SITE INFORMATION

Report Type: Work Plan NRM1930958355 / 1RP-5782

General Site Information:						
Site:	**VGEU 01-02 Flowline Release**					
Company:	**ConocoPhillips**					
Section, Township and Range	**Unit Letter J/K**	**Sec. 28**	**T 17S**	**R 35E**		
Lease Number:	**N/A**					
County:	**Lea**					
GPS:	**32.803350°**			**-103.462965°**		
Surface Owner:	**State of New Mexico**					
Mineral Owner:	**N/A**					
Directions:	Depart from Buckeye (NM238/Buckeye Rd). Head east on Buckeye Rd for 2.45 miles. Turn left onto dirt road. Head north for 0.3 miles. Arrive at location.					

Release Data:			
Date Released:	10/10/2019		
Type Release:	Crude Oil and Produced Water		
Source of Contamination:	Flowline rupture		
Fluid Released:	11 bbls crude oil, 362 bbls produced water		
Fluids Recovered:	5.5 bbls crude oil, 174.5 bbls produced water		

Official Communication:			
Name:	Marvin Soriwei		Christian M. Llull
Company:	Conoco Phillips - RMR		Tetra Tech
Address:	935 N. Eldridge Pkwy.		8911 North Capital of Texas Highway
	832-486-2730		Building 2, Suite 2310
City:	Houston, Texas 77079		Austin, Texas
Phone number:	(832) 486-2730		(512) 338-2861
Fax:			
Email:	Marvin.Soriwei@conocophillips.com		christian.llull@tetratech.com

Site Characterization	
Shallowest Depth to Groundwater:	*80' below surface*
Impact to groundwater or surface water:	*No*
Extents within 300 feet of a watercourse:	*No*
Extents within 200 feet of lakebed, sinkhole, or playa lake:	*Yes*
Extents within 300 feet of an occupied structure:	*No*
Extents within 500 horizontal feet of a private water well:	*No*
Extents within 1000 feet of any water well or spring:	*No*
Extents within incorporated municipal well field:	*No*
Extents within 300 feet of a wetland:	*No*
Extents overlying a subsurface mine:	*No*
Karst Potential:	*Low*
Extents within a 100-year floodplain:	*No*
Impact to areas not on a production site:	*No*

Recommended Remedial Action Levels (RRALs)				
Benzene	***Total BTEX***	***TPH (GRO+DRO)***	***TPH (GRO+DRO+MRO)***	***Chlorides***
10 mg/kg	*50 mg/kg*	*-*	*100 mg/kg*	*600 mg/kg*

TETRA TECH

February 2, 2021

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

Re: Release Characterization and Remediation Work Plan
ConocoPhillips
VGEU 01-02 Flowline Release
Unit Letter J/K, Section 28, Township 17 South, Range 35 East
Lea County, New Mexico
1RP-5782
Incident ID nRM1930958355

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a release that occurred from a flowline associated with the Vacuum Glorietta East Unit (VGEU) 01-02 well. The release site footprint is located in Public Land Survey System (PLSS) Unit Letters J and K, Section 28, Township 17 South, Range 35 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.803350°, -103.462965°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico Oil Conservation Division (NMOCD) C-141 Initial Report (Appendix A), the release was discovered on October 10, 2019. The C-141 mistakenly identifies the Site as "VGEU 02-01;" when in fact, the release occurred from a ruptured flowline associated with the VGEU 01-02 well (located in Section 28), API # 30-025-20719. As documented on the C-141 form, a flowline rupture led to the release of approximately 11 barrels (bbls) of oil and 362 bbls of produced water. During the initial response, 5.5 bbls of oil and 174.5 bbls of produced water were recovered. The release notification was received by the NMOCD on October 16, 2019 and subsequently assigned the District Remediation Permit (RP) number 1RP-5782 and the Incident ID nRM1930958355.

SITE CHARACTERIZATION

A site characterization was performed and per 19.15.29.12 NMAC, no watercourses, sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances and the Site is in a low karst potential area. The Site is within a New Mexico oil and gas production area. However, a portion of the release is located within a New Mexico Office of State Engineer water body (lakebed) and a possible playa lake.

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there is one water well within ½ mile (800 meters) of the Site. The well has a depth to groundwater of 80 feet 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 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's proximity to a water body/playa lake, the RRALs for the Site are as follows:

CONSTITUENT	RRAL
Chloride	600 mg/kg
TPH	100 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

INITIAL RESPONSE AND ASSESSMENT ACTIVITIES

According to information provided by COP, the release extent was identified as an area extending from the aboveground flowline approximately 800 feet southeast of the VGEU 01-02 well. Fluids released from the steel surface flowline ran in a pasture area from the release origination point toward the southeast for approximately 265 feet (ft) to a lease road, then continued along the lease road to the northeast for approximately 240 ft toward another well pad (API # 30-025-33710) (Figure 3). The released fluids then pooled southwest of the well pad and then continued on approximately 200 ft south in a pasture area. The entire release area covers approximately 30,000 square ft.

Per 19.15.29.8 B. (4) NMAC, the responsible party may commence remediation immediately after discovery of a release. The release footprint was fenced to limit access to the site as necessary to protect human health and the environment. COP initiated remediation activities in late 2019. During remediation, the visibly impacted soils within the release extent were excavated to 0.5 feet below ground surface (bgs). Following initial response remediation activities, COP personnel collected soil samples from twenty-four (24) locations on November 1 through 4, 2019 within the excavated area. These soil samples were sent to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for chloride via EPA Method SM45000Cl-B. Sample locations are shown in Figure 3.

Analytical results associated with all twenty-four (24) sample locations exceed the reclamation concentration (0-4 ft bgs) of 600 mg/kg chloride. Analytical results from the initial assessment are summarized in Table 1. The laboratory analytical report is included in Appendix C. After the initial response remediation activities, further remediation efforts were halted to assess soils both vertically and horizontally for potential environmental impacts.

ADDITIONAL SITE ASSESSMENT

Tetra Tech personnel were onsite on March 25, 2020 to conduct soil sampling to achieve horizontal and vertical delineation of the release extent. A total of ten (10) borings (BH-1 through BH-10) were installed using an air rotary drilling rig. Four borings, BH-1 through BH-4, were installed within the preexisting excavated area at depths ranging from 7 ft (BH-4) to 45 ft (BH-1) bgs to achieve vertical delineation. The remaining six borings were installed along the perimeter of the release extent at depths ranging from 3 ft (BH-10) and 5 ft (BH-5 through BH-9) bgs to achieve horizontal delineation. Boring termination depths were determined by field screening results as well as the presence of caprock, which was encountered in seven of the ten borings (BH-1, BH-2, BH-3, BH-4, BH-6, BH-9, and BH-10) at depths ranging from 3 ft to 7 ft bgs. Boring logs, included as Appendix D, present soil descriptions, sample depths, and field screening data from the March 2020 assessment activities.

A total of thirty-eight (38) samples were collected from the ten borings and submitted to Pace Analytical National Center for Testing & Innovation in Nashville, Tennessee to be analyzed for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix D. Figure 4 depicts the release extent, excavated area and the March 2020 soil boring locations. Photographic documentation of the additional site assessment is included in Appendix E.

SUMMARY OF SAMPLING RESULTS

Results from the March 2020 soil sampling event are summarized in Table 2. The analytical results associated with borings BH-2 and BH-3 exceeded the Site reclamation/remediation RRAL for TPH (100 mg/kg) down to 4 ft bgs. The analytical results associated with boring BH-1 exceeded the Site RRAL for chloride (600 mg/kg) down to 30 ft bgs. The analytical results associated with borings BH-2, BH-3, and BH-4 exceeded the RRAL for chloride down to 4 ft bgs. The analytical results associated with all samples analyzed were below the BTEX Site RRAL of 50 mg/kg. There were no exceedances of Site RRALs in any of the perimeter borings. Therefore, both horizontal and vertical delineation was achieved during the March 2020 soil assessment activities.

REMEDIATION WORK PLAN

Based on the analytical results, ConocoPhillips proposes to excavate further and remove the remaining impacted material as depicted in Figure 5. Screening samples will be collected during the excavation process to determine if the remediation footprint for the site will be modified based on field conditions. Impacted soils will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to a maximum depth of 4 ft below surface or until a representative sample from the walls and bottom of the excavation is below the RRALs. The caprock in the area will present significant challenges during the excavation. The area of the release extent that runs along the buried line within the release extent will be hand-dug to a depth of 4 ft or the maximum extent practicable and heavy machinery will come no more than 3 ft from any pressurized lines.

Excavated soils will be transported offsite and disposed of 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 6,420 cubic yards.

VARIANCE REQUEST

In accordance with 19.15.29.14(A) NMAC, COP requests a variance for the remediation of the release area should excavation floor concentrations below 4 ft bgs exceed 600 mg/kg for chlorides or 100 mg/kg for TPH. A 20-mil reinforced poly liner will be installed and properly seated throughout the base of the excavation (at 4 feet below surrounding grade) in any areas which contain constituent concentrations exceeding the proposed RRALs. The existing caprock in the area largely limits most downward migration. The liner will provide an engineering control that will serve as a barrier and further inhibit the downward migration of residual constituents.

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 4. Eighty-six (86) confirmation floor samples and sixty-two (62) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses an area of approximately 43,330 square ft.

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

SITE RECLAMATION AND RESTORATION PLAN

The backfilled areas will be seeded in Spring 2021 (first favorable growing season) to aid in revegetation. Based on the soils at the site, the New Mexico State Land Office (NMSLO) Loamy (L) Sites Seed Mixture will be used for seeding and will be planted in the amount specified in the pounds pure live seed (PLS) per

acre. The seed mixture will be spread by a drill equipped with a depth regulator or a hand-held broadcaster and raked. If a hand-held broadcaster is used for dispersal, the pounds pure live seed per acre will be doubled.

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

CONCLUSION

ConocoPhillips proposes to begin remediation activities at the Site within 90 days of NMOCD plan approval. Upon completion of the proposed work, a final closure report detailing the remediation activities and the results of the confirmation sampling will be submitted to NMOCD. If you have any questions concerning the soil assessment or the proposed remediation activities for the Site, please call me at (512) 338-2861 or Greg at (432) 682-4559.

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

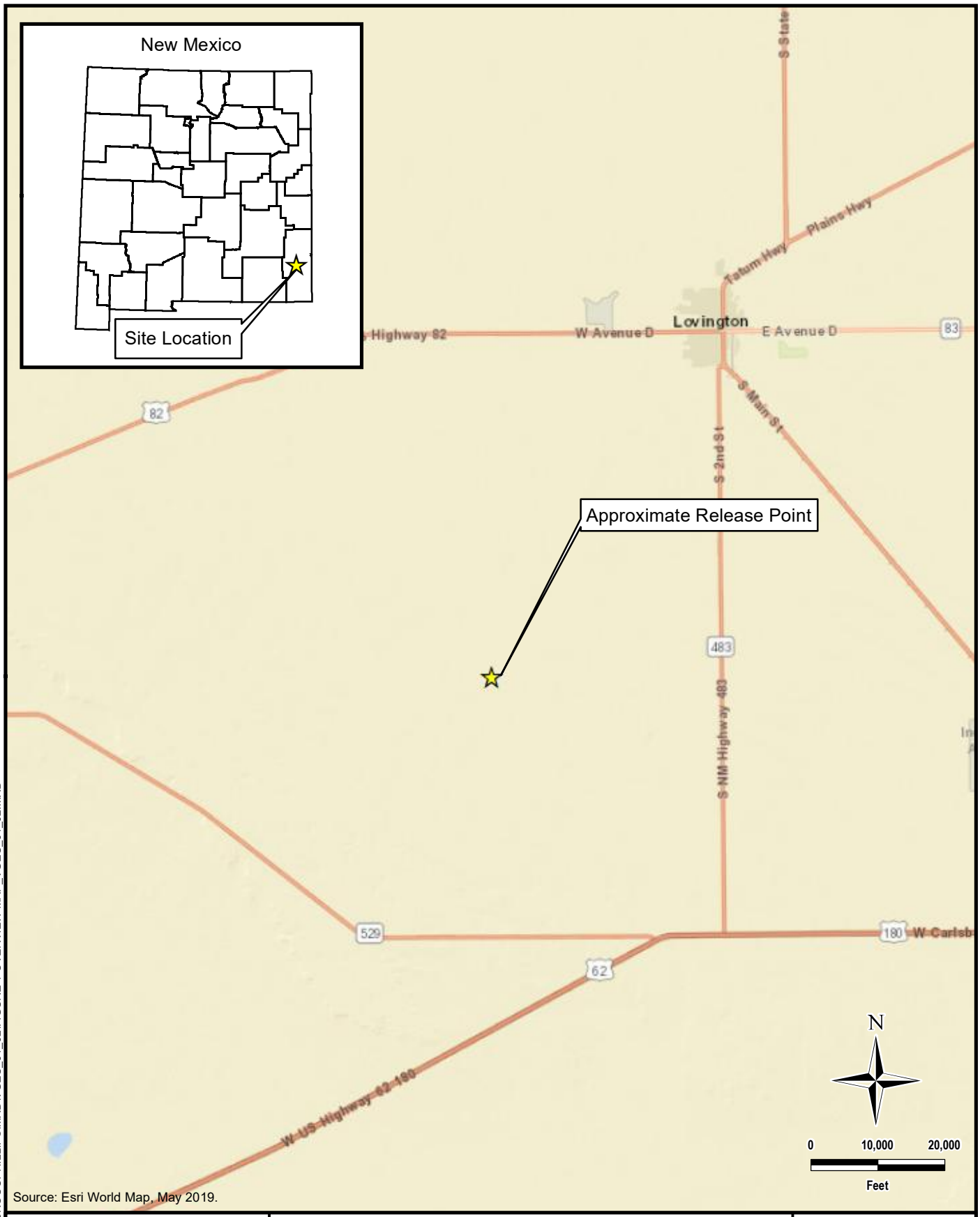
LIST OF ATTACHMENTS

Figures:

Tables:

Appendices:

FIGURES



Source: Esri World Map, May 2019.

DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\VGEU_01_02\FIGURE 1 OVERVIEW MAP_VGEU_01_02.MXD

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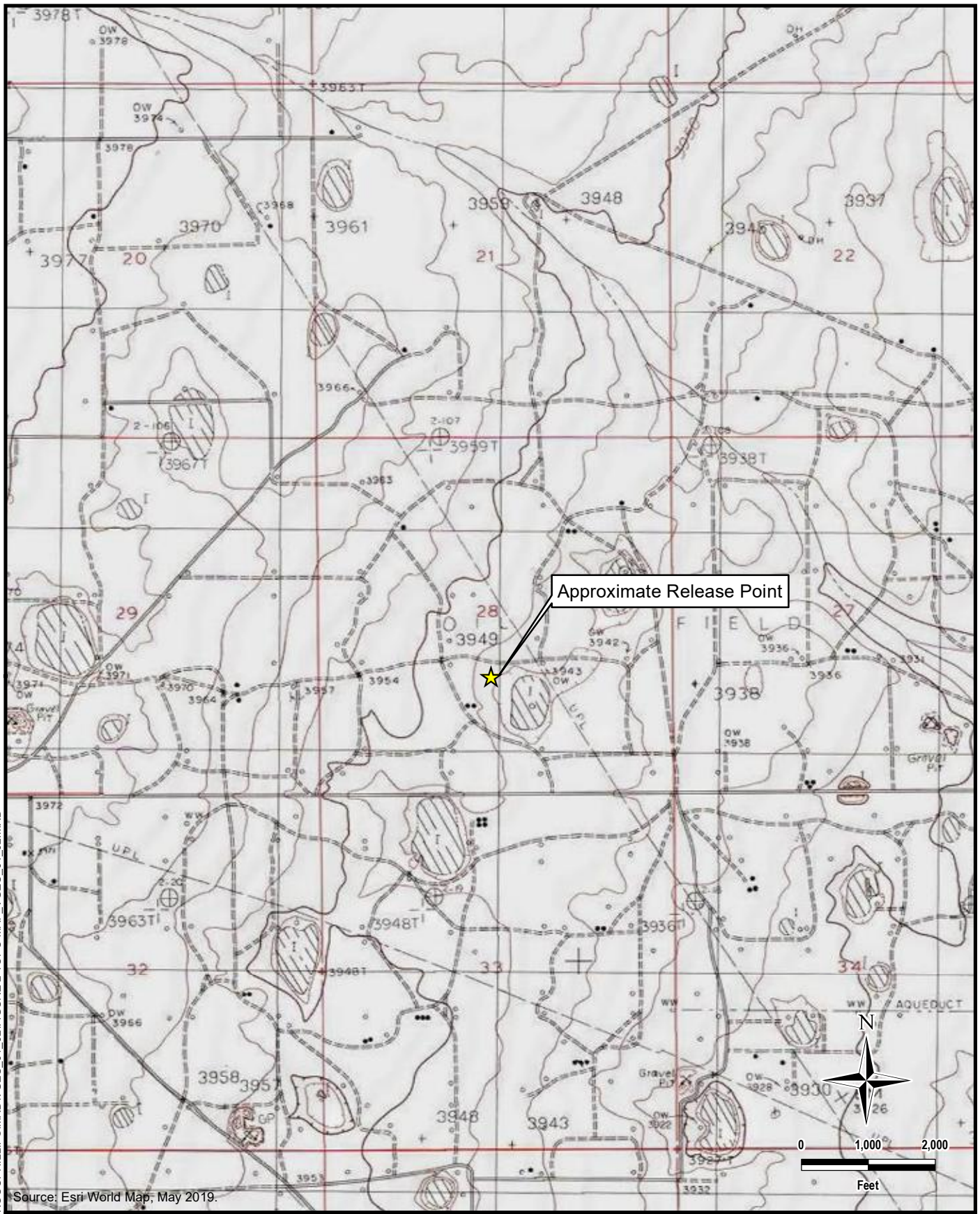
CONOCOPHILLIPS

INCIDENT ID NRM1930958355/1RP-5782
(32.803350°, -103.462965°)
LEA COUNTY, NEW MEXICO

VGEU 01-02 FLOWLINE RELEASE
OVERVIEW MAP

PROJECT NO.:	212C-MD-02099
DATE:	JANUARY 29, 2021
DESIGNED BY:	AAM

Figure No.
1



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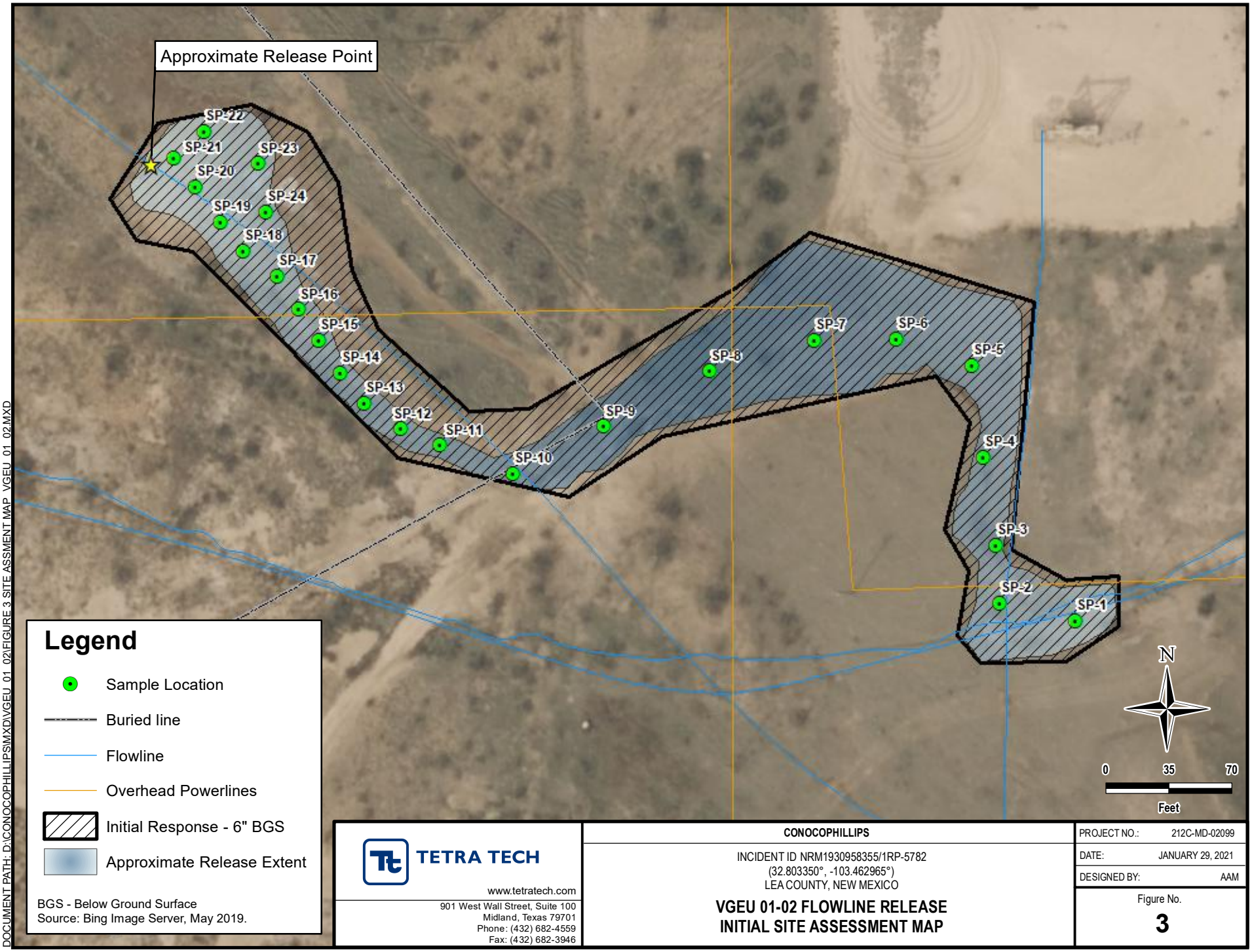
LEA COUNTY, NEW MEXICO

VGEU 01-02 FLOWLINE RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02099
DATE:	JANUARY 29, 2021
DESIGNED BY:	AAM

Figure No.
2



Legend

- Sample Location
- Buried line
- Flowline
- Overhead Powerlines
- Initial Response - 6" BGS
- Approximate Release Extent

BGS - Below Ground Surface
Source: Bing Image Server, May 2019.

DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\VGEU_01_02\FIGURE 3 SITE ASSMENT MAP_VGEU_01_02.MXD

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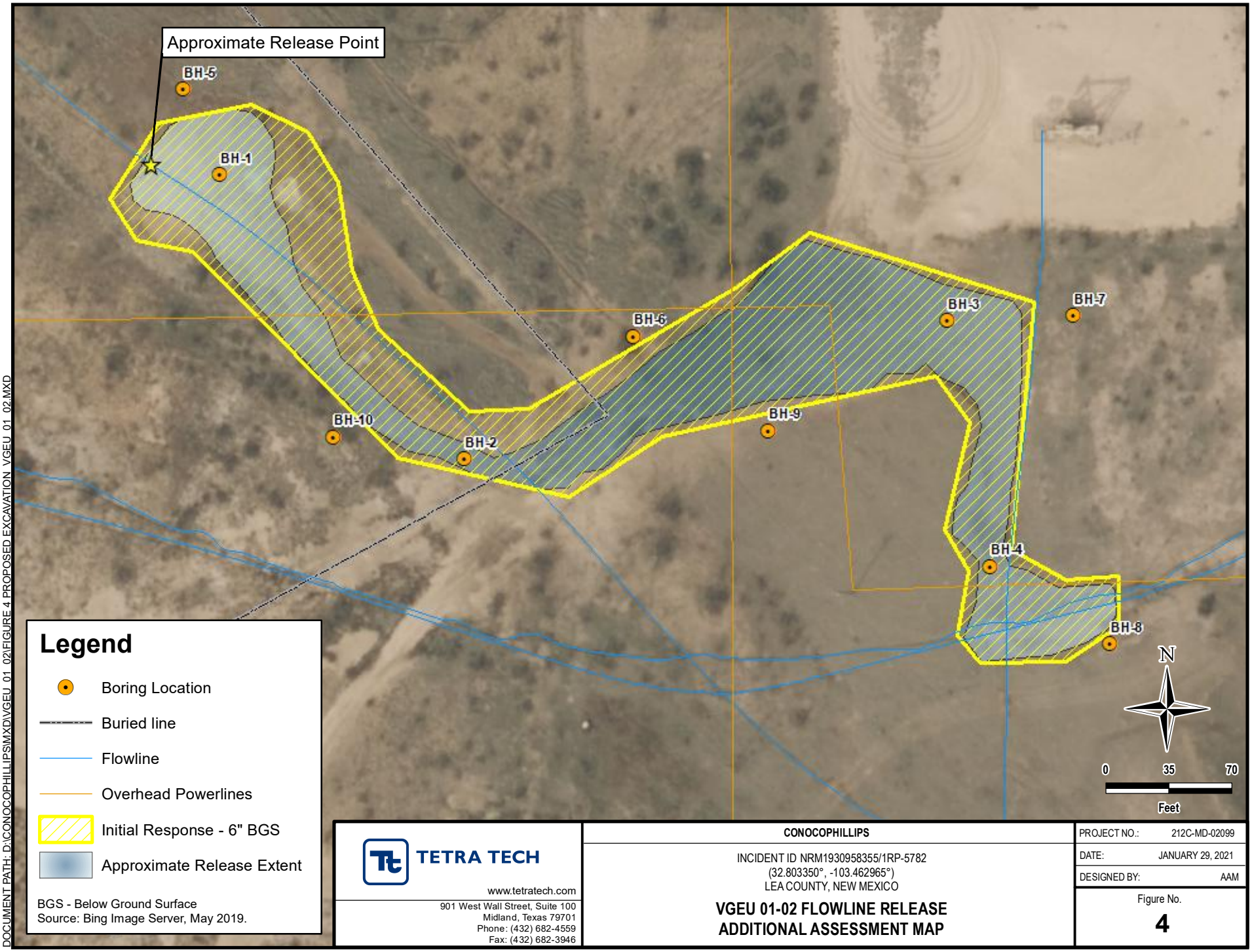
(32.803350°, -103.462965°)
LEA COUNTY, NEW MEXICO

VGEU 01-02 FLOWLINE RELEASE
INITIAL SITE ASSESSMENT MAP

PROJECT NO.:	212C-MD-02099
DATE:	JANUARY 29, 2021
DESIGNED BY:	AAM

Figure No.
3



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\VGEU_01_02\FIGURE 4 PROPOSED EXCAVATION_VGEU_01_02.MXD

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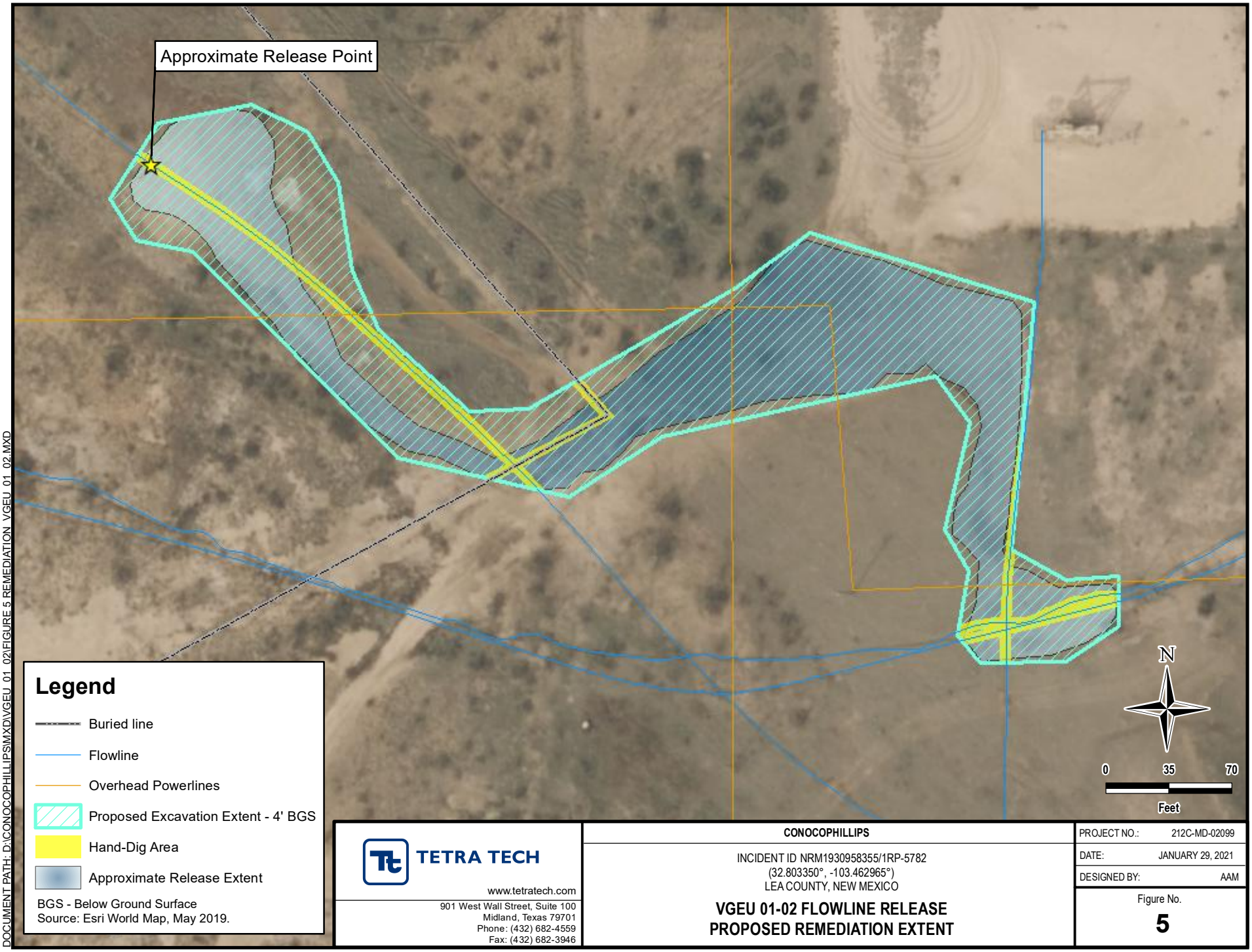
(32.803350°, -103.462965°)
LEA COUNTY, NEW MEXICO

VGEU 01-02 FLOWLINE RELEASE
ADDITIONAL ASSESSMENT MAP

PROJECT NO.:	212C-MD-02099
DATE:	JANUARY 29, 2021
DESIGNED BY:	AAM

Figure No.
4



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\VGEU_01_02\FIGURE 5 REMEDIATION_VGEU_01_02.MXD

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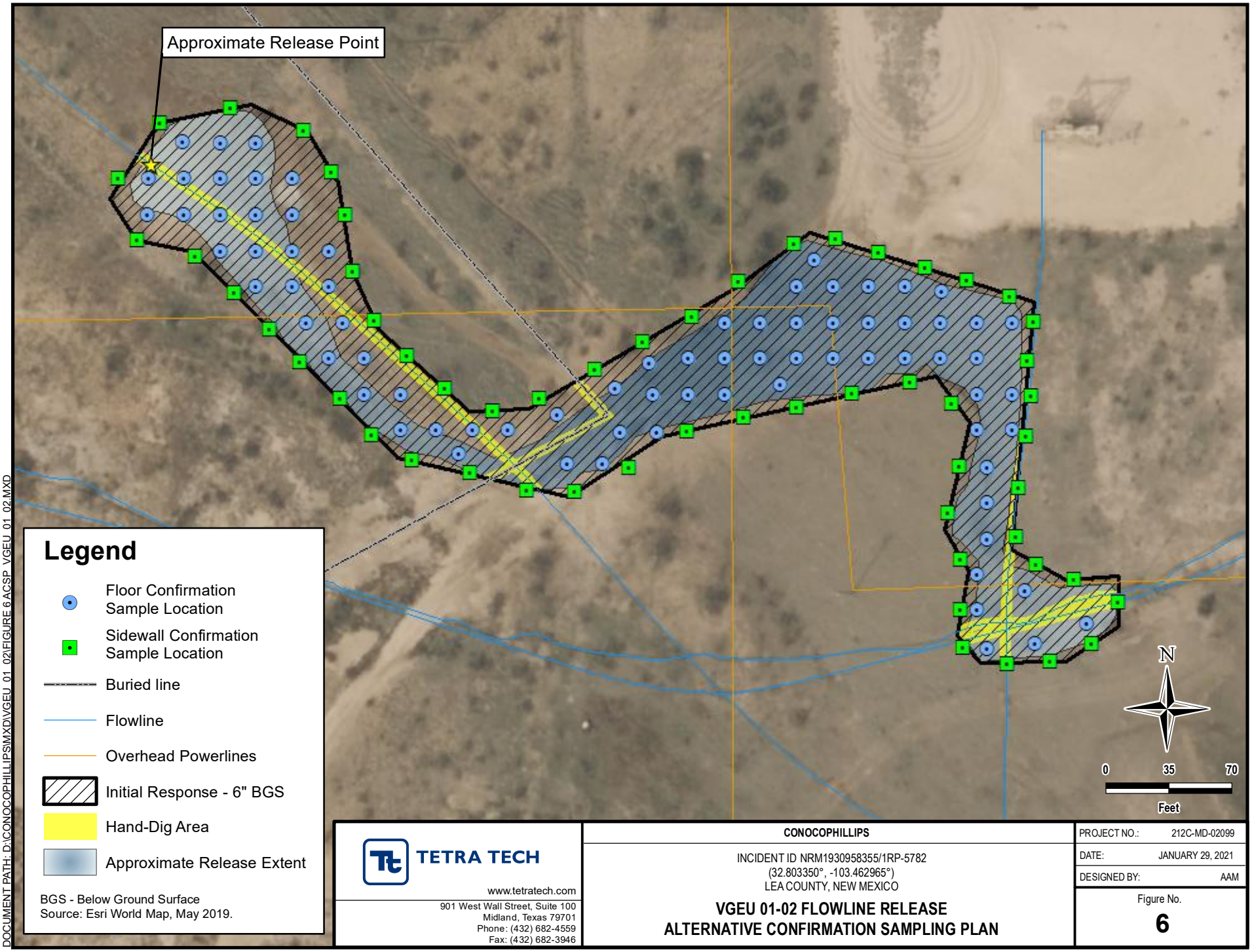
(32.803350°, -103.462965°)
LEA COUNTY, NEW MEXICO

VGEU 01-02 FLOWLINE RELEASE
PROPOSED REMEDIATION EXTENT

PROJECT NO.:	212C-MD-02099
DATE:	JANUARY 29, 2021
DESIGNED BY:	AAM

Figure No.
5



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\VGEU_01_02\FIGURE 6 ACSP_VGEU_01_02.MXD

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(32.803350°, -103.462965°)
LEA COUNTY, NEW MEXICO

VGEU 01-02 FLOWLINE RELEASE
ALTERNATIVE CONFIRMATION SAMPLING PLAN

PROJECT NO.:	212C-MD-02099
DATE:	JANUARY 29, 2021
DESIGNED BY:	AAM

Figure No.
6

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESSMENT - 1RP-5782
CONOCOPHILLIPS
VGEU 01-02 FLOWLINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Interval	Chloride[1]	
		ft bgs	mg/kg	Q
SP-1	11/04/19	0.5	***8720***	
SP-2	11/04/19	0.5	***8800***	
SP-3	11/04/19	0.5	***7330***	
SP-4	11/04/19	0.5	***10000***	
SP-5	11/04/19	0.5	***32800***	
SP-6	11/04/19	0.5	***16200***	
SP-7	11/04/19	0.5	***640***	
SP-8	11/04/19	0.5	***10200***	
SP-9	11/04/19	0.5	***11600***	
SP-10	11/04/19	0.5	***4640***	
SP-11	11/01/19	0.5	***1600***	
SP-12	11/01/19	0.5	***4000***	
SP-13	11/01/19	0.5	***12100***	
SP-14	11/01/19	0.5	***30800***	
SP-15	11/01/19	0.5	***13400***	
SP-16	11/01/19	0.5	***25600***	
SP-17	11/01/19	0.5	***21000***	
SP-18	11/01/19	0.5	***20200***	
SP-19	11/01/19	0.5	***23000***	
SP-20	11/01/19	0.5	***18800***	QM-07
SP-21	11/01/19	0.5	***6240***	
SP-22	11/01/19	0.5	***21400***	
SP-23	11/01/19	0.5	***18800***	
SP-24	11/01/19	0.5	***15400***	

NOTES:

ft Feet
bgs Below ground surface
mg/kg Milligrams per kilogram
Q Qualifier
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS.

1 Method SM45000Cl-B

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
ADDITIONAL SOIL ASSESSMENT - 1RP-5782
CONOCOPHILLIPS
VGEU 01-02 FLOWLINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Field Screening Results		Chloride[1]		BTEX[2]								TPH[3]							
			Chloride	PID			Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX	GRO[4]		DRO		ORO		Total TPH (GRO+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	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
BH-1	3/25/2020	0-1	11730	1.1	***12200***		< 0.00112		< 0.00562		< 0.00281		< 0.00731		ND	< 0.112		8.77		15.3		24.1
		2-3	6860	2.6	***6670***		< 0.00108		< 0.00538		< 0.00269		< 0.00699		ND	< 0.108		1.92	J	1.29	J	3.21
		3-4	5410	3.8	***7120***		< 0.00108		< 0.00541		< 0.00270		< 0.00703		ND	< 0.108		< 4.33		1.16	J	1.16
		4-5	10530	1.2	-		-		-		-		-		-	-		-		-		-
		6-7	-	1.4	-		-		-		-		-		-	-		-		-		-
		9-10	-	1.6	-		-		-		-		-		-	-		-		-		-
		14-15	6620	1.8	-		-		-		-		-		-	-		-		-		-
		19-20	5770	2.1	-		-		-		-		-		-	-		-		-		-
		24-25	4310	2.3	-		-		-		-		-		-	-		-		-		-
		29-30	3670	1.7	***1220***		< 0.00108		< 0.00542		< 0.00271		< 0.00705		ND	< 0.108		3.50	J	1.96	J	5.46
		39-40	718	1.1	-		-		-		-		-		-	-		-		-		-
		44-45	321	1.2	110		< 0.00105		< 0.00523		< 0.00261		< 0.00680		ND	< 0.105		< 4.18		0.306	J	0.306
BH-2	3/25/2020	0-1	1420	2.3	***1580***		< 0.00111		< 0.00557		< 0.00279		< 0.00725		ND	< 0.111		998		1830		***2828***
		2-3	1380	4.5	***1600***		0.00205	J	0.00842	J	0.00535	J	< 0.0296		0.01582	< 0.114		850		1510		***2360***
		3-4	1170	6.1	***1890***		< 0.00114		< 0.00570		< 0.00285		< 0.00741		ND	< 0.114		115		187		***302***
		4-5	1210	4.1	-		-		-		-		-		-	-		-		-		-
		19-20	296	1.1	322		< 0.00105		< 0.00524		< 0.00262		< 0.00681		ND	< 0.105		3.99	J	1.59	J	5.58
BH-3	3/25/2020	0-1	>15000	8.2	***22500***		< 0.00117		< 0.00583		0.000641	J	< 0.00758		0.000641	0.0266	J	343		242		***585***
		2-3	11340	3.2	***19900***		< 0.00117		< 0.00587		< 0.00293		< 0.00763		ND	< 0.117		201		124		***325***
		3-4	1710	1.6	***14100***		< 0.00123		< 0.00613		< 0.00307		< 0.00797		ND	< 0.123		283		184		***467***
		4-5	1210	1.6	-		-		-		-		-		-	-		-		-		-
		6-7	727	1.5	-		-		-		-		-		-	-		-		-		-
		19-20	220	1.8	108		< 0.00104		< 0.00522		< 0.00261		< 0.00679		ND	< 0.104		< 4.18		< 4.18		ND
BH-4	3/25/2020	0-1	2950	1.9	***2920***		< 0.00113		< 0.00565		< 0.00282		< 0.00734		ND	< 0.113		5.88		5.32		11.2
		2-3	2460	2.1	***2730***		< 0.00112		< 0.00558		< 0.00279		< 0.00726		ND	< 0.112		3.81	J	4.48		8.29
		3-4	1560	1.1	***1730***		< 0.00111		< 0.00557		< 0.00279		< 0.00725		ND	0.0346	B J	8.09		6.13		14.3
		4-5	1210	1.1	-		-		-		-		-		-	-		-		-		-
		6-7	489	1.2	23.8		< 0.00105		< 0.00523		< 0.00262		< 0.00680		ND	0.0239	B J	7.23		4.09	J	11.3
BH-5	3/25/2020	0-1	98.1	1.2	17.1	B	< 0.00123		< 0.00613		< 0.00306		< 0.00797		ND	0.0501	B J	13.2		19.9		33.2
		2-3	106	0.9	25.6	B	< 0.00123		< 0.00614		< 0.00307		< 0.00798		ND	0.0647	B J	8.00	J3	17.8		25.9
		3-4	121	0.9	25.7	B	< 0.00125		< 0.00623		< 0.00312		< 0.00810		ND	0.0437	B J	4.61	J	8.65		13.3
		4-5	138	0.8	30.2		< 0.00107		< 0.00536		< 0.00268		< 0.00696		ND	0.104	B J	2.52	J	4.07	J	6.69
BH-6	3/25/2020	0-1	177	0.4	37.5		< 0.00107		< 0.00536		< 0.00268		< 0.00697		ND	0.0404	B J	5.66		6.94		12.6
		2-3	184	0.3	10.3	B J	< 0.00108		< 0.00540		< 0.00270		< 0.00703		ND	0.0265	B J	4.77		4.43		9.23
		3-4	124	0.9	7.52	B J	< 0.00107		< 0.00533		< 0.00266		< 0.00693		ND	< 0.107		3.15	J	2.16	B J	5.31
		4-5	117	1.1	-		-		-		-		-		-	-		-		-		-

