SITE INFORMATION

Report Type: Work Plan NCE2003542701

General Site Information:						
Site:	**EVGSAU 3332-519 Flowline Release**					
Company:	**ConocoPhillips**					
Section, Township and Range	**Unit Letter I**	**Sec. 32**	**T 17S**	**R 35 E**		
Lease Number:	**Associated API No. 30-025-42115**					
County:	**Lea**					
GPS:	**32.788462°**			**-103.475532°**		
Surface Owner:	**State**					
Mineral Owner:	**State**					
Directions:	Depart from Hobbs. Head toward S Morris St on E Marland Blvd (US-62/US-180). 15 miles. Turn right onto NM-529. Go 2.4 miles. Turn right onto State Highway 238 (NM-238). Go 6 miles. Turn right. Go 1.3 miles. Turn left. Go 0.3 miles. Turn Right. Go 0.3 miles. Turn left and travel 700 feet. Arrive at location. Site is on the right side of the road.					

Release Data:		
Date Released:	1/10/2020	
Type Release:	Produced Water/Oil	
Source of Contamination:	Flowline leak	
Fluid Released:	65.5 bbl	
Fluids Recovered:	5 bbl	

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

Site Characterization	
Shallowest Depth to Groundwater:	*85' below surface*
Impact to groundwater or surface water:	*No*
Extents within 300 feet of a watercourse:	*No*
Extents within 200 feet of lakebed, sinkhole, or playa la	*No*
Extents within 300 feet of an occupied structure:	*No*
Extents within 500 horizontal feet of a private water wel	*No*
Extents within 1000 feet of any water well or spring:	*No*
Extents within incorporated municipal well field:	*No*
Extents within 300 feet of a wetland:	*No*
Extents overlying a subsurface mine:	*No*
Karst Potential:	*Low*
Extents within a 100-year floodplain:	*No*
Impact to areas not on a production site:	*No*

Recommended Remedial Action Levels (RRALs)				
Benzene	***Total BTEX***	***TPH (GRO+DRO)***	***TPH (GRO+DRO+MRO)***	***Chlorides***
10 mg/kg	*50 mg/kg*	*1,000 mg/kg*	*2,500 mg/kg*	*10,000 mg/kg*

TETRA TECH

July 24, 2020

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

Re: Release Characterization and Remediation Work Plan
ConocoPhillips
EVGSAU 3332-519 Flowline Release
Unit Letter I, Section 32, Township 17 South, Range 35 East
Lea County, New Mexico
Incident ID# NCE2003542701

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a release that occurred from the flowline of the East Vacuum Grayburg-San Andres Unit (EVGSAU) 3332-519 well (Associated API No. 30-025-42115), approximately 2,200 feet west-northwest of the wellhead. The release footprint is located in Public Land Survey System (PLSS) Unit Letter I, Section 32, Township 17 South, Range 35 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.788462°, -103.475532°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report (Attachment A), the release was discovered on January 10, 2020. The release occurred as the result of a flowline rupture and encompassed an area of 6,010 square feet. Approximately 55.5 barrels (bbls) of produced water and 10 bbls of oil were released, of which 2.5 bbls of produced water and 2.5 bbls of oil were recovered. The New Mexico Oil Conservation District (NMOCD) received the C-141 report form for the release on January 21, 2020. The NMOCD Incident ID for this release is NCE2003542701.

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 is one water well in the Public Land Survey System (PLSS) Section 32, Township 17 South, and Range 35 East with depth to groundwater at 85 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, the RRALs for the Site are as follows:

Constituent	RRAL
Chloride (0-4 ft bgs)	600 mg/kg
Chloride (>4 ft bgs)	10,000 mg/kg
TPH	2,500 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

INITIAL ASSESSMENT ACTIVITIES AND SAMPLING RESULTS

As a portion of initial response, on February 18, 2020, COP personnel collected surface soil samples from twenty-four (24) locations within the release extent. 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 all twenty-four (24) sample locations exceeded the delineation concentration of 600 mg/kg chloride required by NMOCD regulations. The analytical results associated with the majority of the soil samples exceeded the reclamation concentration for TPH (100 mg/kg) in the upper four feet. There were no detections of benzene in any of the analyzed samples, however, there were analytical results which exceeded the total BTEX RRAL at the SP#9 location. A copy of the analytical laboratory report and chain-of-custody documentation are included in Appendix C. Sample results from the initial assessment are summarized in Table 1. Neither horizontal nor vertical delineation of the release was achieved during this assessment.

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. The footprint of the release was excavated by COP personnel with heavy equipment to approximately 1-foot below ground surface (bgs) to remove the visually impacted soils. Figure 3 depicts the release extent, the February 2020 sampling locations and the excavated area.

SITE VISIT

On March 9, 2020, Tetra Tech personnel were onsite to visually inspect the release area. Although the area had been excavated, it appeared that fluids released from the aboveground flowline ran on the ground surface from the release origination point (approximately 250 feet north of the unrelated EVGSAU 3202-001 well pad) to the east and southeast for approximately 150 feet and south for approximately 85 feet (Figure 3). The majority of the release area footprint appeared to have been excavated to roughly 1 foot below the surrounding surface grade.

ADDITIONAL SITE ASSESSMENT

In order to achieve horizontal and vertical delineation of the release extent, Tetra Tech personnel conducted soil sampling on May 13, 2020 on behalf of ConocoPhillips. A total of five (5) borings (BH-1 through BH-5) were installed using an air rotary drilling rig. Two (2) borings (BH-4 and BH-5) were installed within the release extent to a depth of 20 feet bgs to achieve vertical delineation. The remaining 3 borings (BH-1 through BH-3) were installed along the perimeter of the release extent (to the east, south and west, respectively) to a depth of 10 feet bgs to achieve horizontal delineation. Due to steel surface lines in the vicinity of the release, the air rotary drilling rig could not access the area north of the release extent. Therefore, one (1) hand auger boring (AH-1) was installed along the northern perimeter to a depth of 1-foot bgs to achieve horizontal delineation north of the release extent. Figure 4 depicts the release extent, excavated area and the May 2020 soil boring locations. Boring logs from the May 2020 assessment activities are included in Appendix D.

A total of twenty-four (24) 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 C. Sample locations are shown in Figure 4. Photographic documentation of the initial release extent and the additional site inspection is included in Appendix E.

SUMMARY OF SAMPLING RESULTS

Results from the May 2020 soil sampling event are summarized in Table 2. The analytical results associated with the BH-5 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 excavation floor was visibly impacted by the release and recent rains. Thus, there are no analytical results from the 1'-2' interval (open excavation floor) within the footprint. 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 3 feet below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the RRALs. The northern area of the release extent that contains steel surface lines will be hand-dug to a depth of 3 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 830 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. Twenty-seven (27) confirmation floor samples and twenty-three (23) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses a surface area of approximately 13,200 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 F.

CONCLUSION

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

Sincerely,
Tetra Tech, Inc.

Christian M. Llull, P.G.
Project Manager

Greg W. Pope, P.G.
Program Manager

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

LIST OF ATTACHMENTS

Figures:

Figure 1 – Overview Map
Figure 2 – Site Location/Topographic Map
Figure 3 – Approximate Release Extent and Initial Assessment Map
Figure 4 – Additional Assessment and Initial Response Map
Figure 5 – Proposed Remediation Extent
Figure 6 – Alternative Confirmation Sampling Plan

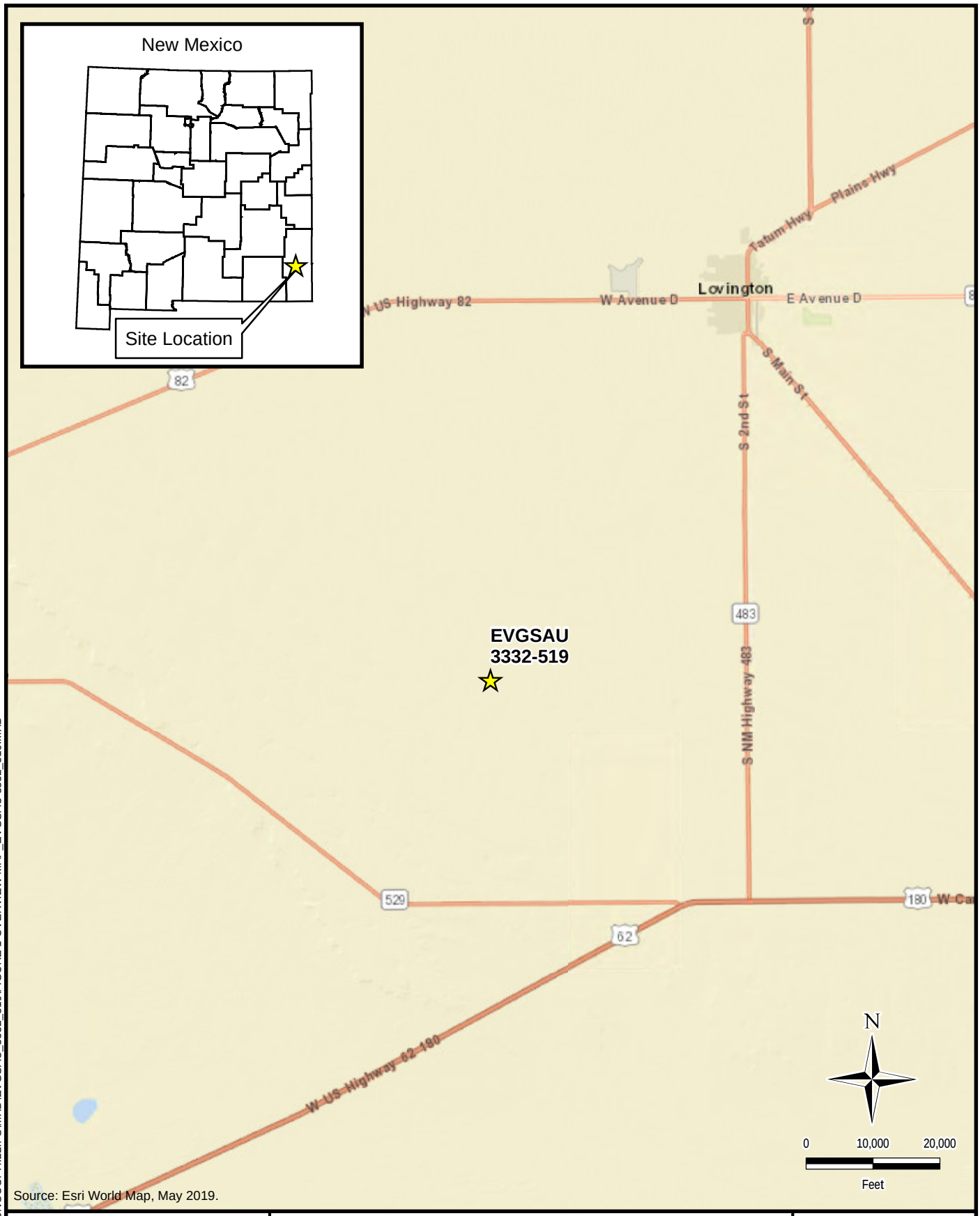
Tables:

Table 1 – Summary of Analytical Results – Initial Soil Assessment
Table 2 – Summary of Analytical Results – Additional Soil Assessment

Appendices:

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

FIGURES



Source: Esri World Map, May 2019.

DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\EVGSAU_3332_519\FIGURE 1 OVERVIEW MAP_EVGSAU 3332_519.MXD

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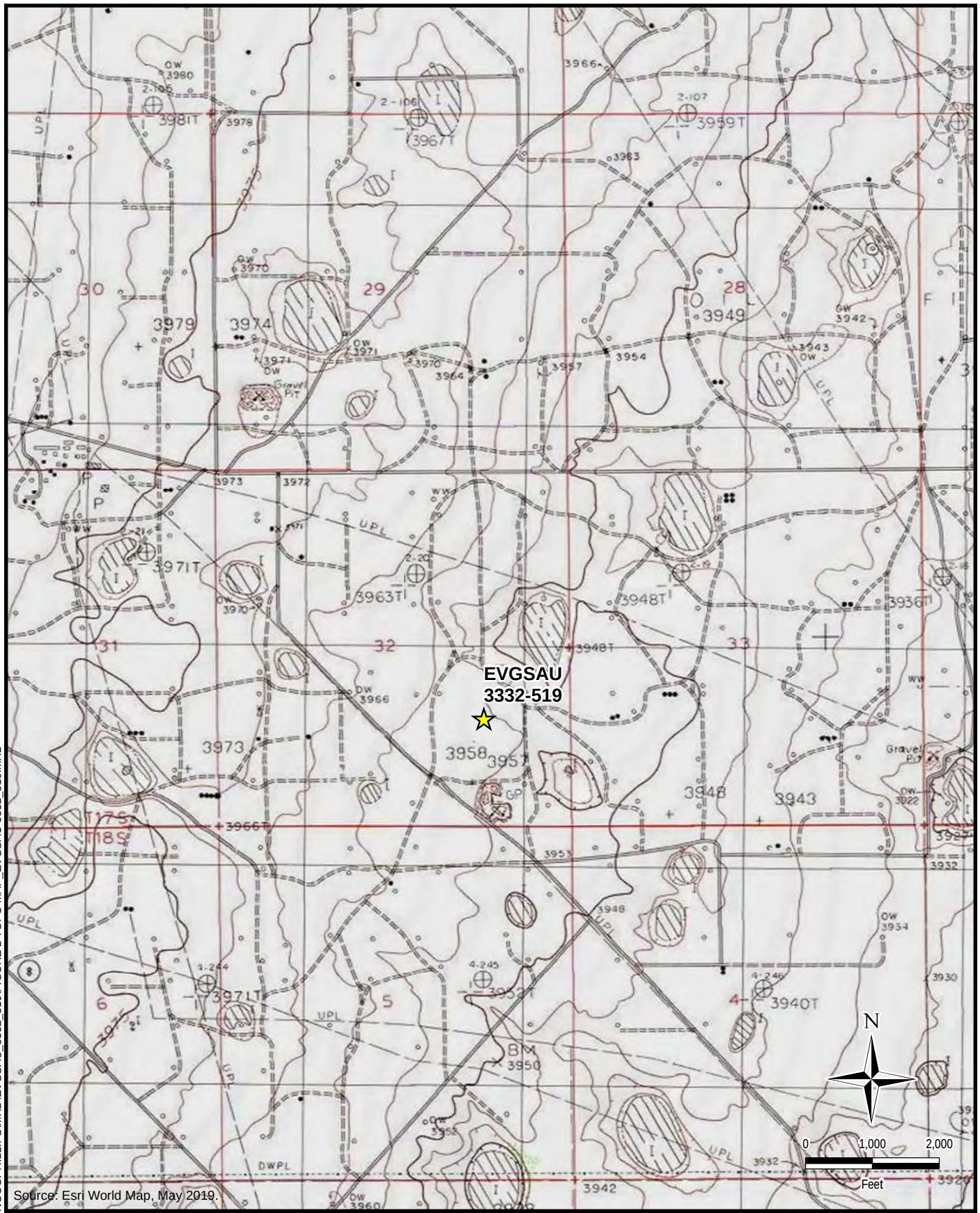
CONOCOPHILLIPS

(32.788462°, -103.475532°)
LEA COUNTY, NEW MEXICO

EVGSAU 3332-519 RELEASE
OVERVIEW MAP

PROJECT NO.:	212C-MD-02141
DATE:	MARCH 18, 2020
DESIGNED BY:	AAM

Figure No.
1



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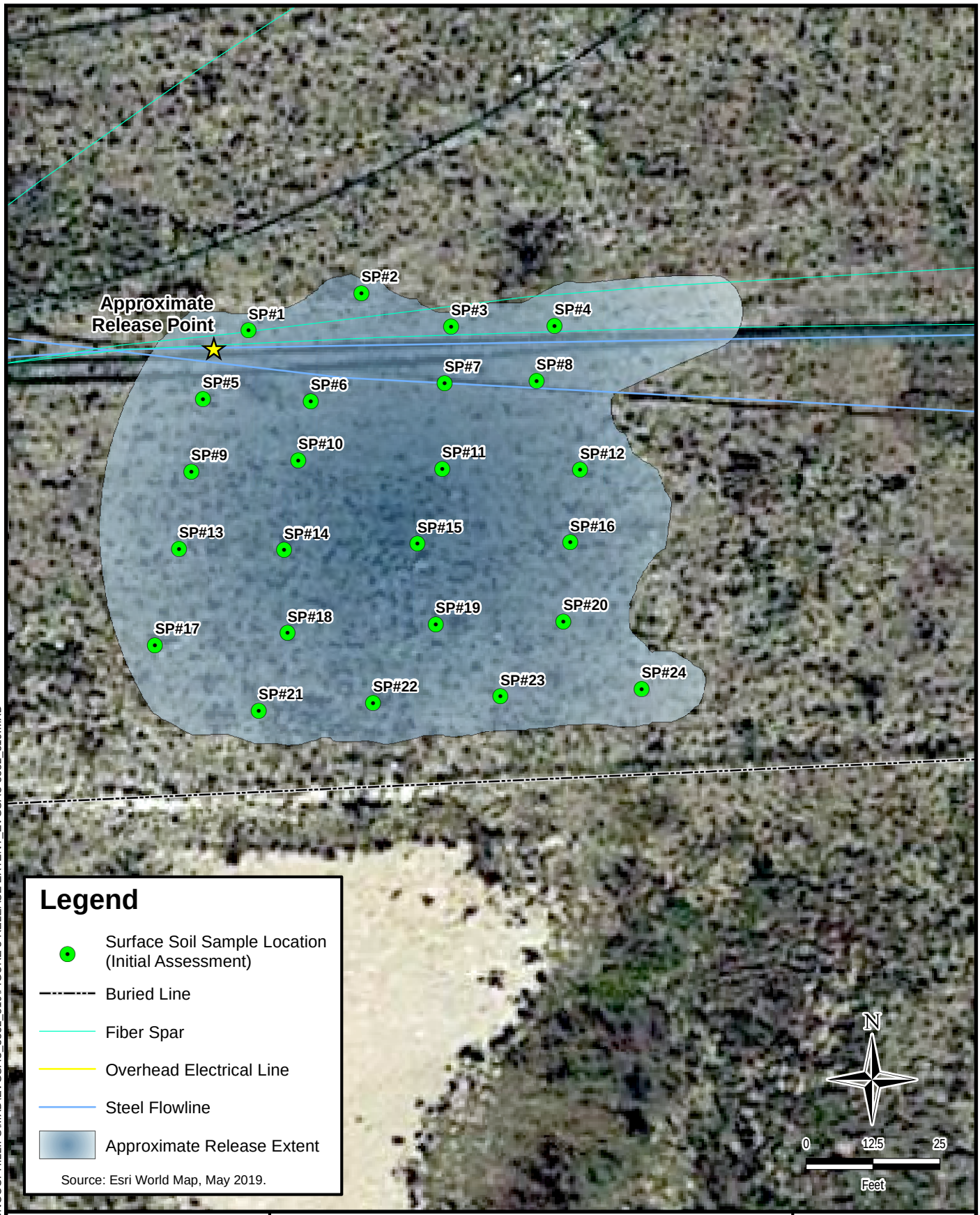
CONOCOPHILLIPS

