TETRA TECH

May 13, 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 02-20 East Flowline Release
Unit Letter D, Section 32, Township 17 South, Range 35 East
Lea County, New Mexico
Incident ID# nRM2019933917

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a release that occurred from the flowline of the Vacuum Glorieta East Unit (VGEU) 02-20 well (Associated API No. 30-025-37850), approximately 2,000 feet west-northwest of the wellhead. The release footprint is located in Public Land Survey System (PLSS) Unit Letter D, Section 32, Township 17 South, and Range 35 East, Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.796080°, -103.485055°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report (Appendix A), the VGEU 02-20 East release was discovered on June 29, 2020. The release occurred as the result of a flowline rupture and encompasses an estimated area of 1,512 square feet. Approximately 16.0 barrels (bbls) of produced water and 4.0 bbls of oil were reported released, of which 0.0 bbls of produced water and 0.0 bbls of oil were recovered. The New Mexico Oil Conservation District (NMOCD) received the C-141 report form for the release on July 10, 2020. The NMOCD Incident ID for this release is nRM2019933917.

SITE CHARACTERIZATION

A site characterization was performed and no watercourses, sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, playa lakes, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the distances specified in 19.15.0029 New Mexico Administrative Code (NMAC). The Site is in an area of low karst potential.

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are four water wells within ½ mile (800m) of the Site with an average depth to groundwater of 102 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.

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

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

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

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

INITIAL RESPONSE AND REMEDIAL ACTIVITIES

In accordance with 19.15.29.8. B. (4) NMAC that states “the responsible party may commence remediation immediately after discovery of a release”, ConocoPhillips elected to begin remediation of the impacted area in 2020. In July of 2020, the release area was partially excavated to depths of 12 inches bgs to 18 inches bgs. Figure 3 depicts the release extent and excavated area. Waste manifests generated during initial response activities are included as Appendix C.

INITIAL ASSESSMENT ACTIVITIES AND SAMPLING RESULTS

As a portion of the initial response, on July 16, 2020, COP personnel collected a total of thirty-three (33) soil samples from twenty-seven (27) sample locations. Surface soil samples were collected at SP #1 through SP #24 within the excavated area and at Background-N, Background-S and Background-E outside the excavated area. At SP #1A through SP #3A, samples were collected at both 1-foot bgs and 2 feet bgs within the existing excavation. These soil samples were sent to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for chloride via EPA Method SM45000Cl-B, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. Sample locations are shown in Figure 3.

Analytical results associated with twenty-four (24) sample locations exceeded the delineation concentration of 600 mg/kg chloride required by NMOCD regulations. The analytical results associated with Background-E exceeded the reclamation concentration for TPH (100 mg/kg). Analytical results associated with sample location Background- and Background-S were below all Site RRALs. There were no detections of benzene in any of the analyzed samples. Copies of the analytical laboratory reports and chain-of-custody documentation are included in Appendix D. Sample results from the initial assessment are summarized in Table 1. Partial horizontal delineation of the release (to the north and south) was achieved during this assessment. Vertical delineation was not achieved during the initial assessment.

ADDITIONAL SITE ASSESSMENT

In order to complete horizontal and vertical delineation of the release extent, Tetra Tech personnel conducted soil sampling on January 18, 2021 on behalf of ConocoPhillips. A total of six (6) borings (BH-1 through BH-6) were installed using an air rotary drilling rig. Two (2) borings (BH-1 and BH-2) were installed within the release extent to depths of 20 feet bgs and 10 feet bgs, respectively, to achieve vertical delineation. The remaining 4 borings (BH-3 through BH-6) were installed along the perimeter of the release extent to a depth of 10 feet bgs to achieve horizontal delineation. Figure 4 depicts the release extent, excavated area and the January 2021 soil boring locations. Boring logs, included as Appendix E, present soil descriptions, sample depths and field screening data from the site assessment in January 2021.

A total of twenty-six (26) samples were collected from the six (6) borings and submitted to Pace Analytical National Center for Testing & Innovation (Pace) in Nashville, Tennessee to be analyzed for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix D. Boring locations are shown in Figure 4. Photographic documentation of the initial response extents and the additional site inspection is included in Appendix F.

SUMMARY OF SAMPLING RESULTS

Results from the January 2021 soil sampling event are summarized in Table 2. The analytical results associated with the BH-1 sample location exceeded the Site chloride RRAL of 600 mg/kg in the 2-3' sample interval. There were no other analytical results which exceeded the chloride RRAL (600 mg/kg) during the additional assessment. The analytical results associated with the remainder of the samples analyzed were below the BTEX or TPH Site RRALs of 50 mg/kg and 100 mg/kg, respectively.

REMEDIATION WORK PLAN

Based on the analytical results, ConocoPhillips proposes to remove the remaining impacted material as shown in Figure 5. Impacted soils will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to a maximum depth of 4 feet below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the RRALs. The western portion of the release extent containing the 1-foot initial response excavation will be excavated an additional 3 feet. The western portion around the perimeter of the initial response excavation will be excavated to a depth 4 feet. The eastern portion of the release extent will be excavated to a depth of 2 feet. The northern and central area of the release extent that contains steel surface lines will be hand-dug to a maximum depth of 4 feet or the maximum extent practicable and heavy equipment will come no more than 3 ft from any pressurized lines.

Excavated soils will be transported offsite and disposed of at an NMOCD-approved or permitted facility. Confirmation bottom and sidewall samples will be collected for verification of remedial activities, and analyzed for TPH, BTEX, and chlorides. Once results are received, NMOCD will be notified and the excavation will then be backfilled with clean material to surface grade. The estimated volume of material to be remediated is approximately 500 cubic yards.

ALTERNATIVE CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, ConocoPhillips proposes the following alternative confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 6. Nine (9) confirmation floor samples and fourteen (14) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses a surface area of approximately 4,500 square feet.

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

SITE RECLAMATION AND RESTORATION PLAN

The backfilled areas will be seeded in Spring 2021 (first favorable growing season) to aid in revegetation. Based on the soils at the site, the New Mexico State Land Office (NMSLO) Sandy Loam (SL) 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 G.

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

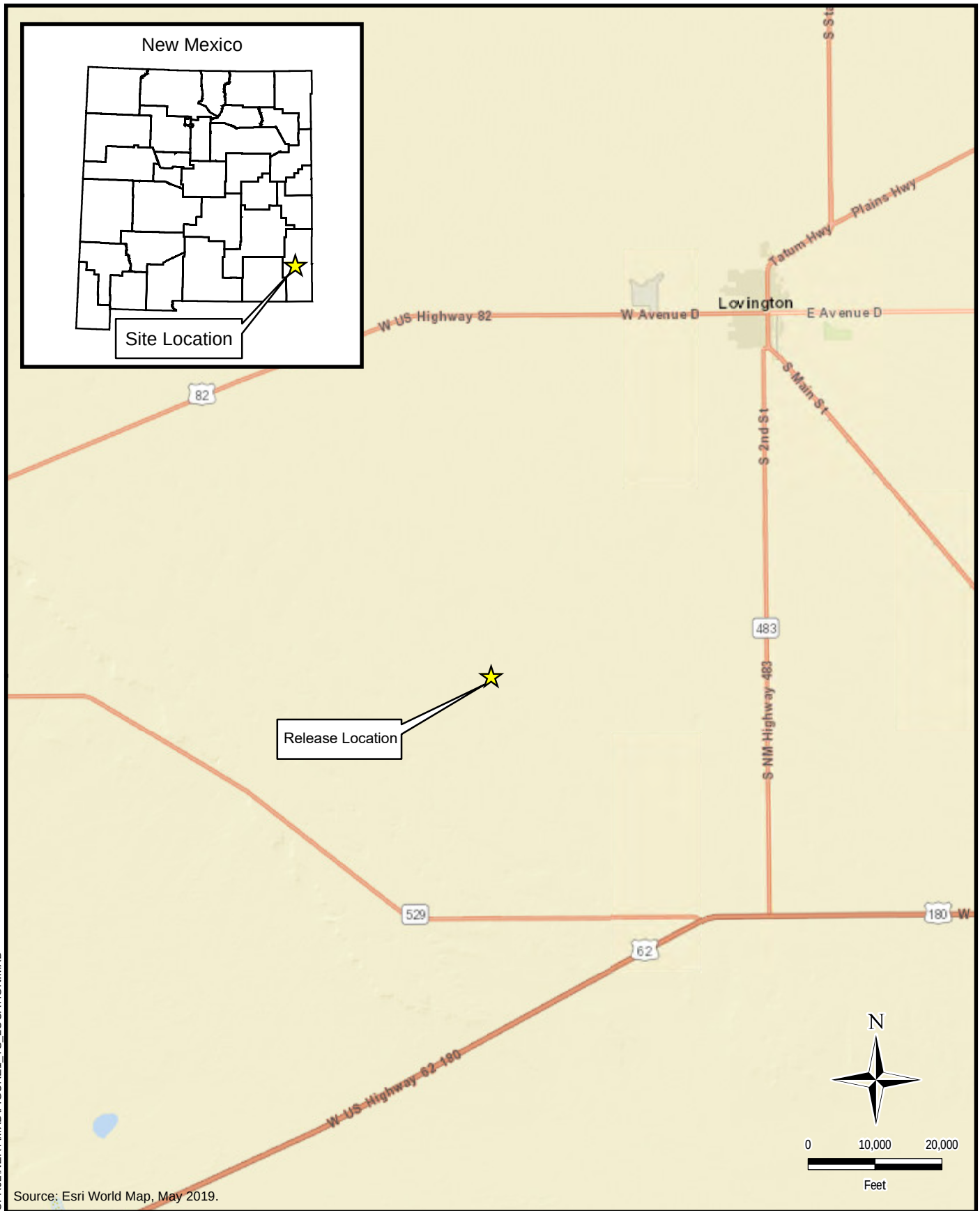
LIST OF ATTACHMENTS

Figures:

Tables:

Appendices:

FIGURES



Source: Esri World Map, May 2019.

\\TTS134FS1\SUP-GIS\ARCPRJ2\NERT\MXD\FIGURE1_TS_LOCATION.MXD

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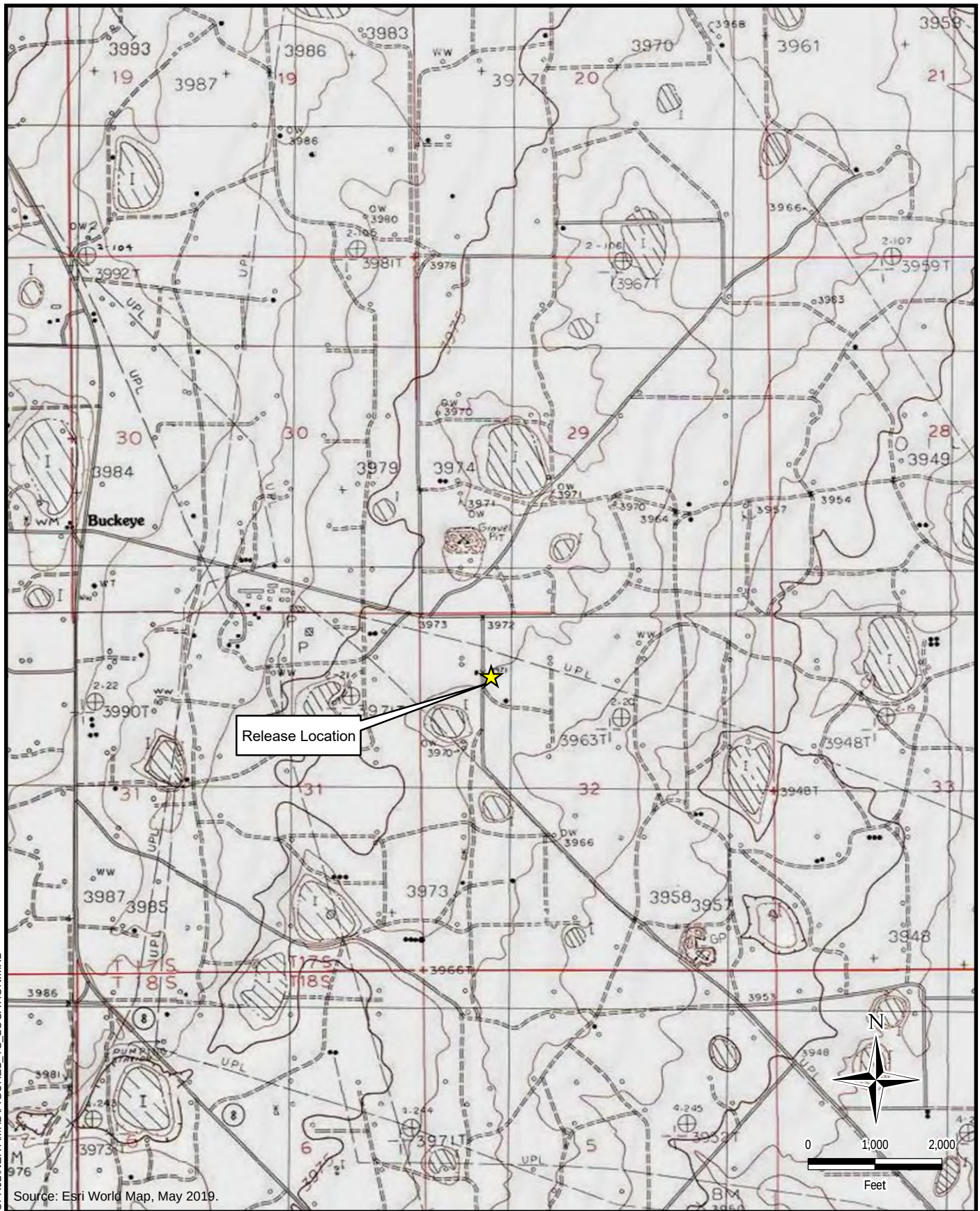
CONOCOPHILLIPS

INCIDENT ID NRM2019933917
(32.796160°, -103.485046°)
LEA COUNTY, NEW MEXICO

VGEU 02-20 EAST FLOWLINE RELEASE
OVERVIEW MAP

PROJECT NO.:	212C-MD-02305
DATE:	OCTOBER 27, 2020
DESIGNED BY:	AAM

Figure No.
1



\\TTS134FS1\SUP-GIS\ARCPRJ2\INERT\MXD\FIGURE1_TS_LOCATION.MXD

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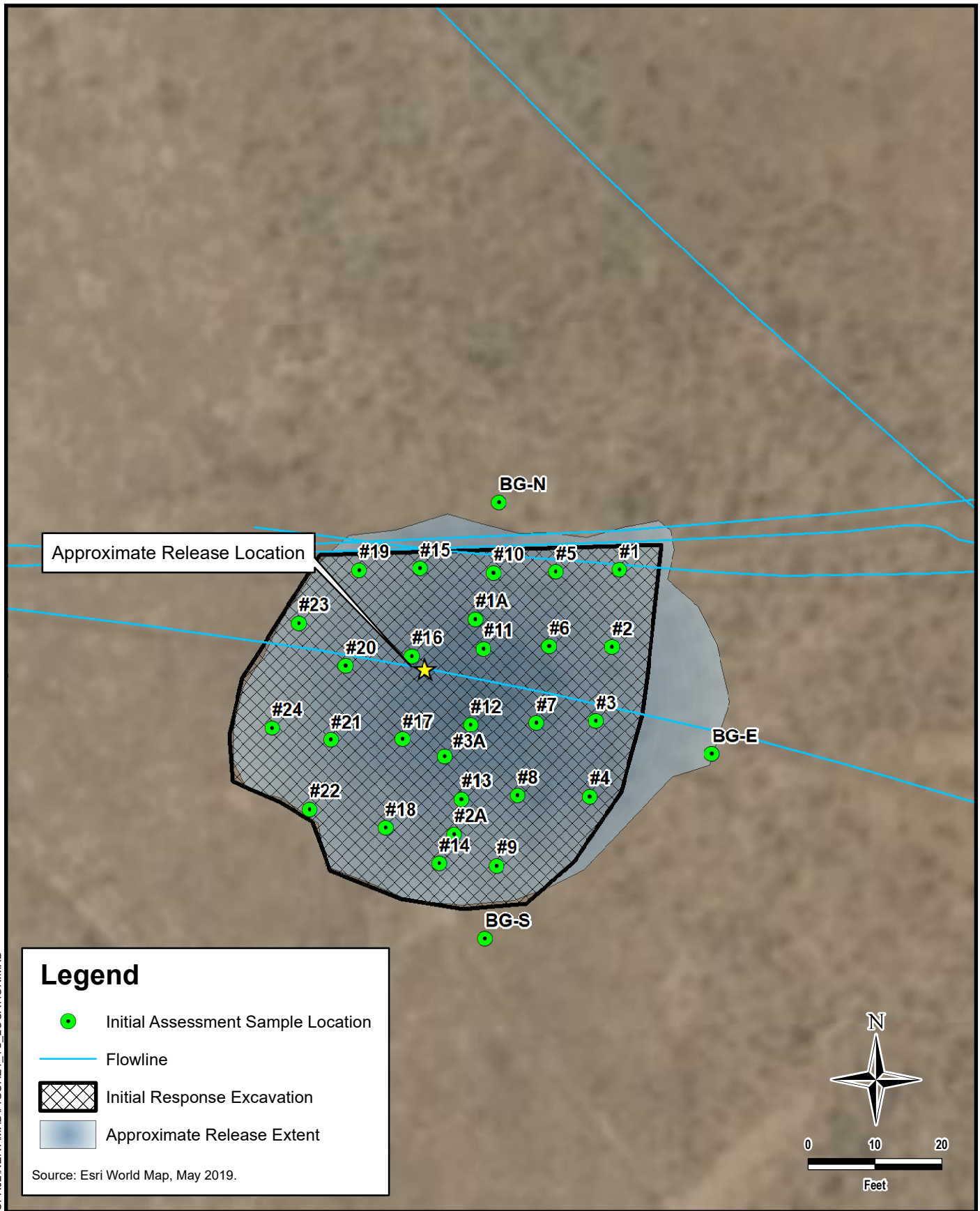
LEA COUNTY, NEW MEXICO

VGEU 02-20 EAST FLOWLINE RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02305
DATE:	OCTOBER 27, 2020
DESIGNED BY:	AAM

Figure No.
2



\\TTS134FS1\SUP-GIS\ARCPRJ2\NERT\MXD\FIGURE1_TS_LOCATION.MXD

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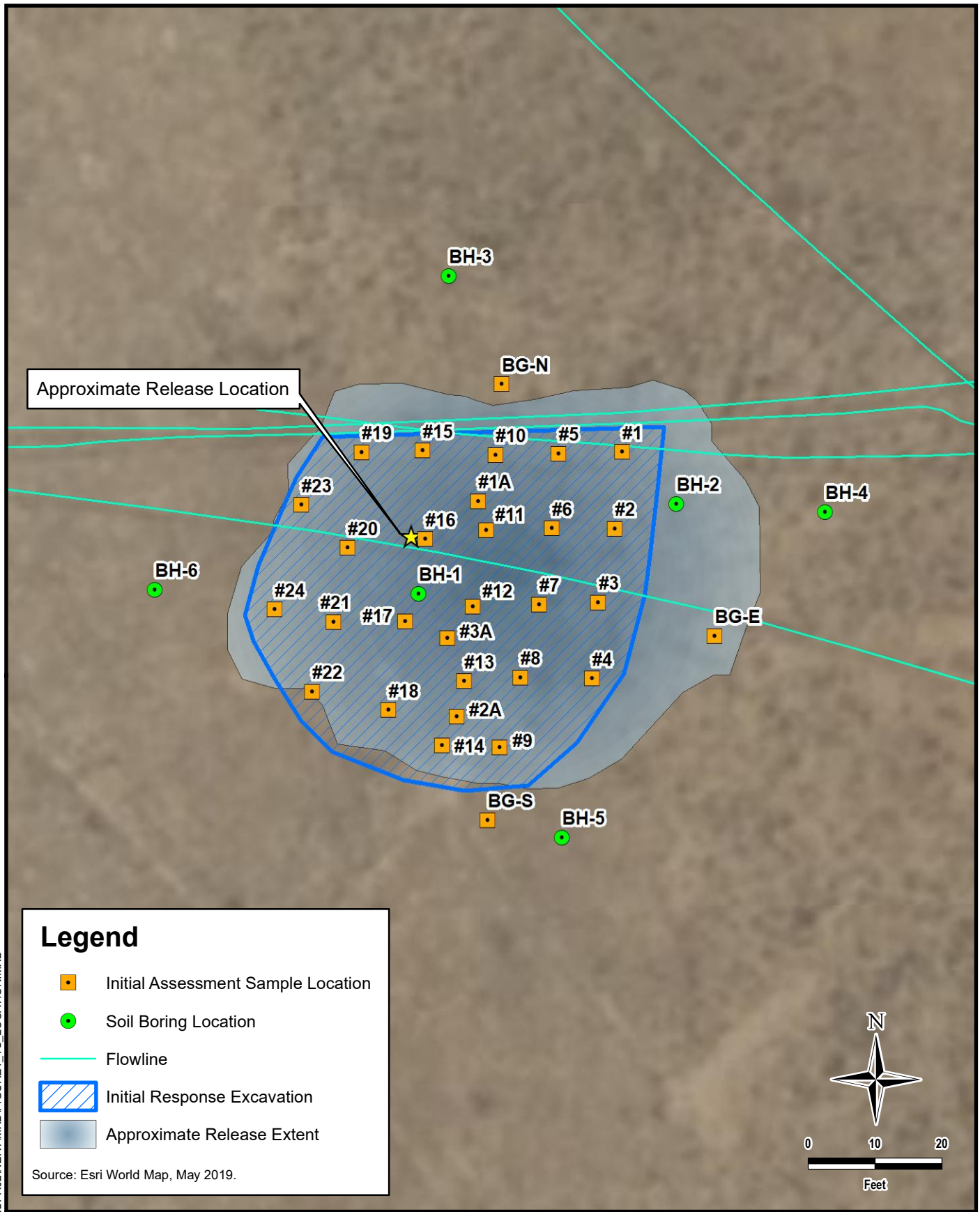
VGEU 02-20 EAST FLOWLINE RELEASE
APPROXIMATE RELEASE EXTENT AND INITIAL ASSESSMENT MAP