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
ADDITIONAL SOIL ASSESSMENT - 1RP-5782
CONOCOPHILLIPS
VGEU 01-02 FLOWLINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Field Screening Results		Chloride[1]		BTEX[2]										TPH[3]							
			Chloride	PID			Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO[4] C_3 - C_{10}		DRO C_{10} - C_{28}		ORO C_{28} - C_{40}		Total TPH (GRO+DRO+ORO)	
		ft. bgs	ppm		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	
BH-7	3/25/2020	0-1	206	1.2	62.6		< 0.00114		< 0.00568		< 0.00284		< 0.00739		ND		0.246	B	18.1		38.5		56.8	
		2-3	193	1.4	45.4		< 0.00114		< 0.00571		< 0.00286		< 0.00743		ND		0.0599	B J	15.0		24.9		40.0	
		3-4	184	1.2	152		< 0.00114		< 0.00568		< 0.00284		< 0.00738		ND		0.0369	B J	6.35		12.5		18.9	
		4-5	208	1.3	260		< 0.00114		< 0.00571		< 0.00286		< 0.00742		ND		0.0248	J	2.52	J	4.51	J	7.05	
BH-8	3/25/2020	0-1	270	1.1	114		< 0.00115		< 0.00576		< 0.00288		< 0.00749		ND		0.0316	B J	5.08		5.50		10.6	
		2-3	262	0.9	295		< 0.00115		< 0.00573		< 0.00287		< 0.00745		ND		0.0315	B J	6.67		7.58		14.3	
		3-4	257	1.0	69.9		< 0.00116		< 0.00579		< 0.00289		< 0.00752		ND		0.0326	B J	15.2		27.9		43.1	
		4-5	156	1.3	25.2		< 0.00109		< 0.00546		< 0.00273		< 0.00709		ND		0.0679	B J	3.55	J	6.84		10.5	
BH-9	3/25/2020	0-1	110	1.1	9.92	B J	< 0.00111		< 0.00556		< 0.00278		< 0.00723		ND		0.0534	B J	15.5		30.8		46.4	
		2-3	146	1.1	7.66	B J	< 0.00105		< 0.00523		< 0.00261		< 0.00679		ND		0.0265	B J	4.21		6.41		10.6	
		3-4	137	0.9	7.52	B J	< 0.00104		< 0.00522		< 0.00261		< 0.00679		ND		0.0306	B J	3.83	J	3.55	J	7.41	
		4-5	123	0.8	7.88	B J	< 0.00122		< 0.00612		< 0.00306		< 0.00795		ND		< 0.122		3.54	J	0.688	J	4.23	
BH-10	3/25/2020	0-1	320	1.1	39.6		< 0.00107		< 0.00535		< 0.00267		< 0.00695		ND		0.0461	J	7.41		4.16	J	11.6	
		2-3	350	1.7	7.20	B J	< 0.00108		< 0.00541		< 0.00271		< 0.00704		ND		0.0258	J	3.84	J	1.35	J	5.22	

NOTES:

ft. Feet
bgs Below ground surface
ppm Parts per million
mg/kg Milligrams per kilogram
HOLD Hold on sample analysis
TPH Total Petroleum Hydrocarbons
GRO Gasoline range organics
DRO Diesel range organics
ORO Oil range organics
ND Non-detect

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.
J3 The associated batch QC was outside the established quality control range for precision.

APPENDIX A
C-141 Forms

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NRM1930958355
District RP	1RP-5782
Facility ID	fGRL0928155860
Application ID	pRM1930959194

Release Notification

Responsible Party

Responsible Party ConocoPhillips Company	OGRID 217817
Contact Name Gustavo Fejervary	Contact Telephone 432/210-7037
Contact email g.fejervary@cop.com	Incident # *(assigned by OCD)*
Contact mailing address 5735 SW 7000 Andrews, TX 79714	

Location of Release Source

Latitude 32.80340 Longitude -103.46305
(NAD 83 in decimal degrees to 5 decimal places)

Site Name VGEU 02-01 Flowline leak	Site Type flowline
Date Release Discovered 10/10/19	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
K & J	28	17S	35E	Lea

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

Nature and Volume of Release

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

☑ Crude Oil	Volume Released (bbls) 11	Volume Recovered (bbls) 5.5
☑ Produced Water	Volume Released (bbls) 362	Volume Recovered (bbls) 174.5
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release Flowline rupture

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM1930958355
District RP	1RP-5782
Facility ID	fGRL0928155860
Application ID	pRM1930959194

Was this a major release as defined by 19.15.29.7(A) NMAC? ☑ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? it was more than 25 bbls.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Yes, email sent to Bradford Billings, District 1 spill reporting email address and Dylan Rose-Coss

Initial Response

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

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

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

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

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

Printed Name: Gustavo Fejervary
Title: Environmental Coordinator
Signature:
Date: 10/16/19
email: g.fejervary@cop.com
Telephone: 432/210-7037

OCD Only

Received by: Ramona Marcus
Date: 11/5/2019

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

APPENDIX B
Site Characterization Data

Karst Potential Map

VGEU 2801-02 Release

Legend

- High
- Low
- Medium
- VGEU 2801-02 Release

Lovington

Lea

VGEU 2801-02 Release

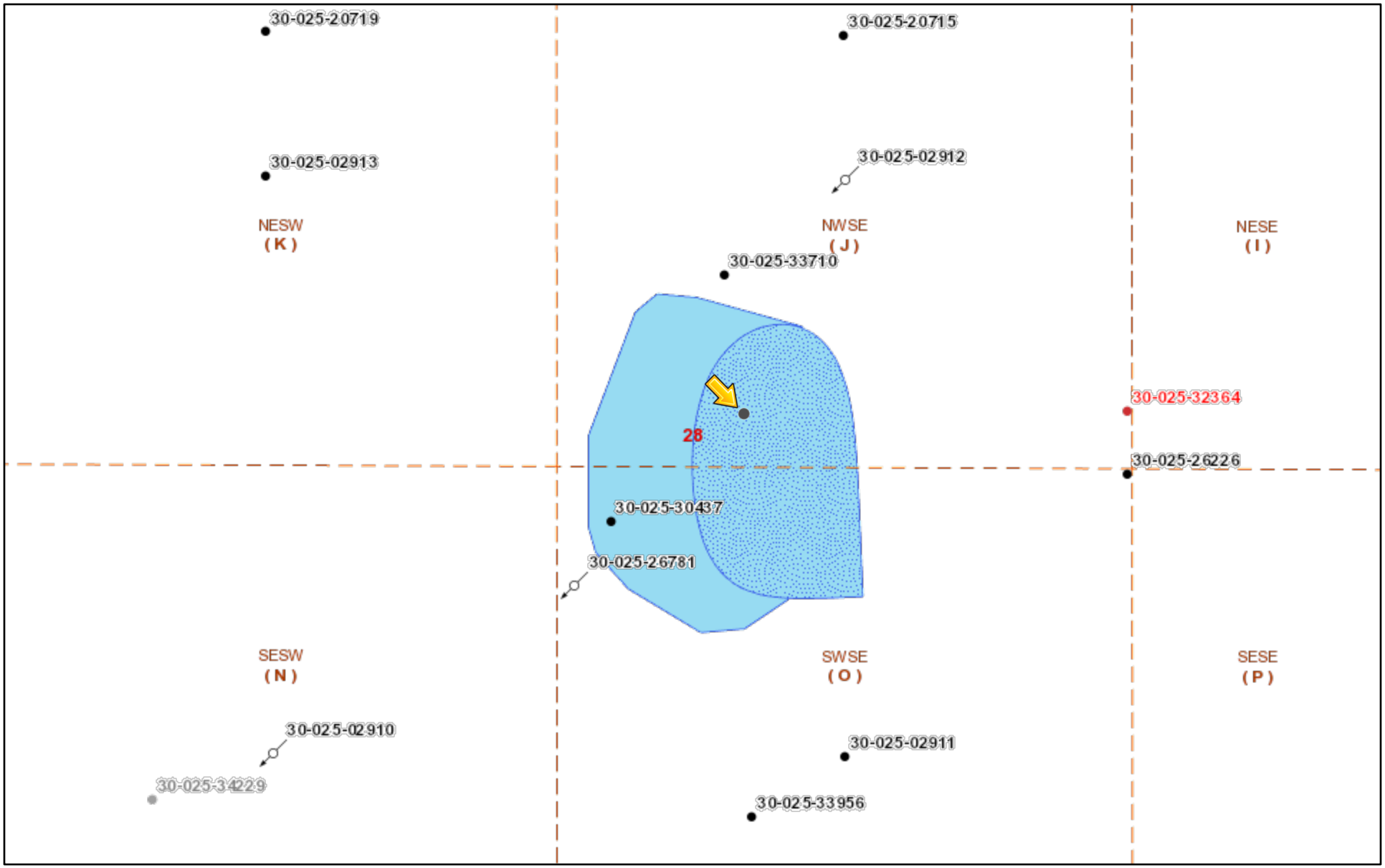
N

10 mi

Google Earth

Image Landsat / Copernicus

VGEU 01-02



8/13/2020, 11:49:25 AM

1:4,514

0 0.03 0.07 0.13 mi

0 0.05 0.1 0.2 km

Override 1

Wells - Large Scale

? undefined

Miscellaneous

CO2, Active

CO2, Cancelled

CO2, New

CO2, Plugged

CO2, Temporarily Abandoned

Gas, Active

Gas, Cancelled

Gas, New

Gas, Plugged

Gas, Temporarily Abandoned

Injection, Active

Oil Conservation Division of the New Mexico Energy, Minerals and Natural

New Mexico Oil Conservation Division

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

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

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 05362	L	LE	3	4	4	28	17S	35E	644444	3630117*	676	140	80	60

Average Depth to Water: **80 feet**

Minimum Depth: **80 feet**

Maximum Depth: **80 feet**

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 643909.13 **Northing (Y):** 3630531.947 **Radius:** 800

***UTM location was derived from PLSS - see Help**

APPENDIX C
Boring Logs

212C-MD-02099	TETRA TECH	LOG OF BORING BH-1	Page 1 of 2

Project Name: VGEU 01-02 Flowline Release

Borehole Location: GPS: 32.803372°, -103.462900° | Surface Elevation: 3940 ft

Borehole Number: BH-1 | Borehole Diameter (in.): 8 | Date Started: 3/24/2020 | Date Finished: 3/24/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			11.73	1.1								**-SM-** SILTY SAND; Brown, dense, dry, with gravel, with no odor, with no staining.		BH-1 (0'-1')
			6.86	2.6									3	BH-1 (2'-3')
			5.41	3.8								**-CL-** SILTY CLAY; Brown, stiff, moist, with no odor, with no staining.		BH-1 (3'-4')
5			10.58	1.2										BH-1 (4'-5')
													6	
				1.4								**-SILTSTONE-** SILTSTONE; Orangish tan, hard, dry, interbedded with sandstone, with no odor, with no staining.		BH-1 (6'-7')
10				1.6										BH-1 (9'-10')
													14	
15			6.62	1.8								**-SM-** SILTY SAND; Tan, dense, dry, with gravel, with no odor, with no staining.		BH-1 (14'-15')
20			5.77	2.1										BH-1 (19'-20')
25			4.31	2.3										BH-1 (24'-25')

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

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

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

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

212C-MD-02099	TETRA TECH	**LOG OF BORING BH-1**	Page 2 of 2

Project Name: VGEU 01-02 Flowline Release

Borehole Location: GPS: 32.803372°, -103.462900° | Surface Elevation: 3940 ft

Borehole Number: BH-1 | Borehole Diameter (in.): 8 | Date Started: 3/24/2020 | Date Finished: 3/24/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
30			3.67	1.7										BH-1 (29'-30')
35														BH-1 (34'-35')
40			718	1.1										BH-1 (39'-40')
45			321	1.2								**-SM-** SILTY SAND; LIght tan, dense, dry, with no odor, with no staining.	44 45	BH-1 (44'-45')

Bottom of borehole at 45.0 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: Devin Dominguez | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02099	TETRA TECH	**LOG OF BORING BH-2**	Page 1 of 1

Project Name: VGEU 01-02 Flowline Release

Borehole Location: GPS: 32.802933°, -103.462462° | Surface Elevation: 3938 ft

Borehole Number: BH-2 | Borehole Diameter (in.): 8 | Date Started: 3/24/2020 | Date Finished: 3/24/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			1.42	2.3								**-SM-** SILTY SAND; Brown, dense, dry, with gravel, with no odor, with no staining.		BH-2 (0'-1')
			1.38	4.5									3	BH-2 (2'-3')
			1.17	6.1								**-CL-** SILTY CLAY; Brown, stiff, moist, with no odor, with no staining.		BH-2 (3'-4')
5			1.21	4.1										BH-2 (4'-5')
													6	
												-SILTSTONE- SILTSTONE; Orangish tan, hard, dry, interbedded with sandstone, with no odor, with no staining.		BH-2 (6'-7')
10														BH-2 (9'-10')
15														BH-2 (14'-15')
													19	
20			296	1.1								**-SM-** SILTY SAND; LIght Brown, dense, dry, with no odor, with no staining.	20	BH-2 (19'-20')

Bottom of borehole at 20.0 feet.

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

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

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

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

212C-MD-02099	TETRA TECH	**LOG OF BORING BH-3**	Page 1 of 1

Project Name: VGEU 01-02 Flowline Release

Borehole Location: GPS: 32.803139°, -103.461587° | Surface Elevation: 3938 ft

Borehole Number: BH-3 | Borehole Diameter (in.): 8 | Date Started: 3/24/2020 | Date Finished: 3/24/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			15000	8.2								**-CL-** SILTY CLAY; Dark Brown, stiff, moist, with no odor, with no staining.		BH-3 (0'-1')
			11.34	3.2										BH-3 (2'-3')
			1.71	1.6									4	BH-3 (3'-4')
5			1.21	1.6								**-SM-** SILTY SAND; Light brown, dense, dry, with gravel, with no odor, with no staining.		BH-3 (4'-5')
			727	1.5									7	BH-3 (6'-7')
												-SILTSTONE- SILTSTONE; Orangish tan, hard, dry, interbedded with sandstone, with no odor, with no staining.		
10														BH-3 (9'-10')
15														BH-3 (14'-15')
													19	
20			220	1.8								**-SM-** SILTY SAND; Tan, dense, dry, with gravel, with no odor, with no staining.	20	BH-3 (19'-20')

Bottom of borehole at 20.0 feet.

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

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

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

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

212C-MD-02099	TETRA TECH	**LOG OF BORING BH-4**	Page 1 of 1

Project Name: VGEU 01-02 Flowline Release

Borehole Location: GPS: 32.802762°, -103.461514° | Surface Elevation: 3935 ft

Borehole Number: BH-4 | Borehole Diameter (in.): 8 | Date Started: 3/24/2020 | Date Finished: 3/24/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			2.95	1.9								**-CL-** SILTY CLAY; Dark Brown, stiff, moist, with no odor, with no staining.		BH-4 (0'-1')
			2.46	2.1									3	BH-4 (2'-3')
			1.56	1.1								**-SM-** SILTY SAND; Tan, dense, dry, with gravel, with no odor, with no staining.		BH-4 (3'-4')
5			1.21	1.1										BH-4 (4'-5')
			489	1.2									6	
												-SM- SILTY SAND; Grayish brown, dense, dry, with gravel, with no odor, with no staining.	7	BH-4 (6'-7')

Bottom of borehole at 7.0 feet.

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

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

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

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

212C-MD-02099	TETRA TECH	LOG OF BORING BH-5	Page 1 of 1

Project Name: VGEU 01-02 Flowline Release

Borehole Location: GPS: 32.803502°, -103.462963° | Surface Elevation: 3941 ft

Borehole Number: BH-5 | Borehole Diameter (in.): 8 | Date Started: 3/25/2020 | Date Finished: 3/25/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			98.1	1.2								**-SM-** SILTY SAND; Dark brown, dense, dry, with gravel, with no odor, with no staining.		BH-5 (0'-1')
			106	0.9									3	BH-5 (2'-3')
			121	0.9								**-SM-** SILTY SAND; Tan, dense, dry, with gravel, with no odor, with no staining.		BH-5 (3'-4')
5			138	0.8									5	BH-5 (4'-5')

Bottom of borehole at 5.0 feet.

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

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

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

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

212C-MD-02099	TETRA TECH	LOG OF BORING BH-6	Page 1 of 1

Project Name: VGEU 01-02 Flowline Release

Borehole Location: GPS: 32.803119°, -103.462156° | Surface Elevation: 3938 ft

Borehole Number: BH-6 | Borehole Diameter (in.): 8 | Date Started: 3/25/2020 | Date Finished: 3/25/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			177	0.4								**-SM-** SILTY SAND; Brown, dense, dry, with gravel, with no odor, with no staining.		BH-6 (0'-1')
			184	0.3										BH-6 (2'-3')
			124	0.9									4	BH-6 (3'-4')
5			117	1.1								**-SM-** SILTY SAND; Dark brown, dense, dry, with gravel, with no odor, with no staining.	5	BH-6 (4'-5')

Bottom of borehole at 5.0 feet.

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

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

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

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

212C-MD-02099	TETRA TECH	**LOG OF BORING BH-7**	Page 1 of 1

Project Name: VGEU 01-02 Flowline Release

Borehole Location: GPS: 32.803144°, -103.461359° | Surface Elevation: 3938 ft

Borehole Number: BH-7 | Borehole Diameter (in.): 8 | Date Started: 3/25/2020 | Date Finished: 3/25/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			206	1.2								**-SM-** SILTY SAND; Dark brown, dense, dry, with gravel, with no odor, with no staining.		BH-7 (0'-1')
			193	1.4									3	BH-7 (2'-3')
			184	1.2								**-SM-** SILTY SAND; Light brown, dense, dry, with gravel, with no odor, with no staining.		BH-7 (3'-4')
5			208	1.3									5	BH-7 (4'-5')

Bottom of borehole at 5.0 feet.

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

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

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

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

212C-MD-02099	TETRA TECH	**LOG OF BORING BH-8**	Page 1 of 1

Project Name: VGEU 01-02 Flowline Release

Borehole Location: GPS: 32.802642°, -103.461298° | Surface Elevation: 3936 ft

Borehole Number: BH-8 | Borehole Diameter (in.): 8 | Date Started: 3/25/2020 | Date Finished: 3/25/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			270	1.1								**-CL-** SILTY CLAY; Dark brown, very stiff, moist, with no odor, with no staining.		BH-8 (0'-1')
			262	0.9									3	BH-8 (2'-3')
			257	1								**-SM-** SILTY SAND; Brown, dense, dry, with gravel, with no odor, with no staining.		BH-8 (3'-4')
5			156	1.3									5	BH-8 (4'-5')

Bottom of borehole at 5.0 feet.