(32.788462°, -103.475532°)
LEA COUNTY, NEW MEXICO

EVGSAU 3332-519 RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02141
DATE:	MARCH 18, 2020
DESIGNED BY:	AAM

Figure No.
2



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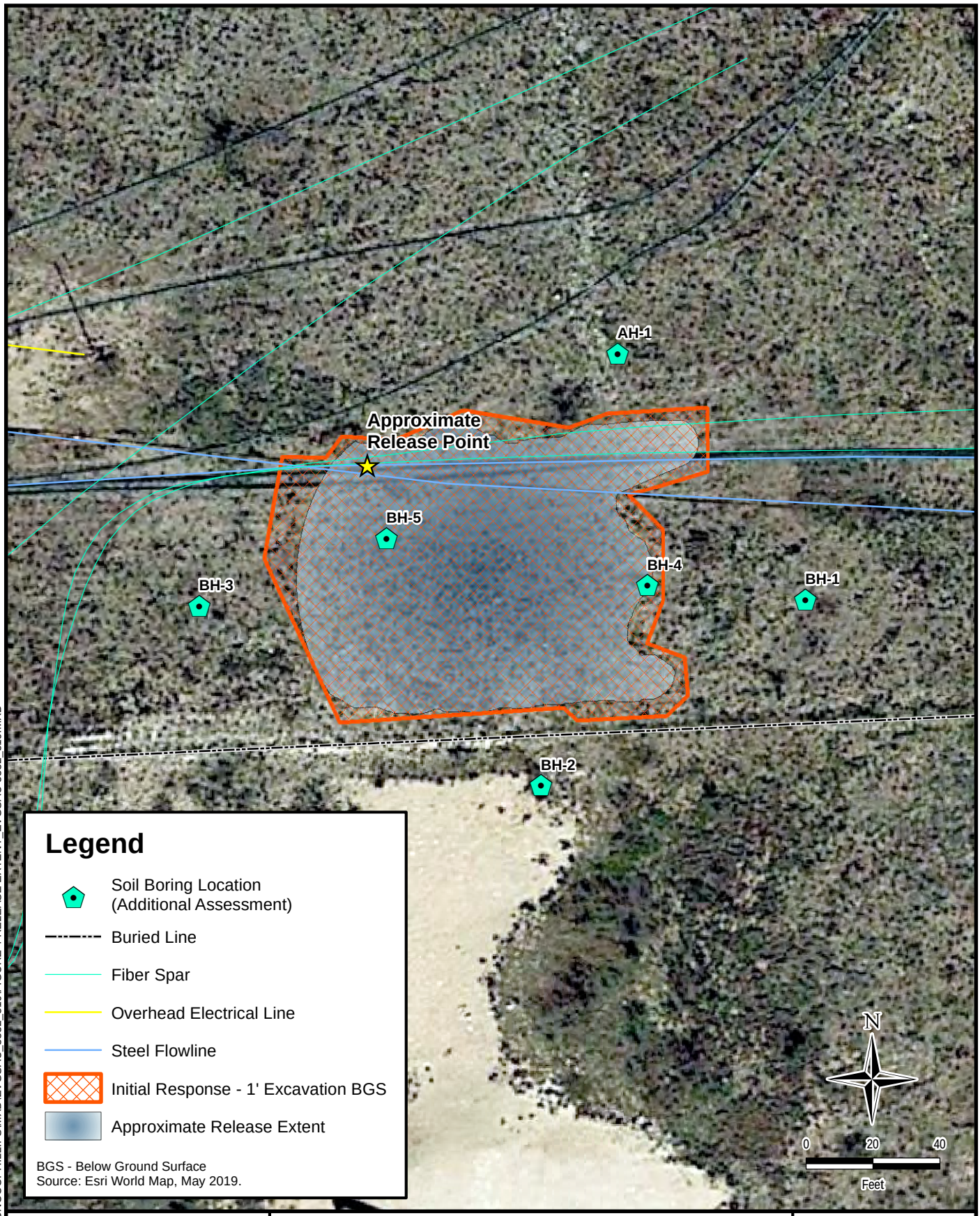
CONOCOPHILLIPS

(32.788462°, -103.475532°)
LEA COUNTY, NEW MEXICO

EVGSAU 3332-519 FLOWLINE RELEASE
APPROXIMATE RELEASE EXTENT AND INITIAL ASSESSMENT MAP

PROJECT NO.:	212C-MD-02141
DATE:	JULY 02, 2020
DESIGNED BY:	AAM

Figure No.
3



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\EVGSAU_3332_519\FIGURE 4 RELEASE EXTENT_EVGSAU 3332_519.MXD

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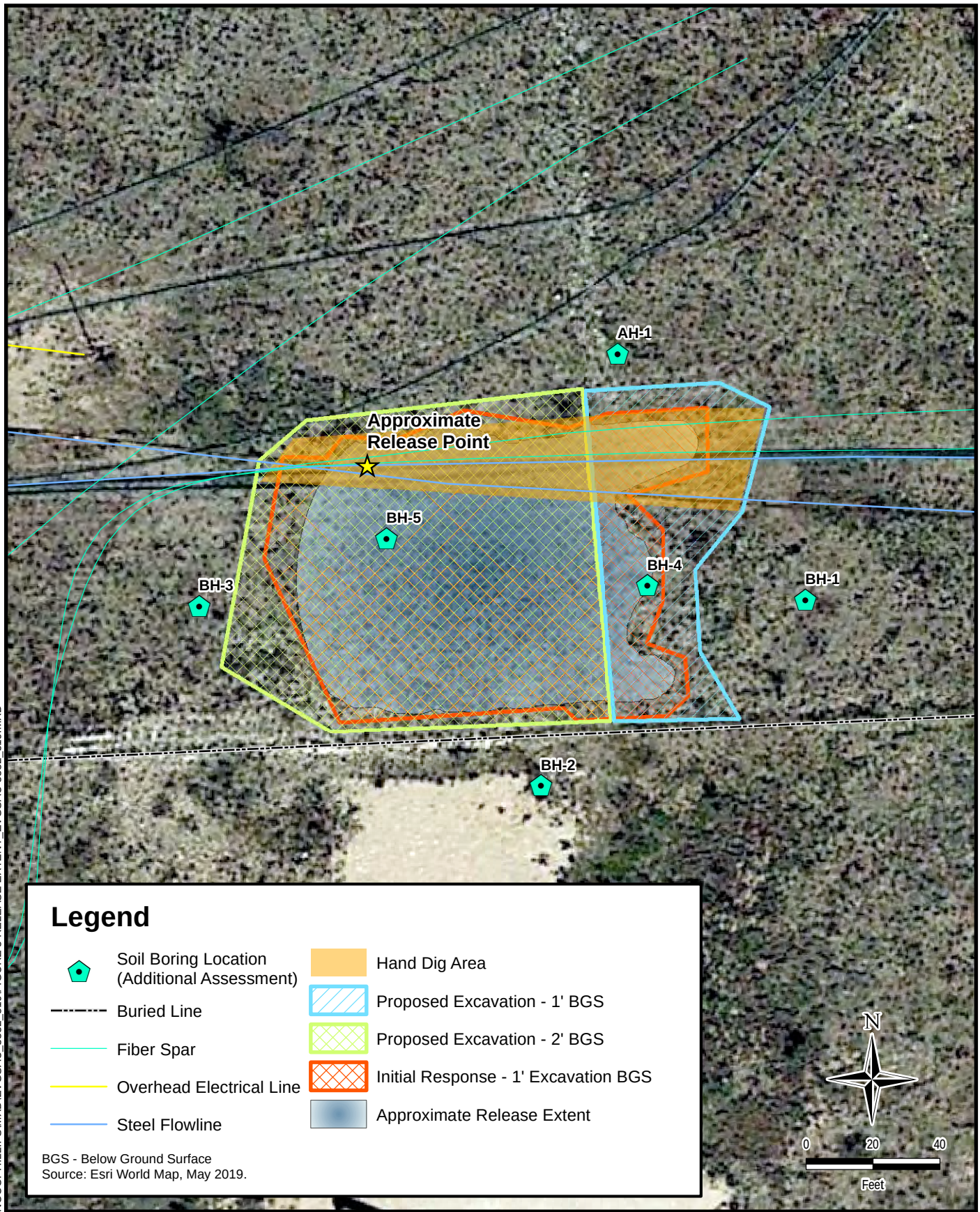
CONOCOPHILLIPS

NCE2003542701
(32.788462°, -103.475532°)
LEA COUNTY, NEW MEXICO

EVGSAU 3332-519 FLOWLINE RELEASE
ADDITIONAL ASSESSMENT AND INITIAL RESPONSE

PROJECT NO.:	212C-MD-02181
DATE:	JULY 02, 2020
DESIGNED BY:	AAM

Figure No.
4



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\EVGSAU_3332_519\FIGURE 5 RELEASE EXTENT_EVGSAU 3332_519.MXD

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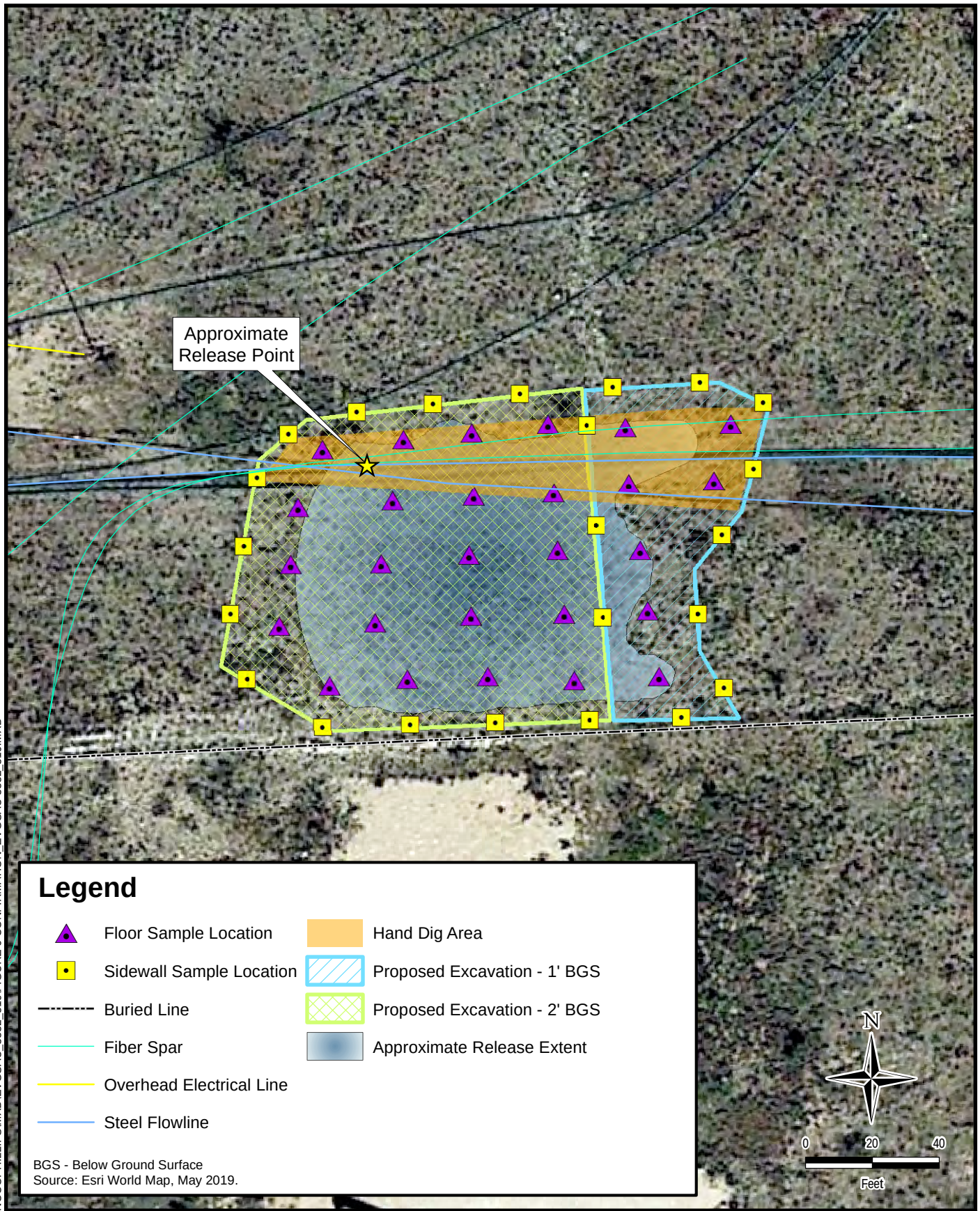
CONOCOPHILLIPS

NCE2003542701
(32.788462°, -103.475532°)
LEA COUNTY, NEW MEXICO

EVGSAU 3332-519 FLOWLINE RELEASE
PROPOSED REMEDIATION EXTENT

PROJECT NO.:	212C-MD-02181
DATE:	JULY 06, 2020
DESIGNED BY:	AAM

Figure No.
5



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LEA COUNTY, NEW MEXICO

EVGSAU 3332-519 FLOWLINE RELEASE
ALTERNATIVE CONFIRMATION SAMPLING PLAN

PROJECT NO.:	212C-MD-02181
DATE:	JULY 06, 2020
DESIGNED BY:	AAM

Figure No.
6

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESSMENT - NCE2003542701
CONOCOPHILLIPS
EVSGAU 3332-519 FLOWLINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Chloride[1]		BTEX[2]										TPH[3]							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO[4] 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	2/18/2020	0.5	***4400***		<0.050		<0.050		<0.050		<0.150		<0.300		<.10.0		<.10.0		<.10.0		-	
SP#2	2/18/2020	0.5	***7360***		<0.050		<0.050		<0.050		<0.150		<0.300		10.1		2340		579		***2929***	
SP#3	2/18/2020	0.5	***8320***		<0.050		<0.050		<0.050		<0.150		<0.300		19.9		6850		1130		***7999.9***	
SP#4	2/18/2020	0.5	***9200***		<0.050		<0.050		<0.050		<0.150		<0.300		<.10.0		2790		577		***3367***	
SP#5	2/18/2020	0.5	***10600***		<0.050		<0.050		<0.050		<0.150		<0.300		<.10.0		109		27.1		***136.1***	
SP#6	2/18/2020	0.5	***20400***		<0.050		0.090		0.397		1.02		1.50		34.6		2510		478		***3023***	
SP#7	2/18/2020	0.5	***14000***		<0.050		0.098		0.754		2.18		3.03		234		18700		3300		***22234***	
SP#8	2/18/2020	0.5	***11000***		<0.050		<0.050		0.050		<0.150		<0.300		<.10.0		3670		684		***4354***	
SP#9	2/18/2020	0.5	***7200***		<0.050		4.03		31.1		57.9		93.1		1200		13000		1900		***16100***	
SP#10	2/18/2020	0.5	***14400***		<0.050		0.118		0.645		1.51		2.27		62.4		4970		866		***5898.4***	
SP#11	2/18/2020	0.5	***20600***		<0.050		0.060		0.154		0.365		0.579		21.8		5160		1090		***6272***	
SP#12	2/18/2020	0.5	***13200***		<0.050		0.053		0.143		0.452		0.648		46.4		7190		1180		***8416***	
SP#13	2/18/2020	0.5	***9600***		<0.050		<0.050		<0.050		<0.150		<0.300		<.10.0		3780		693		***4473***	
SP#14	2/18/2020	0.5	***28400***		<0.050		0.150		0.577		1.24		1.97		54.2		6330		987		***7371***	
SP#15	2/18/2020	0.5	***12200***		<0.050		0.220		0.975		2.02		3.22		72.2		4150		654		***4876***	
SP#16	2/18/2020	0.5	***15400***		<0.050		0.060		0.319		0.821		1.20		18.8		1330		252		***1600.8***	
SP#17	2/18/2020	0.5	***9600***		<0.050		<0.050		<0.050		<0.150		<0.300		<.10.0		690		167		***857***	
SP#18	2/18/2020	0.5	***10400***		<0.050		2.45		9.04		16.6		28.1		195		2470		402		***3067***	
SP#19	2/18/2020	0.5	***10600***		0.106		3.42		12.5		21.0		36.9		258		2610		447		***3315***	
SP#20	2/18/2020	0.5	***5920***		<0.050		<0.050		<0.050		<0.150		<0.300		<.10.0		22.3		<.10.0		22.3	
SP#21	2/18/2020	0.5	***12400***		<0.050		<0.050		<0.050		<0.150		<0.300		<.10.0		2300		560		***2860***	
SP#22	2/18/2020	0.5	***17400***		<0.050		<0.050		<0.050		<0.150		<0.300		<.10.0		5390		1180		***6570***	
SP#23	2/18/2020	0.5	***6800***		<0.050		<0.050		<0.050		<0.150		<0.300		<.10.0		18.2		<.10.0		18.2	
SP#24	2/18/2020	0.5	***9600***		<0.050		<0.050		<0.050		<0.150		<0.300		<.10.0		868		220		***1088.0***	