PROJECT NO.:	212C-MD-02305
DATE:	OCTOBER 29, 2020
DESIGNED BY:	AAM

Figure No.
3



\\TTS134FS1\SUP-GIS\ARCPRJ2\NERT\MXD\FIGURE1_TS_LOCATION.MXD

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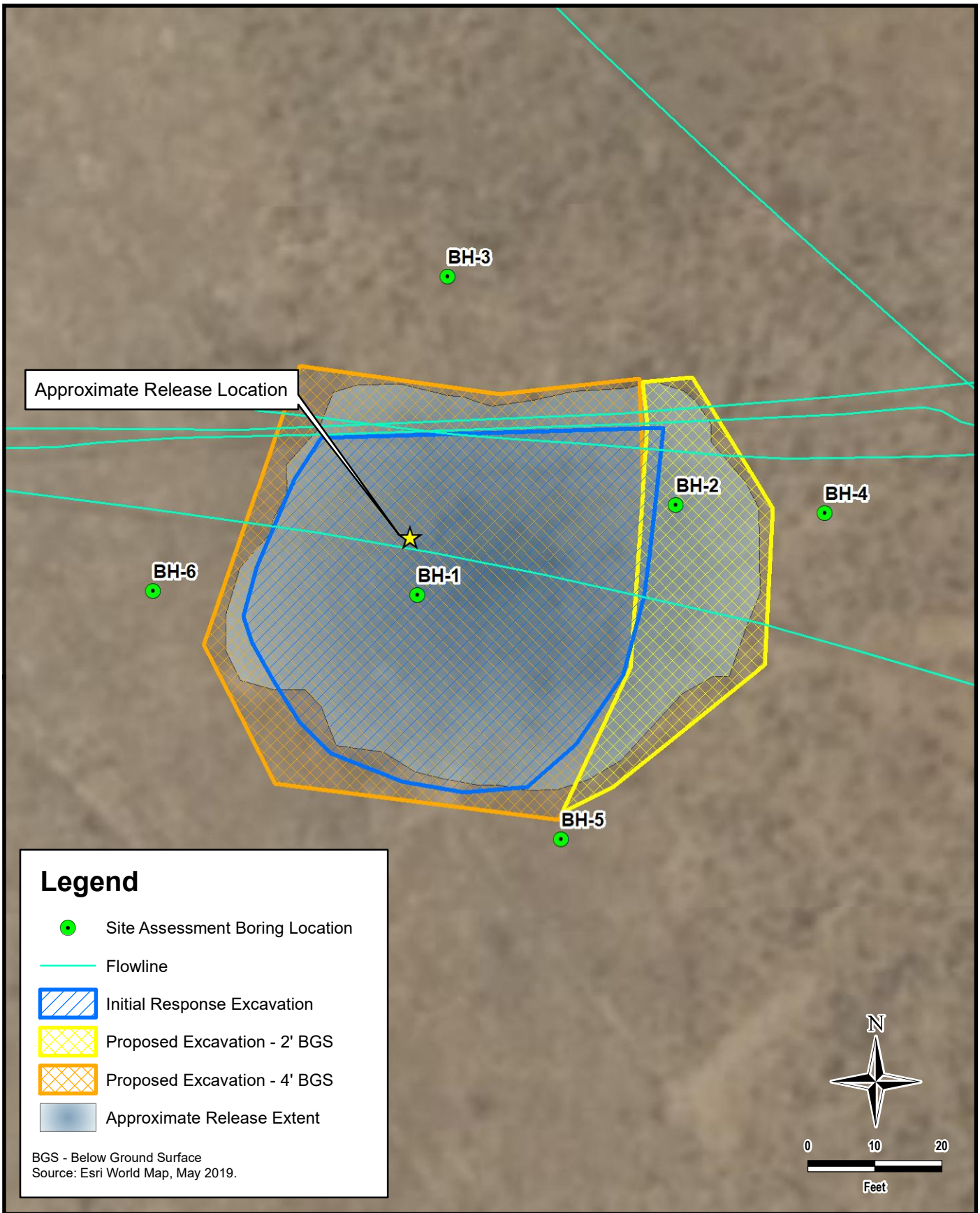
VGEU 02-20 EAST FLOWLINE RELEASE
RELEASE ASSESSMENT MAP

PROJECT NO.:	212C-MD-02305
DATE:	APRIL 08, 2021
DESIGNED BY:	AAM

Figure No.
4



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\VGEU 02-20EAST\FIGURE 5 REMEDIATION VGEU 02-20 EAST.MXD

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CONOCOPHILLIPS

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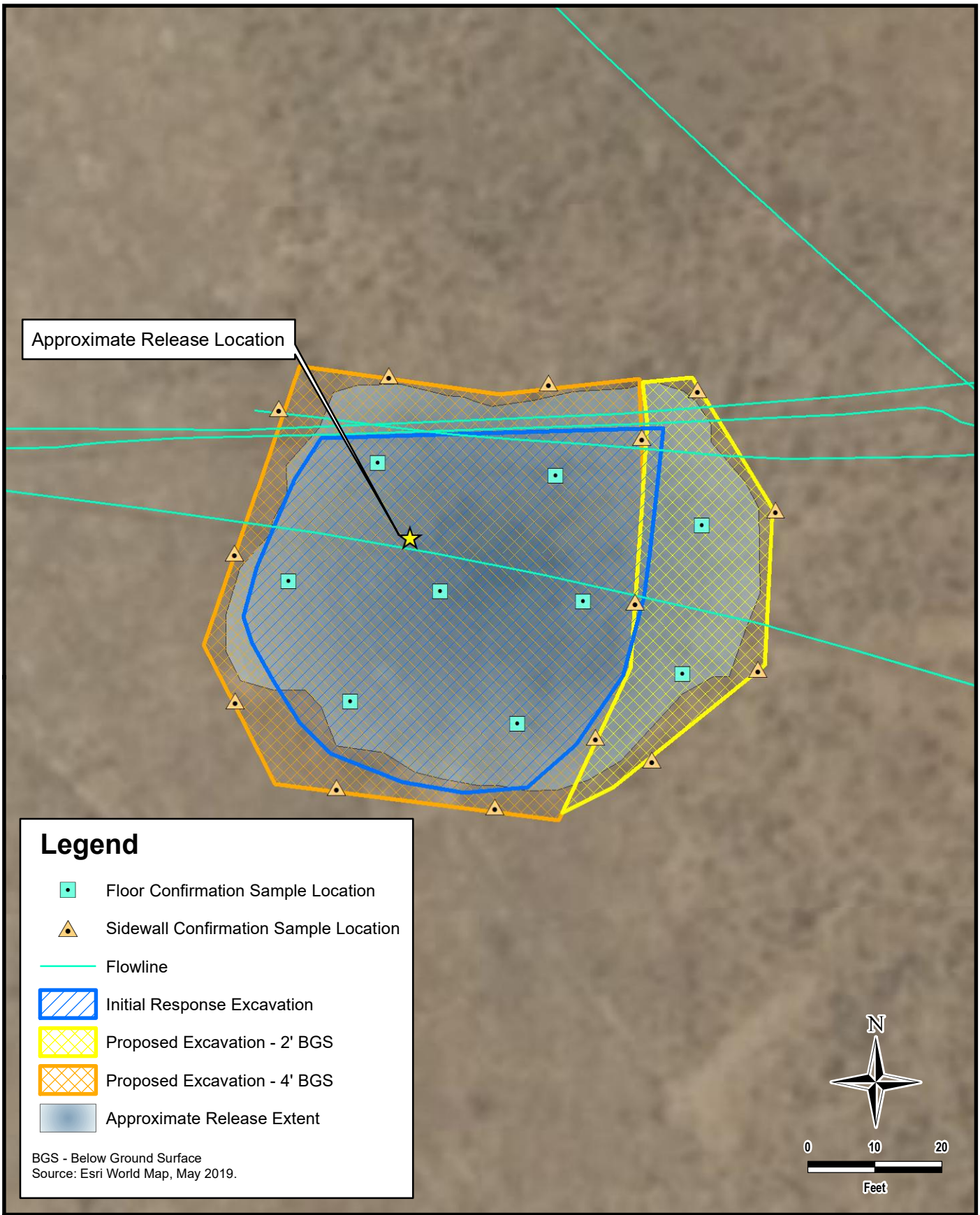
(32.796160°, -103.485046°)
LEA COUNTY, NEW MEXICO

VGEU 02-20 EAST FLOWLINE RELEASE
PROPOSED REMEDIATION EXTENT

PROJECT NO.:	212C-MD-02305
DATE:	APRIL 08, 2021
DESIGNED BY:	AAM

Figure No.
5



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\VGEU 02-20EAST\FIGURE 6 ACSP VGEU 02-20 EAST.MXD

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LEA COUNTY, NEW MEXICO

VGEU 02-20 EAST FLOWLINE RELEASE
ALTERNATIVE CONFIRMATION SAMPLING PLAN

PROJECT NO.:	212C-MD-02305
DATE:	MARCH 24, 2021
DESIGNED BY:	AAM

Figure No.
6

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESSMENT - nRM2019933917
CONOCOPHILLIPS
VGEU 02-20 EAST FLOWLINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sampled Depth	Chloride[1]		BTEX[2]								TPH[3]							
					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
		ft. bgs	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
SP #1	7/16/2020	-	***7,730***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
SP #2	7/16/2020	-	***8,640***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
SP #3	7/16/2020	-	***17,200***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		535		129		***664***
SP #4	7/16/2020	-	***10,800***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		37.6		15.0		52.6
SP #5	7/16/2020	-	***11,600***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
SP #6	7/16/2020	-	***14,000***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		128		33.8		***162***
SP #7	7/16/2020	-	***22,600***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		275		69.2		***344***
SP #8	7/16/2020	-	***14,000***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		284		76.9		***361***
SP #9	7/16/2020	-	***11,000***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
SP #10	7/16/2020	-	***16,800***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		50.8		15.1		65.9
SP #11	7/16/2020	-	***14,400***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		252		77.3		***329***
SP #12	7/16/2020	-	***14,800***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		165		48.4		***213***
SP #13	7/16/2020	-	***11,800***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		62.3		22.3		84.6
SP #14	7/16/2020	-	***14,100***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
SP #15	7/16/2020	-	***10,000***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		105		27.5		***133***
SP #16	7/16/2020	-	***15,000***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		136		37.4		***173***
SP #17	7/16/2020	-	***13,200***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		128		33.2		***161***
SP #18	7/16/2020	-	***9,860***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
SP #19	7/16/2020	-	***5,280***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		13.0		10.1		23.1
SP #20	7/16/2020	-	***28,800***		< 0.050		0.065		0.109		0.230		0.404	10.2		3,220		824		***4,044***
SP #21	7/16/2020	-	***13,000***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		426		105		***531***
SP #22	7/16/2020	-	***10,400***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
SP #23	7/16/2020	-	***13,400***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		542		138		***680***
SP #24	7/16/2020	-	***2,560***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
SP #1A	7/30/2020	1.0	***2,000***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
SP #1A	7/30/2020	2.0	***1,200***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
SP #2A	7/30/2020	1.0	***2,480***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
SP #2A	7/30/2020	2.0	***5,440***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
SP #3A	7/30/2020	1.0	***3,360***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
SP #3A	7/30/2020	2.0	***3,000***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
Background-S	7/30/2020	-	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0
Background-E	7/30/2020	-	240		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		149		33.5		***183***
Background-N	7/30/2020	-	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300	< 10.0		< 10.0		< 10.0		< 10.0

NOTES:

ft.	Feet
bgs	Below ground surface
ppm	Parts per million
mg/kg	Milligrams per kilogram
NS	Not sampled
TPH	Total Petroleum Hydrocarbons
GRO	Gasoline range organics
DRO	Diesel range organics
ORO	Oil range organics

Shaded rows indicate depth intervals proposed for excavation and remediation

Bold and italicized values indicate exceedance of proposed RRALs based on the region's depth to groundwater and the sampled depths bgs.

1	Method 4500.0
2	EPA Method 8260B
3	EPA Method 8015
4	EPA Method 8015D/GRO

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
ADDITIONAL SOIL ASSESSMENT - nRM2019933917
CONOCOPHILLIPS
VGEU 02-20 FLOWLINE RELEASE - EAST
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-1	1/18/2021	2-3	2810	12	***4330***		< 0.00114		< 0.00568		< 0.00284		< 0.00738		-		< 0.107		12.6		18.8		31.4
		4-5	37	1.0	< 21.2		< 0.00112		< 0.00560		< 0.00280		< 0.00729		-		< 0.106		< 4.24		1.75	J	1.75
		6-7	25	1.0	< 21.1		< 0.00111		< 0.00554		< 0.00277		< 0.00721		-		< 0.105		< 4.21		3.01	J	3.01
		9-10	42	1.9	< 21.1		< 0.00111		< 0.00556		< 0.00278		< 0.00723		-		< 0.106		< 4.22		2.79	J	2.79
		15	24	0.9	< 21.3		< 0.00113		< 0.00567		< 0.00284		< 0.00737		-		< 0.107		< 4.27		< 4.27		-
		20	20	0.7	399		< 0.00108		< 0.00540		< 0.00270		< 0.00703		-		< 0.104		< 4.16		< 4.16		-
BH-2	1/18/2021	0-1	65	5.0	41.7		< 0.00108		< 0.00539		< 0.00269		< 0.00700		-		< 0.104		< 4.15		1.73	J	1.73
		2-3	129	5.0	36.0		< 0.00108		< 0.00540		< 0.00270		< 0.00702		-		< 0.104		< 4.16		0.629	J	0.629
		4-5	94	5.0	22.3		< 0.00106		< 0.00528		< 0.00264		< 0.00686		-		< 0.103		< 4.11		< 4.11		-
		6-7	52	1.0	< 21.4		< 0.00114		< 0.00569		< 0.00284		< 0.00740		-		< 0.107		< 4.28		2.90	J	2.90
		9-10	32	0.7	< 21.0		< 0.00110		< 0.00551		< 0.00274		< 0.00716		-		< 0.105		< 4.20		1.87	J	1.87
BH-3	1/18/2021	0-1	91	3.0	< 21.7		< 0.00117		< 0.00584		< 0.00292		< 0.00760		-		< 0.108		< 4.34		7.94		7.94
		2-3	125	5.0	13.0	J	< 0.00107		< 0.00535		< 0.00268		< 0.00696		-		< 0.104		< 4.14		3.07	J	3.07
		4-5	73	5.0	< 20.4		< 0.00104		< 0.00521		< 0.00261		< 0.00678		-		< 0.102		< 4.08		0.685	J	0.685
		6-7	52	2.0	< 21.0		< 0.00110		< 0.00550		< 0.00275		< 0.00715		-		< 0.105		< 4.20		1.42	J	1.42
		9-10	49	2.0	< 20.8		< 0.00108		< 0.00542		< 0.00271		< 0.00704		-		< 0.104		< 4.17		1.09	J	1.09
BH-4	1/18/2021	0-1	89	3.0	32.0		< 0.00108		< 0.00542		< 0.00271		< 0.00705		-		< 0.104		< 4.17	J3	2.59	J	2.59
		2-3	76	5.0	36.2		< 0.00106		< 0.00530		< 0.00265		< 0.00689		-		< 0.103		< 4.12		2.53	B J	2.53
		4-5	81	5.0	12.9	J	< 0.00106		< 0.00530		< 0.00265		< 0.00689				< 0.103		< 4.12		0.365	B J	0.365
		6-7	33	2.0	< 20.8		< 0.00108		< 0.00542		< 0.00271		< 0.00705		-		< 0.104		< 4.17		1.06	J	1.06
		9-10	29	2.0	< 21.1		< 0.00111		< 0.00554		< 0.00277		< 0.00720				< 0.105		< 4.22		0.620	J	0.620
BH-5	1/18/2021	0-1	68	1.0	17.2	J	< 0.00105		< 0.00525		< 0.00262		< 0.00682		-		< 0.102		2.50	J	4.97		7.47
		2-3	87	1.0	15.5	J	< 0.00106		< 0.00528		< 0.00264		< 0.00687		-		< 0.103		2.24	J	4.15	B	6.39
		4-5	57	2.0	< 20.5		0.000493	J J3	< 0.00525	J3	< 0.00262	J3	< 0.00682		0.000493		< 0.102		< 4.10		1.11	B J	1.11
		6-7	49	2.0	< 21.1		< 0.00111		< 0.00553		< 0.00277		< 0.00719		-		< 0.105		< 4.21		1.30	J	1.30
		9-10	51	2.0	< 22.1		< 0.00121		< 0.00605		< 0.00302		< 0.00786		-		< 0.110		< 4.42		0.684	J	0.684

NOTES:

ft. Feet

bgs Below ground surface

ppm Parts per million

mg/kg Milligrams per kilogram

TPH Total Petroleum Hydrocarbons

GRO Gasoline range organics

DRO Diesel range organics

ORO Oil range organics

Shaded rows indicate depth intervals proposed for excavation and remediation

Bold and italicized values indicate exceedance of Reclamation Requirements

1 EPA Method 300.0

2 EPA Method 8260B

3 EPA Method 8015

4 EPA Method 8015D/GRO

QUALIFIERS:

B The same analyte is found in the associated blank.

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

APPENDIX A
C-141 Forms

District I
1625 N. French Dr., Hobbs, NM 88240
District II
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	NRM2019933917
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.796111 Longitude - 103.485
(NAD 83 in decimal degrees to 5 decimal places)

Site Name VGEU 02-20	Site Type Off location
Date Release Discovered 6/29/20	API# *(if applicable) N/A*

Unit Letter	Section	Township	Range	County
D	32	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) 4	Volume Recovered (bbls) 0
☒ Produced Water	Volume Released (bbls) 16	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Flowline split

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM2019933917
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?

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

Email notification was given to Bradford Billings and Jim Griswold, OCD by Kelsy Waggaman, ConocoPhillips Environmental Coordinator on 6/30/20.