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

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

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

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

212C-MD-02099	TETRA TECH	**LOG OF BORING BH-9**	Page 1 of 1

Project Name: VGEU 01-02 Flowline Release

Borehole Location: GPS: 32.802973°, -103.461914° | Surface Elevation: 3938 ft

Borehole Number: BH-9 | Borehole Diameter (in.): 8 | Date Started: 3/25/2020 | Date Finished: 3/25/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			110	1.1								**-SM-** SILTY SAND; Brown, loose, dry, with gravel, with no odor, with no staining.		BH-9 (0'-1')
			146	1.1									3	BH-9 (2'-3')
			137	0.9								**-SM-** SILTY SAND; Light brown, dense, dry, with gravel, with no odor, with no staining.	4	BH-9 (3'-4')
5			123	0.8								**-SM-** SILTY SAND; Brown, dense, dry, with gravel, with no odor, with no staining.	5	BH-9 (4'-5')

Bottom of borehole at 5.0 feet.

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

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

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

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

212C-MD-02099	TETRA TECH	LOG OF BORING BH-10	Page 1 of 1

Project Name: VGEU 01-02 Flowline Release

Borehole Location: GPS: 32.802969°, -103.462699° | Surface Elevation: 3939 ft

Borehole Number: BH-10 | Borehole Diameter (in.): 8 | Date Started: 3/25/2020 | Date Finished: 3/25/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			320	1.1								**-SM-** SILTY SAND; Dark brown, dense, dry, with gravel, with no odor, with no staining.		BH-1 (0'-1')0
			350	1.7									3	BH-10 (2'-3')

Bottom of borehole at 3.0 feet.

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

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

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

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

APPENDIX D
Laboratory Analytical Data

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

November 08, 2019

JUSTIN WRIGHT

Conoco Phillips - Hobbs

P. O. BOX 325

Hobbs, NM 88240

RE: VGEU 01-02

Enclosed are the results of analyses for samples received by the laboratory on 11/05/19 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Conoco Phillips - Hobbs
JUSTIN WRIGHT
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	11/05/2019	Sampling Date:	11/04/2019
Reported:	11/08/2019	Sampling Type:	Soil
Project Name:	VGEU 01-02	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 1 (H903775-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8720**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 2 (H903775-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8800**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 3 (H903775-03)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7330**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 4 (H903775-04)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**10000**	16.0	11/07/2019	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Conoco Phillips - Hobbs
JUSTIN WRIGHT
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	11/05/2019	Sampling Date:	11/04/2019
Reported:	11/08/2019	Sampling Type:	Soil
Project Name:	VGEU 01-02	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 5 (H903775-05)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32800**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 6 (H903775-06)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16200**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 7 (H903775-07)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**640**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 8 (H903775-08)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**10200**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 9 (H903775-09)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**11600**	16.0	11/07/2019	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Conoco Phillips - Hobbs
JUSTIN WRIGHT
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	11/05/2019	Sampling Date:	11/04/2019
Reported:	11/08/2019	Sampling Type:	Soil
Project Name:	VGEU 01-02	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 10 (H903775-10)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4640**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 11 (H903775-11)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1600**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 12 (H903775-12)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4000**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 13 (H903775-13)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**12100**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 14 (H903775-14)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**30800**	16.0	11/07/2019	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Conoco Phillips - Hobbs
JUSTIN WRIGHT
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	11/05/2019	Sampling Date:	11/01/2019
Reported:	11/08/2019	Sampling Type:	Soil
Project Name:	VGEU 01-02	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 15 (H903775-15)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**13400**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 16 (H903775-16)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**25600**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 17 (H903775-17)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**21000**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 18 (H903775-18)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**20200**	16.0	11/07/2019	ND	416	104	400	0.00	

Sample ID: SP # 19 (H903775-19)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**23000**	16.0	11/07/2019	ND	416	104	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Conoco Phillips - Hobbs
JUSTIN WRIGHT
P. O. BOX 325
Hobbs NM, 88240
Fax To: (575) 297-1477

Received:	11/05/2019	Sampling Date:	11/01/2019
Reported:	11/08/2019	Sampling Type:	Soil
Project Name:	VGEU 01-02	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 20 (H903775-20)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**18800**	16.0	11/07/2019	ND	400	100	400	3.92	QM-07

Sample ID: SP # 21 (H903775-21)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6240**	16.0	11/07/2019	ND	400	100	400	3.92	

Sample ID: SP # 22 (H903775-22)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**21400**	16.0	11/07/2019	ND	400	100	400	3.92	

Sample ID: SP # 23 (H903775-23)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**18800**	16.0	11/07/2019	ND	400	100	400	3.92	

Sample ID: SP # 24 (H903775-24)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**15400**	16.0	11/07/2019	ND	400	100	400	3.92	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	ConocoPhillips	P.O. #:	
Project Manager:	Justin Wright	Company:	ConocoPhillips
Address:		Attn:	
City:	Hobbs St NM Zip: #	Address:	
Phone #:	575-631-9092 Fax #:	City:	
Project #:	Project Owner: COPC	State:	Zip:
Project Name:	VGEU 01-02	Phone #:	
Project Location:	Lea County, NM	Fax #:	
Sampler Name:	Justin Wright		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Chlorides
H903775															
1	SP#1	G				*					*		11-4		✓
2	SP#2	G				*					*		11-4		✓
3	SP#3	G				*					*		11-4		✓
4	SP#4	G				*					*		11-4		✓
5	SP#5	G				*					*		11-4		✓
6	SP#6	G				*					*		11-4		✓
7	SP#7	G				*					*		11-4		✓
8	SP#8	G				*					*		11-4		✓
9	SP#9	G				*					*		11-4		✓
10	SP#10	G				*					*		11-4		✓

Relinquished By:	Date: 11-5-19	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 3:55 pm		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 0.6	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C 1.0			Thermometer ID #97 Correction Factor + 0.4 °C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No; Observed Temp. °C; Corrected Temp. °C

FORM-006 R 3.0

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	ConocoPhillips	BILL TO	
Project Manager:	Justin Wright	P.O. #:	
Address:		Company:	ConocoPhillips
City:	Hobbs St NM Zip: #	Attn:	
Phone #:	575-631-9092 Fax #:	Address:	
Project #:	Project Owner: COPC	City:	
Project Name:	VGEU 01-02	State:	Zip:
Project Location:	Lea County, NM	Phone #:	
Sampler Name:	Justin Wright	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides
H903775															
11	SPH 11	G				*					*		11-1		✓
12	SPH 12	G				*					*		11-1		✓
13	SPH 13	G				*					*		11-1		✓
14	SPH 14	G				*					*		11-1		✓
15	SPH 15	G				*					*		11-1		✓
16	SPH 16	G				*					*		11-1		✓
17	SPH 17	G				*					*		11-1		✓
18	SPH 18	G				*					*		11-1		✓
19	SPH 19	G				*					*		11-1		✓
20	SPH 20	G				*					*		11-1		✓

Relinquished By:	Date: 11-5-19	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 3:55pm		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 0.6	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ✓ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C 1.0	☐ Yes ☐ Yes ☐ No ☐ No	TO.	Thermometer ID #97 Correction Factor + 0.4 °C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No; Observed Temp. °C; Corrected Temp. °C

FORM-006 R 3.0

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

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(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	ConocoPhillips	BILL TO	
Project Manager:	Justin Wright	P.O. #:	
Address:		Company:	ConocoPhillips
City:	Hobbs St NM Zip: #	Attn:	
Phone #:	575-631-9092 Fax #:	Address:	
Project #:	Project Owner: COPC	City:	
Project Name:	VGEU 01-02	State:	Zip:
Project Location:	Lea County, NM	Phone #:	
Sampler Name:	Justin Wright	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Chlorides
H903775															
21	SP#21	G				*					*		11-1		✓
22	SP#22	G				*					*		11-1		✓
23	SP#23	G				*					*		11-1		✓
24	SP#24	G				*					*		11-1		✓
		G				*					*				
		G				*					*				
		G				*					*				
		G				*					*				
		G				*					*				
		G				*					*				

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Relinquished By:	Date: 11-5-19 Time: 3:35 pm	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: Time:	Received By:	REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 0.6 Corrected Temp. °C 1.0	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TO
Turnaround Time: Standard ☑ Rush ☐ Thermometer ID #97 Correction Factor + 0.4 °C	Bacteria (only) Sample Condition Cool ☐ Yes ☐ Nc Intact ☐ Yes ☐ No	Observed Temp. °C	Corrected Temp. °C

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† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

April 07, 2020

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1204246
Samples Received:	03/28/2020
Project Number:	212CMD02099
Description:	VGEU 2801-02

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.

TABLE OF CONTENTS

BH-1 0-1' L1204246-01 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453693	1	04/01/20 22:17	04/01/20 22:24	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453916	50	04/02/20 10:05	04/02/20 20:59	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 16:25	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453768	1	04/01/20 01:21	04/01/20 19:18	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	1	04/01/20 00:21	04/02/20 03:24	KME	Mt. Juliet, TN

BH-1 2'-3' L1204246-02 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453693	1	04/01/20 22:17	04/01/20 22:24	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453916	20	04/02/20 10:05	04/02/20 21:27	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 16:49	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453768	1	04/01/20 01:21	04/01/20 19:37	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	1	04/01/20 00:21	04/02/20 20:46	FM	Mt. Juliet, TN

BH-1 3'-4' L1204246-03 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453693	1	04/01/20 22:17	04/01/20 22:24	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453916	20	04/02/20 10:05	04/02/20 21:37	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 17:12	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453768	1	04/01/20 01:21	04/01/20 19:56	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	1	04/01/20 00:21	04/02/20 04:14	KME	Mt. Juliet, TN

BH-1 29'-30' L1204246-04 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453693	1	04/01/20 22:17	04/01/20 22:24	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453916	5	04/02/20 10:05	04/02/20 21:56	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 17:36	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453768	1	04/01/20 01:21	04/01/20 20:15	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	1	04/01/20 00:21	04/02/20 04:27	KME	Mt. Juliet, TN

BH-1 44'-45' L1204246-05 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453694	1	04/01/20 22:07	04/01/20 22:15	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453916	1	04/02/20 10:05	04/02/20 22:05	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 18:00	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453768	1	04/01/20 01:21	04/01/20 20:35	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	1	04/01/20 00:21	04/02/20 04:39	KME	Mt. Juliet, TN

BH-2 0-1' L1204246-06 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453694	1	04/01/20 22:07	04/01/20 22:15	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453916	5	04/02/20 10:05	04/02/20 22:15	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 18:40	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453768	1	04/01/20 01:21	04/01/20 20:54	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	50	04/01/20 00:21	04/02/20 07:21	KME	Mt. Juliet, TN

BH-2 2'-3' L1204246-07 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453694	1	04/01/20 22:07	04/01/20 22:15	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	10	04/02/20 09:30	04/02/20 12:12	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 19:28	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1455868	4	04/01/20 01:21	04/06/20 09:34	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	50	04/01/20 00:21	04/02/20 07:34	KME	Mt. Juliet, TN

BH-2 3'-4' L1204246-08 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453694	1	04/01/20 22:07	04/01/20 22:15	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	10	04/02/20 09:30	04/02/20 12:21	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 19:52	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454287	1	04/01/20 01:21	04/02/20 04:49	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	5	04/01/20 00:21	04/02/20 07:09	KME	Mt. Juliet, TN

BH-2 19'-20' L1204246-09 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453694	1	04/01/20 22:07	04/01/20 22:15	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	1	04/02/20 09:30	04/02/20 12:31	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 20:15	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453794	1	04/01/20 01:21	04/01/20 21:38	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	1	04/01/20 00:21	04/02/20 04:52	KME	Mt. Juliet, TN

BH-3 0-1' L1204246-10 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453694	1	04/01/20 22:07	04/01/20 22:15	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	100	04/02/20 09:30	04/02/20 12:50	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 20:39	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453794	1	04/01/20 01:21	04/01/20 21:58	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	5	04/01/20 00:21	04/02/20 13:49	KME	Mt. Juliet, TN

BH-3 2'-3' L1204246-11 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453694	1	04/01/20 22:07	04/01/20 22:15	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	100	04/02/20 09:30	04/02/20 12:59	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 21:28	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453794	1	04/01/20 01:21	04/01/20 22:19	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	1	04/01/20 00:21	04/02/20 06:44	KME	Mt. Juliet, TN

BH-3 3'-4' L1204246-12 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453694	1	04/01/20 22:07	04/01/20 22:15	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	100	04/02/20 09:30	04/02/20 13:09	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 21:52	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453794	1	04/01/20 01:21	04/01/20 22:39	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	1	04/01/20 00:21	04/02/20 06:56	KME	Mt. Juliet, TN

BH-3 19'-20 L1204246-13 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453694	1	04/01/20 22:07	04/01/20 22:15	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	1	04/02/20 09:30	04/02/20 13:19	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 22:16	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453794	1	04/01/20 01:21	04/01/20 22:59	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	1	04/01/20 00:21	04/02/20 05:05	KME	Mt. Juliet, TN

BH-4 0-1' L1204246-14 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453694	1	04/01/20 22:07	04/01/20 22:15	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	10	04/02/20 09:30	04/02/20 13:47	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 22:40	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453794	1	04/01/20 01:21	04/01/20 23:19	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	1	04/01/20 00:21	04/02/20 05:17	KME	Mt. Juliet, TN

BH-4 2'-3' L1204246-15 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453695	1	04/01/20 21:55	04/01/20 22:04	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	10	04/02/20 09:30	04/02/20 13:57	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453878	1	04/01/20 01:21	04/01/20 23:04	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453794	1	04/01/20 01:21	04/01/20 23:40	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453628	1	04/01/20 00:21	04/02/20 05:30	KME	Mt. Juliet, TN

BH-4 3'-4' L1204246-16 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453695	1	04/01/20 21:55	04/01/20 22:04	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	10	04/02/20 09:30	04/02/20 14:06	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 01:21	04/02/20 00:11	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453794	1	04/01/20 01:21	04/02/20 00:00	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/02/20 20:41	SHG	Mt. Juliet, TN

BH-4 6'-7' L1204246-17 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453695	1	04/01/20 21:55	04/01/20 22:04	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	1	04/02/20 09:30	04/02/20 14:16	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 01:21	04/02/20 00:32	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453794	1	04/01/20 01:21	04/02/20 00:20	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/02/20 20:57	SHG	Mt. Juliet, TN

BH-5 0-1' L1204246-18 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453695	1	04/01/20 21:55	04/01/20 22:04	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	1	04/02/20 09:30	04/02/20 14:44	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 01:21	04/02/20 00:52	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453794	1	04/01/20 01:21	04/02/20 00:40	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/03/20 00:09	SHG	Mt. Juliet, TN

BH-5 2'-3' L1204246-19 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453695	1	04/01/20 21:55	04/01/20 22:04	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	1	04/02/20 09:30	04/02/20 14:54	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 01:21	04/02/20 01:13	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453794	1	04/01/20 01:21	04/02/20 01:00	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/03/20 01:44	SHG	Mt. Juliet, TN

BH-5 3'-4' L1204246-20 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453695	1	04/01/20 21:55	04/01/20 22:04	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	1	04/02/20 09:30	04/02/20 15:03	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 01:21	04/02/20 01:33	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1453794	1	04/01/20 01:21	04/02/20 01:20	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/03/20 00:25	SHG	Mt. Juliet, TN

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

BH-5 4'-5' L1204246-21 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453695	1	04/01/20 21:55	04/01/20 22:04	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	1	04/02/20 09:30	04/02/20 15:13	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1456182	1	04/01/20 08:54	04/06/20 13:00	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 00:06	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/02/20 23:05	SHG	Mt. Juliet, TN

BH-6 0-1' L1204246-22 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453695	1	04/01/20 21:55	04/01/20 22:04	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	1	04/02/20 09:30	04/02/20 15:41	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 08:54	04/02/20 02:45	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 00:25	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/02/20 23:21	SHG	Mt. Juliet, TN

BH-6 2'-3' L1204246-23 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453695	1	04/01/20 21:55	04/01/20 22:04	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	1	04/02/20 09:30	04/02/20 15:51	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 08:54	04/02/20 04:08	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 00:44	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/02/20 23:37	SHG	Mt. Juliet, TN

BH-6 3'-4' L1204246-24 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453695	1	04/01/20 21:55	04/01/20 22:04	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	1	04/02/20 09:30	04/02/20 16:00	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 08:54	04/02/20 04:28	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 01:03	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/02/20 21:12	SHG	Mt. Juliet, TN

BH-7 0-1' L1204246-25 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453697	1	04/01/20 21:38	04/01/20 21:50	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	1	04/02/20 09:30	04/02/20 16:19	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1456182	1	04/01/20 08:54	04/06/20 13:22	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 01:23	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/03/20 01:28	SHG	Mt. Juliet, TN

BH-7 2'-3' L1204246-26 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453697	1	04/01/20 21:38	04/01/20 21:50	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453917	1	04/02/20 09:30	04/02/20 16:29	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 08:54	04/02/20 05:35	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 01:42	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/03/20 00:41	SHG	Mt. Juliet, TN

BH-7 3'-4' L1204246-27 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453697	1	04/01/20 21:38	04/01/20 21:50	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453918	5	04/02/20 14:53	04/02/20 23:50	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 08:54	04/02/20 05:56	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 02:01	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/02/20 23:53	SHG	Mt. Juliet, TN

BH-7 4'-5' L1204246-28 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453697	1	04/01/20 21:38	04/01/20 21:50	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453918	5	04/02/20 14:53	04/03/20 00:09	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 08:54	04/02/20 06:16	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 02:20	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/02/20 21:29	SHG	Mt. Juliet, TN

BH-8 0-1' L1204246-29 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453697	1	04/01/20 21:38	04/01/20 21:50	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453918	1	04/02/20 14:53	04/03/20 00:19	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 08:54	04/02/20 07:04	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 02:39	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/02/20 21:45	SHG	Mt. Juliet, TN

BH-8 2'-3' L1204246-30 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453697	1	04/01/20 21:38	04/01/20 21:50	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453918	1	04/02/20 14:53	04/03/20 00:28	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 08:54	04/02/20 07:24	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 02:58	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/02/20 22:01	SHG	Mt. Juliet, TN

BH-8 3'-4' L1204246-31 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453697	1	04/01/20 21:38	04/01/20 21:50	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453918	1	04/02/20 14:53	04/03/20 00:38	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 08:54	04/02/20 07:45	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 03:17	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/03/20 00:56	SHG	Mt. Juliet, TN

BH-8 4'-5' L1204246-32 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453697	1	04/01/20 21:38	04/01/20 21:50	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453918	1	04/02/20 14:53	04/03/20 00:47	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 08:54	04/02/20 08:26	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 03:36	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/02/20 22:17	SHG	Mt. Juliet, TN

BH-9 0-1' L1204246-33 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453697	1	04/01/20 21:38	04/01/20 21:50	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453918	1	04/02/20 14:53	04/03/20 00:57	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 08:54	04/02/20 08:46	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 03:56	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/03/20 01:12	SHG	Mt. Juliet, TN

BH-9 2'-3' L1204246-34 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453697	1	04/01/20 21:38	04/01/20 21:50	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453918	1	04/02/20 14:53	04/03/20 01:25	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 08:54	04/02/20 09:07	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 04:15	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/02/20 22:33	SHG	Mt. Juliet, TN

BH-9 3'-4' L1204246-35 Solid

Collected by: Devin Dominguez | Collected date/time: 03/25/20 00:00 | Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453699	1	04/01/20 21:22	04/01/20 21:33	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453918	1	04/02/20 14:53	04/03/20 01:54	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453939	1	04/01/20 08:54	04/02/20 09:27	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 04:34	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453629	1	04/01/20 05:23	04/02/20 22:49	SHG	Mt. Juliet, TN

BH-9 4'-5' L1204246-36 Solid

Collected by: Devin Dominguez
Collected date/time: 03/25/20 00:00
Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453699	1	04/01/20 21:22	04/01/20 21:33	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453918	1	04/02/20 14:53	04/03/20 02:03	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453948	1	04/01/20 08:54	04/02/20 23:57	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 04:54	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453630	1	04/01/20 05:24	04/03/20 03:38	SHG	Mt. Juliet, TN

BH-10 0-1' L1204246-37 Solid

Collected by: Devin Dominguez
Collected date/time: 03/25/20 00:00
Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453699	1	04/01/20 21:22	04/01/20 21:33	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453918	1	04/02/20 14:53	04/03/20 02:13	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453948	1	04/01/20 08:54	04/03/20 00:18	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 05:13	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453630	1	04/01/20 05:24	04/03/20 08:24	SHG	Mt. Juliet, TN

BH-10 2'-3' L1204246-38 Solid

Collected by: Devin Dominguez
Collected date/time: 03/25/20 00:00
Received date/time: 03/28/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1453699	1	04/01/20 21:22	04/01/20 21:33	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1453918	1	04/02/20 14:53	04/03/20 02:22	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1453948	1	04/01/20 08:54	04/03/20 00:38	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1454074	1	04/01/20 08:54	04/02/20 05:32	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1453630	1	04/01/20 05:24	04/03/20 03:54	SHG	Mt. Juliet, TN

