SITE INFORMATION

Report Type: Work Plan nRM2002731369

General Site Information:						
Site:	**Philmex #15 Flowline Release**					
Company:	**ConocoPhillips**					
Section, Township and Range	**Unit Letter F**	**Sec. 27**	**T 17S**	**R 33E**		
Lease Number:	**N/A**					
County:	**Lea**					
GPS:	**32.807240°**			**-103.653390°**		
Surface Owner:	**State of New Mexico**					
Mineral Owner:	**N/A**					
Directions:	Depart from Maljamar (Hwy 82/Maljamar Rd): Head south on Maljamar Rd for 0.6 miles. Turn left onto Mescalero Rd. Head southeast for 7.7 miles. Arrive at destination on the left.					

Release Data:		
Date Released:	12/5/2019	
Type Release:	Crude Oil and Produced Water	
Source of Contamination:	Flowline leak	
Fluid Released:	11.86 bbls crude oil, 33.6 bbls produced water	
Fluids Recovered:	1 bbls crude oil, 1 bbls produced water	

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

Site Characterization	
Shallowest Depth to Groundwater:	*61' below surface*
Impact to groundwater or surface water:	*No*
Extents within 300 feet of a watercourse:	*No*
Extents within 200 feet of lakebed, sinkhole, or playa lake:	*No*
Extents within 300 feet of an occupied structure:	*No*
Extents within 500 horizontal feet of a private water well:	*No*
Extents within 1000 feet of any water well or spring:	*No*
Extents within incorporated municipal well field:	*No*
Extents within 300 feet of a wetland:	*No*
Extents overlying a subsurface mine:	*No*
Karst Potential:	*Low*
Extents within a 100-year floodplain:	*No*
Impact to areas not on a production site:	*No*

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

TETRA TECH

September 10, 2020

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

Re: Release Characterization and Remediation Work Plan
ConocoPhillips
Philmex #15 Flowline Release
Unit Letter F, Section 27, Township 17 South, Range 33 East
Lea County, New Mexico
nRM2002731369

Dear Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a release that occurred from the Philmex #15 well (API No. 30-025-27402) flowline. The release site coordinates are 32.807240°, -103.653390°, located in the Public Land Survey System (PLSS) Unit Letter F, Section 27, Township 17 South, Range 33 East, Lea County, New Mexico (Site). The Site location is shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico Oil Conservation Division (NMOCD) C-141 Initial Report (Appendix A), the release was discovered by air patrol on December 5, 2019. The release was caused by a leak on a flowline located approximately 0.55 miles southeast of the Philmex #15 well pad and resulted in the discharge of 11.86 barrels (bbls) of oil and 33.6 bbls of produced water to the ground surface. During the initial response, 1 bbl of oil and 1 bbls of water were recovered with a vacuum truck. The NMOCD processed the initial C-141 on January 27, 2020 and assigned the Site the incident ID nRM2002731369.

SITE CHARACTERIZATION

A site characterization was performed and per 19.15.29.12 NMAC, no watercourses, playa lakes, sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances and the Site is in a low karst potential area. The Site is within a New Mexico oil and gas production area.

According to the New Mexico Office of the State Engineer (NMOSE) well database, there are four wells located in Township 17 South, Range 33 East within a 1000-meter radius of the Site. The average depth to groundwater documented is 61 ft below ground surface (bgs). 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

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levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil. Based on the site characterization, 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 (GRO + DRO + ORO)	2,500 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

INITIAL RESPONSE

According to information provided by COP, the release extent was identified as an area along a flowline that extends from the Philmex #15 well to a flowline header located approximately 0.86 miles southeast of the Philmex #15 lease pad. The release occurred located approximately 0.55 miles southeast of the Philmex #15 well pad in an area of pasture adjacent to a reclaimed pad and lease road. Review of historical imagery indicates that the former lease road and pad were reclaimed sometime between March 2012 and February 2014.

Per 19.15.29.8 B. (4) NMAC, the responsible party may commence remediation immediately after discovery of a release. Free fluids were recovered with a vacuum truck during initial response. The release footprint was fenced to limit access to the site as necessary to protect human health and the environment. COP initiated remediation activities in early 2020. During remediation, the visibly impacted soils within the release extent were excavated to 2 feet below ground surface (bgs). The steel flowline from the Philmex #15 runs through the release extent in a southeast to northwest trend. After the initial response remediation activities, further remediation efforts were halted to assess soils both vertically and horizontally for potential environmental impacts.

SITE ASSESSMENT ACTIVITIES

Tetra Tech personnel were onsite on July 15, 2020 to conduct soil sampling to achieve vertical and horizontal delineation of the release. A total of eight (8) borings (BH-1 through BH-8) were installed using an air rotary drilling rig. Three borings (BH-1 through BH-3) were installed within the preexisting excavated area to 15 feet bgs to achieve vertical delineation of the release. The uppermost samples collected at these locations were the 2 – 3 feet bgs interval, because the top 2 feet were previously excavated and not yet backfilled. The five remaining borings (B-4 through B-8) were installed on the perimeter of the release to the north, south, east, and west to confirm horizontal delineation of the release footprint. Boring logs, included as Appendix C, present soil descriptions, sample depths, and field screening data from the July 2020 assessment activities. Figure 3 depicts the release extent, excavated area and the July 2020 soil boring locations.

A total of thirty-nine (39) samples were collected from the eight borings and submitted to Pace Analytical National Center for Testing & Innovation in Nashville, Tennessee to be analyzed for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix D. Photographic documentation of the site assessment is included in Appendix E.

SUMMARY OF SAMPLING RESULTS

Results from the July 2020 soil sampling event are summarized in Table 1. The analytical results associated with the BH-2 and BH-3 boring locations exceeded the reclamation requirements of 600 mg/kg chloride and 100 mg/kg TPH in the 2-3' sample interval. There were no other analytical results which exceeded the chloride RRAL for the upper four feet (600 mg/kg) during the assessment. Additionally, there were no other analytical results which exceeded the chloride RRAL for soils deeper than 4 feet bgs (10,000

mg/kg). The remainder of analytical results associated with the samples collected were below the respective RRAL for TPH (2,500 mg/kg). The analytical results associated with all samples analyzed were below the BTEX Site RRAL of 50 mg/kg. Therefore, both horizontal and vertical delineation was achieved during the July 2020 soil assessment activities.

REMEDIATION WORK PLAN

Based on the analytical results, ConocoPhillips proposes to further excavate soils an additional 2 ft to a total depth of 4 feet bgs near boring locations BH-2 and BH-3, as depicted in Figure 4. Screening samples will be collected during the excavation process to determine if the remediation footprint for the site will be modified based on field conditions. Impacted soils will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to a maximum depth of 4 feet below surface or until a representative sample from the walls and bottom of the excavation is below the RRAL for chlorides (600 mg/kg). The area of the release extent that runs along the steel flowlines will be hand-dug to a depth of 4 ft or the maximum extent practicable.

Excavated soils will be transported offsite and disposed of at an NMOCD-approved or permitted facility. Confirmation floor and sidewall samples will be collected for verification of remedial activities, and analyzed for TPH, BTEX, and chloride. Once the sample 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 515 cubic yards.

ALTERNATIVE CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, ConocoPhillips proposes the following alternative confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 5. Approximately eighteen (18) confirmation floor samples and twenty-seven (27) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses an area of approximately 5,800 square feet. The proposed alternative confirmation sampling plan includes sampling the existing excavated area to 2 feet bgs around boring location BH-1, which is not considered for any further proposed excavation as analytical results in boring BH-1 were below Site RRALs.

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, BTEX, and chlorides. 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) Course (CS) 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 complete remediation activities at the Site within 90 days of approval of this submittal. 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 – Site Location/Overview Map
- Figure 2 – Site Location/Topographic Map
- Figure 3 – Release Assessment Map
- Figure 4 – Proposed Remediation Extents
- Figure 5 – Alternative Confirmation Sampling Plan

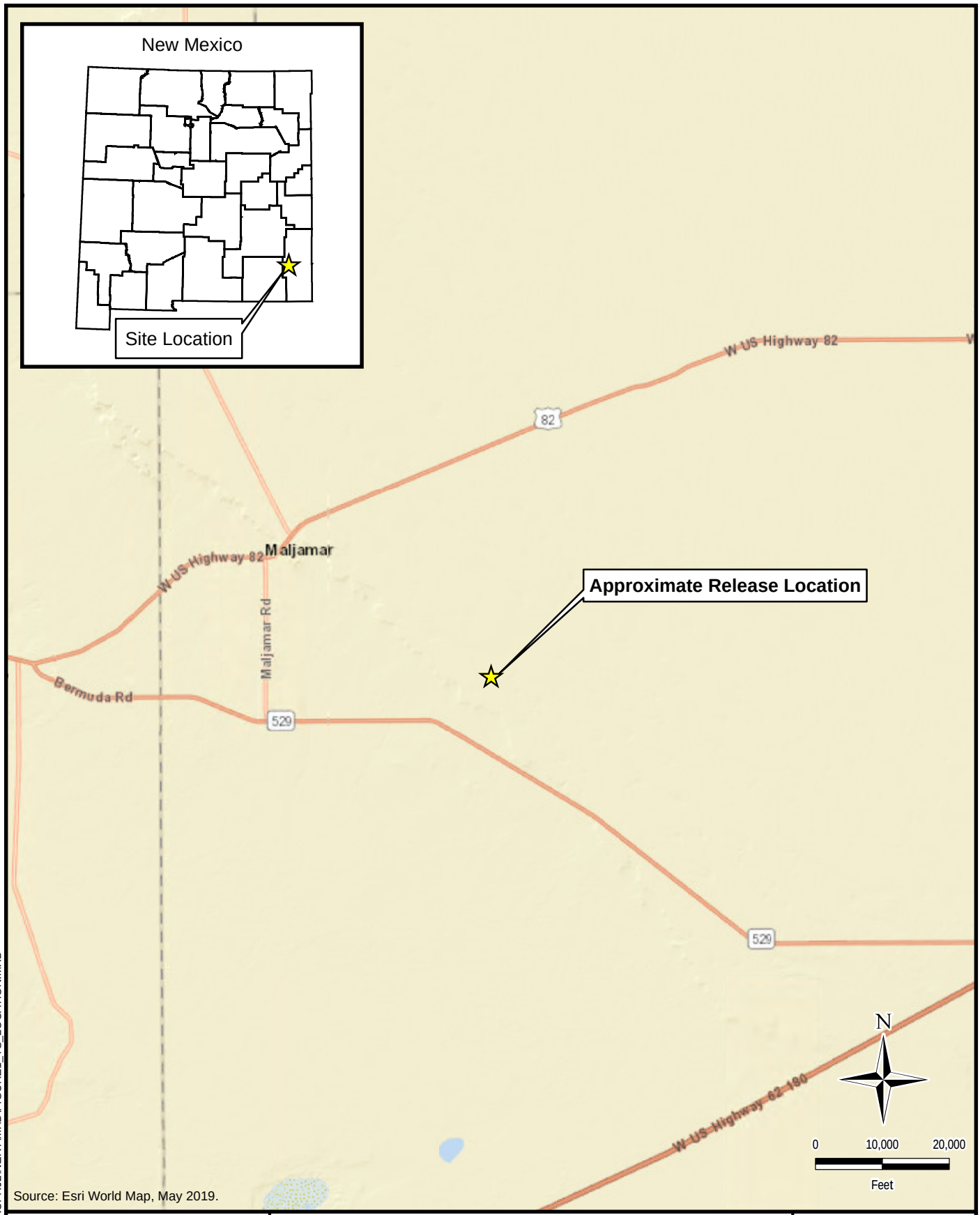
Tables:

- Table 1 – Summary of Analytical Results –Site Assessment

Appendices:

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

FIGURES



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

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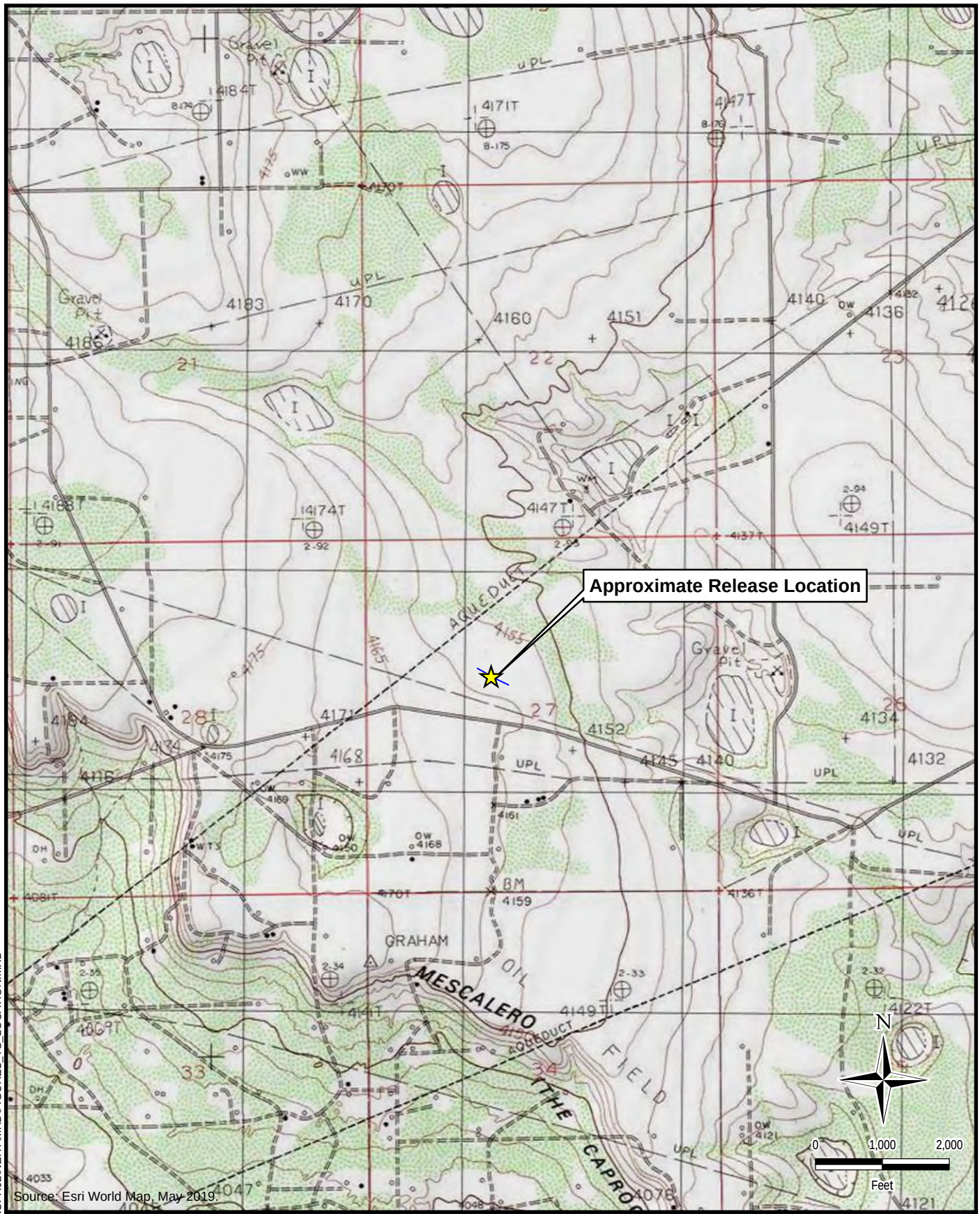
CONOCOPHILLIPS

NRM2002731369
(32.807240°, -103.653390°)
LEA COUNTY, NEW MEXICO

PHILMEX 15 FLOWLINE RELEASE
SITE LOCATION MAP

PROJECT NO.:	212C-MD-02239
DATE:	AUGUST 10, 2020
DESIGNED BY:	AAM

Figure No.
1



Source: Esri World Map, May 2019.

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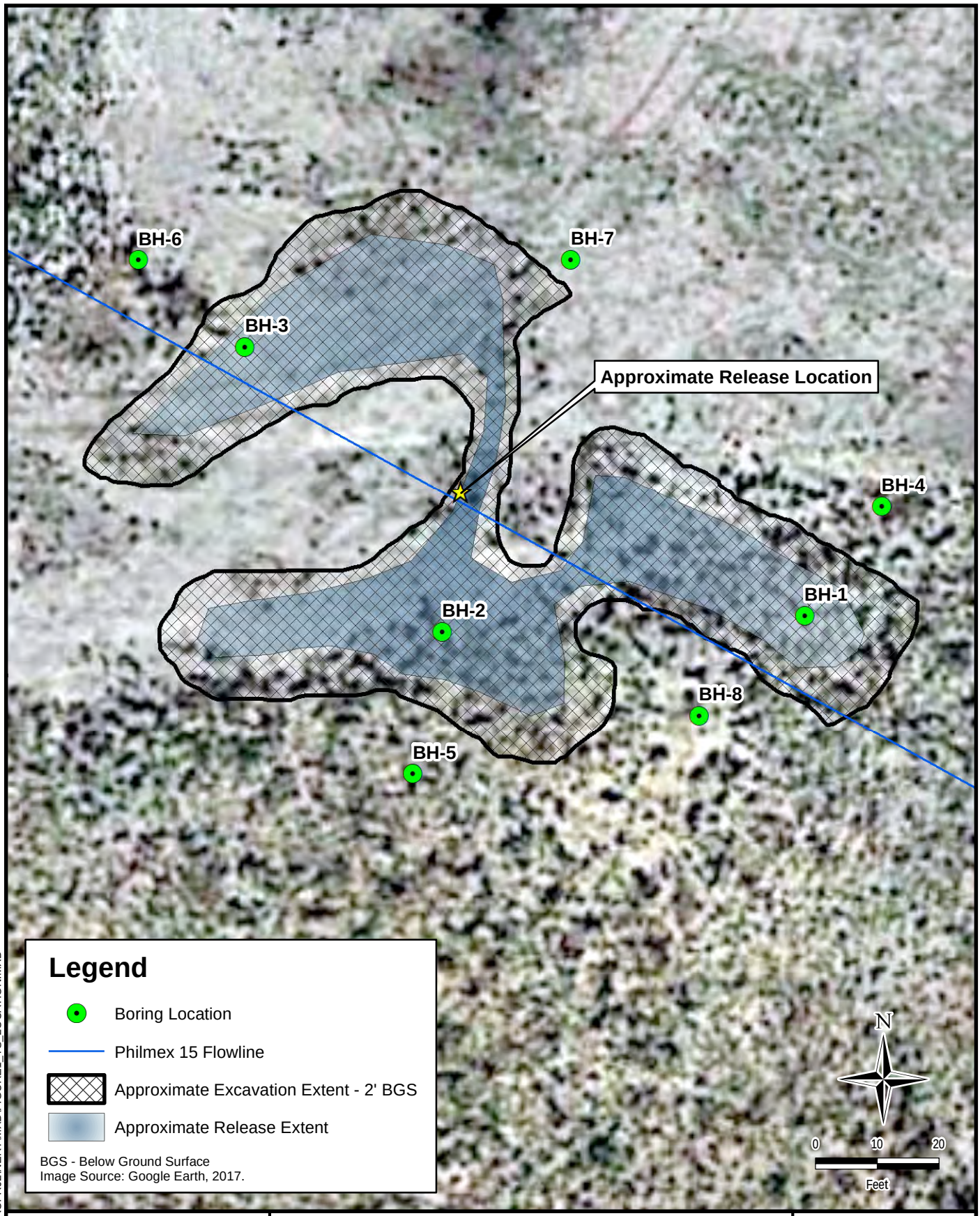
LEA COUNTY, NEW MEXICO