Initial Response

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

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

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

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

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

Printed Name: Kelsy Waggaman Title: Environmental Coordinator

Signature: _____ Date: _7/10/20_

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

OCD Only

Received by: Ramona Marcus Date: 7/17/2020

L48 Spill Volume Estimate Form

NRM2019933917

Facility Name & Number:	VGEU 02-20
Release Discovery Date & Time:	6/30/2020
Release Type:	Oil Mixture
Provide any known details about the event:	FL leak

Spill Calculation - Subsurface Spill - Rectangle

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

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	36.0	42.0	6.00	15.12%	134.568	20.347	20.00%	4.069	16.277
27					0.000	0.000		0.000	0.000
Rectangle C					0.000	0.000		0.000	0.000
Rectangle D					0.000	0.000		0.000	0.000
Rectangle E					0.000	0.000		0.000	0.000
Rectangle F					0.000	0.000		0.000	0.000
Rectangle G					0.000	0.000		0.000	0.000
Rectangle H					0.000	0.000		0.000	0.000
Rectangle I					0.000	0.000		0.000	0.000
Rectangle J					0.000	0.000		0.000	0.000
					Total Volume Release:	20.347		4.069	16.277

State of New Mexico
Oil Conservation Division

Incident ID	nRM2019933917
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?	95 (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	nRM2019933917
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: Marvin Soriwei Title: Program Manager, Risk Management & Remediation

Signature: Date: 5/12/2021

email: marvin.soriwei@conocophillips.com Telephone: 8324862730

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	nRM2019933917
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: Marvin Soriwei Title: Program Manager, Risk Management & Remediation

Signature:  Date: 5/12/2021

email: marvin.soriwei@conocophillips.com Telephone: 8324862730

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

APPENDIX B
Site Characterization Data

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

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

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

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

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 14183 POD2		L	LE	3	2	2	31	17S	35E	641304	3629691	547	227	105	122
L 14183 POD1		L	LE	3	2	2	31	17S	35E	641266	3629667	585	229	106	123
L 14183 POD3		L	LE	3	2	2	31	17S	35E	641213	3629731	639	227	104	123
L 03875 S2	R	L	LE			2	31	17S	35E	641131	3629576*	730	120	95	25
L 03875 S4		L	LE			2	31	17S	35E	641131	3629576*	730	120		

Average Depth to Water: **102 feet**

Minimum Depth: **95 feet**

Maximum Depth: **106 feet**

Record Count: 5

UTMNAD83 Radius Search (in meters):

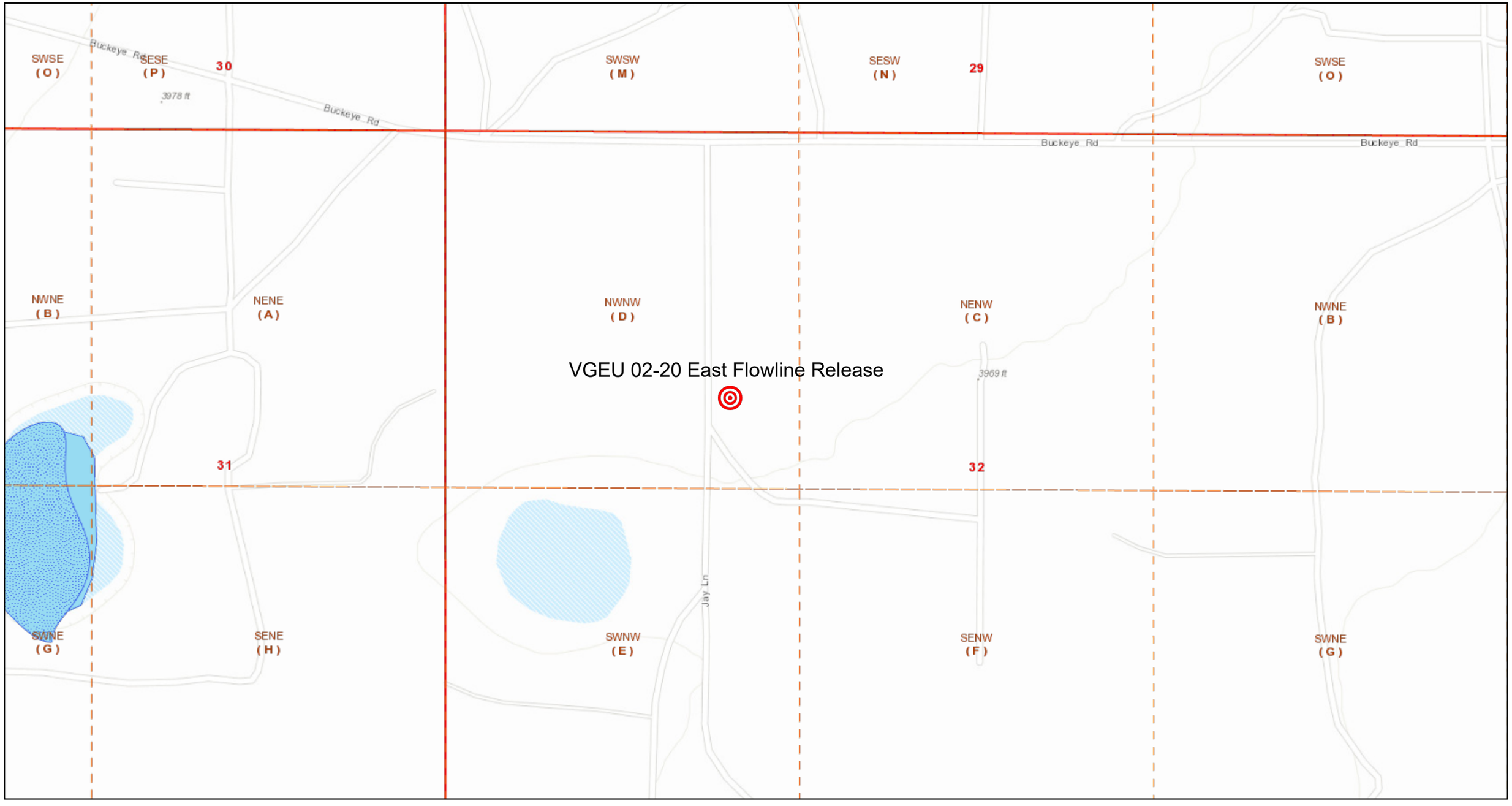
Easting (X): 641851.36 **Northing (Y):** 3629696.63 **Radius:** 800

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

Karst Potential Map

VGEU 02-20 East Flowline Release

VGEU 02-20 East Flowline Release



3/15/2021, 5:31:45 PM

Override 1

PLSS First Division

PLSS Second Division

OSE Water-bodies

PLJV Probable Playas

OSE Streams

1:5,083

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDA, BLM

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

APPENDIX C
Initial Response Waste Manifests

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JUSTIN WRIGHT
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	7/8/2020
Hauler:	MCNABB PARTNERS
Driver	GUMER
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-1155055
Bid #:	O6UJ9A0009Z1
Date:	7/8/2020
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	37850L
Well Name:	VACUUM GLORIETA EAST UNIT
Well #:	020 0220 EAST
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	18.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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

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

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

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

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01FBPX

7/15/2020 12:29:46PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JUSTIN WRIGHT
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	7/8/2020
Hauler:	MCNABB PARTNERS
Driver	JESUS
Truck #	M31
Card #	
Job Ref #	

Ticket #:	700-1155062
Bid #:	O6UJ9A0009Z1
Date:	7/8/2020
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	37850L
Well Name:	VACUUM GLORIETA EAST UNIT
Well #:	020 0220 EAST
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	18.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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

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

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

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

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01FBQB

7/15/2020 12:29:47PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JUSTIN WRIGHT
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	7/8/2020
Hauler:	MCNABB PARTNERS
Driver	GUMER
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-1155117
Bid #:	O6UJ9A0009Z1
Date:	7/8/2020
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	37850L
Well Name:	VACUUM GLORIETA EAST UNIT
Well #:	020
Field:	0220 EAST
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	18.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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

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

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

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

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01FBT7

7/15/2020 12:29:47PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JUSTIN WRIGHT
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	7/8/2020
Hauler:	MCNABB PARTNERS
Driver	JESUS
Truck #	M31
Card #	
Job Ref #	

Ticket #:	700-1155120
Bid #:	O6UJ9A0009Z1
Date:	7/8/2020
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	37850L
Well Name:	VACUUM GLORIETA EAST UNIT
Well #:	020 0220 EAST
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	18.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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

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

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

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

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01FBTA

7/15/2020 12:29:48PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-1155236
Customer #:	CRI2190	Bid #:	O6UJ9A0009Z1
Ordered by:	JUSTIN WRIGHT	Date:	7/9/2020
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	37850L
Manif. Date:	7/9/2020	Well Name:	VACUUM GLORIETA EAST UNIT
Hauler:	MCNABB PARTNERS	Well #:	020
Driver	GUMER	Field:	0220 EAST
Truck #	M32	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	18.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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

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

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

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

Driver/ Agent Signature **R360 Representative Signature:**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01FC19

7/15/2020 12:29:48PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JUSTIN WRIGHT
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	7/9/2020
Hauler:	MCNABB PARTNERS
Driver	JESUS
Truck #	M31
Card #	
Job Ref #	

Ticket #:	700-1155239
Bid #:	O6UJ9A0009Z1
Date:	7/9/2020
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	37850L
Well Name:	VACUUM GLORIETA EAST UNIT
Well #:	020
Field:	0220 EAST
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	18.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0			2.00			

Generator Certification Statement of Waste Status

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

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

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

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

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01FC1N

7/15/2020 12:29:49PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JUSTIN WRIGHT
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	7/9/2020
Hauler:	MCNABB PARTNERS
Driver	JOE
Truck #	M81
Card #	
Job Ref #	

Ticket #:	700-1155241
Bid #:	O6UJ9A0009Z1
Date:	7/9/2020
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	37850L
Well Name:	VACUUM GLORIETA EAST UNIT
Well #:	020
Field:	0220 EAST
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	20.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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

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

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

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

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01FC25

7/15/2020 12:29:49PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-1155266
Customer #:	CRI2190	Bid #:	O6UJ9A0009Z1
Ordered by:	JUSTIN WRIGHT	Date:	7/9/2020
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	37850L
Manif. Date:	7/9/2020	Well Name:	VACUUM GLORIETA EAST UNIT
Hauler:	MCNABB PARTNERS	Well #:	020
Driver	GUMER	Field:	0220 EAST
Truck #	M32	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	18.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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

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

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

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

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01FC4L 7/15/2020 12:29:50PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-1155271
Customer #:	CRI2190	Bid #:	O6UJ9A0009Z1
Ordered by:	JUSTIN WRIGHT	Date:	7/9/2020
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	37850L
Manif. Date:	7/9/2020	Well Name:	VACUUM GLORIETA EAST UNIT
Hauler:	MCNABB PARTNERS	Well #:	020
Driver	JESUS	Field:	0220 EAST
Truck #	M31	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	18.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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

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

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

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

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01FC4S 7/15/2020 12:29:50PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JUSTIN WRIGHT
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	7/9/2020
Hauler:	MCNABB PARTNERS
Driver	JOE
Truck #	M81
Card #	
Job Ref #	

Ticket #:	700-1155274
Bid #:	O6UJ9A0009Z1
Date:	7/9/2020
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	37850L
Well Name:	VACUUM GLORIETA EAST UNIT
Well #:	020
Field:	0220 EAST
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	20.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0			2.00			

Generator Certification Statement of Waste Status

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

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

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

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

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

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Approved By: _____ Date: _____

t6UJ9A01FC4W

7/15/2020 12:29:56PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JUSTIN WRIGHT
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	7/9/2020
Hauler:	MCNABB PARTNERS
Driver	GUMER
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-1155318
Bid #:	O6UJ9A0009Z1
Date:	7/9/2020
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	37850L
Well Name:	VACUUM GLORIETA EAST UNIT
Well #:	020
Field:	020 EAST
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	18.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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

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

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

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

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

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Approved By: _____ Date: _____

t6UJ9A01FC6Z

7/15/2020 12:29:57PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-1155322
Customer #:	CRI2190	Bid #:	O6UJ9A0009Z1
Ordered by:	JUSTIN WRIGHT	Date:	7/9/2020
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	37850L
Manif. Date:	7/9/2020	Well Name:	VACUUM GLORIETA EAST UNIT
Hauler:	MCNABB PARTNERS	Well #:	020
Driver	JESUS	Field:	0220 EAST
Truck #	M31	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	18.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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

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

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

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

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01FC77

7/15/2020 12:29:57PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JUSTIN WRIGHT
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	7/9/2020
Hauler:	MCNABB PARTNERS
Driver	JOE
Truck #	M81
Card #	
Job Ref #	

Ticket #:	700-1155323
Bid #:	O6UJ9A0009Z1
Date:	7/9/2020
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	37850L
Well Name:	VACUUM GLORIETA EAST UNIT
Well #:	020
Field:	0220 EAST
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	20.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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

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

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

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

Driver/Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01FC7B

7/15/2020 12:29:58PM

APPENDIX D
Laboratory Analytical Data

CARDINAL Laboratories

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

July 23, 2020

JUSTIN WRIGHT

Conoco Phillips - Hobbs

P. O. BOX 325

Hobbs, NM 88240

RE: VGEU 02 - 20

Enclosed are the results of analyses for samples received by the laboratory on 07/17/20 12:14.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 1 (H001875-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.7 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7730**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	<10.0	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *98.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *99.3 %* *42.2-156*

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:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 2 (H001875-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.2 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8640**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	<10.0	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *97.1 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *97.3 %* *42.2-156*

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:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 3 (H001875-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.9 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**17200**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	**535**	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	**129**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *91.9 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *112 %* *42.2-156*

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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:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 4 (H001875-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.4 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**10800**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	**37.6**	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	**15.0**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *113 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *117 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 5 (H001875-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.0 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**11600**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	<10.0	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *111 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *117 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 6 (H001875-06)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.2 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**14000**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	**128**	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	**33.8**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *100 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *109 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 7 (H001875-07)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**22600**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	**275**	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	**69.2**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *97.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *117 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 8 (H001875-08)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.6 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**14000**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	**284**	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	**76.9**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *104 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *126 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 9 (H001875-09)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.1 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**11000**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	<10.0	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *104 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *110 %* *42.2-156*

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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:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 10 (H001875-10)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.1 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16800**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	**50.8**	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	**15.1**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *110 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *121 %* *42.2-156*

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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:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 11 (H001875-11)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.1 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**14400**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	**252**	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	**77.3**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *105 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *130 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 12 (H001875-12)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.7 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**14800**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	**165**	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	**48.4**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *97.2 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *112 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 13 (H001875-13)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.7 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**11800**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	**62.3**	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	**22.3**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *109 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *117 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 14 (H001875-14)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.8 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**14100**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	<10.0	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *108 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *115 %* *42.2-156*

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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:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 15 (H001875-15)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.8 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**10000**	16.0	07/20/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	**105**	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	**27.5**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *112 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *126 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 16 (H001875-16)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.2 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**15000**	16.0	07/21/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	**136**	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	**37.4**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *93.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *105 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 17 (H001875-17)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.0 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**13200**	16.0	07/21/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	**128**	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	**33.2**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *104 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *114 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 18 (H001875-18)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2020	ND	1.84	91.9	2.00	7.94	
Toluene*	<0.050	0.050	07/18/2020	ND	1.84	92.0	2.00	8.14	
Ethylbenzene*	<0.050	0.050	07/18/2020	ND	1.85	92.3	2.00	8.21	
Total Xylenes*	<0.150	0.150	07/18/2020	ND	5.33	88.8	6.00	8.24	
Total BTEX	<0.300	0.300	07/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.1 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9860**	16.0	07/21/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	227	114	200	1.32	
DRO >C10-C28*	<10.0	10.0	07/20/2020	ND	248	124	200	3.08	
EXT DRO >C28-C36	<10.0	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *109 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *118 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 19 (H001875-19)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/20/2020	ND	2.00	99.8	2.00	4.26	
Toluene*	<0.050	0.050	07/20/2020	ND	2.01	101	2.00	4.15	
Ethylbenzene*	<0.050	0.050	07/20/2020	ND	2.02	101	2.00	4.61	
Total Xylenes*	<0.150	0.150	07/20/2020	ND	5.81	96.8	6.00	4.74	
Total BTEX	<0.300	0.300	07/20/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5280**	16.0	07/21/2020	ND	416	104	400	0.00	QM-07

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	207	104	200	0.577	
DRO >C10-C28*	**13.0**	10.0	07/20/2020	ND	224	112	200	2.03	
EXT DRO >C28-C36	**10.1**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *104 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *107 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 20 (H001875-20)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/21/2020	ND	2.00	99.8	2.00	4.26	
Toluene*	**0.065**	0.050	07/21/2020	ND	2.01	101	2.00	4.15	
Ethylbenzene*	**0.109**	0.050	07/21/2020	ND	2.02	101	2.00	4.61	
Total Xylenes*	**0.230**	0.150	07/21/2020	ND	5.81	96.8	6.00	4.74	
Total BTEX	**0.404**	0.300	07/21/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.1 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**28800**	16.0	07/21/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**10.2**	10.0	07/20/2020	ND	207	104	200	0.577	
DRO >C10-C28*	**3220**	10.0	07/20/2020	ND	224	112	200	2.03	
EXT DRO >C28-C36	**824**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *107 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *220 %* *42.2-156*

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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:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 21 (H001875-21)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/20/2020	ND	2.00	99.8	2.00	4.26	
Toluene*	<0.050	0.050	07/20/2020	ND	2.01	101	2.00	4.15	
Ethylbenzene*	<0.050	0.050	07/20/2020	ND	2.02	101	2.00	4.61	
Total Xylenes*	<0.150	0.150	07/20/2020	ND	5.81	96.8	6.00	4.74	
Total BTEX	<0.300	0.300	07/20/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.3 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**13000**	16.0	07/21/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/20/2020	ND	207	104	200	0.577	
DRO >C10-C28*	**426**	10.0	07/20/2020	ND	224	112	200	2.03	
EXT DRO >C28-C36	**105**	10.0	07/20/2020	ND					

Surrogate: 1-Chlorooctane *104 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *112 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 22 (H001875-22)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/21/2020	ND	1.95	97.7	2.00	1.67	
Toluene*	<0.050	0.050	07/21/2020	ND	1.96	97.9	2.00	1.46	
Ethylbenzene*	<0.050	0.050	07/21/2020	ND	1.96	97.8	2.00	1.85	
Total Xylenes*	<0.150	0.150	07/21/2020	ND	5.62	93.7	6.00	1.80	
Total BTEX	<0.300	0.300	07/21/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.2 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**10400**	16.0	07/21/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/21/2020	ND	220	110	200	0.522	
DRO >C10-C28*	<10.0	10.0	07/21/2020	ND	222	111	200	3.59	
EXT DRO >C28-C36	<10.0	10.0	07/21/2020	ND					

Surrogate: 1-Chlorooctane *95.0 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *97.3 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 23 (H001875-23)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/21/2020	ND	1.95	97.7	2.00	1.67	
Toluene*	<0.050	0.050	07/21/2020	ND	1.96	97.9	2.00	1.46	
Ethylbenzene*	<0.050	0.050	07/21/2020	ND	1.96	97.8	2.00	1.85	
Total Xylenes*	<0.150	0.150	07/21/2020	ND	5.62	93.7	6.00	1.80	
Total BTEX	<0.300	0.300	07/21/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.7 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**13400**	16.0	07/21/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/21/2020	ND	220	110	200	0.522	
DRO >C10-C28*	**542**	10.0	07/21/2020	ND	222	111	200	3.59	
EXT DRO >C28-C36	**138**	10.0	07/21/2020	ND					

Surrogate: 1-Chlorooctane *72.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *91.6 %* *42.2-156*

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Analytical Results For:

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

Received:	07/17/2020	Sampling Date:	07/16/2020
Reported:	07/23/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	VGEU 02-20 EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP # 24 (H001875-24)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/21/2020	ND	1.95	97.7	2.00	1.67	
Toluene*	<0.050	0.050	07/21/2020	ND	1.96	97.9	2.00	1.46	
Ethylbenzene*	<0.050	0.050	07/21/2020	ND	1.96	97.8	2.00	1.85	
Total Xylenes*	<0.150	0.150	07/21/2020	ND	5.62	93.7	6.00	1.80	
Total BTEX	<0.300	0.300	07/21/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.9 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2560**	16.0	07/21/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/21/2020	ND	220	110	200	0.522	
DRO >C10-C28*	<10.0	10.0	07/21/2020	ND	222	111	200	3.59	
EXT DRO >C28-C36	<10.0	10.0	07/21/2020	ND					

Surrogate: 1-Chlorooctane *77.6 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *81.0 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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

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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

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 02-20 East	State: Zip:	
Project Location:	Lea County, NM	Phone #:	
Sampler Name:	Justin Wright	Fax #:	

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	TPH	BTEX									
H001875																										
1	SP #1	G				#					#		7-16		✓	✓	✓									
2	SP# 2	G				#					#		7-16		✓	✓	✓									
3	SP#3	G				#					#		7-16		✓	✓	✓									
4	SP#4	G				#					#		7-16		✓	✓	✓									
5	SP#5	G				#					#		7-16		✓	✓	✓									
6	SP#6	G				#					#		7-16		✓	✓	✓									
7	SP#7	G				#					#		7-16		✓	✓	✓									
8	SP#8	G				#					#		7-16		✓	✓	✓									
9	SP#9	G				#					#		7-16		✓	✓	✓									
10	SP#10	G				#					#		7-16		✓	✓	✓									

Relinquished By: Justin Wright	Date: 7-17-20 Time: 12:14	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 -1.2°C Corrected Temp. °C	Sample Condition Cool Intact ☑ Yes ☑ Yes ☐ No ☐ No	CHECKED BY: (Initials) TO.	Turnaround Time: Standard ☑ Rush ☐ Thermometer ID ~~#97~~ #113 Correction Factor ~~+0.4~~ °C TO. 7/17/20 Bacteria (only) Sample Condition Cool Intact Observed Temp. °C ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

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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 02-20 East	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	TPH	BTEX
H001875																	
11	SP #11	G				#					#		7-16		✓	✓	✓
12	SP #12	G				#					#		7-16		✓	✓	✓
13	SP #13	G				#					#		7-16		✓	✓	✓
14	SP #14	G				#					#		7-16		✓	✓	✓
15	SP #15	G				#					#		7-16		✓	✓	✓
16	SP #16	G				#					#		7-16		✓	✓	✓
17	SP #17	G				#					#		7-16		✓	✓	✓
18	SP #18	G				#					#		7-16		✓	✓	✓
19	SP #19	G				#					#		7-16		✓	✓	✓
20	SP #20	G				#					#		7-16		✓	✓	✓

Relinquished By: Justin Wright	Date: 7-17-20 Time: 12:14	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 -1.2 Corrected Temp. °C	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) T.O.
Turnaround Time: Standard ☑ Rush ☐ Thermometer ID ~~#97~~ #113 Correction Factor ~~+0.4 °C~~ T.O. 7/17/20	Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No	Observed Temp. °C Corrected Temp. °C	