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

Chris McCord
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.9		1	04/01/2020 22:24	WG1453693

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	12200		44.8	562	50	04/02/2020 20:59	WG1453916

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		0.0244	0.112	1	04/01/2020 16:25	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*96.5*			*59.0-128*		*04/01/2020 16:25*	WG1453878

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		0.000450	0.00112	1	04/01/2020 19:18	WG1453768
Toluene	U		0.00141	0.00562	1	04/01/2020 19:18	WG1453768
Ethylbenzene	U		0.000596	0.00281	1	04/01/2020 19:18	WG1453768
Total Xylenes	U		0.00538	0.00731	1	04/01/2020 19:18	WG1453768
(S) Toluene-d8	*112*			*75.0-131*		*04/01/2020 19:18*	WG1453768
(S) 4-Bromofluorobenzene	*88.1*			*67.0-138*		*04/01/2020 19:18*	WG1453768
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*		*04/01/2020 19:18*	WG1453768

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	8.77		1.81	4.50	1	04/02/2020 03:24	WG1453628
C28-C40 Oil Range	15.3		0.308	4.50	1	04/02/2020 03:24	WG1453628
(S) o-Terphenyl	*41.4*			*18.0-148*		*04/02/2020 03:24*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.0		1	04/01/2020 22:24	WG1453693

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	6670		17.1	215	20	04/02/2020 21:27	WG1453916

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		0.0233	0.108	1	04/01/2020 16:49	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*97.3*			*59.0-128*		*04/01/2020 16:49*	WG1453878

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		0.000430	0.00108	1	04/01/2020 19:37	WG1453768
Toluene	U		0.00134	0.00538	1	04/01/2020 19:37	WG1453768
Ethylbenzene	U		0.000570	0.00269	1	04/01/2020 19:37	WG1453768
Total Xylenes	U		0.00514	0.00699	1	04/01/2020 19:37	WG1453768
(S) Toluene-d8	*111*			*75.0-131*		*04/01/2020 19:37*	WG1453768
(S) 4-Bromofluorobenzene	*87.3*			*67.0-138*		*04/01/2020 19:37*	WG1453768
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*04/01/2020 19:37*	WG1453768

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	1.92	J	1.73	4.30	1	04/02/2020 20:46	WG1453628
C28-C40 Oil Range	1.29	J	0.295	4.30	1	04/02/2020 20:46	WG1453628
(S) o-Terphenyl	*66.9*			*18.0-148*		*04/02/2020 20:46*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.4		1	04/01/2020 22:24	WG1453693

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	7120		17.2	216	20	04/02/2020 21:37	WG1453916

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		0.0235	0.108	1	04/01/2020 17:12	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*97.6*			*59.0-128*		*04/01/2020 17:12*	WG1453878

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		0.000433	0.00108	1	04/01/2020 19:56	WG1453768
Toluene	U		0.00135	0.00541	1	04/01/2020 19:56	WG1453768
Ethylbenzene	U		0.000573	0.00270	1	04/01/2020 19:56	WG1453768
Total Xylenes	U		0.00517	0.00703	1	04/01/2020 19:56	WG1453768
(S) Toluene-d8	*112*			*75.0-131*		*04/01/2020 19:56*	WG1453768
(S) 4-Bromofluorobenzene	*86.3*			*67.0-138*		*04/01/2020 19:56*	WG1453768
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*04/01/2020 19:56*	WG1453768

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		1.74	4.33	1	04/02/2020 04:14	WG1453628
C28-C40 Oil Range	1.16	J	0.296	4.33	1	04/02/2020 04:14	WG1453628
(S) o-Terphenyl	*59.8*			*18.0-148*		*04/02/2020 04:14*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.2		1	04/01/2020 22:24	WG1453693

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	1220		4.31	54.2	5	04/02/2020 21:56	WG1453916

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		0.0235	0.108	1	04/01/2020 17:36	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*98.0*			*59.0-128*		*04/01/2020 17:36*	WG1453878

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		0.000434	0.00108	1	04/01/2020 20:15	WG1453768
Toluene	U		0.00136	0.00542	1	04/01/2020 20:15	WG1453768
Ethylbenzene	U		0.000575	0.00271	1	04/01/2020 20:15	WG1453768
Total Xylenes	U		0.00518	0.00705	1	04/01/2020 20:15	WG1453768
(S) Toluene-d8	*113*			*75.0-131*		*04/01/2020 20:15*	WG1453768
(S) 4-Bromofluorobenzene	*86.3*			*67.0-138*		*04/01/2020 20:15*	WG1453768
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*		*04/01/2020 20:15*	WG1453768

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	3.50	J	1.75	4.34	1	04/02/2020 04:27	WG1453628
C28-C40 Oil Range	1.96	J	0.297	4.34	1	04/02/2020 04:27	WG1453628
(S) o-Terphenyl	*58.1*			*18.0-148*		*04/02/2020 04:27*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.6		1	04/01/2020 22:15	WG1453694

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	110		0.831	10.5	1	04/02/2020 22:05	WG1453916

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		0.0227	0.105	1	04/01/2020 18:00	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*98.3*			*59.0-128*		*04/01/2020 18:00*	WG1453878

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		0.000418	0.00105	1	04/01/2020 20:35	WG1453768
Toluene	U		0.00131	0.00523	1	04/01/2020 20:35	WG1453768
Ethylbenzene	U		0.000554	0.00261	1	04/01/2020 20:35	WG1453768
Total Xylenes	U		0.00500	0.00680	1	04/01/2020 20:35	WG1453768
(S) Toluene-d8	*112*			*75.0-131*		*04/01/2020 20:35*	WG1453768
(S) 4-Bromofluorobenzene	*89.9*			*67.0-138*		*04/01/2020 20:35*	WG1453768
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*04/01/2020 20:35*	WG1453768

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		1.68	4.18	1	04/02/2020 04:39	WG1453628
C28-C40 Oil Range	0.306	J	0.286	4.18	1	04/02/2020 04:39	WG1453628
(S) o-Terphenyl	*63.4*			*18.0-148*		*04/02/2020 04:39*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.7		1	04/01/2020 22:15	WG1453694

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	1580		4.44	55.7	5	04/02/2020 22:15	WG1453916

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		0.0242	0.111	1	04/01/2020 18:40	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*92.1*			*59.0-128*		*04/01/2020 18:40*	WG1453878

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		0.000446	0.00111	1	04/01/2020 20:54	WG1453768
Toluene	U		0.00139	0.00557	1	04/01/2020 20:54	WG1453768
Ethylbenzene	U		0.000591	0.00279	1	04/01/2020 20:54	WG1453768
Total Xylenes	U		0.00533	0.00725	1	04/01/2020 20:54	WG1453768
(S) Toluene-d8	*107*			*75.0-131*		*04/01/2020 20:54*	WG1453768
(S) 4-Bromofluorobenzene	*83.6*			*67.0-138*		*04/01/2020 20:54*	WG1453768
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*04/01/2020 20:54*	WG1453768

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	998		89.7	223	50	04/02/2020 07:21	WG1453628
C28-C40 Oil Range	1830		15.3	223	50	04/02/2020 07:21	WG1453628
(S) o-Terphenyl	*105*	J7		*18.0-148*		*04/02/2020 07:21*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.9		1	04/01/2020 22:15	WG1453694

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	1600		9.04	114	10	04/02/2020 12:12	WG1453917

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		0.0247	0.114	1	04/01/2020 19:28	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*88.9*			*59.0-128*		*04/01/2020 19:28*	WG1453878

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.00205	J	0.00182	0.00455	4	04/06/2020 09:34	WG1455868
Toluene	0.00842	J	0.00569	0.0228	4	04/06/2020 09:34	WG1455868
Ethylbenzene	0.00535	J	0.00241	0.0114	4	04/06/2020 09:34	WG1455868
Total Xylenes	U		0.0217	0.0296	4	04/06/2020 09:34	WG1455868
(S) Toluene-d8	*106*			*75.0-131*		*04/06/2020 09:34*	WG1455868
(S) 4-Bromofluorobenzene	*108*			*67.0-138*		*04/06/2020 09:34*	WG1455868
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*04/06/2020 09:34*	WG1455868

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	850		91.6	228	50	04/02/2020 07:34	WG1453628
C28-C40 Oil Range	1510		15.6	228	50	04/02/2020 07:34	WG1453628
(S) o-Terphenyl	*102*	J7		*18.0-148*		*04/02/2020 07:34*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.7		1	04/01/2020 22:15	WG1453694

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	1890		9.06	114	10	04/02/2020 12:21	WG1453917

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		0.0247	0.114	1	04/01/2020 19:52	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*93.6*			*59.0-128*		*04/01/2020 19:52*	WG1453878

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		0.000456	0.00114	1	04/02/2020 04:49	WG1454287
Toluene	U		0.00143	0.00570	1	04/02/2020 04:49	WG1454287
Ethylbenzene	U		0.000604	0.00285	1	04/02/2020 04:49	WG1454287
Total Xylenes	U		0.00545	0.00741	1	04/02/2020 04:49	WG1454287
(S) Toluene-d8	*110*			*75.0-131*		*04/02/2020 04:49*	WG1454287
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*04/02/2020 04:49*	WG1454287
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*04/02/2020 04:49*	WG1454287

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	115		9.18	22.8	5	04/02/2020 07:09	WG1453628
C28-C40 Oil Range	187		1.56	22.8	5	04/02/2020 07:09	WG1453628
(S) o-Terphenyl	*51.1*			*18.0-148*		*04/02/2020 07:09*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.4		1	04/01/2020 22:15	WG1453694

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	322		0.833	10.5	1	04/02/2020 12:31	WG1453917

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		0.0227	0.105	1	04/01/2020 20:15	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*59.0-128*		*04/01/2020 20:15*	WG1453878

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		0.000419	0.00105	1	04/01/2020 21:38	WG1453794
Toluene	U		0.00131	0.00524	1	04/01/2020 21:38	WG1453794
Ethylbenzene	U		0.000555	0.00262	1	04/01/2020 21:38	WG1453794
Total Xylenes	U		0.00501	0.00681	1	04/01/2020 21:38	WG1453794
(S) Toluene-d8	*107*			*75.0-131*		*04/01/2020 21:38*	WG1453794
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*04/01/2020 21:38*	WG1453794
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*04/01/2020 21:38*	WG1453794

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	3.99	J	1.69	4.19	1	04/02/2020 04:52	WG1453628
C28-C40 Oil Range	1.59	J	0.287	4.19	1	04/02/2020 04:52	WG1453628
(S) o-Terphenyl	*53.6*			*18.0-148*		*04/02/2020 04:52*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.8		1	04/01/2020 22:15	WG1453694

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	22500		92.7	1170	100	04/02/2020 12:50	WG1453917

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	0.0266	J	0.0253	0.117	1	04/01/2020 20:39	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*82.9*			*59.0-128*		*04/01/2020 20:39*	WG1453878

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		0.000466	0.00117	1	04/01/2020 21:58	WG1453794
Toluene	U		0.00146	0.00583	1	04/01/2020 21:58	WG1453794
Ethylbenzene	0.000641	J	0.000618	0.00291	1	04/01/2020 21:58	WG1453794
Total Xylenes	U		0.00557	0.00758	1	04/01/2020 21:58	WG1453794
(S) Toluene-d8	*110*			*75.0-131*		*04/01/2020 21:58*	WG1453794
(S) 4-Bromofluorobenzene	*109*			*67.0-138*		*04/01/2020 21:58*	WG1453794
(S) 1,2-Dichloroethane-d4	*99.9*			*70.0-130*		*04/01/2020 21:58*	WG1453794

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	343		9.38	23.3	5	04/02/2020 13:49	WG1453628
C28-C40 Oil Range	242		1.60	23.3	5	04/02/2020 13:49	WG1453628
(S) o-Terphenyl	*54.6*			*18.0-148*		*04/02/2020 13:49*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.2		1	04/01/2020 22:15	WG1453694

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	19900		93.3	1170	100	04/02/2020 12:59	WG1453917

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		0.0255	0.117	1	04/01/2020 21:28	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*86.2*			*59.0-128*		*04/01/2020 21:28*	WG1453878

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	0.00117	1	04/01/2020 22:19	WG1453794
Toluene	U		0.00147	0.00587	1	04/01/2020 22:19	WG1453794
Ethylbenzene	U		0.000622	0.00293	1	04/01/2020 22:19	WG1453794
Total Xylenes	U		0.00561	0.00763	1	04/01/2020 22:19	WG1453794
(S) Toluene-d8	*109*			*75.0-131*		*04/01/2020 22:19*	WG1453794
(S) 4-Bromofluorobenzene	*108*			*67.0-138*		*04/01/2020 22:19*	WG1453794
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*04/01/2020 22:19*	WG1453794

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	201		1.89	4.69	1	04/02/2020 06:44	WG1453628
C28-C40 Oil Range	124		0.321	4.69	1	04/02/2020 06:44	WG1453628
(S) o-Terphenyl	*84.1*			*18.0-148*		*04/02/2020 06:44*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.6		1	04/01/2020 22:15	WG1453694

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	14100		97.5	1230	100	04/02/2020 13:09	WG1453917

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		0.0266	0.123	1	04/01/2020 21:52	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*88.0*			*59.0-128*		*04/01/2020 21:52*	WG1453878

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000490	0.00123	1	04/01/2020 22:39	WG1453794
Toluene	U		0.00153	0.00613	1	04/01/2020 22:39	WG1453794
Ethylbenzene	U		0.000650	0.00307	1	04/01/2020 22:39	WG1453794
Total Xylenes	U		0.00586	0.00797	1	04/01/2020 22:39	WG1453794
(S) Toluene-d8	*108*			*75.0-131*		*04/01/2020 22:39*	WG1453794
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*04/01/2020 22:39*	WG1453794
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*04/01/2020 22:39*	WG1453794

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	283		1.97	4.90	1	04/02/2020 06:56	WG1453628
C28-C40 Oil Range	184		0.336	4.90	1	04/02/2020 06:56	WG1453628
(S) o-Terphenyl	*94.2*			*18.0-148*		*04/02/2020 06:56*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.7		1	04/01/2020 22:15	WG1453694

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	108		0.830	10.4	1	04/02/2020 13:19	WG1453917

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		0.0227	0.104	1	04/01/2020 22:16	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*59.0-128*		*04/01/2020 22:16*	WG1453878

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		0.000418	0.00104	1	04/01/2020 22:59	WG1453794
Toluene	U		0.00131	0.00522	1	04/01/2020 22:59	WG1453794
Ethylbenzene	U		0.000554	0.00261	1	04/01/2020 22:59	WG1453794
Total Xylenes	U		0.00499	0.00679	1	04/01/2020 22:59	WG1453794
(S) Toluene-d8	*106*			*75.0-131*		*04/01/2020 22:59*	WG1453794
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*04/01/2020 22:59*	WG1453794
(S) 1,2-Dichloroethane-d4	*99.9*			*70.0-130*		*04/01/2020 22:59*	WG1453794

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		1.68	4.18	1	04/02/2020 05:05	WG1453628
C28-C40 Oil Range	U		0.286	4.18	1	04/02/2020 05:05	WG1453628
(S) o-Terphenyl	*72.7*			*18.0-148*		*04/02/2020 05:05*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.5		1	04/01/2020 22:15	WG1453694

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	2920		8.98	113	10	04/02/2020 13:47	WG1453917

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		0.0245	0.113	1	04/01/2020 22:40	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*96.7*			*59.0-128*		*04/01/2020 22:40*	WG1453878

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		0.000452	0.00113	1	04/01/2020 23:19	WG1453794
Toluene	U		0.00141	0.00565	1	04/01/2020 23:19	WG1453794
Ethylbenzene	U		0.000599	0.00282	1	04/01/2020 23:19	WG1453794
Total Xylenes	U		0.00540	0.00734	1	04/01/2020 23:19	WG1453794
(S) Toluene-d8	*108*			*75.0-131*		*04/01/2020 23:19*	WG1453794
(S) 4-Bromofluorobenzene	*108*			*67.0-138*		*04/01/2020 23:19*	WG1453794
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*04/01/2020 23:19*	WG1453794

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.88		1.82	4.52	1	04/02/2020 05:17	WG1453628
C28-C40 Oil Range	5.32		0.310	4.52	1	04/02/2020 05:17	WG1453628
(S) o-Terphenyl	*41.1*			*18.0-148*		*04/02/2020 05:17*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.5		1	04/01/2020 22:04	WG1453695

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	2730		8.88	112	10	04/02/2020 13:57	WG1453917

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		0.0242	0.112	1	04/01/2020 23:04	WG1453878
(S) a,a,a-Trifluorotoluene(FID)	*97.5*			*59.0-128*		*04/01/2020 23:04*	WG1453878

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		0.000447	0.00112	1	04/01/2020 23:40	WG1453794
Toluene	U		0.00140	0.00558	1	04/01/2020 23:40	WG1453794
Ethylbenzene	U		0.000592	0.00279	1	04/01/2020 23:40	WG1453794
Total Xylenes	U		0.00534	0.00726	1	04/01/2020 23:40	WG1453794
(S) Toluene-d8	*109*			*75.0-131*		*04/01/2020 23:40*	WG1453794
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*04/01/2020 23:40*	WG1453794
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*		*04/01/2020 23:40*	WG1453794

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	3.81	J	1.80	4.47	1	04/02/2020 05:30	WG1453628
C28-C40 Oil Range	4.48		0.306	4.47	1	04/02/2020 05:30	WG1453628
(S) o-Terphenyl	*52.6*			*18.0-148*		*04/02/2020 05:30*	WG1453628

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.7		1	04/01/2020 22:04	WG1453695

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	1730		8.86	111	10	04/02/2020 14:06	WG1453917

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	0.0346	B J	0.0242	0.111	1	04/02/2020 00:11	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*94.9*			*77.0-120*		*04/02/2020 00:11*	WG1453939

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		0.000446	0.00111	1	04/02/2020 00:00	WG1453794
Toluene	U		0.00139	0.00557	1	04/02/2020 00:00	WG1453794
Ethylbenzene	U		0.000591	0.00279	1	04/02/2020 00:00	WG1453794
Total Xylenes	U		0.00533	0.00725	1	04/02/2020 00:00	WG1453794
(S) Toluene-d8	*107*			*75.0-131*		*04/02/2020 00:00*	WG1453794
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*04/02/2020 00:00*	WG1453794
(S) 1,2-Dichloroethane-d4	*98.4*			*70.0-130*		*04/02/2020 00:00*	WG1453794

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	8.09		1.79	4.46	1	04/02/2020 20:41	WG1453629
C28-C40 Oil Range	6.13		0.305	4.46	1	04/02/2020 20:41	WG1453629
(S) o-Terphenyl	*81.6*			*18.0-148*		*04/02/2020 20:41*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.5		1	04/01/2020 22:04	WG1453695

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	23.8		0.832	10.5	1	04/02/2020 14:16	WG1453917

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	0.0239	B J	0.0227	0.105	1	04/02/2020 00:32	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*94.8*			*77.0-120*		*04/02/2020 00:32*	WG1453939

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		0.000419	0.00105	1	04/02/2020 00:20	WG1453794
Toluene	U		0.00131	0.00523	1	04/02/2020 00:20	WG1453794
Ethylbenzene	U		0.000555	0.00262	1	04/02/2020 00:20	WG1453794
Total Xylenes	U		0.00500	0.00680	1	04/02/2020 00:20	WG1453794
(S) Toluene-d8	*107*			*75.0-131*		*04/02/2020 00:20*	WG1453794
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*04/02/2020 00:20*	WG1453794
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*04/02/2020 00:20*	WG1453794

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	7.23		1.69	4.19	1	04/02/2020 20:57	WG1453629
C28-C40 Oil Range	4.09	J	0.287	4.19	1	04/02/2020 20:57	WG1453629
(S) o-Terphenyl	*95.7*			*18.0-148*		*04/02/2020 20:57*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.6		1	04/01/2020 22:04	WG1453695

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	17.1	B	0.975	12.3	1	04/02/2020 14:44	WG1453917

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	0.0501	B J	0.0266	0.123	1	04/02/2020 00:52	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*94.3*			*77.0-120*		*04/02/2020 00:52*	WG1453939