PHILMEX 15 FLOWLINE RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02239
DATE:	AUGUST 10, 2020
DESIGNED BY:	AAM

Figure No.
2



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

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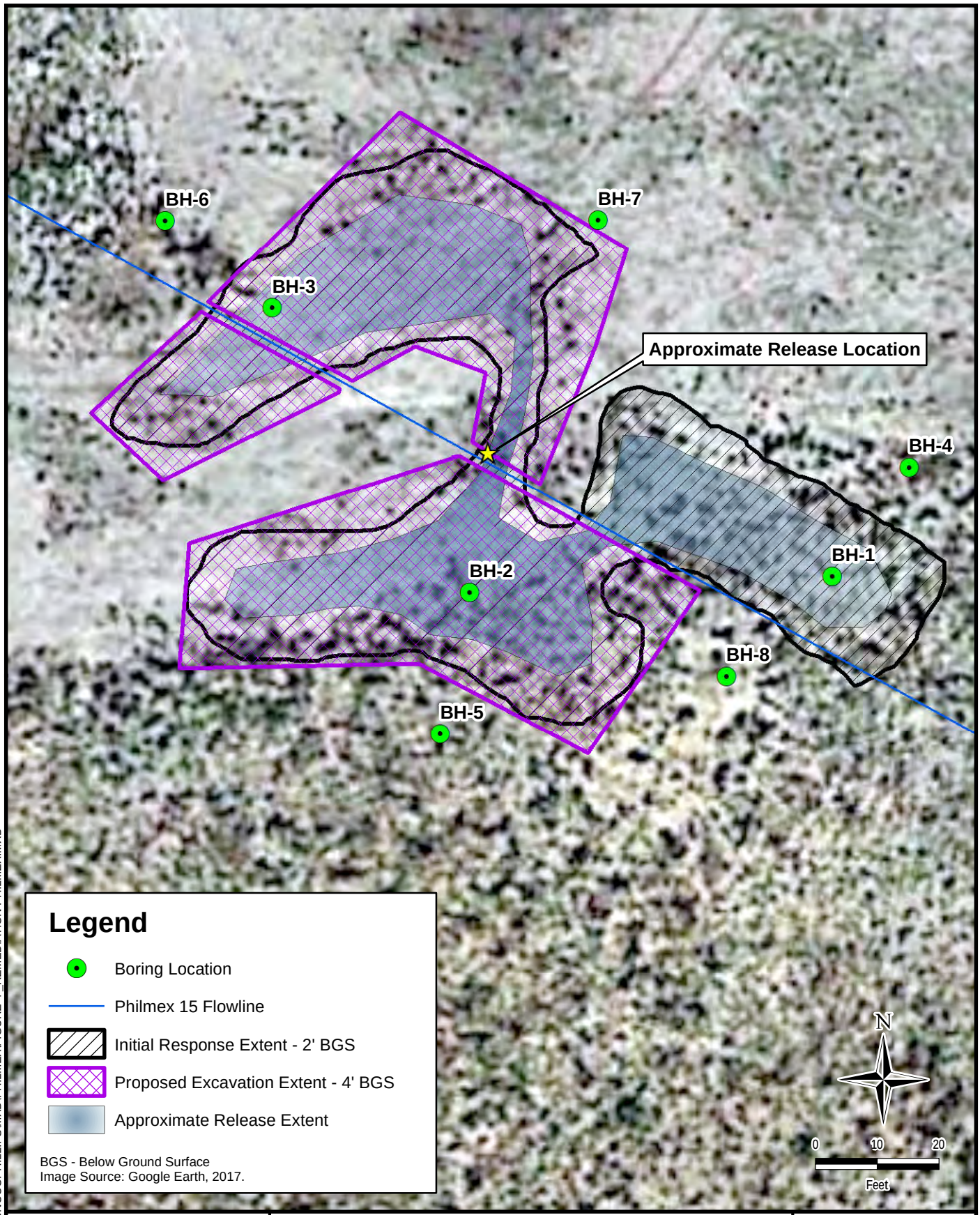
LEA COUNTY, NEW MEXICO

PHILMEX 15 FLOWLINE RELEASE
RELEASE ASSESSMENT MAP

PROJECT NO.:	212C-MD-02239
DATE:	SEPTEMBER 08, 2020
DESIGNED BY:	AAM

Figure No.
3



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\PHILMEX\FIGURE 4 _REMEDIATION PHILMEX.MXD

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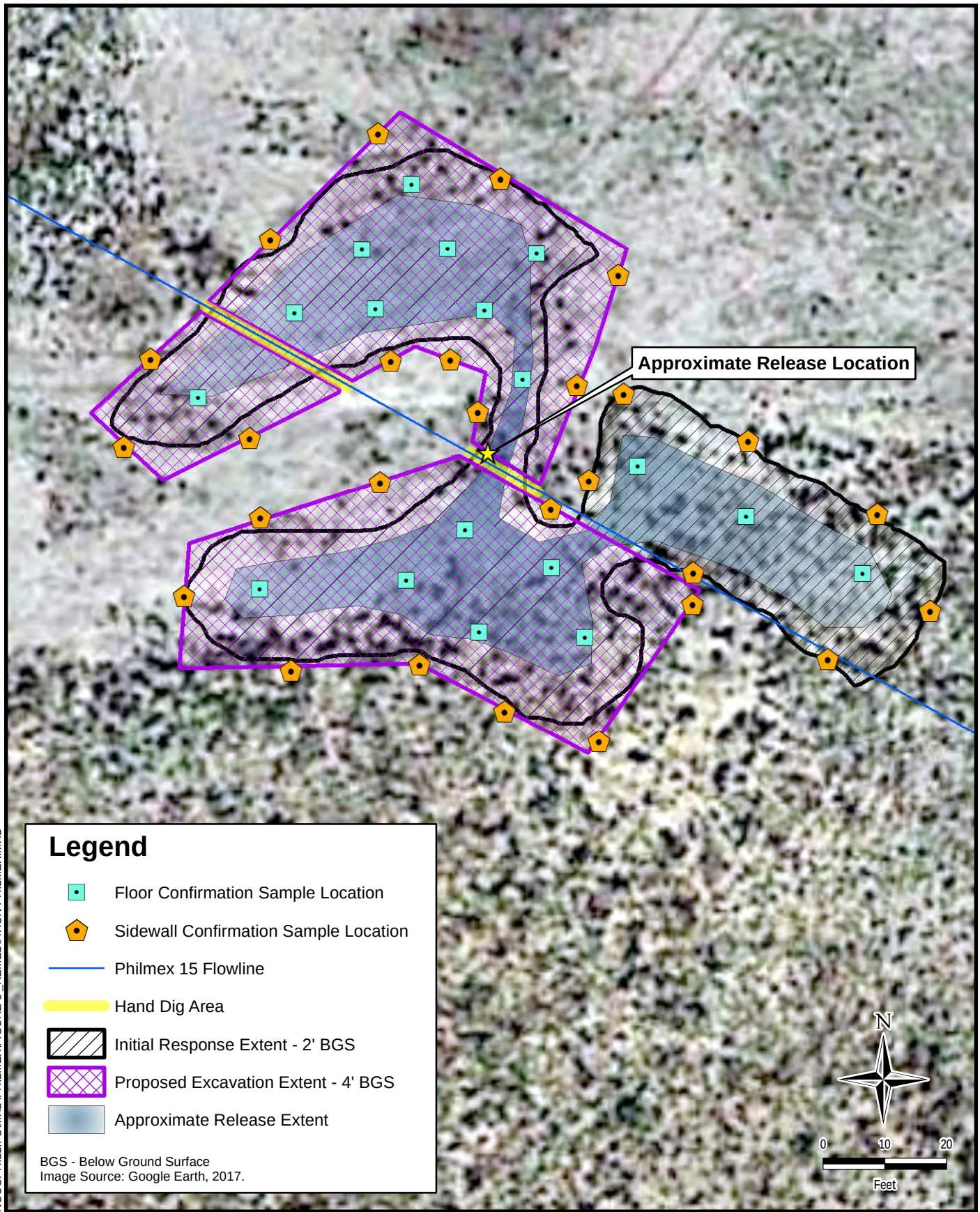
CONOCOPHILLIPS

NRM2002731369
(32.807240°, -103.653390°)
LEA COUNTY, NEW MEXICO

PHILMEX 15 FLOWLINE RELEASE
PROPOSED REMEDIATION EXTENTS

PROJECT NO.: 212C-MD-02239
DATE: SEPTEMBER 08, 2020
DESIGNED BY: AAM

Figure No.
4



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\PHILMEX\FIGURE 5_REMEDIATION PHILMEX.MXD

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CONOCOPHILLIPS

NRM2002731369
(32.807240°, -103.653390°)
LEA COUNTY, NEW MEXICO

PHILMEX 15 FLOWLINE RELEASE
ALTERNATIVE CONFIRMATION SAMPLING PLAN

PROJECT NO.:	212C-MD-02239
DATE:	SEPTEMBER 08, 2020
DESIGNED BY:	AAM

Figure No.
5

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT
CONOCOPHILLIPS
PHILMEX #15 FLOWLINE RELEASE
nRM2002731369
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Field Screening Results		Chloride[1]		BTEX[2]								TPH[3]							
			Chloride	PID			Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX	GRO[4] C_3 - C_{10}		DRO C_{10} - C_{28}		ORO C_{28} - C_{40}		Total TPH (GRO+DRO+ORO)
		ft. bgs	ppm		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
BH-1	7/15/2020	2-3	345	0.9	441		< 0.00105		< 0.00525		< 0.00262		0.00121	J	0.00121	0.0393	B J	3.94	J	6.02		10.0
		4-5	850	0.0	810		< 0.00107		< 0.00536		< 0.00268		< 0.00696		-	0.0415	B J	2.28	J	1.62		3.94
		6-7	-	0.0	354		< 0.00102		< 0.00511		< 0.00256		< 0.00664		-	0.0380	B J	< 4.09		1.24	J	1.28
		8-9	138	0.0	196		< 0.00102		< 0.00511		< 0.00256		< 0.00664		-	< 0.102		< 4.09		2.35	J	2.35
		11-12	74	0.0	33.6		< 0.00102		< 0.00509		< 0.00255		< 0.00662		-	< 0.102		1.89	J	2.61	J	4.50
		16-17	50	0.0	34.6		< 0.00103		< 0.00517		< 0.00258		< 0.00672		-	< 0.103		2.40	J	3.23	J	5.63
BH-2	7/15/2020	2-3	650	0.5	***866***		< 0.00102		< 0.00508		< 0.00254		< 0.00660		-	< 0.102		414		490		***904***
		4-5	425	0.0	247		< 0.00123		< 0.00613		< 0.00307		< 0.00797		-	0.0580	B J	14.1		43.1		57.3
		6-7	176	0.0	1800		< 0.00106		< 0.00532		< 0.00266		< 0.00691		-	0.0553	B J	< 4.26		1.30	J	1.36
		8-9	100	0.0	1440		< 0.00106		< 0.00532		< 0.00266		< 0.00692		-	0.0543	B J	3.01	J	2.17	J	5.23
		11-12	120	0.0	32.2		< 0.00106		< 0.00528		< 0.00264		< 0.00686		-	0.0421	B J	< 4.22		1.90	J	1.94
		16-17	100	0.0	13.5	J	< 0.00141		< 0.00705		< 0.00353		< 0.00917		-	< 0.121		4.98		31.1		36.1
BH-3	7/15/2020	2-3	400	394	***2,590***		< 0.00105		0.00220	J	0.0141		0.0442		0.0605	1.61		881	J3 V	687		***1570***
		4-5	180	125	493		< 0.00106		< 0.00532		< 0.00266		< 0.00692		-	< 0.106		10.6		14.9		25.5
		6-7	400	0.1	191		< 0.00102		< 0.00509		< 0.00255		< 0.00662		-	< 0.102		5.29		6.51		11.8
		8-9	150	0.0	173		< 0.00102		< 0.00511		< 0.00255		< 0.00664		-	< 0.102		2.33	J	2.10	J	4.43
		11-12	200	0.0	222		< 0.00106		< 0.00529		< 0.00265		< 0.00668		-	< 0.106		< 4.24		1.04	J	1.04
		16-17	150	0.0	113		< 0.00103		< 0.00517		< 0.00259		< 0.00673		-	< 0.103		2.31	J	1.45	J	3.76
BH-4	7/15/2020	0-1	70	0.0	< 20.6		< 0.00103		< 0.00516		0.00114	J	0.00196	J	0.00310	< 0.103		16.6		67.0		83.6
		2-3	74	0.0	< 20.8		< 0.00104		< 0.00519		< 0.00260		< 0.00675			< 0.104		5.45		11.5		17.0
		4-5	78	0.0	< 21.1		< 0.00105		< 0.00527		< 0.00263		< 0.00685		-	< 0.105		< 4.22		2.20	J	2.20
		6-7	72	0.0	< 20.6		< 0.00103		< 0.00515		< 0.00258		< 0.00670		-	< 0.103		< 4.12		1.46	J	1.46
		9-10	-	0.0	28.3		< 0.00150		< 0.00749		< 0.00375		< 0.00974		-	< 0.125		< 5.00		0.713	J	0.713
BH-5	7/15/2020	0-1	100	0.0	15.4	J	< 0.00105		< 0.00526		< 0.00263		< 0.00683		-	< 0.105		7.64		21.7		29.3
		2-3	200	0.0	166		< 0.00106		< 0.00531		< 0.00266		< 0.00691		-	< 0.106		< 4.25		2.91	J	2.91
		4-5	78	0.0	44.0		< 0.00108		< 0.00541		< 0.00271		< 0.00704		-	< 0.108		2.75	J	0.862	J	3.61
		6-7	95	0.0	74.4		< 0.00103		< 0.00516		< 0.00258		< 0.00671		-	< 0.103		2.46	J	< 4.13		2.46
BH-6	7/15/2020	0-1	120	0.0	17.1	J	< 0.00104		< 0.00519		< 0.00260		0.00114	J	0.00114	< 0.104		11.1		21.6		32.7
		2-3	68	0.0	55.3		< 0.00102		< 0.00512		< 0.00256		< 0.00666		-	< 0.102		2.70	J	1.44	J	4.14
		4-5	67	0.0	44.2		< 0.00102		< 0.00508		< 0.00254		< 0.00660		-	< 0.102		2.44	J	< 4.06		2.44
		6-7	120	0.0	25.5		< 0.00102		< 0.00510		< 0.00255		< 0.00663		-	< 0.102		2.90	J	< 4.08		2.90
BH-7	7/15/2020	0-1	220	0.0	11.9	J	< 0.00107		< 0.00535		0.000910	J	0.00142	J	0.00233	< 0.107		10.5		24.7		35.2
		2-3	86	0.0	10.4	J	< 0.00102		< 0.00509		< 0.00255		< 0.00662		-	< 0.102		1.81	J	< 4.07		1.81
		4-5	160	0.0	19.8	J	< 0.00101		< 0.00504		< 0.00252		< 0.00656		-	< 0.101		1.80	J	1.40	J	3.20
		6-7	200	0.0	144		< 0.00103		< 0.00514		< 0.00257		< 0.00669		-	< 0.103		2.35	J	1.28	J	3.63
BH-8	7/15/2020	0-1	125	0.0	13.1	J	< 0.00101		< 0.00506		< 0.00253		< 0.00658		-	< 0.101		2.85	J	4.02	J	6.87
		2-3	61	0.0	102		< 0.00102		< 0.00510		< 0.00255		< 0.00663		-	< 0.102		2.08	J	0.865	J	2.95
		4-5	69	0.0	67.6		< 0.00101		< 0.00504		< 0.00252		< 0.00655		-	< 0.101		< 4.03		< 4.03		-
		6-7	170	0.0	85.0		< 0.00102		< 0.00509		< 0.00254		< 0.00661		-	< 0.102		1.96	J	< 4.07		1.96

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

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.
J3 The associated batch QC was outside the established quality control range for precision.
V The sample concentration is too high to evaluate accurate spike recoveries.

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	NRM2002731369
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

SGEYD-191211-C-1410

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 32.8110619 Longitude -103.6617508
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Philmex 15 flowline	Site Type flow line leak
Date Release Discovered 12/5/19	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
A	28	17S	33E	Lea

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

Nature and Volume of Release

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

☑ Crude Oil	Volume Released (bbls) 11.86	Volume Recovered (bbls) 1
☑ Produced Water	Volume Released (bbls) 33.6	Volume Recovered (bbls) 1
	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 flow line leak

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM2002731369
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 was more than 25 bbls.