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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:	VGEV 02-20 East	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	TPH	BTEX
H001875																	
21	SP# 21	G				#					#		7-16		✓	✓	✓
22	SP# 22	G				#					#		7-16		✓	✓	✓
23	SP# 23	G				#					#		7-16		✓	✓	✓
24	SP# 24	G				#					#		7-16		✓	✓	✓
		G				#					#						
		G				#					#						
		G				#					#						
		G				#					#						
		G				#					#						
		G				#					#						

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 7-17-20 Time: 12:14	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 7/17/20 Time: 1200	Received By:	All Results are emailed. Please provide Email address: REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C -1.2 Corrected Temp. °C	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials) T.O.	Turnaround Time: Standard ☑ Rush ☐ Thermometer ID #97 ~~#97~~ #113 Correction Factor ~~+0.4 °C~~ T.O. 7/18/20

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

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CARDINAL Laboratories

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

August 04, 2020

JUSTIN WRIGHT

Conoco Phillips - Hobbs

P. O. BOX 325

Hobbs, NM 88240

RE: VGEU 02 - 20

Enclosed are the results of analyses for samples received by the laboratory on 07/31/20 10:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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:	07/31/2020	Sampling Date:	07/30/2020
Reported:	08/04/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP 1A - 1' (H001978-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/31/2020	ND	1.90	94.8	2.00	0.0709	
Toluene*	<0.050	0.050	07/31/2020	ND	1.90	95.0	2.00	0.157	
Ethylbenzene*	<0.050	0.050	07/31/2020	ND	1.93	96.4	2.00	0.320	
Total Xylenes*	<0.150	0.150	07/31/2020	ND	5.58	93.0	6.00	0.299	
Total BTEX	<0.300	0.300	07/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2000**	16.0	08/03/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2020	ND	201	100	200	5.89	
DRO >C10-C28*	<10.0	10.0	08/01/2020	ND	221	110	200	2.61	
EXT DRO >C28-C36	<10.0	10.0	08/01/2020	ND					

Surrogate: 1-Chlorooctane *89.5 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *90.4 %* *42.2-156*

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:	07/31/2020	Sampling Date:	07/30/2020
Reported:	08/04/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP 1A - 2' (H001978-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/31/2020	ND	1.90	94.8	2.00	0.0709	
Toluene*	<0.050	0.050	07/31/2020	ND	1.90	95.0	2.00	0.157	
Ethylbenzene*	<0.050	0.050	07/31/2020	ND	1.93	96.4	2.00	0.320	
Total Xylenes*	<0.150	0.150	07/31/2020	ND	5.58	93.0	6.00	0.299	
Total BTEX	<0.300	0.300	07/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.4 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1200**	16.0	08/03/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2020	ND	201	100	200	5.89	
DRO >C10-C28*	<10.0	10.0	08/01/2020	ND	221	110	200	2.61	
EXT DRO >C28-C36	<10.0	10.0	08/01/2020	ND					

Surrogate: 1-Chlorooctane *84.3 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *86.0 %* *42.2-156*

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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:	07/31/2020	Sampling Date:	07/30/2020
Reported:	08/04/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP 2A - 1' (H001978-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/31/2020	ND	1.90	94.8	2.00	0.0709	
Toluene*	<0.050	0.050	07/31/2020	ND	1.90	95.0	2.00	0.157	
Ethylbenzene*	<0.050	0.050	07/31/2020	ND	1.93	96.4	2.00	0.320	
Total Xylenes*	<0.150	0.150	07/31/2020	ND	5.58	93.0	6.00	0.299	
Total BTEX	<0.300	0.300	07/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.7 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2480**	16.0	08/03/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2020	ND	201	100	200	5.89	
DRO >C10-C28*	<10.0	10.0	08/01/2020	ND	221	110	200	2.61	
EXT DRO >C28-C36	<10.0	10.0	08/01/2020	ND					

Surrogate: 1-Chlorooctane *88.0 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *89.1 %* *42.2-156*

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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:	07/31/2020	Sampling Date:	07/30/2020
Reported:	08/04/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP 2A - 2' (H001978-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/31/2020	ND	1.90	94.8	2.00	0.0709	
Toluene*	<0.050	0.050	07/31/2020	ND	1.90	95.0	2.00	0.157	
Ethylbenzene*	<0.050	0.050	07/31/2020	ND	1.93	96.4	2.00	0.320	
Total Xylenes*	<0.150	0.150	07/31/2020	ND	5.58	93.0	6.00	0.299	
Total BTEX	<0.300	0.300	07/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.8 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5440**	16.0	08/03/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2020	ND	201	100	200	5.89	
DRO >C10-C28*	<10.0	10.0	08/01/2020	ND	221	110	200	2.61	
EXT DRO >C28-C36	<10.0	10.0	08/01/2020	ND					

Surrogate: 1-Chlorooctane *85.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *87.7 %* *42.2-156*

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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:	07/31/2020	Sampling Date:	07/30/2020
Reported:	08/04/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP 3A - 1' (H001978-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/31/2020	ND	1.90	94.8	2.00	0.0709	
Toluene*	<0.050	0.050	07/31/2020	ND	1.90	95.0	2.00	0.157	
Ethylbenzene*	<0.050	0.050	07/31/2020	ND	1.93	96.4	2.00	0.320	
Total Xylenes*	<0.150	0.150	07/31/2020	ND	5.58	93.0	6.00	0.299	
Total BTEX	<0.300	0.300	07/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.0 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3360**	16.0	08/03/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2020	ND	201	100	200	5.89	
DRO >C10-C28*	<10.0	10.0	08/01/2020	ND	221	110	200	2.61	
EXT DRO >C28-C36	<10.0	10.0	08/01/2020	ND					

Surrogate: 1-Chlorooctane *82.6 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *84.4 %* *42.2-156*

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:	07/31/2020	Sampling Date:	07/30/2020
Reported:	08/04/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SP 3A - 2' (H001978-06)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/31/2020	ND	1.90	94.8	2.00	0.0709	
Toluene*	<0.050	0.050	07/31/2020	ND	1.90	95.0	2.00	0.157	
Ethylbenzene*	<0.050	0.050	07/31/2020	ND	1.93	96.4	2.00	0.320	
Total Xylenes*	<0.150	0.150	07/31/2020	ND	5.58	93.0	6.00	0.299	
Total BTEX	<0.300	0.300	07/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.2 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3000**	16.0	08/03/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2020	ND	201	100	200	5.89	
DRO >C10-C28*	<10.0	10.0	08/01/2020	ND	221	110	200	2.61	
EXT DRO >C28-C36	<10.0	10.0	08/01/2020	ND					

Surrogate: 1-Chlorooctane *78.3 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *79.8 %* *42.2-156*

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:	07/31/2020	Sampling Date:	07/30/2020
Reported:	08/04/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: BACKGROUND - S (H001978-07)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/31/2020	ND	1.90	94.8	2.00	0.0709	
Toluene*	<0.050	0.050	07/31/2020	ND	1.90	95.0	2.00	0.157	
Ethylbenzene*	<0.050	0.050	07/31/2020	ND	1.93	96.4	2.00	0.320	
Total Xylenes*	<0.150	0.150	07/31/2020	ND	5.58	93.0	6.00	0.299	
Total BTEX	<0.300	0.300	07/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.1 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	08/03/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2020	ND	201	100	200	5.89	
DRO >C10-C28*	<10.0	10.0	08/01/2020	ND	221	110	200	2.61	
EXT DRO >C28-C36	<10.0	10.0	08/01/2020	ND					

Surrogate: 1-Chlorooctane *83.0 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *85.5 %* *42.2-156*

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:	07/31/2020	Sampling Date:	07/30/2020
Reported:	08/04/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: BACKGROUND - E (H001978-08)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/31/2020	ND	1.90	94.8	2.00	0.0709	
Toluene*	<0.050	0.050	07/31/2020	ND	1.90	95.0	2.00	0.157	
Ethylbenzene*	<0.050	0.050	07/31/2020	ND	1.93	96.4	2.00	0.320	
Total Xylenes*	<0.150	0.150	07/31/2020	ND	5.58	93.0	6.00	0.299	
Total BTEX	<0.300	0.300	07/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.9 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	08/03/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2020	ND	201	100	200	5.89	
DRO >C10-C28*	**149**	10.0	08/01/2020	ND	221	110	200	2.61	
EXT DRO >C28-C36	**33.5**	10.0	08/01/2020	ND					

Surrogate: 1-Chlorooctane *83.2 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *93.0 %* *42.2-156*

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:	07/31/2020	Sampling Date:	07/30/2020
Reported:	08/04/2020	Sampling Type:	Soil
Project Name:	VGEU 02 - 20	Sampling Condition:	Cool & Intact
Project Number:	EAST	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: BACKGROUND - N (H001978-09)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/31/2020	ND	1.90	94.8	2.00	0.0709	
Toluene*	<0.050	0.050	07/31/2020	ND	1.90	95.0	2.00	0.157	
Ethylbenzene*	<0.050	0.050	07/31/2020	ND	1.93	96.4	2.00	0.320	
Total Xylenes*	<0.150	0.150	07/31/2020	ND	5.58	93.0	6.00	0.299	
Total BTEX	<0.300	0.300	07/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.7 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	08/03/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2020	ND	201	100	200	5.89	
DRO >C10-C28*	<10.0	10.0	08/01/2020	ND	221	110	200	2.61	
EXT DRO >C28-C36	<10.0	10.0	08/01/2020	ND					

Surrogate: 1-Chlorooctane *75.5 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *77.8 %* *42.2-156*

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

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

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:	VGEV 02-20 East	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	TPH	BTEX
H001978																	
1	SP1A-1'	G				#					#		7-30		✓	✓	✓
2	SP1A-2'	G				#					#		7-30		✓	✓	✓
3	SP2A-1'	G				#					#		7-30		✓	✓	✓
4	SP2A-2'	G				#					#		7-30		✓	✓	✓
5	SP3A-1'	G				#					#		7-30		✓	✓	✓
6	SP3A-2'	G				#					#		7-30		✓	✓	✓
7	Background-S	G				#					#		7-30		✓	✓	✓
8	Background-E	G				#					#		7-30		✓	✓	✓
9	Background-N	G				#					#		7-30		✓	✓	✓
		G				#					#						

Relinquished By:	Date: 7-30-20	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 10:00 AM		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 4.8	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C	☑ Yes ☑ Yes ☐ No ☐ No	T.O.	Thermometer ID #97 #113 Correction Factor +0.4 °C T.O. 7/31/20

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

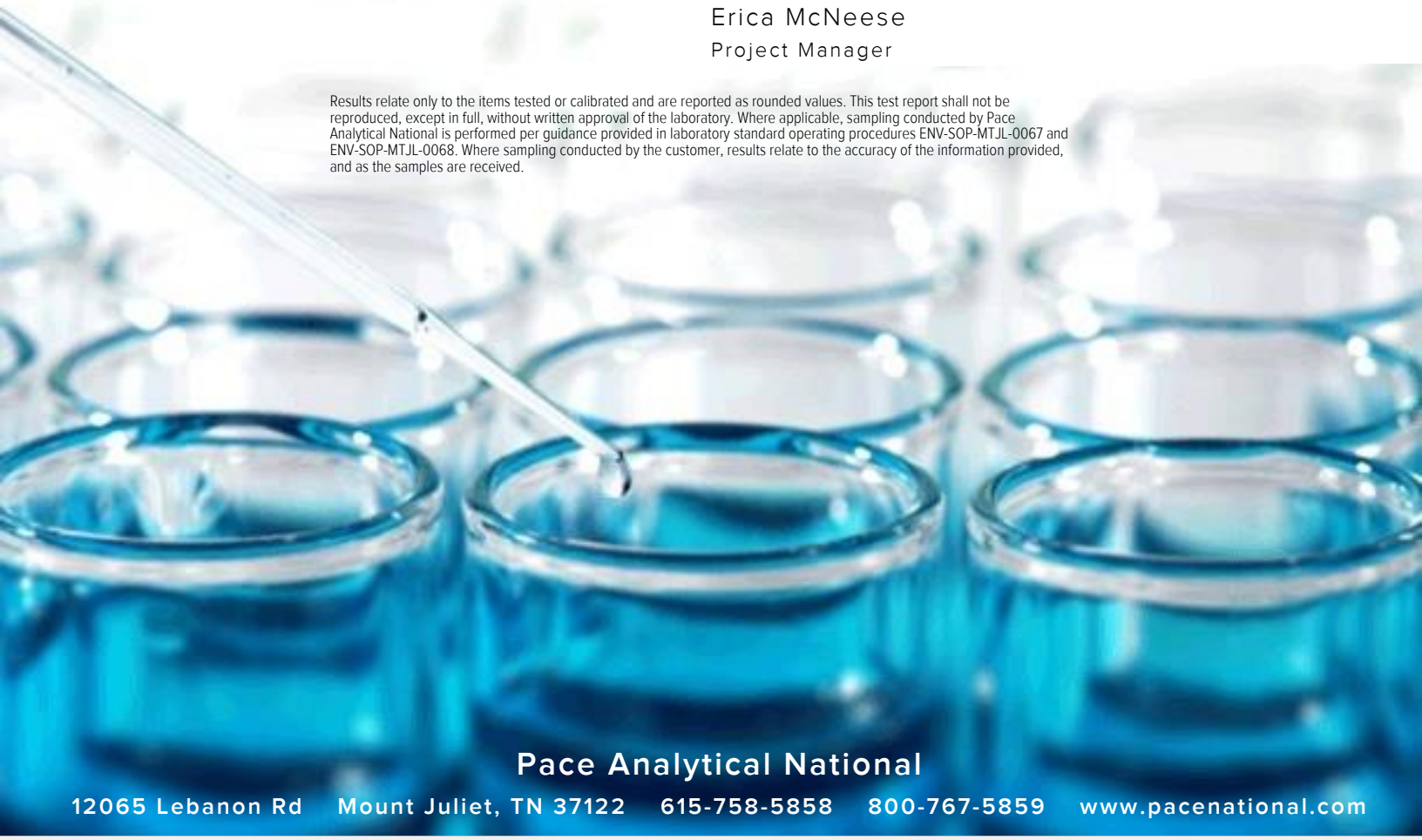
January 29, 2021

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1308904
Samples Received:	01/21/2021
Project Number:	212-MD-02305
Description:	VGEU 02-20 East
Site:	LEA COUNTY, NM
Report To:	Christian Llull
	901 West Wall
	Suite 100
	Midland, TX 79701

Entire Report Reviewed By: Erica McNeese

Erica McNeese
Project Manager



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

TABLE OF CONTENTS

BH-1 (2-3') L1308904-01 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 14:00 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611061	1	01/26/21 11:05	01/26/21 11:12	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	10	01/26/21 15:59	01/26/21 22:30	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1611906	1	01/22/21 13:49	01/27/21 06:08	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1611868	1	01/22/21 13:49	01/27/21 09:30	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1611651	1	01/27/21 11:28	01/27/21 18:36	TJD	Mt. Juliet, TN

BH-1 (4-5') L1308904-02 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 14:05 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611061	1	01/26/21 11:05	01/26/21 11:12	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/26/21 22:49	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1611906	1	01/22/21 13:49	01/27/21 06:29	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1611868	1	01/22/21 13:49	01/27/21 09:49	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1611651	1	01/27/21 11:28	01/27/21 18:49	TJD	Mt. Juliet, TN

BH-1 (6-7') L1308904-03 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 14:10 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611061	1	01/26/21 11:05	01/26/21 11:12	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/26/21 22:58	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1611906	1	01/22/21 13:49	01/27/21 06:50	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612066	1	01/22/21 13:49	01/27/21 20:05	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1611651	1	01/27/21 11:28	01/27/21 19:01	TJD	Mt. Juliet, TN

BH-1 (9-10') L1308904-04 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 14:15 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611061	1	01/26/21 11:05	01/26/21 11:12	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/26/21 23:19	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1611906	1	01/22/21 13:49	01/27/21 07:10	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612066	1	01/22/21 13:49	01/27/21 20:24	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1611651	1	01/27/21 11:28	01/27/21 19:15	TJD	Mt. Juliet, TN

BH-1 (15') L1308904-05 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 14:20 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611061	1	01/26/21 11:05	01/26/21 11:12	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 03:08	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612071	1	01/22/21 13:49	01/29/21 00:06	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612066	1	01/22/21 13:49	01/27/21 20:43	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1611651	1	01/27/21 11:28	01/27/21 19:27	TJD	Mt. Juliet, TN

BH-1 (20') L1308904-06 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 14:25 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611061	1	01/26/21 11:05	01/26/21 11:12	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 00:07	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612071	1	01/22/21 13:49	01/29/21 00:27	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612066	1	01/22/21 13:49	01/27/21 21:02	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1611651	1	01/27/21 11:28	01/27/21 19:41	TJD	Mt. Juliet, TN

BH-2 (0-1') L1308904-07 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 14:30 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611061	1	01/26/21 11:05	01/26/21 11:12	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 00:16	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612071	1	01/22/21 13:49	01/29/21 00:48	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612066	1	01/22/21 13:49	01/27/21 21:20	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1611651	1	01/27/21 11:28	01/27/21 21:10	TJD	Mt. Juliet, TN

BH-2 (2-3) L1308904-08 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 14:35 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611061	1	01/26/21 11:05	01/26/21 11:12	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 00:32	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612071	1	01/22/21 13:49	01/29/21 01:09	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612066	1	01/22/21 13:49	01/27/21 21:39	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1611651	1	01/27/21 11:28	01/27/21 21:23	TJD	Mt. Juliet, TN

BH-2 (4-5') L1308904-09 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 14:40 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611061	1	01/26/21 11:05	01/26/21 11:12	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 00:42	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612071	1	01/22/21 13:49	01/29/21 01:30	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612066	1	01/22/21 13:49	01/27/21 21:58	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1611651	1	01/27/21 11:28	01/27/21 21:35	TJD	Mt. Juliet, TN

BH-3 (0-1') L1308904-10 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 14:55 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611063	1	01/26/21 10:57	01/26/21 11:04	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 00:51	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612071	1	01/22/21 13:49	01/29/21 01:51	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612066	1	01/22/21 13:49	01/27/21 22:17	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1611651	1	01/27/21 11:28	01/27/21 21:48	TJD	Mt. Juliet, TN

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

BH-3 (2-3') L1308904-11 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 15:00 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611063	1	01/26/21 10:57	01/26/21 11:04	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 01:01	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612071	1	01/22/21 13:49	01/29/21 02:12	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612066	1	01/22/21 13:49	01/27/21 22:37	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1611651	1	01/27/21 11:28	01/27/21 22:01	TJD	Mt. Juliet, TN

BH-3 (4-5') L1308904-12 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 15:05 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611063	1	01/26/21 10:57	01/26/21 11:04	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 01:14	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612071	1	01/22/21 13:49	01/29/21 02:33	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612066	1	01/22/21 13:49	01/27/21 22:56	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1611651	1	01/27/21 11:28	01/27/21 22:13	TJD	Mt. Juliet, TN

BH-4 (0-1') L1308904-13 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 15:20 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611063	1	01/26/21 10:57	01/26/21 11:04	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 01:23	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612071	1	01/22/21 13:49	01/29/21 02:53	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612066	1	01/22/21 13:49	01/27/21 23:15	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1611651	1	01/27/21 11:28	01/27/21 22:26	TJD	Mt. Juliet, TN

BH-4 (2-3') L1308904-14 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 15:25 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611063	1	01/26/21 10:57	01/26/21 11:04	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 01:33	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612071	1	01/22/21 13:49	01/29/21 03:14	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612070	1	01/22/21 13:49	01/28/21 12:47	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612505	1	01/27/21 14:18	01/27/21 21:56	TJD	Mt. Juliet, TN

BH-4 (4-5') L1308904-15 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 15:30 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611063	1	01/26/21 10:57	01/26/21 11:04	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 02:11	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612108	1	01/22/21 13:49	01/27/21 20:27	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612070	1	01/22/21 13:49	01/28/21 13:06	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612505	1	01/27/21 14:18	01/27/21 21:29	TJD	Mt. Juliet, TN

BH-5 (0-1') L1308904-16 Solid

Collected by: John Thurston
Collected date/time: 01/18/21 15:40
Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611063	1	01/26/21 10:57	01/26/21 11:04	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 01:42	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612206	1	01/22/21 13:49	01/28/21 00:58	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612070	1	01/22/21 13:49	01/28/21 13:25	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612505	1	01/27/21 14:18	01/27/21 22:36	TJD	Mt. Juliet, TN

BH-5 (2-3') L1308904-17 Solid

Collected by: John Thurston
Collected date/time: 01/18/21 15:45
Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611063	1	01/26/21 10:57	01/26/21 11:04	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 02:30	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612206	1	01/22/21 13:49	01/28/21 01:20	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612070	1	01/22/21 13:49	01/28/21 13:43	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612505	1	01/27/21 14:18	01/27/21 22:10	TJD	Mt. Juliet, TN

