



March 19, 2021

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

The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.

Sampling variance
approved

**Re: Release Characterization and Remediation Work Plan
ConocoPhillips
Warren Unit Water Transfer Line Release
Unit Letter K, Section 28, Township 20 South, Range 38 East
Lea County, New Mexico
1RP-1493
Incident ID nPAC0720030459**

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a historical release that occurred in Public Land Survey System (PLSS) Unit Letter K, Section 28, Township 20 South, Range 38 East, upstream of the Warren Unit Water Transfer Line Header in Lea County, New Mexico (Site). The Site is located at coordinates 32.541719°, -103.154200°, 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 June 20, 2007. The release occurred as the result of an accidental discharge from a Victaulic nipple on polyline upstream of the transfer line header. The release consisted of 22 barrels (bbls) of produced water and reportedly affected an 1,800-square-foot (sf) area of pasture. During initial response, a vacuum truck recovered 15 bbls. The NMOCD received the C-141 report form for the release on July 17, 2007, and subsequently assigned the Site Remediation Permit (RP) number 1RP-1493 and Incident ID nPAC0720030459.

SITE CHARACTERIZATION

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

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are no water wells within 800 meters (approximately ½ mile) of the Site. The search radius was extended to 3,600 meters (approximately 2 miles) before three water wells were encountered. The average depth to groundwater for these wells is 65 feet (ft) below ground surface (bgs). The site characterization data is included in Appendix B.

REGULATORY FRAMEWORK

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

Tetra Tech

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

Tel 432.682.4559

Fax 432.682.3946

www.tetrattech.com

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

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

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

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

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

INITIAL SITE ASSESSMENT

On July 14, 2020, Tetra Tech visited the Site on behalf of ConocoPhillips to assess current site conditions and conduct soil sampling for characterization purposes. During the Site visit, it was observed that the impacted area appeared slightly larger than originally reported, encompassing an area of approximately 2,500 sf. In order to achieve horizontal and vertical delineation of the release extent, a total of four (4) borings (BH-2, BH-3, BH-5 and BH-6) were initially installed via hand auger. Additionally, surface soils in and around the release area were field screened for salinity parts per million (ppm) using an ExStik II EC 400 meter. One (1) boring (BH-2) was installed within the release extent to a depth of 5 ft bgs to achieve vertical delineation. The remaining three (3) borings (BH-3, BH-5, and BH-6) were installed along the perimeter of the release extent (to the west, east, and south, respectively) to depths of 5 ft bgs to achieve horizontal delineation. Boring logs are presented as Appendix C.

A total of twelve (12) samples were collected from the four (4) borings and submitted to Pace Analytical National Center for Testing & Innovation in Nashville, Tennessee (Pace) to be analyzed for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix D. Sample locations are shown in Figure 3. Photographic documentation of the Site assessments is included as Appendix E.

ADDITIONAL SITE ASSESSMENT

To further characterize the area, and ensure complete vertical and horizontal delineation of the release to the north, west and east, Tetra Tech personnel returned to the Site on August 19, 2020. The task objective was to conduct additional soil sampling in a larger area of investigation to the north of the reported point of release. A total of eleven (11) borings (BH-1, BH-4, BH-7, and BH-8, and AH-1 through AH-7) were advanced via hand auger. Two (2) borings (BH-1 and BH-4) were installed within the release extent to a depth of 5 feet bgs to achieve vertical delineation to the north and south of the release extent respectively. Two (2) borings (BH-7 and BH-8) were installed within the release extent to the west and south of BH-2 to a depth of 1 ft bgs to confirm horizontal and vertical delineation in the vicinity of BH-2, where TPH exceeded the reclamation Site RRALs of 100 mg/kg during the July 2020 investigation (Table 1). Four borings (AH-1 through AH-4) were installed to the north, west and east of the release extent to a depth of 5 ft bgs. The remaining three (3) borings (AH-5 through A-7) were installed to the further north, west and east of the release extent to a depth of 1 ft bgs to achieve vertical and horizontal delineation. Boring logs from the July and August 2020 assessment activities are included in Appendix C.

A total of twenty-three (23) samples were collected from the eleven (11) borings and submitted to Pace Analytical National Center for Testing & Innovation in Nashville, Tennessee (Pace) to be analyzed for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix D. Sample locations are shown in Figure 3. Photographic documentation of the Site assessments is included as Appendix E.

SUMMARY OF SAMPLING RESULTS

Results from the July 2020 soil sampling event are summarized in Table 1. Analytical results associated with sample location BH-2, located southwest of the source of the release, exceeded the off-pad Site reclamation RRAL for TPH (100 mg/kg) at the 0-1 ft bgs interval. There were no other analytical results which exceeded the TPH remediation RRAL during the initial assessment. The analytical results associated with the remainder of the samples analyzed were below the BTEX or chloride Site reclamation RRALs of 50 mg/kg and 600 mg/kg, respectively.

Results from the August 2020 additional assessment sampling event are summarized in Table 2. The analytical results associated with BH-7 and BH-8, the borings adjacent to BH-2, exceeded the reclamation RRAL for TPH (100 mg/kg) at the 0-1 ft bgs interval. The remainder of the analytical results were below Site RRALs. These locations were previously bound in the cardinal directions. Therefore, the release was fully delineated following the August 2020 additional sampling activities.

REMEDIATION WORK PLAN

Based on the analytical results, ConocoPhillips proposes to remove the impacted material as indicated in Tables 1 and 2 and as shown in Figure 4. Impacted soils will be excavated using heavy equipment (mini-excavators, backhoes and track hoes) to a maximum depth of 2 feet below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the RRALs. If required, the area of the release extent that contains overhead powerlines will be hand-dug to a depth of 2 feet or the maximum extent practicable so that heavy equipment will not come within 20 ft of any overhead utilities.

Excavated soils will be transported offsite and disposed of at an NMOCD-approved or permitted facility. Confirmation bottom and sidewall samples will be collected for verification of remedial activities, and analyzed for TPH, BTEX, and chlorides. Once results are received, NMOCD will be notified and the excavation will then be backfilled with clean material to surface grade. The estimated volume of material to be remediated is approximately 45 cubic yards.

ALTERNATIVE CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, ConocoPhillips proposes the following alternative confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 5. Two (2) confirmation floor samples and five (5) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses an area of approximately 590 sf.

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

SITE RECLAMATION AND RESTORATION PLAN

The backfilled areas will be seeded in Spring 2021 (or the 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-

Release Characterization and Remediation Work Plan
March 19, 2021

ConocoPhillips

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.

CONCLUSION

ConocoPhillips proposes to begin remediation activities at the Site within 1 year of NMOCD plan approval. The Warren Unit Water Transfer Line Release (1RP-1493 / nPAC0720030459) is included in an Agreed Compliance Order-Releases (ACO-R) between COP and the NMOCD signed on May 7 and 9, 2019, respectively. COP is dedicated to addressing and closing all historical releases included in the ACO-R, and given the number of releases to be addressed, 1 year is anticipated to be a practicable timeline. Upon completion of the proposed work, a final closure report detailing the remediation activities and the results of the confirmation sampling will be submitted to NMOCD.

Sincerely,
Tetra Tech, Inc.



Christian M. Llull, P.G.
Project Manager



Greg W. Pope, P.G.
Program Manager

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

LIST OF ATTACHMENTS

Figures:

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

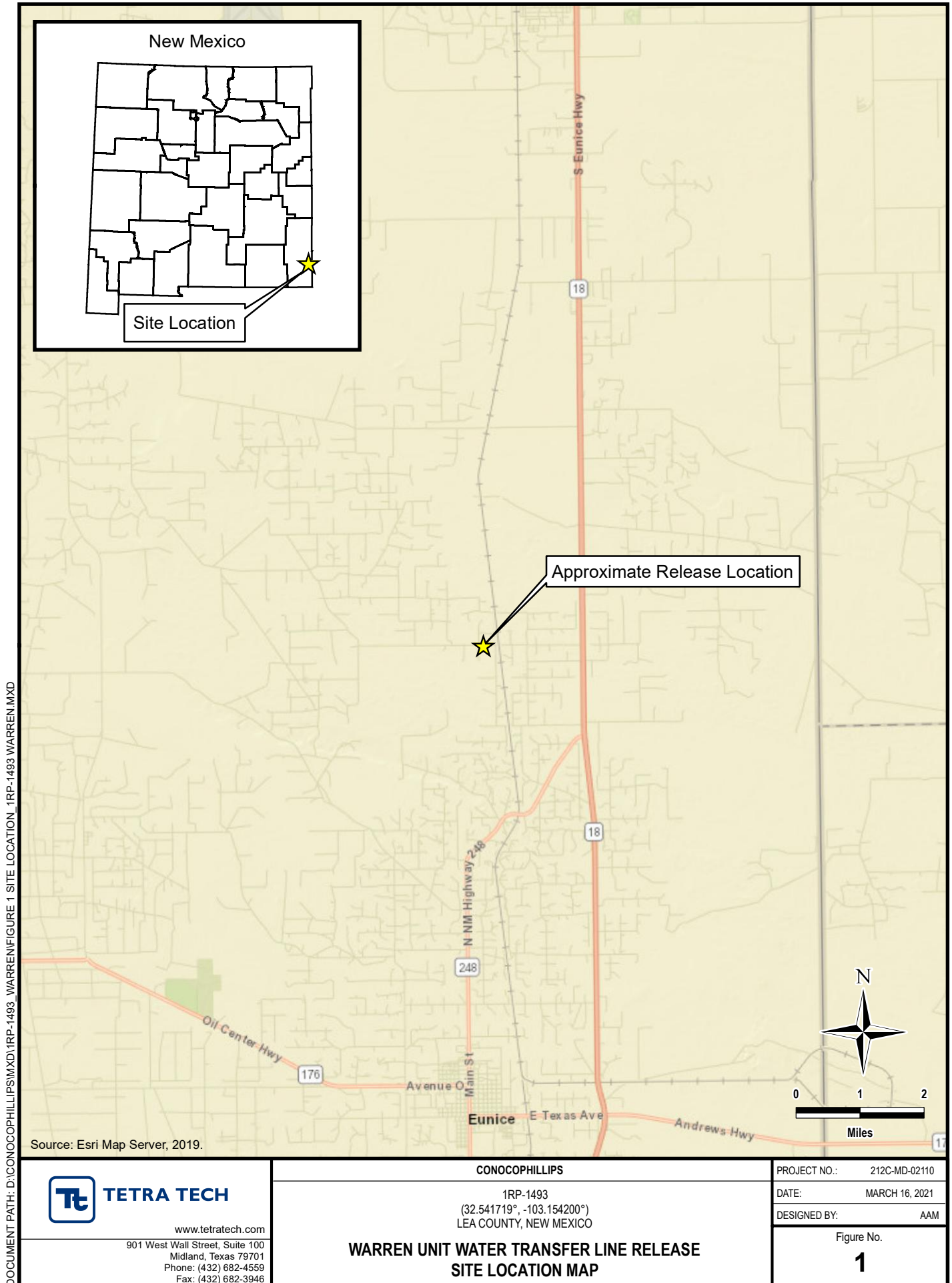
Tables:

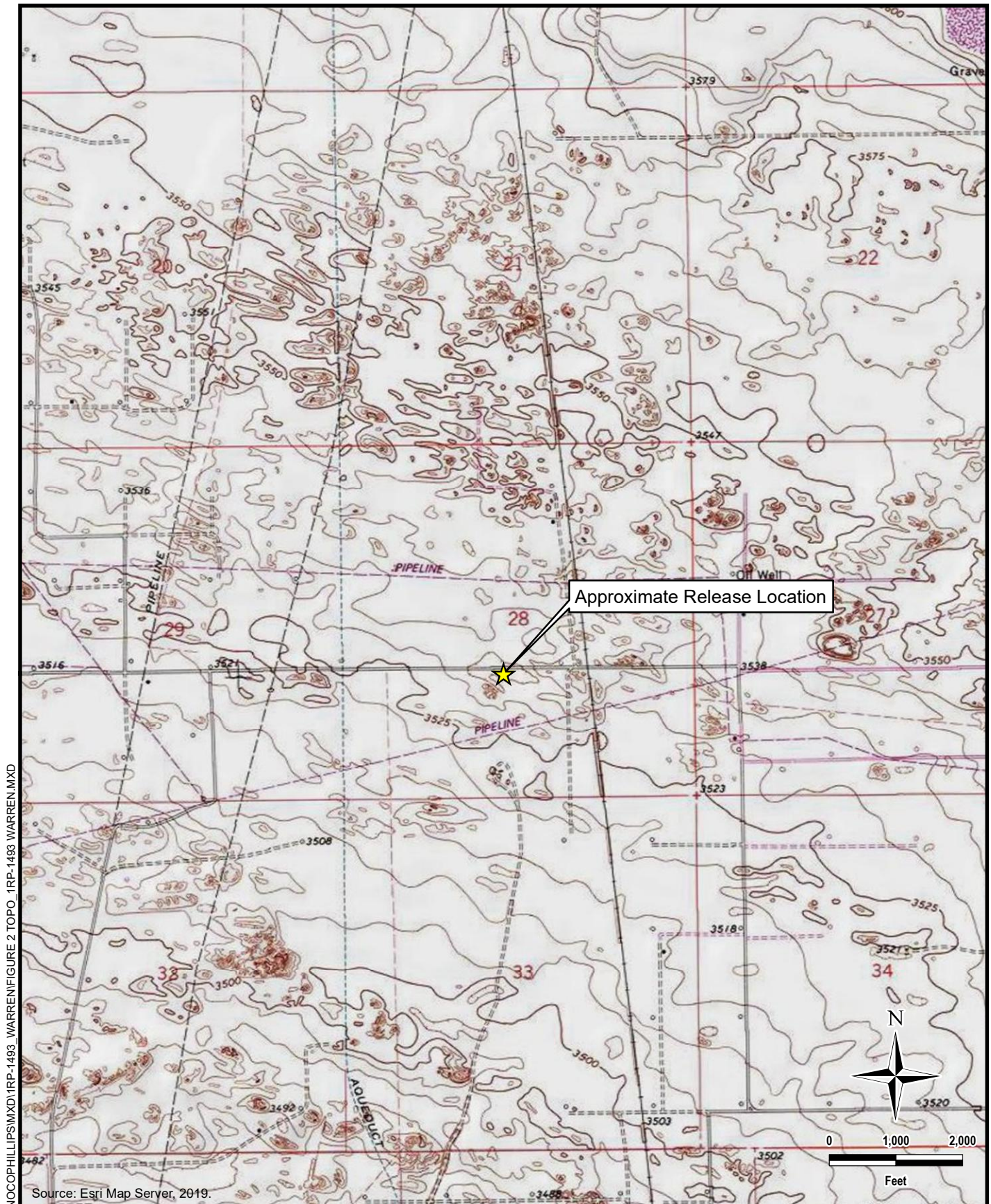
- Table 1 – Summary of Initial Site Assessment Results
- Table 2 – Summary of Additional Site Assessment Results

Appendices:

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

FIGURES





DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-1493 WARREN\FIGURE 2 TOPO_1RP-1493 WARREN.MXD


TETRA TECH
www.tetrattech.com

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

CONOCOPHILLIPS

 1RP-1493
 (32.541719°, -103.154200°)
 LEA COUNTY, NEW MEXICO

**WARREN UNIT WATER TRANSFER LINE RELEASE
 TOPOGRAPHIC MAP**

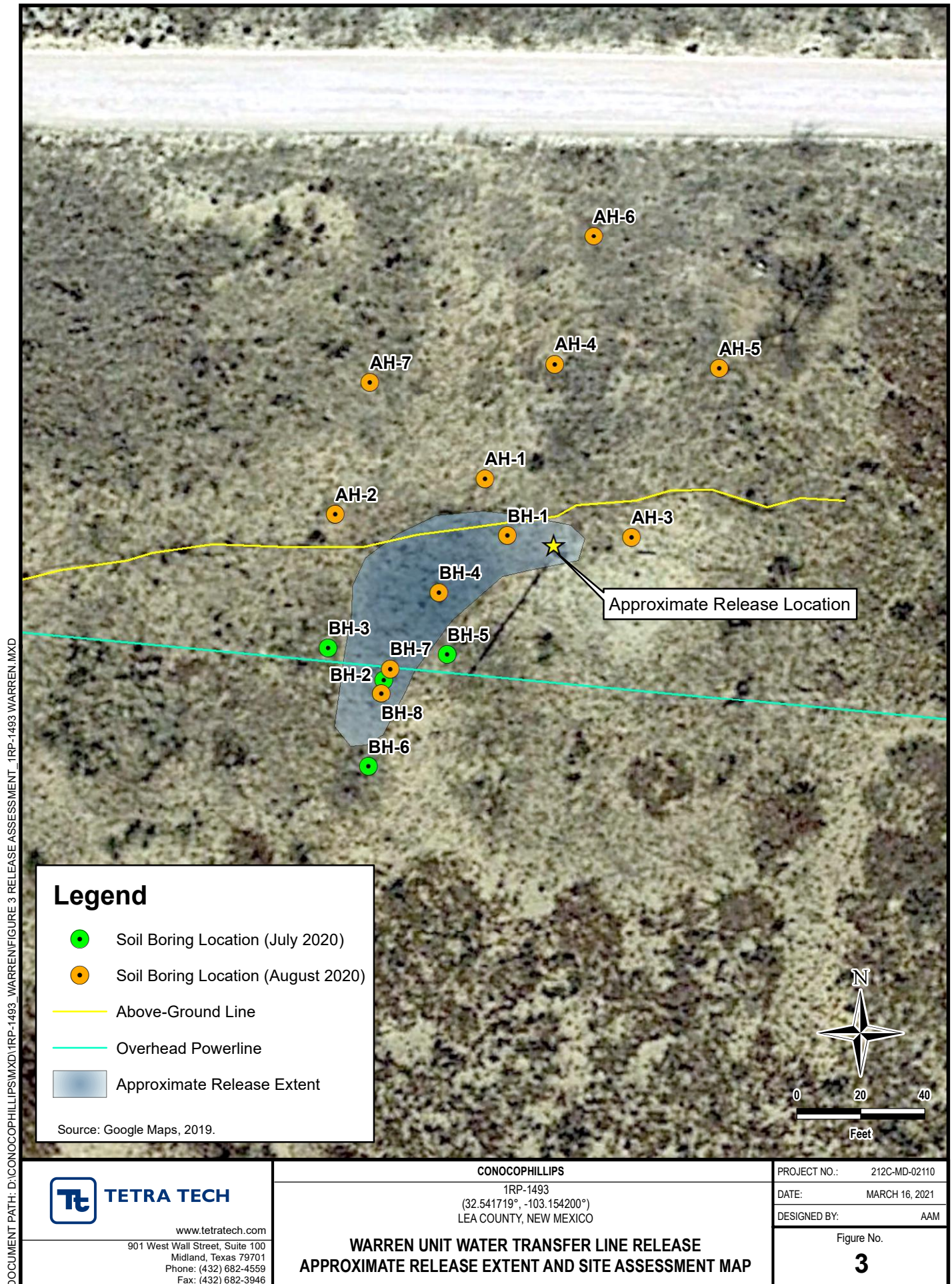
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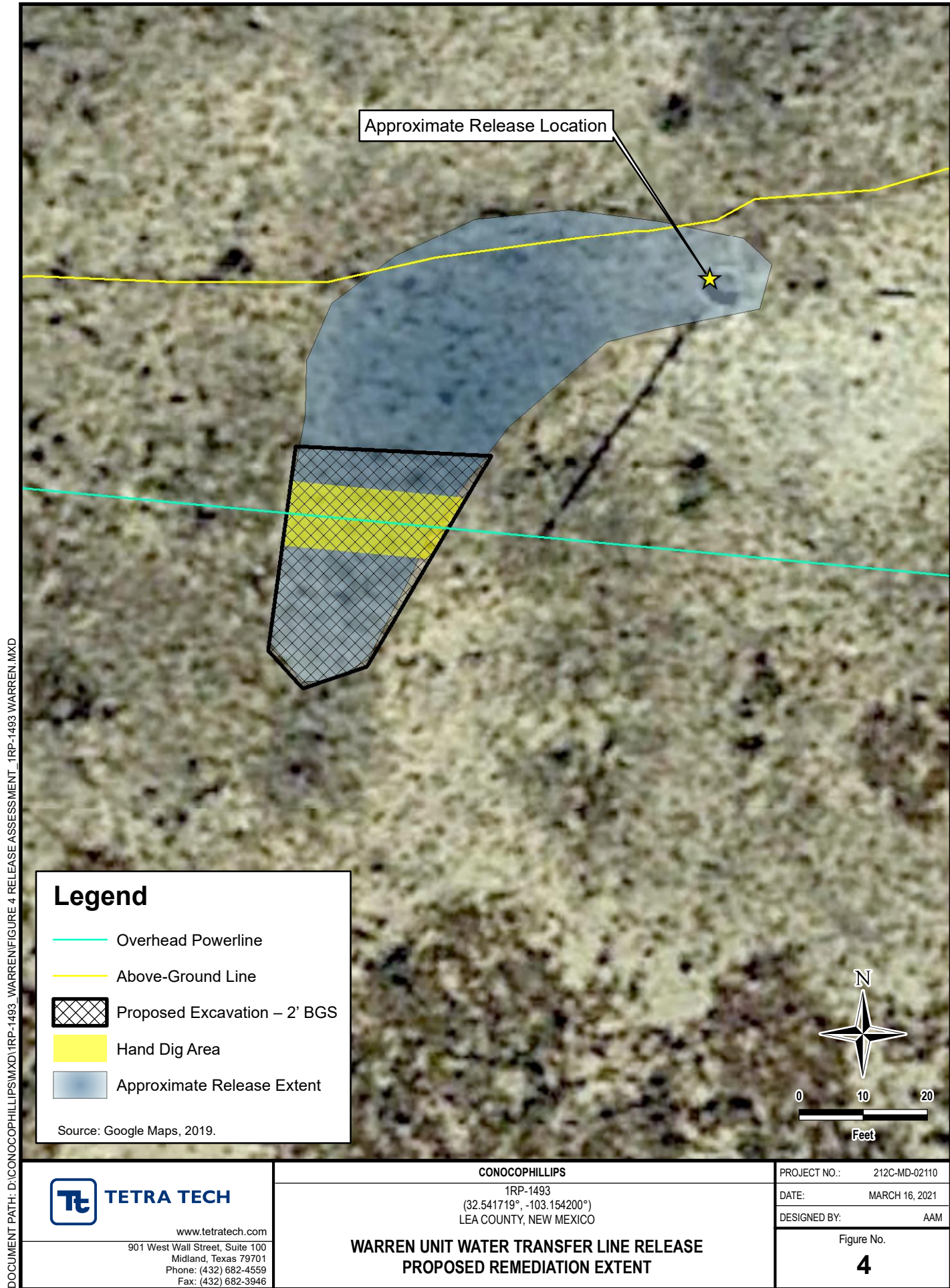
DATE: MARCH 16, 2021

