												X							-13
	AH-4 (2'-3')	06/30/21	1330		X			X		1	N	X		X												X							-14
	AH-5 (0'-1')	06/30/21	1400		X			X		1	N	X		X												X							-15
	AH-5 (2'-3')	06/30/21	1430		X			X		1	N	X		X												X							-16
	AH-6 (0'-1')	06/30/21	1500		X			X		1	N	X		X												X							-17
	AH-6 (2'-3')	06/30/21	1530		X			X		1	N	X		X												X							-18
	AH-7 (0'-1')	06/30/21	1600		X			X		1	N	X		X												X							-19
	AH-7 (2'-3')	06/30/21	1630		X			X		1	N	X		X												X							-20

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Andrew Garcia [signature]	1-Jul-21	12:00	[signature]	7-1-21	12:00
[signature]	7-1-21	14:00	FedEx	7-1-21	14:00
			[signature]	07-02-21	0900

LAB USE ONLY

Sample Temperature

REMARKS:

- [X] Standard
- [ ] RUSH: Same Day 24 hr. 48 hr. 72 hr.
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: ______

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P7 5a

5016 1224 2833 2.7+.1=2.8

Analysis Request of Chain of Custody Record

L1373675

Page : 3 of 3

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	MCA 4B Header Release	**Contact Info:**	Email: Christian.Llull@tetratech.com Phone: (512) 565-0190
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02537
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Andrew Garcia
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B 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	HOLD
	AH-8 (0'-1')	06/30/21	1700		X				X			1	N	X		X												X					
	AH-8 (2'-3')	06/30/21	1715		X				X			1	N	X		X												X					

Relinquished by: Andrew Garcia	Date: 1-Jul-21	Time: 12:00	Received by:	Date: 7-1-21	Time: 12:00
Relinquished by:	Date: 7-1-21	Time: 14:00	Received by: FedEx	Date: 7-1-21	Time: 14:00
Relinquished by:	Date:	Time:	Received by:	Date: 7.2.21	Time: 0730

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LAB USE ONLY

Sample Temperature

REMARKS:

- [X] Standard
- [ ] RUSH: Same Day 24 hr. 48 hr. 72 hr.
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