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

It was given on 12/5/19 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: 12/11/19
email: g.fejervary@cop.com
Telephone: 432/210-7037

OCD Only

Received by: Ramona Marcus
Date: 1/27/2020

NRM2002731369

L48 Spill Volume Estimate Form

Facility Name & Number:	Philmex 15 flowline
Asset Area:	Maljamar
Release Discovery Date & Time:	12/5/19 12:00p
Release Type:	Oil Mixture
Provide any known details about the event:	Flow line leak found by air patrol, 2 bbls 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	62.0	25.0	5.00	15.12%	114.958	17.382	25.00%	4.345	13.036
Rectangle B	22.0	3.0	5.00	15.12%	4.895	0.740	25.00%	0.185	0.555
Rectangle C	40.0	4.0	5.00	15.12%	11.867	1.794	25.00%	0.449	1.346
Rectangle D	55.0	10.0	5.00	15.12%	40.792	6.168	25.00%	1.542	4.626
Rectangle E	62.0	25.0	5.00	15.12%	114.958	17.382	25.00%	4.345	13.036
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:	43.465		10.866	32.599

State of New Mexico
Oil Conservation Division

Incident ID	nRM2002731369
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?	61 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☐ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☐ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☐ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☐ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☐ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☐ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☐ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nRM2002731369
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: 9/9/2020

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

OCD Only

Received by: Cristina Eads Date: 09/10/2020

State of New Mexico
Oil Conservation Division

Incident ID	nRM2002731369
District RP	
Facility ID	
Application ID	

Remediation Plan

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

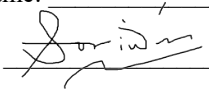
- ☑ Detailed description of proposed remediation technique
- ☑ Scaled sitemap with GPS coordinates showing delineation points
- ☑ Estimated volume of material to be remediated
- ☑ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☑ Proposed schedule for remediation (note 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

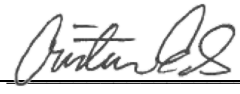
Signature:  Date: 9/9/2020

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

OCD Only

Received by: Cristina Eads Date: 09/10/2020

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

Signature:  Date: 11/02/2020

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	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 03194	L	LE		4	3	25	17S	36E	658227	3630422*	332	120	40	80
L 02566	L	LE	3	3	3	25	17S	36E	657723	3630314*	548	110	40	70
L 12562 POD9	L	LE	1	4	4	25	17S	36E	658980	3630480	925	122	107	15
L 03086	L	LE		1	1	25	17S	36E	657804	3631628*	947	122	60	62

Average Depth to Water: **61 feet**

Minimum Depth: **40 feet**

Maximum Depth: **107 feet**

Record Count: 4

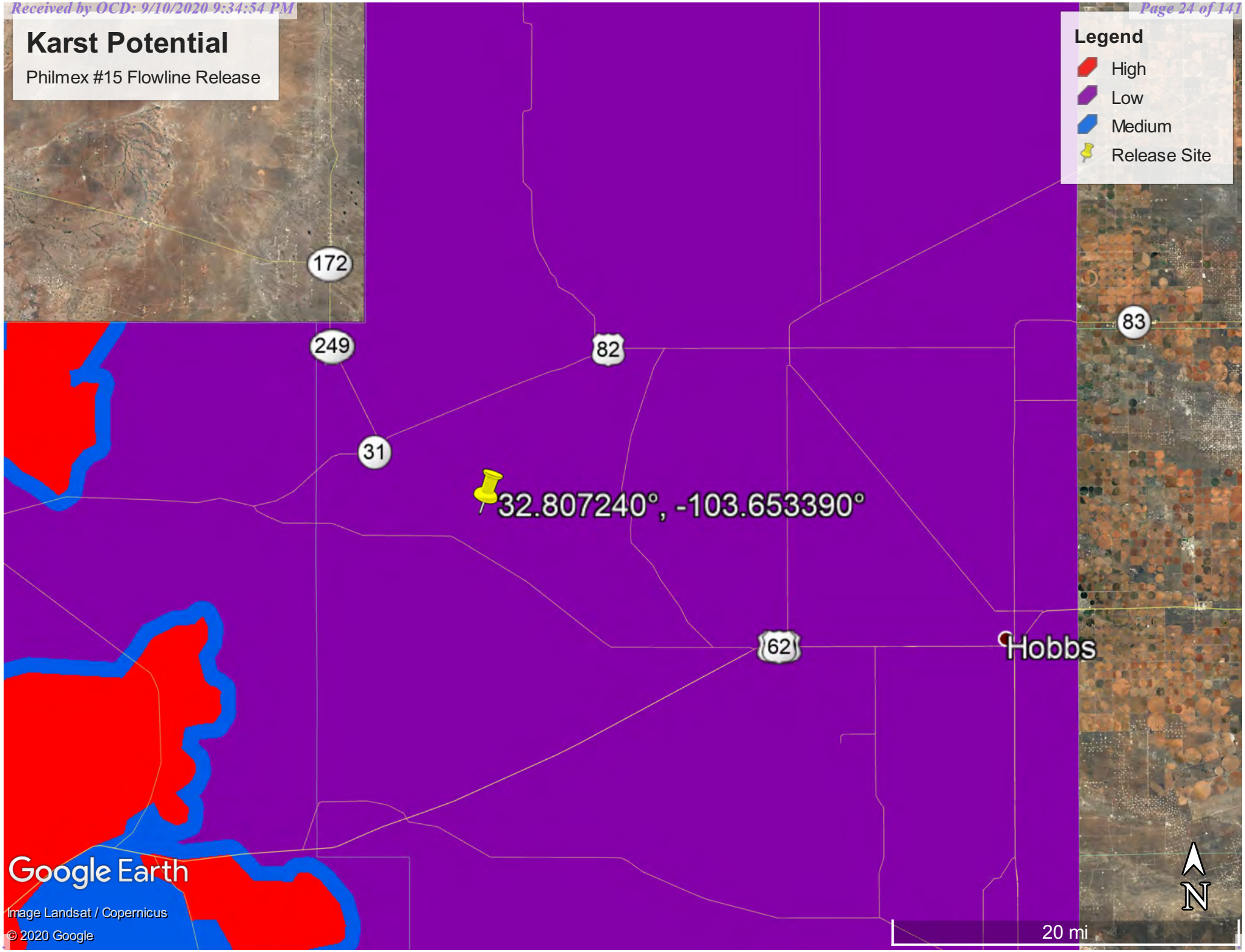
UTMNAD83 Radius Search (in meters):

Easting (X): 658087.21 **Northing (Y):** 3630723.462 **Radius:** 1000

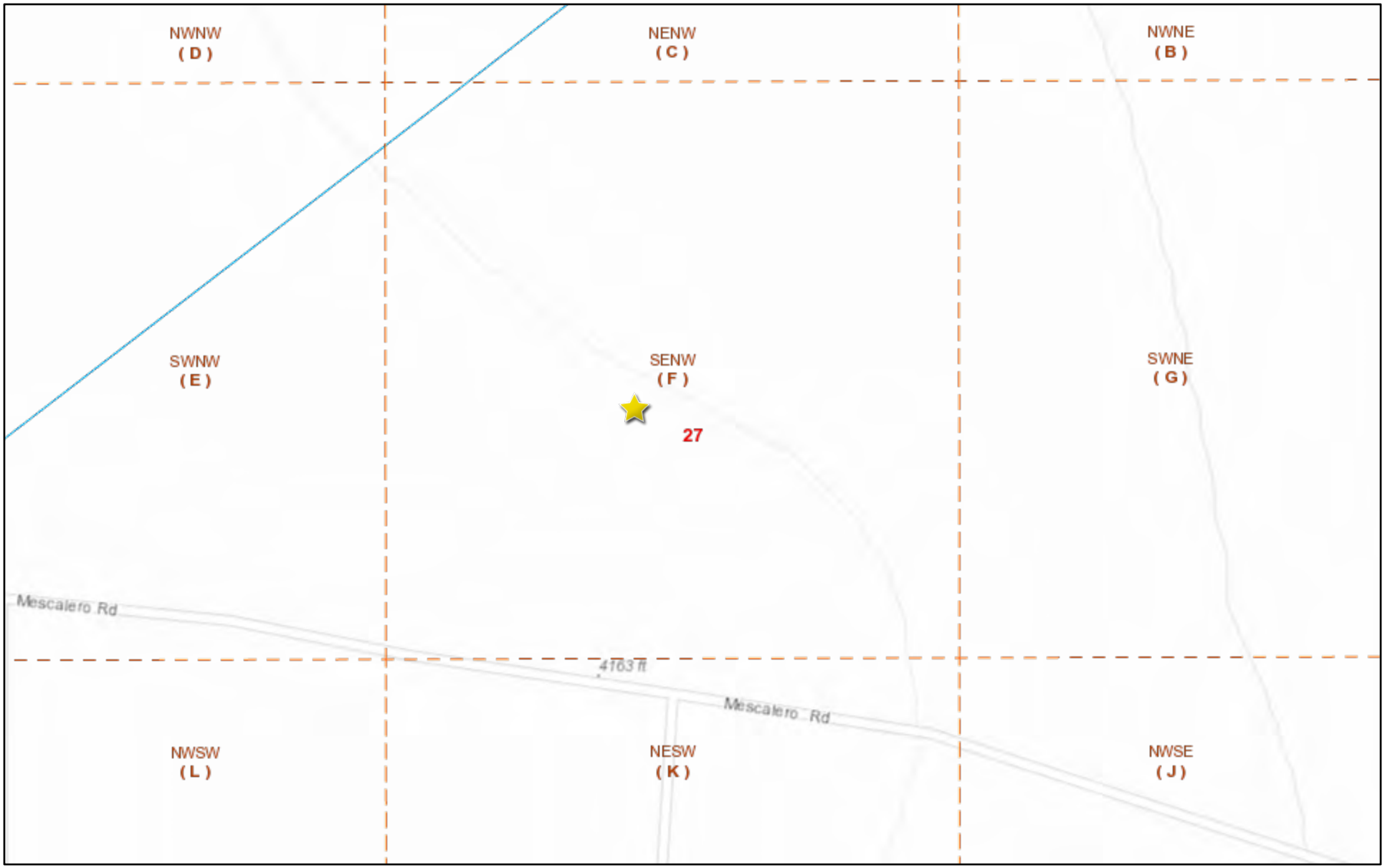
***UTM location was derived from PLSS - see Help**

Karst Potential

Philmex #15 Flowline Release



Water Bodies



8/7/2020, 4:17:31 PM

Override 1

OCD District Offices

PLSS First Division

PLSS Second Division

OSE Water-bodies

PLJV Probable Playas

OSE Streams

1:4,514

0 0.03 0.07 0.13 mi

0 0.05 0.1 0.2 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

New Mexico Oil Conservation Division

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

APPENDIX C
Soil Boring Logs

212C-MD-02239 | TETRA TECH | **LOG OF BORING BH-1** | Page 1 of 1

Project Name: Philmex #15 Flowline Release

Borehole Location: GPS Coordinates: 32.807176, -103.653204 | Surface Elevation: 4165 ft

Borehole Number: BH-1 | Borehole Diameter (in.): 8 | Date Started: 7/15/2020 | Date Finished: 7/15/2020

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
												-- Excavated to 2' bgs		
													2	
		X	345	0.9								**-SM-** SILTY SAND: Tan, very dense, moderately cemented, with some gravel. Interbedded with hard caprock calcrete.		BH-1 (2'-3')
5		X	850	0										BH-1 (4'-5')
		X	-	0										BH-1 (6'-7')
		X	138	0										BH-1 (8'-9')
10														
		X	74	0										BH-1 (11'-12')
15														
		X	50	0									17	BH-1 (16'-17')

Bottom of borehole at 17.0 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:

Logger: Adrian Garcia | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02239 | TETRA TECH | **LOG OF BORING BH-2** | Page 1 of 1

Project Name: Philmex #15 Flowline Release

Borehole Location: GPS Coordinates: 32.807170, -103.653395 | Surface Elevation: 4165 ft

Borehole Number: BH-2 | Borehole Diameter (in.): 8 | Date Started: 7/15/2020 | Date Finished: 7/15/2020

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
												-- Excavated to 2' bgs	2	
		☒	650	0.5								**-SM-** SILTY SAND: Tan, very dense, moderately cemented, with some gravel. Interbedded with hard caprock calcrete.		BH-2 (2'-3')
5		☒	425	0										BH-2 (4'-5')
		☒	176	0										BH-2 (6'-7')
		☒	100	0										BH-2 (8'-9')
10														
		☒	120	0										BH-2 (11'-12')
15														
		☒	100	0									17	BH-2 (16'-17')

Bottom of borehole at 17.0 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:

Logger: Adrian Garcia | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02239	TETRA TECH	**LOG OF BORING BH-3**	Page 1 of 1

Project Name: Philmex #15 Flowline Release

Borehole Location: GPS Coordinates: 32.807297, -103.653498 | Surface Elevation: 4165 ft

Borehole Number: BH-3 | Borehole Diameter (in.): 8 | Date Started: 7/15/2020 | Date Finished: 7/15/2020

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
												-- Excavated to 2' bgs.	2	
		☒	400	394								**-SM-** SILTY SAND: Tan, very dense, moderately cemented, with some gravel. Interbedded with hard caprock calcrete.		BH-3 (2'-3')
5		☒	180	125										BH-3 (4'-5')
		☒	400	0.1										BH-3 (6'-7')
		☒	150	0										BH-3 (8'-9')
10														
		☒	200	0										BH-3 (11'-12')
15														
		☒	150	0									17	BH-3 (16'-17')

Bottom of borehole at 17.0 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:

Logger: Adrian Garcia | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02239 | TETRA TECH | **LOG OF BORING BH-4** | Page 1 of 1

Project Name: Philmex #15 Flowline Release

Borehole Location: GPS Coordinates: 32.807221, -103.653163 | Surface Elevation: 4165 ft

Borehole Number: BH-4 | Borehole Diameter (in.): 8 | Date Started: 7/15/2020 | Date Finished: 7/15/2020

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
			70	0								**-TOPSOIL-** Brown, loose, dry.	1	BH-4 (0'-1')
			74	0								**-CALICHE-** White, hard, lightly cemented, with pea gravel.	3	BH-4 (2'-3')
5			78	0								**-SM-** SILTY SAND: Tan, very dense, moderately cemented, with some gravel. Interbedded with hard caprock calcrete.		BH-4 (4'-5')
			72	0										BH-4 (6'-7')
10			-	0									10	BH-4 (9'-10')

Bottom of borehole at 10.0 feet.

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

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

Notes:

Logger: Adrian Garcia | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02239 | TETRA TECH | **LOG OF BORING BH-5** | Page 1 of 1

Project Name: Philmex #15 Flowline Release

Borehole Location: GPS Coordinates: 32.807107, -103.6534411 | Surface Elevation: 4165 ft

Borehole Number: BH-5 | Borehole Diameter (in.): 8 | Date Started: 7/15/2020 | Date Finished: 7/15/2020

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
			100	0								**-TOPSOIL-** Brown, loose, dry.	1	BH-5 (0'-1')
			200	0								**-CALICHE-** White, hard, lightly cemented, with pea gravel.	3	BH-5 (2'-3')
5			78	0								**-SM-** SILTY SAND: Tan, very dense, moderately cemented, with some gravel. Interbedded with hard caprock calcrete.		BH-5 (4'-5')
			95	0										BH-5 (6'-7')
10													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:

Logger: Adrian Garcia | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02239 | TETRA TECH | **LOG OF BORING BH-6** | Page 1 of 1

Project Name: Philmex #15 Flowline Release

Borehole Location: GPS Coordinates: 32.807336, -103.653554 | Surface Elevation: 4165 ft

Borehole Number: BH-6 | Borehole Diameter (in.): 8 | Date Started: 7/15/2020 | Date Finished: 7/15/2020

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
			120	0								**-TOPSOIL-** Brown, loose, dry.	1	BH-6 (0'-1')
			68	0								**-CALICHE-** White, hard, lightly cemented, with pea gravel.	3	BH-6 (2'-3')
5			67	0								**-SM-** SILTY SAND: Tan, very dense, moderately cemented, with some gravel. Interbedded with hard caprock calcrete.		BH-6 (4'-5')
			170	0										BH-6 (6'-7')
10													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:

Logger: Adrian Garcia | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02239 | TETRA TECH | **LOG OF BORING BH-7** | Page 1 of 1

Project Name: Philmex #15 Flowline Release

Borehole Location: GPS Coordinates: 32.807335, -103.653326 | Surface Elevation: 4165 ft

Borehole Number: BH-7 | Borehole Diameter (in.): 8 | Date Started: 7/15/2020 | Date Finished: 7/15/2020

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
			220	0								**-TOPSOIL-** Brown, loose, dry.	1	BH-7 (0'-1')
			86	0								**-CALICHE-** White, hard, lightly cemented, with pea gravel.	3	BH-7 (2'-3')
5			160	0								**-SM-** SILTY SAND: Tan, very dense, moderately cemented, with some gravel. Interbedded with hard caprock calcrete.		BH-7 (4'-5')
			200	0										BH-7 (6'-7')
10													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:

Logger: Adrian Garcia | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02239 | TETRA TECH | **LOG OF BORING BH-8** | Page 1 of 1

Project Name: Philmex #15 Flowline Release

Borehole Location: GPS Coordinates: 32.807132, -103.653260 | Surface Elevation: 4165 ft

Borehole Number: BH-8 | Borehole Diameter (in.): 8 | Date Started: 7/15/2020 | Date Finished: 7/15/2020

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
			125	0								**-TOPSOIL-** Brown, loose, dry.	1	BH-8 (0'-1')
			61	0								**-CALICHE-** White, hard, lightly cemented, with pea gravel.	3	BH-8 (2'-3')
5			69	0								**-SM-** SILTY SAND: Tan, very dense, moderately cemented, with some gravel. Interbedded with hard caprock calcrete.		BH-8 (4'-5')
			170	0										BH-8 (6'-7')
10													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:

Logger: Adrian Garcia | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

APPENDIX D
Laboratory Analytical Data

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 29, 2020

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1241239
Samples Received:	07/18/2020
Project Number:	212C-MD-02239
Description:	Philmex 15 Flowline Release
Site:	LEA COUNTY, NEW MEXICO
Report To:	Christian Llull 901 West Wall Suite 100 Midland, TX 79701

Entire Report Reviewed By:

Chris McCord
Project Manager

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

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BH-1 (2-3') L1241239-01 Solid

Collected by: Adrian | Collected date/time: 07/15/20 08:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513437	1	07/23/20 00:31	07/23/20 00:41	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	5	07/21/20 13:24	07/21/20 16:01	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512087	1	07/20/20 14:23	07/21/20 00:34	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/20/20 23:25	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 06:00	JN	Mt. Juliet, TN

BH-1 (4-5') L1241239-02 Solid

Collected by: Adrian | Collected date/time: 07/15/20 08:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513437	1	07/23/20 00:31	07/23/20 00:41	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	5	07/21/20 13:24	07/21/20 16:33	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512087	1	07/20/20 14:23	07/21/20 00:58	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/20/20 23:44	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 06:14	JN	Mt. Juliet, TN

BH-1 (6-7') L1241239-03 Solid

Collected by: Adrian | Collected date/time: 07/15/20 08:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513439	1	07/22/20 23:54	07/23/20 00:13	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	5	07/21/20 13:24	07/21/20 16:50	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512087	1	07/20/20 14:23	07/21/20 01:22	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 00:03	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 06:27	JN	Mt. Juliet, TN

BH-1 (8-9') L1241239-04 Solid

Collected by: Adrian | Collected date/time: 07/15/20 08:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513439	1	07/22/20 23:54	07/23/20 00:13	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	5	07/21/20 13:24	07/21/20 17:06	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1513275	1	07/20/20 14:23	07/22/20 15:12	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 00:22	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 06:41	JN	Mt. Juliet, TN