BH-5 (4-5') L1308904-18 Solid

Collected by: John Thurston
Collected date/time: 01/18/21 15:50
Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1611063	1	01/26/21 10:57	01/26/21 11:04	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1609664	1	01/26/21 15:59	01/27/21 02:39	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612206	1	01/22/21 13:49	01/28/21 01:44	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612070	1	01/22/21 13:49	01/28/21 14:03	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612505	1	01/27/21 14:18	01/27/21 21:43	TJD	Mt. Juliet, TN

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

Erica McNeese
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.7		1	01/26/2021 11:12	WG1611061

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	4330		98.2	214	10	01/26/2021 22:30	WG1609664

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		0.0232	0.107	1	01/27/2021 06:08	WG1611906
(S) a,a,a-Trifluorotoluene(FID)	*93.6*			*77.0-120*		*01/27/2021 06:08*	WG1611906

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		0.000530	0.00114	1	01/27/2021 09:30	WG1611868
Toluene	U		0.00148	0.00568	1	01/27/2021 09:30	WG1611868
Ethylbenzene	U		0.000837	0.00284	1	01/27/2021 09:30	WG1611868
Total Xylenes	U		0.000999	0.00738	1	01/27/2021 09:30	WG1611868
(S) Toluene-d8	*98.3*			*75.0-131*		*01/27/2021 09:30*	WG1611868
(S) 4-Bromofluorobenzene	*97.6*			*67.0-138*		*01/27/2021 09:30*	WG1611868
(S) 1,2-Dichloroethane-d4	*90.6*			*70.0-130*		*01/27/2021 09:30*	WG1611868

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	12.6		1.72	4.27	1	01/27/2021 18:36	WG1611651
C28-C40 Oil Range	18.8		0.293	4.27	1	01/27/2021 18:36	WG1611651
(S) o-Terphenyl	*40.5*			*18.0-148*		*01/27/2021 18:36*	WG1611651

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.3		1	01/26/2021 11:12	WG1611061

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.75	21.2	1	01/26/2021 22:49	WG1609664

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		0.0230	0.106	1	01/27/2021 06:29	WG1611906
(S) a,a,a-Trifluorotoluene(FID)	*94.0*			*77.0-120*		*01/27/2021 06:29*	WG1611906

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		0.000523	0.00112	1	01/27/2021 09:49	WG1611868
Toluene	U		0.00146	0.00560	1	01/27/2021 09:49	WG1611868
Ethylbenzene	U		0.000826	0.00280	1	01/27/2021 09:49	WG1611868
Total Xylenes	U		0.000986	0.00729	1	01/27/2021 09:49	WG1611868
(S) Toluene-d8	*99.9*			*75.0-131*		*01/27/2021 09:49*	WG1611868
(S) 4-Bromofluorobenzene	*96.8*			*67.0-138*		*01/27/2021 09:49*	WG1611868
(S) 1,2-Dichloroethane-d4	*88.8*			*70.0-130*		*01/27/2021 09:49*	WG1611868

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		1.71	4.24	1	01/27/2021 18:49	WG1611651
C28-C40 Oil Range	1.75	J	0.290	4.24	1	01/27/2021 18:49	WG1611651
(S) o-Terphenyl	*55.7*			*18.0-148*		*01/27/2021 18:49*	WG1611651

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.9		1	01/26/2021 11:12	WG1611061

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.69	21.1	1	01/26/2021 22:58	WG1609664

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		0.0229	0.105	1	01/27/2021 06:50	WG1611906
(S) a,a,a-Trifluorotoluene(FID)	*92.9*			*77.0-120*		*01/27/2021 06:50*	WG1611906

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		0.000518	0.00111	1	01/27/2021 20:05	WG1612066
Toluene	U		0.00144	0.00554	1	01/27/2021 20:05	WG1612066
Ethylbenzene	U		0.000817	0.00277	1	01/27/2021 20:05	WG1612066
Total Xylenes	U		0.000975	0.00721	1	01/27/2021 20:05	WG1612066
(S) Toluene-d8	*100*			*75.0-131*		*01/27/2021 20:05*	WG1612066
(S) 4-Bromofluorobenzene	*97.1*			*67.0-138*		*01/27/2021 20:05*	WG1612066
(S) 1,2-Dichloroethane-d4	*89.8*			*70.0-130*		*01/27/2021 20:05*	WG1612066

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		1.70	4.21	1	01/27/2021 19:01	WG1611651
C28-C40 Oil Range	3.01	J	0.289	4.21	1	01/27/2021 19:01	WG1611651
(S) o-Terphenyl	*51.4*			*18.0-148*		*01/27/2021 19:01*	WG1611651

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.7		1	01/26/2021 11:12	WG1611061

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.71	21.1	1	01/26/2021 23:19	WG1609664

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		0.0229	0.106	1	01/27/2021 07:10	WG1611906
(S) a,a,a-Trifluorotoluene(FID)	*93.3*			*77.0-120*		*01/27/2021 07:10*	WG1611906

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000520	0.00111	1	01/27/2021 20:24	WG1612066
Toluene	U		0.00145	0.00556	1	01/27/2021 20:24	WG1612066
Ethylbenzene	U		0.000820	0.00278	1	01/27/2021 20:24	WG1612066
Total Xylenes	U		0.000979	0.00723	1	01/27/2021 20:24	WG1612066
(S) Toluene-d8	*99.3*			*75.0-131*		*01/27/2021 20:24*	WG1612066
(S) 4-Bromofluorobenzene	*97.5*			*67.0-138*		*01/27/2021 20:24*	WG1612066
(S) 1,2-Dichloroethane-d4	*88.7*			*70.0-130*		*01/27/2021 20:24*	WG1612066

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		1.70	4.22	1	01/27/2021 19:15	WG1611651
C28-C40 Oil Range	2.79	J	0.289	4.22	1	01/27/2021 19:15	WG1611651
(S) o-Terphenyl	*58.7*			*18.0-148*		*01/27/2021 19:15*	WG1611651

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.8		1	01/26/2021 11:12	WG1611061

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.81	21.3	1	01/27/2021 03:08	WG1609664

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	01/29/2021 00:06	WG1612071
(S) a,a,a-Trifluorotoluene(FID)	*94.3*			*77.0-120*		*01/29/2021 00:06*	WG1612071

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		0.000530	0.00113	1	01/27/2021 20:43	WG1612066
Toluene	U		0.00147	0.00567	1	01/27/2021 20:43	WG1612066
Ethylbenzene	U		0.000836	0.00284	1	01/27/2021 20:43	WG1612066
Total Xylenes	U		0.000998	0.00737	1	01/27/2021 20:43	WG1612066
(S) Toluene-d8	*101*			*75.0-131*		*01/27/2021 20:43*	WG1612066
(S) 4-Bromofluorobenzene	*99.4*			*67.0-138*		*01/27/2021 20:43*	WG1612066
(S) 1,2-Dichloroethane-d4	*88.9*			*70.0-130*		*01/27/2021 20:43*	WG1612066

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		1.72	4.27	1	01/27/2021 19:27	WG1611651
C28-C40 Oil Range	U		0.292	4.27	1	01/27/2021 19:27	WG1611651
(S) o-Terphenyl	*54.7*			*18.0-148*		*01/27/2021 19:27*	WG1611651

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.1		1	01/26/2021 11:12	WG1611061

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	399		9.57	20.8	1	01/27/2021 00:07	WG1609664

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		0.0226	0.104	1	01/29/2021 00:27	WG1612071
(S) a,a,a-Trifluorotoluene(FID)	*93.0*			*77.0-120*		*01/29/2021 00:27*	WG1612071

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		0.000505	0.00108	1	01/27/2021 21:02	WG1612066
Toluene	U		0.00141	0.00540	1	01/27/2021 21:02	WG1612066
Ethylbenzene	U		0.000797	0.00270	1	01/27/2021 21:02	WG1612066
Total Xylenes	U		0.000951	0.00703	1	01/27/2021 21:02	WG1612066
(S) Toluene-d8	*99.0*			*75.0-131*		*01/27/2021 21:02*	WG1612066
(S) 4-Bromofluorobenzene	*97.9*			*67.0-138*		*01/27/2021 21:02*	WG1612066
(S) 1,2-Dichloroethane-d4	*89.8*			*70.0-130*		*01/27/2021 21:02*	WG1612066

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		1.67	4.16	1	01/27/2021 19:41	WG1611651
C28-C40 Oil Range	U		0.285	4.16	1	01/27/2021 19:41	WG1611651
(S) o-Terphenyl	*42.4*			*18.0-148*		*01/27/2021 19:41*	WG1611651

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.3		1	01/26/2021 11:12	WG1611061

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	41.7		9.55	20.8	1	01/27/2021 00:16	WG1609664

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		0.0225	0.104	1	01/29/2021 00:48	WG1612071
(S) a,a,a-Trifluorotoluene(FID)	*93.3*			*77.0-120*		*01/29/2021 00:48*	WG1612071

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		0.000503	0.00108	1	01/27/2021 21:20	WG1612066
Toluene	U		0.00140	0.00539	1	01/27/2021 21:20	WG1612066
Ethylbenzene	U		0.000794	0.00269	1	01/27/2021 21:20	WG1612066
Total Xylenes	U		0.000948	0.00700	1	01/27/2021 21:20	WG1612066
(S) Toluene-d8	*100*			*75.0-131*		*01/27/2021 21:20*	WG1612066
(S) 4-Bromofluorobenzene	*98.1*			*67.0-138*		*01/27/2021 21:20*	WG1612066
(S) 1,2-Dichloroethane-d4	*89.5*			*70.0-130*		*01/27/2021 21:20*	WG1612066

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		1.67	4.15	1	01/27/2021 21:10	WG1611651
C28-C40 Oil Range	1.73	J	0.284	4.15	1	01/27/2021 21:10	WG1611651
(S) o-Terphenyl	*46.3*			*18.0-148*		*01/27/2021 21:10*	WG1611651

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.1		1	01/26/2021 11:12	WG1611061

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	36.0		9.57	20.8	1	01/27/2021 00:32	WG1609664

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		0.0226	0.104	1	01/29/2021 01:09	WG1612071
(S) a,a,a-Trifluorotoluene(FID)	*94.1*			*77.0-120*		*01/29/2021 01:09*	WG1612071

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		0.000505	0.00108	1	01/27/2021 21:39	WG1612066
Toluene	U		0.00140	0.00540	1	01/27/2021 21:39	WG1612066
Ethylbenzene	U		0.000796	0.00270	1	01/27/2021 21:39	WG1612066
Total Xylenes	U		0.000951	0.00702	1	01/27/2021 21:39	WG1612066
(S) Toluene-d8	*100*			*75.0-131*		*01/27/2021 21:39*	WG1612066
(S) 4-Bromofluorobenzene	*98.9*			*67.0-138*		*01/27/2021 21:39*	WG1612066
(S) 1,2-Dichloroethane-d4	*90.5*			*70.0-130*		*01/27/2021 21:39*	WG1612066

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		1.67	4.16	1	01/27/2021 21:23	WG1611651
C28-C40 Oil Range	0.629	J	0.285	4.16	1	01/27/2021 21:23	WG1611651
(S) o-Terphenyl	*53.2*			*18.0-148*		*01/27/2021 21:23*	WG1611651

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.3		1	01/26/2021 11:12	WG1611061

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	22.3		9.45	20.5	1	01/27/2021 00:42	WG1609664

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		0.0223	0.103	1	01/29/2021 01:30	WG1612071
(S) a,a,a-Trifluorotoluene(FID)	*92.6*			*77.0-120*		*01/29/2021 01:30*	WG1612071

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		0.000493	0.00106	1	01/27/2021 21:58	WG1612066
Toluene	U		0.00137	0.00528	1	01/27/2021 21:58	WG1612066
Ethylbenzene	U		0.000778	0.00264	1	01/27/2021 21:58	WG1612066
Total Xylenes	U		0.000929	0.00686	1	01/27/2021 21:58	WG1612066
(S) Toluene-d8	*100*			*75.0-131*		*01/27/2021 21:58*	WG1612066
(S) 4-Bromofluorobenzene	*98.1*			*67.0-138*		*01/27/2021 21:58*	WG1612066
(S) 1,2-Dichloroethane-d4	*91.8*			*70.0-130*		*01/27/2021 21:58*	WG1612066

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		1.65	4.11	1	01/27/2021 21:35	WG1611651
C28-C40 Oil Range	U		0.282	4.11	1	01/27/2021 21:35	WG1611651
(S) o-Terphenyl	*43.1*			*18.0-148*		*01/27/2021 21:35*	WG1611651

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.2		1	01/26/2021 11:04	WG1611063

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.98	21.7	1	01/27/2021 00:51	WG1609664

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	01/29/2021 01:51	WG1612071
(S) a,a,a-Trifluorotoluene(FID)	*93.3*			*77.0-120*		*01/29/2021 01:51*	WG1612071

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		0.000546	0.00117	1	01/27/2021 22:17	WG1612066
Toluene	U		0.00152	0.00584	1	01/27/2021 22:17	WG1612066
Ethylbenzene	U		0.000861	0.00292	1	01/27/2021 22:17	WG1612066
Total Xylenes	U		0.00103	0.00760	1	01/27/2021 22:17	WG1612066
(S) Toluene-d8	*99.5*			*75.0-131*		*01/27/2021 22:17*	WG1612066
(S) 4-Bromofluorobenzene	*97.8*			*67.0-138*		*01/27/2021 22:17*	WG1612066
(S) 1,2-Dichloroethane-d4	*90.5*			*70.0-130*		*01/27/2021 22:17*	WG1612066

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		1.75	4.34	1	01/27/2021 21:48	WG1611651
C28-C40 Oil Range	7.94		0.297	4.34	1	01/27/2021 21:48	WG1611651
(S) o-Terphenyl	*36.9*			*18.0-148*		*01/27/2021 21:48*	WG1611651

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.6		1	01/26/2021 11:04	WG1611063

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	13.0	J	9.52	20.7	1	01/27/2021 01:01	WG1609664

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		0.0225	0.104	1	01/29/2021 02:12	WG1612071
(S) a,a,a-Trifluorotoluene(FID)	*94.0*			*77.0-120*		*01/29/2021 02:12*	WG1612071

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		0.000500	0.00107	1	01/27/2021 22:37	WG1612066
Toluene	U		0.00139	0.00535	1	01/27/2021 22:37	WG1612066
Ethylbenzene	U		0.000789	0.00268	1	01/27/2021 22:37	WG1612066
Total Xylenes	U		0.000942	0.00696	1	01/27/2021 22:37	WG1612066
(S) Toluene-d8	*100*			*75.0-131*		*01/27/2021 22:37*	WG1612066
(S) 4-Bromofluorobenzene	*97.7*			*67.0-138*		*01/27/2021 22:37*	WG1612066
(S) 1,2-Dichloroethane-d4	*91.3*			*70.0-130*		*01/27/2021 22:37*	WG1612066

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		1.67	4.14	1	01/27/2021 22:01	WG1611651
C28-C40 Oil Range	3.07	J	0.284	4.14	1	01/27/2021 22:01	WG1611651
(S) o-Terphenyl	*66.2*			*18.0-148*		*01/27/2021 22:01*	WG1611651

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.9		1	01/26/2021 11:04	WG1611063

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.39	20.4	1	01/27/2021 01:14	WG1609664

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		0.0222	0.102	1	01/29/2021 02:33	WG1612071
(S) a,a,a-Trifluorotoluene(FID)	*94.3*			*77.0-120*		*01/29/2021 02:33*	WG1612071

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		0.000487	0.00104	1	01/27/2021 22:56	WG1612066
Toluene	U		0.00136	0.00521	1	01/27/2021 22:56	WG1612066
Ethylbenzene	U		0.000768	0.00261	1	01/27/2021 22:56	WG1612066
Total Xylenes	U		0.000917	0.00678	1	01/27/2021 22:56	WG1612066
(S) Toluene-d8	*99.9*			*75.0-131*		*01/27/2021 22:56*	WG1612066
(S) 4-Bromofluorobenzene	*98.3*			*67.0-138*		*01/27/2021 22:56*	WG1612066
(S) 1,2-Dichloroethane-d4	*90.7*			*70.0-130*		*01/27/2021 22:56*	WG1612066

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.64	4.08	1	01/27/2021 22:13	WG1611651
C28-C40 Oil Range	0.685	J	0.280	4.08	1	01/27/2021 22:13	WG1611651
(S) o-Terphenyl	*59.5*			*18.0-148*		*01/27/2021 22:13*	WG1611651

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.0		1	01/26/2021 11:04	WG1611063

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	32.0		9.59	20.8	1	01/27/2021 01:23	WG1609664

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		0.0226	0.104	1	01/29/2021 02:53	WG1612071
(S) a,a,a-Trifluorotoluene(FID)	*93.7*			*77.0-120*		*01/29/2021 02:53*	WG1612071

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		0.000506	0.00108	1	01/27/2021 23:15	WG1612066
Toluene	U		0.00141	0.00542	1	01/27/2021 23:15	WG1612066
Ethylbenzene	U		0.000799	0.00271	1	01/27/2021 23:15	WG1612066
Total Xylenes	U		0.000954	0.00705	1	01/27/2021 23:15	WG1612066
(S) Toluene-d8	*99.1*			*75.0-131*		*01/27/2021 23:15*	WG1612066
(S) 4-Bromofluorobenzene	*97.7*			*67.0-138*		*01/27/2021 23:15*	WG1612066
(S) 1,2-Dichloroethane-d4	*89.4*			*70.0-130*		*01/27/2021 23:15*	WG1612066

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	J3	1.68	4.17	1	01/27/2021 22:26	WG1611651
C28-C40 Oil Range	2.59	J	0.286	4.17	1	01/27/2021 22:26	WG1611651
(S) o-Terphenyl	*58.0*			*18.0-148*		*01/27/2021 22:26*	WG1611651

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.1		1	01/26/2021 11:04	WG1611063

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	36.2		9.47	20.6	1	01/27/2021 01:33	WG1609664

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		0.0223	0.103	1	01/29/2021 03:14	WG1612071
(S) a,a,a-Trifluorotoluene(FID)	*94.2*			*77.0-120*		*01/29/2021 03:14*	WG1612071

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		0.000495	0.00106	1	01/28/2021 12:47	WG1612070
Toluene	U		0.00138	0.00530	1	01/28/2021 12:47	WG1612070
Ethylbenzene	U		0.000781	0.00265	1	01/28/2021 12:47	WG1612070
Total Xylenes	U		0.000933	0.00689	1	01/28/2021 12:47	WG1612070
(S) Toluene-d8	*100*			*75.0-131*		*01/28/2021 12:47*	WG1612070
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*01/28/2021 12:47*	WG1612070
(S) 1,2-Dichloroethane-d4	*92.2*			*70.0-130*		*01/28/2021 12:47*	WG1612070

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		1.66	4.12	1	01/27/2021 21:56	WG1612505
C28-C40 Oil Range	2.53	B J	0.282	4.12	1	01/27/2021 21:56	WG1612505
(S) o-Terphenyl	*60.8*			*18.0-148*		*01/27/2021 21:56*	WG1612505

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.1		1	01/26/2021 11:04	WG1611063

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	12.9	J	9.47	20.6	1	01/27/2021 02:11	WG1609664

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		0.0223	0.103	1	01/27/2021 20:27	WG1612108
(S) a,a,a-Trifluorotoluene(FID)	*95.1*			*77.0-120*		*01/27/2021 20:27*	WG1612108

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		0.000495	0.00106	1	01/28/2021 13:06	WG1612070
Toluene	U		0.00138	0.00530	1	01/28/2021 13:06	WG1612070
Ethylbenzene	U		0.000781	0.00265	1	01/28/2021 13:06	WG1612070
Total Xylenes	U		0.000932	0.00689	1	01/28/2021 13:06	WG1612070
(S) Toluene-d8	*99.0*			*75.0-131*		*01/28/2021 13:06*	WG1612070
(S) 4-Bromofluorobenzene	*97.2*			*67.0-138*		*01/28/2021 13:06*	WG1612070
(S) 1,2-Dichloroethane-d4	*91.1*			*70.0-130*		*01/28/2021 13:06*	WG1612070

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		1.66	4.12	1	01/27/2021 21:29	WG1612505
C28-C40 Oil Range	0.365	B J	0.282	4.12	1	01/27/2021 21:29	WG1612505
(S) o-Terphenyl	*54.5*			*18.0-148*		*01/27/2021 21:29*	WG1612505

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.6		1	01/26/2021 11:04	WG1611063

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	17.2	J	9.43	20.5	1	01/27/2021 01:42	WG1609664

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		0.0222	0.102	1	01/28/2021 00:58	WG1612206
(S) a,a,a-Trifluorotoluene(FID)	*113*			*77.0-120*		*01/28/2021 00:58*	WG1612206