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000490	0.00123	1	04/02/2020 00:40	WG1453794
Toluene	U		0.00153	0.00613	1	04/02/2020 00:40	WG1453794
Ethylbenzene	U		0.000650	0.00306	1	04/02/2020 00:40	WG1453794
Total Xylenes	U		0.00586	0.00797	1	04/02/2020 00:40	WG1453794
(S) Toluene-d8	*110*			*75.0-131*		*04/02/2020 00:40*	WG1453794
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*04/02/2020 00:40*	WG1453794
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*04/02/2020 00:40*	WG1453794

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	13.2		1.97	4.90	1	04/03/2020 00:09	WG1453629
C28-C40 Oil Range	19.9		0.336	4.90	1	04/03/2020 00:09	WG1453629
(S) o-Terphenyl	*67.8*			*18.0-148*		*04/03/2020 00:09*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.4		1	04/01/2020 22:04	WG1453695

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	25.2	B	0.976	12.3	1	04/02/2020 14:54	WG1453917

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	0.0647	B J	0.0267	0.123	1	04/02/2020 01:13	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*93.8*			*77.0-120*		*04/02/2020 01:13*	WG1453939

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		0.000491	0.00123	1	04/02/2020 01:00	WG1453794
Toluene	U		0.00154	0.00614	1	04/02/2020 01:00	WG1453794
Ethylbenzene	U		0.000651	0.00307	1	04/02/2020 01:00	WG1453794
Total Xylenes	U		0.00587	0.00798	1	04/02/2020 01:00	WG1453794
(S) Toluene-d8	*107*			*75.0-131*		*04/02/2020 01:00*	WG1453794
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*04/02/2020 01:00*	WG1453794
(S) 1,2-Dichloroethane-d4	*99.2*			*70.0-130*		*04/02/2020 01:00*	WG1453794

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	8.00	J3	1.98	4.91	1	04/03/2020 01:44	WG1453629
C28-C40 Oil Range	17.8		0.337	4.91	1	04/03/2020 01:44	WG1453629
(S) o-Terphenyl	*60.7*			*18.0-148*		*04/03/2020 01:44*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.2		1	04/01/2020 22:04	WG1453695

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	25.7	B	0.991	12.5	1	04/02/2020 15:03	WG1453917

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	0.0437	B J	0.0270	0.125	1	04/02/2020 01:33	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*95.3*			*77.0-120*		*04/02/2020 01:33*	WG1453939

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		0.000498	0.00125	1	04/02/2020 01:20	WG1453794
Toluene	U		0.00156	0.00623	1	04/02/2020 01:20	WG1453794
Ethylbenzene	U		0.000660	0.00312	1	04/02/2020 01:20	WG1453794
Total Xylenes	U		0.00596	0.00810	1	04/02/2020 01:20	WG1453794
(S) Toluene-d8	*108*			*75.0-131*		*04/02/2020 01:20*	WG1453794
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*04/02/2020 01:20*	WG1453794
(S) 1,2-Dichloroethane-d4	*98.7*			*70.0-130*		*04/02/2020 01:20*	WG1453794

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	4.61	J	2.01	4.98	1	04/03/2020 00:25	WG1453629
C28-C40 Oil Range	8.65		0.341	4.98	1	04/03/2020 00:25	WG1453629
(S) o-Terphenyl	*69.3*			*18.0-148*		*04/03/2020 00:25*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.3		1	04/01/2020 22:04	WG1453695

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	30.2		0.852	10.7	1	04/02/2020 15:13	WG1453917

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	0.104	B J	0.0233	0.107	1	04/06/2020 13:00	WG1456182
(S) a,a,a-Trifluorotoluene(FID)	*112*			*77.0-120*		*04/06/2020 13:00*	WG1456182

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		0.000429	0.00107	1	04/02/2020 00:06	WG1454074
Toluene	U		0.00134	0.00536	1	04/02/2020 00:06	WG1454074
Ethylbenzene	U		0.000568	0.00268	1	04/02/2020 00:06	WG1454074
Total Xylenes	U		0.00512	0.00696	1	04/02/2020 00:06	WG1454074
(S) Toluene-d8	*112*			*75.0-131*		*04/02/2020 00:06*	WG1454074
(S) 4-Bromofluorobenzene	*91.6*			*67.0-138*		*04/02/2020 00:06*	WG1454074
(S) 1,2-Dichloroethane-d4	*114*			*70.0-130*		*04/02/2020 00:06*	WG1454074

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	2.52	J	1.73	4.29	1	04/02/2020 23:05	WG1453629
C28-C40 Oil Range	4.07	J	0.294	4.29	1	04/02/2020 23:05	WG1453629
(S) o-Terphenyl	*95.0*			*18.0-148*		*04/02/2020 23:05*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.2		1	04/01/2020 22:04	WG1453695

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	37.5		0.853	10.7	1	04/02/2020 15:41	WG1453917

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	0.0404	B J	0.0233	0.107	1	04/02/2020 02:45	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*95.4*			*77.0-120*		*04/02/2020 02:45*	WG1453939

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		0.000429	0.00107	1	04/02/2020 00:25	WG1454074
Toluene	U		0.00134	0.00536	1	04/02/2020 00:25	WG1454074
Ethylbenzene	U		0.000568	0.00268	1	04/02/2020 00:25	WG1454074
Total Xylenes	U		0.00513	0.00697	1	04/02/2020 00:25	WG1454074
(S) Toluene-d8	*114*			*75.0-131*		*04/02/2020 00:25*	WG1454074
(S) 4-Bromofluorobenzene	*87.6*			*67.0-138*		*04/02/2020 00:25*	WG1454074
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*		*04/02/2020 00:25*	WG1454074

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.66		1.73	4.29	1	04/02/2020 23:21	WG1453629
C28-C40 Oil Range	6.94		0.294	4.29	1	04/02/2020 23:21	WG1453629
(S) o-Terphenyl	*97.6*			*18.0-148*		*04/02/2020 23:21*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.5		1	04/01/2020 22:04	WG1453695

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	10.3	B J	0.859	10.8	1	04/02/2020 15:51	WG1453917

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	0.0265	B J	0.0235	0.108	1	04/02/2020 04:08	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*94.9*			*77.0-120*		*04/02/2020 04:08*	WG1453939

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		0.000432	0.00108	1	04/02/2020 00:44	WG1454074
Toluene	U		0.00135	0.00540	1	04/02/2020 00:44	WG1454074
Ethylbenzene	U		0.000573	0.00270	1	04/02/2020 00:44	WG1454074
Total Xylenes	U		0.00517	0.00703	1	04/02/2020 00:44	WG1454074
(S) Toluene-d8	*110*			*75.0-131*		*04/02/2020 00:44*	WG1454074
(S) 4-Bromofluorobenzene	*88.7*			*67.0-138*		*04/02/2020 00:44*	WG1454074
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*04/02/2020 00:44*	WG1454074

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	4.77		1.74	4.32	1	04/02/2020 23:37	WG1453629
C28-C40 Oil Range	4.43		0.296	4.32	1	04/02/2020 23:37	WG1453629
(S) o-Terphenyl	*95.3*			*18.0-148*		*04/02/2020 23:37*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.8		1	04/01/2020 22:04	WG1453695

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	7.52	B J	0.847	10.7	1	04/02/2020 16:00	WG1453917

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		0.0231	0.107	1	04/02/2020 04:28	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*94.6*			*77.0-120*		*04/02/2020 04:28*	WG1453939

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		0.000426	0.00107	1	04/02/2020 01:03	WG1454074
Toluene	U		0.00133	0.00533	1	04/02/2020 01:03	WG1454074
Ethylbenzene	U		0.000565	0.00266	1	04/02/2020 01:03	WG1454074
Total Xylenes	U		0.00509	0.00693	1	04/02/2020 01:03	WG1454074
(S) Toluene-d8	*110*			*75.0-131*		*04/02/2020 01:03*	WG1454074
(S) 4-Bromofluorobenzene	*87.2*			*67.0-138*		*04/02/2020 01:03*	WG1454074
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*		*04/02/2020 01:03*	WG1454074

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	3.15	J	1.72	4.26	1	04/02/2020 21:12	WG1453629
C28-C40 Oil Range	2.16	B J	0.292	4.26	1	04/02/2020 21:12	WG1453629
(S) o-Terphenyl	*92.6*			*18.0-148*		*04/02/2020 21:12*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.0		1	04/01/2020 21:50	WG1453697

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	62.6		0.904	11.4	1	04/02/2020 16:19	WG1453917

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	0.246	B	0.0247	0.114	1	04/06/2020 13:22	WG1456182
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*		*04/06/2020 13:22*	WG1456182

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		0.000455	0.00114	1	04/02/2020 01:23	WG1454074
Toluene	U		0.00142	0.00568	1	04/02/2020 01:23	WG1454074
Ethylbenzene	U		0.000603	0.00284	1	04/02/2020 01:23	WG1454074
Total Xylenes	U		0.00543	0.00739	1	04/02/2020 01:23	WG1454074
(S) Toluene-d8	*112*			*75.0-131*		*04/02/2020 01:23*	WG1454074
(S) 4-Bromofluorobenzene	*88.7*			*67.0-138*		*04/02/2020 01:23*	WG1454074
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*		*04/02/2020 01:23*	WG1454074

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	18.1		1.83	4.55	1	04/03/2020 01:28	WG1453629
C28-C40 Oil Range	38.5		0.311	4.55	1	04/03/2020 01:28	WG1453629
(S) o-Terphenyl	*65.9*			*18.0-148*		*04/03/2020 01:28*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.5		1	04/01/2020 21:50	WG1453697

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	45.4		0.909	11.4	1	04/02/2020 16:29	WG1453917

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	0.0599	B J	0.0248	0.114	1	04/02/2020 05:35	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*93.8*			*77.0-120*		*04/02/2020 05:35*	WG1453939

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		0.000457	0.00114	1	04/02/2020 01:42	WG1454074
Toluene	U		0.00143	0.00571	1	04/02/2020 01:42	WG1454074
Ethylbenzene	U		0.000606	0.00286	1	04/02/2020 01:42	WG1454074
Total Xylenes	U		0.00546	0.00743	1	04/02/2020 01:42	WG1454074
(S) Toluene-d8	*112*			*75.0-131*		*04/02/2020 01:42*	WG1454074
(S) 4-Bromofluorobenzene	*90.1*			*67.0-138*		*04/02/2020 01:42*	WG1454074
(S) 1,2-Dichloroethane-d4	*115*			*70.0-130*		*04/02/2020 01:42*	WG1454074

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	15.0		1.84	4.57	1	04/03/2020 00:41	WG1453629
C28-C40 Oil Range	24.9		0.313	4.57	1	04/03/2020 00:41	WG1453629
(S) o-Terphenyl	*83.3*			*18.0-148*		*04/03/2020 00:41*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.0		1	04/01/2020 21:50	WG1453697

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	152		4.52	56.8	5	04/02/2020 23:50	WG1453918

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	0.0369	B J	0.0247	0.114	1	04/02/2020 05:56	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*95.8*			*77.0-120*		*04/02/2020 05:56*	WG1453939

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		0.000454	0.00114	1	04/02/2020 02:01	WG1454074
Toluene	U		0.00142	0.00568	1	04/02/2020 02:01	WG1454074
Ethylbenzene	U		0.000602	0.00284	1	04/02/2020 02:01	WG1454074
Total Xylenes	U		0.00543	0.00738	1	04/02/2020 02:01	WG1454074
(S) Toluene-d8	*109*			*75.0-131*		*04/02/2020 02:01*	WG1454074
(S) 4-Bromofluorobenzene	*83.4*			*67.0-138*		*04/02/2020 02:01*	WG1454074
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*04/02/2020 02:01*	WG1454074

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	6.35		1.83	4.54	1	04/02/2020 23:53	WG1453629
C28-C40 Oil Range	12.5		0.311	4.54	1	04/02/2020 23:53	WG1453629
(S) o-Terphenyl	*87.7*			*18.0-148*		*04/02/2020 23:53*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	87.6		1	04/01/2020 21:50	WG1453697

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	260		4.55	57.1	5	04/03/2020 00:09	WG1453918

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	0.0248	J	0.0248	0.114	1	04/02/2020 06:16	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*95.4*			*77.0-120*		*04/02/2020 06:16*	WG1453939

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		0.000457	0.00114	1	04/02/2020 02:20	WG1454074
Toluene	U		0.00143	0.00571	1	04/02/2020 02:20	WG1454074
Ethylbenzene	U		0.000605	0.00286	1	04/02/2020 02:20	WG1454074
Total Xylenes	U		0.00546	0.00742	1	04/02/2020 02:20	WG1454074
(S) Toluene-d8	*111*			*75.0-131*		*04/02/2020 02:20*	WG1454074
(S) 4-Bromofluorobenzene	*88.9*			*67.0-138*		*04/02/2020 02:20*	WG1454074
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*04/02/2020 02:20*	WG1454074

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	2.52	J	1.84	4.57	1	04/02/2020 21:29	WG1453629
C28-C40 Oil Range	4.51	J	0.313	4.57	1	04/02/2020 21:29	WG1453629
(S) o-Terphenyl	*75.0*			*18.0-148*		*04/02/2020 21:29*	WG1453629

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.8		1	04/01/2020 21:50	WG1453697

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	114		0.915	11.5	1	04/03/2020 00:19	WG1453918

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	0.0316	B J	0.0250	0.115	1	04/02/2020 07:04	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*96.0*			*77.0-120*		*04/02/2020 07:04*	WG1453939

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		0.000461	0.00115	1	04/02/2020 02:39	WG1454074
Toluene	U		0.00144	0.00576	1	04/02/2020 02:39	WG1454074
Ethylbenzene	U		0.000610	0.00288	1	04/02/2020 02:39	WG1454074
Total Xylenes	U		0.00550	0.00749	1	04/02/2020 02:39	WG1454074
(S) Toluene-d8	*111*			*75.0-131*		*04/02/2020 02:39*	WG1454074
(S) 4-Bromofluorobenzene	*88.1*			*67.0-138*		*04/02/2020 02:39*	WG1454074
(S) 1,2-Dichloroethane-d4	*117*			*70.0-130*		*04/02/2020 02:39*	WG1454074

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.08		1.85	4.61	1	04/02/2020 21:45	WG1453629
C28-C40 Oil Range	5.50		0.316	4.61	1	04/02/2020 21:45	WG1453629
(S) o-Terphenyl	*69.3*			*18.0-148*		*04/02/2020 21:45*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.2		1	04/01/2020 21:50	WG1453697

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	295		0.911	11.5	1	04/03/2020 00:28	WG1453918

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	0.0315	B J	0.0249	0.115	1	04/02/2020 07:24	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*95.8*			*77.0-120*		*04/02/2020 07:24*	WG1453939

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		0.000459	0.00115	1	04/02/2020 02:58	WG1454074
Toluene	U		0.00143	0.00573	1	04/02/2020 02:58	WG1454074
Ethylbenzene	U		0.000608	0.00287	1	04/02/2020 02:58	WG1454074
Total Xylenes	U		0.00548	0.00745	1	04/02/2020 02:58	WG1454074
(S) Toluene-d8	*110*			*75.0-131*		*04/02/2020 02:58*	WG1454074
(S) 4-Bromofluorobenzene	*86.8*			*67.0-138*		*04/02/2020 02:58*	WG1454074
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*04/02/2020 02:58*	WG1454074

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	6.67		1.85	4.59	1	04/02/2020 22:01	WG1453629
C28-C40 Oil Range	7.58		0.314	4.59	1	04/02/2020 22:01	WG1453629
(S) o-Terphenyl	*77.6*			*18.0-148*		*04/02/2020 22:01*	WG1453629

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Collected date/time: 03/25/20 00:00

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.4		1	04/01/2020 21:50	WG1453697

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	69.9		0.920	11.6	1	04/03/2020 00:38	WG1453918

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	0.0326	B J	0.0251	0.116	1	04/02/2020 07:45	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*95.7*			*77.0-120*		*04/02/2020 07:45*	WG1453939

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		0.000463	0.00116	1	04/02/2020 03:17	WG1454074
Toluene	U		0.00145	0.00579	1	04/02/2020 03:17	WG1454074
Ethylbenzene	U		0.000613	0.00289	1	04/02/2020 03:17	WG1454074
Total Xylenes	U		0.00553	0.00752	1	04/02/2020 03:17	WG1454074
(S) Toluene-d8	*109*			*75.0-131*		*04/02/2020 03:17*	WG1454074
(S) 4-Bromofluorobenzene	*84.6*			*67.0-138*		*04/02/2020 03:17*	WG1454074
(S) 1,2-Dichloroethane-d4	*116*			*70.0-130*		*04/02/2020 03:17*	WG1454074

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	15.2		1.86	4.63	1	04/03/2020 00:56	WG1453629
C28-C40 Oil Range	27.9		0.317	4.63	1	04/03/2020 00:56	WG1453629
(S) o-Terphenyl	*72.3*			*18.0-148*		*04/03/2020 00:56*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.6		1	04/01/2020 21:50	WG1453697

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	25.2		0.868	10.9	1	04/03/2020 00:47	WG1453918

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	0.0679	B J	0.0237	0.109	1	04/02/2020 08:26	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*93.8*			*77.0-120*		*04/02/2020 08:26*	WG1453939

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		0.000436	0.00109	1	04/02/2020 03:36	WG1454074
Toluene	U		0.00136	0.00546	1	04/02/2020 03:36	WG1454074
Ethylbenzene	U		0.000578	0.00273	1	04/02/2020 03:36	WG1454074
Total Xylenes	U		0.00522	0.00709	1	04/02/2020 03:36	WG1454074
(S) Toluene-d8	*113*			*75.0-131*		*04/02/2020 03:36*	WG1454074
(S) 4-Bromofluorobenzene	*87.8*			*67.0-138*		*04/02/2020 03:36*	WG1454074
(S) 1,2-Dichloroethane-d4	*114*			*70.0-130*		*04/02/2020 03:36*	WG1454074

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	3.55	J	1.76	4.36	1	04/02/2020 22:17	WG1453629
C28-C40 Oil Range	6.84		0.299	4.36	1	04/02/2020 22:17	WG1453629
(S) o-Terphenyl	*97.4*			*18.0-148*		*04/02/2020 22:17*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.9		1	04/01/2020 21:50	WG1453697

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	9.92	B J	0.884	11.1	1	04/03/2020 00:57	WG1453918

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	0.0534	B J	0.0241	0.111	1	04/02/2020 08:46	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*94.9*			*77.0-120*		*04/02/2020 08:46*	WG1453939

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		0.000445	0.00111	1	04/02/2020 03:56	WG1454074
Toluene	U		0.00139	0.00556	1	04/02/2020 03:56	WG1454074
Ethylbenzene	U		0.000589	0.00278	1	04/02/2020 03:56	WG1454074
Total Xylenes	U		0.00532	0.00723	1	04/02/2020 03:56	WG1454074
(S) Toluene-d8	*109*			*75.0-131*		*04/02/2020 03:56*	WG1454074
(S) 4-Bromofluorobenzene	*85.7*			*67.0-138*		*04/02/2020 03:56*	WG1454074
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*04/02/2020 03:56*	WG1454074

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	15.5		1.79	4.45	1	04/03/2020 01:12	WG1453629
C28-C40 Oil Range	30.8		0.305	4.45	1	04/03/2020 01:12	WG1453629
(S) o-Terphenyl	*93.7*			*18.0-148*		*04/03/2020 01:12*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.7		1	04/01/2020 21:50	WG1453697

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	7.66	B J	0.831	10.5	1	04/03/2020 01:25	WG1453918

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	0.0265	B J	0.0227	0.105	1	04/02/2020 09:07	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*95.3*			*77.0-120*		*04/02/2020 09:07*	WG1453939

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		0.000418	0.00105	1	04/02/2020 04:15	WG1454074
Toluene	U		0.00131	0.00523	1	04/02/2020 04:15	WG1454074
Ethylbenzene	U		0.000554	0.00261	1	04/02/2020 04:15	WG1454074
Total Xylenes	U		0.00500	0.00679	1	04/02/2020 04:15	WG1454074
(S) Toluene-d8	*113*			*75.0-131*		*04/02/2020 04:15*	WG1454074
(S) 4-Bromofluorobenzene	*85.4*			*67.0-138*		*04/02/2020 04:15*	WG1454074
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*04/02/2020 04:15*	WG1454074

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	4.21		1.68	4.18	1	04/02/2020 22:33	WG1453629
C28-C40 Oil Range	6.41		0.286	4.18	1	04/02/2020 22:33	WG1453629
(S) o-Terphenyl	*82.0*			*18.0-148*		*04/02/2020 22:33*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.7		1	04/01/2020 21:33	WG1453699