BH-1 (11-12') L1241239-05 Solid

Collected by: Adrian | Collected date/time: 07/15/20 08:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513439	1	07/22/20 23:54	07/23/20 00:13	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	1	07/21/20 13:24	07/21/20 17:22	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1513275	1	07/20/20 14:23	07/22/20 15:34	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 00:41	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 06:54	JN	Mt. Juliet, TN

BH-1 (16-17') L1241239-06 Solid

Collected by: Adrian | Collected date/time: 07/15/20 08:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513439	1	07/22/20 23:54	07/23/20 00:13	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	1	07/21/20 13:24	07/21/20 17:39	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1513275	1	07/20/20 14:23	07/22/20 15:56	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 01:00	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 07:07	JN	Mt. Juliet, TN

BH-2 (2-3') L1241239-07 Solid

Collected by: Adrian | Collected date/time: 07/15/20 09:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513439	1	07/22/20 23:54	07/23/20 00:13	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	5	07/21/20 13:24	07/21/20 19:01	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1513275	1	07/20/20 14:23	07/22/20 16:19	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 01:19	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	5	07/24/20 15:00	07/26/20 19:14	JN	Mt. Juliet, TN

BH-2 (4-5') L1241239-08 Solid

Collected by: Adrian | Collected date/time: 07/15/20 09:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513439	1	07/22/20 23:54	07/23/20 00:13	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	5	07/21/20 13:24	07/21/20 19:17	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512462	1	07/20/20 14:23	07/21/20 19:17	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 01:39	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 09:22	JN	Mt. Juliet, TN

BH-2 (6-7') L1241239-09 Solid

Collected by: Adrian | Collected date/time: 07/15/20 09:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513439	1	07/22/20 23:54	07/23/20 00:13	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	5	07/21/20 13:24	07/21/20 19:34	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512462	1	07/20/20 14:23	07/21/20 20:03	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 01:58	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 07:21	JN	Mt. Juliet, TN

BH-2 (8-9') L1241239-10 Solid

Collected by: Adrian | Collected date/time: 07/15/20 09:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513439	1	07/22/20 23:54	07/23/20 00:13	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	5	07/21/20 13:24	07/21/20 19:50	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512462	1	07/20/20 14:23	07/21/20 20:55	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 02:17	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 07:34	JN	Mt. Juliet, TN

BH-2 (11-12') L1241239-11 Solid

Collected by: Adrian | Collected date/time: 07/15/20 09:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513439	1	07/22/20 23:54	07/23/20 00:13	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	1	07/21/20 13:24	07/21/20 20:07	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512462	1	07/20/20 14:23	07/21/20 21:18	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 02:36	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 07:48	JN	Mt. Juliet, TN

BH-2 (16-17') L1241239-12 Solid

Collected by: Adrian | Collected date/time: 07/15/20 09:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513439	1	07/22/20 23:54	07/23/20 00:13	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	1	07/21/20 13:24	07/21/20 20:23	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1513052	1	07/20/20 14:23	07/22/20 12:13	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 02:55	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 08:01	JN	Mt. Juliet, TN

BH-3 (2-3') L1241239-13 Solid

Collected by: Adrian | Collected date/time: 07/15/20 10:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513982	1	07/23/20 17:30	07/23/20 17:48	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	5	07/21/20 13:24	07/21/20 20:39	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1513052	1	07/20/20 14:23	07/22/20 12:35	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 03:14	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	5	07/24/20 15:00	07/25/20 09:50	JN	Mt. Juliet, TN

BH-3 (4-5') L1241239-14 Solid

Collected by: Adrian | Collected date/time: 07/15/20 10:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513982	1	07/23/20 17:30	07/23/20 17:48	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	5	07/21/20 13:24	07/21/20 20:56	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1513052	1	07/20/20 14:23	07/22/20 12:58	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 03:33	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 08:15	JN	Mt. Juliet, TN

BH-3 (6-7') L1241239-15 Solid

Collected by: Adrian | Collected date/time: 07/15/20 10:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513983	1	07/23/20 23:01	07/23/20 23:10	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	1	07/21/20 13:24	07/21/20 21:12	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1513052	1	07/20/20 14:23	07/22/20 13:20	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 03:52	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 08:28	JN	Mt. Juliet, TN

BH-3 (8-9') L1241239-16 Solid

Collected by: Adrian | Collected date/time: 07/15/20 10:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513983	1	07/23/20 23:01	07/23/20 23:10	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	1	07/21/20 13:24	07/21/20 22:01	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1513052	1	07/20/20 14:23	07/22/20 13:43	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 04:11	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 08:42	JN	Mt. Juliet, TN

BH-3 (11-12') L1241239-17 Solid

Collected by: Adrian | Collected date/time: 07/15/20 10:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513983	1	07/23/20 23:01	07/23/20 23:10	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	1	07/21/20 13:24	07/21/20 22:18	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1513052	1	07/20/20 14:23	07/22/20 14:05	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 04:30	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 08:55	JN	Mt. Juliet, TN

BH-3 (16-17') L1241239-18 Solid

Collected by: Adrian | Collected date/time: 07/15/20 10:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513983	1	07/23/20 23:01	07/23/20 23:10	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	1	07/21/20 13:24	07/21/20 22:34	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1513052	1	07/20/20 14:23	07/22/20 14:27	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 04:49	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513729	1	07/24/20 15:00	07/25/20 09:09	JN	Mt. Juliet, TN

BH-4 (0-1') L1241239-19 Solid

Collected by: Adrian | Collected date/time: 07/15/20 11:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513983	1	07/23/20 23:01	07/23/20 23:10	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	1	07/21/20 13:24	07/21/20 23:07	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1513052	1	07/20/20 14:23	07/22/20 14:49	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512199	1	07/20/20 14:23	07/21/20 05:08	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513917	1	07/23/20 12:49	07/24/20 03:15	AEG	Mt. Juliet, TN

BH-4 (2-3') L1241239-20 Solid

Collected by: Adrian | Collected date/time: 07/15/20 11:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513983	1	07/23/20 23:01	07/23/20 23:10	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512221	1	07/21/20 13:24	07/21/20 23:24	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 12:46	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512500	1	07/21/20 09:07	07/21/20 22:23	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1515493	1	07/21/20 09:07	07/27/20 01:16	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513917	1	07/23/20 12:49	07/24/20 03:02	AEG	Mt. Juliet, TN

BH-4 (6-7') L1241239-21 Solid

Collected by: Adrian | Collected date/time: 07/15/20 11:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513983	1	07/23/20 23:01	07/23/20 23:10	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 19:58	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 13:08	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512500	1	07/21/20 09:07	07/21/20 22:42	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1515493	1	07/21/20 09:07	07/27/20 01:36	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513917	1	07/23/20 12:49	07/24/20 01:20	AEG	Mt. Juliet, TN

BH-5 (0-1') L1241239-22 Solid

Collected by: Adrian | Collected date/time: 07/15/20 11:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513983	1	07/23/20 23:01	07/23/20 23:10	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 20:17	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 13:30	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512500	1	07/21/20 09:07	07/21/20 23:01	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1515493	1	07/21/20 09:07	07/27/20 01:56	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1513917	1	07/23/20 12:49	07/24/20 02:49	AEG	Mt. Juliet, TN

BH-5 (2-3') L1241239-23 Solid

Collected by: Adrian | Collected date/time: 07/15/20 12:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513983	1	07/23/20 23:01	07/23/20 23:10	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 20:26	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 13:53	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512500	1	07/21/20 09:07	07/21/20 23:20	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1515493	1	07/21/20 09:07	07/27/20 02:16	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514119	1	07/23/20 15:44	07/24/20 02:57	AEG	Mt. Juliet, TN

BH-5 (4-5') L1241239-24 Solid

Collected by: Adrian | Collected date/time: 07/15/20 12:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513983	1	07/23/20 23:01	07/23/20 23:10	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 20:36	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 14:15	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512500	1	07/21/20 09:07	07/21/20 23:39	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514119	1	07/23/20 15:44	07/24/20 03:10	AEG	Mt. Juliet, TN

BH-5 (6-7') L1241239-25 Solid

Collected by: Adrian | Collected date/time: 07/15/20 12:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513986	1	07/23/20 22:41	07/23/20 22:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 20:45	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 14:37	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512500	1	07/21/20 09:07	07/21/20 23:58	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514119	1	07/23/20 15:44	07/24/20 03:23	AEG	Mt. Juliet, TN

BH-6 (0-1') L1241239-26 Solid

Collected by: Adrian | Collected date/time: 07/15/20 13:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513986	1	07/23/20 22:41	07/23/20 22:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 20:55	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 15:22	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512500	1	07/21/20 09:07	07/22/20 00:17	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514119	1	07/23/20 15:44	07/24/20 04:42	AEG	Mt. Juliet, TN

BH-6 (2-3') L1241239-27 Solid

Collected by: Adrian | Collected date/time: 07/15/20 13:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513986	1	07/23/20 22:41	07/23/20 22:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 21:04	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 15:44	WDK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512500	1	07/21/20 09:07	07/22/20 00:36	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514119	1	07/23/20 15:44	07/24/20 03:37	AEG	Mt. Juliet, TN

BH-6 (4-5') L1241239-28 Solid

Collected by: Adrian | Collected date/time: 07/15/20 13:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513986	1	07/23/20 22:41	07/23/20 22:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 21:33	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 16:06	WDK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512500	1	07/21/20 09:07	07/22/20 00:55	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514119	1	07/23/20 15:44	07/24/20 03:50	AEG	Mt. Juliet, TN

BH-6 (6-7') L1241239-29 Solid

Collected by: Adrian | Collected date/time: 07/15/20 13:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513986	1	07/23/20 22:41	07/23/20 22:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 22:01	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 16:29	WDK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512500	1	07/21/20 09:07	07/22/20 01:14	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514119	1	07/23/20 15:44	07/24/20 04:03	AEG	Mt. Juliet, TN

BH-7 (0-1') L1241239-30 Solid

Collected by: Adrian | Collected date/time: 07/15/20 14:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513986	1	07/23/20 22:41	07/23/20 22:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 22:11	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 16:51	WDK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512591	1	07/21/20 09:07	07/21/20 15:49	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514119	1	07/23/20 15:44	07/24/20 04:29	AEG	Mt. Juliet, TN

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

BH-7 (2-3') L1241239-31 Solid

Collected by: Adrian | Collected date/time: 07/15/20 14:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513986	1	07/23/20 22:41	07/23/20 22:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 22:20	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 17:13	WDK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512591	1	07/21/20 09:07	07/21/20 16:08	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514119	1	07/23/20 15:44	07/24/20 04:16	AEG	Mt. Juliet, TN

BH-7 (4-5') L1241239-32 Solid

Collected by: Adrian | Collected date/time: 07/15/20 14:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513986	1	07/23/20 22:41	07/23/20 22:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 22:30	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 17:35	WDK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512591	1	07/21/20 09:07	07/21/20 16:27	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514120	1	07/23/20 15:47	07/24/20 22:29	JN	Mt. Juliet, TN

BH-7 (6-7') L1241239-33 Solid

Collected by: Adrian | Collected date/time: 07/15/20 14:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513986	1	07/23/20 22:41	07/23/20 22:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 22:39	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 17:58	WDK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512591	1	07/21/20 09:07	07/21/20 16:46	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514120	1	07/23/20 15:47	07/24/20 22:42	JN	Mt. Juliet, TN

BH-8 (0-1') L1241239-34 Solid

Collected by: Adrian | Collected date/time: 07/15/20 15:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513986	1	07/23/20 22:41	07/23/20 22:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 22:49	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 18:20	WDK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512528	1	07/21/20 09:07	07/21/20 13:36	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514120	1	07/23/20 15:47	07/24/20 22:56	JN	Mt. Juliet, TN

BH-8 (2-3') L1241239-35 Solid

Collected by: Adrian | Collected date/time: 07/15/20 15:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513987	1	07/23/20 22:10	07/23/20 22:31	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 22:58	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 18:42	WDK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512528	1	07/21/20 09:07	07/21/20 13:56	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514120	1	07/23/20 15:47	07/24/20 23:09	JN	Mt. Juliet, TN

BH-8 (4-5') L1241239-36 Solid

Collected by: Adrian | Collected date/time: 07/15/20 15:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513987	1	07/23/20 22:10	07/23/20 22:31	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 23:27	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 19:05	WDK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512528	1	07/21/20 09:07	07/21/20 14:16	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514120	1	07/23/20 15:47	07/24/20 23:22	JN	Mt. Juliet, TN

BH-8 (6-7') L1241239-37 Solid

Collected by: Adrian | Collected date/time: 07/15/20 15:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513987	1	07/23/20 22:10	07/23/20 22:31	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 23:36	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 19:27	WDK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512528	1	07/21/20 09:07	07/21/20 14:35	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514120	1	07/23/20 15:47	07/24/20 23:35	JN	Mt. Juliet, TN

BH-4 (4-5') L1241239-38 Solid

Collected by: Adrian | Collected date/time: 07/15/20 11:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513987	1	07/23/20 22:10	07/23/20 22:31	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/22/20 23:46	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 19:49	WDK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512528	1	07/21/20 09:07	07/21/20 14:55	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514120	1	07/23/20 15:47	07/24/20 23:48	JN	Mt. Juliet, TN

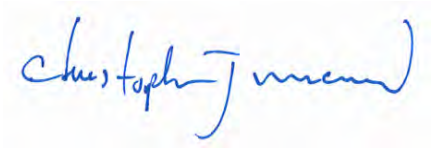
BH-4 (9-10') L1241239-39 Solid

Collected by: Adrian | Collected date/time: 07/15/20 11:00 | Received date/time: 07/18/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1513987	1	07/23/20 22:10	07/23/20 22:31	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1512222	1	07/22/20 13:34	07/23/20 00:05	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1512560	1	07/21/20 09:07	07/21/20 20:12	WDK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1512528	1	07/21/20 09:07	07/21/20 15:15	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1514120	1	07/23/20 15:47	07/25/20 00:02	JN	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	95.3		1	07/23/2020 00:41	WG1513437

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	441		48.3	105	5	07/21/2020 16:01	WG1512221

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	0.0393	B J	0.0228	0.105	1	07/21/2020 00:34	WG1512087
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*07/21/2020 00:34*	WG1512087

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000490	0.00105	1	07/20/2020 23:25	WG1512199
Toluene	U		0.00136	0.00525	1	07/20/2020 23:25	WG1512199
Ethylbenzene	U		0.000773	0.00262	1	07/20/2020 23:25	WG1512199
Total Xylenes	0.00121	J	0.000923	0.00682	1	07/20/2020 23:25	WG1512199
(S) Toluene-d8	*102*			*75.0-131*		*07/20/2020 23:25*	WG1512199
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*07/20/2020 23:25*	WG1512199
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*07/20/2020 23:25*	WG1512199

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	3.94	J	1.69	4.20	1	07/25/2020 06:00	WG1513729
C28-C40 Oil Range	6.02		0.287	4.20	1	07/25/2020 06:00	WG1513729
(S) o-Terphenyl	*54.7*			*18.0-148*		*07/25/2020 06:00*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.3		1	07/23/2020 00:41	WG1513437

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	810		49.3	107	5	07/21/2020 16:33	WG1512221

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	0.0415	B J	0.0232	0.107	1	07/21/2020 00:58	WG1512087
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*07/21/2020 00:58*	WG1512087

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	07/20/2020 23:44	WG1512199
Toluene	U		0.00139	0.00536	1	07/20/2020 23:44	WG1512199
Ethylbenzene	U		0.000790	0.00268	1	07/20/2020 23:44	WG1512199
Total Xylenes	U		0.000943	0.00696	1	07/20/2020 23:44	WG1512199
(S) Toluene-d8	*102*			*75.0-131*		*07/20/2020 23:44*	WG1512199
(S) 4-Bromofluorobenzene	*96.1*			*67.0-138*		*07/20/2020 23:44*	WG1512199
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*07/20/2020 23:44*	WG1512199

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.28	J	1.72	4.29	1	07/25/2020 06:14	WG1513729
C28-C40 Oil Range	1.62	J	0.294	4.29	1	07/25/2020 06:14	WG1513729
(S) o-Terphenyl	*51.5*			*18.0-148*		*07/25/2020 06:14*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.8		1	07/23/2020 00:13	WG1513439

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	354		47.0	102	5	07/21/2020 16:50	WG1512221

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	0.0222	0.102	1	07/21/2020 01:22	WG1512087
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/21/2020 01:22*	WG1512087

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		0.000477	0.00102	1	07/21/2020 00:03	WG1512199
Toluene	U		0.00133	0.00511	1	07/21/2020 00:03	WG1512199
Ethylbenzene	U		0.000753	0.00256	1	07/21/2020 00:03	WG1512199
Total Xylenes	U		0.000900	0.00664	1	07/21/2020 00:03	WG1512199
(S) Toluene-d8	*98.8*			*75.0-131*		*07/21/2020 00:03*	WG1512199
(S) 4-Bromofluorobenzene	*96.8*			*67.0-138*		*07/21/2020 00:03*	WG1512199
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*07/21/2020 00:03*	WG1512199

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	07/25/2020 06:27	WG1513729
C28-C40 Oil Range	1.24	J	0.280	4.09	1	07/25/2020 06:27	WG1513729
(S) o-Terphenyl	*53.0*			*18.0-148*		*07/25/2020 06:27*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.8		1	07/23/2020 00:13	WG1513439

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	196		47.0	102	5	07/21/2020 17:06	WG1512221

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	07/22/2020 15:12	WG1513275
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*07/22/2020 15:12*	WG1513275

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		0.000477	0.00102	1	07/21/2020 00:22	WG1512199
Toluene	U		0.00133	0.00511	1	07/21/2020 00:22	WG1512199
Ethylbenzene	U		0.000753	0.00256	1	07/21/2020 00:22	WG1512199
Total Xylenes	U		0.000900	0.00664	1	07/21/2020 00:22	WG1512199
(S) Toluene-d8	*100*			*75.0-131*		*07/21/2020 00:22*	WG1512199
(S) 4-Bromofluorobenzene	*99.2*			*67.0-138*		*07/21/2020 00:22*	WG1512199
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*07/21/2020 00:22*	WG1512199

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	07/25/2020 06:41	WG1513729
C28-C40 Oil Range	2.35	J	0.280	4.09	1	07/25/2020 06:41	WG1513729
(S) o-Terphenyl	*57.8*			*18.0-148*		*07/25/2020 06:41*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.2		1	07/23/2020 00:13	WG1513439

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	33.6		9.37	20.4	1	07/21/2020 17:22	WG1512221

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0221	0.102	1	07/22/2020 15:34	WG1513275
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*07/22/2020 15:34*	WG1513275