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000490	0.00105	1	01/28/2021 13:25	WG1612070
Toluene	U		0.00136	0.00525	1	01/28/2021 13:25	WG1612070
Ethylbenzene	U		0.000773	0.00262	1	01/28/2021 13:25	WG1612070
Total Xylenes	U		0.000923	0.00682	1	01/28/2021 13:25	WG1612070
(S) Toluene-d8	*101*			*75.0-131*		*01/28/2021 13:25*	WG1612070
(S) 4-Bromofluorobenzene	*98.4*			*67.0-138*		*01/28/2021 13:25*	WG1612070
(S) 1,2-Dichloroethane-d4	*91.8*			*70.0-130*		*01/28/2021 13:25*	WG1612070

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	2.50	J	1.65	4.10	1	01/27/2021 22:36	WG1612505
C28-C40 Oil Range	4.97		0.281	4.10	1	01/27/2021 22:36	WG1612505
(S) o-Terphenyl	*52.9*			*18.0-148*		*01/27/2021 22:36*	WG1612505

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.3		1	01/26/2021 11:04	WG1611063

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	15.5	J	9.46	20.6	1	01/27/2021 02:30	WG1609664

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		0.0223	0.103	1	01/28/2021 01:20	WG1612206
(S) a,a,a-Trifluorotoluene(FID)	*113*			*77.0-120*		*01/28/2021 01:20*	WG1612206

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		0.000493	0.00106	1	01/28/2021 13:43	WG1612070
Toluene	U		0.00137	0.00528	1	01/28/2021 13:43	WG1612070
Ethylbenzene	U		0.000779	0.00264	1	01/28/2021 13:43	WG1612070
Total Xylenes	U		0.000930	0.00687	1	01/28/2021 13:43	WG1612070
(S) Toluene-d8	*99.7*			*75.0-131*		*01/28/2021 13:43*	WG1612070
(S) 4-Bromofluorobenzene	*99.1*			*67.0-138*		*01/28/2021 13:43*	WG1612070
(S) 1,2-Dichloroethane-d4	*90.5*			*70.0-130*		*01/28/2021 13:43*	WG1612070

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	2.24	J	1.66	4.11	1	01/27/2021 22:10	WG1612505
C28-C40 Oil Range	4.15	B	0.282	4.11	1	01/27/2021 22:10	WG1612505
(S) o-Terphenyl	*54.5*			*18.0-148*		*01/27/2021 22:10*	WG1612505

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.6		1	01/26/2021 11:04	WG1611063

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.43	20.5	1	01/27/2021 02:39	WG1609664

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		0.0222	0.102	1	01/28/2021 01:44	WG1612206
(S) a,a,a-Trifluorotoluene(FID)	*112*			*77.0-120*		*01/28/2021 01:44*	WG1612206

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	0.000493	J J3	0.000490	0.00105	1	01/28/2021 14:03	WG1612070
Toluene	U	J3	0.00136	0.00525	1	01/28/2021 14:03	WG1612070
Ethylbenzene	U	J3	0.000774	0.00262	1	01/28/2021 14:03	WG1612070
Total Xylenes	U		0.000924	0.00682	1	01/28/2021 14:03	WG1612070
(S) Toluene-d8	*98.8*			*75.0-131*		*01/28/2021 14:03*	WG1612070
(S) 4-Bromofluorobenzene	*98.6*			*67.0-138*		*01/28/2021 14:03*	WG1612070
(S) 1,2-Dichloroethane-d4	*90.1*			*70.0-130*		*01/28/2021 14:03*	WG1612070

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		1.65	4.10	1	01/27/2021 21:43	WG1612505
C28-C40 Oil Range	1.11	B J	0.281	4.10	1	01/27/2021 21:43	WG1612505
(S) o-Terphenyl	*53.8*			*18.0-148*		*01/27/2021 21:43*	WG1612505

Method Blank (MB)

(MB) R3616498-1 01/26/21 11:12

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00200			

L1308904-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1308904-01 01/26/21 11:12 • (DUP) R3616498-3 01/26/21 11:12

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	93.7	93.6	1	0.0433		10

Laboratory Control Sample (LCS)

(LCS) R3616498-2 01/26/21 11:12

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) R3616496-1 01/26/21 11:04

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00200			

L1308904-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1308904-10 01/26/21 11:04 • (DUP) R3616496-3 01/26/21 11:04

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	92.2	92.2	1	0.0563		10

Laboratory Control Sample (LCS)

(LCS) R3616496-2 01/26/21 11:04

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) R3616563-1 01/26/21 22:11

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

L1308904-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1308904-01 01/26/21 22:30 • (DUP) R3616563-3 01/26/21 22:39

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	4330	4740	10	9.00		20

L1308904-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1308904-15 01/27/21 02:11 • (DUP) R3616563-7 01/27/21 02:20

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	12.9	10.6	1	19.7	J	20

Laboratory Control Sample (LCS)

(LCS) R3616563-4 01/26/21 23:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	190	94.9	90.0-110	

L1308904-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1308904-04 01/26/21 23:19 • (MS) R3616563-5 01/26/21 23:29 • (MSD) R3616563-6 01/26/21 23:38

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	528	U	443	466	83.9	88.4	1	80.0-120			5.20	20

Method Blank (MB)

(MB) R3616625-2 01/27/21 00:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*92.8*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3616625-1 01/26/21 23:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.92	89.5	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*108*	*77.0-120*	

L1308512-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1308512-01 01/27/21 00:58 • (MS) R3616625-3 01/27/21 07:52 • (MSD) R3616625-4 01/27/21 08:12

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	173	U	246	265	96.0	103	31.5	10.0-151			7.54	28
(S) a,a,a-Trifluorotoluene(FID)					*107*	*109*		*77.0-120*				

Method Blank (MB)

(MB) R3617325-2 01/28/21 22:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*93.5*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3617325-1 01/28/21 21:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.90	107	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*77.0-120*	

L1310278-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1310278-08 01/28/21 23:04 • (MS) R3617325-3 01/29/21 05:40 • (MSD) R3617325-4 01/29/21 06:01

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	109	2.46	122	124	110	112	25	10.0-151			1.63	28
(S) a,a,a-Trifluorotoluene(FID)					*111*	*111*		*77.0-120*				

Method Blank (MB)

(MB) R3616634-2 01/27/21 10:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*95.9*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3616634-1 01/27/21 09:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.21	94.7	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*100*	*77.0-120*	

Method Blank (MB)

(MB) R3617045-2 01/28/21 00:14

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)	*114*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3617045-1 01/27/21 23:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.32	115	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*104*	*77.0-120*	

Method Blank (MB)

(MB) R3616928-2 01/27/21 04:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*103*			*75.0-131*
(S) 4-Bromofluorobenzene	*96.1*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*87.4*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3616928-1 01/27/21 03:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.114	91.2	70.0-123	
Ethylbenzene	0.125	0.108	86.4	74.0-126	
Toluene	0.125	0.114	91.2	75.0-121	
Xylenes, Total	0.375	0.344	91.7	72.0-127	
(S) Toluene-d8			*101*	*75.0-131*	
(S) 4-Bromofluorobenzene			*99.2*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*100*	*70.0-130*	

L1308902-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1308902-01 01/27/21 06:44 • (MS) R3616928-3 01/27/21 12:02 • (MSD) R3616928-4 01/27/21 12:21

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	U	0.108	0.110	86.4	88.0	1	10.0-149			1.83	37
Ethylbenzene	0.125	U	0.107	0.109	85.6	87.2	1	10.0-160			1.85	38
Toluene	0.125	U	0.115	0.115	92.0	92.0	1	10.0-156			0.000	38
Xylenes, Total	0.375	U	0.321	0.330	85.6	88.0	1	10.0-160			2.76	38
(S) Toluene-d8					*100*	*101*		*75.0-131*				
(S) 4-Bromofluorobenzene					*98.4*	*99.4*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*91.1*	*90.4*		*70.0-130*				

Method Blank (MB)

(MB) R3616912-2 01/27/21 19:46

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*100*			*75.0-131*
(S) 4-Bromofluorobenzene	*95.9*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*90.1*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3616912-1 01/27/21 18:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.144	115	70.0-123	
Ethylbenzene	0.125	0.130	104	74.0-126	
Toluene	0.125	0.133	106	75.0-121	
Xylenes, Total	0.375	0.405	108	72.0-127	
(S) Toluene-d8			*96.4*	*75.0-131*	
(S) 4-Bromofluorobenzene			*99.6*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*98.8*	*70.0-130*	

L1308904-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1308904-13 01/27/21 23:15 • (MS) R3616912-3 01/28/21 02:25 • (MSD) R3616912-4 01/28/21 02:44

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 %
Benzene	0.134	U	0.0870	0.120	64.7	89.5	1	10.0-149			32.2	37
Ethylbenzene	0.134	U	0.0805	0.112	59.8	83.1	1	10.0-160			32.5	38
Toluene	0.134	U	0.0825	0.114	61.4	84.7	1	10.0-156			31.9	38
Xylenes, Total	0.403	U	0.255	0.343	63.2	84.9	1	10.0-160			29.4	38
(S) Toluene-d8					*99.7*	*98.3*		*75.0-131*				
(S) 4-Bromofluorobenzene					*99.2*	*97.4*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*90.7*	*93.3*		*70.0-130*				

Method Blank (MB)

(MB) R3617193-3 01/28/21 10:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*99.0*			*75.0-131*
(S) 4-Bromofluorobenzene	*96.9*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*90.4*			*70.0-130*

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

(LCS) R3617193-1 01/28/21 09:36 • (LCSD) R3617193-2 01/28/21 09:55

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	0.113	0.116	90.4	92.8	70.0-123			2.62	20
Ethylbenzene	0.125	0.106	0.110	84.8	88.0	74.0-126			3.70	20
Toluene	0.125	0.111	0.115	88.8	92.0	75.0-121			3.54	20
Xylenes, Total	0.375	0.323	0.339	86.1	90.4	72.0-127			4.83	20
(S) Toluene-d8				*97.6*	*97.1*	*75.0-131*				
(S) 4-Bromofluorobenzene				*101*	*102*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*99.9*	*97.6*	*70.0-130*				

L1308904-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1308904-18 01/28/21 14:03 • (MS) R3617193-4 01/28/21 17:32 • (MSD) R3617193-5 01/28/21 17:51

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	0.130	0.000493	0.0542	0.0852	41.2	65.1	1	10.0-149		J3	44.6	37
Ethylbenzene	0.130	U	0.0517	0.0813	39.7	62.4	1	10.0-160		J3	44.5	38
Toluene	0.130	U	0.0552	0.0862	42.4	66.2	1	10.0-156		J3	43.8	38
Xylenes, Total	0.391	U	0.167	0.235	42.7	60.2	1	10.0-160			33.9	38
(S) Toluene-d8					*99.3*	*97.3*		*75.0-131*				
(S) 4-Bromofluorobenzene					*97.8*	*96.1*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*93.9*	*92.4*		*70.0-130*				

Method Blank (MB)

(MB) R3616785-1 01/27/21 17:44

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	*43.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3616785-2 01/27/21 17:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.2	72.4	50.0-150	
(S) o-Terphenyl			*51.1*	*18.0-148*	

L1308904-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1308904-13 01/27/21 22:26 • (MS) R3616785-3 01/27/21 22:39 • (MSD) R3616785-4 01/27/21 22:52

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	51.9	U	35.5	28.0	68.5	57.2	1	50.0-150		J3	23.6	20
(S) o-Terphenyl					*45.3*	*42.2*		*18.0-148*				

Method Blank (MB)

(MB) R3616804-1 01/27/21 21:02

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	0.413	J	0.274	4.00
(S) o-Terphenyl	*57.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3616804-2 01/27/21 21:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	32.6	65.2	50.0-150	
(S) o-Terphenyl			*80.9*	*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.

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.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN, 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

Pace Analytical National 660 Bercut Dr. Ste. C Sacramento, CA, 95811

California	2961	Oregon	CA300002
Minnesota	006-999-465	Washington	C926
North Dakota	R-214		

Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1

Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18

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

Analysis Request of Chain of Custody Record

Page : 1 of 3

Tetra Tech, Inc.

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

L1309904

D216

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	VGEU 02-20 EAST	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02305
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	John Thurston

Comments: COPTETRA Acctnum

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2021 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD NONE	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
	BH-1 (2-3')	1/18/2021	14:00		X				X			1	N	X		X												X						-01
	BH-1 (4-5')	1/18/2021	14:05		X				X			1	N	X		X												X						-02
	BH-1 (6-7')	1/18/2021	14:10		X				X			1	N	X		X												X						-03
	BH-1 (9-10')	1/18/2021	14:15		X				X			1	N	X		X												X						-04
	BH-1 (15')	1/18/2021	14:20		X				X			1	N	X		X												X						-05
	BH-1 (20')	1/18/2021	14:25		X				X			1	N	X		X												X						-06
	BH-2 (0-1')	1/18/2021	14:30		X				X			1	N	X		X												X						-07
	BH-2 (2-3')	1/18/2021	14:35		X				X			1	N	X		X												X						-08
	BH-2 (4-5')	1/18/2021	14:40		X				X			1	N	X		X												X						-09
	BH-2 (6-7')	1/18/2021	14:45		X				X			1	N	X		X												X						X

Relinquished by:	Date: 1/20/21	Time: 1500	Received by:
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by: Date: 1/21 Time: 0930

ORIGINAL COPY

LAB USE ONLY
Sample Temperature

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

1.4+0=1.4 AB

Analysis Request of Chain of Custody Record

Page : 2 of 3

Tetra Tech, Inc.

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

U38904

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	VGEU 02-20 EAST	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02305
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	John Thurston
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

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 Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R	HOLD	
	BH-2 (9-10')	1/18/2021	14:50		X			X		1	N	X		X												X					X	
	BH-3 (0-1')	1/18/2021	14:55		X			X		1	N	X		X												X						-10
	BH-3 (2-3')	1/18/2021	15:00		X			X		1	N	X		X												X						-11
	BH-3 (4-5')	1/18/2021	15:05		X			X		1	N	X		X												X						-12
	BH-3 (6-7')	1/18/2021	15:10		X			X		1	N	X		X												X					X	
	BH-3 (9-10')	1/18/2021	15:15		X			X		1	N	X		X												X					X	
	BH-4 (0-1')	1/18/2021	15:20		X			X		1	N	X		X												X						-13
	BH-4 (2-3')	1/18/2021	15:25		X			X		1	N	X		X												X						-14
	BH-4 (4-5')	1/18/2021	15:30		X			X		1	N	X		X												X						-15
	BH-4 (6-7')	1/18/2021	15:35		X			X		1	N	X		X												X					X	

Relinquished by:	Date: 1/20/21	Time: 1500	Received by:
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by: ORIGINAL COPY

Date: 1/21 Time: 0900

LAB USE ONLY
Sample Temperature

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

1.4+0=1.4 MM AG

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

HB08104

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	VGEU 02-20 EAST	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02305
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	John Thurston
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE (YEAR: 2021)	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 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R	HOLD
	BH-4 (9-10')	1/18/2021	15:35		X			X		1	N	X		X												X					X
	BH-5 (0-1')	1/18/2021	15:40		X			X		1	N	X		X												X					
	BH-5 (2-3')	1/18/2021	15:45		X			X		1	N	X		X												X					
	BH-5 (4-5')	1/18/2021	15:50		X			X		1	N	X		X												X					
	BH-5 (6-7')	1/18/2021	15:55		X			X		1	N	X		X												X					X
	BH-5 (9-10')	1/18/2021	16:00		X			X		1	N	X		X												X					X

-16
-17
-18

Relinquished by: Date: 1/20/21 Time: 1500
Received by: Date: Time:

Relinquished by: Date: Time:
Received by: Date: Time:

Relinquished by: Date: Time:
Received by: Date: 1/21 Time: 0900

ORIGINAL COPY

LAB USE ONLY
Sample Temperature

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

1.4 + 0 = 1.4 AG

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

February 09, 2021

Revised Report

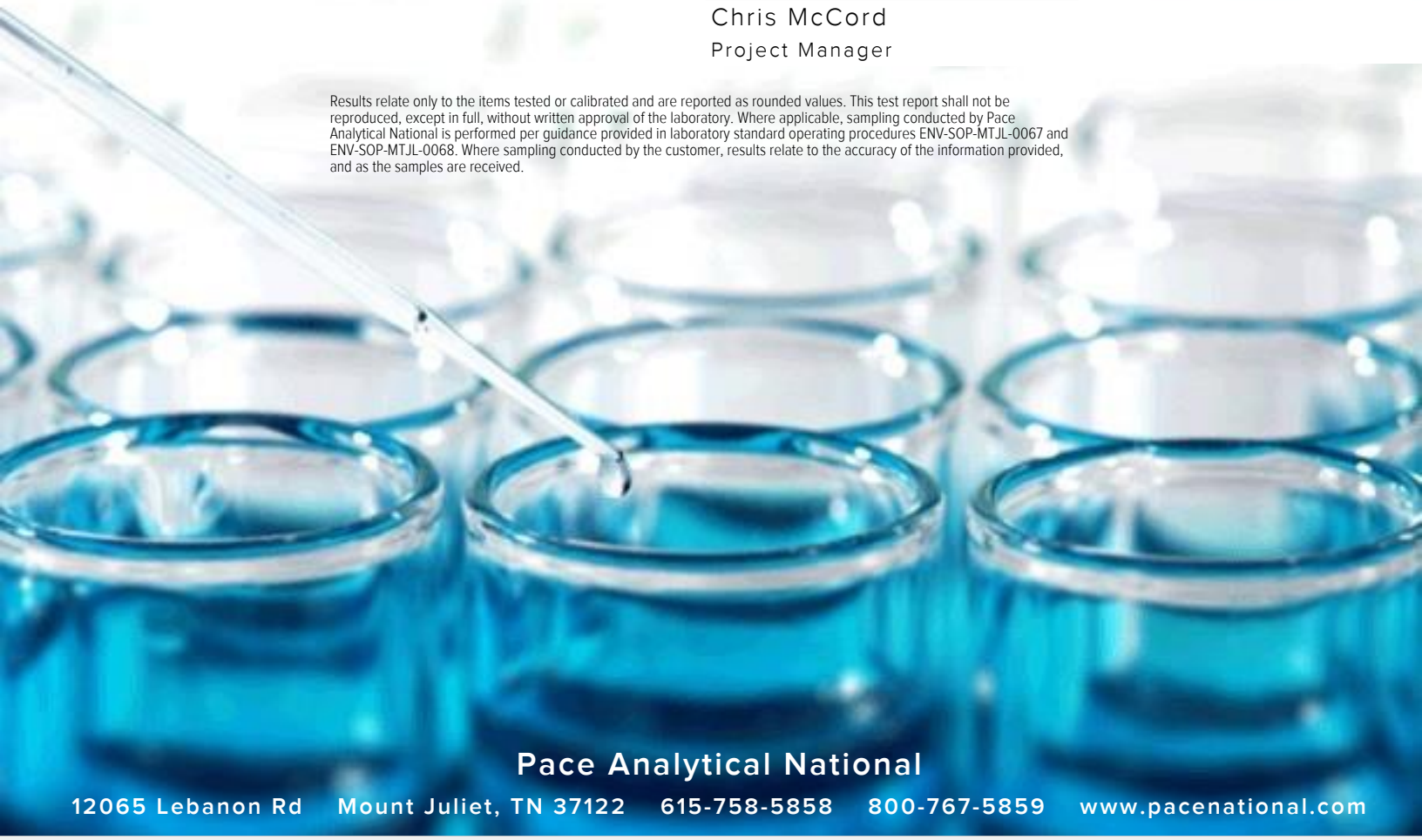
ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1311652
Samples Received:	01/21/2021
Project Number:	212-MD-02305
Description:	VGEU 02-20 East
Site:	LEA COUNTY, NM
Report To:	Christian Llull
	901 West Wall
	Suite 100
	Midland, TX 79701

Entire Report Reviewed By:

Chris McCord
Project Manager

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



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

TABLE OF CONTENTS

BH-2 (6-7') L1311652-01 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 14:45 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1615134	1	02/04/21 09:49	02/04/21 09:59	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615167	1	02/04/21 17:47	02/05/21 01:28	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613977	1	01/30/21 10:02	01/31/21 17:55	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613926	1	01/30/21 10:02	01/30/21 17:29	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614200	1	01/31/21 17:32	02/01/21 13:45	TJD	Mt. Juliet, TN

BH-2 (9-10') L1311652-02 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 14:50 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1615134	1	02/04/21 09:49	02/04/21 09:59	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615167	1	02/04/21 17:47	02/05/21 01:56	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613977	1	01/30/21 10:02	01/31/21 20:12	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613926	1	01/30/21 10:02	01/30/21 17:48	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614200	1	01/31/21 17:32	02/01/21 13:58	TJD	Mt. Juliet, TN

BH-3 (6-7') L1311652-03 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 15:10 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1615134	1	02/04/21 09:49	02/04/21 09:59	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615167	1	02/04/21 17:47	02/05/21 02:16	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613977	1	01/30/21 10:02	01/31/21 20:32	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613926	1	01/30/21 10:02	01/30/21 18:07	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614200	1	01/31/21 17:32	02/01/21 14:11	TJD	Mt. Juliet, TN