NOTES:

ft. Feet
bgs Below ground surface
ppm Parts per million
mg/kg Milligrams per kilogram
TPH Total Petroleum Hydrocarbons
GRO Gasoline range organics
DRO Diesel range organics
ORO Oil range organics
1 EPA Method 300.0
2 EPA Method 8260B
3 EPA Method 8015
4 EPA Method 8015D/GRO

Bold and italicized values indicate exceedance of proposed RRALs

1 EPA Method SM45000Cl-B
2 EPA Method 8021B
3 EPA Method 8015M

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
ADDITIONAL SOIL ASSESSMENT - NCE2003542701
CONOCOPHILLIPS
EVGSAU 3332-519 FLOWLINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Field Screening Results		Chloride[1]		BTEX[2]								TPH[3]						
			Chloride	PID			Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX	GRO[4] C_3 - C_{10}		DRO C_{10} - C_{28}		ORO C_{28} - C_{40}		Total TPH (GRO+DRO+ORO)
		ft. bgs	ppm		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
AH-1	5/13/2020	0-1	-	-	< 20.3		< 0.00102		< 0.00508		< 0.00254		< 0.00660		-	0.0380	B J	3.19	J	13.9		17.1
BH-1	5/13/2020	0-1	194	2.5	< 20.8		< 0.00104		< 0.00520		< 0.00260		< 0.00676		-	< 0.104		4.98		7.13		12.1
		2-3	-	1.4	10.3	J	< 0.00103		< 0.00516		< 0.00258		< 0.00671		-	< 0.103		3.13	J	2.58	J	5.71
		4-5	95.1	1.1	10.3	J	< 0.00103		< 0.00514		< 0.00257		< 0.00668		-	0.0377	J	< 4.11		< 4.11		0.0377
		6-7	-	0.9	< 20.5		< 0.00102		< 0.00512		< 0.00256		< 0.00665		-	< 0.102		< 4.09		< 4.09		-
		9-10	86.1	1.0	< 20.5		< 0.00409		< 0.0205		< 0.0102		< 0.0266		-	< 0.102		< 4.09		< 4.09		-
BH-2	5/13/2020	0-1	351	1.9	137		< 0.00104		< 0.00522		< 0.00261		< 0.00679		-	< 0.104		4.80		11.2		16.0
		2-3	420	1.2	136		< 0.00105		< 0.00524		< 0.00262		< 0.00681		-	< 0.105		< 4.19		3.11	J	3.11
		4-5	551	1.3	220		< 0.00107		< 0.00536		< 0.00268		< 0.00696		-	< 0.107		< 4.28		1.03	J	1.03
		6-7	334	1.8	189		< 0.00103		< 0.00516		< 0.00258		< 0.00671		-	< 0.103		< 4.13		0.482	J	0.482
		9-10	209	1.1	112		< 0.00101		< 0.00505		< 0.00253		< 0.00657		-	0.0252	B J	< 4.04		< 4.04		0.0252
BH-3	5/13/2020	0-1	191	1.2	21.7		< 0.00105		< 0.00527		< 0.00263		< 0.00685		-	< 0.105		< 4.21		1.35	J	1.35
		2-3	170	1.4	24.8		< 0.00104		< 0.00518		< 0.00259		< 0.00674		-	< 0.104		< 4.14		0.538	J	0.538
		4-5	105	1.1	11.0	J	< 0.00104		< 0.00520		< 0.00260		< 0.00675		-	< 0.104		< 4.16		0.447	J	0.447
		6-7	121	0.9	< 20.7		< 0.00104		< 0.00518		< 0.00259		< 0.00674		-	< 0.104		< 4.15		< 4.15		-
		9-10	99.0	1.3	< 21.1		< 0.00106		< 0.00528		< 0.00264		< 0.00687		-	< 0.106		< 4.23		< 4.23		-
BH-4	5/13/2020	1-2	-	-	NA		NA		NA		NA		NA		-	NA		NA		NA		-
		2-3	-	-	13.3	J	< 0.00103		< 0.00514		< 0.00257		< 0.00669		-	0.0238	B J	< 4.12		1.08	J	1.10
		4-5	-	-	< 20.9		< 0.00105		< 0.00523		< 0.00262		< 0.00680		-	< 0.105		< 4.19		< 4.19		-
		6-7	95.3	2.3	< 21.2		< 0.00106		< 0.00530		< 0.00265		< 0.00689		-	< 0.106		< 4.24		< 4.24		-
		9-10	-	1.9	< 21.9		< 0.00109		< 0.00546		< 0.00273		< 0.00710		-	< 0.109		< 4.37		< 4.37		-
		14-15	-	1.6	NA		NA		NA		NA		NA		-	NA		NA		NA		-
		19-20	70.4	1.1	NA		NA		NA		NA		NA		-	NA		NA		NA		-
BH-5	5/13/2020	1-2	-	-	NA		NA		NA		NA		NA		-	NA		NA		NA		-
		2-3	-	-	***940***		< 0.00106		< 0.00528		< 0.00264		< 0.00686		-	< 0.106		< 4.22		1.53	J	1.53
		4-5	-	-	145		< 0.00103		< 0.00514		< 0.00257		< 0.00669		-	< 0.103		< 4.12		< 4.12		-
		6-7	80.4	1.4	< 20.6		< 0.00103		< 0.00515		< 0.00257		< 0.00669		-	< 0.103		< 4.12		< 4.12		-
		9-10	-	1.1	< 20.3		< 0.00102		< 0.00508		< 0.00254		< 0.00660		-	< 0.102		< 4.06		< 4.06		-
		14-15	-	0.4	NA		NA		NA		NA		NA		-	NA		NA		NA		-
		19-20	79.1	1.2	NA		NA		NA		NA		NA		-	NA		NA		NA		-

NOTES:

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

Bold and italicized values indicate exceedance of proposed RRALs

Shaded rows indicate depth intervals proposed for excavation and remediation.

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	NCE2003542701
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.788462 Longitude -103.475532
(NAD 83 in decimal degrees to 5 decimal places)

Site Name EVGSAU 3332-519	Site Type flow line leak
Date Release Discovered 01/10/2020	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
I	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) 10	Volume Recovered (bbls) 2.5
☑ Produced Water	Volume Released (bbls) 55.5	Volume Recovered (bbls) 2.5
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release Flowline rupture

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NCE2003542701
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? it exceeded the 25bbls defined by the Major release definition

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

It was given on 1/10/20 to district 1 email address and Bradford Billings

Initial Response

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

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

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

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

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

Printed Name: Gustavo Fejervary
Title: Environmental Coordinator
Signature:
Date: 1/21/20
email: g.fejervary@cop.com
Telephone: 432/210-7037

OCD Only

Received by:
Date:

NCE2003542701

L48 Spill Volume Estimate Form

Facility Name & Number:	EVGSAU 3332-519
Asset Area:	SENM (BUCKEYE)
Release Discovery Date & Time:	1/9/2020 10:30AM
Release Type:	Oil Mixture
Provide any known details about the event:	Flowline leak

Spill Calculation - On Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated *Pool* Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	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	90.0	60.0	0.50	4	5400.000	0.010	10.013	0.001	10.018	15.14%	1.517	8.501
Rectangle B	40.0	10.0	0.50	3	400.000	0.014	0.989	0.001	0.990	15.14%	0.150	0.840
Rectangle C	30.0	7.0	0.50	3	210.000	0.014	0.519	0.001	0.520	15.14%	0.079	0.441
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle J					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
								Total Volume Release:	11.527		1.745	9.782

L48 Spill Volume Estimate Form

Facility Name & Number:	EVGSAU 3332-519
Asset Area:	SENM (BUCKEYE)
Release Discovery Date & Time:	1/9/2020 10:30AM CST
Release Type:	Oil Mixture
Provide any known details about the event:	Flowline Leak. Five barrels were recovered

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	60.0	90.0	4.00	15.12%	320.400	48.444	15.14%	7.334	41.110
Rectangle B	40.0	10.0	4.00	15.12%	23.733	3.588	15.14%	0.543	3.045
Rectangle C	30.0	7.0	4.00	15.12%	12.460	1.884	15.14%	0.285	1.599
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:	53.917		8.163	45.754

State of New Mexico
Oil Conservation Division

Incident ID	NCE2003542701
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?	85 (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.

State of New Mexico
Oil Conservation Division

Incident ID	NCE2003542701
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: 7/23/2020

email: marvin.soriwei@conocophillips.com Telephone: 832-486-2730

OCD Only

Received by: Cristina Eads Date: 07/24/2020

State of New Mexico
Oil Conservation Division

Incident ID	NCE2003542701
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: 7/23/2020

email: marvin.soriwei@conocophillipd.com Telephone: 832-486-2730

OCD Only

Received by: Cristina Eads Date: 07/24/2020

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

Signature: Date: 09/21/2020

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-basin	Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 04829 S	L		LE	3	4		32	17S	35E	642554	3628586*	198	85	113

Average Depth to Water: **85 feet**

Minimum Depth: **85 feet**

Maximum Depth: **85 feet**

Record Count: 1

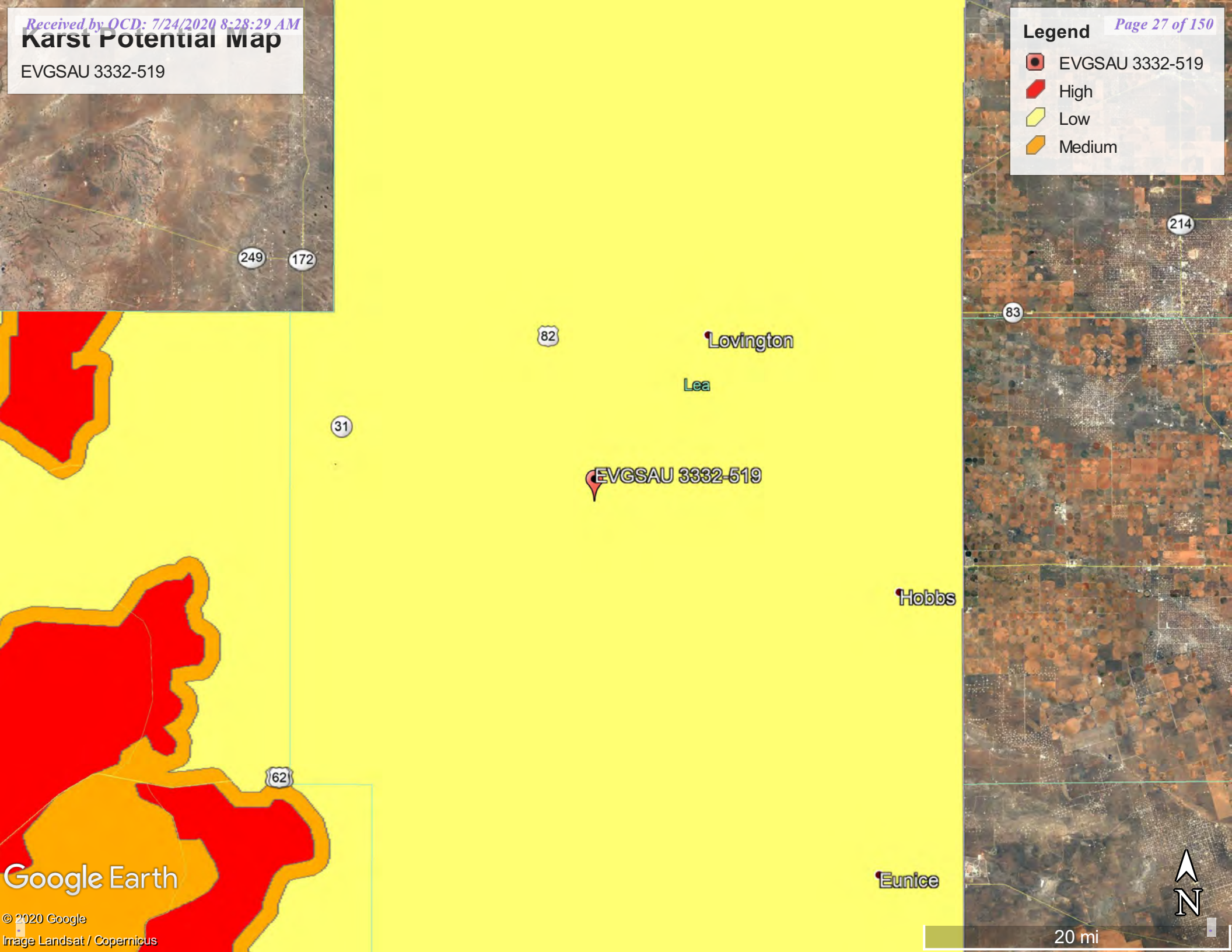
PLSS Search:

Section(s): 32 **Township:** 17S **Range:** 35E

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

Karst Potential Map

EVGSAU 3332-519



EVGSAU 3332-519 NMOCD Map

3/18/2020, 3:49:19 PM

New Mexico Counties
New Mexico Towns
NMDOT GPS ROADS
NMDOT Railroads
OSE Water-bodies
PLJV Probable Playas
OSE Streams

1:5,072

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

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

APPENDIX C
Laboratory Analytical Data

CARDINAL Laboratories

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

March 05, 2020

JUSTIN WRIGHT

Conoco Phillips - Hobbs

P. O. BOX 325

Hobbs, NM 88240

RE: EVGSAU 3332-519

Enclosed are the results of analyses for samples received by the laboratory on 02/19/20 16:10.

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

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP # 1	H000528-01	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 2	H000528-02	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 3	H000528-03	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 4	H000528-04	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 5	H000528-05	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 6	H000528-06	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 7	H000528-07	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 8	H000528-08	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 9	H000528-09	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 10	H000528-10	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 11	H000528-11	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 12	H000528-12	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 13	H000528-13	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 14	H000528-14	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 15	H000528-15	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 16	H000528-16	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 17	H000528-17	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 18	H000528-18	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 19	H000528-19	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 20	H000528-20	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 21	H000528-21	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 22	H000528-22	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 23	H000528-23	Soil	18-Feb-20 00:00	19-Feb-20 16:10
SP # 24	H000528-24	Soil	18-Feb-20 00:00	19-Feb-20 16:10

03/04/20 - Client revised the project name via email.
03/05/20 - This is the revised report and will replace the one sent on 02/25/20.

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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 1

H000528-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**4400**		16.0	mg/kg	4	0022404	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*100 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022106	CK	22-Feb-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0022106	CK	22-Feb-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0022106	CK	22-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*80.9 %*	*44.3-144*		*0022106*	CK	*22-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*84.9 %*	*42.2-156*		*0022106*	CK	*22-Feb-20*	*8015B*	

Cardinal Laboratories

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 2

H000528-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**7360**		16.0	mg/kg	4	0022404	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	**10.1**		10.0	mg/kg	1	0022106	CK	22-Feb-20	8015B	
DRO >C10-C28*	**2340**		10.0	mg/kg	1	0022106	CK	22-Feb-20	8015B	
EXT DRO >C28-C36	**579**		10.0	mg/kg	1	0022106	CK	22-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*79.5 %*	*44.3-144*		*0022106*	CK	*22-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*135 %*	*42.2-156*		*0022106*	CK	*22-Feb-20*	*8015B*	

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 3

H000528-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**8320**		16.0	mg/kg	4	0022404	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-04**
GRO C6-C10*	**19.9**		10.0	mg/kg	1	0022106	CK	22-Feb-20	8015B	
DRO >C10-C28*	**6850**		10.0	mg/kg	1	0022106	CK	22-Feb-20	8015B	
EXT DRO >C28-C36	**1130**		10.0	mg/kg	1	0022106	CK	22-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*107 %*	*44.3-144*		*0022106*	CK	*22-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*286 %*	*42.2-156*		*0022106*	CK	*22-Feb-20*	*8015B*	

Cardinal Laboratories

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 4

H000528-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**9200**		16.0	mg/kg	4	0022404	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-04**
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
DRO >C10-C28*	**2790**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	QM-07
EXT DRO >C28-C36	**577**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*88.9 %*	*44.3-144*		*0022107*	CK	*23-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*161 %*	*42.2-156*		*0022107*	CK	*23-Feb-20*	*8015B*	

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 5

H000528-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**10600**		16.0	mg/kg	4	0022404	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
DRO >C10-C28*	**109**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
EXT DRO >C28-C36	**27.1**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*90.3 %*	*44.3-144*		*0022107*	CK	*23-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*96.6 %*	*42.2-156*		*0022107*	CK	*23-Feb-20*	*8015B*	

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 6

H000528-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**20400**		16.0	mg/kg	4	0022404	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	**0.090**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	**0.397**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	**1.02**		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	**1.50**		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*119 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-04**
GRO C6-C10*	**34.6**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
DRO >C10-C28*	**2510**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
EXT DRO >C28-C36	**478**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*108 %*	*44.3-144*		*0022107*	CK	*23-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*160 %*	*42.2-156*		*0022107*	CK	*23-Feb-20*	*8015B*	