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000476	0.00102	1	07/21/2020 00:41	WG1512199
Toluene	U		0.00132	0.00509	1	07/21/2020 00:41	WG1512199
Ethylbenzene	U		0.000751	0.00255	1	07/21/2020 00:41	WG1512199
Total Xylenes	U		0.000896	0.00662	1	07/21/2020 00:41	WG1512199
(S) Toluene-d8	*98.8*			*75.0-131*		*07/21/2020 00:41*	WG1512199
(S) 4-Bromofluorobenzene	*97.4*			*67.0-138*		*07/21/2020 00:41*	WG1512199
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*07/21/2020 00:41*	WG1512199

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1.89	J	1.64	4.07	1	07/25/2020 06:54	WG1513729
C28-C40 Oil Range	2.61	J	0.279	4.07	1	07/25/2020 06:54	WG1513729
(S) o-Terphenyl	*61.7*			*18.0-148*		*07/25/2020 06:54*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.8		1	07/23/2020 00:13	WG1513439

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	34.6		9.51	20.7	1	07/21/2020 17:39	WG1512221

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	07/22/2020 15:56	WG1513275
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/22/2020 15:56*	WG1513275

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		0.000483	0.00103	1	07/21/2020 01:00	WG1512199
Toluene	U		0.00134	0.00517	1	07/21/2020 01:00	WG1512199
Ethylbenzene	U		0.000762	0.00258	1	07/21/2020 01:00	WG1512199
Total Xylenes	U		0.000909	0.00672	1	07/21/2020 01:00	WG1512199
(S) Toluene-d8	*100*			*75.0-131*		*07/21/2020 01:00*	WG1512199
(S) 4-Bromofluorobenzene	*97.6*			*67.0-138*		*07/21/2020 01:00*	WG1512199
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*07/21/2020 01:00*	WG1512199

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.40	J	1.66	4.13	1	07/25/2020 07:07	WG1513729
C28-C40 Oil Range	3.23	J	0.283	4.13	1	07/25/2020 07:07	WG1513729
(S) o-Terphenyl	*62.7*			*18.0-148*		*07/25/2020 07:07*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.5		1	07/23/2020 00:13	WG1513439

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	866		46.7	102	5	07/21/2020 19:01	WG1512221

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	07/22/2020 16:19	WG1513275
(S) a,a,a-Trifluorotoluene(FID)	*99.9*			*77.0-120*		*07/22/2020 16:19*	WG1513275

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	07/21/2020 01:19	WG1512199
Toluene	U		0.00132	0.00508	1	07/21/2020 01:19	WG1512199
Ethylbenzene	U		0.000748	0.00254	1	07/21/2020 01:19	WG1512199
Total Xylenes	U		0.000894	0.00660	1	07/21/2020 01:19	WG1512199
(S) Toluene-d8	*101*			*75.0-131*		*07/21/2020 01:19*	WG1512199
(S) 4-Bromofluorobenzene	*99.4*			*67.0-138*		*07/21/2020 01:19*	WG1512199
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*07/21/2020 01:19*	WG1512199

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	414		8.17	20.3	5	07/26/2020 19:14	WG1513729
C28-C40 Oil Range	490		1.39	20.3	5	07/26/2020 19:14	WG1513729
(S) o-Terphenyl	*0.000*	J2		*18.0-148*		*07/26/2020 19:14*	WG1513729

Sample Narrative:

L1241239-07 WG1513729: Surrogate failure due to matrix interference

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.8		1	07/23/2020 00:13	WG1513439

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	247		51.2	111	5	07/21/2020 19:17	WG1512221

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	0.0580	B J	0.0242	0.111	1	07/21/2020 19:17	WG1512462
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*07/21/2020 19:17*	WG1512462

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		0.000573	0.00123	1	07/21/2020 01:39	WG1512199
Toluene	U		0.00159	0.00613	1	07/21/2020 01:39	WG1512199
Ethylbenzene	U		0.000904	0.00307	1	07/21/2020 01:39	WG1512199
Total Xylenes	U		0.00108	0.00797	1	07/21/2020 01:39	WG1512199
(S) Toluene-d8	*98.1*			*75.0-131*		*07/21/2020 01:39*	WG1512199
(S) 4-Bromofluorobenzene	*99.3*			*67.0-138*		*07/21/2020 01:39*	WG1512199
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*07/21/2020 01:39*	WG1512199

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	14.1		1.79	4.45	1	07/25/2020 09:22	WG1513729
C28-C40 Oil Range	43.1		0.305	4.45	1	07/25/2020 09:22	WG1513729
(S) o-Terphenyl	*49.8*			*18.0-148*		*07/25/2020 09:22*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.0		1	07/23/2020 00:13	WG1513439

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	1800		48.9	106	5	07/21/2020 19:34	WG1512221

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	0.0553	B J	0.0231	0.106	1	07/21/2020 20:03	WG1512462
(S) a,a,a-Trifluorotoluene(FID)	*104*			*77.0-120*		*07/21/2020 20:03*	WG1512462

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		0.000497	0.00106	1	07/21/2020 01:58	WG1512199
Toluene	U		0.00138	0.00532	1	07/21/2020 01:58	WG1512199
Ethylbenzene	U		0.000784	0.00266	1	07/21/2020 01:58	WG1512199
Total Xylenes	U		0.000936	0.00691	1	07/21/2020 01:58	WG1512199
(S) Toluene-d8	*100*			*75.0-131*		*07/21/2020 01:58*	WG1512199
(S) 4-Bromofluorobenzene	*99.3*			*67.0-138*		*07/21/2020 01:58*	WG1512199
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*07/21/2020 01:58*	WG1512199

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	4.26	1	07/25/2020 07:21	WG1513729
C28-C40 Oil Range	1.30	J	0.291	4.26	1	07/25/2020 07:21	WG1513729
(S) o-Terphenyl	*58.6*			*18.0-148*		*07/25/2020 07:21*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.9		1	07/23/2020 00:13	WG1513439

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	1440		49.0	106	5	07/21/2020 19:50	WG1512221

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	0.0543	B J	0.0231	0.106	1	07/21/2020 20:55	WG1512462
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*07/21/2020 20:55*	WG1512462

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		0.000497	0.00106	1	07/21/2020 02:17	WG1512199
Toluene	U		0.00138	0.00532	1	07/21/2020 02:17	WG1512199
Ethylbenzene	U		0.000784	0.00266	1	07/21/2020 02:17	WG1512199
Total Xylenes	U		0.000937	0.00692	1	07/21/2020 02:17	WG1512199
(S) Toluene-d8	*101*			*75.0-131*		*07/21/2020 02:17*	WG1512199
(S) 4-Bromofluorobenzene	*98.2*			*67.0-138*		*07/21/2020 02:17*	WG1512199
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*07/21/2020 02:17*	WG1512199

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	3.01	J	1.71	4.26	1	07/25/2020 07:34	WG1513729
C28-C40 Oil Range	2.17	J	0.292	4.26	1	07/25/2020 07:34	WG1513729
(S) o-Terphenyl	*55.3*			*18.0-148*		*07/25/2020 07:34*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.7		1	07/23/2020 00:13	WG1513439

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	32.2		9.71	21.1	1	07/21/2020 20:07	WG1512221

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	0.0421	B J	0.0229	0.106	1	07/21/2020 21:18	WG1512462
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/21/2020 21:18*	WG1512462

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	07/21/2020 02:36	WG1512199
Toluene	U		0.00137	0.00528	1	07/21/2020 02:36	WG1512199
Ethylbenzene	U		0.000778	0.00264	1	07/21/2020 02:36	WG1512199
Total Xylenes	U		0.000929	0.00686	1	07/21/2020 02:36	WG1512199
(S) Toluene-d8	*99.9*			*75.0-131*		*07/21/2020 02:36*	WG1512199
(S) 4-Bromofluorobenzene	*95.8*			*67.0-138*		*07/21/2020 02:36*	WG1512199
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*07/21/2020 02:36*	WG1512199

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	07/25/2020 07:48	WG1513729
C28-C40 Oil Range	1.90	J	0.289	4.22	1	07/25/2020 07:48	WG1513729
(S) o-Terphenyl	*59.1*			*18.0-148*		*07/25/2020 07:48*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.0		1	07/23/2020 00:13	WG1513439

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	13.5	J	11.1	24.1	1	07/21/2020 20:23	WG1512221

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		0.0261	0.121	1	07/22/2020 12:13	WG1513052
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/22/2020 12:13*	WG1513052

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		0.000659	0.00141	1	07/21/2020 02:55	WG1512199
Toluene	U		0.00183	0.00705	1	07/21/2020 02:55	WG1512199
Ethylbenzene	U		0.00104	0.00353	1	07/21/2020 02:55	WG1512199
Total Xylenes	U		0.00124	0.00917	1	07/21/2020 02:55	WG1512199
(S) Toluene-d8	*102*			*75.0-131*		*07/21/2020 02:55*	WG1512199
(S) 4-Bromofluorobenzene	*99.5*			*67.0-138*		*07/21/2020 02:55*	WG1512199
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*07/21/2020 02:55*	WG1512199

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		1.94	4.82	1	07/25/2020 08:01	WG1513729
C28-C40 Oil Range	31.1		0.330	4.82	1	07/25/2020 08:01	WG1513729
(S) o-Terphenyl	*34.6*			*18.0-148*		*07/25/2020 08:01*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.6		1	07/23/2020 17:48	WG1513982

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	2590		48.1	105	5	07/21/2020 20:39	WG1512221

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	1.61		0.0227	0.105	1	07/22/2020 12:35	WG1513052
(S) a,a,a-Trifluorotoluene(FID)	*93.5*			*77.0-120*		*07/22/2020 12:35*	WG1513052

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	0.00105	1	07/21/2020 03:14	WG1512199
Toluene	0.00220	J	0.00136	0.00523	1	07/21/2020 03:14	WG1512199
Ethylbenzene	0.0141		0.000771	0.00261	1	07/21/2020 03:14	WG1512199
Total Xylenes	0.0442		0.000920	0.00680	1	07/21/2020 03:14	WG1512199
(S) Toluene-d8	*102*			*75.0-131*		*07/21/2020 03:14*	WG1512199
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*07/21/2020 03:14*	WG1512199
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*		*07/21/2020 03:14*	WG1512199

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	881	J3 V	8.42	20.9	5	07/25/2020 09:50	WG1513729
C28-C40 Oil Range	687		1.43	20.9	5	07/25/2020 09:50	WG1513729
(S) o-Terphenyl	*0.000*	J2		*18.0-148*		*07/25/2020 09:50*	WG1513729

Sample Narrative:

L1241239-13 WG1513729: Surrogate failure due to matrix interference

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.9		1	07/23/2020 17:48	WG1513982

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	493		49.0	106	5	07/21/2020 20:56	WG1512221

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0231	0.106	1	07/22/2020 12:58	WG1513052
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/22/2020 12:58*	WG1513052

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		0.000497	0.00106	1	07/21/2020 03:33	WG1512199
Toluene	U		0.00138	0.00532	1	07/21/2020 03:33	WG1512199
Ethylbenzene	U		0.000785	0.00266	1	07/21/2020 03:33	WG1512199
Total Xylenes	U		0.000937	0.00692	1	07/21/2020 03:33	WG1512199
(S) Toluene-d8	*97.2*			*75.0-131*		*07/21/2020 03:33*	WG1512199
(S) 4-Bromofluorobenzene	*97.4*			*67.0-138*		*07/21/2020 03:33*	WG1512199
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*07/21/2020 03:33*	WG1512199

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	10.6		1.71	4.26	1	07/25/2020 08:15	WG1513729
C28-C40 Oil Range	14.9		0.292	4.26	1	07/25/2020 08:15	WG1513729
(S) o-Terphenyl	*63.7*			*18.0-148*		*07/25/2020 08:15*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.2		1	07/23/2020 23:10	WG1513983

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	191		9.37	20.4	1	07/21/2020 21:12	WG1512221

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0221	0.102	1	07/22/2020 13:20	WG1513052
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/22/2020 13:20*	WG1513052

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000476	0.00102	1	07/21/2020 03:52	WG1512199
Toluene	U		0.00132	0.00509	1	07/21/2020 03:52	WG1512199
Ethylbenzene	U		0.000751	0.00255	1	07/21/2020 03:52	WG1512199
Total Xylenes	U		0.000896	0.00662	1	07/21/2020 03:52	WG1512199
(S) Toluene-d8	*101*			*75.0-131*		*07/21/2020 03:52*	WG1512199
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*07/21/2020 03:52*	WG1512199
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*07/21/2020 03:52*	WG1512199

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.29		1.64	4.07	1	07/25/2020 08:28	WG1513729
C28-C40 Oil Range	6.51		0.279	4.07	1	07/25/2020 08:28	WG1513729
(S) o-Terphenyl	*65.1*			*18.0-148*		*07/25/2020 08:28*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.9		1	07/23/2020 23:10	WG1513983

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	173		9.40	20.4	1	07/21/2020 22:01	WG1512221

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	07/22/2020 13:43	WG1513052
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/22/2020 13:43*	WG1513052

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		0.000477	0.00102	1	07/21/2020 04:11	WG1512199
Toluene	U		0.00133	0.00511	1	07/21/2020 04:11	WG1512199
Ethylbenzene	U		0.000753	0.00255	1	07/21/2020 04:11	WG1512199
Total Xylenes	U		0.000899	0.00664	1	07/21/2020 04:11	WG1512199
(S) Toluene-d8	*102*			*75.0-131*		*07/21/2020 04:11*	WG1512199
(S) 4-Bromofluorobenzene	*98.7*			*67.0-138*		*07/21/2020 04:11*	WG1512199
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*07/21/2020 04:11*	WG1512199

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.33	J	1.64	4.09	1	07/25/2020 08:42	WG1513729
C28-C40 Oil Range	2.10	J	0.280	4.09	1	07/25/2020 08:42	WG1513729
(S) o-Terphenyl	*54.2*			*18.0-148*		*07/25/2020 08:42*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.4		1	07/23/2020 23:10	WG1513983

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	222		9.74	21.2	1	07/21/2020 22:18	WG1512221

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	07/22/2020 14:05	WG1513052
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*07/22/2020 14:05*	WG1513052

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	07/21/2020 04:30	WG1512199
Toluene	U		0.00138	0.00529	1	07/21/2020 04:30	WG1512199
Ethylbenzene	U		0.000780	0.00265	1	07/21/2020 04:30	WG1512199
Total Xylenes	U		0.000932	0.00688	1	07/21/2020 04:30	WG1512199
(S) Toluene-d8	*100*			*75.0-131*		*07/21/2020 04:30*	WG1512199
(S) 4-Bromofluorobenzene	*97.9*			*67.0-138*		*07/21/2020 04:30*	WG1512199
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*07/21/2020 04:30*	WG1512199

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	4.24	1	07/25/2020 08:55	WG1513729
C28-C40 Oil Range	1.04	J	0.290	4.24	1	07/25/2020 08:55	WG1513729
(S) o-Terphenyl	*54.3*			*18.0-148*		*07/25/2020 08:55*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.6		1	07/23/2020 23:10	WG1513983

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	113		9.52	20.7	1	07/21/2020 22:34	WG1512221

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	0.103	1	07/22/2020 14:27	WG1513052
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/22/2020 14:27*	WG1513052

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		0.000483	0.00103	1	07/21/2020 04:49	WG1512199
Toluene	U		0.00135	0.00517	1	07/21/2020 04:49	WG1512199
Ethylbenzene	U		0.000763	0.00259	1	07/21/2020 04:49	WG1512199
Total Xylenes	U		0.000911	0.00673	1	07/21/2020 04:49	WG1512199
(S) Toluene-d8	*98.2*			*75.0-131*		*07/21/2020 04:49*	WG1512199
(S) 4-Bromofluorobenzene	*95.1*			*67.0-138*		*07/21/2020 04:49*	WG1512199
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*07/21/2020 04:49*	WG1512199

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.31	J	1.67	4.14	1	07/25/2020 09:09	WG1513729
C28-C40 Oil Range	1.45	J	0.284	4.14	1	07/25/2020 09:09	WG1513729
(S) o-Terphenyl	*54.0*			*18.0-148*		*07/25/2020 09:09*	WG1513729

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.9		1	07/23/2020 23:10	WG1513983

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		9.50	20.6	1	07/21/2020 23:07	WG1512221

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	07/22/2020 14:49	WG1513052
(S) a,a,a-Trifluorotoluene(FID)	*99.8*			*77.0-120*		*07/22/2020 14:49*	WG1513052

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	07/21/2020 05:08	WG1512199
Toluene	U		0.00134	0.00516	1	07/21/2020 05:08	WG1512199
Ethylbenzene	0.00114	J	0.000761	0.00258	1	07/21/2020 05:08	WG1512199
Total Xylenes	0.00196	J	0.000909	0.00671	1	07/21/2020 05:08	WG1512199
(S) Toluene-d8	*100*			*75.0-131*		*07/21/2020 05:08*	WG1512199
(S) 4-Bromofluorobenzene	*99.2*			*67.0-138*		*07/21/2020 05:08*	WG1512199
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*07/21/2020 05:08*	WG1512199

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	16.6		1.66	4.13	1	07/24/2020 03:15	WG1513917
C28-C40 Oil Range	67.0		0.283	4.13	1	07/24/2020 03:15	WG1513917
(S) o-Terphenyl	*59.4*			*18.0-148*		*07/24/2020 03:15*	WG1513917

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.3		1	07/23/2020 23:10	WG1513983

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		9.56	20.8	1	07/21/2020 23:24	WG1512221

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	07/21/2020 12:46	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/21/2020 12:46*	WG1512560

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	07/21/2020 22:23	WG1512500
Toluene	U		0.00135	0.00519	1	07/21/2020 22:23	WG1512500
Ethylbenzene	U		0.000765	0.00260	1	07/21/2020 22:23	WG1512500
Total Xylenes	U		0.000914	0.00675	1	07/27/2020 01:16	WG1515493
(S) Toluene-d8	*99.1*			*75.0-131*		*07/21/2020 22:23*	WG1512500
(S) Toluene-d8	*99.2*			*75.0-131*		*07/27/2020 01:16*	WG1515493
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*07/21/2020 22:23*	WG1512500
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*07/27/2020 01:16*	WG1515493
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*07/21/2020 22:23*	WG1512500
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*07/27/2020 01:16*	WG1515493

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.45		1.67	4.15	1	07/24/2020 03:02	WG1513917
C28-C40 Oil Range	11.5		0.285	4.15	1	07/24/2020 03:02	WG1513917
(S) o-Terphenyl	*62.4*			*18.0-148*		*07/24/2020 03:02*	WG1513917

BH-4 (0-7')
Collected date/time: 07/15/20 11:00

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.0		1	07/23/2020 23:10	WG1513983

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		9.49	20.6	1	07/22/2020 19:58	WG1512222

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	07/21/2020 13:08	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*07/21/2020 13:08*	WG1512560