BH-3 (9-10') L1311652-04 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 15:15 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1615134	1	02/04/21 09:49	02/04/21 09:59	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615167	1	02/04/21 17:47	02/05/21 02:25	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613977	1	01/30/21 10:02	01/31/21 20:53	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613926	1	01/30/21 10:02	01/30/21 18:26	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614200	1	01/31/21 17:32	02/01/21 14:24	TJD	Mt. Juliet, TN

BH-4 (6-7') L1311652-05 Solid

Collected by: John Thurston | Collected date/time: 01/18/21 15:35 | Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1615134	1	02/04/21 09:49	02/04/21 09:59	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615167	1	02/04/21 17:47	02/05/21 02:35	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613977	1	01/30/21 10:02	01/31/21 21:14	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613926	1	01/30/21 10:02	01/30/21 18:45	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614200	1	01/31/21 17:32	02/01/21 14:37	TJD	Mt. Juliet, TN

BH-4 (9-10') L1311652-06 Solid

Collected by: John Thurston
Collected date/time: 01/18/21 15:35
Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1615134	1	02/04/21 09:49	02/04/21 09:59	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615167	1	02/04/21 17:47	02/05/21 03:03	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613977	1	01/30/21 10:02	01/31/21 21:34	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613926	1	01/30/21 10:02	01/30/21 19:04	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614200	1	01/31/21 17:32	02/01/21 14:50	TJD	Mt. Juliet, TN

BH-5 (6-7') L1311652-07 Solid

Collected by: John Thurston
Collected date/time: 01/18/21 15:55
Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1615134	1	02/04/21 09:49	02/04/21 09:59	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615167	1	02/04/21 17:47	02/05/21 03:13	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613977	1	01/30/21 10:02	01/31/21 21:55	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613926	1	01/30/21 10:02	01/30/21 19:23	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614200	1	01/31/21 17:32	02/01/21 15:03	TJD	Mt. Juliet, TN

BH-5 (9-10') L1311652-08 Solid

Collected by: John Thurston
Collected date/time: 01/18/21 16:00
Received date/time: 01/21/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1615134	1	02/04/21 09:49	02/04/21 09:59	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615167	1	02/04/21 17:47	02/05/21 03:22	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613977	1	01/30/21 10:02	01/31/21 22:16	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613926	1	01/30/21 10:02	01/30/21 19:42	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614200	1	01/31/21 17:32	02/01/21 15:17	TJD	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

Report Revision History

Level II Report - Version 1: 02/05/21 16:05

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.6		1	02/04/2021 09:59	WG1615134

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.83	21.4	1	02/05/2021 01:28	WG1615167

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		0.0232	0.107	1	01/31/2021 17:55	WG1613977
(S) a,a,a-Trifluorotoluene(FID)	*88.9*			*77.0-120*		*01/31/2021 17:55*	WG1613977

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		0.000531	0.00114	1	01/30/2021 17:29	WG1613926
Toluene	U		0.00148	0.00569	1	01/30/2021 17:29	WG1613926
Ethylbenzene	U		0.000839	0.00284	1	01/30/2021 17:29	WG1613926
Total Xylenes	U		0.00100	0.00740	1	01/30/2021 17:29	WG1613926
(S) Toluene-d8	*101*			*75.0-131*		*01/30/2021 17:29*	WG1613926
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*01/30/2021 17:29*	WG1613926
(S) 1,2-Dichloroethane-d4	*90.7*			*70.0-130*		*01/30/2021 17:29*	WG1613926

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		1.72	4.28	1	02/01/2021 13:45	WG1614200
C28-C40 Oil Range	2.90	J	0.293	4.28	1	02/01/2021 13:45	WG1614200
(S) o-Terphenyl	*71.6*			*18.0-148*		*02/01/2021 13:45*	WG1614200

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.2		1	02/04/2021 09:59	WG1615134

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.67	21.0	1	02/05/2021 01:56	WG1615167

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		0.0228	0.105	1	01/31/2021 20:12	WG1613977
(S) a,a,a-Trifluorotoluene(FID)	*89.7*			*77.0-120*		*01/31/2021 20:12*	WG1613977

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		0.000514	0.00110	1	01/30/2021 17:48	WG1613926
Toluene	U		0.00143	0.00551	1	01/30/2021 17:48	WG1613926
Ethylbenzene	U		0.000812	0.00275	1	01/30/2021 17:48	WG1613926
Total Xylenes	U		0.000969	0.00716	1	01/30/2021 17:48	WG1613926
(S) Toluene-d8	*102*			*75.0-131*		*01/30/2021 17:48*	WG1613926
(S) 4-Bromofluorobenzene	*96.3*			*67.0-138*		*01/30/2021 17:48*	WG1613926
(S) 1,2-Dichloroethane-d4	*90.7*			*70.0-130*		*01/30/2021 17:48*	WG1613926

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		1.69	4.20	1	02/01/2021 13:58	WG1614200
C28-C40 Oil Range	1.87	J	0.288	4.20	1	02/01/2021 13:58	WG1614200
(S) o-Terphenyl	*68.6*			*18.0-148*		*02/01/2021 13:58*	WG1614200

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.2		1	02/04/2021 09:59	WG1615134

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.66	21.0	1	02/05/2021 02:16	WG1615167

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		0.0228	0.105	1	01/31/2021 20:32	WG1613977
(S) a,a,a-Trifluorotoluene(FID)	*90.0*			*77.0-120*		*01/31/2021 20:32*	WG1613977

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		0.000514	0.00110	1	01/30/2021 18:07	WG1613926
Toluene	U		0.00143	0.00550	1	01/30/2021 18:07	WG1613926
Ethylbenzene	U		0.000811	0.00275	1	01/30/2021 18:07	WG1613926
Total Xylenes	U		0.000968	0.00715	1	01/30/2021 18:07	WG1613926
(S) Toluene-d8	*103*			*75.0-131*		*01/30/2021 18:07*	WG1613926
(S) 4-Bromofluorobenzene	*95.8*			*67.0-138*		*01/30/2021 18:07*	WG1613926
(S) 1,2-Dichloroethane-d4	*90.1*			*70.0-130*		*01/30/2021 18:07*	WG1613926

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		1.69	4.20	1	02/01/2021 14:11	WG1614200
C28-C40 Oil Range	1.42	J	0.288	4.20	1	02/01/2021 14:11	WG1614200
(S) o-Terphenyl	*77.1*			*18.0-148*		*02/01/2021 14:11*	WG1614200

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.0		1	02/04/2021 09:59	WG1615134

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.58	20.8	1	02/05/2021 02:25	WG1615167

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		0.0226	0.104	1	01/31/2021 20:53	WG1613977
(S) a,a,a-Trifluorotoluene(FID)	*89.4*			*77.0-120*		*01/31/2021 20:53*	WG1613977

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		0.000506	0.00108	1	01/30/2021 18:26	WG1613926
Toluene	U		0.00141	0.00542	1	01/30/2021 18:26	WG1613926
Ethylbenzene	U		0.000798	0.00271	1	01/30/2021 18:26	WG1613926
Total Xylenes	U		0.000953	0.00704	1	01/30/2021 18:26	WG1613926
(S) Toluene-d8	*104*			*75.0-131*		*01/30/2021 18:26*	WG1613926
(S) 4-Bromofluorobenzene	*96.6*			*67.0-138*		*01/30/2021 18:26*	WG1613926
(S) 1,2-Dichloroethane-d4	*93.0*			*70.0-130*		*01/30/2021 18:26*	WG1613926

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	4.17	1	02/01/2021 14:24	WG1614200
C28-C40 Oil Range	1.09	J	0.285	4.17	1	02/01/2021 14:24	WG1614200
(S) o-Terphenyl	*71.0*			*18.0-148*		*02/01/2021 14:24*	WG1614200

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.9		1	02/04/2021 09:59	WG1615134

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.59	20.8	1	02/05/2021 02:35	WG1615167

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		0.0226	0.104	1	01/31/2021 21:14	WG1613977
(S) a,a,a-Trifluorotoluene(FID)	*89.7*			*77.0-120*		*01/31/2021 21:14*	WG1613977

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		0.000507	0.00108	1	01/30/2021 18:45	WG1613926
Toluene	U		0.00141	0.00542	1	01/30/2021 18:45	WG1613926
Ethylbenzene	U		0.000800	0.00271	1	01/30/2021 18:45	WG1613926
Total Xylenes	U		0.000955	0.00705	1	01/30/2021 18:45	WG1613926
(S) Toluene-d8	*102*			*75.0-131*		*01/30/2021 18:45*	WG1613926
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*01/30/2021 18:45*	WG1613926
(S) 1,2-Dichloroethane-d4	*92.0*			*70.0-130*		*01/30/2021 18:45*	WG1613926

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	4.17	1	02/01/2021 14:37	WG1614200
C28-C40 Oil Range	1.06	J	0.286	4.17	1	02/01/2021 14:37	WG1614200
(S) o-Terphenyl	*76.5*			*18.0-148*		*02/01/2021 14:37*	WG1614200

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.9		1	02/04/2021 09:59	WG1615134

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.70	21.1	1	02/05/2021 03:03	WG1615167

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		0.0229	0.105	1	01/31/2021 21:34	WG1613977
(S) a,a,a-Trifluorotoluene(FID)	*91.0*			*77.0-120*		*01/31/2021 21:34*	WG1613977

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		0.000517	0.00111	1	01/30/2021 19:04	WG1613926
Toluene	U		0.00144	0.00554	1	01/30/2021 19:04	WG1613926
Ethylbenzene	U		0.000816	0.00277	1	01/30/2021 19:04	WG1613926
Total Xylenes	U		0.000975	0.00720	1	01/30/2021 19:04	WG1613926
(S) Toluene-d8	*104*			*75.0-131*		*01/30/2021 19:04*	WG1613926
(S) 4-Bromofluorobenzene	*98.1*			*67.0-138*		*01/30/2021 19:04*	WG1613926
(S) 1,2-Dichloroethane-d4	*96.3*			*70.0-130*		*01/30/2021 19:04*	WG1613926

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		1.70	4.22	1	02/01/2021 14:50	WG1614200
C28-C40 Oil Range	0.620	J	0.289	4.22	1	02/01/2021 14:50	WG1614200
(S) o-Terphenyl	*60.1*			*18.0-148*		*02/01/2021 14:50*	WG1614200

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.0		1	02/04/2021 09:59	WG1615134

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.69	21.1	1	02/05/2021 03:13	WG1615167

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		0.0229	0.105	1	01/31/2021 21:55	WG1613977
(S) a,a,a-Trifluorotoluene(FID)	*89.6*			*77.0-120*		*01/31/2021 21:55*	WG1613977

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		0.000517	0.00111	1	01/30/2021 19:23	WG1613926
Toluene	U		0.00144	0.00553	1	01/30/2021 19:23	WG1613926
Ethylbenzene	U		0.000815	0.00277	1	01/30/2021 19:23	WG1613926
Total Xylenes	U		0.000974	0.00719	1	01/30/2021 19:23	WG1613926
(S) Toluene-d8	*103*			*75.0-131*		*01/30/2021 19:23*	WG1613926
(S) 4-Bromofluorobenzene	*98.9*			*67.0-138*		*01/30/2021 19:23*	WG1613926
(S) 1,2-Dichloroethane-d4	*95.4*			*70.0-130*		*01/30/2021 19:23*	WG1613926

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		1.70	4.21	1	02/01/2021 15:03	WG1614200
C28-C40 Oil Range	1.30	J	0.289	4.21	1	02/01/2021 15:03	WG1614200
(S) o-Terphenyl	*76.5*			*18.0-148*		*02/01/2021 15:03*	WG1614200

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.5		1	02/04/2021 09:59	WG1615134

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		10.2	22.1	1	02/05/2021 03:22	WG1615167

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		0.0240	0.110	1	01/31/2021 22:16	WG1613977
(S) a,a,a-Trifluorotoluene(FID)	*90.1*			*77.0-120*		*01/31/2021 22:16*	WG1613977

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		0.000565	0.00121	1	01/30/2021 19:42	WG1613926
Toluene	U		0.00157	0.00605	1	01/30/2021 19:42	WG1613926
Ethylbenzene	U		0.000891	0.00302	1	01/30/2021 19:42	WG1613926
Total Xylenes	U		0.00106	0.00786	1	01/30/2021 19:42	WG1613926
(S) Toluene-d8	*102*			*75.0-131*		*01/30/2021 19:42*	WG1613926
(S) 4-Bromofluorobenzene	*97.8*			*67.0-138*		*01/30/2021 19:42*	WG1613926
(S) 1,2-Dichloroethane-d4	*94.6*			*70.0-130*		*01/30/2021 19:42*	WG1613926

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		1.78	4.42	1	02/01/2021 15:17	WG1614200
C28-C40 Oil Range	0.684	J	0.303	4.42	1	02/01/2021 15:17	WG1614200
(S) o-Terphenyl	*71.3*			*18.0-148*		*02/01/2021 15:17*	WG1614200

Method Blank (MB)

(MB) R3619668-1 02/04/21 09:59

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

L1311652-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1311652-01 02/04/21 09:59 • (DUP) R3619668-3 02/04/21 09:59

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	93.6	92.7	1	0.891		10

Laboratory Control Sample (LCS)

(LCS) R3619668-2 02/04/21 09:59

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) R3619727-1 02/05/21 01:00

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

L1311652-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1311652-02 02/05/21 01:56 • (DUP) R3619727-5 02/05/21 02:06

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

L1312186-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1312186-10 02/05/21 05:26 • (DUP) R3619727-6 02/05/21 05:35

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

Laboratory Control Sample (LCS)

(LCS) R3619727-2 02/05/21 01:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	196	97.8	90.0-110	

L1311652-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311652-01 02/05/21 01:28 • (MS) R3619727-3 02/05/21 01:37 • (MSD) R3619727-4 02/05/21 01:47

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	534	U	509	507	95.3	95.0	1	80.0-120			0.312	20

Method Blank (MB)

(MB) R3618053-2 01/31/21 11:39

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

Laboratory Control Sample (LCS)

(LCS) R3618053-1 01/31/21 10:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.08	92.4	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*102*	*77.0-120*	

Method Blank (MB)

(MB) R3617853-3 01/30/21 12:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*105*			*75.0-131*
(S) 4-Bromofluorobenzene	*96.6*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*84.6*			*70.0-130*

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

(LCS) R3617853-1 01/30/21 11:42 • (LCSD) R3617853-2 01/30/21 12:01

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	0.137	0.135	110	108	70.0-123			1.47	20
Ethylbenzene	0.125	0.141	0.144	113	115	74.0-126			2.11	20
Toluene	0.125	0.136	0.133	109	106	75.0-121			2.23	20
Xylenes, Total	0.375	0.425	0.431	113	115	72.0-127			1.40	20
(S) Toluene-d8				*98.1*	*98.4*	*75.0-131*				
(S) 4-Bromofluorobenzene				*100*	*108*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*98.5*	*98.3*	*70.0-130*				

Method Blank (MB)

(MB) R3618035-1 02/01/21 04:54

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	*67.4*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3618035-2 02/01/21 05:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	46.5	93.0	50.0-150	
(S) o-Terphenyl			*61.1*	*18.0-148*	

L1311641-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311641-01 02/01/21 10:56 • (MS) R3618035-3 02/01/21 11:09 • (MSD) R3618035-4 02/01/21 11:22

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.6	9.02	53.5	50.3	87.9	81.6	1	50.0-150			6.17	20
(S) o-Terphenyl					*50.0*	*46.2*		*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
J	The identification of the analyte is acceptable; the reported value is an estimate.

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.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN, 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

Pace Analytical National 660 Bercut Dr. Ste. C Sacramento, CA, 95811

California	2961	Oregon	CA300002
Minnesota	006-999-465	Washington	C926
North Dakota	R-214		

Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1

Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18

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

Analysis Request of Chain of Custody Record

Page : 1 of 3

Tetra Tech, Inc.

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

~~L1309904~~ AY 1/29/21 C229 L1311652

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	VGEU 02-20 EAST	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02305
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	John Thurston
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2021 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 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
	BH-1 (2-3')	1/18/2021	14:00		X			X		1	N	X		X												X						-01
	BH-1 (4-5')	1/18/2021	14:05		X			X		1	N	X		X												X						-02
	BH-1 (6-7')	1/18/2021	14:10		X			X		1	N	X		X												X						-03
	BH-1 (9-10')	1/18/2021	14:15		X			X		1	N	X		X												X						-04
	BH-1 (15')	1/18/2021	14:20		X			X		1	N	X		X												X						-05
	BH-1 (20')	1/18/2021	14:25		X			X		1	N	X		X												X						-06
	BH-2 (0-1')	1/18/2021	14:30		X			X		1	N	X		X												X						-07
	BH-2 (2-3')	1/18/2021	14:35		X			X		1	N	X		X												X						-08
	BH-2 (4-5')	1/18/2021	14:40		X			X		1	N	X		X												X						-09
	BH-2 (6-7')	1/18/2021	14:45		X			X		1	N	X		X												X						X -01

Relinquished by:	Date: 1/20/21	Time: 1500	Received by:
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by: Date: 1/21 Time: 0920

ORIGINAL COPY

LAB USE ONLY
Sample Temperature

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

1.4 + 0 = 1.4 AB

Analysis Request of Chain of Custody Record

Page : 2 of 3

Tetra Tech, Inc.

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

L1311652
L1308904

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	VGEU 02-20 EAST	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02305
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	John Thurston
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2021 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	HNO3	ICE	NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R	HOLD	
	BH-2 (9-10')	1/18/2021	14:50		X				X		1	N	X		X												X					X	-02
	BH-3 (0-1')	1/18/2021	14:55		X				X		1	N	X		X												X						-10
	BH-3 (2-3')	1/18/2021	15:00		X				X		1	N	X		X												X						-11
	BH-3 (4-5')	1/18/2021	15:05		X				X		1	N	X		X												X						-12
	BH-3 (6-7')	1/18/2021	15:10		X				X		1	N	X		X												X					X	-03
	BH-3 (9-10')	1/18/2021	15:15		X				X		1	N	X		X												X					X	-04
	BH-4 (0-1')	1/18/2021	15:20		X				X		1	N	X		X												X						-07
	BH-4 (2-3')	1/18/2021	15:25		X				X		1	N	X		X												X						-14
	BH-4 (4-5')	1/18/2021	15:30		X				X		1	N	X		X												X						-15
	BH-4 (6-7')	1/18/2021	15:35		X				X		1	N	X		X												X					X	05

Relinquished by:	Date: 1/20/21	Time: 1500	Received by:
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by: Date: 1/21 Time: 0910

ORIGINAL COPY

LAB USE ONLY
Sample Temperature

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

(Circle) HAND DELIVERED (FEDEX) UPS Tracking #:

1.4+0=1.4 MG

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

H308804 L1311652

Client Name:	Conoco Phillips	Site Manager:	Christian Llull
Project Name:	VGEU 02-20 EAST	Contact Info:	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-02305
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	John Thurston
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2021 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	GCMS Vol. 8260B / 624	GCMS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD	
	BH-4 (9-10')	1/18/2021	15:35		X			X		1	N	X		X												X						X	06
	BH-5 (0-1')	1/18/2021	15:40		X			X		1	N	X		X												X							16
	BH-5 (2-3')	1/18/2021	15:45		X			X		1	N	X		X												X							17
	BH-5 (4-5')	1/18/2021	15:50		X			X		1	N	X		X												X							18
	BH-5 (6-7')	1/18/2021	15:55		X			X		1	N	X		X												X						X	0607
	BH-5 (9-10')	1/18/2021	16:00		X			X		1	N	X		X												X						X	0708

Relinquished by: Date: 1/20/21 Time: 1500 Received by: Date: Time:

Relinquished by: Date: Time: Received by: Date: Time:

Relinquished by: Date: Time: Received by: Date: 1/21 Time: 0900

ORIGINAL COPY

LAB USE ONLY
Sample Temperature

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

1.4+0=1.4 MM

L1308904 *COPTETRA* goes OOH on Monday, 2/1 - 01-145

R1/R2

Please log all hold samples for V8260BTEX, GRO, DRORLA, CHLORIDE-300, TS. Log as R5 due 2/5.
Refer to 01-145 for hold samples.

Adjust RUSH multiplier for V8260BTEX, GRO to 2x for analysis hold time expiring on Monday, 2/1.
Adjust RUSH multiplier for DRORLA to 1.75x for extraction hold time expiring on Monday, 2/1.

Thanks,
Chris

From: Dickerson, Ryan <Ryan.Dickerson@tetratech.com>
Sent: Friday, January 29, 2021 12:28 PM
To: Chris McCord <Chris.McCord@pacelabs.com>
Cc: Llull, Christian <Christian.Llull@tetratech.com>
Subject: L1308904 - Run all "HOLD" samples

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.
Chris,
Can you run the samples from L1308904 that were previously placed on hold? There should be 8 of them.