DESIGNED BY: AAM

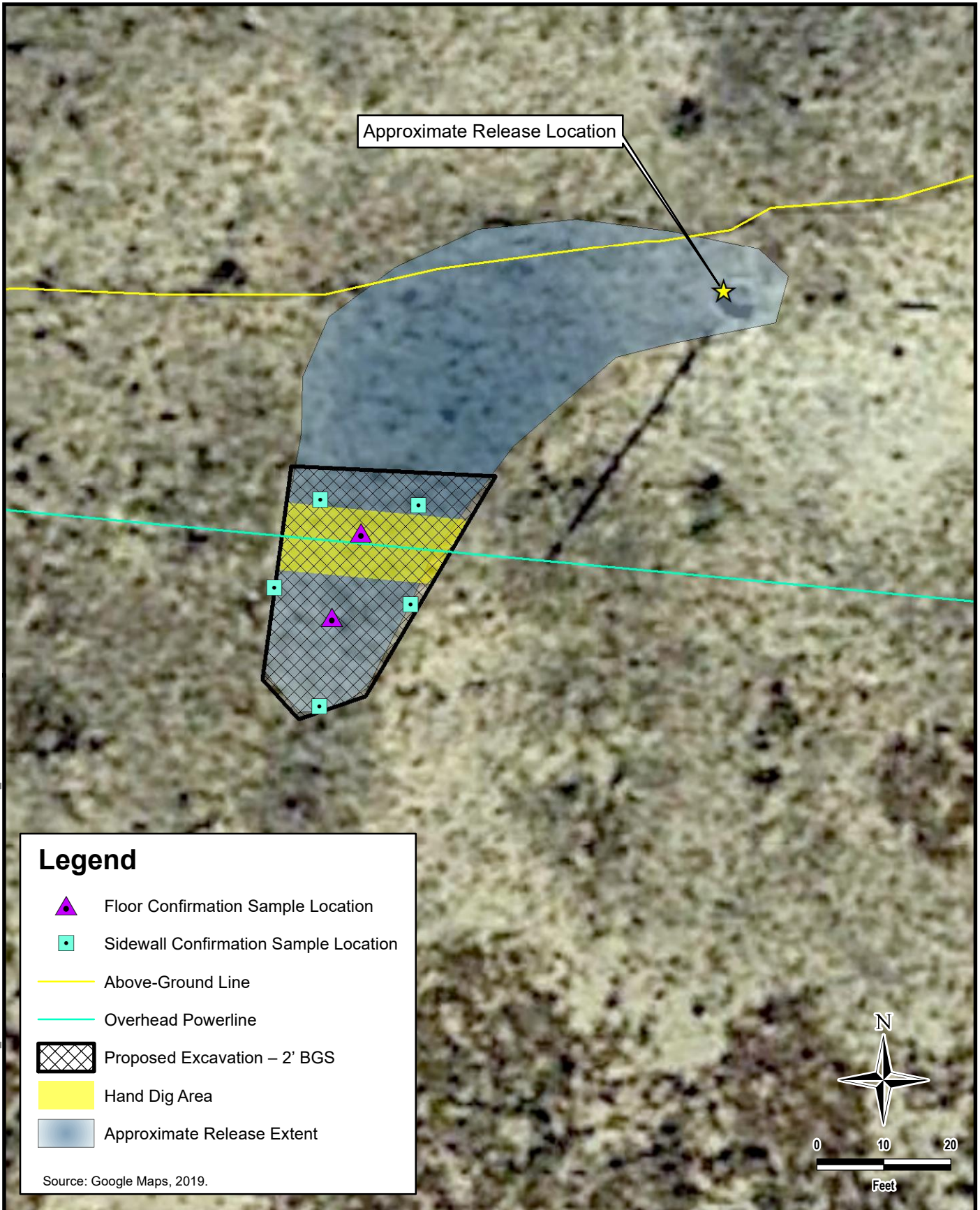
Figure No.

2





DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-1493 WARREN\FIGURE 5 ADDITIONAL ASSESSMENT - 1RP-1493 WARREN.MXD



TETRA TECH

www.tetrattech.com

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

CONOCOPHILLIPS

1RP-1493

(32.541719°, -103.154200°)
LEA COUNTY, NEW MEXICO

**WARREN UNIT WATER TRANSFER LINE RELEASE
ALTERNATIVE CONFIRMATION SAMPLING PLAN**

PROJECT NO.: 212C-MD-02110

DATE: MARCH 16, 2021

DESIGNED BY: AAM

Figure No.

5

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESSMENT - 1RP-1493
CONOCOPHILLIPS
WARREN UNIT WATER TRANSFER LINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Field Screening Results		Chloride ¹		BTEX ²								TPH ³							
							Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO ⁴		DRO		ORO	
			C ₃ - C ₁₀														C ₁₀ - C ₂₈		C ₂₈ - C ₄₀			
			ft. bgs	ppm			mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q
BH-2	7/14/2020	0-1	78	0.0	12.9	J	< 0.00102		< 0.00510		< 0.00255		< 0.00663		-	0.0408	B J	420		891		1311
		2-3	109	0.0	< 24.8		< 0.00148		< 0.00741		< 0.00371		< 0.00964		-	0.0494	B J	< 4.96		< 4.96		0.0494
		4-5	201	0.0	133		< 0.00119		< 0.00595		< 0.00298		< 0.00774		-	0.0358	B J	< 4.33		0.642	J	0.678
BH-3	7/14/2020	0-1	79	0.0	17.5	J	< 0.00138		< 0.00691		< 0.00345		< 0.00898		-	0.0455	B J	< 4.76		0.929	J	0.975
		2-3	101	0.0	49.3		< 0.00101		< 0.00507		< 0.00253		< 0.00659		-	< 0.101		1.98	J	8.34		10.3
		4-5	39	0.0	14.3	J	< 0.00137		< 0.00683		< 0.00341		< 0.00887		-	< 0.119		2.08	J	5.94		8.02
BH-5	7/14/2020	0-1	91	0.0	19.2	J	< 0.00138		< 0.00691		< 0.00346		< 0.00899		-	< 0.119		< 4.76		2.56	J	2.56
		2-3	111	0.0	18.2	J	< 0.00130		< 0.00652		< 0.00326		< 0.00848		-	< 0.116		< 4.61		4.11	J	4.11
		4-5	57	0.0	13.9	J	< 0.00125		< 0.00624		< 0.00312		< 0.00811		-	< 0.112		< 4.49		5.67		5.67
BH-6	7/14/2020	0-1	100	0.0	24.4	J	< 0.00146		< 0.00730		< 0.00365		< 0.00949		-	< 0.123		< 4.92		< 4.92		-
		2-3	79	0.0	< 20.2		< 0.00101		< 0.00504		< 0.00252		< 0.00655		-	< 0.101		1.78	J	5.64		7.42
		4-5	215	0.0	120		< 0.00125		< 0.00625		< 0.00313		< 0.00813		-	< 0.113		< 4.50		0.428	J	0.428

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

Shaded rows indicate intervals proposed for excavation and remediation.

Bold and italicized values indicate exceedance of proposed RRALs

1 EPA Method 300.0

2 EPA Method 8260B

3 EPA Method 8015

4 EPA Method 8015D/GRO

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.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
ADDITIONAL SOIL ASSESSMENT - 1RP-1493
CONOCOPHILLIPS
WARREN UNIT WATER TRANSFER LINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Field Screening Results		Chloride ¹		BTEX ²								TPH ³							
							Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO ⁴		DRO		ORO	
			C ₃ - C ₁₀														C ₁₀ - C ₂₈		C ₂₈ - C ₄₀			
		ft. bgs	ppm		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	
AH-1	8/19/2020	0-1	25.1	0.0	< 20.0		< 0.00100		< 0.00502		< 0.00251		< 0.00653		-	< 0.100		2.56	J	6.35		8.91
		2-3	0.0	0.0	< 20.3		< 0.00103		< 0.00515		< 0.00257		< 0.00669		-	< 0.101		< 4.06		0.4.34	J	0.434
		4-5	20.4	0.0	< 20.4		< 0.00104		< 0.00520		< 0.00260		< 0.00676		-	< 0.102		< 4.08		0.360	J	0.360
AH-2	8/19/2020	0-1	17	0.0	< 20.3		< 0.00103		< 0.00516		< 0.00258		< 0.00670		-	< 0.102		4.00	J	2.97	J	6.97
		2-3	21	0.0	< 22.2		< 0.00122		< 0.00612		< 0.00306		< 0.00796		-	< 0.111		< 4.45		4.20	J	4.20
		4-5	19	0.0	< 20.1		< 0.00101	J3	< 0.00504	J3	< 0.00252	J3	< 0.00655		-	< 0.100		< 4.01		3.74	J	3.74
AH-3	8/19/2020	0-1	20	0.0	< 20.2		< 0.00102		< 0.00508		< 0.00254		< 0.00660		-	< 0.101		< 4.03		5.02		5.02
		2-3	21	0.0	< 24.6		< 0.00146		< 0.00730		< 0.00365		< 0.00949		-	< 0.123		< 4.92		0.391	J	0.391
		4-5	17	0.0	< 20.8		< 0.00108		< 0.00539		< 0.00269		< 0.00700		-	< 0.104		< 4.15		0.729	J	0.729
AH-4	8/19/2020	0-1	18	0.0	< 20.2		< 0.00102		< 0.00509		< 0.00255		< 0.00662		-	< 0.101		11.2		24.3		35.5
		2-3	25	0.0	< 20.2		< 0.00102		< 0.00511		< 0.00256		< 0.00665		-	< 0.101		3.25	J	6.39		9.64
		4-5	19	0.0	< 20.9		< 0.00109		< 0.00546		< 0.00273		< 0.00710		-	< 0.105		2.05	J	4.77		6.82
AH-5	8/19/2020	0-1	-	-	< 21.6		< 0.00116		< 0.00579		< 0.00290		< 0.00753		-	< 0.108		4.71		4.19	J	8.90
AH-6	8/19/2020	0-1	-	-	< 21.8		< 0.00118		< 0.00588		< 0.00294		< 0.00764		-	0.0348	J	3.56	J	3.70	J	7.29
AH-7	8/19/2020	0-1	-	-	< 21.0		< 0.00110		< 0.00550		< 0.00275		< 0.00715		-	0.0273	J	6.27		5.75		12.0
BH-1	8/19/2020	0-1	24	0.0	< 20.1		< 0.00101		< 0.00504		< 0.00252		< 0.00655		-	< 0.100		2.83	J	21.8		24.6
		2-3	0.0	0.0	14.4	J	< 0.00102		< 0.00508		< 0.00254		< 0.00661		-	< 0.101		< 4.03		3.56	J	3.56
		4-5	21	0.0	< 20.4		< 0.00104		< 0.00519		< 0.00260		< 0.00675		-	< 0.102		< 4.08		0.340	J	0.340
BH-4	8/19/2020	0-1	0.0	0.0	< 20.1		< 0.00101		< 0.00507		0.000836	J	< 0.00659		0.000836	< 0.101		< 4.03		5.06		5.06
		2-3	49.5	0.0	< 20.1		< 0.00101		0.00154	J	< 0.00252		< 0.00654		0.00154	< 0.100		4.17		10.8		15.0
		4-5	0.0	0.0	44.7		< 0.00102		< 0.00508		< 0.00254		0.00109	J	0.00109	< 0.101		3.10	J	9.51		12.6
BH-7	8/19/2020	0-1	-	-	< 24.1		< 0.00141		< 0.00704		< 0.00352		< 0.00915		-	0.0308	J	75.9		212		288
BH-8	8/19/2020	0-1	-	-	< 20.7		< 0.00107		< 0.00535		< 0.00267		< 0.00695		-	0.0312	J	294		844		1138

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

Shaded rows indicate intervals proposed for excavation and remediation.

Bold and italicized values indicate exceedance of proposed RRALs

1 EPA Method 300.0

2 EPA Method 8260B

3 EPA Method 8015

4 EPA Method 8015D/GRO

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.

APPENDIX A C-141 Forms

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

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company ConocoPhillips Company	Contact Jesse A. Sosa
Address 3300 N. "A" St., Bldg. 6 #247 Midland, TX 79705-5	Telephone No. (505)391-3126
Facility Name Warren Unit Water Transfer Line	Facility Type Produced water trunk line
Surface Owner Bob McCasland	Mineral Owner BLM
Lease No. LC031695B	

LOCATION OF RELEASE

Unit Letter K	Section 28	Township 20S	Range 38E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	---------------

Latitude N 32 32.512 Longitude W 103 09.256

NATURE OF RELEASE

WTR ≈ 50'

Type of Release Produced water	Volume of Release 22	Volume Recovered 15
Source of Release Victaulic nipple in trunk line	Date and Hour of Occurrence 6/20/07	Date and Hour of Discovery 6/20/07 5p
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? Pat Richards (voicemail)	
By Whom? Jesse Sosa	Date and Hour 6/22/2007 2:35 pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

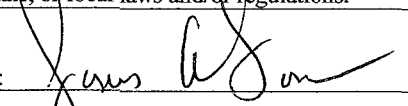
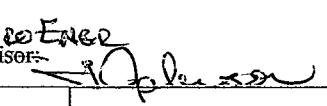
There was an accidental discharge of 22 BPW from a victaulic nipple on transfer line header. The nipple was on a 3" polyline upstream of header. The spill was not contained in a dike and 15 BPW fluid was recovered.

NEED CHLORIDES OF WTR SPILLED

Describe Area Affected and Cleanup Action Taken.*

Affected area was 15' X 120' all on pasture land. MSO called a vacuum truck out and 15 bbls was recovered. No cows were presence. Area will be remediated in accordance with NMOCD guidelines. Regulatory Agencies were notified.

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

Signature: 		OIL CONSERVATION DIVISION	
Printed Name: Jesse A. Sosa		Approved by District Supervisor: 	
Title: HSER Lead	Approval Date: 7.18.07	Expiration Date: 9.18.07	
E-mail Address: Jesse.A.Sosa@conocophillips.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 06/29/2007	Phone: (505)391-3126	SUBMIT FINAL C-141 BY	

* Attach Additional Sheets If Necessary

① ATTACH DOCUMENTATION OF CLEANUP
② PROVIDE SPILL CHLORIDES

RPT# 1493

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	_____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature:  _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

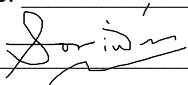
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ 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

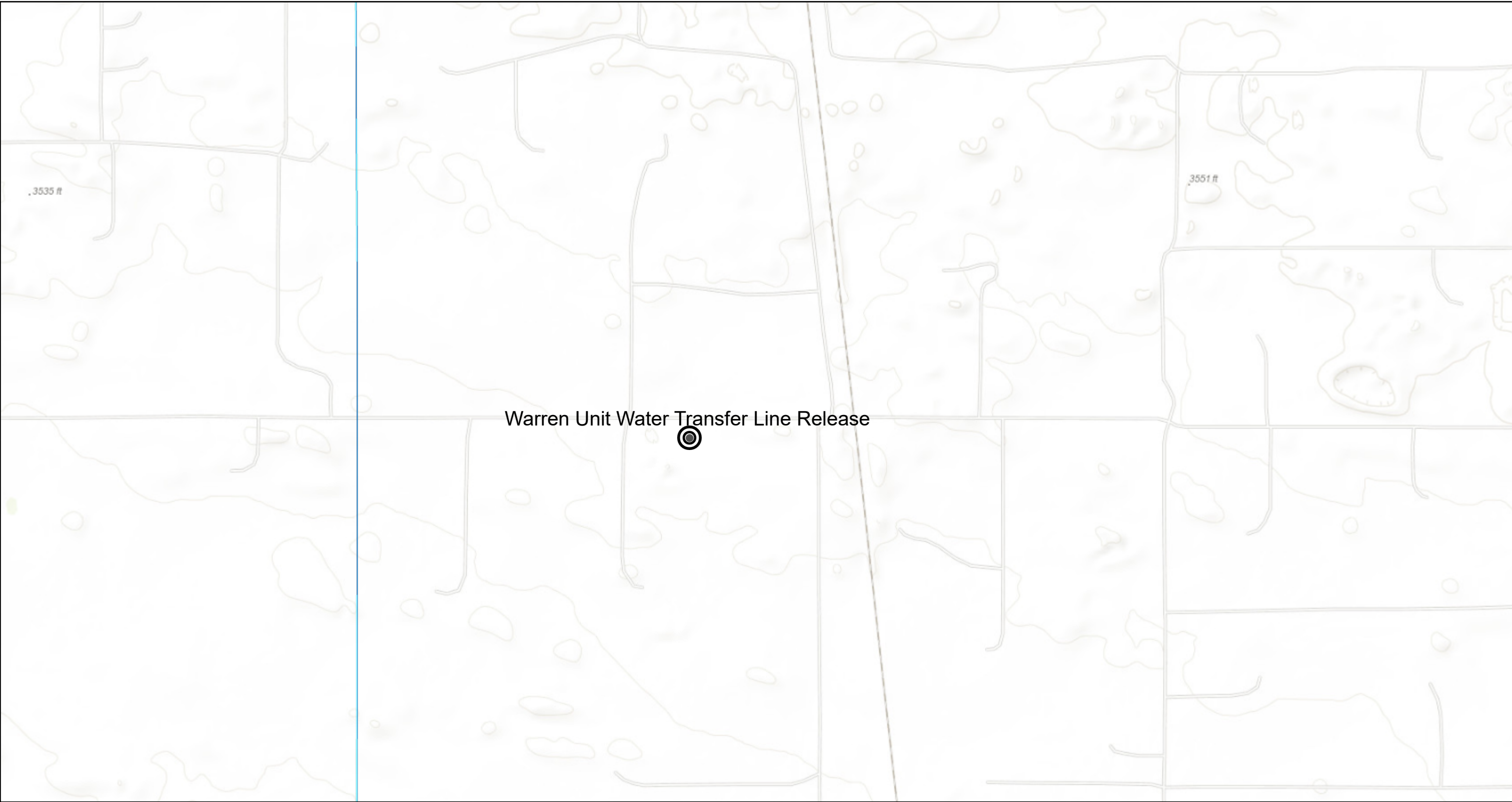
Signature:  Date: _____

The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.