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	7.52	B J	0.831	10.4	1	04/03/2020 01:54	WG1453918

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	0.0306	B J	0.0227	0.104	1	04/02/2020 09:27	WG1453939
(S) a,a,a-Trifluorotoluene(FID)	*95.4*			*77.0-120*		*04/02/2020 09:27*	WG1453939

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		0.000418	0.00104	1	04/02/2020 04:34	WG1454074
Toluene	U		0.00131	0.00522	1	04/02/2020 04:34	WG1454074
Ethylbenzene	U		0.000554	0.00261	1	04/02/2020 04:34	WG1454074
Total Xylenes	U		0.00499	0.00679	1	04/02/2020 04:34	WG1454074
(S) Toluene-d8	*110*			*75.0-131*		*04/02/2020 04:34*	WG1454074
(S) 4-Bromofluorobenzene	*84.9*			*67.0-138*		*04/02/2020 04:34*	WG1454074
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*04/02/2020 04:34*	WG1454074

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	3.83	J	1.68	4.18	1	04/02/2020 22:49	WG1453629
C28-C40 Oil Range	3.55	J	0.286	4.18	1	04/02/2020 22:49	WG1453629
(S) o-Terphenyl	*83.0*			*18.0-148*		*04/02/2020 22:49*	WG1453629

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.7		1	04/01/2020 21:33	WG1453699

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	7.88	B J	0.973	12.2	1	04/03/2020 02:03	WG1453918

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		0.0266	0.122	1	04/02/2020 23:57	WG1453948
(S) a,a,a-Trifluorotoluene(FID)	*95.7*			*77.0-120*		*04/02/2020 23:57*	WG1453948

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		0.000489	0.00122	1	04/02/2020 04:54	WG1454074
Toluene	U		0.00153	0.00612	1	04/02/2020 04:54	WG1454074
Ethylbenzene	U		0.000649	0.00306	1	04/02/2020 04:54	WG1454074
Total Xylenes	U		0.00585	0.00795	1	04/02/2020 04:54	WG1454074
(S) Toluene-d8	*112*			*75.0-131*		*04/02/2020 04:54*	WG1454074
(S) 4-Bromofluorobenzene	*85.2*			*67.0-138*		*04/02/2020 04:54*	WG1454074
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*04/02/2020 04:54*	WG1454074

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	3.54	J	1.97	4.89	1	04/03/2020 03:38	WG1453630
C28-C40 Oil Range	0.688	J	0.335	4.89	1	04/03/2020 03:38	WG1453630
(S) o-Terphenyl	*85.8*			*18.0-148*		*04/03/2020 03:38*	WG1453630

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.5		1	04/01/2020 21:33	WG1453699

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	39.6		0.851	10.7	1	04/03/2020 02:13	WG1453918

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	0.0461	J	0.0232	0.107	1	04/03/2020 00:18	WG1453948
(S) a,a,a-Trifluorotoluene(FID)	*95.6*			*77.0-120*		*04/03/2020 00:18*	WG1453948

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		0.000428	0.00107	1	04/02/2020 05:13	WG1454074
Toluene	U		0.00134	0.00535	1	04/02/2020 05:13	WG1454074
Ethylbenzene	U		0.000567	0.00267	1	04/02/2020 05:13	WG1454074
Total Xylenes	U		0.00511	0.00695	1	04/02/2020 05:13	WG1454074
(S) Toluene-d8	*110*			*75.0-131*		*04/02/2020 05:13*	WG1454074
(S) 4-Bromofluorobenzene	*88.8*			*67.0-138*		*04/02/2020 05:13*	WG1454074
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*04/02/2020 05:13*	WG1454074

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	7.41		1.72	4.28	1	04/03/2020 08:24	WG1453630
C28-C40 Oil Range	4.16	J	0.293	4.28	1	04/03/2020 08:24	WG1453630
(S) o-Terphenyl	*93.4*			*18.0-148*		*04/03/2020 08:24*	WG1453630

BH-10 2-3'
Collected date/time: 03/25/20 00:00

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.3		1	04/01/2020 21:33	WG1453699

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	7.20	B J	0.861	10.8	1	04/03/2020 02:22	WG1453918

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	0.0258	J	0.0235	0.108	1	04/03/2020 00:38	WG1453948
(S) a,a,a-Trifluorotoluene(FID)	*95.0*			*77.0-120*		*04/03/2020 00:38*	WG1453948

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		0.000433	0.00108	1	04/02/2020 05:32	WG1454074
Toluene	U		0.00135	0.00541	1	04/02/2020 05:32	WG1454074
Ethylbenzene	U		0.000574	0.00271	1	04/02/2020 05:32	WG1454074
Total Xylenes	U		0.00518	0.00704	1	04/02/2020 05:32	WG1454074
(S) Toluene-d8	*111*			*75.0-131*		*04/02/2020 05:32*	WG1454074
(S) 4-Bromofluorobenzene	*87.2*			*67.0-138*		*04/02/2020 05:32*	WG1454074
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*04/02/2020 05:32*	WG1454074

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	3.84	J	1.74	4.33	1	04/03/2020 03:54	WG1453630
C28-C40 Oil Range	1.35	J	0.297	4.33	1	04/03/2020 03:54	WG1453630
(S) o-Terphenyl	*97.2*			*18.0-148*		*04/03/2020 03:54*	WG1453630

Method Blank (MB)

(MB) R3514960-1 04/01/20 22:24

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

L1204240-28 Original Sample (OS) • Duplicate (DUP)

(OS) L1204240-28 04/01/20 22:24 • (DUP) R3514960-3 04/01/20 22:24

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	92.2	92.4	1	0.181		10

Laboratory Control Sample (LCS)

(LCS) R3514960-2 04/01/20 22:24

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

Method Blank (MB)

(MB) R3514957-1 04/01/20 22:15

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00800			

L1204246-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1204246-05 04/01/20 22:15 • (DUP) R3514957-3 04/01/20 22:15

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	95.6	95.6	1	0.0774		10

Laboratory Control Sample (LCS)

(LCS) R3514957-2 04/01/20 22:15

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

Method Blank (MB)

(MB) R3514956-1 04/01/20 22:04

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00400			

L1204246-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1204246-16 04/01/20 22:04 • (DUP) R3514956-3 04/01/20 22:04

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	89.7	89.4	1	0.385		10

Laboratory Control Sample (LCS)

(LCS) R3514956-2 04/01/20 22:04

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	49.9	99.9	85.0-115	

Method Blank (MB)

(MB) R3514955-1 04/01/20 21:50

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

L1204246-27 Original Sample (OS) • Duplicate (DUP)

(OS) L1204246-27 04/01/20 21:50 • (DUP) R3514955-3 04/01/20 21:50

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	88.0	88.0	1	0.0888		10

Laboratory Control Sample (LCS)

(LCS) R3514955-2 04/01/20 21:50

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.1	100	85.0-115	

Method Blank (MB)

(MB) R3514954-1 04/01/20 21:33

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00500			

L1204246-38 Original Sample (OS) • Duplicate (DUP)

(OS) L1204246-38 04/01/20 21:33 • (DUP) R3514954-3 04/01/20 21:33

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	92.3	92.5	1	0.138		10

Laboratory Control Sample (LCS)

(LCS) R3514954-2 04/01/20 21:33

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

Method Blank (MB)

(MB) R3515160-1 04/02/20 17:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	2.55	J	0.795	10.0

L1204240-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1204240-23 04/02/20 18:45 • (DUP) R3515160-3 04/02/20 18:55

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	22.3	22.6	1	1.31		20

L1204246-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1204246-03 04/02/20 21:37 • (DUP) R3515160-6 04/02/20 21:46

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	7120	6590	20	7.70		20

Laboratory Control Sample (LCS)

(LCS) R3515160-2 04/02/20 17:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	182	90.8	90.0-110	

L1204240-31 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1204240-31 04/02/20 20:30 • (MS) R3515160-4 04/02/20 20:40 • (MSD) R3515160-5 04/02/20 20:49

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	524	9.82	505	506	94.6	94.7	1	80.0-120			0.0649	20

Method Blank (MB)

(MB) R3515144-1 04/02/20 11:42

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	2.19	J	0.795	10.0

L1204246-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1204246-09 04/02/20 12:31 • (DUP) R3515144-3 04/02/20 12:40

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	322	307	1	4.55		20

L1204246-24 Original Sample (OS) • Duplicate (DUP)

(OS) L1204246-24 04/02/20 16:00 • (DUP) R3515144-6 04/02/20 16:10

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	7.52	7.08	1	5.99	J	20

Laboratory Control Sample (LCS)

(LCS) R3515144-2 04/02/20 11:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	184	91.8	90.0-110	

L1204246-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1204246-17 04/02/20 14:16 • (MS) R3515144-4 04/02/20 14:25 • (MSD) R3515144-5 04/02/20 14:35

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	523	23.8	536	491	97.9	89.3	1	80.0-120			8.75	20

Method Blank (MB)

(MB) R3515206-1 04/02/20 23:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	2.23	J	0.795	10.0

L1204246-27 Original Sample (OS) • Duplicate (DUP)

(OS) L1204246-27 04/02/20 23:50 • (DUP) R3515206-3 04/03/20 00:00

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	152	156	5	2.19		20

L1204259-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1204259-04 04/03/20 03:20 • (DUP) R3515206-6 04/03/20 03:29

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	11100	10800	100	2.82		20

Laboratory Control Sample (LCS)

(LCS) R3515206-2 04/02/20 23:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	191	95.6	90.0-110	

L1204246-34 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1204246-34 04/03/20 01:25 • (MS) R3515206-4 04/03/20 01:35 • (MSD) R3515206-5 04/03/20 01:44

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	523	7.66	505	504	95.1	95.0	1	80.0-120			0.103	20

Method Blank (MB)

(MB) R3515024-2 04/01/20 12:36

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)	*100*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3515024-1 04/01/20 11:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.16	112	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*77.0-120*	

Method Blank (MB)

(MB) R3515681-2 04/01/20 23:51

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0299	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.5*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3515681-1 04/01/20 22:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.39	98.0	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*113*	*77.0-120*	

Method Blank (MB)

(MB) R3515682-2 04/02/20 22:55

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)	*100*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3515682-1 04/02/20 22:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.83	106	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*115*	*77.0-120*	

L1204246-38 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1204246-38 04/03/20 00:38 • (MS) R3515682-3 04/03/20 06:49 • (MSD) R3515682-4 04/03/20 07:09

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	5.96	0.0258	3.53	3.10	58.8	51.6	1	10.0-151			13.1	28
(S) a,a,a-Trifluorotoluene(FID)					*102*	*100*		*77.0-120*				

Method Blank (MB)

(MB) R3515941-2 04/06/20 12:13

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0624	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*113*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3515941-1 04/06/20 09:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.82	106	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*112*	*77.0-120*	

Method Blank (MB)

(MB) R3515599-1 04/01/20 10:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*112*			*75.0-131*
(S) 4-Bromofluorobenzene	*89.2*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3515599-2 04/01/20 12:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.116	92.8	70.0-123	
Ethylbenzene	0.125	0.101	80.8	74.0-126	
Toluene	0.125	0.109	87.2	75.0-121	
Xylenes, Total	0.375	0.314	83.7	72.0-127	
(S) Toluene-d8			*101*	*75.0-131*	
(S) 4-Bromofluorobenzene			*94.4*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*121*	*70.0-130*	

Method Blank (MB)

(MB) R3514759-2 04/01/20 11:45

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*110*			*75.0-131*
(S) 4-Bromofluorobenzene	*106*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*

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

(LCS) R3514759-1 04/01/20 10:43 • (LCSD) R3514759-3 04/01/20 15:03

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	0.0996	0.0997	79.7	79.8	70.0-123			0.100	20
Ethylbenzene	0.125	0.129	0.127	103	102	74.0-126			1.56	20
Toluene	0.125	0.111	0.108	88.8	86.4	75.0-121			2.74	20
Xylenes, Total	0.375	0.370	0.350	98.7	93.3	72.0-127			5.56	20
(S) Toluene-d8				*108*	*108*	*75.0-131*				
(S) 4-Bromofluorobenzene				*105*	*101*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*104*	*103*	*70.0-130*				

L1204246-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1204246-20 04/02/20 01:20 • (MS) R3514759-4 04/02/20 01:40 • (MSD) R3514759-5 04/02/20 02:00

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	0.156	U	0.123	0.117	78.7	74.8	1	10.0-149			5.11	37
Ethylbenzene	0.156	U	0.158	0.155	102	99.2	1	10.0-160			2.39	38
Toluene	0.156	U	0.136	0.126	87.2	80.8	1	10.0-156			7.62	38
Xylenes, Total	0.467	U	0.454	0.431	97.1	92.3	1	10.0-160			5.07	38
(S) Toluene-d8					*109*	*110*		*75.0-131*				
(S) 4-Bromofluorobenzene					*109*	*107*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*103*	*101*		*70.0-130*				

Method Blank (MB)

(MB) R3515600-2 04/01/20 23:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*112*			*75.0-131*
(S) 4-Bromofluorobenzene	*87.7*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3515600-1 04/01/20 22:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.116	92.8	70.0-123	
Ethylbenzene	0.125	0.104	83.2	74.0-126	
Toluene	0.125	0.110	88.0	75.0-121	
Xylenes, Total	0.375	0.299	79.7	72.0-127	
(S) Toluene-d8			*103*	*75.0-131*	
(S) 4-Bromofluorobenzene			*89.9*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*117*	*70.0-130*	

L1204246-27 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1204246-27 04/02/20 02:01 • (MS) R3515600-3 04/02/20 06:30 • (MSD) R3515600-4 04/02/20 06:49

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	0.142	U	0.128	0.125	90.4	88.0	1	10.0-149			2.69	37
Ethylbenzene	0.142	U	0.116	0.112	81.6	78.6	1	10.0-160			3.80	38
Toluene	0.142	U	0.128	0.125	90.4	88.0	1	10.0-156			2.69	38
Xylenes, Total	0.426	U	0.331	0.319	77.6	74.9	1	10.0-160			3.50	38
(S) Toluene-d8					*106*	*105*		*75.0-131*				
(S) 4-Bromofluorobenzene					*87.6*	*82.8*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*108*	*116*		*70.0-130*				

Method Blank (MB)

(MB) R3514888-2 04/02/20 04:01

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*108*			*75.0-131*
(S) 4-Bromofluorobenzene	*106*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3514888-1 04/02/20 03:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.0971	77.7	70.0-123	
Ethylbenzene	0.125	0.124	99.2	74.0-126	
Toluene	0.125	0.104	83.2	75.0-121	
Xylenes, Total	0.375	0.354	94.4	72.0-127	
(S) Toluene-d8			*108*	*75.0-131*	
(S) 4-Bromofluorobenzene			*108*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*105*	*70.0-130*	

Method Blank (MB)

(MB) R3515895-3 04/06/20 08:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*110*			*75.0-131*
(S) 4-Bromofluorobenzene	*107*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*99.6*			*70.0-130*

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

(LCS) R3515895-1 04/06/20 07:23 • (LCSD) R3515895-2 04/06/20 07:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.102	0.104	81.6	83.2	70.0-123			1.94	20
Ethylbenzene	0.125	0.127	0.129	102	103	74.0-126			1.56	20
Toluene	0.125	0.110	0.111	88.0	88.8	75.0-121			0.905	20
Xylenes, Total	0.375	0.352	0.371	93.9	98.9	72.0-127			5.26	20
(S) Toluene-d8				*110*	*107*	*75.0-131*				
(S) 4-Bromofluorobenzene				*103*	*103*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*107*	*103*	*70.0-130*				

Method Blank (MB)

(MB) R3514866-1 04/02/20 01:32

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	*62.5*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3514866-2 04/02/20 01:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	29.2	58.4	50.0-150	
(S) o-Terphenyl			*51.2*	*18.0-148*	

L1204246-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1204246-02 04/02/20 20:46 • (MS) R3514866-3 04/02/20 20:59 • (MSD) R3514866-4 04/02/20 21:11

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	53.8	1.92	37.0	39.7	65.2	70.2	1	50.0-150			7.01	20
(S) o-Terphenyl					*53.9*	*47.0*		*18.0-148*				

Method Blank (MB)

(MB) R3515134-1 04/02/20 15:08

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	0.313	J	0.274	4.00
(S) o-Terphenyl	*94.1*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3515134-2 04/02/20 15:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	49.6	99.2	50.0-150	
(S) o-Terphenyl			*118*	*18.0-148*	

L1204246-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1204246-19 04/03/20 01:44 • (MS) R3515134-3 04/03/20 02:00 • (MSD) R3515134-4 04/03/20 02:16

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	61.4	8.00	47.9	61.9	65.0	87.8	1	50.0-150		J3	25.5	20
(S) o-Terphenyl					*75.5*	*98.3*		*18.0-148*				

Method Blank (MB)

(MB) R3515135-1 04/02/20 15:40

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	*93.5*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3515135-2 04/02/20 15:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	50.4	101	50.0-150	
(S) o-Terphenyl			*121*	*18.0-148*	

L1204246-37 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1204246-37 04/03/20 08:24 • (MS) R3515135-3 04/03/20 08:39 • (MSD) R3515135-4 04/03/20 08:55

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	53.5	7.41	56.0	62.2	90.7	102	1	50.0-150			10.5	20
(S) o-Terphenyl					*110*	*118*		*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
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.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
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

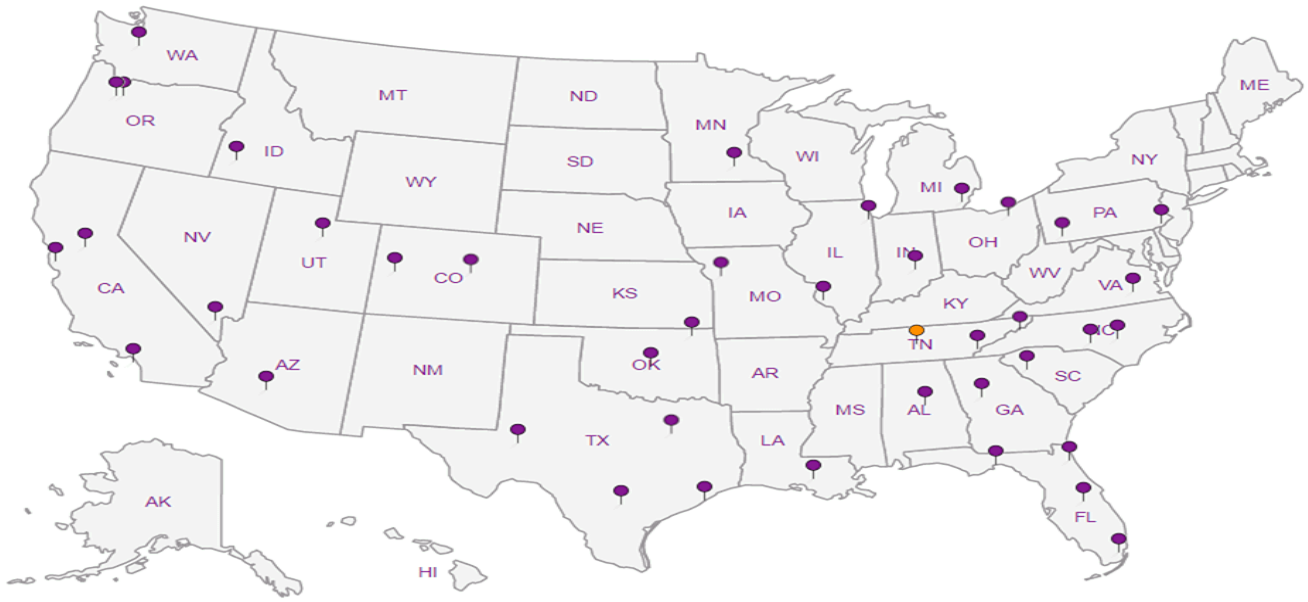
Third Party Federal Accreditations

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.



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
ConocoPhillips - Tetra Tech	212CMD02099	L1204246	04/07/20 10:00	72 of 77

L1204246

Analysis Request of Chain of Custody Record

Page 1 of 5

Tetra Tech, Inc.