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	07/21/2020 22:42	WG1512500
Toluene	U		0.00134	0.00515	1	07/21/2020 22:42	WG1512500
Ethylbenzene	U		0.000760	0.00258	1	07/21/2020 22:42	WG1512500
Total Xylenes	U		0.000907	0.00670	1	07/27/2020 01:36	WG1515493
(S) Toluene-d8	*102*			*75.0-131*		*07/21/2020 22:42*	WG1512500
(S) Toluene-d8	*101*			*75.0-131*		*07/27/2020 01:36*	WG1515493
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*07/21/2020 22:42*	WG1512500
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*07/27/2020 01:36*	WG1515493
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*07/21/2020 22:42*	WG1512500
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*		*07/27/2020 01:36*	WG1515493

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	07/24/2020 01:20	WG1513917
C28-C40 Oil Range	1.46	J	0.282	4.12	1	07/24/2020 01:20	WG1513917
(S) o-Terphenyl	*90.2*			*18.0-148*		*07/24/2020 01:20*	WG1513917

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.1		1	07/23/2020 23:10	WG1513983

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	15.4	J	9.67	21.0	1	07/22/2020 20:17	WG1512222

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0228	0.105	1	07/21/2020 13:30	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*07/21/2020 13:30*	WG1512560

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000491	0.00105	1	07/21/2020 23:01	WG1512500
Toluene	U		0.00137	0.00526	1	07/21/2020 23:01	WG1512500
Ethylbenzene	U		0.000775	0.00263	1	07/21/2020 23:01	WG1512500
Total Xylenes	U		0.000925	0.00683	1	07/27/2020 01:56	WG1515493
(S) Toluene-d8	*100*			*75.0-131*		*07/21/2020 23:01*	WG1512500
(S) Toluene-d8	*100*			*75.0-131*		*07/27/2020 01:56*	WG1515493
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*07/21/2020 23:01*	WG1512500
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*07/27/2020 01:56*	WG1515493
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*07/21/2020 23:01*	WG1512500
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*07/27/2020 01:56*	WG1515493

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	7.64		1.69	4.21	1	07/24/2020 02:49	WG1513917
C28-C40 Oil Range	21.7		0.288	4.21	1	07/24/2020 02:49	WG1513917
(S) o-Terphenyl	*59.4*			*18.0-148*		*07/24/2020 02:49*	WG1513917

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.1		1	07/23/2020 23:10	WG1513983

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	166		9.78	21.3	1	07/22/2020 20:26	WG1512222

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0231	0.106	1	07/21/2020 13:53	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*07/21/2020 13:53*	WG1512560

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		0.000496	0.00106	1	07/21/2020 23:20	WG1512500
Toluene	U		0.00138	0.00531	1	07/21/2020 23:20	WG1512500
Ethylbenzene	U		0.000783	0.00266	1	07/21/2020 23:20	WG1512500
Total Xylenes	U		0.000935	0.00691	1	07/27/2020 02:16	WG1515493
(S) Toluene-d8	*101*			*75.0-131*		*07/21/2020 23:20*	WG1512500
(S) Toluene-d8	*100*			*75.0-131*		*07/27/2020 02:16*	WG1515493
(S) 4-Bromofluorobenzene	*99.0*			*67.0-138*		*07/21/2020 23:20*	WG1512500
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*07/27/2020 02:16*	WG1515493
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*07/21/2020 23:20*	WG1512500
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*07/27/2020 02:16*	WG1515493

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	4.25	1	07/24/2020 02:57	WG1514119
C28-C40 Oil Range	2.91	J	0.291	4.25	1	07/24/2020 02:57	WG1514119
(S) o-Terphenyl	*69.0*			*18.0-148*		*07/24/2020 02:57*	WG1514119

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.4		1	07/23/2020 23:10	WG1513983

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	44.0		9.96	21.6	1	07/22/2020 20:36	WG1512222

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0235	0.108	1	07/21/2020 14:15	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*07/21/2020 14:15*	WG1512560

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000505	0.00108	1	07/21/2020 23:39	WG1512500
Toluene	U		0.00141	0.00541	1	07/21/2020 23:39	WG1512500
Ethylbenzene	U		0.000798	0.00271	1	07/21/2020 23:39	WG1512500
Total Xylenes	U		0.000953	0.00704	1	07/21/2020 23:39	WG1512500
(S) Toluene-d8	*99.6*			*75.0-131*		*07/21/2020 23:39*	WG1512500
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*07/21/2020 23:39*	WG1512500
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*07/21/2020 23:39*	WG1512500

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.75	J	1.74	4.33	1	07/24/2020 03:10	WG1514119
C28-C40 Oil Range	0.862	J	0.297	4.33	1	07/24/2020 03:10	WG1514119
(S) o-Terphenyl	*80.8*			*18.0-148*		*07/24/2020 03:10*	WG1514119

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.9		1	07/23/2020 22:56	WG1513986

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	74.4		9.49	20.6	1	07/22/2020 20:45	WG1512222

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	07/21/2020 14:37	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*07/21/2020 14:37*	WG1512560

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	07/21/2020 23:58	WG1512500
Toluene	U		0.00134	0.00516	1	07/21/2020 23:58	WG1512500
Ethylbenzene	U		0.000760	0.00258	1	07/21/2020 23:58	WG1512500
Total Xylenes	U		0.000908	0.00671	1	07/21/2020 23:58	WG1512500
(S) Toluene-d8	*101*			*75.0-131*		*07/21/2020 23:58*	WG1512500
(S) 4-Bromofluorobenzene	*99.6*			*67.0-138*		*07/21/2020 23:58*	WG1512500
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*07/21/2020 23:58*	WG1512500

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.46	J	1.66	4.13	1	07/24/2020 03:23	WG1514119
C28-C40 Oil Range	U		0.283	4.13	1	07/24/2020 03:23	WG1514119
(S) o-Terphenyl	*78.8*			*18.0-148*		*07/24/2020 03:23*	WG1514119

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.3		1	07/23/2020 22:56	WG1513986

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	17.1	J	9.55	20.8	1	07/22/2020 20:55	WG1512222

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	07/21/2020 15:22	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*07/21/2020 15:22*	WG1512560

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	07/22/2020 00:17	WG1512500
Toluene	U		0.00135	0.00519	1	07/22/2020 00:17	WG1512500
Ethylbenzene	U		0.000765	0.00260	1	07/22/2020 00:17	WG1512500
Total Xylenes	0.00114	J	0.000914	0.00675	1	07/22/2020 00:17	WG1512500
(S) Toluene-d8	*99.6*			*75.0-131*		*07/22/2020 00:17*	WG1512500
(S) 4-Bromofluorobenzene	*99.3*			*67.0-138*		*07/22/2020 00:17*	WG1512500
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*07/22/2020 00:17*	WG1512500

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	11.1		1.67	4.15	1	07/24/2020 04:42	WG1514119
C28-C40 Oil Range	21.6		0.284	4.15	1	07/24/2020 04:42	WG1514119
(S) o-Terphenyl	*82.1*			*18.0-148*		*07/24/2020 04:42*	WG1514119

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.6		1	07/23/2020 22:56	WG1513986

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	55.3		9.43	20.5	1	07/22/2020 21:04	WG1512222

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	07/21/2020 15:44	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*07/21/2020 15:44*	WG1512560

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		0.000479	0.00102	1	07/22/2020 00:36	WG1512500
Toluene	U		0.00133	0.00512	1	07/22/2020 00:36	WG1512500
Ethylbenzene	U		0.000755	0.00256	1	07/22/2020 00:36	WG1512500
Total Xylenes	U		0.000902	0.00666	1	07/22/2020 00:36	WG1512500
(S) Toluene-d8	*98.7*			*75.0-131*		*07/22/2020 00:36*	WG1512500
(S) 4-Bromofluorobenzene	*99.5*			*67.0-138*		*07/22/2020 00:36*	WG1512500
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*07/22/2020 00:36*	WG1512500

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.70	J	1.65	4.10	1	07/24/2020 03:37	WG1514119
C28-C40 Oil Range	1.44	J	0.281	4.10	1	07/24/2020 03:37	WG1514119
(S) o-Terphenyl	*78.4*			*18.0-148*		*07/24/2020 03:37*	WG1514119

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.5		1	07/23/2020 22:56	WG1513986

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	44.2		9.34	20.3	1	07/22/2020 21:33	WG1512222

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	07/21/2020 16:06	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*07/21/2020 16:06*	WG1512560

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	07/22/2020 00:55	WG1512500
Toluene	U		0.00132	0.00508	1	07/22/2020 00:55	WG1512500
Ethylbenzene	U		0.000748	0.00254	1	07/22/2020 00:55	WG1512500
Total Xylenes	U		0.000893	0.00660	1	07/22/2020 00:55	WG1512500
(S) Toluene-d8	*101*			*75.0-131*		*07/22/2020 00:55*	WG1512500
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*07/22/2020 00:55*	WG1512500
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*07/22/2020 00:55*	WG1512500

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.44	J	1.63	4.06	1	07/24/2020 03:50	WG1514119
C28-C40 Oil Range	U		0.278	4.06	1	07/24/2020 03:50	WG1514119
(S) o-Terphenyl	*69.6*			*18.0-148*		*07/24/2020 03:50*	WG1514119

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.0		1	07/23/2020 22:56	WG1513986

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	25.5		9.38	20.4	1	07/22/2020 22:01	WG1512222

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0221	0.102	1	07/21/2020 16:29	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/21/2020 16:29*	WG1512560

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000476	0.00102	1	07/22/2020 01:14	WG1512500
Toluene	U		0.00133	0.00510	1	07/22/2020 01:14	WG1512500
Ethylbenzene	U		0.000752	0.00255	1	07/22/2020 01:14	WG1512500
Total Xylenes	U		0.000898	0.00663	1	07/22/2020 01:14	WG1512500
(S) Toluene-d8	*102*			*75.0-131*		*07/22/2020 01:14*	WG1512500
(S) 4-Bromofluorobenzene	*95.7*			*67.0-138*		*07/22/2020 01:14*	WG1512500
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*07/22/2020 01:14*	WG1512500

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.90	J	1.64	4.08	1	07/24/2020 04:03	WG1514119
C28-C40 Oil Range	U		0.280	4.08	1	07/24/2020 04:03	WG1514119
(S) o-Terphenyl	*81.2*			*18.0-148*		*07/24/2020 04:03*	WG1514119

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.4		1	07/23/2020 22:56	WG1513986

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	11.9	J	9.85	21.4	1	07/22/2020 22:11	WG1512222

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	07/21/2020 16:51	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*99.6*			*77.0-120*		*07/21/2020 16:51*	WG1512560

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	07/21/2020 15:49	WG1512591
Toluene	U		0.00139	0.00535	1	07/21/2020 15:49	WG1512591
Ethylbenzene	0.000910	J	0.000789	0.00268	1	07/21/2020 15:49	WG1512591
Total Xylenes	0.00142	J	0.000942	0.00696	1	07/21/2020 15:49	WG1512591
(S) Toluene-d8	*105*			*75.0-131*		*07/21/2020 15:49*	WG1512591
(S) 4-Bromofluorobenzene	*96.3*			*67.0-138*		*07/21/2020 15:49*	WG1512591
(S) 1,2-Dichloroethane-d4	*89.8*			*70.0-130*		*07/21/2020 15:49*	WG1512591

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	10.5		1.72	4.28	1	07/24/2020 04:29	WG1514119
C28-C40 Oil Range	24.7		0.293	4.28	1	07/24/2020 04:29	WG1514119
(S) o-Terphenyl	*77.3*			*18.0-148*		*07/24/2020 04:29*	WG1514119

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.2		1	07/23/2020 22:56	WG1513986

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	10.4	J	9.37	20.4	1	07/22/2020 22:20	WG1512222

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0221	0.102	1	07/21/2020 17:13	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/21/2020 17:13*	WG1512560

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000476	0.00102	1	07/21/2020 16:08	WG1512591
Toluene	U		0.00132	0.00509	1	07/21/2020 16:08	WG1512591
Ethylbenzene	U		0.000751	0.00255	1	07/21/2020 16:08	WG1512591
Total Xylenes	U		0.000896	0.00662	1	07/21/2020 16:08	WG1512591
(S) Toluene-d8	*104*			*75.0-131*		*07/21/2020 16:08*	WG1512591
(S) 4-Bromofluorobenzene	*93.2*			*67.0-138*		*07/21/2020 16:08*	WG1512591
(S) 1,2-Dichloroethane-d4	*91.7*			*70.0-130*		*07/21/2020 16:08*	WG1512591

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1.81	J	1.64	4.07	1	07/24/2020 04:16	WG1514119
C28-C40 Oil Range	U		0.279	4.07	1	07/24/2020 04:16	WG1514119
(S) o-Terphenyl	*79.5*			*18.0-148*		*07/24/2020 04:16*	WG1514119

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.2		1	07/23/2020 22:56	WG1513986

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	19.8	J	9.28	20.2	1	07/22/2020 22:30	WG1512222

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0219	0.101	1	07/21/2020 17:35	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*99.9*			*77.0-120*		*07/21/2020 17:35*	WG1512560

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		0.000471	0.00101	1	07/21/2020 16:27	WG1512591
Toluene	U		0.00131	0.00504	1	07/21/2020 16:27	WG1512591
Ethylbenzene	U		0.000743	0.00252	1	07/21/2020 16:27	WG1512591
Total Xylenes	U		0.000888	0.00656	1	07/21/2020 16:27	WG1512591
(S) Toluene-d8	*106*			*75.0-131*		*07/21/2020 16:27*	WG1512591
(S) 4-Bromofluorobenzene	*94.8*			*67.0-138*		*07/21/2020 16:27*	WG1512591
(S) 1,2-Dichloroethane-d4	*93.6*			*70.0-130*		*07/21/2020 16:27*	WG1512591

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1.80	J	1.62	4.03	1	07/24/2020 22:29	WG1514120
C28-C40 Oil Range	1.40	J	0.276	4.03	1	07/24/2020 22:29	WG1514120
(S) o-Terphenyl	*70.9*			*18.0-148*		*07/24/2020 22:29*	WG1514120

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.2		1	07/23/2020 22:56	WG1513986

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	144		9.46	20.6	1	07/22/2020 22:39	WG1512222

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	07/21/2020 17:58	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/21/2020 17:58*	WG1512560

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	07/21/2020 16:46	WG1512591
Toluene	U		0.00134	0.00514	1	07/21/2020 16:46	WG1512591
Ethylbenzene	U		0.000758	0.00257	1	07/21/2020 16:46	WG1512591
Total Xylenes	U		0.000905	0.00669	1	07/21/2020 16:46	WG1512591
(S) Toluene-d8	*106*			*75.0-131*		*07/21/2020 16:46*	WG1512591
(S) 4-Bromofluorobenzene	*93.0*			*67.0-138*		*07/21/2020 16:46*	WG1512591
(S) 1,2-Dichloroethane-d4	*94.4*			*70.0-130*		*07/21/2020 16:46*	WG1512591

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.35	J	1.66	4.11	1	07/24/2020 22:42	WG1514120
C28-C40 Oil Range	1.28	J	0.282	4.11	1	07/24/2020 22:42	WG1514120
(S) o-Terphenyl	*66.6*			*18.0-148*		*07/24/2020 22:42*	WG1514120

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.8		1	07/23/2020 22:56	WG1513986

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	13.1	J	9.31	20.2	1	07/22/2020 22:49	WG1512222

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	0.101	1	07/21/2020 18:20	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*99.9*			*77.0-120*		*07/21/2020 18:20*	WG1512560

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		0.000473	0.00101	1	07/21/2020 13:36	WG1512528
Toluene	U		0.00132	0.00506	1	07/21/2020 13:36	WG1512528
Ethylbenzene	U		0.000746	0.00253	1	07/21/2020 13:36	WG1512528
Total Xylenes	U		0.000891	0.00658	1	07/21/2020 13:36	WG1512528
(S) Toluene-d8	*106*			*75.0-131*		*07/21/2020 13:36*	WG1512528
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*07/21/2020 13:36*	WG1512528
(S) 1,2-Dichloroethane-d4	*96.8*			*70.0-130*		*07/21/2020 13:36*	WG1512528

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.85	J	1.63	4.05	1	07/24/2020 22:56	WG1514120
C28-C40 Oil Range	4.02	J	0.277	4.05	1	07/24/2020 22:56	WG1514120
(S) o-Terphenyl	*59.2*			*18.0-148*		*07/24/2020 22:56*	WG1514120

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.1		1	07/23/2020 22:31	WG1513987

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	102		9.38	20.4	1	07/22/2020 22:58	WG1512222

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0221	0.102	1	07/21/2020 18:42	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/21/2020 18:42*	WG1512560

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000476	0.00102	1	07/21/2020 13:56	WG1512528
Toluene	U		0.00133	0.00510	1	07/21/2020 13:56	WG1512528
Ethylbenzene	U		0.000751	0.00255	1	07/21/2020 13:56	WG1512528
Total Xylenes	U		0.000897	0.00663	1	07/21/2020 13:56	WG1512528
(S) Toluene-d8	*107*			*75.0-131*		*07/21/2020 13:56*	WG1512528
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*07/21/2020 13:56*	WG1512528
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*07/21/2020 13:56*	WG1512528

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.08	J	1.64	4.08	1	07/24/2020 23:09	WG1514120
C28-C40 Oil Range	0.865	J	0.279	4.08	1	07/24/2020 23:09	WG1514120
(S) o-Terphenyl	*63.1*			*18.0-148*		*07/24/2020 23:09*	WG1514120

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.2		1	07/23/2020 22:31	WG1513987

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	67.6		9.27	20.2	1	07/22/2020 23:27	WG1512222

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0219	0.101	1	07/21/2020 19:05	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*07/21/2020 19:05*	WG1512560

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		0.000471	0.00101	1	07/21/2020 14:16	WG1512528
Toluene	U		0.00131	0.00504	1	07/21/2020 14:16	WG1512528
Ethylbenzene	U		0.000743	0.00252	1	07/21/2020 14:16	WG1512528
Total Xylenes	U		0.000887	0.00655	1	07/21/2020 14:16	WG1512528
(S) Toluene-d8	*103*			*75.0-131*		*07/21/2020 14:16*	WG1512528
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*07/21/2020 14:16*	WG1512528
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*07/21/2020 14:16*	WG1512528

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.62	4.03	1	07/24/2020 23:22	WG1514120
C28-C40 Oil Range	U		0.276	4.03	1	07/24/2020 23:22	WG1514120
(S) o-Terphenyl	*71.8*			*18.0-148*		*07/24/2020 23:22*	WG1514120

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	98.3		1	07/23/2020 22:31	WG1513987

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	85.0		9.36	20.4	1	07/22/2020 23:36	WG1512222

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0221	0.102	1	07/21/2020 19:27	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*99.9*			*77.0-120*		*07/21/2020 19:27*	WG1512560

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000475	0.00102	1	07/21/2020 14:35	WG1512528
Toluene	U		0.00132	0.00509	1	07/21/2020 14:35	WG1512528
Ethylbenzene	U		0.000750	0.00254	1	07/21/2020 14:35	WG1512528
Total Xylenes	U		0.000895	0.00661	1	07/21/2020 14:35	WG1512528
(S) Toluene-d8	*106*			*75.0-131*		*07/21/2020 14:35*	WG1512528
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*07/21/2020 14:35*	WG1512528
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*07/21/2020 14:35*	WG1512528

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1.96	J	1.64	4.07	1	07/24/2020 23:35	WG1514120
C28-C40 Oil Range	U		0.279	4.07	1	07/24/2020 23:35	WG1514120
(S) o-Terphenyl	*60.7*			*18.0-148*		*07/24/2020 23:35*	WG1514120

BH-1 (4-5)
Collected date/time: 07/15/20 11:00

ONE LAB. NATIONWIDE.