APPENDIX B

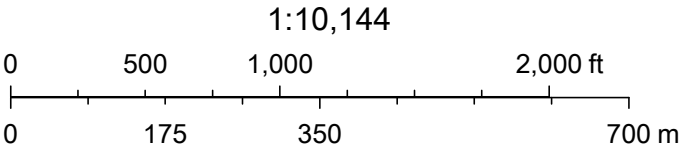
Site Characterization Data

Warren Unit WTR Transfer Line Release



7/13/2020, 10:53:42 AM

-  Override 1
-  OSE Water-bodies
-  PLJV Probable Playas
-  OSE Streams



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Karst Potential Map

Warren Unit Water Transfer Line Release

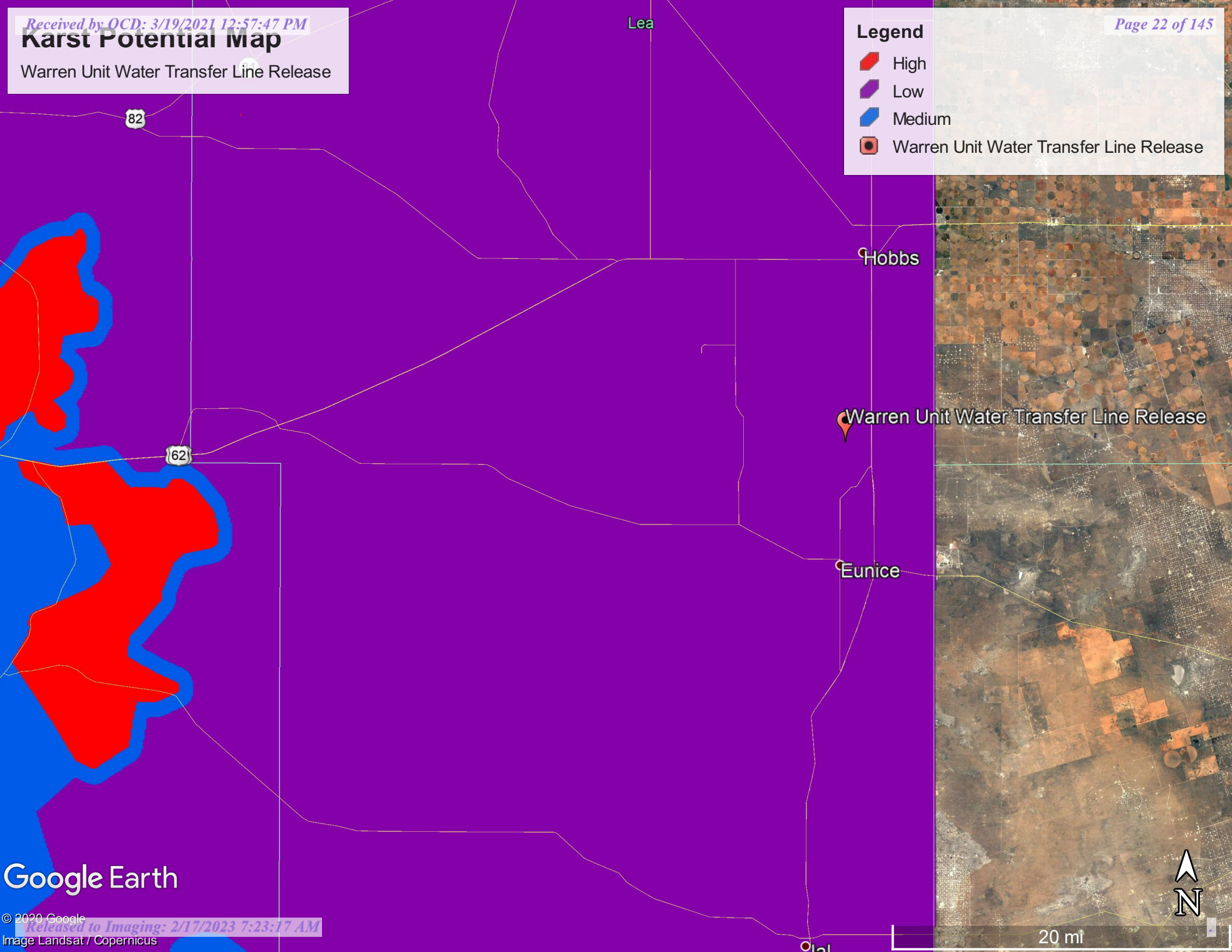
Legend

High

Low

Medium

Warren Unit Water Transfer Line Release



Google Earth



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 Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
L_09918		L	LE	4	2	21	20S	38E		673954	3604063*	2170	135		
L_13546	POD1	L	LE	4	4	3	34	20S	38E	675011	3600037	2575	88		
L_07980		L	LE	4	3	26	20S	38E		676412	3601687*	3099	130	65	65

Average Depth to Water: **65 feet**

Minimum Depth: **65 feet**

Maximum Depth: **65 feet**

Record Count: 3

UTM NAD83 Radius Search (in meters):

Easting (X): 673326.41

Northing (Y): 3601985.24

Radius: 3600

*UTM location was derived from PLSS - see Help

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

10/1/20 4:28 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

APPENDIX C

Soil Boring Logs

212C-MD-02200		TETRA TECH		LOG OF BORING AH-1				Page 1 of 1						
Project Name: Warren Unit Water Transfer Line Release														
Borehole Location: GPS: 32.541778°, -103.154269°					Surface Elevation: 3530 ft									
Borehole Number: AH-1				Borehole Diameter (in.): 2		Date Started: 8/19/2020		Date Finished: 8/19/2020						
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:		
			ExStik	PID				LL	PI			MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
5			25.1	0.0								-SM- SILTY SAND: Red, loose, dry, with no odor, with no staining.	1.5	AH-1 (0'-1')
			0.0	0.0								-SM- SILTY SAND: Reddish white, loose, dry, with no odor, with no staining.	3.5	AH-1 (2'-3')
			20.4	0.0								-SM- SILTY SAND: Reddish white, loose, wet, with no odor, with no staining.	5	AH-1 (4'-5')

Bottom of borehole at 5.0 feet.

Sampler Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Split Spoon Shelby Bulk Sample Grab Sample </div> <div style="width: 50%;"> Acetate Liner Vane Shear California Test Pit </div> </div>	Operation Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Mud Rotary Continuous Flight Auger Wash Rotary </div> <div style="width: 50%;"> Hand Auger Air Rotary Direct Push Core Barrel </div> </div>	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: John Thurston		Drilling Equipment: Hand Auger
Driller: Tetra Tech		


212C-MD-02200		TETRA TECH		LOG OF BORING AH-2				Page 1 of 1							
Project Name: Warren Unit Water Transfer Line Release															
Borehole Location: GPS: 32.541747°, -103.154419°					Surface Elevation: 3531 ft										
Borehole Number: AH-2				Borehole Diameter (in.): 2		Date Started: 8/19/2020		Date Finished: 8/19/2020							
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:			
			ExStik	PID				LL	PI			MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS	
5	[Hand Auger]	[Hand]	17	0.0							[Pattern]	-SM- SILTY SAND: Red, loose, dry, with no odor, with no staining.	1.5	AH-2 (0'-1')	
			21	0.0								[Pattern]	-SM- SILTY SAND: Reddish white, loose, dry, with no odor, with no staining.	3.5	AH-2 (2'-3')
			19	0.0								[Pattern]	-SM- SILTY SAND: White, loose, dry, with no odor, with no staining.	5	AH-2 (4'-5')
Bottom of borehole at 5.0 feet.															

Sampler Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Split Spoon Shelby Bulk Sample Grab Sample </div> <div style="width: 50%;"> Acetate Liner Vane Shear California Test Pit </div> </div>	Operation Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Mud Rotary Continuous Flight Auger Wash Rotary </div> <div style="width: 50%;"> Hand Auger Air Rotary Direct Push Core Barrel </div> </div>	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: John Thurston	Drilling Equipment: Hand Auger	Driller: Tetra Tech

212C-MD-02200		TETRA TECH		LOG OF BORING AH-3				Page 1 of 1						
Project Name: Warren Unit Water Transfer Line Release														
Borehole Location: GPS: 32.541725°, -103.154119°					Surface Elevation: 3531 ft									
Borehole Number: AH-3				Borehole Diameter (in.): 2		Date Started: 8/19/2020		Date Finished: 8/19/2020						
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:		
			ExStik	PID				LL	PI			MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
5	[Hand Auger]	[Hand]	20	0.0							[Dotted Pattern]	1.5	-SM- SILTY SAND: White, loose, dry, with no odor, with no staining.	AH-3 (0'-1')
	[Hand Auger]	[Hand]	21	0.0							[Dotted Pattern]	1.5	-SM- SILTY SAND: Red, loose, dry, with no odor, with no staining.	AH-3 (2'-3')
	[Hand Auger]	[Hand]	17	0.0							[Dotted Pattern]	5	AH-3 (4'-5')	

Bottom of borehole at 5.0 feet.

Sampler Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Split Spoon Shelby Bulk Sample Grab Sample </div> <div style="width: 50%;"> Acetate Liner Vane Shear California Test Pit </div> </div>	Operation Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Mud Rotary Continuous Flight Auger Wash Rotary </div> <div style="width: 50%;"> Hand Auger Air Rotary Direct Push Core Barrel </div> </div>	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: John Thurston		Drilling Equipment: Hand Auger
Driller: Tetra Tech		

212C-MD-02200	 TETRA TECH	LOG OF BORING AH-4	Page 1 of 1
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Project Name: Warren Unit Water Transfer Line Release

Borehole Location: GPS: 32.541875°, -103.154197°


Surface Elevation: 3531 ft

Borehole Number: AH-4
















Borehole
Diameter (in.): 2

Date Started: 8/19/2020

Date Finished: 8/19/2020

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS		DEPTH (ft)	REMARKS	
												While Drilling	Upon Completion of Drilling			
												WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:				
			ExStik	PID									MATERIAL DESCRIPTION			
													-SM- SILTY SAND: Red, loose, dry, with no odor, with no staining.		1.5	AH-4 (0'-1')
													-SM- SILTY SAND: Reddish white, loose, dry, with no odor, with no staining.		3.5	AH-4 (2'-3')
5													-SM- SILTY SAND: White, loose, dry, with no odor, with no staining.		5	AH-4 (4'-5')

Bottom of borehole at 5.0 feet.

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.
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Logger: John Thurston

Drilling Equipment: Hand Auger

Driller: Tetra Tech

212C-MD-02200		TETRA TECH		LOG OF BORING AH-5				Page 1 of 1							
Project Name: Warren Unit Water Transfer Line Release															
Borehole Location: GPS: 32.541869°, -103.154031°						Surface Elevation: 3532 ft									
Borehole Number: AH-5						Borehole Diameter (in.): 2		Date Started: 8/19/2020		Date Finished: 8/19/2020					
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:			
												MATERIAL DESCRIPTION		DEPTH (ft)	REMARKS
			-	-								-SM- SILTY SAND: Red, loose, dry, with no odor, with no staining.		1	AH-5 (0'-1')
Bottom of borehole at 1.0 feet.															
Sampler Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Split Spoon Shelby Bulk Sample Grab Sample </div> <div style="width: 50%;"> Acetate Liner Vane Shear California Test Pit </div> </div>			Operation Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Mud Rotary Continuous Flight Auger Wash Rotary </div> <div style="width: 50%;"> Hand Auger Air Rotary Direct Push Core Barrel </div> </div>			Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.									
Logger: John Thurston						Drilling Equipment: Hand Auger				Driller: Tetra Tech					

212C-MD-02200		TETRA TECH		LOG OF BORING AH-6				Page 1 of 1							
Project Name: Warren Unit Water Transfer Line Release															
Borehole Location: GPS: 32.541983°, -103.154156°					Surface Elevation: 3532 ft										
Borehole Number: AH-6				Borehole Diameter (in.): 2		Date Started: 8/19/2020		Date Finished: 8/19/2020							
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:			
												MATERIAL DESCRIPTION		DEPTH (ft)	REMARKS
			-	-								-SM- SILTY SAND: Red, loose, dry, with no odor, with no staining.		1	AH-6 (0'-1')
Bottom of borehole at 1.0 feet.															
Sampler Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Split Spoon Shelby Bulk Sample Grab Sample </div> <div style="width: 50%;"> Acetate Liner Vane Shear California Test Pit </div> </div>			Operation Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Mud Rotary Continuous Flight Auger Wash Rotary </div> <div style="width: 50%;"> Hand Auger Air Rotary Direct Push Core Barrel </div> </div>			Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.									
Logger: John Thurston					Drilling Equipment: Hand Auger					Driller: Tetra Tech					

212C-MD-02200	 TETRA TECH	LOG OF BORING AH-7	Page 1 of 1
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Project Name: Warren Unit Water Transfer Line Release

Borehole Location: GPS: 32.541861°, -103.154383°

Surface Elevation: 3532 ft

Borehole Number: AH-7
















Borehole
Diameter (in.): 2

Date Started: 8/19/2020

Date Finished: 8/19/2020

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS		DEPTH (ft)	REMARKS
												While Drilling	Upon Completion of Drilling		
			ExStik	PID				LL	PI				WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:		
			-	-									MATERIAL DESCRIPTION -SM- SILTY SAND: Red, loose, dry, with no odor, with no staining.	1	AH-7 (0'-1')

Bottom of borehole at 1.0 feet.

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: John Thurston	Drilling Equipment: Hand Auger	Driller: Tetra Tech

212C-MD-02200		TETRA TECH		LOG OF BORING BH-1				Page 1 of 1						
Project Name: Warren Unit Water Transfer Line Release														
Borehole Location: GPS: 32.541728°, -103.154247°						Surface Elevation: 3530 ft								
Borehole Number: BH-1					Borehole Diameter (in.): 2		Date Started: 8/19/2020		Date Finished: 8/19/2020					
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:		
			ExStik	PID					LL			PI	MATERIAL DESCRIPTION	DEPTH (ft)
5	[Hand Auger]	[Hand]	24	0.0							[Pattern]	-SM- SILTY SAND: Red, loose, dry, with no odor, with no staining.	1.5	BH-1 (0'-1')
		[Hand]	0.0	0.0							[Pattern]	-SM- SILTY SAND: Reddish white, loose, dry, with no odor, with no staining.	3.5	BH-1 (2'-3')
		[Hand]	21	0.0							[Pattern]	-SM- SILTY SAND: White, loose, wet, with no odor, with no staining.	5	BH-1 (4'-5')

Bottom of borehole at 5.0 feet.

Sampler Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Split Spoon Shelby Bulk Sample Grab Sample </div> <div style="width: 50%;"> Acetate Liner Vane Shear California Test Pit </div> </div>	Operation Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Mud Rotary Continuous Flight Auger Wash Rotary </div> <div style="width: 50%;"> Hand Auger Air Rotary Direct Push Core Barrel </div> </div>	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: John Thurston		Drilling Equipment: Hand Auger
Driller: Scarborough Drilling		

212C-MD-02200		TETRA TECH		LOG OF BORING BH-2				Page 1 of 1							
Project Name: Warren Unit Water Transfer Line Release															
Borehole Location: GPS: 32.541605°, -103.154373°					Surface Elevation: 3530 ft										
Borehole Number: BH-2				Borehole Diameter (in.): 2		Date Started: 7/14/2020		Date Finished: 7/14/2020							
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS			
												While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft			
Remarks:												DEPTH (ft)	REMARKS		
MATERIAL DESCRIPTION															
5			78	0.0									-SM- SILTY SAND: Brown, loose, dry, with no odor, with no staining. -- 2" bed of cementation @ 0.25'	1.5	BH-2 (0'-1')
			109	0.0									-SM- SILTY SAND: Brown, loose, dry, with no odor, with no staining.	3.5	BH-2 (2'-3')
			201	0.0									-ML- SANDY SILT: Brownish white, loose, wet, with no odor, with no staining.	5	BH-2 (4'-5')

Bottom of borehole at 5.0 feet.

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: Adrian Garcia		Drilling Equipment: Hand Auger		Driller: Scarborough Drilling

212C-MD-02200		TETRA TECH		LOG OF BORING BH-3				Page 1 of 1						
Project Name: Warren Unit Water Transfer Line Release														
Borehole Location: GPS: 32.541641°, -103.154444°						Surface Elevation: 3531 ft								
Borehole Number: BH-3				Borehole Diameter (in.): 2		Date Started: 7/14/2020		Date Finished: 7/14/2020						
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:		
			ExStik	PID				LL	PI			MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
5	[Hand Auger]	[Hand Auger]	79	0.0							[Pattern]	-SM- SILTY SAND: Brown, loose, dry, with no odor, with no staining.	3.5	BH-3 (0'-1')
	[Hand Auger]	[Hand Auger]	101	0.0							[Pattern]	-SM- SILTY SAND: Brown, loose, wet, with no odor, with no staining.	3.5	BH-3 (2'-3')
	[Hand Auger]	[Hand Auger]	39	0.0							[Pattern]	-SM- SILTY SAND: Brown, loose, wet, with no odor, with no staining.	5	BH-3 (4'-5')

Bottom of borehole at 5.0 feet.

Sampler Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Split Spoon Shelby Bulk Sample Grab Sample </div> <div style="width: 50%;"> Acetate Liner Vane Shear California Test Pit </div> </div>	Operation Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Mud Rotary Continuous Flight Auger Wash Rotary </div> <div style="width: 50%;"> Hand Auger Air Rotary Direct Push Core Barrel </div> </div>	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: Adrian Garcia	Drilling Equipment: Hand Auger	Driller: Scarborough Drilling

212C-MD-02200		TETRA TECH		LOG OF BORING BH-4				Page 1 of 1						
Project Name: Warren Unit Water Transfer Line Release														
Borehole Location: GPS: 32.541681°, -103.154317°					Surface Elevation: 3530 ft									
Borehole Number: BH-4				Borehole Diameter (in.): 2		Date Started: 8/19/2020		Date Finished: 8/19/2020						
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:		
			ExStik	PID					LL			PI	MATERIAL DESCRIPTION	DEPTH (ft)
5	[Hand Auger]	[Hand Auger]	0.0	0.0								1.5	BH-4 (0'-1')	
	[Hand Auger]	[Hand Auger]	49.5	0.0								3.5	BH-4 (2'-3')	
	[Hand Auger]	[Hand Auger]	0.0	0.0								5	BH-4 (4'-5')	

Bottom of borehole at 5.0 feet.

Sampler Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Split Spoon Shelby Bulk Sample Grab Sample </div> <div style="width: 50%;"> Acetate Liner Vane Shear California Test Pit </div> </div>	Operation Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Mud Rotary Continuous Flight Auger Wash Rotary </div> <div style="width: 50%;"> Hand Auger Air Rotary Direct Push Core Barrel </div> </div>	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: John Thurston	Drilling Equipment: Hand Auger	Driller: Scarborough Drilling

212C-MD-02200		TETRA TECH		LOG OF BORING BH-5				Page 1 of 1						
Project Name: Warren Unit Water Transfer Line Release														
Borehole Location: GPS: 32.541616°, -103.154295°					Surface Elevation: 3531 ft									
Borehole Number: BH-5				Borehole Diameter (in.): 2		Date Started: 7/14/2020		Date Finished: 7/14/2020						
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:		
			ExStik	PID				LL	PI			MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
5	[Hand Auger]	[Hand]	91	0.0							[Pattern]	-SM- SILTY SAND: Brown, loose, dry, with no odor, with no staining.	3.5	BH-5 (0'-1')
		[Hand]	111	0.0							[Pattern]	-SM- SILTY SAND: Brown, loose, wet, with no odor, with no staining.	3.5	BH-5 (2'-3')
		[Hand]	57	0.0							[Pattern]	-SM- SILTY SAND: Brown, loose, wet, with no odor, with no staining.	5	BH-5 (4'-5')

Bottom of borehole at 5.0 feet.

Sampler Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Split Spoon Shelby Bulk Sample Grab Sample </div> <div style="width: 50%;"> Acetate Liner Vane Shear California Test Pit </div> </div>	Operation Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Mud Rotary Continuous Flight Auger Wash Rotary </div> <div style="width: 50%;"> Hand Auger Air Rotary Direct Push Core Barrel </div> </div>	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: Adrian Garcia	Drilling Equipment: Hand Auger	Driller: Scarborough Drilling

212C-MD-02200		TETRA TECH		LOG OF BORING BH-6				Page 1 of 1									
Project Name: Warren Unit Water Transfer Line Release																	
Borehole Location: GPS: 32.541531°, -103.154390°					Surface Elevation: 3531 ft												
Borehole Number: BH-6				Borehole Diameter (in.): 2		Date Started: 7/14/2020		Date Finished: 7/14/2020									
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:					
			ExStik	PID	LL	PI	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS								
5			100	0.0								-SM- SILTY SAND: Brown, loose, dry, with no odor, with no staining.			3.5	BH-6 (0'-1')	
			79	0.0									-ML- SANDY SILT: Brown, loose, wet, with no odor, with no staining.			3.5	BH-6 (2'-3')
			215	0.0										-ML- SANDY SILT: Brown, loose, wet, with no odor, with no staining.			5
Bottom of borehole at 5.0 feet.																	