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 7

H000528-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**14000**		16.0	mg/kg	4	0022404	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										**S-04**
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	24-Feb-20	8021B	
Toluene*	**0.098**		0.050	mg/kg	50	0022110	CK	24-Feb-20	8021B	
Ethylbenzene*	**0.754**		0.050	mg/kg	50	0022110	CK	24-Feb-20	8021B	
Total Xylenes*	**2.18**		0.150	mg/kg	50	0022110	CK	24-Feb-20	8021B	
Total BTEX	**3.03**		0.300	mg/kg	50	0022110	CK	24-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*155 %*	*73.3-129*		*0022110*	CK	*24-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-06**
GRO C6-C10*	**234**		50.0	mg/kg	5	0022107	CK	23-Feb-20	8015B	
DRO >C10-C28*	**18700**		50.0	mg/kg	5	0022107	CK	23-Feb-20	8015B	
EXT DRO >C28-C36	**3300**		50.0	mg/kg	5	0022107	CK	23-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*172 %*	*44.3-144*		*0022107*	CK	*23-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*586 %*	*42.2-156*		*0022107*	CK	*23-Feb-20*	*8015B*	

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 8

H000528-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**11000**		16.0	mg/kg	4	0022404	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	**0.050**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*105 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-04**
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
DRO >C10-C28*	**3670**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
EXT DRO >C28-C36	**684**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*86.8 %*	*44.3-144*		*0022107*	CK	*23-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*190 %*	*42.2-156*		*0022107*	CK	*23-Feb-20*	*8015B*	

Cardinal Laboratories

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 9

H000528-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**7200**		16.0	mg/kg	4	0022404	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.500		0.500	mg/kg	500	0022110	CK	23-Feb-20	8021B	
Toluene*	**4.03**		0.500	mg/kg	500	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	**31.1**		0.500	mg/kg	500	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	**57.9**		1.50	mg/kg	500	0022110	CK	23-Feb-20	8021B	
Total BTEX	**93.1**		3.00	mg/kg	500	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*125 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-06**
GRO C6-C10*	**1200**		50.0	mg/kg	5	0022107	CK	23-Feb-20	8015B	
DRO >C10-C28*	**13000**		50.0	mg/kg	5	0022107	CK	23-Feb-20	8015B	
EXT DRO >C28-C36	**1900**		50.0	mg/kg	5	0022107	CK	23-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*239 %*	*44.3-144*		*0022107*	CK	*23-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*415 %*	*42.2-156*		*0022107*	CK	*23-Feb-20*	*8015B*	

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 10

H000528-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**14400**		16.0	mg/kg	4	0022404	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	**0.118**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	**0.645**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	**1.51**		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	**2.27**		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*122 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-04**
GRO C6-C10*	**62.4**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
DRO >C10-C28*	**4970**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
EXT DRO >C28-C36	**866**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*122 %*	*44.3-144*		*0022107*	CK	*23-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*233 %*	*42.2-156*		*0022107*	CK	*23-Feb-20*	*8015B*	

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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 11

H000528-11 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**20600**		16.0	mg/kg	4	0022404	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	**0.060**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	**0.154**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	**0.365**		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	**0.579**		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*104 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-04**
GRO C6-C10*	**21.8**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
DRO >C10-C28*	**5160**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
EXT DRO >C28-C36	**1090**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*91.1 %*	*44.3-144*		*0022107*	CK	*23-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*252 %*	*42.2-156*		*0022107*	CK	*23-Feb-20*	*8015B*	

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 12

H000528-12 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**13200**		16.0	mg/kg	4	0022404	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	**0.053**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	**0.143**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	**0.452**		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	**0.648**		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*113 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-04**
GRO C6-C10*	**46.4**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
DRO >C10-C28*	**7190**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
EXT DRO >C28-C36	**1180**		10.0	mg/kg	1	0022107	CK	23-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*131 %*	*44.3-144*		*0022107*	CK	*23-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*298 %*	*42.2-156*		*0022107*	CK	*23-Feb-20*	*8015B*	

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 13

H000528-13 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**9600**		16.0	mg/kg	4	0022413	GM	24-Feb-20	4500-Cl-B	QM-07
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*100 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-04**
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
DRO >C10-C28*	**3780**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
EXT DRO >C28-C36	**693**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*84.4 %*	*44.3-144*		*0022107*	CK	*24-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*193 %*	*42.2-156*		*0022107*	CK	*24-Feb-20*	*8015B*	

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CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 14

H000528-14 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**28400**		16.0	mg/kg	4	0022413	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	**0.150**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	**0.577**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	**1.24**		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	**1.97**		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*116 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-04**
GRO C6-C10*	**54.2**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
DRO >C10-C28*	**6330**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
EXT DRO >C28-C36	**987**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*104 %*	*44.3-144*		*0022107*	CK	*24-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*266 %*	*42.2-156*		*0022107*	CK	*24-Feb-20*	*8015B*	

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CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 15

H000528-15 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**12200**		16.0	mg/kg	4	0022413	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	**0.220**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	**0.975**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	**2.02**		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	**3.22**		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*122 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-04**
GRO C6-C10*	**72.2**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
DRO >C10-C28*	**4150**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
EXT DRO >C28-C36	**654**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*124 %*	*44.3-144*		*0022107*	CK	*24-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*204 %*	*42.2-156*		*0022107*	CK	*24-Feb-20*	*8015B*	

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CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 16

H000528-16 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**15400**		16.0	mg/kg	4	0022413	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	**0.060**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	**0.319**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	**0.821**		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	**1.20**		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*113 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	**18.8**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
DRO >C10-C28*	**1330**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
EXT DRO >C28-C36	**252**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*98.7 %*	*44.3-144*		*0022107*	CK	*24-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*126 %*	*42.2-156*		*0022107*	CK	*24-Feb-20*	*8015B*	

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CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 17

H000528-17 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**9600**		16.0	mg/kg	4	0022413	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*99.7 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
DRO >C10-C28*	**690**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
EXT DRO >C28-C36	**167**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*85.2 %*	*44.3-144*		*0022107*	CK	*24-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*97.2 %*	*42.2-156*		*0022107*	CK	*24-Feb-20*	*8015B*	

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CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 18

H000528-18 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**10400**		16.0	mg/kg	4	0022413	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										**S-04**
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	**2.45**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	**9.04**		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	**16.6**		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	**28.1**		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*192 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	**195**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
DRO >C10-C28*	**2470**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
EXT DRO >C28-C36	**402**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*144 %*	*44.3-144*		*0022107*	CK	*24-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*151 %*	*42.2-156*		*0022107*	CK	*24-Feb-20*	*8015B*	

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 19

H000528-19 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**10600**		16.0	mg/kg	4	0022413	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										**S-04**
Benzene*	**0.106**		0.100	mg/kg	100	0022110	CK	24-Feb-20	8021B	
Toluene*	**3.42**		0.100	mg/kg	100	0022110	CK	24-Feb-20	8021B	
Ethylbenzene*	**12.5**		0.100	mg/kg	100	0022110	CK	24-Feb-20	8021B	
Total Xylenes*	**21.0**		0.300	mg/kg	100	0022110	CK	24-Feb-20	8021B	
Total BTEX	**36.9**		0.600	mg/kg	100	0022110	CK	24-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*169 %*	*73.3-129*		*0022110*	CK	*24-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-04**
GRO C6-C10*	**258**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
DRO >C10-C28*	**2610**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
EXT DRO >C28-C36	**447**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*160 %*	*44.3-144*		*0022107*	CK	*24-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*148 %*	*42.2-156*		*0022107*	CK	*24-Feb-20*	*8015B*	

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 20

H000528-20 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**5920**		16.0	mg/kg	4	0022413	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022110	CK	23-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*99.3 %*	*73.3-129*		*0022110*	CK	*23-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
DRO >C10-C28*	**22.3**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*85.6 %*	*44.3-144*		*0022107*	CK	*24-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*88.5 %*	*42.2-156*		*0022107*	CK	*24-Feb-20*	*8015B*	

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CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 21

H000528-21 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**12400**		16.0	mg/kg	4	0022413	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*100 %*	*73.3-129*		*0022111*	CK	*24-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-04**
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
DRO >C10-C28*	**2300**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
EXT DRO >C28-C36	**560**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*86.2 %*	*44.3-144*		*0022107*	CK	*24-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*167 %*	*42.2-156*		*0022107*	CK	*24-Feb-20*	*8015B*	

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 22

H000528-22 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**17400**		16.0	mg/kg	4	0022413	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*100 %*	*73.3-129*		*0022111*	CK	*24-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-04**
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
DRO >C10-C28*	**5390**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
EXT DRO >C28-C36	**1180**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*83.2 %*	*44.3-144*		*0022107*	CK	*24-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*269 %*	*42.2-156*		*0022107*	CK	*24-Feb-20*	*8015B*	

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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 23

H000528-23 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**6800**		16.0	mg/kg	4	0022413	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*73.3-129*		*0022111*	CK	*24-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
DRO >C10-C28*	**18.2**		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0022107	CK	24-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*89.2 %*	*44.3-144*		*0022107*	CK	*24-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*93.3 %*	*42.2-156*		*0022107*	CK	*24-Feb-20*	*8015B*	

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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

SP # 24

H000528-24 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**9600**		16.0	mg/kg	4	0022413	GM	24-Feb-20	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0022111	CK	24-Feb-20	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*73.3-129*		*0022111*	CK	*24-Feb-20*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	0022410	CK	24-Feb-20	8015B	
DRO >C10-C28*	**868**		10.0	mg/kg	1	0022410	CK	24-Feb-20	8015B	
EXT DRO >C28-C36	**220**		10.0	mg/kg	1	0022410	CK	24-Feb-20	8015B	
Surrogate: 1-Chlorooctane			*89.7 %*	*44.3-144*		*0022410*	CK	*24-Feb-20*	*8015B*	
Surrogate: 1-Chlorooctadecane			*115 %*	*42.2-156*		*0022410*	CK	*24-Feb-20*	*8015B*	

Cardinal Laboratories

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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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0022404 - 1:4 DI Water										
Blank (0022404-BLK1)				Prepared & Analyzed: 24-Feb-20						
Chloride	ND	16.0	mg/kg							
LCS (0022404-BS1)				Prepared & Analyzed: 24-Feb-20						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (0022404-BSD1)				Prepared & Analyzed: 24-Feb-20						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	
Batch 0022413 - 1:4 DI Water										
Blank (0022413-BLK1)				Prepared & Analyzed: 24-Feb-20						
Chloride	ND	16.0	mg/kg							
LCS (0022413-BS1)				Prepared & Analyzed: 24-Feb-20						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (0022413-BSD1)				Prepared & Analyzed: 24-Feb-20						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

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CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0022110 - Volatiles										
Blank (0022110-BLK1)				Prepared: 21-Feb-20 Analyzed: 23-Feb-20						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*99.0*	*73.3-129*			
LCS (0022110-BS1)				Prepared: 21-Feb-20 Analyzed: 23-Feb-20						
Benzene	1.87	0.050	mg/kg	2.00		93.7	72.2-131			
Toluene	1.91	0.050	mg/kg	2.00		95.7	71.7-126			
Ethylbenzene	1.87	0.050	mg/kg	2.00		93.7	68.9-126			
Total Xylenes	5.43	0.150	mg/kg	6.00		90.6	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0484*		mg/kg	*0.0500*		*96.9*	*73.3-129*			
LCS Dup (0022110-BSD1)				Prepared: 21-Feb-20 Analyzed: 23-Feb-20						
Benzene	1.91	0.050	mg/kg	2.00		95.3	72.2-131	1.70	14.6	
Toluene	1.94	0.050	mg/kg	2.00		96.8	71.7-126	1.10	17.4	
Ethylbenzene	1.92	0.050	mg/kg	2.00		96.2	68.9-126	2.60	18.9	
Total Xylenes	5.57	0.150	mg/kg	6.00		92.8	71.4-125	2.49	18.5	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0492*		mg/kg	*0.0500*		*98.4*	*73.3-129*			
Batch 0022111 - Volatiles										
Blank (0022111-BLK1)				Prepared: 21-Feb-20 Analyzed: 24-Feb-20						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0509*		mg/kg	*0.0500*		*102*	*73.3-129*			

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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0022111 - Volatiles										
LCS (0022111-BS1)				Prepared: 21-Feb-20 Analyzed: 24-Feb-20						
Benzene	1.77	0.050	mg/kg	2.00		88.3	72.2-131			
Toluene	1.75	0.050	mg/kg	2.00		87.6	71.7-126			
Ethylbenzene	1.76	0.050	mg/kg	2.00		88.1	68.9-126			
Total Xylenes	5.09	0.150	mg/kg	6.00		84.9	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0511*		mg/kg	*0.0500*		*102*	*73.3-129*			
LCS Dup (0022111-BSD1)				Prepared: 21-Feb-20 Analyzed: 24-Feb-20						
Benzene	1.89	0.050	mg/kg	2.00		94.5	72.2-131	6.87	14.6	
Toluene	1.88	0.050	mg/kg	2.00		93.9	71.7-126	6.95	17.4	
Ethylbenzene	1.90	0.050	mg/kg	2.00		95.0	68.9-126	7.53	18.9	
Total Xylenes	5.48	0.150	mg/kg	6.00		91.4	71.4-125	7.38	18.5	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0508*		mg/kg	*0.0500*		*102*	*73.3-129*			

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CARDINAL Laboratories

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

Analytical Results For:

Conoco Phillips - Hobbs P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0022106 - General Prep - Organics										
Blank (0022106-BLK1)				Prepared: 21-Feb-20 Analyzed: 22-Feb-20						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*48.7*		mg/kg	*50.0*		*97.3*	*44.3-144*			
Surrogate: 1-Chlorooctadecane	*50.3*		mg/kg	*50.0*		*101*	*42.2-156*			
LCS (0022106-BS1)				Prepared: 21-Feb-20 Analyzed: 22-Feb-20						
GRO C6-C10	193	10.0	mg/kg	200		96.4	78.8-127			
DRO >C10-C28	206	10.0	mg/kg	200		103	80-132			
Total TPH C6-C28	399	10.0	mg/kg	400		99.8	81.3-128			
Surrogate: 1-Chlorooctane	*51.1*		mg/kg	*50.0*		*102*	*44.3-144*			
Surrogate: 1-Chlorooctadecane	*50.8*		mg/kg	*50.0*		*102*	*42.2-156*			
LCS Dup (0022106-BSD1)				Prepared: 21-Feb-20 Analyzed: 22-Feb-20						
GRO C6-C10	197	10.0	mg/kg	200		98.5	78.8-127	2.22	15.1	
DRO >C10-C28	212	10.0	mg/kg	200		106	80-132	2.75	17.1	
Total TPH C6-C28	409	10.0	mg/kg	400		102	81.3-128	2.50	15	
Surrogate: 1-Chlorooctane	*50.2*		mg/kg	*50.0*		*100*	*44.3-144*			
Surrogate: 1-Chlorooctadecane	*51.3*		mg/kg	*50.0*		*103*	*42.2-156*			
Batch 0022107 - General Prep - Organics										
Blank (0022107-BLK1)				Prepared: 21-Feb-20 Analyzed: 23-Feb-20						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*48.8*		mg/kg	*50.0*		*97.7*	*44.3-144*			
Surrogate: 1-Chlorooctadecane	*50.5*		mg/kg	*50.0*		*101*	*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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0022107 - General Prep - Organics										
LCS (0022107-BS1)				Prepared: 21-Feb-20 Analyzed: 23-Feb-20						
GRO C6-C10	206	10.0	mg/kg	200		103	78.8-127			
DRO >C10-C28	217	10.0	mg/kg	200		109	80-132			
Total TPH C6-C28	423	10.0	mg/kg	400		106	81.3-128			
Surrogate: 1-Chlorooctane	*54.2*		mg/kg	*50.0*		*108*	*44.3-144*			
Surrogate: 1-Chlorooctadecane	*55.0*		mg/kg	*50.0*		*110*	*42.2-156*			
LCS Dup (0022107-BSD1)				Prepared: 21-Feb-20 Analyzed: 23-Feb-20						
GRO C6-C10	200	10.0	mg/kg	200		100	78.8-127	2.73	15.1	
DRO >C10-C28	212	10.0	mg/kg	200		106	80-132	2.27	17.1	
Total TPH C6-C28	413	10.0	mg/kg	400		103	81.3-128	2.49	15	
Surrogate: 1-Chlorooctane	*51.3*		mg/kg	*50.0*		*103*	*44.3-144*			
Surrogate: 1-Chlorooctadecane	*53.2*		mg/kg	*50.0*		*106*	*42.2-156*			
Batch 0022410 - General Prep - Organics										
Blank (0022410-BLK1)				Prepared & Analyzed: 24-Feb-20						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*49.7*		mg/kg	*50.0*		*99.4*	*44.3-144*			
Surrogate: 1-Chlorooctadecane	*50.3*		mg/kg	*50.0*		*101*	*42.2-156*			
LCS (0022410-BS1)				Prepared & Analyzed: 24-Feb-20						
GRO C6-C10	190	10.0	mg/kg	200		95.1	78.8-127			
DRO >C10-C28	178	10.0	mg/kg	200		88.8	80-132			
Total TPH C6-C28	368	10.0	mg/kg	400		92.0	81.3-128			
Surrogate: 1-Chlorooctane	*53.1*		mg/kg	*50.0*		*106*	*44.3-144*			
Surrogate: 1-Chlorooctadecane	*52.8*		mg/kg	*50.0*		*106*	*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 P. O. BOX 325 Hobbs NM, 88240	Project: EVGSAU 3332-519 Project Number: NONE GIVEN Project Manager: JUSTIN WRIGHT Fax To: (575) 297-1477	Reported: 05-Mar-20 09:11