2.7+.1=2.8

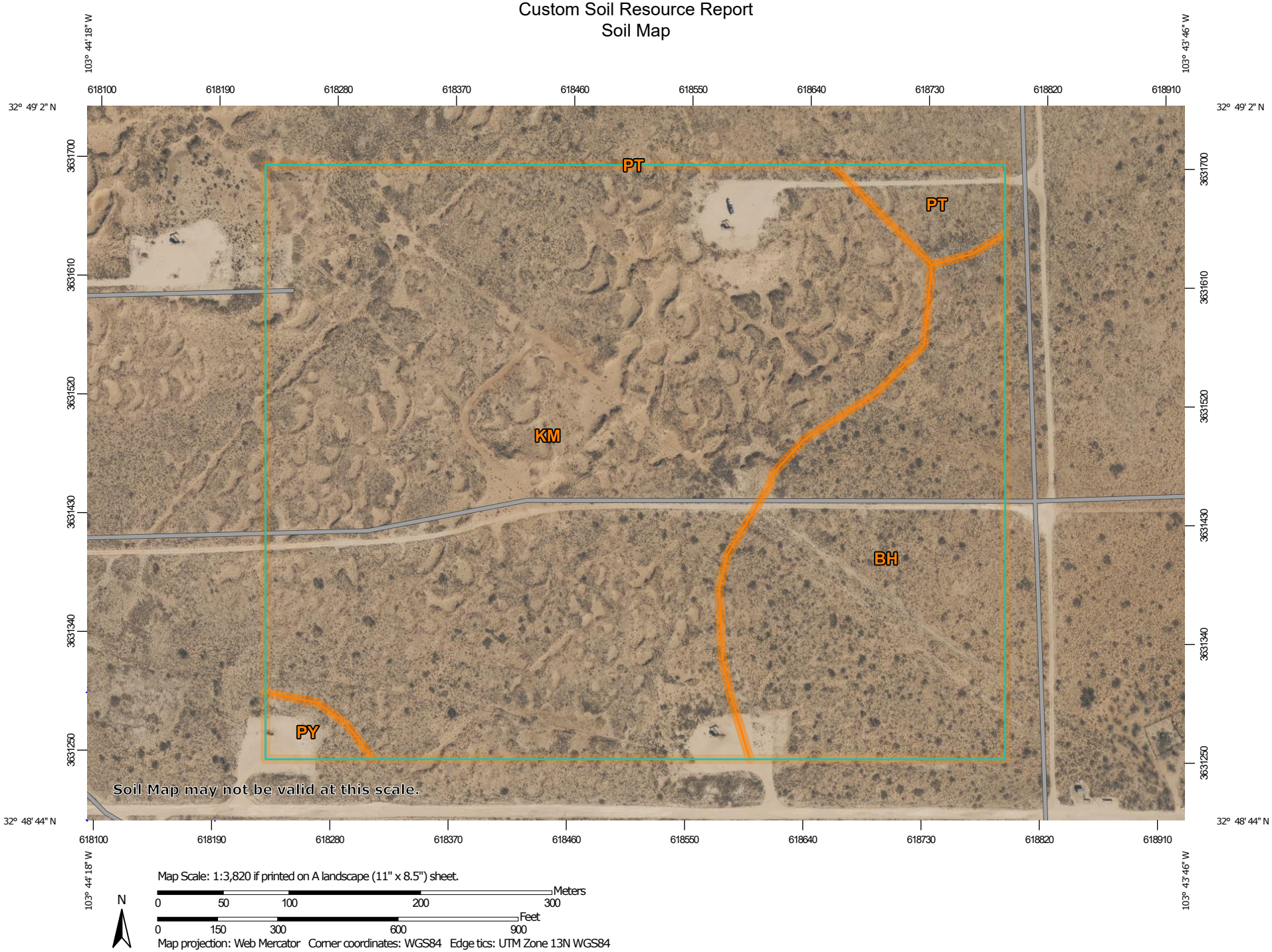
Sole 1221 2133

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form		
Client: COPTETRA	L1373875	
Cooler Received/Opened On: 7/2/21 Temperature:	2.8	
Received By: Bobby Atherry		
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 F
NMSLO Seed Mixture Details

Custom Soil Resource Report
Soil Map



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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BH	Berino-Cacique association, hummocky	14.9	23.7%
KM	Kermit soils and Dune land, 0 to 12 percent slopes	45.6	72.5%
PT	Pyote loamy fine sand	1.6	2.6%
PY	Pyote soils and Dune land	0.7	1.1%
Totals for Area of Interest		**62.9**	**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, 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.

Lea County, New Mexico

BH—Berino-Cacique association, hummocky

Map Unit Setting

National map unit symbol: dmpg
Elevation: 3,000 to 4,400 feet
Mean annual precipitation: 10 to 13 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

Berino and similar soils: 50 percent
Cacique and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock over calcareous sandy alluvium derived from sedimentary rock

Typical profile

A - 0 to 10 inches: fine sand
Btk - 10 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 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: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7c
Hydrologic Soil Group: B
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Description of Cacique

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 7 inches: fine sand
Bt - 7 to 28 inches: sandy clay loam
Bkm - 28 to 38 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 20 to 40 inches to petrocalcic
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 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 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7c
Hydrologic Soil Group: C
Ecological site: R042XC004NM - Sandy
Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 4 percent
Ecological site: R042XC005NM - Deep Sand
Hydric soil rating: No

Maljamar

Percent of map unit: 3 percent
Ecological site: R077CY028TX - Limy Upland 16-21" PZ
Hydric soil rating: No

Palomas

Percent of map unit: 2 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Dune land

Percent of map unit: 1 percent
Hydric soil rating: No

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

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

PT—Pyote loamy fine sand

Map Unit Setting

National map unit symbol: dmqp
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 60 to 62 degrees F

Frost-free period: 190 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Pyote and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pyote

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 25 inches: loamy fine sand
Bt - 25 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 5.3 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

Minor Components

Maljamar

Percent of map unit: 8 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Palomas

Percent of map unit: 7 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

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

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Kermit

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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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.

District I
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

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 55185
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	11/17/2021