Sampler Types: <input checked="" type="checkbox"/> Split Spoon <input checked="" type="checkbox"/> Shelby <input checked="" type="checkbox"/> Bulk Sample <input checked="" type="checkbox"/> Grab Sample	<input checked="" type="checkbox"/> Acetate Liner <input checked="" type="checkbox"/> Vane Shear <input checked="" type="checkbox"/> California <input checked="" type="checkbox"/> Test Pit	Operation Types: <input checked="" type="checkbox"/> Mud Rotary <input checked="" type="checkbox"/> Continuous Flight Auger <input checked="" type="checkbox"/> Wash Rotary	<input checked="" type="checkbox"/> Hand Auger <input checked="" type="checkbox"/> Air Rotary <input checked="" type="checkbox"/> Direct Push <input checked="" type="checkbox"/> Core Barrel	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: Adrian Garcia		Drilling Equipment: Hand Auger		Driller: Scarborough Drilling

212C-MD-02200		TETRA TECH		LOG OF BORING BH-7				Page 1 of 1							
Project Name: Warren Unit Water Transfer Line Release															
Borehole Location: GPS: 32.541614°, -103.154367°						Surface Elevation: 3530 ft									
Borehole Number: BH-7						Borehole Diameter (in.): 2		Date Started: 8/19/2020		Date Finished: 8/19/2020					
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:			
												MATERIAL DESCRIPTION		DEPTH (ft)	REMARKS
			-	-								-SM- SILTY SAND: Brown, loose, dry, with no odor, with no staining.		1	BH-7 (0'-1')
Bottom of borehole at 1.0 feet.															

Sampler Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Split Spoon Shelby Bulk Sample Grab Sample </div> <div style="width: 50%;"> Acetate Liner Vane Shear California Test Pit </div> </div>	Operation Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Mud Rotary Continuous Flight Auger Wash Rotary </div> <div style="width: 50%;"> Hand Auger Air Rotary Direct Push Core Barrel </div> </div>	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: John Thurston		Drilling Equipment: Hand Auger
Driller: Scarborough Drilling		

212C-MD-02200		TETRA TECH		LOG OF BORING BH-8				Page 1 of 1						
Project Name: Warren Unit Water Transfer Line Release														
Borehole Location: GPS: 32.541594°, -103.154375°						Surface Elevation: 3530 ft								
Borehole Number: BH-8						Borehole Diameter (in.): 2		Date Started: 8/19/2020		Date Finished: 8/19/2020				
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:		
			ExStik	PID					LL			PI	MATERIAL DESCRIPTION	DEPTH (ft)
			-	-								-SM- SILTY SAND: Brown, loose, dry, with no odor, with no staining. Bottom of borehole at 1.0 feet.		
												1	BH-8 (0'-1')	

Sampler Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Split Spoon Shelby Bulk Sample Grab Sample </div> <div style="width: 50%;"> Acetate Liner Vane Shear California Test Pit </div> </div>	Operation Types: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> Mud Rotary Continuous Flight Auger Wash Rotary </div> <div style="width: 50%;"> Hand Auger Air Rotary Direct Push Core Barrel </div> </div>	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
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Logger: John Thurston	Drilling Equipment: Hand Auger	Driller: Scarborough Drilling
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APPENDIX D

Laboratory Analytical Data



ANALYTICAL REPORT

July 29, 2020

ConocoPhillips - Tetra Tech

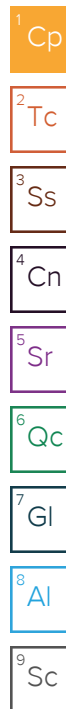
Sample Delivery Group: L1241838
Samples Received: 07/21/2020
Project Number: 212C-MD-02200
Description: Warren Unit Wtr. Transfer

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

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



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BH-2 (0-1') L1241838-01 Solid

Collected by
Adrian

Collected date/time
07/14/20 10:00

Received date/time
07/21/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1514253	1	07/28/20 07:04	07/28/20 07:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1513059	1	07/23/20 11:59	07/23/20 15:19	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1514644	1	07/22/20 16:27	07/24/20 20:04	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1513778	1	07/22/20 16:27	07/23/20 09:21	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1515220	20	07/25/20 20:55	07/26/20 14:52	TJD	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

BH-2 (2-3') L1241838-02 Solid

Collected by
Adrian

Collected date/time
07/14/20 10:00

Received date/time
07/21/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1514253	1	07/28/20 07:04	07/28/20 07:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1513059	1	07/23/20 11:59	07/23/20 15:36	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1514644	1.01	07/22/20 16:27	07/24/20 20:28	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1513778	1	07/22/20 16:27	07/23/20 09:41	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1515220	1	07/25/20 20:55	07/26/20 11:00	TJD	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

BH-2 (4-5') L1241838-03 Solid

Collected by
Adrian

Collected date/time
07/14/20 10:00

Received date/time
07/21/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1514253	1	07/28/20 07:04	07/28/20 07:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1513059	1	07/23/20 11:59	07/23/20 15:54	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1514644	1	07/22/20 16:27	07/24/20 20:52	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1513778	1.1	07/22/20 16:27	07/23/20 10:01	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1515220	1	07/25/20 20:55	07/26/20 11:13	TJD	Mt. Juliet, TN

9 Sc

BH-3 (0-1') L1241838-04 Solid

Collected by
Adrian

Collected date/time
07/14/20 11:00

Received date/time
07/21/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1514253	1	07/28/20 07:04	07/28/20 07:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1513059	1	07/23/20 11:59	07/23/20 16:11	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1514644	1	07/22/20 16:27	07/24/20 21:16	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1513778	1	07/22/20 16:27	07/23/20 10:21	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1515220	1	07/25/20 20:55	07/26/20 11:26	TJD	Mt. Juliet, TN

BH-3 (2-3') L1241838-05 Solid

Collected by
Adrian

Collected date/time
07/14/20 11:00

Received date/time
07/21/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1514253	1	07/28/20 07:04	07/28/20 07:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1513059	1	07/23/20 11:59	07/23/20 17:03	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1514653	1	07/22/20 16:27	07/24/20 12:33	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1513778	1	07/22/20 16:27	07/23/20 10:41	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1515220	1	07/25/20 20:55	07/26/20 12:04	TJD	Mt. Juliet, TN

BH-3 (4-5') L1241838-06 Solid

				Collected by Adrian	Collected date/time 07/14/20 11:00	Received date/time 07/21/20 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1514253	1	07/28/20 07:04	07/28/20 07:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1513059	1	07/23/20 11:59	07/23/20 17:21	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1515130	1.01	07/22/20 16:27	07/25/20 19:58	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1513778	1	07/22/20 16:27	07/23/20 11:01	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1515220	1	07/25/20 20:55	07/26/20 11:39	TJD	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

BH-5 (0-1') L1241838-07 Solid

				Collected by Adrian	Collected date/time 07/14/20 12:00	Received date/time 07/21/20 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1514253	1	07/28/20 07:04	07/28/20 07:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1513059	1	07/23/20 11:59	07/23/20 17:38	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1514653	1	07/22/20 16:27	07/24/20 14:37	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1513778	1	07/22/20 16:27	07/23/20 11:21	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1515220	1	07/25/20 20:55	07/26/20 11:52	TJD	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

BH-5 (2-3') L1241838-08 Solid

				Collected by Adrian	Collected date/time 07/14/20 12:00	Received date/time 07/21/20 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1514253	1	07/28/20 07:04	07/28/20 07:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1513059	1	07/23/20 11:59	07/23/20 17:56	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1514653	1.01	07/22/20 16:27	07/24/20 14:58	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1513778	1	07/22/20 16:27	07/23/20 11:41	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1515220	1	07/25/20 20:55	07/26/20 12:17	TJD	Mt. Juliet, TN

9 Sc

BH-5 (4-5') L1241838-09 Solid

				Collected by Adrian	Collected date/time 07/14/20 12:00	Received date/time 07/21/20 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1514254	1	07/28/20 06:28	07/28/20 07:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1513059	1	07/23/20 11:59	07/23/20 18:13	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1514653	1	07/22/20 16:27	07/24/20 15:19	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1513778	1	07/22/20 16:27	07/23/20 12:01	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1515220	1	07/25/20 20:55	07/26/20 10:08	TJD	Mt. Juliet, TN

BH-6 (0-1') L1241838-10 Solid

				Collected by Adrian	Collected date/time 07/14/20 13:00	Received date/time 07/21/20 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1514254	1	07/28/20 06:28	07/28/20 07:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1513059	1	07/23/20 11:59	07/23/20 18:31	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1514653	1	07/22/20 16:27	07/24/20 15:39	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1513778	1	07/22/20 16:27	07/23/20 12:21	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1515220	1	07/25/20 20:55	07/26/20 10:22	TJD	Mt. Juliet, TN

BH-6 (2-3') L1241838-11 Solid

Collected by
Adrian

Collected date/time
07/14/20 13:00

Received date/time
07/21/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1514254	1	07/28/20 06:28	07/28/20 07:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1513059	1	07/23/20 11:59	07/23/20 18:48	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1514653	1	07/22/20 16:27	07/24/20 16:00	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1513778	1	07/22/20 16:27	07/23/20 12:41	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1515220	1	07/25/20 20:55	07/26/20 12:43	TJD	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn

BH-6 (4-5') L1241838-12 Solid

Collected by
Adrian

Collected date/time
07/14/20 13:00

Received date/time
07/21/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1514254	1	07/28/20 06:28	07/28/20 07:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1513059	1	07/23/20 11:59	07/23/20 19:05	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1514653	1	07/22/20 16:27	07/24/20 16:21	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1513778	1	07/22/20 16:27	07/23/20 13:01	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1515220	1	07/25/20 20:55	07/26/20 10:34	TJD	Mt. Juliet, TN

⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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



Chris McCord
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Collected date/time: 07/14/20 10:00

L1241838

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.0		1	07/28/2020 07:17	WG1514253

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	12.9	J	9.39	20.4	1	07/23/2020 15:19	WG1513059

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0408	B J	0.0221	0.102	1	07/24/2020 20:04	WG1514644
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120		07/24/2020 20:04	WG1514644

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000477	0.00102	1	07/23/2020 09:21	WG1513778
Toluene	U		0.00133	0.00510	1	07/23/2020 09:21	WG1513778
Ethylbenzene	U		0.000752	0.00255	1	07/23/2020 09:21	WG1513778
Total Xylenes	U		0.000898	0.00663	1	07/23/2020 09:21	WG1513778
(S) Toluene-d8	103			75.0-131		07/23/2020 09:21	WG1513778
(S) 4-Bromofluorobenzene	105			67.0-138		07/23/2020 09:21	WG1513778
(S) 1,2-Dichloroethane-d4	120			70.0-130		07/23/2020 09:21	WG1513778

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	420		32.9	81.6	20	07/26/2020 14:52	WG1515220
C28-C40 Oil Range	891		5.59	81.6	20	07/26/2020 14:52	WG1515220
(S) o-Terphenyl	0.000	J7		18.0-148		07/26/2020 14:52	WG1515220

Collected date/time: 07/14/20 10:00

L1241838

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	80.6		1	07/28/2020 07:17	WG1514253

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		11.4	24.8	1	07/23/2020 15:36	WG1513059

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

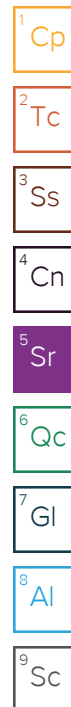
Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0494	B J	0.0272	0.125	1.01	07/24/2020 20:28	WG1514644
(S) a,a,a-Trifluorotoluene(FID)	102			77.0-120		07/24/2020 20:28	WG1514644

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000692	0.00148	1	07/23/2020 09:41	WG1513778
Toluene	U		0.00193	0.00741	1	07/23/2020 09:41	WG1513778
Ethylbenzene	U		0.00109	0.00371	1	07/23/2020 09:41	WG1513778
Total Xylenes	U		0.00130	0.00964	1	07/23/2020 09:41	WG1513778
(S) Toluene-d8	104			75.0-131		07/23/2020 09:41	WG1513778
(S) 4-Bromofluorobenzene	105			67.0-138		07/23/2020 09:41	WG1513778
(S) 1,2-Dichloroethane-d4	112			70.0-130		07/23/2020 09:41	WG1513778

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		2.00	4.96	1	07/26/2020 11:00	WG1515220
C28-C40 Oil Range	U		0.340	4.96	1	07/26/2020 11:00	WG1515220
(S) o-Terphenyl	63.6			18.0-148		07/26/2020 11:00	WG1515220



Collected date/time: 07/14/20 10:00

L1241838

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.4		1	07/28/2020 07:17	WG1514253

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	133		9.96	21.7	1	07/23/2020 15:54	WG1513059

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

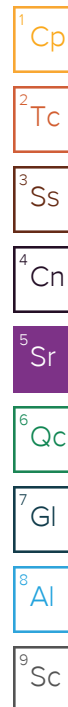
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0358	B J	0.0235	0.108	1	07/24/2020 20:52	WG1514644
(S) a,a,a-Trifluorotoluene(FID)	99.1			77.0-120		07/24/2020 20:52	WG1514644

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000556	0.00119	1.1	07/23/2020 10:01	WG1513778
Toluene	U		0.00155	0.00595	1.1	07/23/2020 10:01	WG1513778
Ethylbenzene	U		0.000878	0.00298	1.1	07/23/2020 10:01	WG1513778
Total Xylenes	U		0.00105	0.00774	1.1	07/23/2020 10:01	WG1513778
(S) Toluene-d8	105			75.0-131		07/23/2020 10:01	WG1513778
(S) 4-Bromofluorobenzene	105			67.0-138		07/23/2020 10:01	WG1513778
(S) 1,2-Dichloroethane-d4	107			70.0-130		07/23/2020 10:01	WG1513778

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.74	4.33	1	07/26/2020 11:13	WG1515220
C28-C40 Oil Range	0.642	J	0.297	4.33	1	07/26/2020 11:13	WG1515220
(S) o-Terphenyl	62.6			18.0-148		07/26/2020 11:13	WG1515220



Collected date/time: 07/14/20 11:00

L1241838

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.0		1	07/28/2020 07:17	WG1514253

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	17.5	J	11.0	23.8	1	07/23/2020 16:11	WG1513059

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0455	B J	0.0258	0.119	1	07/24/2020 21:16	WG1514644
(S) a,a,a-Trifluorotoluene(FID)	100			77.0-120		07/24/2020 21:16	WG1514644

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000645	0.00138	1	07/23/2020 10:21	WG1513778
Toluene	U		0.00180	0.00691	1	07/23/2020 10:21	WG1513778
Ethylbenzene	U		0.00102	0.00345	1	07/23/2020 10:21	WG1513778
Total Xylenes	U		0.00122	0.00898	1	07/23/2020 10:21	WG1513778
(S) Toluene-d8	108			75.0-131		07/23/2020 10:21	WG1513778
(S) 4-Bromofluorobenzene	108			67.0-138		07/23/2020 10:21	WG1513778
(S) 1,2-Dichloroethane-d4	103			70.0-130		07/23/2020 10:21	WG1513778

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.92	4.76	1	07/26/2020 11:26	WG1515220
C28-C40 Oil Range	0.929	J	0.326	4.76	1	07/26/2020 11:26	WG1515220
(S) o-Terphenyl	48.0			18.0-148		07/26/2020 11:26	WG1515220

Collected date/time: 07/14/20 11:00

L1241838

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.7		1	07/28/2020 07:17	WG1514253

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	49.3		9.32	20.3	1	07/23/2020 17:03	WG1513059

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0220	0.101	1	07/24/2020 12:33	WG1514653
(S) a,a,a-Trifluorotoluene(FID)	108			77.0-120		07/24/2020 12:33	WG1514653

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000473	0.00101	1	07/23/2020 10:41	WG1513778
Toluene	U		0.00132	0.00507	1	07/23/2020 10:41	WG1513778
Ethylbenzene	U		0.000747	0.00253	1	07/23/2020 10:41	WG1513778
Total Xylenes	U		0.000892	0.00659	1	07/23/2020 10:41	WG1513778
(S) Toluene-d8	104			75.0-131		07/23/2020 10:41	WG1513778
(S) 4-Bromofluorobenzene	101			67.0-138		07/23/2020 10:41	WG1513778
(S) 1,2-Dichloroethane-d4	114			70.0-130		07/23/2020 10:41	WG1513778

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	1.98	J	1.63	4.05	1	07/26/2020 12:04	WG1515220
C28-C40 Oil Range	8.34		0.278	4.05	1	07/26/2020 12:04	WG1515220
(S) o-Terphenyl	76.2			18.0-148		07/26/2020 12:04	WG1515220

Collected date/time: 07/14/20 11:00

L1241838

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.6		1	07/28/2020 07:17	WG1514253

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	14.3	J	10.9	23.6	1	07/23/2020 17:21	WG1513059

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0259	0.119	1.01	07/25/2020 19:58	WG1515130
(S) a,a,a-Trifluorotoluene(FID)	93.0			77.0-120		07/25/2020 19:58	WG1515130

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000638	0.00137	1	07/23/2020 11:01	WG1513778
Toluene	U		0.00177	0.00683	1	07/23/2020 11:01	WG1513778
Ethylbenzene	U		0.00101	0.00341	1	07/23/2020 11:01	WG1513778
Total Xylenes	U		0.00120	0.00887	1	07/23/2020 11:01	WG1513778
(S) Toluene-d8	104			75.0-131		07/23/2020 11:01	WG1513778
(S) 4-Bromofluorobenzene	102			67.0-138		07/23/2020 11:01	WG1513778
(S) 1,2-Dichloroethane-d4	103			70.0-130		07/23/2020 11:01	WG1513778

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.08	J	1.90	4.73	1	07/26/2020 11:39	WG1515220
C28-C40 Oil Range	5.94		0.324	4.73	1	07/26/2020 11:39	WG1515220
(S) o-Terphenyl	65.8			18.0-148		07/26/2020 11:39	WG1515220

Collected date/time: 07/14/20 12:00

L1241838

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.0		1	07/28/2020 07:17	WG1514253

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	19.2	J	11.0	23.8	1	07/23/2020 17:38	WG1513059

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0258	0.119	1	07/24/2020 14:37	WG1514653
(S) a,a,a-Trifluorotoluene(FID)	106			77.0-120		07/24/2020 14:37	WG1514653

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000646	0.00138	1	07/23/2020 11:21	WG1513778
Toluene	U		0.00180	0.00691	1	07/23/2020 11:21	WG1513778
Ethylbenzene	U		0.00102	0.00346	1	07/23/2020 11:21	WG1513778
Total Xylenes	U		0.00122	0.00899	1	07/23/2020 11:21	WG1513778
(S) Toluene-d8	104			75.0-131		07/23/2020 11:21	WG1513778
(S) 4-Bromofluorobenzene	101			67.0-138		07/23/2020 11:21	WG1513778
(S) 1,2-Dichloroethane-d4	105			70.0-130		07/23/2020 11:21	WG1513778

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.92	4.76	1	07/26/2020 11:52	WG1515220
C28-C40 Oil Range	2.56	J	0.326	4.76	1	07/26/2020 11:52	WG1515220
(S) o-Terphenyl	60.0			18.0-148		07/26/2020 11:52	WG1515220

Collected date/time: 07/14/20 12:00

L1241838

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	86.8		1	07/28/2020 07:17	WG1514253

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	18.2	J	10.6	23.0	1	07/23/2020 17:56	WG1513059

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0252	0.116	1.01	07/24/2020 14:58	WG1514653
(S) a,a,a-Trifluorotoluene(FID)	103			77.0-120		07/24/2020 14:58	WG1514653

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000609	0.00130	1	07/23/2020 11:41	WG1513778
Toluene	U		0.00170	0.00652	1	07/23/2020 11:41	WG1513778
Ethylbenzene	U		0.000962	0.00326	1	07/23/2020 11:41	WG1513778
Total Xylenes	U		0.00115	0.00848	1	07/23/2020 11:41	WG1513778
(S) Toluene-d8	105			75.0-131		07/23/2020 11:41	WG1513778
(S) 4-Bromofluorobenzene	108			67.0-138		07/23/2020 11:41	WG1513778
(S) 1,2-Dichloroethane-d4	119			70.0-130		07/23/2020 11:41	WG1513778