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.9		1	07/23/2020 22:31	WG1513987

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.70	21.1	1	07/22/2020 23:46	WG1512222

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	07/21/2020 19:49	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*07/21/2020 19:49*	WG1512560

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	07/21/2020 14:55	WG1512528
Toluene	U		0.00137	0.00527	1	07/21/2020 14:55	WG1512528
Ethylbenzene	U		0.000777	0.00263	1	07/21/2020 14:55	WG1512528
Total Xylenes	U		0.000927	0.00685	1	07/21/2020 14:55	WG1512528
(S) Toluene-d8	*107*			*75.0-131*		*07/21/2020 14:55*	WG1512528
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*07/21/2020 14:55*	WG1512528
(S) 1,2-Dichloroethane-d4	*90.0*			*70.0-130*		*07/21/2020 14:55*	WG1512528

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	07/24/2020 23:48	WG1514120
C28-C40 Oil Range	2.20	J	0.289	4.22	1	07/24/2020 23:48	WG1514120
(S) o-Terphenyl	*64.5*			*18.0-148*		*07/24/2020 23:48*	WG1514120

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.1		1	07/23/2020 22:31	WG1513987

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	28.3		11.5	25.0	1	07/23/2020 00:05	WG1512222

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		0.0271	0.125	1	07/21/2020 20:12	WG1512560
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/21/2020 20:12*	WG1512560

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		0.000700	0.00150	1	07/21/2020 15:15	WG1512528
Toluene	U		0.00195	0.00749	1	07/21/2020 15:15	WG1512528
Ethylbenzene	U		0.00110	0.00375	1	07/21/2020 15:15	WG1512528
Total Xylenes	U		0.00132	0.00974	1	07/21/2020 15:15	WG1512528
(S) Toluene-d8	*108*			*75.0-131*		*07/21/2020 15:15*	WG1512528
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*07/21/2020 15:15*	WG1512528
(S) 1,2-Dichloroethane-d4	*93.1*			*70.0-130*		*07/21/2020 15:15*	WG1512528

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		2.01	5.00	1	07/25/2020 00:02	WG1514120
C28-C40 Oil Range	0.713	J	0.342	5.00	1	07/25/2020 00:02	WG1514120
(S) o-Terphenyl	*63.1*			*18.0-148*		*07/25/2020 00:02*	WG1514120

Method Blank (MB)

(MB) R3552736-1 07/23/20 00:41

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

L1241239-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1241239-01 07/23/20 00:41 • (DUP) R3552736-3 07/23/20 00:41

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	95.3	95.1	1	0.220		10

Laboratory Control Sample (LCS)

(LCS) R3552736-2 07/23/20 00:41

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

Method Blank (MB)

(MB) R3552732-1 07/23/20 00:13

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00300			

L1241239-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1241239-11 07/23/20 00:13 • (DUP) R3552732-3 07/23/20 00:13

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	94.7	94.4	1	0.362		10

Laboratory Control Sample (LCS)

(LCS) R3552732-2 07/23/20 00:13

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	49.1	98.3	85.0-115	

Method Blank (MB)

(MB) R3552868-1 07/23/20 17:48

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

L1242466-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1242466-14 07/23/20 17:48 • (DUP) R3552868-3 07/23/20 17:48

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	94.3	94.9	1	0.618		10

Laboratory Control Sample (LCS)

(LCS) R3552868-2 07/23/20 17:48

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) R3552916-1 07/23/20 23:10

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

L1241239-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1241239-17 07/23/20 23:10 • (DUP) R3552916-3 07/23/20 23:10

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	94.4	93.9	1	0.615		10

Laboratory Control Sample (LCS)

(LCS) R3552916-2 07/23/20 23:10

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) R3552914-1 07/23/20 22:56

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

L1241239-33 Original Sample (OS) • Duplicate (DUP)

(OS) L1241239-33 07/23/20 22:56 • (DUP) R3552914-3 07/23/20 22:56

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	97.2	97.8	1	0.626		10

Laboratory Control Sample (LCS)

(LCS) R3552914-2 07/23/20 22:56

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) R3552906-1 07/23/20 22:31

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.0110			

L1241240-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1241240-02 07/23/20 22:31 • (DUP) R3552906-3 07/23/20 22:31

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	68.6	68.5	1	0.161		10

Laboratory Control Sample (LCS)

(LCS) R3552906-2 07/23/20 22:31

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.2	100	85.0-115	

Method Blank (MB)

(MB) R3551801-1 07/21/20 15:09

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

L1241239-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1241239-01 07/21/20 16:01 • (DUP) R3551801-3 07/21/20 16:17

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	441	500	5	12.5		20

L1241239-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1241239-18 07/21/20 22:34 • (DUP) R3551801-6 07/21/20 22:51

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	113	114	1	1.04		20

Laboratory Control Sample (LCS)

(LCS) R3551801-2 07/21/20 15:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	197	98.4	90.0-110	

L1241239-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1241239-06 07/21/20 17:39 • (MS) R3551801-4 07/21/20 17:55 • (MSD) R3551801-5 07/21/20 18:45

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	517	34.6	558	564	101	102	1	80.0-120			1.14	20

Method Blank (MB)

(MB) R3552302-1 07/22/20 19:29

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

L1241239-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1241239-21 07/22/20 19:58 • (DUP) R3552302-3 07/22/20 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

L1241239-38 Original Sample (OS) • Duplicate (DUP)

(OS) L1241239-38 07/22/20 23:46 • (DUP) R3552302-6 07/22/20 23:55

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) R3552302-2 07/22/20 19:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	193	96.5	90.0-110	

L1241239-28 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1241239-28 07/22/20 21:33 • (MS) R3552302-4 07/22/20 21:42 • (MSD) R3552302-5 07/22/20 21:52

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	508	44.2	525	543	94.7	98.3	1	80.0-120			3.42	20

Method Blank (MB)

(MB) R3551937-1 07/20/20 14:45

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0609	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.0*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3551937-2 07/20/20 15:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.02	73.1	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*108*	*77.0-120*	

Method Blank (MB)

(MB) R3551790-2 07/21/20 12:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0469	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.2*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3551790-1 07/21/20 10:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.65	121	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*116*	*77.0-120*	

Method Blank (MB)

(MB) R3551632-2 07/21/20 11:40

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)	*101*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3551632-1 07/21/20 10:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.08	111	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*77.0-120*	

Method Blank (MB)

(MB) R3552992-2 07/22/20 10:42

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)	*102*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3552992-1 07/22/20 09:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.07	110	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*107*	*77.0-120*	

Method Blank (MB)

(MB) R3552993-2 07/22/20 10:42

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)	*102*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3552993-1 07/22/20 09:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.07	110	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*107*	*77.0-120*	

Method Blank (MB)

(MB) R3553284-2 07/20/20 21:10

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	*101*			*75.0-131*
(S) 4-Bromofluorobenzene	*100*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3553284-1 07/20/20 19:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.119	95.2	70.0-123	
Ethylbenzene	0.125	0.123	98.4	74.0-126	
Toluene	0.125	0.123	98.4	75.0-121	
Xylenes, Total	0.375	0.358	95.5	72.0-127	
(S) Toluene-d8			*103*	*75.0-131*	
(S) 4-Bromofluorobenzene			*99.8*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*113*	*70.0-130*	

L1241239-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1241239-19 07/21/20 05:08 • (MS) R3553284-3 07/21/20 05:27 • (MSD) R3553284-4 07/21/20 05:47

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 %
Benzene	0.129	U	0.125	0.128	96.8	99.2	1	10.0-149			2.45	37
Ethylbenzene	0.129	0.00114	0.127	0.127	97.5	97.5	1	10.0-160			0.000	38
Toluene	0.129	U	0.125	0.128	96.8	99.2	1	10.0-156			2.45	38
Xylenes, Total	0.387	0.00196	0.377	0.390	96.8	100	1	10.0-160			3.50	38
(S) Toluene-d8					*99.4*	*100*		*75.0-131*				
(S) 4-Bromofluorobenzene					*98.6*	*101*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*106*	*109*		*70.0-130*				

Method Blank (MB)

(MB) R3551783-2 07/21/20 18:55

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	*94.1*			*75.0-131*
(S) 4-Bromofluorobenzene	*104*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3551783-1 07/21/20 17:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.123	98.4	70.0-123	
Ethylbenzene	0.125	0.114	91.2	74.0-126	
Toluene	0.125	0.119	95.2	75.0-121	
Xylenes, Total	0.375	0.346	92.3	72.0-127	
(S) Toluene-d8			*98.4*	*75.0-131*	
(S) 4-Bromofluorobenzene			*96.1*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*114*	*70.0-130*	

L1241239-29 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1241239-29 07/22/20 01:14 • (MS) R3551783-3 07/22/20 01:33 • (MSD) R3551783-4 07/22/20 01:53

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 %
Benzene	0.128	U	0.132	0.132	103	103	1	10.0-149			0.000	37
Ethylbenzene	0.128	U	0.125	0.125	98.4	98.4	1	10.0-160			0.000	38
Toluene	0.128	U	0.130	0.119	102	93.6	1	10.0-156			8.20	38
Xylenes, Total	0.383	U	0.390	0.389	102	102	1	10.0-160			0.262	38
(S) Toluene-d8					*103*	*92.6*		*75.0-131*				
(S) 4-Bromofluorobenzene					*102*	*109*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*110*	*117*		*70.0-130*				

Method Blank (MB)

(MB) R3551580-3 07/21/20 06:22

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*105*			*75.0-131*
(S) 4-Bromofluorobenzene	*99.7*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*93.9*			*70.0-130*

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

(LCS) R3551580-1 07/21/20 05:02 • (LCSD) R3551580-2 07/21/20 05:22

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	0.114	0.120	91.2	96.0	70.0-123			5.13	20
Ethylbenzene	0.125	0.121	0.122	96.8	97.6	74.0-126			0.823	20
Toluene	0.125	0.121	0.121	96.8	96.8	75.0-121			0.000	20
Xylenes, Total	0.375	0.366	0.386	97.6	103	72.0-127			5.32	20
(S) Toluene-d8				*105*	*105*	*75.0-131*				
(S) 4-Bromofluorobenzene				*104*	*105*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*108*	*107*	*70.0-130*				

Method Blank (MB)

(MB) R3551702-2 07/21/20 07:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*103*			*75.0-131*
(S) 4-Bromofluorobenzene	*94.0*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*95.1*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3551702-1 07/21/20 06:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.104	83.2	70.0-123	
Ethylbenzene	0.125	0.120	96.0	74.0-126	
Toluene	0.125	0.106	84.8	75.0-121	
Xylenes, Total	0.375	0.309	82.4	72.0-127	
(S) Toluene-d8			*95.3*	*75.0-131*	
(S) 4-Bromofluorobenzene			*103*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*104*	*70.0-130*	

L1241239-33 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1241239-33 07/21/20 16:46 • (MS) R3551702-3 07/21/20 17:05 • (MSD) R3551702-4 07/21/20 17:24

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	0.129	U	0.0884	0.0853	68.7	66.3	1	10.0-149			3.55	37
Ethylbenzene	0.129	U	0.105	0.102	81.6	79.6	1	10.0-160			2.48	38
Toluene	0.129	U	0.103	0.0979	79.8	76.2	1	10.0-156			4.72	38
Xylenes, Total	0.386	U	0.278	0.277	72.0	71.7	1	10.0-160			0.371	38
(S) Toluene-d8					*105*	*102*		*75.0-131*				
(S) 4-Bromofluorobenzene					*91.9*	*93.5*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*91.9*	*92.8*		*70.0-130*				

Method Blank (MB)

(MB) R3553487-2 07/26/20 20:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*99.1*			*75.0-131*
(S) 4-Bromofluorobenzene	*101*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3553487-1 07/26/20 19:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Xylenes, Total	0.375	0.313	83.5	72.0-127	
(S) Toluene-d8			*96.9*	*75.0-131*	
(S) 4-Bromofluorobenzene			*101*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*105*	*70.0-130*	

Method Blank (MB)

(MB) R3553303-1 07/25/20 05:20

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	*53.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3553303-2 07/25/20 05:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	33.1	66.2	50.0-150	
(S) o-Terphenyl			*67.1*	*18.0-148*	

L1241239-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1241239-13 07/25/20 09:50 • (MS) R3553303-3 07/25/20 10:03 • (MSD) R3553303-4 07/25/20 10:17

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	51.2	881	798	1150	0.000	524	5	50.0-150	V	J3 V	36.2	20
(S) o-Terphenyl					*0.000*	*0.000*		*18.0-148*	J2	J2		

Sample Narrative:

OS: Surrogate failure due to matrix interference

Method Blank (MB)

(MB) R3552607-1 07/23/20 16:57

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	*81.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3552607-2 07/23/20 17:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	41.7	83.4	50.0-150	
(S) o-Terphenyl			*83.2*	*18.0-148*	

L1242567-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1242567-01 07/23/20 22:22 • (MS) R3552607-5 07/23/20 22:35 • (MSD) R3552607-6 07/23/20 22:48

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	65.0	U	49.9	45.9	76.8	70.6	1	50.0-150			8.41	20
(S) o-Terphenyl					*74.9*	*71.2*		*18.0-148*				

Method Blank (MB)

(MB) R3552771-1 07/23/20 22:20

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	*70.3*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3552771-2 07/23/20 22:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	37.4	74.8	50.0-150	
(S) o-Terphenyl			*74.9*	*18.0-148*	

L1242558-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1242558-01 07/24/20 00:45 • (MS) R3552771-3 07/24/20 00:59 • (MSD) R3552771-4 07/24/20 01:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	49.7	2.27	30.9	40.6	57.6	77.4	1	50.0-150		J3	27.1	20
(S) o-Terphenyl					*52.6*	*54.4*		*18.0-148*				

Method Blank (MB)

(MB) R3553326-1 07/24/20 22:03

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	*68.5*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3553326-2 07/24/20 22:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	35.7	71.4	50.0-150	
(S) o-Terphenyl			*67.1*	*18.0-148*	

L1241239-39 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1241239-39 07/25/20 00:02 • (MS) R3553326-3 07/25/20 00:15 • (MSD) R3553326-4 07/25/20 00:28

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	61.7	U	45.3	43.6	73.5	71.2	1	50.0-150			3.93	20
(S) o-Terphenyl					*61.9*	*65.7*		*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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

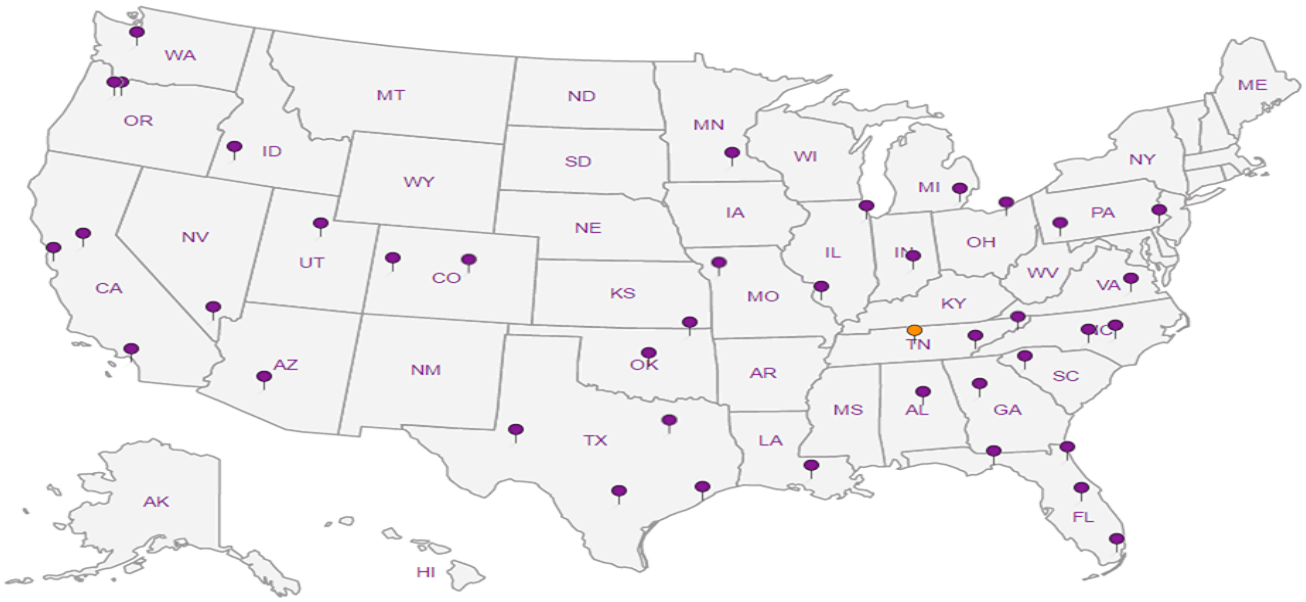
Third Party Federal Accreditations

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

Tetra Tech, Inc.

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

L124239 F032

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	Philmex 15 Flowline Release	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02239
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Adrian
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING 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
-01	BH-1 (0-1')	7/15/2020	800		X				X			1	N	X		X												X						
-02	BH-1 (2-3')	7/15/2020	800		X				X			1	N	X		X												X						
-03	BH-1 (4-5')	7/15/2020	800		X				X			1	N	X		X												X						
-04	BH-1 (6-7')	7/15/2020	800		X				X			1	N	X		X												X						
-05	BH-1 (9-10')	7/15/2020	800		X				X			1	N	X		X												X						
-06	BH-1 (14-15')	7/15/2020	800		X				X			1	N	X		X												X						
-07	BH-2 (0-1')	7/15/2020	900		X				X			1	N	X		X												X						
-08	BH-2 (2-3')	7/15/2020	900		X				X			1	N	X		X												X						
-09	BH-2 (4-5')	7/15/2020	900		X				X			1	N	X		X												X						
-10	BH-2 (6-7')	7/15/2020	900		X				X			1	N	X		X												X						

Relinquished by: Colleen Pa	Date: 7/17/20	Time: 1430	Received by: [signature] Date: 7/17/20 Time: 14:30
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: 07/18/20 Time: 0895

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 #: _____

rec 39

179030302971

3.7-1=3.6

Analysis Request of Chain of Custody Record

Page: 2 of 4

Tetra Tech, Inc.