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0022410 - General Prep - Organics										
LCS Dup (0022410-BSD1)				Prepared & Analyzed: 24-Feb-20						
GRO C6-C10	195	10.0	mg/kg	200		97.6	78.8-127	2.53	15.1	
DRO >C10-C28	178	10.0	mg/kg	200		89.1	80-132	0.329	17.1	
Total TPH C6-C28	373	10.0	mg/kg	400		93.3	81.3-128	1.47	15	
Surrogate: 1-Chlorooctane	*54.0*		mg/kg	*50.0*		*108*	*44.3-144*			
Surrogate: 1-Chlorooctadecane	*53.8*		mg/kg	*50.0*		*108*	*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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	ConocoPhillips	P.O. #:	
Project Manager:	Justin Wright	Company:	COPC
Address:		Attn:	
City:	Hobbs St NM Zip #	Address:	
Phone #:	575-631-9092 Fax #:	City:	
Project #:	Project Owner: COPC	State:	Zip:
Project Name:	EVGSAU ~~3202-012~~ 3332-519 *	Phone #:	
Project Location:	Lea County, NM	Fax #:	
Sampler Name:	Justin Wright		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Chlorides	BTEX	TPH
H000528																	
1	SP #1	G				*					*		2-18		✓	✓	✓
2	SP #2	G				*					*		2-18		✓	✓	✓
3	SP #3	G				*					*		2-18		✓	✓	✓
4	SP #4	G				*					*		2-18		✓	✓	✓
5	SP #5	G				*					*		2-18		✓	✓	✓
6	SP #6	G				*					*		2-18		✓	✓	✓
7	SP #7	G				*					*		2-18		✓	✓	✓
8	SP #8	G				*					*		2-18		✓	✓	✓
9	SP #9	G				*					*		2-18		✓	✓	✓
10	SP #10	G				*					*		2-18		✓	✓	✓

Relinquished By:	Date: 2-19-20 Time: 4:10 pm	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address:
			REMARKS: * Project name revised as per Christian. 3/4/20 CK
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C -6°C Corrected Temp. °C	Sample Condition Cool: ☒ Yes ☐ No Intact: ☒ Yes ☐ No	CHECKED BY: (Initials) KJ
			Turnaround Time: Standard ☑ Rush ☐ Thermometer ID ~~#97~~ #113 Correction Factor ~~±0.4°C~~
			Bacteria (only) Sample Condition Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.0

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

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	ConocoPhillips	BILL TO	
Project Manager:	Justin Wright	P.O. #:	
Address:		Company:	COPC
City:	Hobbs St NM Zip #	Attn:	
Phone #:	575-631-9092 Fax #:	Address:	
Project #:	Project Owner: COPC	City:	
Project Name:	EVGSAU ~~3207-012~~ 3332-519*	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	BTEX	TPH
H000528																	
11	SP#11	G				*					*		2-18		✓	✓	✓
12	SP#12	G				*					*		2-18		✓	✓	✓
13	SP#13	G				*					*		2-18		✓	✓	✓
14	SP#14	G				*					*		2-18		✓	✓	✓
15	SP#15	G				*					*		2-18		✓	✓	✓
16	SP#16	G				*					*		2-18		✓	✓	✓
17	SP#17	G				*					*		2-18		✓	✓	✓
18	SP#18	G				*					*		2-18		✓	✓	✓
19	SP#19	G				*					*		2-18		✓	✓	✓
20	SP#20	G				*					*		2-18		✓	✓	✓

Relinquished By:	Date: 2-19-20 Time: 4:10 PM	Received By:	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 -6°C Corrected Temp. °C	Sample Condition Cool Yes Intact Yes / No No	CHECKED BY: (Initials) HJ
Turnaround Time: Standard ☒ Rush ☐ Thermometer ID #97 Correction Factor +0.4°C #113	Bacteria (only) Sample Condition Cool Yes Intact Yes / No 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

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:	COPC
City:	Hobbs St NM Zip #	Attn:	
Phone #:	575-631-9092 Fax #:	Address:	
Project #:	Project Owner: COPC	City:	
Project Name:	EVGSAU ~~3202-012~~ 3332-519 *	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	BTEX	TPH
H000528																	
21	SP# 21	G				*					*		2-18		✓	✓	✓
22	SP# 22	G				*					*		2-18		✓	✓	✓
23	SP# 23	G				*					*		2-18		✓	✓	✓
24	SP# 24	G				*					*		2-18		✓	✓	✓
		G				*					*						
		G				*					*						
		G				*					*						
		G				*					*						
		G				*					*						
		G				*					*						

Relinquished By:	Date: 2-19-20 Time: 4:10pm	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 6.2 Corrected Temp. °C	Sample Condition Cool: ☒ Yes ☐ No Intact: ☒ Yes ☐ No	CHECKED BY: (Initials) hs

Turnaround Time: Standard ☒ Rush ☐
Thermometer ID #97
Correction Factor +0.4 °C #113

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

May 28, 2020

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1220029
Samples Received:	05/19/2020
Project Number:	212C-MD-02181
Description:	COP EVGSAU 3332-519

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

Entire Report Reviewed By:

Chris McCord
Project Manager

TABLE OF CONTENTS

BH-1 (0'-1') L1220029-01 Solid

Collected by: JT | Collected date/time: 05/13/20 10:00 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481813	1	05/26/20 16:30	05/26/20 16:44	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 15:57	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1480940	1	05/21/20 11:46	05/23/20 14:10	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/21/20 23:37	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1480987	1	05/22/20 22:52	05/24/20 00:49	JDG	Mt. Juliet, TN

BH-1 (2'-3') L1220029-02 Solid

Collected by: JT | Collected date/time: 05/13/20 10:10 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481813	1	05/26/20 16:30	05/26/20 16:44	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 16:16	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1480940	1	05/21/20 11:46	05/23/20 14:31	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/21/20 23:56	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1480987	1	05/22/20 22:52	05/24/20 01:02	JDG	Mt. Juliet, TN

BH-1 (4'-5') L1220029-03 Solid

Collected by: JT | Collected date/time: 05/13/20 10:20 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481813	1	05/26/20 16:30	05/26/20 16:44	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 16:25	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1480940	1	05/21/20 11:46	05/23/20 14:51	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 00:15	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1480987	1	05/22/20 22:52	05/23/20 23:17	JDG	Mt. Juliet, TN

BH-1 (6'-7') L1220029-04 Solid

Collected by: JT | Collected date/time: 05/13/20 10:30 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481814	1	05/26/20 21:30	05/26/20 21:41	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 16:35	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1480940	1	05/21/20 11:46	05/23/20 15:12	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 00:34	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1480987	1	05/22/20 22:52	05/23/20 23:30	JDG	Mt. Juliet, TN

BH-1 (9'-10') L1220029-05 Solid

Collected by: JT | Collected date/time: 05/13/20 10:40 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481814	1	05/26/20 21:30	05/26/20 21:41	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 16:44	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1480940	1	05/21/20 11:46	05/23/20 15:33	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	4	05/21/20 11:46	05/22/20 02:18	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 16:51	KLM	Mt. Juliet, TN

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

BH-2 (0'-1') L1220029-06 Solid

Collected by: JT | Collected date/time: 05/13/20 10:50 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481814	1	05/26/20 21:30	05/26/20 21:41	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 16:54	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1480943	1	05/21/20 11:46	05/22/20 23:24	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 02:38	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 20:21	KLM	Mt. Juliet, TN

BH-2 (2'-3') L1220029-07 Solid

Collected by: JT | Collected date/time: 05/13/20 11:00 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481814	1	05/26/20 21:30	05/26/20 21:41	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 17:03	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1480943	1	05/21/20 11:46	05/22/20 23:44	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 02:57	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 17:04	KLM	Mt. Juliet, TN

BH-2 (4'-5') L1220029-08 Solid

Collected by: JT | Collected date/time: 05/13/20 11:10 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481814	1	05/26/20 21:30	05/26/20 21:41	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 17:35	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1480943	1	05/21/20 11:46	05/23/20 00:05	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 03:16	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 17:17	KLM	Mt. Juliet, TN

BH-2 (6'-7') L1220029-09 Solid

Collected by: JT | Collected date/time: 05/13/20 11:20 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481814	1	05/26/20 21:30	05/26/20 21:41	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 17:45	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1480943	1	05/21/20 11:46	05/23/20 00:26	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 03:36	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 17:30	KLM	Mt. Juliet, TN

BH-2 (9'-10') L1220029-10 Solid

Collected by: JT | Collected date/time: 05/13/20 11:30 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481814	1	05/26/20 21:30	05/26/20 21:41	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 18:13	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1481347	1	05/21/20 11:46	05/23/20 14:31	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 03:55	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 17:43	KLM	Mt. Juliet, TN

BH-3 (0'-1') L1220029-11 Solid

Collected by: JT | Collected date/time: 05/13/20 11:40 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481814	1	05/26/20 21:30	05/26/20 21:41	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 18:23	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1480943	1	05/21/20 11:46	05/23/20 01:13	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 04:14	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 17:57	KLM	Mt. Juliet, TN

BH-3 (2'-3') L1220029-12 Solid

Collected by: JT | Collected date/time: 05/13/20 11:50 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481814	1	05/26/20 21:30	05/26/20 21:41	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 18:32	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1480943	1	05/21/20 11:46	05/23/20 01:34	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 04:34	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 18:10	KLM	Mt. Juliet, TN

BH-3 (4'-5') L1220029-13 Solid

Collected by: JT | Collected date/time: 05/13/20 12:00 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481814	1	05/26/20 21:30	05/26/20 21:41	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 18:42	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1480943	1	05/21/20 11:46	05/23/20 01:54	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 04:53	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 18:23	KLM	Mt. Juliet, TN

BH-3 (6'-7') L1220029-14 Solid

Collected by: JT | Collected date/time: 05/13/20 12:10 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481815	1	05/26/20 21:05	05/26/20 21:21	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 18:51	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1480943	1	05/21/20 11:46	05/23/20 06:36	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 05:12	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 18:36	KLM	Mt. Juliet, TN

BH-3 (9'-10') L1220029-15 Solid

Collected by: JT | Collected date/time: 05/13/20 12:20 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481815	1	05/26/20 21:05	05/26/20 21:21	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 19:01	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1481347	1	05/21/20 11:46	05/23/20 14:52	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 05:32	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 18:49	KLM	Mt. Juliet, TN

BH-4 (2'-3') L1220029-16 Solid

Collected by: JT | Collected date/time: 05/13/20 12:30 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481815	1	05/26/20 21:05	05/26/20 21:21	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 19:29	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1481347	1	05/21/20 11:46	05/23/20 15:13	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 05:51	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 19:02	KLM	Mt. Juliet, TN

BH-4 (4'-5') L1220029-17 Solid

Collected by: JT | Collected date/time: 05/13/20 12:40 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481815	1	05/26/20 21:05	05/26/20 21:21	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 19:39	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1481347	1	05/21/20 11:46	05/23/20 15:33	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 06:10	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 19:15	KLM	Mt. Juliet, TN

BH-4 (6'-7') L1220029-18 Solid

Collected by: JT | Collected date/time: 05/13/20 12:50 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481815	1	05/26/20 21:05	05/26/20 21:21	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 19:48	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1481347	1	05/21/20 11:46	05/23/20 15:54	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 06:29	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 19:28	KLM	Mt. Juliet, TN

BH-4 (9'-10') L1220029-19 Solid

Collected by: JT | Collected date/time: 05/13/20 13:00 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481815	1	05/26/20 21:05	05/26/20 21:21	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	1	05/20/20 14:13	05/20/20 19:58	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1481347	1	05/21/20 11:46	05/23/20 16:15	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 06:48	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 19:42	KLM	Mt. Juliet, TN

BH-5 (2'-3') L1220029-20 Solid

Collected by: JT | Collected date/time: 05/13/20 14:00 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481815	1	05/26/20 21:05	05/26/20 21:21	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479248	5	05/20/20 14:13	05/20/20 20:17	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1481347	1	05/21/20 11:46	05/23/20 16:35	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480587	1	05/21/20 11:46	05/22/20 07:08	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 19:55	KLM	Mt. Juliet, TN

BH-5 (4'-5') L1220029-21 Solid

Collected by: JT | Collected date/time: 05/13/20 14:10 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481815	1	05/26/20 21:05	05/26/20 21:21	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479249	1	05/20/20 16:05	05/20/20 21:33	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1481347	1	05/21/20 11:46	05/23/20 16:56	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480325	1	05/21/20 11:46	05/22/20 04:51	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481780	1	05/25/20 07:45	05/25/20 20:08	KLM	Mt. Juliet, TN

BH-5 (6'-7') L1220029-22 Solid

Collected by: JT | Collected date/time: 05/13/20 14:20 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481815	1	05/26/20 21:05	05/26/20 21:21	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479249	1	05/20/20 16:05	05/20/20 21:52	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1481347	1	05/21/20 11:46	05/23/20 17:16	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480325	1	05/21/20 11:46	05/22/20 05:10	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481870	1	05/26/20 16:44	05/27/20 14:29	FM	Mt. Juliet, TN

BH-5 (9'-10') L1220029-23 Solid

Collected by: JT | Collected date/time: 05/13/20 14:30 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481815	1	05/26/20 21:05	05/26/20 21:21	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479249	1	05/20/20 16:05	05/20/20 22:02	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1481347	1	05/21/20 11:46	05/23/20 17:37	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480325	1	05/21/20 11:46	05/22/20 05:29	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481870	1	05/26/20 16:44	05/27/20 14:45	FM	Mt. Juliet, TN

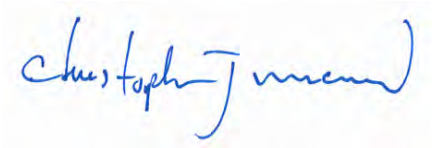
AH-1 (0'-1') L1220029-24 Solid

Collected by: JT | Collected date/time: 05/13/20 15:30 | Received date/time: 05/19/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1481816	1	05/26/20 20:41	05/26/20 21:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1479249	1	05/20/20 16:05	05/20/20 22:11	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1481347	1	05/21/20 11:46	05/23/20 17:58	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1480325	1	05/21/20 11:46	05/22/20 05:48	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1481781	1	05/25/20 07:49	05/26/20 02:27	KLM	Mt. Juliet, TN

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

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



Chris McCord
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.2		1	05/26/2020 16:44	WG1481813

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		9.57	20.8	1	05/20/2020 15:57	WG1479248

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	05/23/2020 14:10	WG1480940
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*05/23/2020 14:10*	WG1480940

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000486	0.00104	1	05/21/2020 23:37	WG1480587
Toluene	U		0.00135	0.00520	1	05/21/2020 23:37	WG1480587
Ethylbenzene	U		0.000767	0.00260	1	05/21/2020 23:37	WG1480587
Total Xylenes	U		0.000915	0.00676	1	05/21/2020 23:37	WG1480587
(S) Toluene-d8	*112*			*75.0-131*		*05/21/2020 23:37*	WG1480587
(S) 4-Bromofluorobenzene	*91.2*			*67.0-138*		*05/21/2020 23:37*	WG1480587
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*05/21/2020 23:37*	WG1480587

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	4.98		1.67	4.16	1	05/24/2020 00:49	WG1480987
C28-C40 Oil Range	7.13		0.285	4.16	1	05/24/2020 00:49	WG1480987
(S) o-Terphenyl	*86.4*			*18.0-148*		*05/24/2020 00:49*	WG1480987

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.8		1	05/26/2020 16:44	WG1481813

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	10.3	J	9.50	20.7	1	05/20/2020 16:16	WG1479248

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		0.0224	0.103	1	05/23/2020 14:31	WG1480940
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*05/23/2020 14:31*	WG1480940

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000482	0.00103	1	05/21/2020 23:56	WG1480587
Toluene	U		0.00134	0.00516	1	05/21/2020 23:56	WG1480587
Ethylbenzene	U		0.000761	0.00258	1	05/21/2020 23:56	WG1480587
Total Xylenes	U		0.000909	0.00671	1	05/21/2020 23:56	WG1480587
(S) Toluene-d8	*113*			*75.0-131*		*05/21/2020 23:56*	WG1480587
(S) 4-Bromofluorobenzene	*94.9*			*67.0-138*		*05/21/2020 23:56*	WG1480587
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*05/21/2020 23:56*	WG1480587

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3.13	J	1.66	4.13	1	05/24/2020 01:02	WG1480987
C28-C40 Oil Range	2.58	J	0.283	4.13	1	05/24/2020 01:02	WG1480987
(S) o-Terphenyl	*92.8*			*18.0-148*		*05/24/2020 01:02*	WG1480987

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.3		1	05/26/2020 16:44	WG1481813

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	10.3	J	9.46	20.6	1	05/20/2020 16:25	WG1479248

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0377	J	0.0223	0.103	1	05/23/2020 14:51	WG1480940
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*05/23/2020 14:51*	WG1480940

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		0.000480	0.00103	1	05/22/2020 00:15	WG1480587
Toluene	U		0.00134	0.00514	1	05/22/2020 00:15	WG1480587
Ethylbenzene	U		0.000758	0.00257	1	05/22/2020 00:15	WG1480587
Total Xylenes	U		0.000905	0.00668	1	05/22/2020 00:15	WG1480587
(S) Toluene-d8	*109*			*75.0-131*		*05/22/2020 00:15*	WG1480587
(S) 4-Bromofluorobenzene	*89.1*			*67.0-138*		*05/22/2020 00:15*	WG1480587
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*05/22/2020 00:15*	WG1480587

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	4.11	1	05/23/2020 23:17	WG1480987
C28-C40 Oil Range	U		0.282	4.11	1	05/23/2020 23:17	WG1480987
(S) o-Terphenyl	*94.7*			*18.0-148*		*05/23/2020 23:17*	WG1480987

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.7		1	05/26/2020 21:41	WG1481814

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		9.41	20.5	1	05/20/2020 16:35	WG1479248

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	05/23/2020 15:12	WG1480940
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*05/23/2020 15:12*	WG1480940

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000478	0.00102	1	05/22/2020 00:34	WG1480587
Toluene	U		0.00133	0.00512	1	05/22/2020 00:34	WG1480587
Ethylbenzene	U		0.000754	0.00256	1	05/22/2020 00:34	WG1480587
Total Xylenes	U		0.000900	0.00665	1	05/22/2020 00:34	WG1480587
(S) Toluene-d8	*113*			*75.0-131*		*05/22/2020 00:34*	WG1480587
(S) 4-Bromofluorobenzene	*95.2*			*67.0-138*		*05/22/2020 00:34*	WG1480587
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*05/22/2020 00:34*	WG1480587

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	4.09	1	05/23/2020 23:30	WG1480987
C28-C40 Oil Range	U		0.280	4.09	1	05/23/2020 23:30	WG1480987
(S) o-Terphenyl	*90.5*			*18.0-148*		*05/23/2020 23:30*	WG1480987

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.7		1	05/26/2020 21:41	WG1481814

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		9.41	20.5	1	05/20/2020 16:44	WG1479248

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	05/23/2020 15:33	WG1480940
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*05/23/2020 15:33*	WG1480940

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		0.00191	0.00409	4	05/22/2020 02:18	WG1480587
Toluene	U		0.00532	0.0205	4	05/22/2020 02:18	WG1480587
Ethylbenzene	U		0.00302	0.0102	4	05/22/2020 02:18	WG1480587
Total Xylenes	U		0.00360	0.0266	4	05/22/2020 02:18	WG1480587
(S) Toluene-d8	*108*			*75.0-131*		*05/22/2020 02:18*	WG1480587
(S) 4-Bromofluorobenzene	*113*			*67.0-138*		*05/22/2020 02:18*	WG1480587
(S) 1,2-Dichloroethane-d4	*96.9*			*70.0-130*		*05/22/2020 02:18*	WG1480587

Sample Narrative:

L1220029-05 WG1480587: Elevated diltuion due to foamy matrix.