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.86	4.61	1	07/26/2020 12:17	WG1515220
C28-C40 Oil Range	4.11	J	0.316	4.61	1	07/26/2020 12:17	WG1515220
(S) o-Terphenyl	64.9			18.0-148		07/26/2020 12:17	WG1515220

Collected date/time: 07/14/20 12:00

L1241838

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.0		1	07/28/2020 07:01	WG1514254

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	13.9	J	10.3	22.5	1	07/23/2020 18:13	WG1513059

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0244	0.112	1	07/24/2020 15:19	WG1514653
(S) a,a,a-Trifluorotoluene(FID)	108			77.0-120		07/24/2020 15:19	WG1514653

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000583	0.00125	1	07/23/2020 12:01	WG1513778
Toluene	U		0.00162	0.00624	1	07/23/2020 12:01	WG1513778
Ethylbenzene	U		0.000919	0.00312	1	07/23/2020 12:01	WG1513778
Total Xylenes	U		0.00110	0.00811	1	07/23/2020 12:01	WG1513778
(S) Toluene-d8	106			75.0-131		07/23/2020 12:01	WG1513778
(S) 4-Bromofluorobenzene	104			67.0-138		07/23/2020 12:01	WG1513778
(S) 1,2-Dichloroethane-d4	107			70.0-130		07/23/2020 12:01	WG1513778

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.81	4.49	1	07/26/2020 10:08	WG1515220
C28-C40 Oil Range	5.67		0.308	4.49	1	07/26/2020 10:08	WG1515220
(S) o-Terphenyl	66.3			18.0-148		07/26/2020 10:08	WG1515220

Collected date/time: 07/14/20 13:00

L1241838

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	81.3		1	07/28/2020 07:01	WG1514254

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	24.4	J	11.3	24.6	1	07/23/2020 18:31	WG1513059

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0267	0.123	1	07/24/2020 15:39	WG1514653
(S) a,a,a-Trifluorotoluene(FID)	107			77.0-120		07/24/2020 15:39	WG1514653

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000682	0.00146	1	07/23/2020 12:21	WG1513778
Toluene	U		0.00190	0.00730	1	07/23/2020 12:21	WG1513778
Ethylbenzene	U		0.00108	0.00365	1	07/23/2020 12:21	WG1513778
Total Xylenes	U		0.00128	0.00949	1	07/23/2020 12:21	WG1513778
(S) Toluene-d8	103			75.0-131		07/23/2020 12:21	WG1513778
(S) 4-Bromofluorobenzene	104			67.0-138		07/23/2020 12:21	WG1513778
(S) 1,2-Dichloroethane-d4	120			70.0-130		07/23/2020 12:21	WG1513778

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.98	4.92	1	07/26/2020 10:22	WG1515220
C28-C40 Oil Range	U		0.337	4.92	1	07/26/2020 10:22	WG1515220
(S) o-Terphenyl	51.6			18.0-148		07/26/2020 10:22	WG1515220

Collected date/time: 07/14/20 13:00

L1241838

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	99.2		1	07/28/2020 07:01	WG1514254

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	U		9.27	20.2	1	07/23/2020 18:48	WG1513059

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

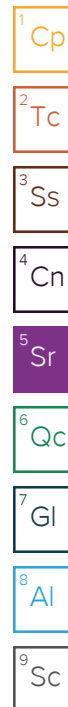
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0219	0.101	1	07/24/2020 16:00	WG1514653
(S) a,a,a-Trifluorotoluene(FID)	106			77.0-120		07/24/2020 16:00	WG1514653

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000471	0.00101	1	07/23/2020 12:41	WG1513778
Toluene	U		0.00131	0.00504	1	07/23/2020 12:41	WG1513778
Ethylbenzene	U		0.000743	0.00252	1	07/23/2020 12:41	WG1513778
Total Xylenes	U		0.000887	0.00655	1	07/23/2020 12:41	WG1513778
(S) Toluene-d8	102			75.0-131		07/23/2020 12:41	WG1513778
(S) 4-Bromofluorobenzene	102			67.0-138		07/23/2020 12:41	WG1513778
(S) 1,2-Dichloroethane-d4	115			70.0-130		07/23/2020 12:41	WG1513778

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	1.78	J	1.62	4.03	1	07/26/2020 12:43	WG1515220
C28-C40 Oil Range	5.64		0.276	4.03	1	07/26/2020 12:43	WG1515220
(S) o-Terphenyl	70.1			18.0-148		07/26/2020 12:43	WG1515220



Collected date/time: 07/14/20 13:00

L1241838

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	88.8		1	07/28/2020 07:01	WG1514254

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	120		10.4	22.5	1	07/23/2020 19:05	WG1513059

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0244	0.113	1	07/24/2020 16:21	WG1514653
(S) a,a,a-Trifluorotoluene(FID)	104			77.0-120		07/24/2020 16:21	WG1514653

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000584	0.00125	1	07/23/2020 13:01	WG1513778
Toluene	U		0.00163	0.00625	1	07/23/2020 13:01	WG1513778
Ethylbenzene	U		0.000922	0.00313	1	07/23/2020 13:01	WG1513778
Total Xylenes	U		0.00110	0.00813	1	07/23/2020 13:01	WG1513778
(S) Toluene-d8	102			75.0-131		07/23/2020 13:01	WG1513778
(S) 4-Bromofluorobenzene	101			67.0-138		07/23/2020 13:01	WG1513778
(S) 1,2-Dichloroethane-d4	116			70.0-130		07/23/2020 13:01	WG1513778

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.81	4.50	1	07/26/2020 10:34	WG1515220
C28-C40 Oil Range	0.428	J	0.308	4.50	1	07/26/2020 10:34	WG1515220
(S) o-Terphenyl	67.6			18.0-148		07/26/2020 10:34	WG1515220

Total Solids by Method 2540 G-2011 [L1241838-01,02,03,04,05,06,07,08](#)

Method Blank (MB)

(MB) R3554042-1 07/28/20 07:17

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1241838-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1241838-03 07/28/20 07:17 • (DUP) R3554042-3 07/28/20 07:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	92.4	92.0	1	0.438		10

Laboratory Control Sample (LCS)

(LCS) R3554042-2 07/28/20 07:17

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

⁷Gl

⁸Al

⁹Sc

Total Solids by Method 2540 G-2011 [L1241838-09,10,11,12](#)

Method Blank (MB)

(MB) R3554040-1 07/28/20 07:01

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

L1241844-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1241844-01 07/28/20 07:01 • (DUP) R3554040-3 07/28/20 07:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Total Solids	71.7	76.1	1	5.91		10

Laboratory Control Sample (LCS)

(LCS) R3554040-2 07/28/20 07:01

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 300.0

[L1241838-01,02,03,04,05,06,07,08,09,10,11,12](#)

Method Blank (MB)

(MB) R3553300-1 07/23/20 13:17

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1241738-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1241738-01 07/23/20 14:09 • (DUP) R3553300-3 07/23/20 14:27

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

L1241903-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1241903-01 07/23/20 21:25 • (DUP) R3553300-6 07/23/20 21:42

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte				%		%
Chloride	99.3	104	1	4.58		20

Laboratory Control Sample (LCS)

(LCS) R3553300-2 07/23/20 13:34

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

L1241845-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1241845-01 07/23/20 19:23 • (MS) R3553300-4 07/23/20 19:40 • (MSD) R3553300-5 07/23/20 20:32

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	500	232	739	759	101	105	1	80.0-120			2.56	20

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

L1241838-01,02,03,04

Method Blank (MB)

(MB) R3553322-2 07/24/20 11:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0480	⌵	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	97.5			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3553322-1 07/24/20 10:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.26	95.6	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			109	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO L1241838-05,07,08,09,10,11,12

Method Blank (MB)

(MB) R3553085-2 07/24/20 11:51

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)	106			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3553085-1 07/24/20 11:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.95	126	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			102	77.0-120	

L1241865-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1241865-01 07/24/20 19:06 • (MS) R3553085-4 07/24/20 20:49 • (MSD) R3553085-5 07/24/20 21:10

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	5450	286	4160	3730	71.1	63.2	1000	10.0-151			10.9	28
(S) a,a,a-Trifluorotoluene(FID)					97.2	97.5		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1241838-06

Method Blank (MB)

(MB) R3553274-2 07/25/20 12:03

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)	94.5			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3553274-1 07/25/20 11:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.93	89.6	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			108	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

[L1241838-01,02,03,04,05,06,07,08,09,10,11,12](#)

Method Blank (MB)

(MB) R3553517-2 07/23/20 05:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	107			75.0-131
(S) 4-Bromofluorobenzene	105			67.0-138
(S) 1,2-Dichloroethane-d4	103			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3553517-1 07/23/20 04:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.120	96.0	70.0-123	
Ethylbenzene	0.125	0.119	95.2	74.0-126	
Toluene	0.125	0.113	90.4	75.0-121	
Xylenes, Total	0.375	0.356	94.9	72.0-127	
(S) Toluene-d8			103	75.0-131	
(S) 4-Bromofluorobenzene			105	67.0-138	
(S) 1,2-Dichloroethane-d4			119	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

[L1241838-01,02,03,04,05,06,07,08,09,10,11,12](#)

Method Blank (MB)

(MB) R3553436-1 07/26/20 09:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	73.9			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3553436-2 07/26/20 09:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	38.9	77.8	50.0-150	
(S) o-Terphenyl			77.6	18.0-148	

L1243416-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1243416-04 07/28/20 12:11 • (MS) R3553978-1 07/28/20 12:24 • (MSD) R3553978-2 07/28/20 12:37

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 %
C10-C28 Diesel Range	48.9	8.98	59.3	41.1	103	66.6	2	50.0-150		J3	36.3	20
(S) o-Terphenyl					112	49.4		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

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.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

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

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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

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

State Accreditations

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

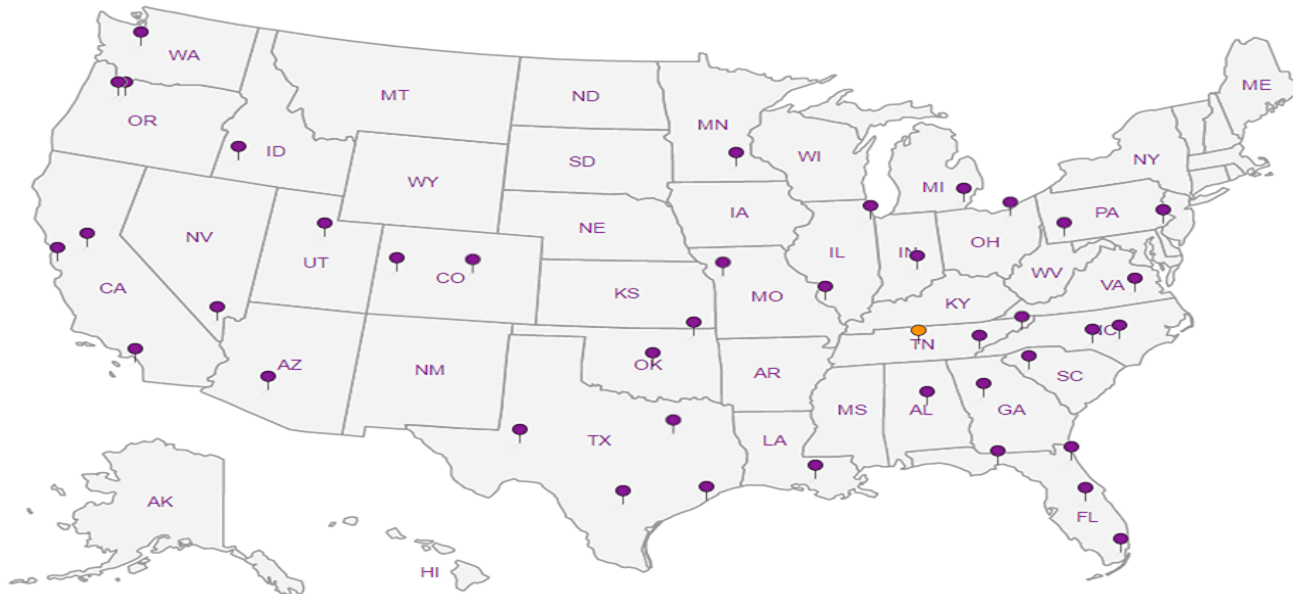
Third Party Federal Accreditations

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

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

Our Locations

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



L1241838



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:	Warren Unit Wtr. Transfer	Contact Info:	Email: christian.llull@tetrattech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-02200
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	Adrian
Comments: COPTETRA Acctnum			

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	BTEX 8260B / 624	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba C Cd Cr Cu Hg Mn Ni Pb Se Tl V Zn	TCLP Metals Ag As Ba C Cd Cr Cu Hg Mn Ni Pb Se Tl V Zn	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 TD	General Water Chemistry	Anion/Cation Balance	TPH 8015R	HOLD			
		YEAR: 2020		WATER	SOIL	HCL	HNO ₃	ICE	NONE																										
		DATE	TIME																																
-01	BH-2 (0-1')	7/14/2020	1000		X			X		1	N	X		X																					
-02	BH-2 (2-3')	7/14/2020	1000		X			X		1	N	X		X																					
-03	BH-2 (4-5')	7/14/2020	1000		X			X		1	N	X		X																					
-04	BH-3 (0-1')	7/14/2020	1100		X			X		1	N	X		X																					
-05	BH-3 (2-3')	7/14/2020	1100		X			X		1	N	X		X																					
-06	BH-3 (4-5')	7/14/2020	1100		X			X		1	N	X		X																					
-07	BH-5 (0-1')	7/14/2020	1200		X			X		1	N	X		X																					
-08	BH-5 (2-3')	7/14/2020	1200		X			X		1	N	X		X																					
-09	BH-5 (4-5')	7/14/2020	1200		X			X		1	N	X		X																					
-10	BH-6 (0-1')	7/14/2020	1300		X			X		1	N	X		X																					

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>Adrian Llull</i>	7/20/20	1300	<i>Adrian Llull</i>	7/20/20	1300
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>Adrian Llull</i>	7/20/20	1600	<i>Federico</i>	7/20/20	1600
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
			<i>Deanna</i>	7/20/20	8:45

LAB USE ONLY	REMARKS:
	<input checked="" type="checkbox"/> Standard
	<input type="checkbox"/> RUSH: Same Day 24 hr. 48 hr. 72 hr.
	<input type="checkbox"/> Rush Charges Authorized
Sample Temperature:	<input type="checkbox"/> Special Report Limits or TRRP Report

RAD SCREEN: <0.5 mR/hr

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

MPA3 $1.8 - .5 = 1.3$

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: <u>COPTETRA</u>		<u>61241838</u>	
Cooler Received/Opened On: <u>7 12 / 20</u>		Temperature: <u>1.3</u>	
Received By: <u>DECARSO GOODE</u>			
Signature: <u>[Signature]</u>			
Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	<u>/</u>	<u>/</u>	
COC Signed / Accurate?		<u>/</u>	
Bottles arrive intact?		<u>/</u>	
Correct bottles used?		<u>/</u>	
Sufficient volume sent?		<u>/</u>	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			



ANALYTICAL REPORT

August 31, 2020

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1253291
Samples Received: 08/21/2020
Project Number: 212C-MD-02200
Description: Warren Transfer Unit Release

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

Entire Report Reviewed By:

Erica McNeese
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



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

BH-1 (0-1) L1253291-01 Solid

				Collected by Adrian	Collected date/time 08/19/20 08:00	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532745	1	08/26/20 19:38	08/26/20 20:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 12:45	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/27/20 20:59	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1532645	1	08/26/20 10:13	08/26/20 12:25	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1532731	1	08/27/20 12:58	08/27/20 18:20	JN	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

BH-1 (2-3) L1253291-02 Solid

				Collected by Adrian	Collected date/time 08/19/20 08:10	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532745	1	08/26/20 19:38	08/26/20 20:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 12:54	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/27/20 21:22	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1532645	1	08/26/20 10:13	08/26/20 15:16	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1532731	1	08/27/20 12:58	08/28/20 07:59	JDG	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

BH-1 (4-5) L1253291-03 Solid

				Collected by Adrian	Collected date/time 08/19/20 08:20	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532745	1	08/26/20 19:38	08/26/20 20:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531556	1	08/26/20 09:59	08/26/20 18:12	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/27/20 21:45	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1532645	1	08/26/20 10:13	08/26/20 15:35	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1532731	1	08/27/20 12:58	08/27/20 16:52	JN	Mt. Juliet, TN

9 Sc

BH-4 (0-1) L1253291-04 Solid

				Collected by Adrian	Collected date/time 08/19/20 08:30	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532745	1	08/26/20 19:38	08/26/20 20:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531556	1	08/26/20 09:59	08/26/20 18:21	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/27/20 22:07	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1532645	1	08/26/20 10:13	08/26/20 15:54	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1532731	1	08/27/20 12:58	08/27/20 18:06	JN	Mt. Juliet, TN

BH-4 (2-3) L1253291-05 Solid

				Collected by Adrian	Collected date/time 08/19/20 08:40	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532745	1	08/26/20 19:38	08/26/20 20:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531556	1	08/26/20 09:59	08/26/20 18:30	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/27/20 22:29	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1532645	1	08/26/20 10:13	08/26/20 16:12	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1532731	1	08/27/20 12:58	08/27/20 18:38	JN	Mt. Juliet, TN

BH-4 (4-5) L1253291-06 Solid

				Collected by Adrian	Collected date/time 08/19/20 08:50	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532745	1	08/26/20 19:38	08/26/20 20:17	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531556	1	08/26/20 09:59	08/26/20 18:40	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/27/20 22:52	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1532645	1	08/26/20 10:13	08/26/20 16:31	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1532731	1	08/27/20 12:58	08/27/20 18:52	JN	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

AH-1 (0-1) L1253291-07 Solid

				Collected by Adrian	Collected date/time 08/19/20 09:00	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532747	1	08/27/20 12:37	08/27/20 12:47	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 13:13	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/27/20 23:15	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1532645	1	08/26/20 10:13	08/26/20 16:50	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1532731	1	08/27/20 12:58	08/27/20 19:06	JN	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

AH-1 (2-3) L1253291-08 Solid

				Collected by Adrian	Collected date/time 08/19/20 09:10	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532747	1	08/27/20 12:37	08/27/20 12:47	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 13:23	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/27/20 23:37	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1532645	1	08/26/20 10:13	08/26/20 17:09	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1532731	1	08/27/20 12:58	08/27/20 17:20	JN	Mt. Juliet, TN

9 Sc

AH-1 (4-5) L1253291-09 Solid

				Collected by Adrian	Collected date/time 08/19/20 09:20	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532747	1	08/27/20 12:37	08/27/20 12:47	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 13:32	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/27/20 23:59	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1532645	1	08/26/20 10:13	08/26/20 17:28	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1532731	1	08/27/20 12:58	08/27/20 17:06	JN	Mt. Juliet, TN

AH-2 (0-1) L1253291-10 Solid

				Collected by Adrian	Collected date/time 08/19/20 09:30	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532747	1	08/27/20 12:37	08/27/20 12:47	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 13:42	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/28/20 00:22	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1532645	1	08/26/20 10:13	08/26/20 17:47	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1532731	1	08/27/20 12:58	08/27/20 17:53	JN	Mt. Juliet, TN

AH-2 (2-3) L1253291-11 Solid

Collected by
Adrian

Collected date/time
08/19/20 09:40

Received date/time
08/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532747	1	08/27/20 12:37	08/27/20 12:47	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 13:51	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/28/20 00:44	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1532645	1	08/26/20 10:13	08/26/20 18:06	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1533025	1	08/26/20 21:42	08/27/20 13:07	TJD	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

AH-2 (4-5) L1253291-12 Solid

Collected by
Adrian

Collected date/time
08/19/20 09:50

Received date/time
08/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532747	1	08/27/20 12:37	08/27/20 12:47	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 14:20	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/28/20 01:07	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1532645	1	08/26/20 10:13	08/26/20 18:25	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1533025	1	08/26/20 21:42	08/27/20 13:20	TJD	Mt. Juliet, TN

AH-3 (0-1) L1253291-13 Solid

Collected by
Adrian

Collected date/time
08/19/20 10:00

Received date/time
08/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532747	1	08/27/20 12:37	08/27/20 12:47	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 14:48	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/28/20 01:29	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1533076	1	08/26/20 10:13	08/26/20 23:41	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1533025	1	08/26/20 21:42	08/27/20 13:33	TJD	Mt. Juliet, TN

