



February 8, 2021

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

**Re: Release Characterization and Remediation Work Plan
ConocoPhillips
EVGSAU Santa Fe 133 Trunk Line Release
Unit Letter G/H/I/J, Section 31, Township 17 South, Range 35 East
Lea County, New Mexico
1RP-735
Incident ID nPAC0605538935**

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a release that occurred from the East Vacuum Grayburg-San Andres Unit (EVGSAU) Santa Fe 133 Battery trunk line. The release footprint is located in Public Land Survey System (PLSS) Unit Letters G, H, I, and J, Section 15, Township 17 South, Range 35 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.79163°, -103.49285°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report (Appendix A), the release was discovered on October 25, 2004. According to the C-141, the release occurred due to a bullet hole in the trunk line at the Santa Fe 133 Battery. The release consisted of 5 barrels (bbls) of oil and 2 bbls of produced water affecting a 150-foot (ft) by 20-ft pasture area. During immediate response actions, a vacuum truck recovered 4 bbls of oil and 1 bbl of produced water. The New Mexico Oil Conservation District (NMOCD) received the C-141 report form for the release on January 5, 2005. The release was subsequently assigned the Remediation Permit (RP) number 1RP-735 and the Incident ID nPAC0605538935. The 1RP-735 release is included in an Agreed Compliance Order-Releases (ACO-R) between COP and the NMOCD signed on May 7 and 9, 2019, respectively.

SITE CHARACTERIZATION

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

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are six (6) water wells within 800 meters (approximately ½ mile) of the Site. The average depth to groundwater is 100 ft below ground surface (bgs). The site characterization data is included in Appendix B.

REGULATORY FRAMEWORK

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

Tetra Tech

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

Tel 432.682.4559 Fax 432.682.3946 www.tetrattech.com

levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil. Based on the site characterization and in accordance with Table I of 19.15.29.12 NMAC, the remediation RRALs for the Site are as follows:

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

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

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

INITIAL ASSESSMENT ACTIVITIES AND SAMPLING RESULTS

On behalf of COP, BBC International Inc. (BBC) conducted an investigation at the Santa Fe 133 Battery release area and documented their findings in an Environmental Site Investigation (ESI) report dated November 4, 2004 (Appendix C). During this investigation, BBC collected samples at a depth of 1 ft bgs from two sample locations: SP-1, located at the west end of the release extent, and SP-2, located at the east end of the release extent. A total of two samples were taken to Cardinal Laboratories in Hobbs, NM and analyzed for BTEX, TPH (GRO and DRO), and chlorides. A diagram of the release and sample locations are presented in Appendix II of the ESI report (Appendix C).

Analytical results associated with both locations (SP-1 and SP-2) exceeded the delineation concentration of 600 mg/kg chloride required by NMOCD regulations. A copy of the analytical laboratory report and chain-of-custody documentation are included in Appendix I of the ESI report along with the sample results (Appendix C). Horizontal and vertical delineation of the release were not achieved during the assessment.

The ESI report concluded with the recommendation that the impacted soil be excavated to the rock layer that occurs at approximately 1 ft bgs. There is no documentation that the recommended remedial actions were taken. During a visual Site inspection conducted by Tetra Tech in June 2020, the release area footprint appeared discolored and devoid of vegetation. Photographic documentation of the visual Site inspection is included as Appendix D.

ADDITIONAL SITE ASSESSMENT

On behalf of COP, Tetra Tech personnel returned to the Site on October 28 and 29, 2020 to conduct soil sampling to complete horizontal and vertical delineation of the release. Three (3) borings (BH-1 through BH-3) were installed using an air rotary drilling rig to a depth of 30 ft bgs within the release extent to delineate the depth of impact. Four (4) borings (BH-4 through BH-7) were installed along the perimeter of the release extent to depths of 4 ft bgs to confirm horizontal delineation of the release. Soils at the Site consist of approximately 1.5 ft of brown silty clay underlain by a caliche cap rock. Figure 3 depicts the release extent and the October 2020 soil boring locations, and GPS coordinates for the boring locations are presented in Table 1.

A total of twenty-nine (29) samples were collected from the seven (7) borings (BH-1 through BH-7) and submitted to Pace Analytical National Center for Testing & Innovation (Pace) in Nashville, Tennessee to be analyzed for chloride 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 E.