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	4.09	1	05/25/2020 16:51	WG1481780
C28-C40 Oil Range	U		0.280	4.09	1	05/25/2020 16:51	WG1481780
(S) o-Terphenyl	*65.0*			*18.0-148*		*05/25/2020 16:51*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.8		1	05/26/2020 21:41	WG1481814

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	137		9.61	20.9	1	05/20/2020 16:54	WG1479248

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0227	0.104	1	05/22/2020 23:24	WG1480943
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*05/22/2020 23:24*	WG1480943

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		0.000488	0.00104	1	05/22/2020 02:38	WG1480587
Toluene	U		0.00136	0.00522	1	05/22/2020 02:38	WG1480587
Ethylbenzene	U		0.000769	0.00261	1	05/22/2020 02:38	WG1480587
Total Xylenes	U		0.000919	0.00679	1	05/22/2020 02:38	WG1480587
(S) Toluene-d8	*112*			*75.0-131*		*05/22/2020 02:38*	WG1480587
(S) 4-Bromofluorobenzene	*93.3*			*67.0-138*		*05/22/2020 02:38*	WG1480587
(S) 1,2-Dichloroethane-d4	*97.8*			*70.0-130*		*05/22/2020 02:38*	WG1480587

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	4.80		1.68	4.18	1	05/25/2020 20:21	WG1481780
C28-C40 Oil Range	11.2		0.286	4.18	1	05/25/2020 20:21	WG1481780
(S) o-Terphenyl	*179*	J1		*18.0-148*		*05/25/2020 20:21*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.4		1	05/26/2020 21:41	WG1481814

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	136		9.64	21.0	1	05/20/2020 17:03	WG1479248

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0227	0.105	1	05/22/2020 23:44	WG1480943
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*05/22/2020 23:44*	WG1480943

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	05/22/2020 02:57	WG1480587
Toluene	U		0.00136	0.00524	1	05/22/2020 02:57	WG1480587
Ethylbenzene	U		0.000773	0.00262	1	05/22/2020 02:57	WG1480587
Total Xylenes	U		0.000923	0.00681	1	05/22/2020 02:57	WG1480587
(S) Toluene-d8	*113*			*75.0-131*		*05/22/2020 02:57*	WG1480587
(S) 4-Bromofluorobenzene	*96.5*			*67.0-138*		*05/22/2020 02:57*	WG1480587
(S) 1,2-Dichloroethane-d4	*90.1*			*70.0-130*		*05/22/2020 02:57*	WG1480587

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	4.19	1	05/25/2020 17:04	WG1481780
C28-C40 Oil Range	3.11	J	0.287	4.19	1	05/25/2020 17:04	WG1481780
(S) o-Terphenyl	*77.4*			*18.0-148*		*05/25/2020 17:04*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.4		1	05/26/2020 21:41	WG1481814

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	220		9.85	21.4	1	05/20/2020 17:35	WG1479248

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	05/23/2020 00:05	WG1480943
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*05/23/2020 00:05*	WG1480943

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	05/22/2020 03:16	WG1480587
Toluene	U		0.00139	0.00536	1	05/22/2020 03:16	WG1480587
Ethylbenzene	U		0.000789	0.00268	1	05/22/2020 03:16	WG1480587
Total Xylenes	U		0.000943	0.00696	1	05/22/2020 03:16	WG1480587
(S) Toluene-d8	*112*			*75.0-131*		*05/22/2020 03:16*	WG1480587
(S) 4-Bromofluorobenzene	*93.1*			*67.0-138*		*05/22/2020 03:16*	WG1480587
(S) 1,2-Dichloroethane-d4	*98.6*			*70.0-130*		*05/22/2020 03:16*	WG1480587

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	05/25/2020 17:17	WG1481780
C28-C40 Oil Range	1.03	J	0.293	4.28	1	05/25/2020 17:17	WG1481780
(S) o-Terphenyl	*73.3*			*18.0-148*		*05/25/2020 17:17*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.9		1	05/26/2020 21:41	WG1481814

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	189		9.50	20.6	1	05/20/2020 17:45	WG1479248

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		0.0224	0.103	1	05/23/2020 00:26	WG1480943
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*05/23/2020 00:26*	WG1480943

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000482	0.00103	1	05/22/2020 03:36	WG1480587
Toluene	U		0.00134	0.00516	1	05/22/2020 03:36	WG1480587
Ethylbenzene	U		0.000761	0.00258	1	05/22/2020 03:36	WG1480587
Total Xylenes	U		0.000908	0.00671	1	05/22/2020 03:36	WG1480587
(S) Toluene-d8	*114*			*75.0-131*		*05/22/2020 03:36*	WG1480587
(S) 4-Bromofluorobenzene	*92.7*			*67.0-138*		*05/22/2020 03:36*	WG1480587
(S) 1,2-Dichloroethane-d4	*88.8*			*70.0-130*		*05/22/2020 03:36*	WG1480587

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	4.13	1	05/25/2020 17:30	WG1481780
C28-C40 Oil Range	0.482	J	0.283	4.13	1	05/25/2020 17:30	WG1481780
(S) o-Terphenyl	*63.8*			*18.0-148*		*05/25/2020 17:30*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.9		1	05/26/2020 21:41	WG1481814

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	112		9.30	20.2	1	05/20/2020 18:13	WG1479248

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0252	B J	0.0219	0.101	1	05/23/2020 14:31	WG1481347
(S) a,a,a-Trifluorotoluene(FID)	*89.4*			*77.0-120*		*05/23/2020 14:31*	WG1481347

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		0.000472	0.00101	1	05/22/2020 03:55	WG1480587
Toluene	U		0.00131	0.00505	1	05/22/2020 03:55	WG1480587
Ethylbenzene	U		0.000745	0.00253	1	05/22/2020 03:55	WG1480587
Total Xylenes	U		0.000890	0.00657	1	05/22/2020 03:55	WG1480587
(S) Toluene-d8	*111*			*75.0-131*		*05/22/2020 03:55*	WG1480587
(S) 4-Bromofluorobenzene	*91.3*			*67.0-138*		*05/22/2020 03:55*	WG1480587
(S) 1,2-Dichloroethane-d4	*91.1*			*70.0-130*		*05/22/2020 03:55*	WG1480587

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		1.63	4.04	1	05/25/2020 17:43	WG1481780
C28-C40 Oil Range	U		0.277	4.04	1	05/25/2020 17:43	WG1481780
(S) o-Terphenyl	*64.0*			*18.0-148*		*05/25/2020 17:43*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.9		1	05/26/2020 21:41	WG1481814

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	21.7		9.69	21.1	1	05/20/2020 18:23	WG1479248

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	05/23/2020 01:13	WG1480943
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*05/23/2020 01:13*	WG1480943

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		0.000492	0.00105	1	05/22/2020 04:14	WG1480587
Toluene	U		0.00137	0.00527	1	05/22/2020 04:14	WG1480587
Ethylbenzene	U		0.000776	0.00263	1	05/22/2020 04:14	WG1480587
Total Xylenes	U		0.000927	0.00685	1	05/22/2020 04:14	WG1480587
(S) Toluene-d8	*110*			*75.0-131*		*05/22/2020 04:14*	WG1480587
(S) 4-Bromofluorobenzene	*87.1*			*67.0-138*		*05/22/2020 04:14*	WG1480587
(S) 1,2-Dichloroethane-d4	*95.4*			*70.0-130*		*05/22/2020 04:14*	WG1480587

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	05/25/2020 17:57	WG1481780
C28-C40 Oil Range	1.35	J	0.289	4.21	1	05/25/2020 17:57	WG1481780
(S) o-Terphenyl	*72.0*			*18.0-148*		*05/25/2020 17:57*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.5		1	05/26/2020 21:41	WG1481814

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	24.8		9.53	20.7	1	05/20/2020 18:32	WG1479248

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	05/23/2020 01:34	WG1480943
(S) a,a,a-Trifluorotoluene(FID)	*104*			*77.0-120*		*05/23/2020 01:34*	WG1480943

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		0.000484	0.00104	1	05/22/2020 04:34	WG1480587
Toluene	U		0.00135	0.00518	1	05/22/2020 04:34	WG1480587
Ethylbenzene	U		0.000764	0.00259	1	05/22/2020 04:34	WG1480587
Total Xylenes	U		0.000912	0.00674	1	05/22/2020 04:34	WG1480587
(S) Toluene-d8	*114*			*75.0-131*		*05/22/2020 04:34*	WG1480587
(S) 4-Bromofluorobenzene	*90.1*			*67.0-138*		*05/22/2020 04:34*	WG1480587
(S) 1,2-Dichloroethane-d4	*97.5*			*70.0-130*		*05/22/2020 04:34*	WG1480587

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	05/25/2020 18:10	WG1481780
C28-C40 Oil Range	0.538	J	0.284	4.14	1	05/25/2020 18:10	WG1481780
(S) o-Terphenyl	*79.2*			*18.0-148*		*05/25/2020 18:10*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.2		1	05/26/2020 21:41	WG1481814

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	11.0	J	9.56	20.8	1	05/20/2020 18:42	WG1479248

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	05/23/2020 01:54	WG1480943
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*05/23/2020 01:54*	WG1480943

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		0.000485	0.00104	1	05/22/2020 04:53	WG1480587
Toluene	U		0.00135	0.00520	1	05/22/2020 04:53	WG1480587
Ethylbenzene	U		0.000766	0.00260	1	05/22/2020 04:53	WG1480587
Total Xylenes	U		0.000914	0.00675	1	05/22/2020 04:53	WG1480587
(S) Toluene-d8	*111*			*75.0-131*		*05/22/2020 04:53*	WG1480587
(S) 4-Bromofluorobenzene	*88.1*			*67.0-138*		*05/22/2020 04:53*	WG1480587
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*05/22/2020 04:53*	WG1480587

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	05/25/2020 18:23	WG1481780
C28-C40 Oil Range	0.447	J	0.285	4.16	1	05/25/2020 18:23	WG1481780
(S) o-Terphenyl	*83.4*			*18.0-148*		*05/25/2020 18:23*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.5		1	05/26/2020 21:21	WG1481815

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		9.54	20.7	1	05/20/2020 18:51	WG1479248

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	05/23/2020 06:36	WG1480943
(S) a,a,a-Trifluorotoluene(FID)	*105*			*77.0-120*		*05/23/2020 06:36*	WG1480943

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		0.000484	0.00104	1	05/22/2020 05:12	WG1480587
Toluene	U		0.00135	0.00518	1	05/22/2020 05:12	WG1480587
Ethylbenzene	U		0.000764	0.00259	1	05/22/2020 05:12	WG1480587
Total Xylenes	U		0.000912	0.00674	1	05/22/2020 05:12	WG1480587
(S) Toluene-d8	*113*			*75.0-131*		*05/22/2020 05:12*	WG1480587
(S) 4-Bromofluorobenzene	*89.5*			*67.0-138*		*05/22/2020 05:12*	WG1480587
(S) 1,2-Dichloroethane-d4	*95.2*			*70.0-130*		*05/22/2020 05:12*	WG1480587

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	05/25/2020 18:36	WG1481780
C28-C40 Oil Range	U		0.284	4.15	1	05/25/2020 18:36	WG1481780
(S) o-Terphenyl	*68.9*			*18.0-148*		*05/25/2020 18:36*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.6		1	05/26/2020 21:21	WG1481815

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		9.72	21.1	1	05/20/2020 19:01	WG1479248

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	05/23/2020 14:52	WG1481347
(S) a,a,a-Trifluorotoluene(FID)	*89.5*			*77.0-120*		*05/23/2020 14:52*	WG1481347

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		0.000494	0.00106	1	05/22/2020 05:32	WG1480587
Toluene	U		0.00137	0.00528	1	05/22/2020 05:32	WG1480587
Ethylbenzene	U		0.000779	0.00264	1	05/22/2020 05:32	WG1480587
Total Xylenes	U		0.000930	0.00687	1	05/22/2020 05:32	WG1480587
(S) Toluene-d8	*113*			*75.0-131*		*05/22/2020 05:32*	WG1480587
(S) 4-Bromofluorobenzene	*90.4*			*67.0-138*		*05/22/2020 05:32*	WG1480587
(S) 1,2-Dichloroethane-d4	*94.7*			*70.0-130*		*05/22/2020 05:32*	WG1480587

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	4.23	1	05/25/2020 18:49	WG1481780
C28-C40 Oil Range	U		0.290	4.23	1	05/25/2020 18:49	WG1481780
(S) o-Terphenyl	*63.3*			*18.0-148*		*05/25/2020 18:49*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.2		1	05/26/2020 21:21	WG1481815

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	13.3	J	9.47	20.6	1	05/20/2020 19:29	WG1479248

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0238	B J	0.0223	0.103	1	05/23/2020 15:13	WG1481347
(S) a,a,a-Trifluorotoluene(FID)	*89.3*			*77.0-120*		*05/23/2020 15:13*	WG1481347

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		0.000480	0.00103	1	05/22/2020 05:51	WG1480587
Toluene	U		0.00134	0.00514	1	05/22/2020 05:51	WG1480587
Ethylbenzene	U		0.000758	0.00257	1	05/22/2020 05:51	WG1480587
Total Xylenes	U		0.000905	0.00669	1	05/22/2020 05:51	WG1480587
(S) Toluene-d8	*111*			*75.0-131*		*05/22/2020 05:51*	WG1480587
(S) 4-Bromofluorobenzene	*89.4*			*67.0-138*		*05/22/2020 05:51*	WG1480587
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*05/22/2020 05:51*	WG1480587

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	05/25/2020 19:02	WG1481780
C28-C40 Oil Range	1.08	J	0.282	4.12	1	05/25/2020 19:02	WG1481780
(S) o-Terphenyl	*68.9*			*18.0-148*		*05/25/2020 19:02*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.6		1	05/26/2020 21:21	WG1481815

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		9.63	20.9	1	05/20/2020 19:39	WG1479248

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0227	0.105	1	05/23/2020 15:33	WG1481347
(S) a,a,a-Trifluorotoluene(FID)	*89.0*			*77.0-120*		*05/23/2020 15:33*	WG1481347

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000489	0.00105	1	05/22/2020 06:10	WG1480587
Toluene	U		0.00136	0.00523	1	05/22/2020 06:10	WG1480587
Ethylbenzene	U		0.000771	0.00262	1	05/22/2020 06:10	WG1480587
Total Xylenes	U		0.000921	0.00680	1	05/22/2020 06:10	WG1480587
(S) Toluene-d8	*112*			*75.0-131*		*05/22/2020 06:10*	WG1480587
(S) 4-Bromofluorobenzene	*89.9*			*67.0-138*		*05/22/2020 06:10*	WG1480587
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*05/22/2020 06:10*	WG1480587

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	4.19	1	05/25/2020 19:15	WG1481780
C28-C40 Oil Range	U		0.287	4.19	1	05/25/2020 19:15	WG1481780
(S) o-Terphenyl	*76.4*			*18.0-148*		*05/25/2020 19:15*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.4		1	05/26/2020 21:21	WG1481815

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	05/20/2020 19:48	WG1479248

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	05/23/2020 15:54	WG1481347
(S) a,a,a-Trifluorotoluene(FID)	*89.2*			*77.0-120*		*05/23/2020 15:54*	WG1481347

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	05/22/2020 06:29	WG1480587
Toluene	U		0.00138	0.00530	1	05/22/2020 06:29	WG1480587
Ethylbenzene	U		0.000781	0.00265	1	05/22/2020 06:29	WG1480587
Total Xylenes	U		0.000933	0.00689	1	05/22/2020 06:29	WG1480587
(S) Toluene-d8	*108*			*75.0-131*		*05/22/2020 06:29*	WG1480587
(S) 4-Bromofluorobenzene	*84.1*			*67.0-138*		*05/22/2020 06:29*	WG1480587
(S) 1,2-Dichloroethane-d4	*99.2*			*70.0-130*		*05/22/2020 06:29*	WG1480587