AH-3 (2-3) L1253291-14 Solid

Collected by
Adrian

Collected date/time
08/19/20 10:10

Received date/time
08/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532747	1	08/27/20 12:37	08/27/20 12:47	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 14:58	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/28/20 01:52	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1533076	1	08/26/20 10:13	08/27/20 00:00	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1533025	1	08/26/20 21:42	08/27/20 13:47	TJD	Mt. Juliet, TN

AH-3 (4-5) L1253291-15 Solid

Collected by
Adrian

Collected date/time
08/19/20 10:20

Received date/time
08/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532747	1	08/27/20 12:37	08/27/20 12:47	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 15:08	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/28/20 02:14	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1533076	1	08/26/20 10:13	08/27/20 00:19	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1533025	1	08/26/20 21:42	08/27/20 14:00	TJD	Mt. Juliet, TN

AH-4 (0-1) L1253291-16 Solid

				Collected by Adrian	Collected date/time 08/19/20 10:30	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532747	1	08/27/20 12:37	08/27/20 12:47	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 15:17	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/28/20 02:37	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1533076	1	08/26/20 10:13	08/27/20 00:37	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1533025	1	08/26/20 21:42	08/27/20 14:13	TJD	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

AH-4 (2-3) L1253291-17 Solid

				Collected by Adrian	Collected date/time 08/19/20 10:40	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532749	1	08/27/20 12:19	08/27/20 12:34	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 15:26	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/28/20 02:59	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1533076	1	08/26/20 10:13	08/27/20 00:56	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1533025	1	08/26/20 21:42	08/27/20 14:26	TJD	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

AH-4 (4-5) L1253291-18 Solid

				Collected by Adrian	Collected date/time 08/19/20 10:50	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532749	1	08/27/20 12:19	08/27/20 12:34	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 15:36	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/28/20 03:22	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1533076	1	08/26/20 10:13	08/27/20 01:15	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1533025	1	08/26/20 21:42	08/27/20 14:39	TJD	Mt. Juliet, TN

9 Sc

AH-5 (0-1) L1253291-19 Solid

				Collected by Adrian	Collected date/time 08/19/20 11:00	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532749	1	08/27/20 12:19	08/27/20 12:34	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 16:14	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533658	1	08/26/20 10:13	08/28/20 03:44	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1533076	1	08/26/20 10:13	08/27/20 01:34	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1533025	1	08/26/20 21:42	08/27/20 14:52	TJD	Mt. Juliet, TN

AH-6 (0-1) L1253291-20 Solid

				Collected by Adrian	Collected date/time 08/19/20 11:30	Received date/time 08/21/20 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532749	1	08/27/20 12:19	08/27/20 12:34	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 16:23	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533805	1	08/26/20 10:13	08/28/20 05:46	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1533076	1	08/26/20 10:13	08/27/20 01:53	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1533025	1	08/26/20 21:42	08/27/20 15:32	TJD	Mt. Juliet, TN

AH-7 (0-1) L1253291-21 Solid

Collected by
Adrian

Collected date/time
08/19/20 11:40

Received date/time
08/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532749	1	08/27/20 12:19	08/27/20 12:34	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 16:32	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533805	1	08/26/20 10:13	08/28/20 06:07	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1533076	1	08/26/20 10:13	08/27/20 02:12	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1533025	1	08/26/20 21:42	08/27/20 15:47	TJD	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn

BH-7 (0-1) L1253291-22 Solid

Collected by
Adrian

Collected date/time
08/19/20 11:50

Received date/time
08/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532749	1	08/27/20 12:19	08/27/20 12:34	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 16:42	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533805	1	08/26/20 10:13	08/28/20 06:27	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1533076	1	08/26/20 10:13	08/27/20 02:31	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1533025	10	08/26/20 21:42	08/27/20 17:04	TJD	Mt. Juliet, TN

⁵ Sr⁶ Qc⁷ Gl⁸ Al

BH-8 (0-1) L1253291-23 Solid

Collected by
Adrian

Collected date/time
08/19/20 12:00

Received date/time
08/21/20 09:30

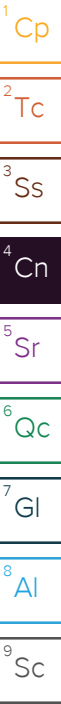
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1532749	1	08/27/20 12:19	08/27/20 12:34	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1531557	1	08/26/20 09:13	08/26/20 16:51	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1533805	1	08/26/20 10:13	08/28/20 06:48	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1533076	1	08/26/20 10:13	08/27/20 02:50	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1533575	50	08/27/20 23:56	08/30/20 10:51	JN	Mt. Juliet, TN

⁹ Sc

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



Collected date/time: 08/19/20 08:00

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	99.6		1	08/26/2020 20:17	WG1532745

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.23	20.1	1	08/26/2020 12:45	WG1531557

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

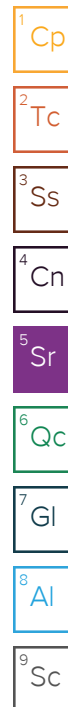
Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0218	0.100	1	08/27/2020 20:59	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.2			77.0-120		08/27/2020 20:59	WG1533658

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000470	0.00101	1	08/26/2020 12:25	WG1532645
Toluene	U		0.00131	0.00504	1	08/26/2020 12:25	WG1532645
Ethylbenzene	U		0.000742	0.00252	1	08/26/2020 12:25	WG1532645
Total Xylenes	U		0.000886	0.00655	1	08/26/2020 12:25	WG1532645
(S) Toluene-d8	102			75.0-131		08/26/2020 12:25	WG1532645
(S) 4-Bromofluorobenzene	99.6			67.0-138		08/26/2020 12:25	WG1532645
(S) 1,2-Dichloroethane-d4	107			70.0-130		08/26/2020 12:25	WG1532645

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.83	J	1.62	4.01	1	08/27/2020 18:20	WG1532731
C28-C40 Oil Range	21.8		0.275	4.01	1	08/27/2020 18:20	WG1532731
(S) o-Terphenyl	78.0			18.0-148		08/27/2020 18:20	WG1532731



Collected date/time: 08/19/20 08:10

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.2		1	08/26/2020 20:17	WG1532745

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	14.4	J	9.28	20.2	1	08/26/2020 12:54	WG1531557

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0219	0.101	1	08/27/2020 21:22	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.8			77.0-120		08/27/2020 21:22	WG1533658

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	08/26/2020 15:16	WG1532645
Toluene	U		0.00132	0.00508	1	08/26/2020 15:16	WG1532645
Ethylbenzene	U		0.000749	0.00254	1	08/26/2020 15:16	WG1532645
Total Xylenes	U		0.000895	0.00661	1	08/26/2020 15:16	WG1532645
(S) Toluene-d8	103			75.0-131		08/26/2020 15:16	WG1532645
(S) 4-Bromofluorobenzene	97.9			67.0-138		08/26/2020 15:16	WG1532645
(S) 1,2-Dichloroethane-d4	81.6			70.0-130		08/26/2020 15:16	WG1532645

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.62	4.03	1	08/28/2020 07:59	WG1532731
C28-C40 Oil Range	3.56	J	0.276	4.03	1	08/28/2020 07:59	WG1532731
(S) o-Terphenyl	77.2			18.0-148		08/28/2020 07:59	WG1532731

Collected date/time: 08/19/20 08:20

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.1		1	08/26/2020 20:17	WG1532745

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.38	20.4	1	08/26/2020 18:12	WG1531556

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0221	0.102	1	08/27/2020 21:45	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.5			77.0-120		08/27/2020 21:45	WG1533658

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000485	0.00104	1	08/26/2020 15:35	WG1532645
Toluene	U		0.00135	0.00519	1	08/26/2020 15:35	WG1532645
Ethylbenzene	U		0.000765	0.00260	1	08/26/2020 15:35	WG1532645
Total Xylenes	U		0.000914	0.00675	1	08/26/2020 15:35	WG1532645
(S) Toluene-d8	105			75.0-131		08/26/2020 15:35	WG1532645
(S) 4-Bromofluorobenzene	96.3			67.0-138		08/26/2020 15:35	WG1532645
(S) 1,2-Dichloroethane-d4	77.4			70.0-130		08/26/2020 15:35	WG1532645

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.64	4.08	1	08/27/2020 16:52	WG1532731
C28-C40 Oil Range	0.340	J	0.279	4.08	1	08/27/2020 16:52	WG1532731
(S) o-Terphenyl	73.2			18.0-148		08/27/2020 16:52	WG1532731

Collected date/time: 08/19/20 08:30

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	99.3		1	08/26/2020 20:17	WG1532745

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.26	20.1	1	08/26/2020 18:21	WG1531556

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0218	0.101	1	08/27/2020 22:07	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.4			77.0-120		08/27/2020 22:07	WG1533658

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000473	0.00101	1	08/26/2020 15:54	WG1532645
Toluene	U		0.00132	0.00507	1	08/26/2020 15:54	WG1532645
Ethylbenzene	0.000836	J	0.000747	0.00253	1	08/26/2020 15:54	WG1532645
Total Xylenes	U		0.000892	0.00659	1	08/26/2020 15:54	WG1532645
(S) Toluene-d8	105			75.0-131		08/26/2020 15:54	WG1532645
(S) 4-Bromofluorobenzene	97.1			67.0-138		08/26/2020 15:54	WG1532645
(S) 1,2-Dichloroethane-d4	81.4			70.0-130		08/26/2020 15:54	WG1532645

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.62	4.03	1	08/27/2020 18:06	WG1532731
C28-C40 Oil Range	5.06		0.276	4.03	1	08/27/2020 18:06	WG1532731
(S) o-Terphenyl	73.1			18.0-148		08/27/2020 18:06	WG1532731

Collected date/time: 08/19/20 08:40

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	99.7		1	08/26/2020 20:17	WG1532745

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.23	20.1	1	08/26/2020 18:30	WG1531556

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

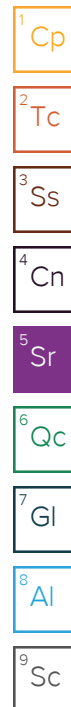
Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0218	0.100	1	08/27/2020 22:29	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	95.6			77.0-120		08/27/2020 22:29	WG1533658

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000470	0.00101	1	08/26/2020 16:12	WG1532645
Toluene	0.00154	J	0.00131	0.00503	1	08/26/2020 16:12	WG1532645
Ethylbenzene	U		0.000741	0.00252	1	08/26/2020 16:12	WG1532645
Total Xylenes	U		0.000885	0.00654	1	08/26/2020 16:12	WG1532645
(S) Toluene-d8	103			75.0-131		08/26/2020 16:12	WG1532645
(S) 4-Bromofluorobenzene	95.8			67.0-138		08/26/2020 16:12	WG1532645
(S) 1,2-Dichloroethane-d4	80.4			70.0-130		08/26/2020 16:12	WG1532645

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	4.17		1.61	4.01	1	08/27/2020 18:38	WG1532731
C28-C40 Oil Range	10.8		0.275	4.01	1	08/27/2020 18:38	WG1532731
(S) o-Terphenyl	80.9			18.0-148		08/27/2020 18:38	WG1532731



Collected date/time: 08/19/20 08:50

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.2		1	08/26/2020 20:17	WG1532745

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	44.7		9.27	20.2	1	08/26/2020 18:40	WG1531556

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0219	0.101	1	08/27/2020 22:52	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.7			77.0-120		08/27/2020 22:52	WG1533658

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		0.000474	0.00102	1	08/26/2020 16:31	WG1532645
Toluene	U		0.00132	0.00508	1	08/26/2020 16:31	WG1532645
Ethylbenzene	U		0.000748	0.00254	1	08/26/2020 16:31	WG1532645
Total Xylenes	0.00109	J	0.000894	0.00660	1	08/26/2020 16:31	WG1532645
(S) Toluene-d8	105			75.0-131		08/26/2020 16:31	WG1532645
(S) 4-Bromofluorobenzene	93.6			67.0-138		08/26/2020 16:31	WG1532645
(S) 1,2-Dichloroethane-d4	79.1			70.0-130		08/26/2020 16:31	WG1532645

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3.10	J	1.62	4.03	1	08/27/2020 18:52	WG1532731
C28-C40 Oil Range	9.51		0.276	4.03	1	08/27/2020 18:52	WG1532731
(S) o-Terphenyl	79.9			18.0-148		08/27/2020 18:52	WG1532731

Collected date/time: 08/19/20 09:00

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.8		1	08/27/2020 12:47	WG1532747

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		9.22	20.0	1	08/26/2020 13:13	WG1531557

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0217	0.100	1	08/27/2020 23:15	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.5			77.0-120		08/27/2020 23:15	WG1533658

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		0.000469	0.00100	1	08/26/2020 16:50	WG1532645
Toluene	U		0.00131	0.00502	1	08/26/2020 16:50	WG1532645
Ethylbenzene	U		0.000740	0.00251	1	08/26/2020 16:50	WG1532645
Total Xylenes	U		0.000884	0.00653	1	08/26/2020 16:50	WG1532645
(S) Toluene-d8	103			75.0-131		08/26/2020 16:50	WG1532645
(S) 4-Bromofluorobenzene	95.9			67.0-138		08/26/2020 16:50	WG1532645
(S) 1,2-Dichloroethane-d4	79.3			70.0-130		08/26/2020 16:50	WG1532645

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.56	J	1.61	4.01	1	08/27/2020 19:06	WG1532731
C28-C40 Oil Range	6.35		0.275	4.01	1	08/27/2020 19:06	WG1532731
(S) o-Terphenyl	75.2			18.0-148		08/27/2020 19:06	WG1532731

Collected date/time: 08/19/20 09:10

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.5		1	08/27/2020 12:47	WG1532747

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.34	20.3	1	08/26/2020 13:23	WG1531557

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

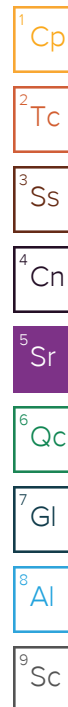
Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0220	0.101	1	08/27/2020 23:37	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.8			77.0-120		08/27/2020 23:37	WG1533658

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000481	0.00103	1	08/26/2020 17:09	WG1532645
Toluene	U		0.00134	0.00515	1	08/26/2020 17:09	WG1532645
Ethylbenzene	U		0.000759	0.00257	1	08/26/2020 17:09	WG1532645
Total Xylenes	U		0.000906	0.00669	1	08/26/2020 17:09	WG1532645
(S) Toluene-d8	103			75.0-131		08/26/2020 17:09	WG1532645
(S) 4-Bromofluorobenzene	94.1			67.0-138		08/26/2020 17:09	WG1532645
(S) 1,2-Dichloroethane-d4	79.5			70.0-130		08/26/2020 17:09	WG1532645

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.63	4.06	1	08/27/2020 17:20	WG1532731
C28-C40 Oil Range	0.434	J	0.278	4.06	1	08/27/2020 17:20	WG1532731
(S) o-Terphenyl	77.3			18.0-148		08/27/2020 17:20	WG1532731



Collected date/time: 08/19/20 09:20

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.1		1	08/27/2020 12:47	WG1532747

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		9.38	20.4	1	08/26/2020 13:32	WG1531557

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0221	0.102	1	08/27/2020 23:59	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	97.3			77.0-120		08/27/2020 23:59	WG1533658

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		0.000486	0.00104	1	08/26/2020 17:28	WG1532645
Toluene	U		0.00135	0.00520	1	08/26/2020 17:28	WG1532645
Ethylbenzene	U		0.000766	0.00260	1	08/26/2020 17:28	WG1532645
Total Xylenes	U		0.000915	0.00676	1	08/26/2020 17:28	WG1532645
(S) Toluene-d8	106			75.0-131		08/26/2020 17:28	WG1532645
(S) 4-Bromofluorobenzene	95.0			67.0-138		08/26/2020 17:28	WG1532645
(S) 1,2-Dichloroethane-d4	85.9			70.0-130		08/26/2020 17:28	WG1532645

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.64	4.08	1	08/27/2020 17:06	WG1532731
C28-C40 Oil Range	0.360	J	0.279	4.08	1	08/27/2020 17:06	WG1532731
(S) o-Terphenyl	66.9			18.0-148		08/27/2020 17:06	WG1532731

Collected date/time: 08/19/20 09:30

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.5		1	08/27/2020 12:47	WG1532747

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		9.34	20.3	1	08/26/2020 13:42	WG1531557

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0220	0.102	1	08/28/2020 00:22	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.9			77.0-120		08/28/2020 00:22	WG1533658

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		0.000482	0.00103	1	08/26/2020 17:47	WG1532645
Toluene	U		0.00134	0.00516	1	08/26/2020 17:47	WG1532645
Ethylbenzene	U		0.000760	0.00258	1	08/26/2020 17:47	WG1532645
Total Xylenes	U		0.000908	0.00670	1	08/26/2020 17:47	WG1532645
(S) Toluene-d8	106			75.0-131		08/26/2020 17:47	WG1532645
(S) 4-Bromofluorobenzene	98.8			67.0-138		08/26/2020 17:47	WG1532645
(S) 1,2-Dichloroethane-d4	85.4			70.0-130		08/26/2020 17:47	WG1532645

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	4.00	J	1.64	4.06	1	08/27/2020 17:53	WG1532731
C28-C40 Oil Range	2.97	J	0.278	4.06	1	08/27/2020 17:53	WG1532731
(S) o-Terphenyl	78.1			18.0-148		08/27/2020 17:53	WG1532731

Collected date/time: 08/19/20 09:40

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.9		1	08/27/2020 12:47	WG1532747

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		10.2	22.2	1	08/26/2020 13:51	WG1531557

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0241	0.111	1	08/28/2020 00:44	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	97.1			77.0-120		08/28/2020 00:44	WG1533658

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000572	0.00122	1	08/26/2020 18:06	WG1532645
Toluene	U		0.00159	0.00612	1	08/26/2020 18:06	WG1532645
Ethylbenzene	U		0.000902	0.00306	1	08/26/2020 18:06	WG1532645
Total Xylenes	U		0.00108	0.00796	1	08/26/2020 18:06	WG1532645
(S) Toluene-d8	104			75.0-131		08/26/2020 18:06	WG1532645
(S) 4-Bromofluorobenzene	96.3			67.0-138		08/26/2020 18:06	WG1532645
(S) 1,2-Dichloroethane-d4	83.4			70.0-130		08/26/2020 18:06	WG1532645

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.79	4.45	1	08/27/2020 13:07	WG1533025
C28-C40 Oil Range	4.20	J	0.305	4.45	1	08/27/2020 13:07	WG1533025
(S) o-Terphenyl	74.5			18.0-148		08/27/2020 13:07	WG1533025

Collected date/time: 08/19/20 09:50

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.6		1	08/27/2020 12:47	WG1532747

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		9.23	20.1	1	08/26/2020 14:20	WG1531557

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0218	0.100	1	08/28/2020 01:07	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.4			77.0-120		08/28/2020 01:07	WG1533658

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	J3	0.000470	0.00101	1	08/26/2020 18:25	WG1532645
Toluene	U	J3	0.00131	0.00504	1	08/26/2020 18:25	WG1532645
Ethylbenzene	U	J3	0.000742	0.00252	1	08/26/2020 18:25	WG1532645
Total Xylenes	U		0.000886	0.00655	1	08/26/2020 18:25	WG1532645
(S) Toluene-d8	105			75.0-131		08/26/2020 18:25	WG1532645
(S) 4-Bromofluorobenzene	95.6			67.0-138		08/26/2020 18:25	WG1532645
(S) 1,2-Dichloroethane-d4	79.1			70.0-130		08/26/2020 18:25	WG1532645

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.62	4.01	1	08/27/2020 13:20	WG1533025
C28-C40 Oil Range	3.74	J	0.275	4.01	1	08/27/2020 13:20	WG1533025
(S) o-Terphenyl	77.7			18.0-148		08/27/2020 13:20	WG1533025

Collected date/time: 08/19/20 10:00

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.2		1	08/27/2020 12:47	WG1532747

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		9.27	20.2	1	08/26/2020 14:48	WG1531557

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0219	0.101	1	08/28/2020 01:29	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.9			77.0-120		08/28/2020 01:29	WG1533658

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		0.000474	0.00102	1	08/26/2020 23:41	WG1533076
Toluene	U		0.00132	0.00508	1	08/26/2020 23:41	WG1533076
Ethylbenzene	U		0.000749	0.00254	1	08/26/2020 23:41	WG1533076
Total Xylenes	U		0.000894	0.00660	1	08/26/2020 23:41	WG1533076
(S) Toluene-d8	100			75.0-131		08/26/2020 23:41	WG1533076
(S) 4-Bromofluorobenzene	98.3			67.0-138		08/26/2020 23:41	WG1533076
(S) 1,2-Dichloroethane-d4	98.8			70.0-130		08/26/2020 23:41	WG1533076