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

Client Name:	ConocoPhillips	Site Manager:	Christian Llull
Project Name:	VGEU 2801-02		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-02099
Invoice to:	Accounts Payable 901 West Wall St. Suite 100, Midland TX 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	Devin Dominguez
Comments:	Contact PM regarding holds ; COPTETRA acctnum		

03-224

F227

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metal Ba Cd Cr Pb Se Hg	TCLP Volat	TCLP Semi	RCI	GC/MS Vol. 624	GC/MS Sem 270C/625	PCB's 8082	NORM	PLM (Asbest	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached lis	Anion/Cation Balance	TPH 8015R			Hold
-01	BH-1 0-1'	3/25/2020			X			X		1	N	X		X												X								
-02	BH-1 2'-3'	3/25/2020			X			X		1	N	X		X												X								
-03	BH-1 3'-4'	3/25/2020			X			X		1	N	X		X												X								
	BH-1 4'-5'	3/25/2020			X			X		1	N																							X
	BH-1 14'-15'	3/25/2020			X			X		1	N																							X
	BH-1 19'-20'	3/25/2020			X			X		1	N																							X
	BH-1 24'-25'	3/25/2020			X			X		1	N																							X
-04	BH-1 29'-30'	3/25/2020			X			X		1	N	X		X												X								
	BH-1 39'-40'	3/25/2020			X			X		1	N																							X
-05	BH-1 44'-45'	3/25/2020			X			X		1	N	X		X												X								

ANALYSIS REQUEST
(Circle or Specify Method No.)

Relinquished by:	Date: 3/27	Time: 12:00	Received by: Date: 3/27/20 Time: 12
Relinquished by:	Date: 3/27/20	Time: 15:00	Received by: Date: 3/27/20 Time: 15:00
Relinquished by:	Date:	Time:	Received by: Date: 3/28/20 Time: 08:00

LAB USE ONLY

Sample Temperature 0.2, 0.1, 0.3 °C

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

RAD SCREEN: <0.5 mR/hr

L1204246

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name:	ConocoPhillips	Site Manager:	Christian Llull
Project Name:	VGEU 2801-02		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-02099
Invoice to:	Accounts Payable 901 West Wall St. Suite 100, Midland TX 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	Devin Dominguez
Comments:	Contact PM regarding holds ; COPTETRA acctnum		

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None		# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R			Hold
-06'	BH-2 0-1'	3/25/2020			X				X			1	N	X		X												X						
-07'	BH-2 2'-3'	3/25/2020			X				X			1	N	X		X												X						
-08'	BH-2 3'-4'	3/25/2020			X				X			1	N	X		X												X						
	BH-2 4'-5'	3/25/2020			X				X			1	N																					X
-09'	BH-2 19'-20'	3/25/2020			X				X			1	N	X		X												X						
-10	BH-3 0-1'	3/25/2020			X				X			1	N	X		X												X						
-11	BH-3 2'-3'	3/25/2020			X				X			1	N	X		X												X						
-12	BH-3 3'-4'	3/25/2020			X				X			1	N	X		X												X						
	BH-3 4'-5'	3/25/2020			X				X			1	N																					X
	BH-3 6'-7'	3/25/2020			X				X			1	N																					X

Relinquished by:	Date: 3/27 Time: Dino	Received by:	Date: 3/27/20 Time: 12:30
Relinquished by:	Date: 3/27/20 Time: 15:00	Received by:	Date: 3/27/20 Time: 15:00
Relinquished by:	Date: Time:	Received by:	Date: 3/28/20 Time: 08:00

LAB USE ONLY

Sample Temperature 0.2+0.1-0.3 = 0C

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

RAD SCREEN: <0.5 mR/hr

L12042446

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name: ConocoPhillips	Site Manager: Christian Llull
Project Name: VGEU 2801-02	
Project Location: (county, state) Lea County, New Mexico	Project #: 212C-MD-02099
Invoice to: Accounts Payable 901 West Wall St. Suite 100, Midland TX 79701	
Receiving Laboratory: Pace Analytical	Sampler Signature: Devin Dominguez
Comments: Contact PM regarding holds ; COPTETRA acctnum	

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R			Hold
	BH-3 19-20'	3/25/2020			X			X		1	N	X		X												X							
-13	BH-4 0-1'	3/25/2020			X			X		1	N	X		X												X							
-14	BH-4 2'-3'	3/25/2020			X			X		1	N	X		X												X							
-15	BH-4 3'-4'	3/25/2020			X			X		1	N	X		X												X							
-16	BH-4 4'-5'	3/25/2020			X			X		1	N																						X
	BH-4 6'-7'	3/25/2020			X			X		1	N	X		X												X							
-17	BH-5 0-1'	3/25/2020			X			X		1	N	X		X												X							
-18	BH-5 2'-3'	3/25/2020			X			X		1	N	X		X												X							
-19	BH-5 3'-4'	3/25/2020			X			X		1	N	X		X												X							
-20	BH-5 4'-5'	3/25/2020			X			X		1	N	X		X												X							
-21																																	

Relinquished by:	Date: 3/27	Time: 12:00	Received by: Date: 3/27/20 Time: 12:00
Relinquished by:	Date: 3/27/20	Time: 15:20	Received by: Date: 3/27/20 Time: 15:20
Relinquished by:	Date:	Time:	Received by: Date: 3/28/20 Time: 08:00

ORIGINAL COPY

LAB USE ONLY

Sample Temperature 0.2+0.1=0.3 AG

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

RAD SCREEN: <0.5 mR/hr

L1204246

Page 4 of 5

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name: ConocoPhillips	**Site Manager:** Christian Llull
Project Name: VGEU 2801-02	
Project Location: (county, state) Lea County, New Mexico	**Project #:** 212C-MD-02099
Invoice to: Accounts Payable 901 West Wall St. Suite 100, Midland TX 79701	
Receiving Laboratory: Pace Analytical	**Sampler Signature:** Devin Dominguez
Comments: Contact PM regarding holds ; COPTETRA acctnum	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None		# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R			Hold
-22	BH-6 0-1'	3/25/2020			X				X			1	N	X		X												X							
-23	BH-6 2'-3'	3/25/2020			X				X			1	N	X		X												X							
-24	BH-6 3'-4'	3/25/2020			X				X			1	N	X		X												X							
	BH-6 4'-5'	3/25/2020			X				X			1	N																						X
-25	BH-7 0-1'	3/25/2020			X				X			1	N	X		X												X							
-26	BH-7 2'-3'	3/25/2020			X				X			1	N	X		X												X							
-27	BH-7 3'-4'	3/25/2020			X				X			1	N	X		X												X							
-28	BH-7 4'-5'	3/25/2020			X				X			1	N	X		X												X							
-29	BH-8 0-1'	3/25/2020			X				X			1	N	X		X												X							
-30	BH-8 2'-3'	3/25/2020			X				X			1	N	X		X												X							

Relinquished by:	Date: 3/27	Time: 12:00	Received by: Date: 3/27/20 Time: 12:00
Relinquished by:	Date: 3/27/20	Time: 15:00	Received by: Date: 3/27/20 Time: 15:00
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY

Sample Temperature 0.2+0.1=0.3 °C

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

RAD SCREEN: <0.5 mR/hr

L1204246

Page 5 of 5

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name:	ConocoPhillips	Site Manager:	Christian Llull
Project Name:	VGEU 2801-02		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-02099
Invoice to:	Accounts Payable 901 West Wall St. Suite 100, Midland TX 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	Devin Dominguez
Comments:	Contact PM regarding holds ; COPTETRA acctnum		

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R			Hold
-31	BH-8 3'-4'	3/25/2020			X				X			1	N	X		X												X							
-32	BH-8 4'-5'	3/25/2020			X				X			1	N	X		X												X							
-33	BH-9 0-1'	3/25/2020			X				X			1	N	X		X												X							
-34	BH-9 2'-3'	3/25/2020			X				X			1	N	X		X												X							
-35	BH-9 3'-4'	3/25/2020			X				X			1	N	X		X												X							
-36	BH-9 4'-5'	3/25/2020			X				X			1	N	X		X												X							
-37	BH-10 0-1'	3/25/2020			X				X			1	N	X		X												X							
-38	BH-10 2'-3'	3/25/2020			X				X			1	N	X		X												X							

ANALYSIS REQUEST
(Circle or Specify Method No.)

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	3/27	12:00		3/27/20	12:00
	3/27/20	15:00		3/27/20	15:00
				3/28/20	08:00

LAB USE ONLY

Sample Temperature 0.2+0.1=0.3 °C

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

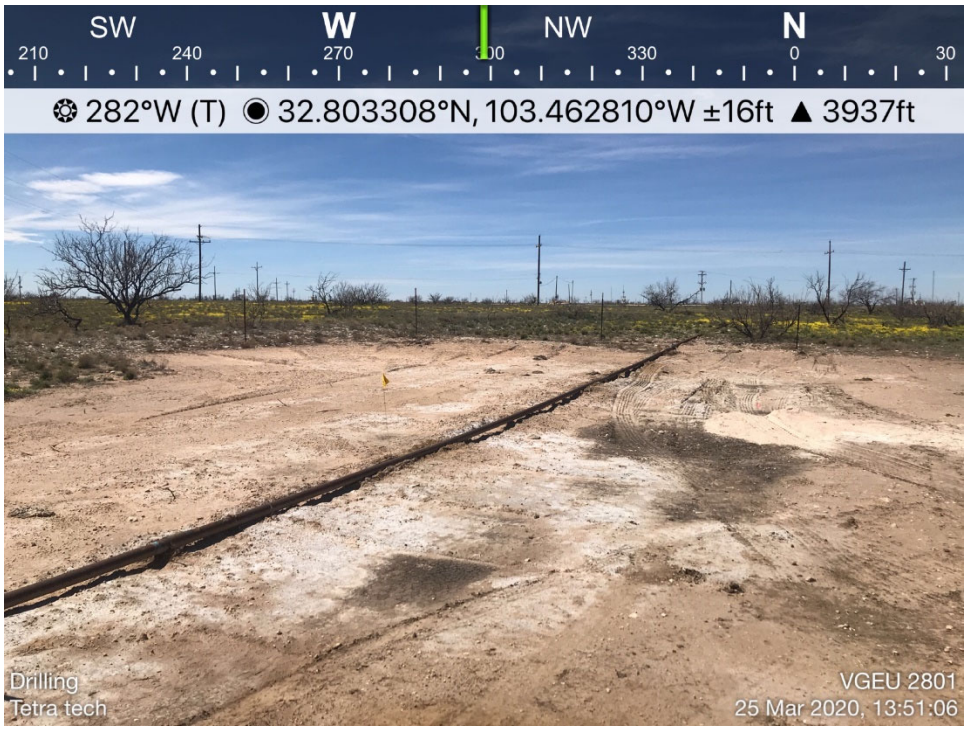
RAD SCREEN: <0.5 mR/hr

APPENDIX E
Photographic Documentation

TETRA TECH, INC. PROJECT NO. 212C-MD-02099	DESCRIPTION	View SE of flowline and release area, with adjacent well (API # 30-025-33710) in the background.	1
	SITE NAME	VGEU 01-02 Flowline Release	3/25/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02099	DESCRIPTION	View SE of the eastern portion of the scraped release area.	2
	SITE NAME	VGEU 01-02 Flowline Release	3/25/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02099	DESCRIPTION	View N of release extent. Lease pad for adjacent well (API # 30-025-33710) and access road to the north visible in the background.	3
	SITE NAME	VGEU 01-02 Flowline Release	3/25/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02099	DESCRIPTION	View NW of the release area and the source of the release on the flowline.	4
	SITE NAME	VGEU 01-02 Flowline Release	3/25/2020

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

VGEU 2801-02 Flowline Release

April 23, 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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Contents

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

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.

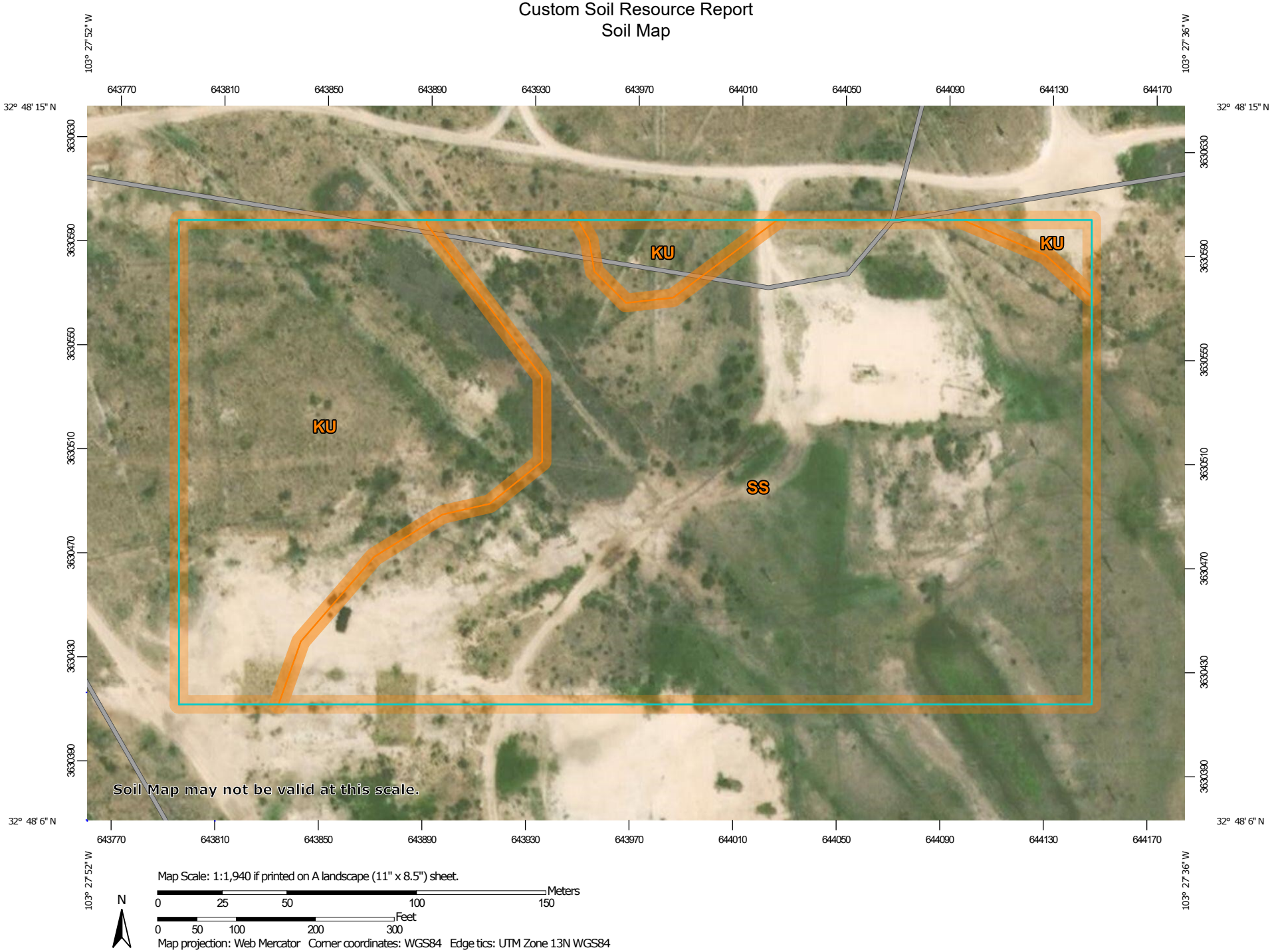
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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

Soil Map

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

Custom Soil Resource Report
Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 16, Sep 15, 2019

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

Date(s) aerial images were photographed: Sep 18, 2016—Nov 20, 2017

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KU	Kimbrough-Lea complex, dry, 0 to 3 percent slopes	5.2	31.7%
SS	Stegall and slaughter soils	11.1	68.3%
Totals for Area of Interest		**16.3**	**100.0%**

Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

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

Lea County, New Mexico

KU—Kimbrough-Lea complex, dry, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tw46
Elevation: 2,500 to 4,800 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 57 to 63 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Kimbrough and similar soils: 45 percent
Lea and similar soils: 25 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kimbrough

Setting

Landform: Plains, playa rims
Down-slope shape: Linear, convex
Across-slope shape: Linear, concave
Parent material: Loamy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 3 inches: gravelly loam
Bw - 3 to 10 inches: loam
Bkkm1 - 10 to 16 inches: cemented material
Bkkm2 - 16 to 80 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 4 to 18 inches to petrocalcic
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.01 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 95 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: Very Shallow 12-17" PZ (R077DY049TX)
Hydric soil rating: No

Description of Lea

Setting

Landform: Plains
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Calcareous, loamy eolian deposits from the blackwater draw formation of pleistocene age over indurated caliche of pliocene age

Typical profile

A - 0 to 10 inches: loam
Bk - 10 to 18 inches: loam
Bkk - 18 to 26 inches: gravelly fine sandy loam
Bkkm - 26 to 80 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 22 to 30 inches to petrocalcic
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 90 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 3.0
Available water storage in profile: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: Sandy Loam 12-17" PZ (R077DY047TX)
Hydric soil rating: No

Minor Components

Douro

Percent of map unit: 12 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Sandy Loam 12-17" PZ (R077DY047TX)
Hydric soil rating: No

Kenhill

Percent of map unit: 12 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Clay Loam 12-17" PZ (R077DY038TX)
Hydric soil rating: No

Spraberry

Percent of map unit: 6 percent
Landform: Plains, playa rims
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: Very Shallow 12-17" PZ (R077DY049TX)
Hydric soil rating: No

SS—Stegall and slaughter soils

Map Unit Setting

National map unit symbol: dmr4
Elevation: 3,600 to 4,400 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 58 to 60 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Stegall and similar soils: 40 percent
Slaughter and similar soils: 35 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Stegall

Setting

Landform: Plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sedimentary rock

Typical profile

A - 0 to 9 inches: loam
Bt - 9 to 28 inches: clay loam
Bkm - 28 to 38 inches: cemented material
BCk - 38 to 60 inches: variable

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 20 to 40 inches to petrocalcic
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Calcium carbonate, maximum in profile: 90 percent
Gypsum, maximum in profile: 1 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 2.0
Available water storage in profile: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: Limy Upland 16-21" PZ (R077CY028TX)
Hydric soil rating: No

Description of Slaughter

Setting

Landform: Plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous alluvium and/or calcareous eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 2 inches: loam
Bt - 2 to 15 inches: clay
Bkm - 15 to 25 inches: cemented material
BCk - 25 to 60 inches: variable

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: About 15 inches to petrocalcic; About 25 inches to petrocalcic
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 90 percent
Gypsum, maximum in profile: 1 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 2.0
Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): 6s
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: Limy Upland 16-21" PZ (R077CY028TX)
Hydric soil rating: No

Minor Components

Arvana

Percent of map unit: 10 percent
Ecological site: Sandy 16-21" PZ (R077CY035TX)
Hydric soil rating: No

Kimbrough

Percent of map unit: 9 percent
Ecological site: Very Shallow 16-21" PZ (R077CY037TX)
Hydric soil rating: No

Portales

Percent of map unit: 6 percent
Ecological site: Limy Upland 16-21" PZ (R077CY028TX)
Hydric soil rating: No

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NMSLO Seed Mix Loamy (L)

LOAMY (L) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Black grama	**VNS, Southern**	**1.0**	**D**
Blue grama	**Lovington**	**1.0**	**D**
Sideoats grama	**Vaughn, El Reno**	**4.0**	**F**
Sand dropseed	**VNS, Southern**	**2.0**	**S**
Alkali sacaton	**VNS, Southern**	**1.0**	
Little bluestem	**Cimarron, Pastura**	**1.5**	**F**
Forbs:			
Firewheel (*Gaillardia*)	**VNS, Southern**	**1.0**	**D**
Shrubs:			
Fourwing saltbush	**Marana, Santa Rita**	**1.0**	**D**
Common winterfat	**VNS, Southern**	**0.5**	**F**
	Total PLS/acre	**18.0**	

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.

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

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: Robert Hamlet Date: 6/10/2021

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

Signature: Robert Hamlet Date: 6/10/2021

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 16718

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 16718
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	The Remediation Plan is approved with the following conditions: Surface to 4' below ground surface sidewall/floor samples need to comply with the strictest closure criteria limits 600 mg/kg for Chlorides and 100 mg/kg TPH. In the pasture area, 4 feet below the ground surface, soil contamination limits revert back to Table 1 in the spill rule. If rock refusal is encountered, use hydrovac to clean contaminated soil off rock. After rock surface is clean, layer rock with microbial strains to digest organics and hydrocarbons if present. Back-fill with clean material. Alternative sample plan is approved with 500 ft2 closure confirmation samples. Liner at the base of excavation is denied.	6/10/2021