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	05/25/2020 19:28	WG1481780
C28-C40 Oil Range	U		0.290	4.24	1	05/25/2020 19:28	WG1481780
(S) o-Terphenyl	*72.6*			*18.0-148*		*05/25/2020 19:28*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.5		1	05/26/2020 21:21	WG1481815

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		10.1	21.9	1	05/20/2020 19:58	WG1479248

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		0.0237	0.109	1	05/23/2020 16:15	WG1481347
(S) a,a,a-Trifluorotoluene(FID)	*89.5*			*77.0-120*		*05/23/2020 16:15*	WG1481347

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		0.000510	0.00109	1	05/22/2020 06:48	WG1480587
Toluene	U		0.00142	0.00546	1	05/22/2020 06:48	WG1480587
Ethylbenzene	U		0.000805	0.00273	1	05/22/2020 06:48	WG1480587
Total Xylenes	U		0.000962	0.00710	1	05/22/2020 06:48	WG1480587
(S) Toluene-d8	*113*			*75.0-131*		*05/22/2020 06:48*	WG1480587
(S) 4-Bromofluorobenzene	*89.1*			*67.0-138*		*05/22/2020 06:48*	WG1480587
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*05/22/2020 06:48*	WG1480587

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		1.76	4.37	1	05/25/2020 19:42	WG1481780
C28-C40 Oil Range	U		0.299	4.37	1	05/25/2020 19:42	WG1481780
(S) o-Terphenyl	*69.1*			*18.0-148*		*05/25/2020 19:42*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.8		1	05/26/2020 21:21	WG1481815

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	940		48.5	106	5	05/20/2020 20:17	WG1479248

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	05/23/2020 16:35	WG1481347
(S) a,a,a-Trifluorotoluene(FID)	*90.0*			*77.0-120*		*05/23/2020 16:35*	WG1481347

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	05/22/2020 07:08	WG1480587
Toluene	U		0.00137	0.00528	1	05/22/2020 07:08	WG1480587
Ethylbenzene	U		0.000778	0.00264	1	05/22/2020 07:08	WG1480587
Total Xylenes	U		0.000929	0.00686	1	05/22/2020 07:08	WG1480587
(S) Toluene-d8	*117*			*75.0-131*		*05/22/2020 07:08*	WG1480587
(S) 4-Bromofluorobenzene	*95.3*			*67.0-138*		*05/22/2020 07:08*	WG1480587
(S) 1,2-Dichloroethane-d4	*95.4*			*70.0-130*		*05/22/2020 07:08*	WG1480587

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	05/25/2020 19:55	WG1481780
C28-C40 Oil Range	1.53	J	0.289	4.22	1	05/25/2020 19:55	WG1481780
(S) o-Terphenyl	*83.3*			*18.0-148*		*05/25/2020 19:55*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.2		1	05/26/2020 21:21	WG1481815

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	145		9.47	20.6	1	05/20/2020 21:33	WG1479249

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	05/23/2020 16:56	WG1481347
(S) a,a,a-Trifluorotoluene(FID)	*89.8*			*77.0-120*		*05/23/2020 16:56*	WG1481347

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		0.000480	0.00103	1	05/22/2020 04:51	WG1480325
Toluene	U		0.00134	0.00514	1	05/22/2020 04:51	WG1480325
Ethylbenzene	U		0.000758	0.00257	1	05/22/2020 04:51	WG1480325
Total Xylenes	U		0.000905	0.00669	1	05/22/2020 04:51	WG1480325
(S) Toluene-d8	*107*			*75.0-131*		*05/22/2020 04:51*	WG1480325
(S) 4-Bromofluorobenzene	*85.0*			*67.0-138*		*05/22/2020 04:51*	WG1480325
(S) 1,2-Dichloroethane-d4	*95.6*			*70.0-130*		*05/22/2020 04:51*	WG1480325

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	05/25/2020 20:08	WG1481780
C28-C40 Oil Range	U		0.282	4.12	1	05/25/2020 20:08	WG1481780
(S) o-Terphenyl	*78.1*			*18.0-148*		*05/25/2020 20:08*	WG1481780

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.1		1	05/26/2020 21:21	WG1481815

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		9.47	20.6	1	05/20/2020 21:52	WG1479249

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	05/23/2020 17:16	WG1481347
(S) a,a,a-Trifluorotoluene(FID)	*89.6*			*77.0-120*		*05/23/2020 17:16*	WG1481347

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		0.000481	0.00103	1	05/22/2020 05:10	WG1480325
Toluene	U		0.00134	0.00515	1	05/22/2020 05:10	WG1480325
Ethylbenzene	U		0.000759	0.00257	1	05/22/2020 05:10	WG1480325
Total Xylenes	U		0.000906	0.00669	1	05/22/2020 05:10	WG1480325
(S) Toluene-d8	*106*			*75.0-131*		*05/22/2020 05:10*	WG1480325
(S) 4-Bromofluorobenzene	*86.1*			*67.0-138*		*05/22/2020 05:10*	WG1480325
(S) 1,2-Dichloroethane-d4	*91.8*			*70.0-130*		*05/22/2020 05:10*	WG1480325

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	05/27/2020 14:29	WG1481870
C28-C40 Oil Range	U		0.282	4.12	1	05/27/2020 14:29	WG1481870
(S) o-Terphenyl	*69.6*			*18.0-148*		*05/27/2020 14:29*	WG1481870

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.5		1	05/26/2020 21:21	WG1481815

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.34	20.3	1	05/20/2020 22:02	WG1479249

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0220	0.102	1	05/23/2020 17:37	WG1481347
(S) a,a,a-Trifluorotoluene(FID)	*89.8*			*77.0-120*		*05/23/2020 17:37*	WG1481347

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000474	0.00102	1	05/22/2020 05:29	WG1480325
Toluene	U		0.00132	0.00508	1	05/22/2020 05:29	WG1480325
Ethylbenzene	U		0.000748	0.00254	1	05/22/2020 05:29	WG1480325
Total Xylenes	U		0.000894	0.00660	1	05/22/2020 05:29	WG1480325
(S) Toluene-d8	*105*			*75.0-131*		*05/22/2020 05:29*	WG1480325
(S) 4-Bromofluorobenzene	*86.3*			*67.0-138*		*05/22/2020 05:29*	WG1480325
(S) 1,2-Dichloroethane-d4	*96.5*			*70.0-130*		*05/22/2020 05:29*	WG1480325

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	4.06	1	05/27/2020 14:45	WG1481870
C28-C40 Oil Range	U		0.278	4.06	1	05/27/2020 14:45	WG1481870
(S) o-Terphenyl	*67.5*			*18.0-148*		*05/27/2020 14:45*	WG1481870

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.4		1	05/26/2020 21:00	WG1481816

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		9.35	20.3	1	05/20/2020 22:11	WG1479249

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0380	B J	0.0220	0.102	1	05/23/2020 17:58	WG1481347
(S) a,a,a-Trifluorotoluene(FID)	*88.6*			*77.0-120*		*05/23/2020 17:58*	WG1481347

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000474	0.00102	1	05/22/2020 05:48	WG1480325
Toluene	U		0.00132	0.00508	1	05/22/2020 05:48	WG1480325
Ethylbenzene	U		0.000749	0.00254	1	05/22/2020 05:48	WG1480325
Total Xylenes	U		0.000894	0.00660	1	05/22/2020 05:48	WG1480325
(S) Toluene-d8	*108*			*75.0-131*		*05/22/2020 05:48*	WG1480325
(S) 4-Bromofluorobenzene	*82.8*			*67.0-138*		*05/22/2020 05:48*	WG1480325
(S) 1,2-Dichloroethane-d4	*96.3*			*70.0-130*		*05/22/2020 05:48*	WG1480325

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3.19	J	1.64	4.06	1	05/26/2020 02:27	WG1481781
C28-C40 Oil Range	13.9		0.278	4.06	1	05/26/2020 02:27	WG1481781
(S) o-Terphenyl	*83.2*			*18.0-148*		*05/26/2020 02:27*	WG1481781

Method Blank (MB)

(MB) R3532010-1 05/26/20 16:44

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

Laboratory Control Sample (LCS)

(LCS) R3532010-2 05/26/20 16:44

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) R3532084-1 05/26/20 21:41

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

L1220029-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1220029-12 05/26/20 21:41 • (DUP) R3532084-3 05/26/20 21:41

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	96.5	96.3	1	0.268		10

Laboratory Control Sample (LCS)

(LCS) R3532084-2 05/26/20 21:41

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) R3532069-1 05/26/20 21:21

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

L1220029-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1220029-18 05/26/20 21:21 • (DUP) R3532069-3 05/26/20 21:21

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	94.4	94.2	1	0.208		10

Laboratory Control Sample (LCS)

(LCS) R3532069-2 05/26/20 21:21

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) R3532065-1 05/26/20 21:00

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

Laboratory Control Sample (LCS)

(LCS) R3532065-2 05/26/20 21:00

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) R3530257-1 05/20/20 15:29

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

L1220029-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1220029-01 05/20/20 15:57 • (DUP) R3530257-3 05/20/20 16:06

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

L1220029-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1220029-19 05/20/20 19:58 • (DUP) R3530257-6 05/20/20 20:07

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) R3530257-2 05/20/20 15:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	190	95.2	90.0-110	

L1220029-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1220029-09 05/20/20 17:45 • (MS) R3530257-4 05/20/20 17:54 • (MSD) R3530257-5 05/20/20 18:04

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	516	189	707	682	100	95.5	1	80.0-120			3.53	20

Method Blank (MB)

(MB) R3530260-1 05/20/20 21:05

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

L1220029-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1220029-21 05/20/20 21:33 • (DUP) R3530260-3 05/20/20 21:43

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	145	149	1	2.85		20

Laboratory Control Sample (LCS)

(LCS) R3530260-2 05/20/20 21:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	192	95.9	90.0-110	

Method Blank (MB)

(MB) R3531571-2 05/23/20 12:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*106*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3531571-1 05/23/20 10:46

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.30	115	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*99.3*	*77.0-120*	

Method Blank (MB)

(MB) R3531754-2 05/22/20 22:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*106*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3531754-1 05/22/20 21:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.87	107	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*99.1*	*77.0-120*	

Method Blank (MB)

(MB) R3531455-2 05/23/20 13:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0217	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*93.6*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3531455-1 05/23/20 12:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.53	82.4	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*77.0-120*	

L1220029-24 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1220029-24 05/23/20 17:58 • (MS) R3531455-3 05/23/20 21:03 • (MSD) R3531455-4 05/23/20 21:23

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.59	0.0380	2.84	3.09	50.2	55.1	1	10.0-151			8.22	28
(S) a,a,a-Trifluorotoluene(FID)					*94.9*	*96.4*		*77.0-120*				

Method Blank (MB)

(MB) R3531615-3 05/22/20 00:45

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	*106*			*75.0-131*
(S) 4-Bromofluorobenzene	*85.6*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*93.4*			*70.0-130*

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

(LCS) R3531615-1 05/21/20 23:29 • (LCSD) R3531615-2 05/21/20 23:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.109	0.108	87.2	86.4	70.0-123			0.922	20
Ethylbenzene	0.125	0.0991	0.102	79.3	81.6	74.0-126			2.88	20
Toluene	0.125	0.104	0.103	83.2	82.4	75.0-121			0.966	20
Xylenes, Total	0.375	0.284	0.287	75.7	76.5	72.0-127			1.05	20
(S) Toluene-d8				*99.1*	*101*	*75.0-131*				
(S) 4-Bromofluorobenzene				*90.3*	*90.7*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*106*	*106*	*70.0-130*				

Method Blank (MB)

(MB) R3531851-3 05/21/20 22:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*108*			*75.0-131*
(S) 4-Bromofluorobenzene	*87.7*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*

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

(LCS) R3531851-1 05/21/20 20:51 • (LCSD) R3531851-2 05/21/20 21:10

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	0.111	0.107	88.8	85.6	70.0-123			3.67	20
Ethylbenzene	0.125	0.137	0.136	110	109	74.0-126			0.733	20
Toluene	0.125	0.110	0.112	88.0	89.6	75.0-121			1.80	20
Xylenes, Total	0.375	0.328	0.333	87.5	88.8	72.0-127			1.51	20
(S) Toluene-d8				*107*	*108*	*75.0-131*				
(S) 4-Bromofluorobenzene				*93.4*	*94.3*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*109*	*107*	*70.0-130*				

L1220029-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1220029-20 05/22/20 07:08 • (MS) R3531851-4 05/22/20 07:27 • (MSD) R3531851-5 05/22/20 07:46

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.132	U	0.114	0.103	86.4	77.8	1	10.0-149			10.4	37
Ethylbenzene	0.132	U	0.152	0.129	115	97.6	1	10.0-160			16.5	38
Toluene	0.132	U	0.123	0.107	93.6	80.8	1	10.0-156			14.7	38
Xylenes, Total	0.396	U	0.360	0.309	90.9	78.1	1	10.0-160			15.1	38
(S) Toluene-d8					*108*	*108*		*75.0-131*				
(S) 4-Bromofluorobenzene					*91.6*	*91.8*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*107*	*106*		*70.0-130*				

Method Blank (MB)

(MB) R3531146-1 05/23/20 11:27

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	*75.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3531146-2 05/23/20 11:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	41.8	83.6	50.0-150	
(S) o-Terphenyl			*96.8*	*18.0-148*	

Method Blank (MB)

(MB) R3531499-1 05/25/20 16:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*63.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3531499-2 05/25/20 16:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	35.4	70.8	50.0-150	
(S) o-Terphenyl			*94.3*	*18.0-148*	

L1220029-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1220029-06 05/25/20 20:21 • (MS) R3531499-3 05/25/20 20:34 • (MSD) R3531499-4 05/25/20 20:47

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 %
C10-C28 Diesel Range	52.0	4.80	38.7	43.3	65.3	74.1	1	50.0-150			11.2	20
(S) o-Terphenyl					*224*	*345*		*18.0-148*	J1	J1		

Method Blank (MB)

(MB) R3531640-1 05/25/20 21:53

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	*75.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3531640-2 05/25/20 22:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.1	78.2	50.0-150	
(S) o-Terphenyl			*99.4*	*18.0-148*	

L1220029-24 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1220029-24 05/26/20 02:27 • (MS) R3531640-3 05/26/20 02:40 • (MSD) R3531640-4 05/26/20 02:53

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	49.8	3.19	40.4	41.7	74.8	77.4	1	50.0-150			2.97	20
(S) o-Terphenyl					*87.3*	*85.6*		*18.0-148*				

Method Blank (MB)

(MB) R3532334-1 05/27/20 13:57

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	*68.6*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3532334-2 05/27/20 14:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	30.6	61.2	50.0-150	
(S) o-Terphenyl			*57.1*	*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.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

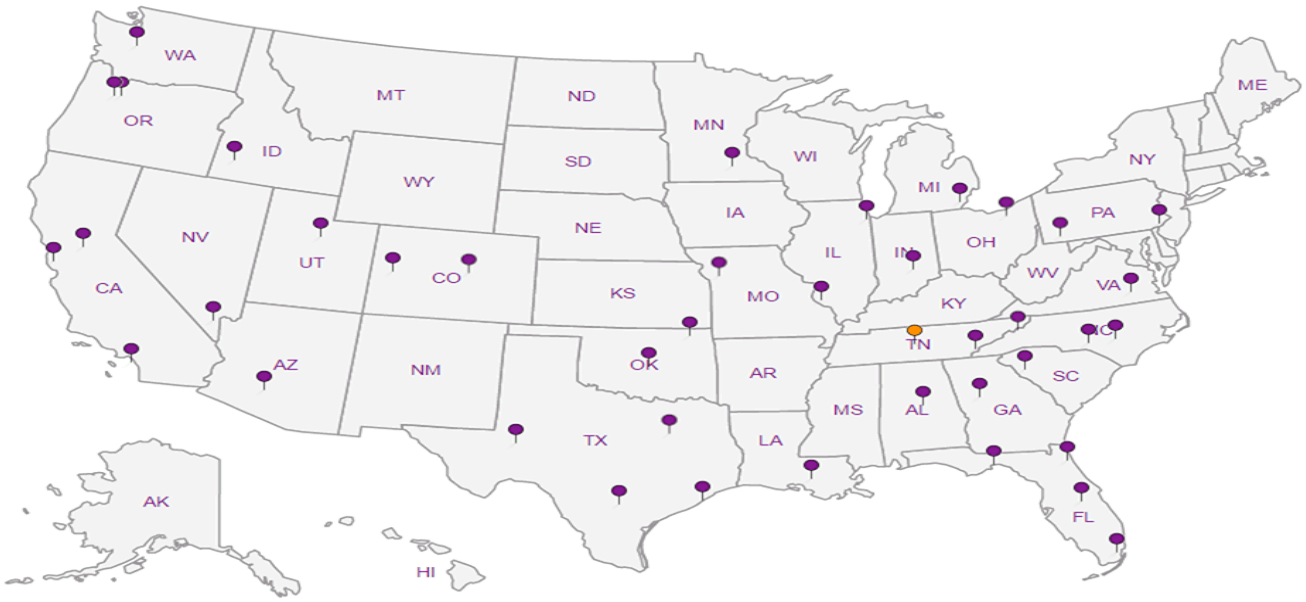
Third Party Federal Accreditations

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

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

Our Locations

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



Analysis Request of Chain of Custody Record

1220029 Page : 1 of 3

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	COP EVGSAU 3332-519	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02181
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
-01	BH-1 (0'-1')	05/13/20	1000		X			X		1	N	X		X												X						
02	BH-1 (2'-3')	05/13/20	1010		X			X		1	N	X		X												X						
03	BH-1 (4'-5')	05/13/20	1020		X			X		1	N	X		X												X						
04	BH-1 (6'-7')	05/13/20	1030		X			X		1	N	X		X												X						
05	BH-1 (9'-10')	05/13/20	1040		X			X		1	N	X		X												X						
06	BH-2 (0'-1')	05/13/20	1050		X			X		1	N	X		X												X						
07	BH-2 (2'-3')	05/13/20	1100		X			X		1	N	X		X												X						
08	BH-2 (4'-5')	05/13/20	1110		X			X		1	N	X		X												X						
09	BH-2 (6'-7')	05/13/20	1120		X			X		1	N	X		X												X						
10	BH-2 (9'-10')	05/13/20	1130		X			X		1	N	X		X												X						