Thanks,

Ryan Dickerson | Senior Staff Geologist
Direct +1 (512) 338-2889 | Main +1 (512) 338-1667 | Cell +1 (512) 217-7254 |
ryan.dickerson@tetratech.com<mailto:ryan.dickerson@tetratech.com>

Tetra Tech | Leading with Science(r) | OGA
8911 N. Capital of TX Hwy. | Bldg. 2, Ste 2310 | Austin, TX 78759 | tetratech.com

Time estimate: oh **Time spent:** oh

Members

Mc Christopher McCord (responsible)

APPENDIX E
Soil Boring Logs

212C-MD-02305 | TETRA TECH | **LOG OF BORING BH-1** | Page 1 of 1

Project Name: VGEU 02-20 East Flowline Release

Borehole Location: GPS: 32.796171, -103.487380 | Surface Elevation: 3975 ft

Borehole Number: BH-1 | Borehole Diameter (in.): 8 | Date Started: 1/18/2021 | Date Finished: 1/18/2021

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			-- Previously excavated to approximately 2' bgs.	2	
	2810	12	-- CALICHE: Light tan, very dense, cemented, with occasional limestone.		BH-1 (2-3')
5	37	1		5	BH-1 (4-5')
			-ML- SILT: Light tan, very dense, cemented, dry.		
	25	1			BH-1 (6-7')
10	42	1.9			BH-1 (9-10')
			-- Becoming brittle at 11' bgs		
15	24	0.9		15	BH-1 (15')
			-SM- SILTY SAND: Light reddish brown, medium dense, dry.		
20	20	0.7		20	BH-1 (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 above.
Surface elevations are estimated from Google Earth data.

Logger: John Thurston | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02305 | TETRA TECH | **LOG OF BORING BH-2** | Page 1 of 1

Project Name: VGEU 02-20 East Flowline Release

Borehole Location: GPS: 32.796421, -103.487760 | Surface Elevation: 3973 ft

Borehole Number: BH-2 | Borehole Diameter (in.): 8 | Date Started: 1/18/2021 | Date Finished: 1/18/2021

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
			95	5								**-SM-** SILTY SAND: Brown, medium dense, dry.		BH-2 (0-1')
														BH-2 (2-3')
			129	3									3	
												-- CALICHE: Light tan, very dense, cemented, with occasional limestone.		
5			94	5									5	BH-2 (4-5')
												-ML- SILT: Light tan, very dense, cemented, dry.		
			52	1										BH-2 (6-7')
10			32	0.7									10	BH-2 (9-10')

Bottom of borehole at 10.0 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 above.
Surface elevations are estimated from Google Earth data.

Logger: John Thurston | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02305 | TETRA TECH | **LOG OF BORING BH-3** | Page 1 of 1

Project Name: VGEU 02-20 East Flowline Release

Borehole Location: GPS: 32.796421, -103.487760 | Surface Elevation: 3976 ft

Borehole Number: BH-3 | Borehole Diameter (in.): 8 | Date Started: 1/18/2021 | Date Finished: 1/18/2021

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
			91	3								**-SM-** SILTY SAND: Brown, medium dense, dry.	2	BH-3 (0-1')
			125	5								**--** CALICHE: Light tan, very dense, cemented, with occasional limestone.		BH-3 (2-3')
5			73	5									6	BH-3 (4-5')
			52	2								**-ML-** SILT: Light grey/tan, very dense, cemented, dry.	7	BH-3 (6-7')
												-ML- SILT: Light tan, very dense, cemented, dry.		
10			49	2									10	BH-3 (9-10')

Bottom of borehole at 10.0 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 above.
Surface elevations are estimated from Google Earth data.

Logger: John Thurston | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02305 | TETRA TECH | **LOG OF BORING BH-4** | Page 1 of 1

Project Name: VGEU 02-20 East Flowline Release

Borehole Location: GPS: 32.796421, -103.487760 | Surface Elevation: 3973 ft

Borehole Number: BH-4 | Borehole Diameter (in.): 8 | Date Started: 1/18/2021 | Date Finished: 1/18/2021

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
			89	3								**-SM-** SILTY SAND: Brown, medium dense, dry.	2	BH-4 (0-1')
			76	5								**--** CALICHE: Light tan, very dense, cemented, with occasional limestone.		BH-4 (2-3')
5			81	5									6	BH-4 (4-5')
			33	2								**-ML-** SILT: Light grey/tan, very dense, cemented, dry.	7	BH-4 (6-7')
												-ML- SILT: Light tan, very dense, cemented, dry.		
10			29	2									10	BH-4 (9-10')

Bottom of borehole at 10.0 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 above.
Surface elevations are estimated from Google Earth data.

Logger: John Thurston | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02305	TETRA TECH	LOG OF BORING BH-5	Page 1 of 1

Project Name: VGEU 02-20 East Flowline Release

Borehole Location: GPS: 32.796421, -103.487760 | Surface Elevation: 3974 ft

Borehole Number: BH-5 | Borehole Diameter (in.): 8 | Date Started: 1/18/2021 | Date Finished: 1/18/2021

WATER LEVEL OBSERVATIONS

While Drilling ▽ Dry ft Upon Completion of Drilling ▽ Dry ft

Remarks:

DEPTH (ft)	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 (%)	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
	68	1							**-SM-** SILTY SAND: Brown, medium dense, dry.	2	BH-5 (0-1')
	87	1							**--** CALICHE: Light tan, very dense, cemented, with occasional limestone.		BH-5 (2-3')
5	57	2								6	BH-5 (4-5')
	49	2							**-ML-** SILT: Light grey/tan, very dense, cemented, dry.	7	BH-5 (6-7')
									-ML- SILT: Light tan, very dense, cemented, dry.		
10	51	2								10	BH-5 (9-10')

Bottom of borehole at 10.0 feet.

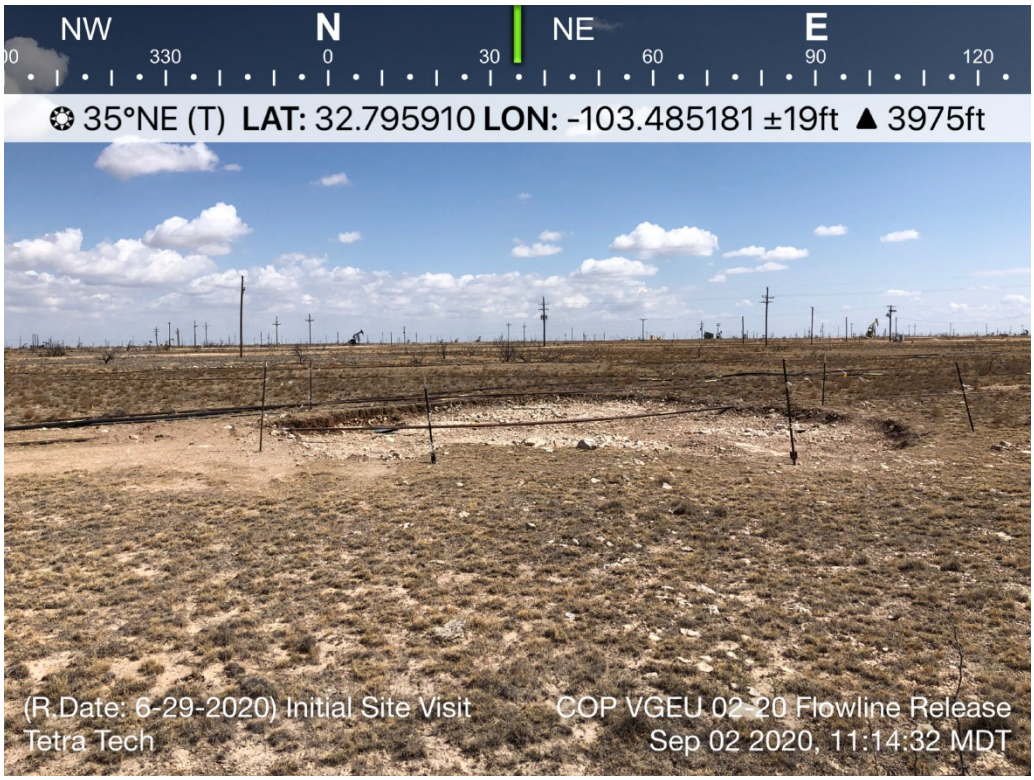
Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, California, Grab Sample, Test Pit

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

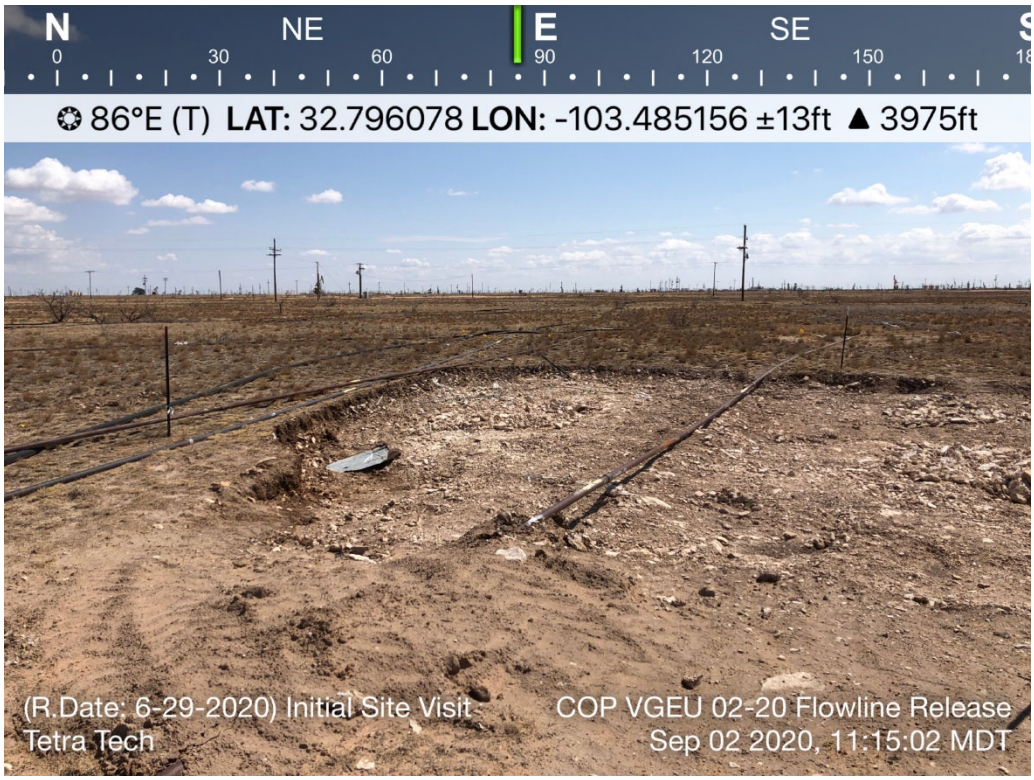
Notes:
Analytical samples are shown in the remarks column above.
Surface elevations are estimated from Google Earth data.

Logger: John Thurston | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

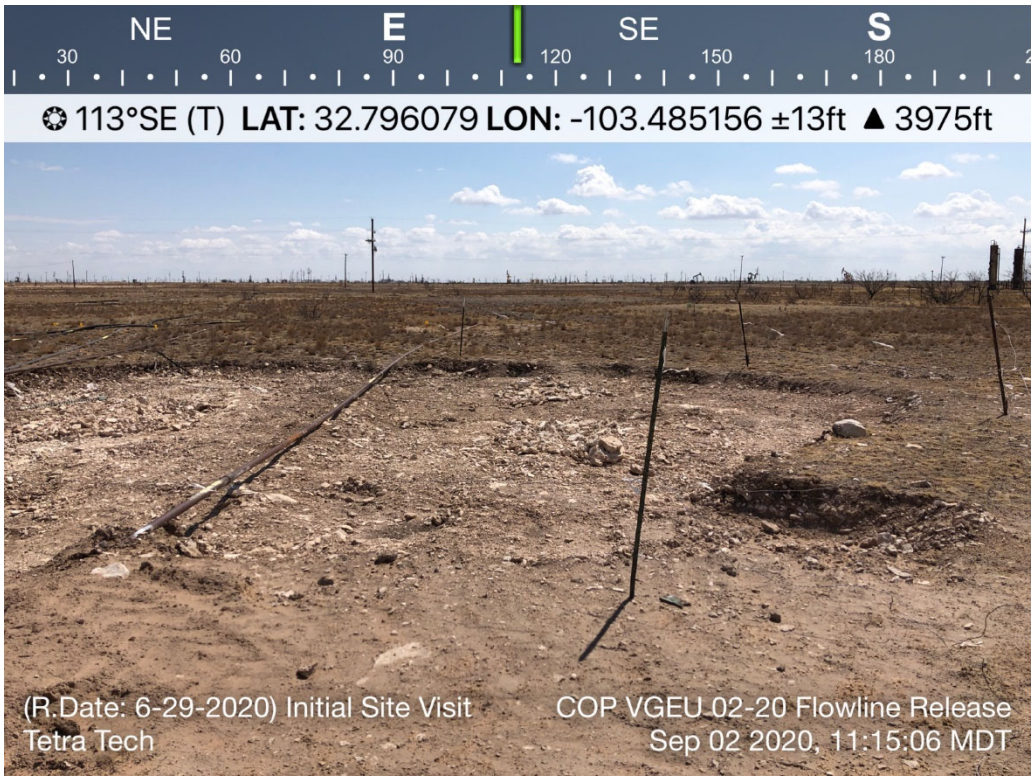
APPENDIX F
Photographic Documentation



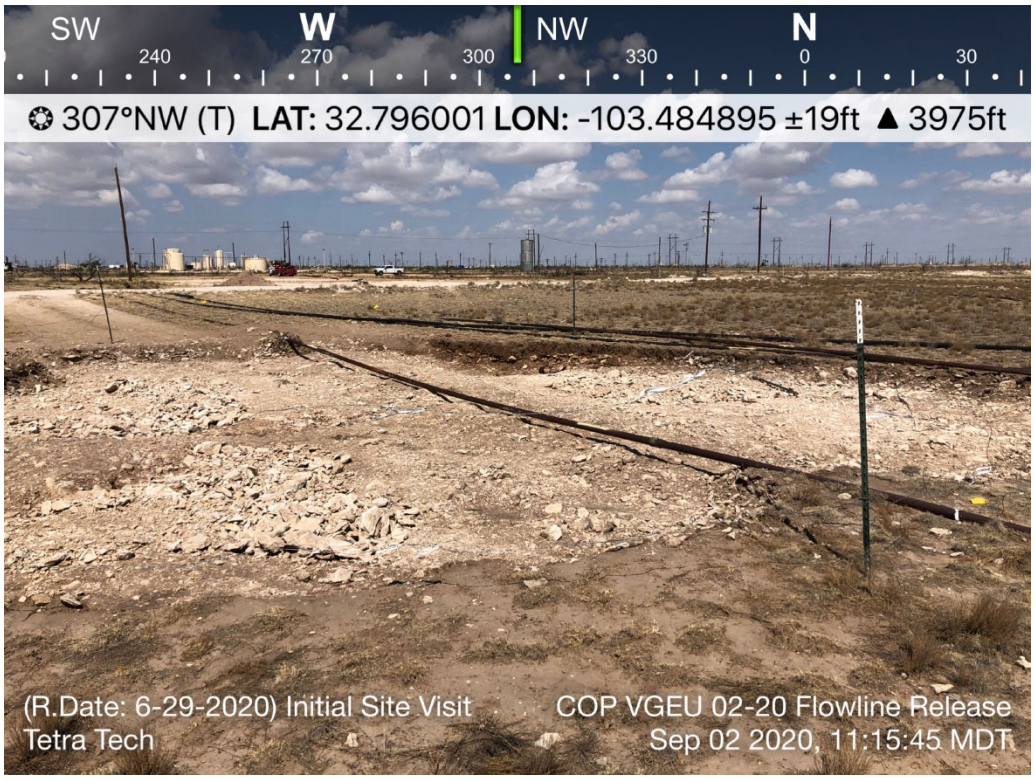
TETRA TECH, INC. PROJECT NO. 212C-MD-02305	DESCRIPTION	General site view of the VGEU 02-20 East flowline release, looking northeast.	1
	SITE NAME	ConocoPhillips VGEU 02-20 East Release	9/02/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02305	DESCRIPTION	View of the northern portion of the VGEU 02-20 East flowline release area, looking east.	2
	SITE NAME	ConocoPhillips VGEU 02-20 East Release	9/02/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02305	DESCRIPTION	View of the southern portion of the VGEU 02-20 East flowline release area, looking southeast.	3
	SITE NAME	ConocoPhillips VGEU 02-20 East Release	9/02/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02305	DESCRIPTION	View of the VGEU 02-20 East flowline release area, looking northwest.	4
	SITE NAME	ConocoPhillips VGEU 02-20 East Release	9/02/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02305	DESCRIPTION	View of the northern portion of the VGEU 02-20 East flowline release area, looking west.	5
	SITE NAME	ConocoPhillips VGEU 02-20 East Release	9/02/2020

APPENDIX G
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 02-20 East Flowline Release

April 8, 2021

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

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

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

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

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

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KU	Kimbrough-Lea complex, dry, 0 to 3 percent slopes	0.1	100.0%
Totals for Area of Interest		**0.1**	**100.0%**

Map Unit Descriptions

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

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

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, 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
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 content: 95 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water capacity: 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: R077DY049TX - Very Shallow 12-17" PZ
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
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 90 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 3.0
Available water capacity: 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: R077DY047TX - Sandy Loam 12-17" PZ
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: R077DY047TX - Sandy Loam 12-17" PZ
Other vegetative classification: Unnamed (G077DH000TX)
Hydric soil rating: No

Kenhill

Percent of map unit: 12 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R077DY038TX - Clay Loam 12-17" PZ
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: R077DY049TX - Very Shallow 12-17" PZ
Other vegetative classification: Unnamed (G077DH000TX)
Hydric soil rating: No

1 REVEGETATION PLANS

The following Revegetation Plans were developed for revegetation of sites in southeastern New Mexico. To determine which revegetation plan is appropriate follow procedures in the section titled Determining the Revegetation Plan.

Revegetation Plans contain seed mixtures, as well as seed bed preparation and planting requirements. The detailed instructions for seedbed preparation and planting can be found in the section Revegetation Techniques.

Table 3 - Revegetation Plans, Codes, and Soil Types for Southeastern New Mexico

REVEGTATION PLANS	CODE	SOIL TEXTURES
Clay	C	Clay, Silty Clay, Stony Silty Clay, Clay Loam, Silty Clay Loam (including saline and sodic Clay soils)
Loam	L	Silty Loam, Cobbly Silt Loam, Stony Silt Loam, Silt, Loam, Sandy, Clay Loam
Sandy Loam	SL	Very Fine Sandy Loam, Fine Sandy Loam, Cobbly Fine Sandy Loam, Sandy Loam, Cobbly Sandy Loam, Gravelly Fine Sandy Loam, Very Gravelly Fine Sand Loam, Stony Fine Sandy Loam, Stony Sandy Loam
Shallow	SH	Rocky Loam, Cobbly Loam
Course	CS	Gravelly Loam, very Gravelly Loam, Gravelly Sandy Loam, Very Gravelly Sandy Loam, Stony Loam, Stony Sandy Loam
Sandy	S	Loamy Fine Sand, Loam Sand, Very Gravelly Loamy Fine Sand
Blow Sand	BS	Fine Sand, Sand, Coarse Sand
Mountain Meadow	MM	Clay, Loam
Mountain Upland	MU	Clay Loam, Loam

NMSLO Seed Mix Sandy Loam (SL)

SANDY LOAM (SL) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Galleta grass	Viva, VNS, So.	2.5	F
Little bluestem	Cimmaron, Pastura	2.5	F
Blue grama	Hachita, Lovington	2.0	D
Sideoats grama	Vaughn, El Reno	2.0	F
Sand dropseed	VNS, Southern	1.0	S
Forbs:			
Indian blanketflower	VNS, Southern	1.0	D
Parry penstemon	VNS, Southern	1.0	D
Blue flax	Appar	1.0	D
Desert globemallow	VNS, Southern	1.0	D
Shrubs:			
Fourwing saltbush	VNS, Southern	2.0	D
Common winterfat	VNS, Southern	1.0	F
Apache plume	VNS, Southern	0.75	F
	Total PLS/acre	17.75	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box

- VNS, Southern – No Variety Stated, seed should be from a southern latitude collection of this species.
- Double above seed rates for broadcast or hydroseeding.
- If Parry penstemon is not available, substitute firecracker penstemon.
- If desert globemallow is not available, substitute scarlet globemallow or Nelson globemallow.
- If a species is not available, provide a suggested substitute to the New Mexico Land Office for approval. Increasing all other species proportionately may be acceptable.

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	nRM2019933917
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: Marvin Soriwei Title: Program Manager, Risk Management & Remediation

Signature: Date: 5/12/2021

email: marvin.soriwei@conocophillips.com Telephone: 8324862730

OCD Only

Received by: Chad Hensley Date: 06/29/2021

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

Signature: Date: 06/29/2021

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 28225

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 28225
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	Please collect confirmation samples representing no more than 200 square feet, unless Conoco chooses to provide a sampling plan for approval prior to conduction additional sampling.	6/29/2021