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.62	4.03	1	08/27/2020 13:33	WG1533025
C28-C40 Oil Range	5.02		0.276	4.03	1	08/27/2020 13:33	WG1533025
(S) o-Terphenyl	82.7			18.0-148		08/27/2020 13:33	WG1533025

Collected date/time: 08/19/20 10:10

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.3		1	08/27/2020 12:47	WG1532747

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	24.6	1	08/26/2020 14:58	WG1531557

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0267	0.123	1	08/28/2020 01:52	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.9			77.0-120		08/28/2020 01:52	WG1533658

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		0.000682	0.00146	1	08/27/2020 00:00	WG1533076
Toluene	U		0.00190	0.00730	1	08/27/2020 00:00	WG1533076
Ethylbenzene	U		0.00108	0.00365	1	08/27/2020 00:00	WG1533076
Total Xylenes	U		0.00129	0.00949	1	08/27/2020 00:00	WG1533076
(S) Toluene-d8	103			75.0-131		08/27/2020 00:00	WG1533076
(S) 4-Bromofluorobenzene	101			67.0-138		08/27/2020 00:00	WG1533076
(S) 1,2-Dichloroethane-d4	93.8			70.0-130		08/27/2020 00:00	WG1533076

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.98	4.92	1	08/27/2020 13:47	WG1533025
C28-C40 Oil Range	0.391	J	0.337	4.92	1	08/27/2020 13:47	WG1533025
(S) o-Terphenyl	54.8			18.0-148		08/27/2020 13:47	WG1533025

Collected date/time: 08/19/20 10:20

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.3		1	08/27/2020 12:47	WG1532747

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.55	20.8	1	08/26/2020 15:08	WG1531557

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

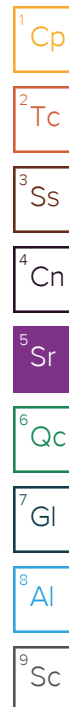
Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0225	0.104	1	08/28/2020 02:14	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.5			77.0-120		08/28/2020 02:14	WG1533658

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000503	0.00108	1	08/27/2020 00:19	WG1533076
Toluene	U		0.00140	0.00539	1	08/27/2020 00:19	WG1533076
Ethylbenzene	U		0.000794	0.00269	1	08/27/2020 00:19	WG1533076
Total Xylenes	U		0.000948	0.00700	1	08/27/2020 00:19	WG1533076
(S) Toluene-d8	105			75.0-131		08/27/2020 00:19	WG1533076
(S) 4-Bromofluorobenzene	94.0			67.0-138		08/27/2020 00:19	WG1533076
(S) 1,2-Dichloroethane-d4	92.2			70.0-130		08/27/2020 00:19	WG1533076

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.67	4.15	1	08/27/2020 14:00	WG1533025
C28-C40 Oil Range	0.729	J	0.285	4.15	1	08/27/2020 14:00	WG1533025
(S) o-Terphenyl	79.7			18.0-148		08/27/2020 14:00	WG1533025



Collected date/time: 08/19/20 10:30

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.1		1	08/27/2020 12:47	WG1532747

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		9.29	20.2	1	08/26/2020 15:17	WG1531557

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0219	0.101	1	08/28/2020 02:37	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.4			77.0-120		08/28/2020 02:37	WG1533658

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		0.000476	0.00102	1	08/27/2020 00:37	WG1533076
Toluene	U		0.00132	0.00509	1	08/27/2020 00:37	WG1533076
Ethylbenzene	U		0.000751	0.00255	1	08/27/2020 00:37	WG1533076
Total Xylenes	U		0.000896	0.00662	1	08/27/2020 00:37	WG1533076
(S) Toluene-d8	104			75.0-131		08/27/2020 00:37	WG1533076
(S) 4-Bromofluorobenzene	95.1			67.0-138		08/27/2020 00:37	WG1533076
(S) 1,2-Dichloroethane-d4	94.9			70.0-130		08/27/2020 00:37	WG1533076

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	11.2		1.62	4.04	1	08/27/2020 14:13	WG1533025
C28-C40 Oil Range	24.3		0.277	4.04	1	08/27/2020 14:13	WG1533025
(S) o-Terphenyl	82.9			18.0-148		08/27/2020 14:13	WG1533025

Collected date/time: 08/19/20 10:40

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.9		1	08/27/2020 12:34	WG1532749

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		9.30	20.2	1	08/26/2020 15:26	WG1531557

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0219	0.101	1	08/28/2020 02:59	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	96.5			77.0-120		08/28/2020 02:59	WG1533658

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		0.000478	0.00102	1	08/27/2020 00:56	WG1533076
Toluene	U		0.00133	0.00511	1	08/27/2020 00:56	WG1533076
Ethylbenzene	U		0.000754	0.00256	1	08/27/2020 00:56	WG1533076
Total Xylenes	U		0.000900	0.00665	1	08/27/2020 00:56	WG1533076
(S) Toluene-d8	105			75.0-131		08/27/2020 00:56	WG1533076
(S) 4-Bromofluorobenzene	93.7			67.0-138		08/27/2020 00:56	WG1533076
(S) 1,2-Dichloroethane-d4	89.1			70.0-130		08/27/2020 00:56	WG1533076

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3.25	J	1.63	4.05	1	08/27/2020 14:26	WG1533025
C28-C40 Oil Range	6.39		0.277	4.05	1	08/27/2020 14:26	WG1533025
(S) o-Terphenyl	86.2			18.0-148		08/27/2020 14:26	WG1533025

Collected date/time: 08/19/20 10:50

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.6		1	08/27/2020 12:34	WG1532749

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.62	20.9	1	08/26/2020 15:36	WG1531557

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0227	0.105	1	08/28/2020 03:22	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	97.2			77.0-120		08/28/2020 03:22	WG1533658

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000510	0.00109	1	08/27/2020 01:15	WG1533076
Toluene	U		0.00142	0.00546	1	08/27/2020 01:15	WG1533076
Ethylbenzene	U		0.000805	0.00273	1	08/27/2020 01:15	WG1533076
Total Xylenes	U		0.000961	0.00710	1	08/27/2020 01:15	WG1533076
(S) Toluene-d8	109			75.0-131		08/27/2020 01:15	WG1533076
(S) 4-Bromofluorobenzene	94.0			67.0-138		08/27/2020 01:15	WG1533076
(S) 1,2-Dichloroethane-d4	91.4			70.0-130		08/27/2020 01:15	WG1533076

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.05	J	1.68	4.18	1	08/27/2020 14:39	WG1533025
C28-C40 Oil Range	4.77		0.287	4.18	1	08/27/2020 14:39	WG1533025
(S) o-Terphenyl	85.0			18.0-148		08/27/2020 14:39	WG1533025

Collected date/time: 08/19/20 11:00

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.7		1	08/27/2020 12:34	WG1532749

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.93	21.6	1	08/26/2020 16:14	WG1531557

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0234	0.108	1	08/28/2020 03:44	WG1533658
(S) a,a,a-Trifluorotoluene(FID)	97.5			77.0-120		08/28/2020 03:44	WG1533658

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000541	0.00116	1	08/27/2020 01:34	WG1533076
Toluene	U		0.00151	0.00579	1	08/27/2020 01:34	WG1533076
Ethylbenzene	U		0.000854	0.00290	1	08/27/2020 01:34	WG1533076
Total Xylenes	U		0.00102	0.00753	1	08/27/2020 01:34	WG1533076
(S) Toluene-d8	102			75.0-131		08/27/2020 01:34	WG1533076
(S) 4-Bromofluorobenzene	93.4			67.0-138		08/27/2020 01:34	WG1533076
(S) 1,2-Dichloroethane-d4	92.4			70.0-130		08/27/2020 01:34	WG1533076

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	4.71		1.74	4.32	1	08/27/2020 14:52	WG1533025
C28-C40 Oil Range	4.19	J	0.296	4.32	1	08/27/2020 14:52	WG1533025
(S) o-Terphenyl	49.4			18.0-148		08/27/2020 14:52	WG1533025

Collected date/time: 08/19/20 11:30

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.9		1	08/27/2020 12:34	WG1532749

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		10.0	21.8	1	08/26/2020 16:23	WG1531557

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	0.0348	J	0.0236	0.109	1	08/28/2020 05:46	WG1533805
(S) a,a,a-Trifluorotoluene(FID)	91.3			77.0-120		08/28/2020 05:46	WG1533805

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		0.000549	0.00118	1	08/27/2020 01:53	WG1533076
Toluene	U		0.00153	0.00588	1	08/27/2020 01:53	WG1533076
Ethylbenzene	U		0.000867	0.00294	1	08/27/2020 01:53	WG1533076
Total Xylenes	U		0.00103	0.00764	1	08/27/2020 01:53	WG1533076
(S) Toluene-d8	101			75.0-131		08/27/2020 01:53	WG1533076
(S) 4-Bromofluorobenzene	94.1			67.0-138		08/27/2020 01:53	WG1533076
(S) 1,2-Dichloroethane-d4	83.3			70.0-130		08/27/2020 01:53	WG1533076

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3.56	J	1.75	4.35	1	08/27/2020 15:32	WG1533025
C28-C40 Oil Range	3.70	J	0.298	4.35	1	08/27/2020 15:32	WG1533025
(S) o-Terphenyl	79.7			18.0-148		08/27/2020 15:32	WG1533025

Collected date/time: 08/19/20 11:40

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.2		1	08/27/2020 12:34	WG1532749

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.66	21.0	1	08/26/2020 16:32	WG1531557

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0273	J	0.0228	0.105	1	08/28/2020 06:07	WG1533805
(S) a,a,a-Trifluorotoluene(FID)	91.3			77.0-120		08/28/2020 06:07	WG1533805

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000514	0.00110	1	08/27/2020 02:12	WG1533076
Toluene	U		0.00143	0.00550	1	08/27/2020 02:12	WG1533076
Ethylbenzene	U		0.000811	0.00275	1	08/27/2020 02:12	WG1533076
Total Xylenes	U		0.000968	0.00715	1	08/27/2020 02:12	WG1533076
(S) Toluene-d8	102			75.0-131		08/27/2020 02:12	WG1533076
(S) 4-Bromofluorobenzene	94.8			67.0-138		08/27/2020 02:12	WG1533076
(S) 1,2-Dichloroethane-d4	98.8			70.0-130		08/27/2020 02:12	WG1533076

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	6.27		1.69	4.20	1	08/27/2020 15:47	WG1533025
C28-C40 Oil Range	5.75		0.288	4.20	1	08/27/2020 15:47	WG1533025
(S) o-Terphenyl	48.4			18.0-148		08/27/2020 15:47	WG1533025

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

Collected date/time: 08/19/20 11:50

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.1		1	08/27/2020 12:34	WG1532749

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		11.1	24.1	1	08/26/2020 16:42	WG1531557

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	0.0308	J	0.0261	0.120	1	08/28/2020 06:27	WG1533805
(S) a,a,a-Trifluorotoluene(FID)	92.2			77.0-120		08/28/2020 06:27	WG1533805

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		0.000657	0.00141	1	08/27/2020 02:31	WG1533076
Toluene	U		0.00183	0.00704	1	08/27/2020 02:31	WG1533076
Ethylbenzene	U		0.00104	0.00352	1	08/27/2020 02:31	WG1533076
Total Xylenes	U		0.00124	0.00915	1	08/27/2020 02:31	WG1533076
(S) Toluene-d8	102			75.0-131		08/27/2020 02:31	WG1533076
(S) 4-Bromofluorobenzene	95.6			67.0-138		08/27/2020 02:31	WG1533076
(S) 1,2-Dichloroethane-d4	92.8			70.0-130		08/27/2020 02:31	WG1533076

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	75.9		19.4	48.1	10	08/27/2020 17:04	WG1533025
C28-C40 Oil Range	212		3.30	48.1	10	08/27/2020 17:04	WG1533025
(S) o-Terphenyl	48.6			18.0-148		08/27/2020 17:04	WG1533025

Collected date/time: 08/19/20 12:00

L1253291

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.7		1	08/27/2020 12:34	WG1532749

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		9.52	20.7	1	08/26/2020 16:51	WG1531557

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	0.0312	J	0.0225	0.103	1	08/28/2020 06:48	WG1533805
(S) a,a,a-Trifluorotoluene(FID)	91.5			77.0-120		08/28/2020 06:48	WG1533805

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		0.000499	0.00107	1	08/27/2020 02:50	WG1533076
Toluene	U		0.00139	0.00535	1	08/27/2020 02:50	WG1533076
Ethylbenzene	U		0.000788	0.00267	1	08/27/2020 02:50	WG1533076
Total Xylenes	U		0.000941	0.00695	1	08/27/2020 02:50	WG1533076
(S) Toluene-d8	103			75.0-131		08/27/2020 02:50	WG1533076
(S) 4-Bromofluorobenzene	93.9			67.0-138		08/27/2020 02:50	WG1533076
(S) 1,2-Dichloroethane-d4	93.6			70.0-130		08/27/2020 02:50	WG1533076

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	294		83.3	207	50	08/30/2020 10:51	WG1533575
C28-C40 Oil Range	844		14.2	207	50	08/30/2020 10:51	WG1533575
(S) o-Terphenyl	70.8	J7		18.0-148		08/30/2020 10:51	WG1533575

Total Solids by Method 2540 G-2011 [L1253291-01,02,03,04,05,06](#)

Method Blank (MB)

(MB) R3564311-1 08/26/20 20:17

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

L1253291-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1253291-02 08/26/20 20:17 • (DUP) R3564311-3 08/26/20 20:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Total Solids	99.2	99.1	1	0.110		10

Laboratory Control Sample (LCS)

(LCS) R3564311-2 08/26/20 20:17

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011 [L1253291-07,08,09,10,11,12,13,14,15,16](#)

Method Blank (MB)

(MB) R3564732-1 08/27/20 12:47

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1253291-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1253291-11 08/27/20 12:47 • (DUP) R3564732-3 08/27/20 12:47

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	89.9	90.3	1	0.407		10

Laboratory Control Sample (LCS)

(LCS) R3564732-2 08/27/20 12:47

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

Total Solids by Method 2540 G-2011 [L1253291-17,18,19,20,21,22,23](#)

Method Blank (MB)

(MB) R3564726-1 08/27/20 12:34

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1253291-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1253291-22 08/27/20 12:34 • (DUP) R3564726-3 08/27/20 12:34

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	83.1	85.3	1	2.56		10

Laboratory Control Sample (LCS)

(LCS) R3564726-2 08/27/20 12:34

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

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 300.0

L1253291-03,04,05,06

Method Blank (MB)

(MB) R3564305-1 08/26/20 17:38

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

L1253373-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1253373-01 08/26/20 18:49 • (DUP) R3564305-3 08/26/20 18:59

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

L1253439-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1253439-04 08/26/20 20:35 • (DUP) R3564305-6 08/26/20 20:44

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	21.0	21.2	1	0.943	J	20

Laboratory Control Sample (LCS)

(LCS) R3564305-2 08/26/20 17:48

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

L1253374-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1253374-01 08/26/20 19:10 • (MS) R3564305-4 08/26/20 19:44 • (MSD) R3564305-5 08/26/20 19:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	500	U	500	501	100	100	1	80.0-120			0.220	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 300.0

L1253291-01,02,07,08,09,10,11,12,13,14,15,16,17,18,19,20,21,22,23

Method Blank (MB)

(MB) R3564304-1 08/26/20 12:16

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

L1253291-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1253291-02 08/26/20 12:54 • (DUP) R3564304-3 08/26/20 13:04

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	14.4	13.9	1	3.51	⌵	20

L1253291-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1253291-18 08/26/20 15:36 • (DUP) R3564304-6 08/26/20 15:45

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

Laboratory Control Sample (LCS)

(LCS) R3564304-2 08/26/20 12:26

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	206	103	90.0-110	

L1253291-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1253291-12 08/26/20 14:20 • (MS) R3564304-4 08/26/20 14:29 • (MSD) R3564304-5 08/26/20 14:39

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	502	U	509	514	101	102	1	80.0-120			0.868	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1253291-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15,16,17,18,19

Method Blank (MB)

(MB) R3564706-2 08/27/20 19:34

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)	97.3			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3564706-1 08/27/20 18:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.09	111	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			101	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1253291-20,21,22,23

Method Blank (MB)

(MB) R3564858-2 08/28/20 02:51

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)	92.6			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3564858-1 08/28/20 01:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.07	92.2	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			106	77.0-120	

L1252874-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1252874-16 08/28/20 04:24 • (MS) R3564858-3 08/28/20 11:14 • (MSD) R3564858-4 08/28/20 11:34

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	74.5	U	75.9	73.3	102	98.4	25	10.0-151			3.48	28
(S) a,a,a-Trifluorotoluene(FID)					109	109		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

L1253291-01,02,03,04,05,06,07,08,09,10,11,12

Method Blank (MB)

(MB) R3564054-3 08/26/20 11:12

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	100			75.0-131
(S) 4-Bromofluorobenzene	91.9			67.0-138
(S) 1,2-Dichloroethane-d4	91.3			70.0-130

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

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

(LCS) R3564054-1 08/26/20 09:56 • (LCSD) R3564054-2 08/26/20 10:15

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	0.136	0.141	109	113	70.0-123			3.61	20
Ethylbenzene	0.125	0.122	0.129	97.6	103	74.0-126			5.58	20
Toluene	0.125	0.121	0.123	96.8	98.4	75.0-121			1.64	20
Xylenes, Total	0.375	0.371	0.394	98.9	105	72.0-127			6.01	20
(S) Toluene-d8				94.6	96.8	75.0-131				
(S) 4-Bromofluorobenzene				99.3	101	67.0-138				
(S) 1,2-Dichloroethane-d4				107	114	70.0-130				

L1253291-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1253291-12 08/26/20 18:25 • (MS) R3564054-4 08/26/20 18:44 • (MSD) R3564054-5 08/26/20 19:03

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	0.126	U	0.157	0.0960	125	76.2	1	10.0-149		J3	48.3	37
Ethylbenzene	0.126	U	0.145	0.0899	115	71.4	1	10.0-160		J3	47.0	38
Toluene	0.126	U	0.148	0.0911	118	72.3	1	10.0-156		J3	47.7	38
Xylenes, Total	0.378	U	0.377	0.266	99.7	70.4	1	10.0-160			34.5	38
(S) Toluene-d8					103	103		75.0-131				
(S) 4-Bromofluorobenzene					94.9	95.3		67.0-138				
(S) 1,2-Dichloroethane-d4					89.1	86.9		70.0-130				

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

L1253291-13,14,15,16,17,18,19,20,21,22,23

Method Blank (MB)

(MB) R3564263-3 08/26/20 20:56

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	104			75.0-131
(S) 4-Bromofluorobenzene	95.3			67.0-138
(S) 1,2-Dichloroethane-d4	96.9			70.0-130

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

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

(LCS) R3564263-1 08/26/20 19:41 • (LCSD) R3564263-2 08/26/20 20:00

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	0.134	0.129	107	103	70.0-123			3.80	20
Ethylbenzene	0.125	0.120	0.122	96.0	97.6	74.0-126			1.65	20
Toluene	0.125	0.122	0.122	97.6	97.6	75.0-121			0.000	20
Xylenes, Total	0.375	0.359	0.371	95.7	98.9	72.0-127			3.29	20
(S) Toluene-d8				101	97.4	75.0-131				
(S) 4-Bromofluorobenzene				97.2	100	67.0-138				
(S) 1,2-Dichloroethane-d4				99.8	100	70.0-130				

L1253291-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1253291-23 08/27/20 02:50 • (MS) R3564263-4 08/27/20 05:02 • (MSD) R3564263-5 08/27/20 05:21

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	0.668	U	0.738	0.733	110	110	1	10.0-149			0.581	37
Ethylbenzene	0.668	U	0.666	0.675	99.7	101	1	10.0-160			1.28	38
Toluene	0.668	U	0.677	0.688	101	103	1	10.0-156			1.57	38
Xylenes, Total	2.00	U	1.92	1.91	96.0	95.5	1	10.0-160			0.557	38
(S) Toluene-d8					96.4	98.7		75.0-131				
(S) 4-Bromofluorobenzene					91.6	91.0		67.0-138				
(S) 1,2-Dichloroethane-d4					92.6	85.9		70.0-130				

Semi-Volatile Organic Compounds (GC) by Method 8015 [L1253291-01,02,03,04,05,06,07,08,09,10](#)

Method Blank (MB)

(MB) R3564703-1 08/27/20 16:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	76.4			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3564703-2 08/27/20 16:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	38.5	77.0	50.0-150	
(S) o-Terphenyl			106	18.0-148	

L1252874-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1252874-10 08/28/20 11:16 • (MS) R3565012-1 08/28/20 11:29 • (MSD) R3565012-2 08/28/20 11:42

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	58.6	24.6	56.3	91.4	54.3	114	2	50.0-150		J3	47.5	20
(S) o-Terphenyl					80.7	98.1		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3564267-1 08/27/20 03:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	77.0			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3564267-2 08/27/20 04:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.1	78.2	50.0-150	
(S) o-Terphenyl			57.2	18.0-148	

L1253291-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1253291-19 08/27/20 14:52 • (MS) R3564267-3 08/27/20 15:05 • (MSD) R3564267-4 08/27/20 15:19

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	54.9	4.71	46.3	45.4	75.7	74.4	1.02	50.0-150			1.88	20
(S) o-Terphenyl					49.6	41.7		18.0-148				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 L1253291-23

Method Blank (MB)

(MB) R3565013-1 08/28/20 07:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	80.8			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3565013-2 08/28/20 07:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	34.1	68.2	50.0-150	
(S) o-Terphenyl			92.8	18.0-148	

L1253296-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1253296-02 08/28/20 15:19 • (MS) R3565013-3 08/28/20 15:32 • (MSD) R3565013-4 08/28/20 15:46

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	57.5	U	39.0	38.2	67.9	66.5	1	50.0-150			2.14	20
(S) o-Terphenyl					85.6	87.2		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Guide to Reading and Understanding Your Laboratory Report

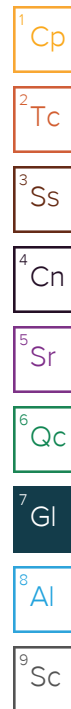
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.