	Date	Time		Date	Time
Relinquished by:	5-18-20	14:00	Received by:	5-18-20	14:00
Relinquished by:	5-18-20	16:00	Received by: FedEx	5-18-20	16:00
Relinquished by:			Received by: M Pappas	5-19-20	845

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 #:

4430 3423 2093 28 total No TB J097 1.8-2=1.6 AG 05-0170

Analysis Request of Chain of Custody Record

120029

Page : 2 of 3

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	COP EVGSAU 3332-519	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02181
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD NONE	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
11	BH-3 (0'-1')	05/13/20	1140		X				X			1	N	X		X												X						
12	BH-3 (2'-3')	05/13/20	1150		X				X			1	N	X		X												X						
13	BH-3 (4'-5')	05/13/20	1200		X				X			1	N	X		X												X						
14	BH-3 (6'-7')	05/13/20	1210		X				X			1	N	X		X												X						
15	BH-3 (9'-10')	05/13/20	1220		X				X			1	N	X		X												X						
16	BH-4 (2'-3')	05/13/20	1230		X				X			1	N	X		X												X						
17	BH-4 (4'-5')	05/13/20	1240		X				X			1	N	X		X												X						
18	BH-4 (6'-7')	05/13/20	1250		X				X			1	N	X		X												X						
19	BH-4 (9'-10')	05/13/20	1300		X				X			1	N	X		X												X						
~~20~~	BH-4 (14'-15')	05/13/20	1310		X				X			1	N																					X

Relinquished by:	Date: 5-18-20	Time: 14:00	Received by:	Date: 5-18-20 Time: 14:00
Relinquished by:	Date: 5-18-20	Time: 16:00	Received by: Fedex	Date: 5-18-20 Time: 16:00
Relinquished by:	Date:	Time:	Received by: M Pappas	Date: 5-19-20 Time: 845

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 #: _____

4430 3423 7093 28 total No TB

1.8-.2=1.6 MM AG

Analysis Request of Chain of Custody Record

120029

Page : 3 of 3

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	COP EVGSAU 3332-519	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02181
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
	BH-4 (19'-20')	05/13/20	1320		X			X		1	N																					X
20	BH-5 (2'-3')	05/13/20	1400		X			X		1	N	X		X												X						
21	BH-5 (4'-5')	05/13/20	1410		X			X		1	N	X		X												X						
22	BH-5 (6'-7')	05/13/20	1420		X			X		1	N	X		X												X						
23	BH-5 (9'-10')	05/13/20	1430		X			X		1	N	X		X												X						
	BH-5 (14'-15')	05/13/20	1440		X			X		1	N																					X
	BH-5 (19'-20')	05/13/20	1450		X			X		1	N																					X
24	AH-1 (0'-1')	05/13/20	1530		X			X		1	N	X		X												X						

Relinquished by:	Date: 5-18-20	Time: 14:00	Received by: Date: 5-18-20 Time: 14:00
Relinquished by:	Date: 5-18-20	Time: 16:00	Received by: FedEx Date: 5-18-20 Time: 16:00
Relinquished by:	Date:	Time:	Received by: M Pappas Date: 5-19-20 Time: 845

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 #: _____

4430 3423 7093 28 total No TB

1.8 - 2 = 1.6 MM

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	COPTETRA	12.20029
Cooler Received/Opened On:	5 / 19 / 20	Temperature: 1.6
Received By:	Michael Pappas	
Signature:	M Pappas	

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

APPENDIX D
Soil Boring Logs

212C-MD-02181	TETRA TECH	**LOG OF BORING AH-1**	Page 1 of 1

Project Name: EVGSAU 3332-519 Flowline Release

Borehole Location: GPS: 32.788562°, -103.475353° | Surface Elevation: 3954 ft

Borehole Number: AH-1 | Borehole Diameter (in.): 2 | Date Started: 5/13/2020 | Date Finished: 5/13/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
				21.2								**-TOPSOIL-** Brown, loose, with organics, no odor, no staining.	1	AH-1 (0'-1')

Bottom of borehole at 1.0 feet.

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

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

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

Logger: Joe Tyler | Drilling Equipment: Hand Auger | Driller: Tetra Tech

212C-MD-02181	TETRA TECH	**LOG OF BORING BH-1**	Page 1 of 1

Project Name: EVGSAU 3332-519 Flowline Release

Borehole Location: GPS: 32.788358°, -103.475172° | Surface Elevation: 3955 ft

Borehole Number: BH-1 | Borehole Diameter (in.): 8 | Date Started: 5/13/2020 | Date Finished: 5/13/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			194	2.5								**-TOPSOIL-** Brown, loose, with organics, no odor, no staining.	1.5	BH-1 (0'-1')
				1.4								**-CALICHE-** White, hard, indurated, heavily cemented, with no odor, no staining.		BH-1 (2'-3')
5			95.1	1.1									5	BH-1 (4'-5')
				0.9								**-SM-** SILTY SAND: White, with occasional gravel, heavily cemented, with no odor, no staining.		BH-1 (6'-7')
10			86.1	1									10	BH-1 (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.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02181	TETRA TECH	**LOG OF BORING BH-2**	Page 1 of 1

Project Name: EVGSAU 3332-519 Flowline Release

Borehole Location: GPS: 32.788208°, -103.475431° | Surface Elevation: 3957 ft

Borehole Number: BH-2 | Borehole Diameter (in.): 8 | Date Started: 5/13/2020 | Date Finished: 5/13/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			351	1.9								**-TOPSOIL-** Brown, loose, with organics, no odor, no staining.	1.5	BH-2 (0'-1')
			420	1.2								**-CALICHE-** White, hard, indurated, heavily cemented, with no odor, no staining.		BH-2 (2'-3')
5			551	1.3									5	BH-2 (4'-5')
			334	1.8								**-SM-** SILTY SAND: White, with occasional gravel, heavily cemented, with no odor, no staining.		BH-2 (6'-7')
10			209	1.1									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.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02181 | TETRA TECH | **LOG OF BORING BH-3** | Page 1 of 1

Project Name: EVGSAU 3332-519 Flowline Release

Borehole Location: GPS: 32.788357°, -103.475762° | Surface Elevation: 3956 ft

Borehole Number: BH-3 | Borehole Diameter (in.): 8 | Date Started: 5/13/2020 | Date Finished: 5/13/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			191	1.2								**-TOPSOIL-** Brown, loose, with organics, no odor, no staining.	1.5	BH-3 (0'-1')
			170	1.4								**-CALICHE-** White, hard, indurated, heavily cemented, with no odor, no staining.		BH-3 (2'-3')
5			105	1.1									5	BH-3 (4'-5')
			121	0.9								**-SM-** SILTY SAND: White, with occasional gravel, heavily cemented, with no odor, no staining.		BH-3 (6'-7')
10			99	1.3									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.
Surface elevation is an estimated value.

Logger: Joe Tyler | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02181 | TETRA TECH | **LOG OF BORING BH-4** | Page 1 of 1

Project Name: EVGSAU 3332-519 Flowline Release

Borehole Location: GPS: 32.788371°, -103.475326° | Surface Elevation: 3954 ft

Borehole Number: BH-4 | Borehole Diameter (in.): 8 | Date Started: 5/13/2020 | Date Finished: 5/13/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
												Previously excavated and not replaced.		
													1.5	
												-CALICHE- White, hard, indurated, heavily cemented, with no odor, no staining.		BH-4 (2'-3')
5														BH-4 (4'-5')
			95.3	2.3										BH-4 (6'-7')
													7	
												-SM- SILTY SAND: White, with low gravel, heavily cemented, with no odor, no staining.		
10				1.9										BH-4 (9'-10')
15				1.6										
													17	
												-SM- SILTY SAND: Tan, with moderate gravel, moderate cemented, with no odor, no staining.		
20			70.4	1.1									20	

Bottom of borehole at 20.0 feet.

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

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

Notes:

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

Logger: Joe Tyler | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02181 | TETRA TECH | **LOG OF BORING BH-5** | Page 1 of 1

Project Name: EVGSAU 3332-519 Flowline Release

Borehole Location: GPS: 32.788412°, -103.475579° | Surface Elevation: 3957 ft

Borehole Number: BH-5 | Borehole Diameter (in.): 8 | Date Started: 5/13/2020 | Date Finished: 5/13/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
												Previously excavated and not replaced.		
													1.5	
												-CALICHE- White, hard, indurated, heavily cemented, with no odor, no staining.		BH-5 (2'-3')
5														BH-5 (4'-5')
			80.4	1.4									7	BH-5 (6'-7')
												-SM- SILTY SAND: White, with low gravel, heavily cemented, with no odor, no staining.		
10				1.1										BH-5 (9'-10')
15				0.4									17	
												-SM- SILTY SAND: Tan, with moderate gravel, moderate cemented, with no odor, no staining.		
20			79.1	1.2									20	

Bottom of borehole at 20.0 feet.

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

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

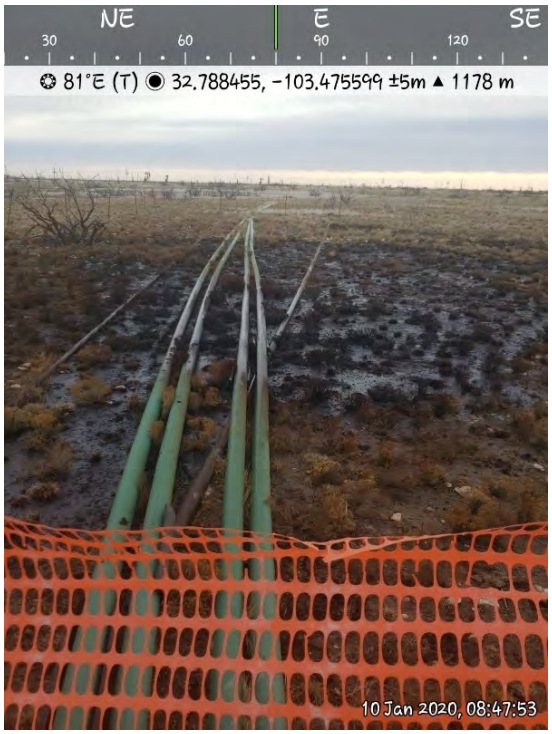
Notes:

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

Logger: Joe Tyler | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

APPENDIX E
Photographic Documentation

TETRA TECH, INC. PROJECT NO. 212C-MD-02181	DESCRIPTION	View east. Impacted area from the western extent.	1
	SITE NAME	EVGSAU 3332-519 Flowline Release	1/10/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02181	DESCRIPTION	View east. Release source at fiber flow lines.	2
	SITE NAME	EVGSAU 3332-519 Flowline Release	1/10/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02181	DESCRIPTION	View northeast. Northern portion of the impacted area.	3
	SITE NAME	EVGSAU 3332-519 Flowline Release	3/9/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02181	DESCRIPTION	View southwest. Northeastern extent of scraped area.	4
	SITE NAME	EVGSAU 3332-519 Flowline Release	3/9/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02181	DESCRIPTION	View south. Scraped area from near northern extent.	5
	SITE NAME	EVGSAU 3332-519 Flowline Release	3/9/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02181	DESCRIPTION	View northeast. Repairs at release point near the northwest extent.	6
	SITE NAME	EVGSAU 3332-519 Flowline Release	3/9/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02181	DESCRIPTION	View west. Flowlines running across release area.	7
	SITE NAME	EVGSAU 3332-519 Flowline Release	3/9/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02181	DESCRIPTION	View south. Southern portion of release area.	8
	SITE NAME	EVGSAU 3332-519 Flowline Release	3/9/2020

APPENDIX F
NMSLO Seed Mixture Details

United States Department of Agriculture

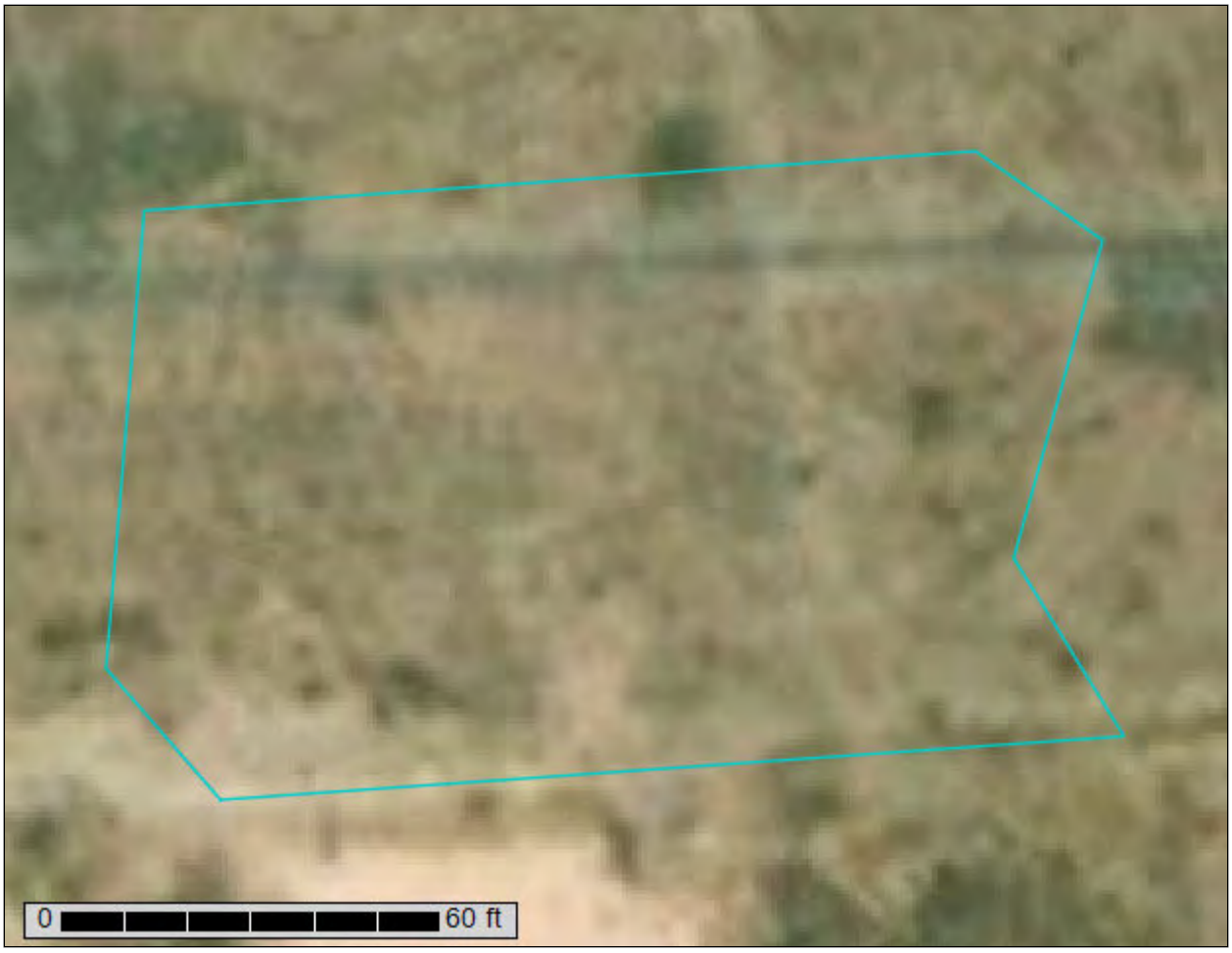
NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Lea County, New Mexico

EVGSAU 3332-519



July 8, 2020

Preface

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

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

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

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

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

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

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Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map (EVGSAU 3332-519 Release)

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: Sep 18, 2016—Nov 20, 2017

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

Map Unit Legend (EVGSAU 3332-519 Release)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KU	Kimbrough-Lea complex, dry, 0 to 3 percent slopes	0.3	100.0%
Totals for Area of Interest		**0.3**	**100.0%**

Map Unit Descriptions (EVGSAU 3332-519 Release)

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

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

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

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

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

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

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

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

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

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

Lea County, New Mexico

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

Map Unit Setting

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

Map Unit Composition

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

Description of Kimbrough

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: Very Shallow 12-17" PZ (R077DY049TX)
Hydric soil rating: No

Description of Lea

Setting

Landform: Plains
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Calcareous, loamy eolian deposits from the blackwater draw formation of pleistocene age over indurated caliche of pliocene age

Typical profile

A - 0 to 10 inches: loam
Bk - 10 to 18 inches: loam
Bkk - 18 to 26 inches: gravelly fine sandy loam
Bkkm - 26 to 80 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 22 to 30 inches to petrocalcic
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 90 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 3.0
Available water storage in profile: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: Sandy Loam 12-17" PZ (R077DY047TX)
Hydric soil rating: No

Minor Components

Douro

Percent of map unit: 12 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Sandy Loam 12-17" PZ (R077DY047TX)
Hydric soil rating: No

Kenhill

Percent of map unit: 12 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Clay Loam 12-17" PZ (R077DY038TX)
Hydric soil rating: No

Spraberry

Percent of map unit: 6 percent
Landform: Plains, playa rims
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: Very Shallow 12-17" PZ (R077DY049TX)
Hydric soil rating: No

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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.