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

L1241239

Client	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	Philmex 15 Flowline Release	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02239
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Adrian
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING Volume/Amou 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
YEAR: 2020																																	
-11	BH-2 (9-10')	7/15/2020	900		X				X			1	N	X		X												X					
-12	BH-2 (14-15')	7/15/2020	900		X				X			1	N	X		X												X					
-13	BH-3 (0-1')	7/15/2020	1000		X				X			1	N	X		X												X					
-14	BH-3 (2-3')	7/15/2020	1000		X				X			1	N	X		X												X					
-15	BH-3 (4-5')	7/15/2020	1000		X				X			1	N	X		X												X					
-16	BH-3 (6-7')	7/15/2020	1000		X				X			1	N	X		X												X					
-17	BH-3 (9-10')	7/15/2020	1000		X				X			1	N	X		X												X					
-18	BH-3 (14-15')	7/15/2020	1000		X				X			1	N	X		X												X					
-19	BH-4 (0-1')	7/15/2020	1100		X				X			1	N	X		X												X					
-20	BH-4 (2-3')	7/15/2020	1100		X				X			1	N	X		X												X					

Relinquished by: Adrian Rg	Date: 7/17/20	Time: 1430	Received by: [signature]
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by: [signature] Date: 07/18/20 Time: 0895

Received by: [signature] Date: 7/17/20 Time: 14:31

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LAB USE ONLY

Sample Temperature

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

Analysis Request of Chain of Custody Record

Page : 3 of 4

Tetra Tech, Inc.

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

L1241239

Client	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	Philmex 15 Flowline Release	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02239
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Adrian
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING Volume/Amou 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
YEAR: 2020																																	
-21	BH-4 (6-7')	7/15/2020	1100		X				X			1	N	X		X												X					
-22	BH-5 (0-1')	7/15/2020	1100		X				X			1	N	X		X												X					
-23	BH-5 (2-3')	7/15/2020	1200		X				X			1	N	X		X												X					
-24	BH-5 (4-5')	7/15/2020	1200		X				X			1	N	X		X												X					
-25	BH-5 (6-7')	7/15/2020	1200		X				X			1	N	X		X												X					
-26	BH-6 (0-1')	7/15/2020	1300		X				X			1	N	X		X												X					
-27	BH-6 (2-3')	7/15/2020	1300		X				X			1	N	X		X												X					
-28	BH-6 (4-5')	7/15/2020	1300		X				X			1	N	X		X												X					
-29	BH-6 (6-7')	7/15/2020	1300		X				X			1	N	X		X												X					
-30	BH-7 (0-1')	7/15/2020	1400		X				X			1	N	X		X												X					

Relinquished by: Odessa Pace	Date: 7/17/20	Time: 1430	Received by: [signature] Date: 7/17/20 Time: 1435
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: [signature] Date: 07/18/20 Time: 0845

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 #: _____

Analysis Request of Chain of Custody Record

Page : 4 of 4

Tetra Tech, Inc.

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

L1241239

Client	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	Philmex 15 Flowline Release	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02239
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Adrian
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING Volume/Amou DATE	TIME	MATRIX WATER	SOIL	PRESERVATIVE METHOD HCL	HNO_3	ICE	NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
		YEAR: 2020																														
-31	BH-7 (2-3')	7/15/2020	1400		X			X			1	N	X		X											X						
-32	BH-7 (4-5')	7/15/2020	1400		X			X			1	N	X		X											X						
-33	BH-7 (6-7')	7/15/2020	1400		X			X			1	N	X		X											X						
-34	BH-8 (0-1')	7/15/2020	1500		X			X			1	N	X		X											X						
-35	BH-8 (2-3')	7/15/2020	1500		X			X			1	N	X		X											X						
-36	BH-8 (4-5')	7/15/2020	1500		X			X			1	N	X		X											X						
-37	BH-8 (6-7')	7/15/2020	1500		X			X			1	N	X		X											X						
-38	BH-4 (4-5')	7/15/2020	1100		X			X			1	N	X		X											X						

Relinquished by: Adrian Sosa	Date: 7/17/20	Time: 1430	Received by: [signature]
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by: [signature] Date: 07/18/20 Time: 0845

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 #: _____

ORIGINAL COPY

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	L1241239	
Cooler Received/Opened On: 07 / 28 / 20 Temperature:	3.6	
Received By: Brandan Stockton		
Signature:		

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

Pace Analytical®
National Center for Testing & Innovation

Login #: L1241239	Client: COPTETRA	Date: 07/18/20	Evaluated by:

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Temperature not in range		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	pH not in range.		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Couri
	Insufficient sample volume.	x	Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.	x	Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments:

1. Samples "B-8(6-7')" and "BH-3(14-15')" are mislabeled as "(6-7')" and "BH-13(14-15')" respectively.
2. Received an extra sample in a 4oz jar labeled "BH-4(9-10')".

Client informed by:		Call	x	Email		Voice Mail		Date: 7/20/20	Time: 12:26
TSR Initials:	Client Contact: Christian Llull								

Login Instructions:

1. Log per COC.
2. Log BH-4 (9-10') for same tests.

Chris McCord

From: Abbott, Sam <Sam.Abbott@tetratech.com>
Sent: Tuesday, July 21, 2020 9:43 AM
To: Chris McCord
Subject: FW: Pace Analytical National Login for 212C-MD-02239 Philmex 15 Flowline Release L1241239
Attachments: COCL1241239.pdf; In01L1241239.pdf

Hi Chris,

I have some revisions to make to the sampling nomenclature on this COC:

Old	New
BH-1 (0-1')	**BH-1 (2-3')**
BH-1 (2-3')	**BH-1 (4-5')**
BH-1 (4-5')	**BH-1 (6-7')**
BH-1 (6-7')	**BH-1 (8-9')**
BH-1 (9-10')	**BH-1 (11-12')**
BH-1 (14-15')	**BH-1 (16-17')**
BH-2 (0-1')	**BH-2 (2-3')**
BH-2 (2-3')	**BH-2 (4-5')**
BH-2 (4-5')	**BH-2 (6-7')**
BH-2 (6-7')	**BH-2 (8-9')**
BH-2 (9-10')	**BH-2 (11-12')**
BH-2 (14-15')	**BH-2 (16-17')**
BH-3 (0-1')	**BH-3 (2-3')**
BH-3 (2-3')	**BH-3 (4-5')**
BH-3 (4-5')	**BH-3 (6-7')**
BH-3 (6-7')	**BH-3 (8-9')**
BH-3 (9-10')	**BH-3 (11-12')**
BH-3 (14-15')	**BH-3 (16-17')**

Thanks!
Sam

From: Llull, Christian <Christian.Llull@tetratech.com>
Sent: Sunday, July 19, 2020 7:53 AM
To: Abbott, Sam <Sam.Abbott@tetratech.com>
Subject: Fwd: Pace Analytical National Login for 212C-MD-02239 Philmex 15 Flowline Release L1241239

Christian

APPENDIX E
Photographic Documentation

TETRA TECH, INC. PROJECT NO. 212C-MD-02239	DESCRIPTION	View north of steel flowline in excavation in formerly impacted surface area. Site Coordinates: 32.807240°, -103.653390°	1
	SITE NAME	Philmex #15 Flowline Release	7/15/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02239	DESCRIPTION	View east over excavation in formerly impacted surface area. Steel flowline visible on the left.	2
	SITE NAME	Philmex #15 Flowline Release	7/15/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02239	DESCRIPTION	View south over excavation in formerly impacted surface area. Access ramp for drilling rig visible on left.	3
	SITE NAME	Philmex #15 Flowline Release	7/15/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02239	DESCRIPTION	View south over excavation in formerly impacted surface area. Drilling rig for soil assessment activities in background.	4
	SITE NAME	Philmex #15 Flowline Release	7/15/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02239	DESCRIPTION	View northeast of steel flowline in excavation in formerly impacted surface area.	5
	SITE NAME	Philmex #15 Flowline Release	7/15/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02239	DESCRIPTION	View north of steel flowline in excavation in formerly impacted surface area.	6
	SITE NAME	Philmex #15 Flowline Release	7/15/2020

APPENDIX F
NMSLO Seed Mixture

United States Department of Agriculture

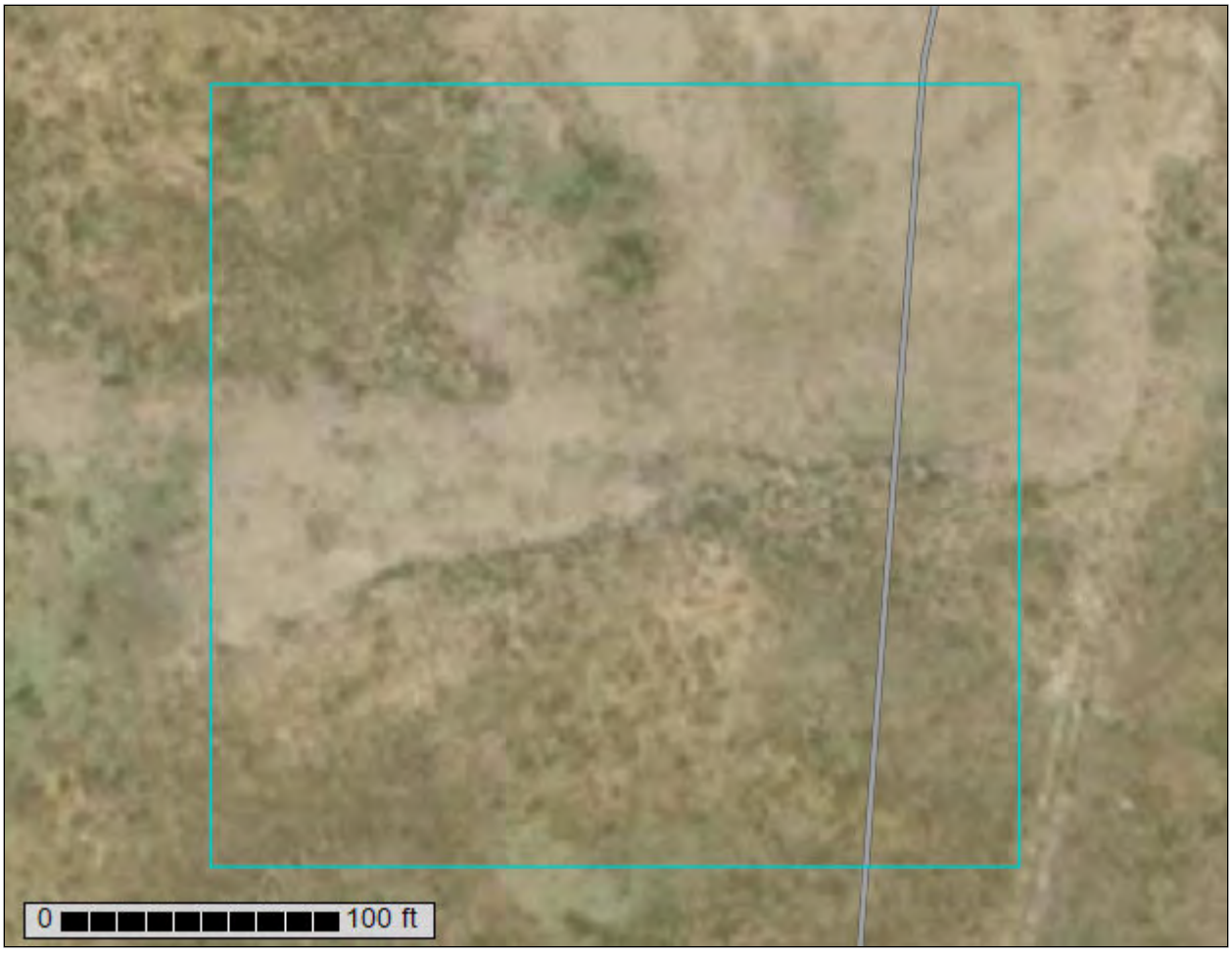
NRCS

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

Philmex #15 Flowline Release



August 10, 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.

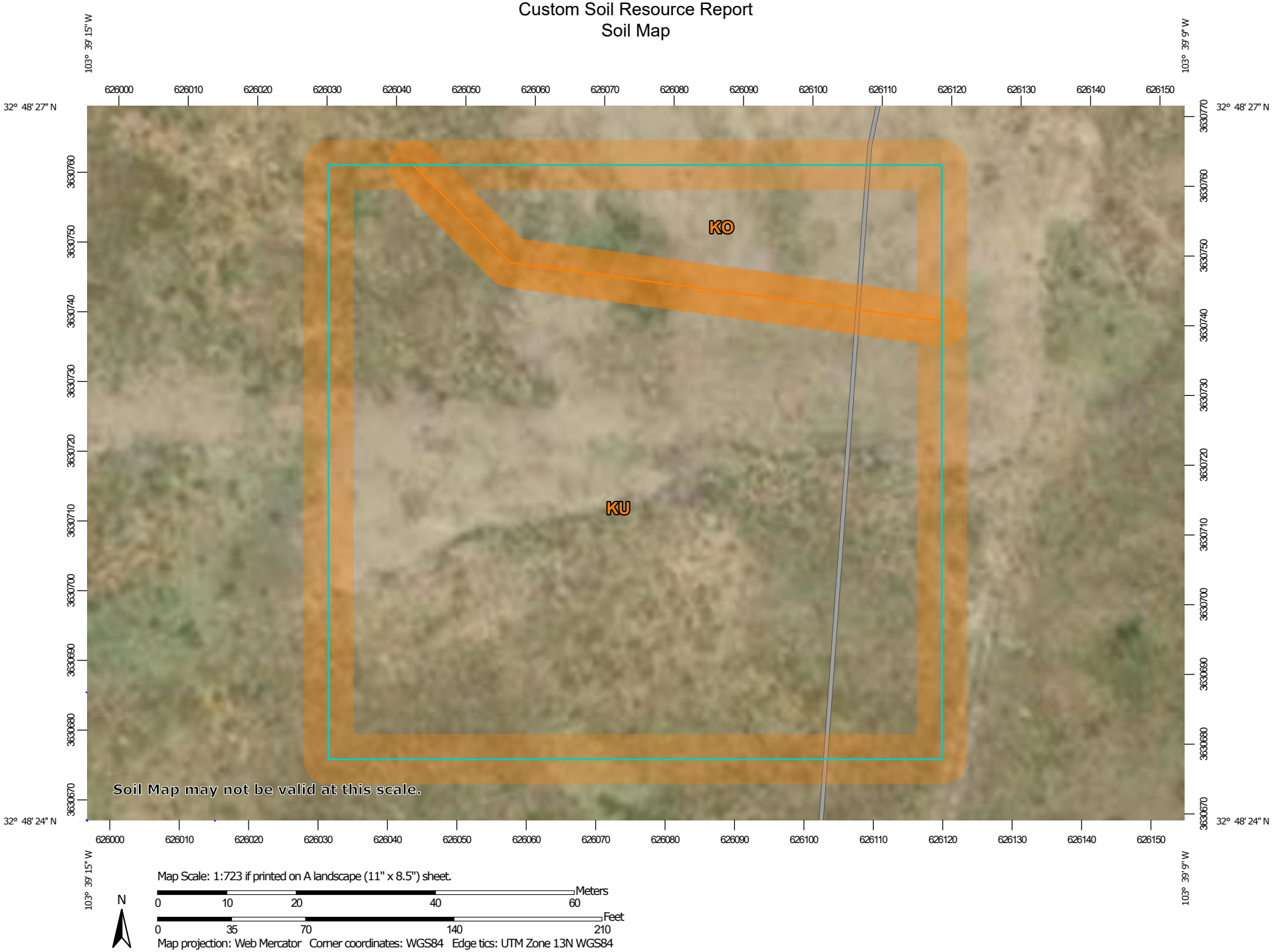
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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



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

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KO	Kimbrough gravelly loam, dry, 0 to 3 percent slopes	0.3	16.3%
KU	Kimbrough-Lea complex, dry, 0 to 3 percent slopes	1.6	83.7%
Totals for Area of Interest		**1.9**	**100.0%**

Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

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

Lea County, New Mexico

KO—Kimbrough gravelly loam, dry, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tw43
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, dry, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kimbrough, Dry

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Eunice

Percent of map unit: 10 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R077DY049TX - Very Shallow 12-17" PZ
Hydric soil rating: No

Spraberry

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

Kenhill

Percent of map unit: 4 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R077DY038TX - Clay Loam 12-17" PZ
Hydric soil rating: No

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

Map Unit Setting

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

Map Unit Composition

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

Description of Kimbrough

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Description of Lea

Setting

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

Typical profile

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

Properties and qualities

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

Available water capacity: Very low (about 2.9 inches)

Interpretive groups

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

Minor Components

Douro

Percent of map unit: 12 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R077DY047TX - Sandy Loam 12-17" PZ
Other vegetative classification: Unnamed (G077DH000TX)
Hydric soil rating: No

Kenhill

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

Spraberry

Percent of map unit: 6 percent
Landform: Plains, playa rims
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: R077DY049TX - Very Shallow 12-17" PZ
Other vegetative classification: Unnamed (G077DH000TX)
Hydric soil rating: No

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NMSLO Seed Mix Coarse (CS)

COARSE (CS) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Sand bluestem	VNS, Southern	2.0	F
Sideoats grama	Vaughn, El Reno	2.0	F
Blue grama	Hachita, Lovington	1.5	D
Little bluestem	Cimmaron, Pastura	1.5	F
Sand dropseed	VNS, Southern	1.0	S
Plains bristlegrass	VNS, Southern	0.75	D
Forbs:			
Parry penstemon	VNS, Southern	1.0	D
Desert globemallow	VNS, Southern	1.0	D
White prairieclover	Kaneb, VNS	0.5	D
Sulfur buckwheat	VNS, Southern	0.5	D
Shrubs:			
Fourwing saltbush	VNS, Southern	1.0	D
Skunkbush sumac	VNS, Southern	1.0	D
Common winterfat	VNS, Southern	1.0	F
Fringed sagewort	VNS, Southern	0.5	F
	Total PLS/acre	18.25	

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 is not available, substitute firecracker penstemon.
- If desert globemallow is not available, substitute scarlet globemallow.
- If one species is not available, provide a suggested substitute to the New Mexico Land Office for approval. Increasing all other species proportionately may be acceptable.