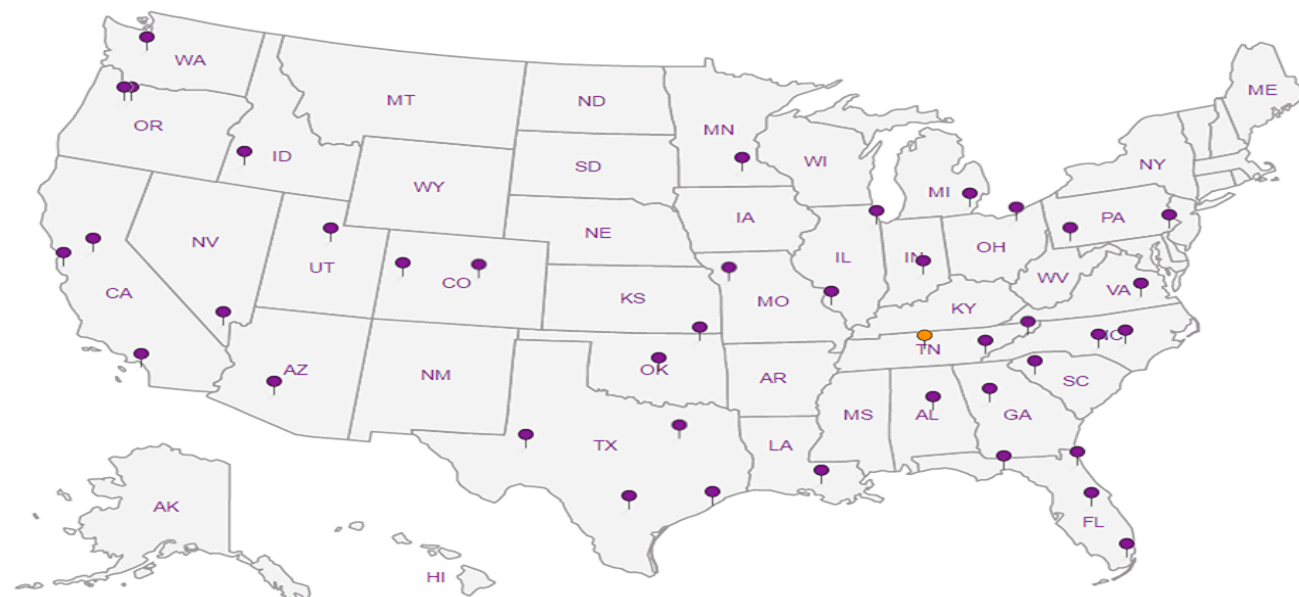
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

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

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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

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Tetra Tech, Inc.

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

125391

Client Name:	Conoco Phillips	Site Manager:	Christian Llull
Project Name:	Warren Transfer Unit Release	Contact Info:	Email: christian.llull@tetrattech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-02200
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	Adrian
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX			PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	BTEX 8260B / 6240B (Ext to C35)	TPH TX1005 (GRO - DRP)	TPH 8015M (GRO - DRP)	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 / 6240B	GC/MS Semi. Vol. 8270C / 6250C	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry	Anion/Cation Balance	TPH 8015R	HOLD			
		YEAR: 2020		WATER	SOIL	HCL	HNO ₃	ICE	NONE																											
		DATE	TIME																																	
	BH-1 (0-1)	8/19/2020	800		X			X			1	N	X		X																					
	BH-1 (2-3)	8/19/2020	810		X			X			1	N	X		X																					
	BH-1 (4-5)	8/19/2020	820		X			X			1	N	X		X																					
	BH-4 (0-1)	8/19/2020	830		X			X			1	N	X		X																					
	BH-4 (2-3)	8/19/2020	840		X			X			1	N	X		X																					
	BH-4 (4-5)	8/19/2020	850		X			X			1	N	X		X																					
	AH-1 (0-1)	8/19/2020	900		X			X			1	N	X		X																					
	AH-1 (2-3)	8/19/2020	910		X			X			1	N	X		X																					
	AH-1 (4-5)	8/19/2020	920		X			X			1	N	X		X																					
	AH-2 (0-1)	8/19/2020	930		X			X			1	N	X		X																					

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>Odnew Dan</i>	8/20/20	1400	<i>[Signature]</i>	8/20/20	1400
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>[Signature]</i>	8/20/20	1700	<i>FedEx</i>	8/20/20	1700
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
			<i>Olivia Luy</i>	8/21/20	930

LAB USE ONLY

Sample Temperature

REMARKS:

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

ORIGINAL COPY

3.5.1 = 3.442
ck(Circle) HAND DELIVERED FEDEX UPS Tracking #:
RAD SCREEN: <0.5 mR/hr

Analysis Request of Chain of Custody Record

Page: 2 of 3

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

h253291

Client Name: Conoco Phillips

Site Manager: Christian Llull

Project Name: Warren Transfer Unit Release

Contact Info: Email: christian.llull@tetratech.com
Phone: (512) 338-1667Project Location: Lea County, New Mexico
(county, state)

Project #: 212C-MD-02200

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

Receiving Laboratory: Pace Analytical

Sampler Signature: Adrian

Comments: COPTETRA Acctnum

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX			PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	BTEX 8260B / 624	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
		YEAR: 2020		WATER	SOIL		HCL	HNO3	ICE	NONE																							
		DATE	TIME																														
	AH-2 (2-3)	8/19/2020	940		X			X			1	N	X	X													X						11
	AH-2 (4-5)	8/19/2020	950		X			X			1	N	X	X													X						12
	AH-3 (0-1)	8/19/2020	1000		X			X			1	N	X	X													X						13
	AH-3 (2-3)	8/19/2020	1010		X			X			1	N	X	X													X						14
	AH-3 (4-5)	8/19/2020	1020		X			X			1	N	X	X													X						15
	AH-4 (0-1)	8/19/2020	1030		X			X			1	N	X	X													X						16
	AH-4 (2-3)	8/19/2020	1040		X			X			1	N	X	X													X						17
	AH-4 (4-5)	8/19/2020	1050		X			X			1	N	X	X													X						18
	AH-5 (0-1)	8/19/2020	1100		X			X			1	N	X	X													X						19
	AH-6 (0-1)	8/19/2020	1130		X			X			1	N	X	X													X						20

Relinquished by: *Ordinow Dan* Date: 8/20/20 Time: 1400Received by: *Adrian Llull* Date: 8/20/20 Time: 14:00Relinquished by: *Adrian Llull* Date: 8/20/20 Time: 17:00Received by: *Fede* Date: 8/20/20 Time: 17:00Relinquished by: *Olivia* Date: 8/21/20 Time: 930Received by: *Olivia* Date: 8/21/20 Time: 930**LAB USE ONLY****REMARKS:**

- ☒ 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 #: _____

ORIGINAL COPY

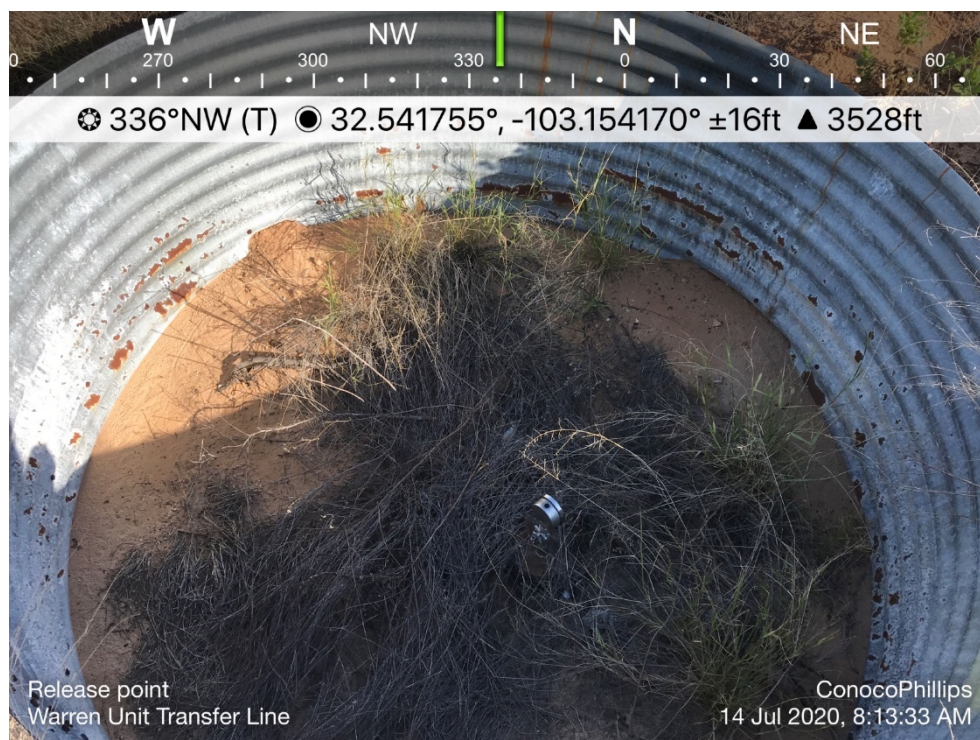
1253291

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	Coptetra	1253291
Cooler Received/Opened On:	8 / 21 / 20	Temperature: 3.4
Received By:	Olivia Turner	
Signature:	Olivia Turner	
Receipt Check List	NP	Yes No
COC Seal Present / Intact?	/	
COC Signed / Accurate?		/
Bottles arrive intact?		/
Correct bottles used?		/
Sufficient volume sent?		/
If Applicable		
VOA Zero headspace?		
Preservation Correct / Checked?		

APPENDIX E

Photographic Documentation



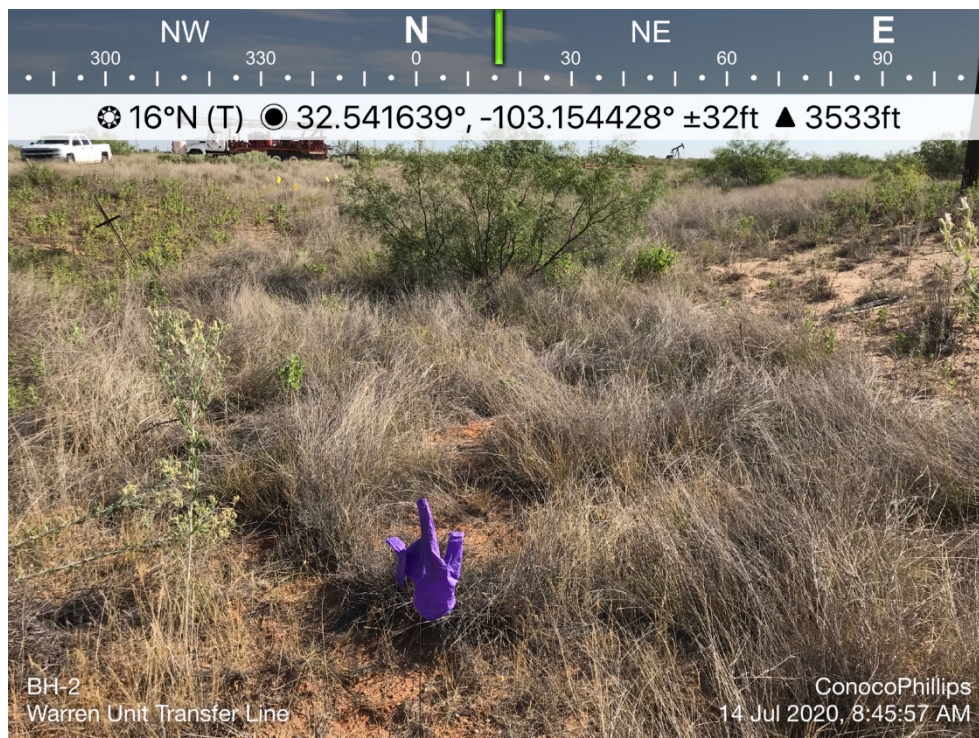
TETRA TECH, INC. PROJECT NO. 212C-MD-02200	DESCRIPTION	View of the release point.	1
	SITE NAME	Warren Unit Water Transfer Line Release	7/14/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02200	DESCRIPTION	View northwest in the vicinity of the release.	2
	SITE NAME	Warren Unit Water Transfer Line Release	7/14/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02200	DESCRIPTION	View north in the vicinity of the release.	3
	SITE NAME	Warren Unit Water Transfer Line Release	7/14/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02200	DESCRIPTION	View north of the impacted surface area.	4
	SITE NAME	Warren Unit Water Transfer Line Release	7/14/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02200	DESCRIPTION	View south of the impacted surface area.	5
	SITE NAME	Warren Unit Water Transfer Line Release	7/14/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02200	DESCRIPTION	View west of the impacted surface area.	6
	SITE NAME	Warren Unit Water Transfer Line Release	8/19/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02200	DESCRIPTION	View northeast of the impacted surface area.	7
	SITE NAME	Warren Unit Water Transfer Line Release	8/19/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02200	DESCRIPTION	View northeast of the impacted surface area.	8
	SITE NAME	Warren Unit Water Transfer Line Release	8/19/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02200	DESCRIPTION	View east in the vicinity of the release.	9
	SITE NAME	Warren Unit Water Transfer Line Release	8/19/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02200	DESCRIPTION	View west in the vicinity of the release.	10
	SITE NAME	Warren Unit Water Transfer Line Release	8/19/2020

APPENDIX F

NMSLO Seed Mixture Details



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

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

Custom Soil Resource Report for Lea County, New Mexico

Warren Unit Water Transfer Line Release



September 4, 2020

Preface

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

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

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

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

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

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

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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How Soil Surveys Are Made

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

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

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

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

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

Custom Soil Resource Report

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

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

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

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

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

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

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

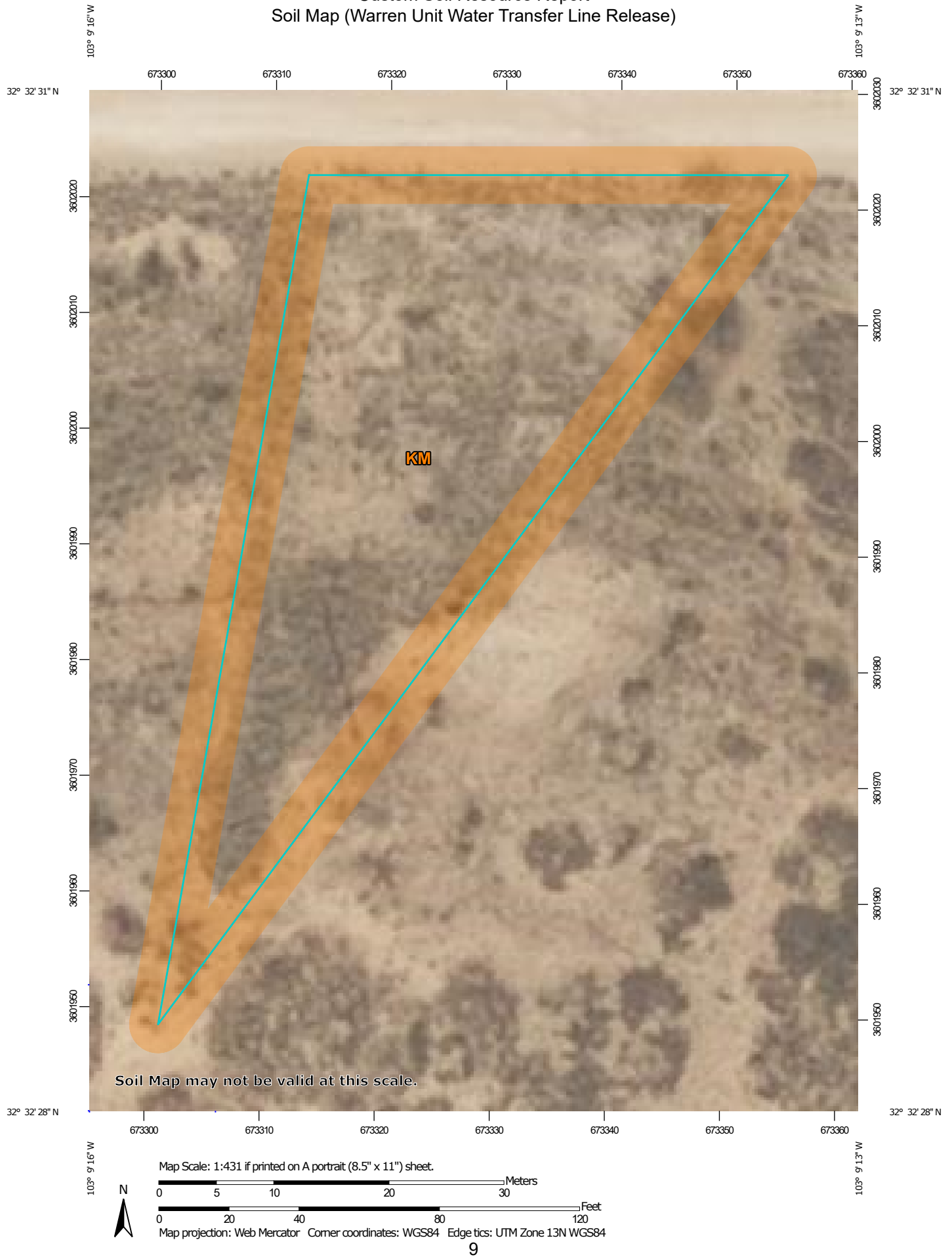
Custom Soil Resource Report

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

Soil Map

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


Custom Soil Resource Report
Soil Map (Warren Unit Water Transfer Line Release)



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)


Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit


 Clay Spot


 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip


 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

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

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

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

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

Custom Soil Resource Report

Map Unit Legend (Warren Unit Water Transfer Line Release)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KM	Kermit soils and Dune land, 0 to 12 percent slopes	0.4	100.0%
Totals for Area of Interest		0.4	100.0%

Map Unit Descriptions (Warren Unit Water Transfer Line Release)

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

Custom Soil Resource Report

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.

Custom Soil Resource Report

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

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

Map Unit Composition

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

Description of Kermit**Setting**

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Custom Soil Resource Report

Description of Dune Land**Setting**

Landform: Dunes

Landform position (two-dimensional): Shoulder, backslope, footslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex, linear, concave

Across-slope shape: Convex

Typical profile

A - 0 to 6 inches: fine sand

C - 6 to 60 inches: fine sand

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8e

Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components**Palomas**

Percent of map unit: 3 percent

Ecological site: R042XC003NM - Loamy Sand

Hydric soil rating: No

Pyote

Percent of map unit: 3 percent

Ecological site: R042XC003NM - Loamy Sand

Hydric soil rating: No

Wink

Percent of map unit: 2 percent

Ecological site: R042XC003NM - Loamy Sand

Hydric soil rating: No

Maljamar

Percent of map unit: 2 percent

Ecological site: R042XC003NM - Loamy Sand

Hydric soil rating: No

References

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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

Action 21408

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 21408
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Approved with conditions	2/17/2023
amaxwell	The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.	2/17/2023
amaxwell	Variance request for sampling approved	2/17/2023
amaxwell	Submit closure report via the OCD permitting portal by 2/17/2024.	2/17/2023