SUMMARY OF SAMPLING RESULTS

Results from the October 2020 soil sampling event are summarized in Table 2. The analytical results associated with one interior boring location (BH-2) exceeded the Site reclamation RRAL (0-4 ft bgs) for TPH (100 mg/kg) in the sample intervals from the top 3 ft. There were no other analytical results which exceeded the Site RRALs for TPH, chlorides, or BTEX in the interior boring locations (BH-1 through BH-3). The analytical results associated with the samples collected from the perimeter borings (BH-4 through BH-7) were below the Site RRALs for all analyzed constituents. The release extent was horizontally and vertically delineated.

REMEDIATION WORK PLAN

Based on the analytical results, COP proposes to remove the remaining impacted material as shown in Figure 4. Impacted soils will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to a maximum depth of 4 feet below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the RRALs.

Excavated soils will be transported offsite and disposed of at an NMOCD-approved or permitted facility. Confirmation bottom and sidewall samples will be collected for verification of remedial activities, and analyzed for TPH, BTEX, and chlorides. Once results are received, NMOCD will be notified and the excavation will then be backfilled with clean material to surface grade. The estimated volume of material to be remediated is approximately 310 cubic yards.

ALTERNATIVE CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, COP proposes the following alternative confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 5. Five (5) confirmation floor samples and eight (8) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses a surface area of approximately 2,060 square ft.

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

SITE RECLAMATION AND RESTORATION PLAN

The release extent, including backfilled areas as well as areas that do not require excavation to meet Site RRALs (see Figure 4), will be seeded Spring 2021 (or the first favorable growing season) to aid in revegetation. Based on soils at the Site, the New Mexico State Land Office (NMSLO) Loamy (L) Sites Seed Mixture will be used for seeding and will be planted in the amount specified in the pounds pure live seed (PLS) per acre. The seed mixture will be spread by a drill equipped with a depth regulator or a hand-held broadcaster and raked. If a hand-held broadcaster is used for dispersal, the pounds pure live seed per acre will be doubled.

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

CONCLUSION

ConocoPhillips proposes to begin remediation activities at the Site within 1 year of NMOCD plan approval. The EVGSAU Santa Fe 133 Trunk Line Release (1RP-735) is included in an Agreed Compliance Order-Releases (ACO-R) between COP and the NMOCD signed on May 7 and 9, 2019, respectively. COP is

Release Characterization and Remediation Work Plan
February 8, 2021

ConocoPhillips

dedicated to addressing and closing all historical releases included in the ACO-R, and given the number of releases to be addressed, 1 year is anticipated to be a practicable timeline. Upon completion of the proposed work, a final closure report detailing the remediation activities and the results of the confirmation sampling will be submitted to NMOCD.

If you have any questions concerning the soil assessment or the proposed remediation activities for the Site, please call me at (512) 739-7874 or Christian at (512) 338-2861.

Sincerely,
Tetra Tech, Inc.



Samantha K. Abbott, P.G.
Senior Staff Geologist



Christian M, Llull, P.G.
Project Manager

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

LIST OF ATTACHMENTS

Figures:

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

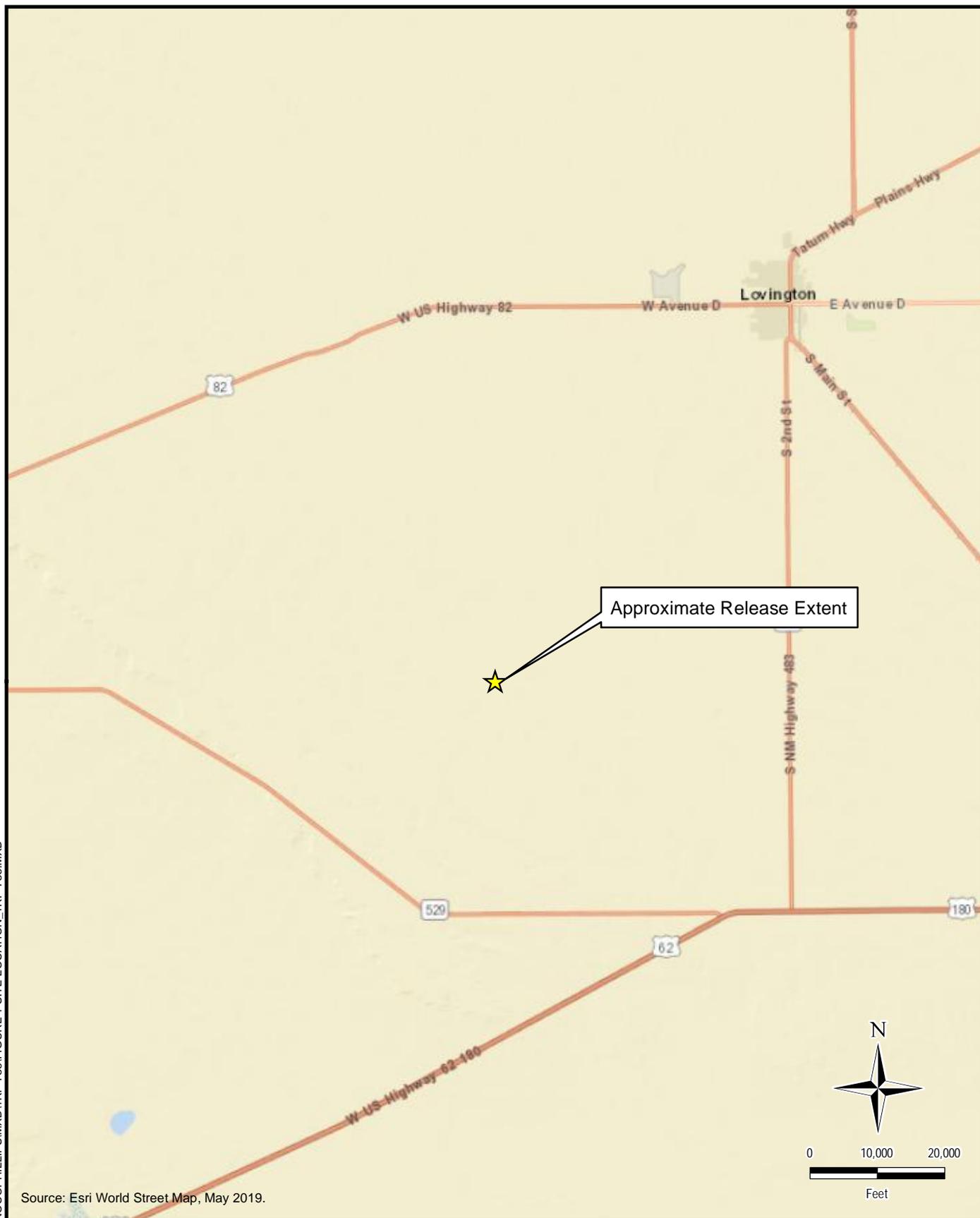
Tables:

- Table 1 – Boring Location Coordinates
- Table 2 – Summary of Analytical Results – Soil Assessment

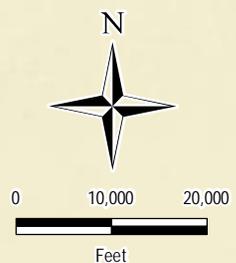
Appendices:

- Appendix A – C-141 Forms
- Appendix B – Site Characterization Data
- Appendix C – Environmental Site Investigation Report (BBC, November 4, 2004)
- Appendix D – Photographic Documentation
- Appendix E – Laboratory Analytical Data
- Appendix F – NMSLO Seed Mixture Details

FIGURES



Source: Esri World Street Map, May 2019.



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-735\FIGURE 1 SITE LOCATION_1RP-735.MXD

 www.tetratech.com 901 West Wall Street, Suite 100 Midland, Texas 79701 Phone: (432) 682-4559 Fax: (432) 682-3946	CONOCOPHILLIPS 1RP-735 (32.791633°, -103.49285°) LEA COUNTY, NEW MEXICO	PROJECT NO.: 212C-MD-02334 DATE: DECEMBER 16, 2020 DESIGNED BY: AAM
	EVGSAU SANTA FE 133 BATTERY TRUNK LINE RELEASE SITE LOCATION MAP	Figure No. 1



Source: Esri, USGS Topo, May 2019.

DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-735\FIGURE 2 TOPO_1RP-735.MXD



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CONOCOPHILLIPS

1RP-735
 (32.791633°, -103.49285°)
 LEA COUNTY, NEW MEXICO

**EVGSAU SANTA FE 133 BATTERY TRUNK LINE RELEASE
 TOPOGRAPHIC MAP**

PROJECT NO.: 212C-MD-02334

DATE: DECEMBER 16, 2020

DESIGNED BY: AAM

Figure No.

2



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-735\FIGURE 3 SITE LOCATION_1RP-735.MXD

Legend

-  Boring Location
-  Fenceline
-  Approximate Release Extent

Source: Google Earth Pro, May 2019.

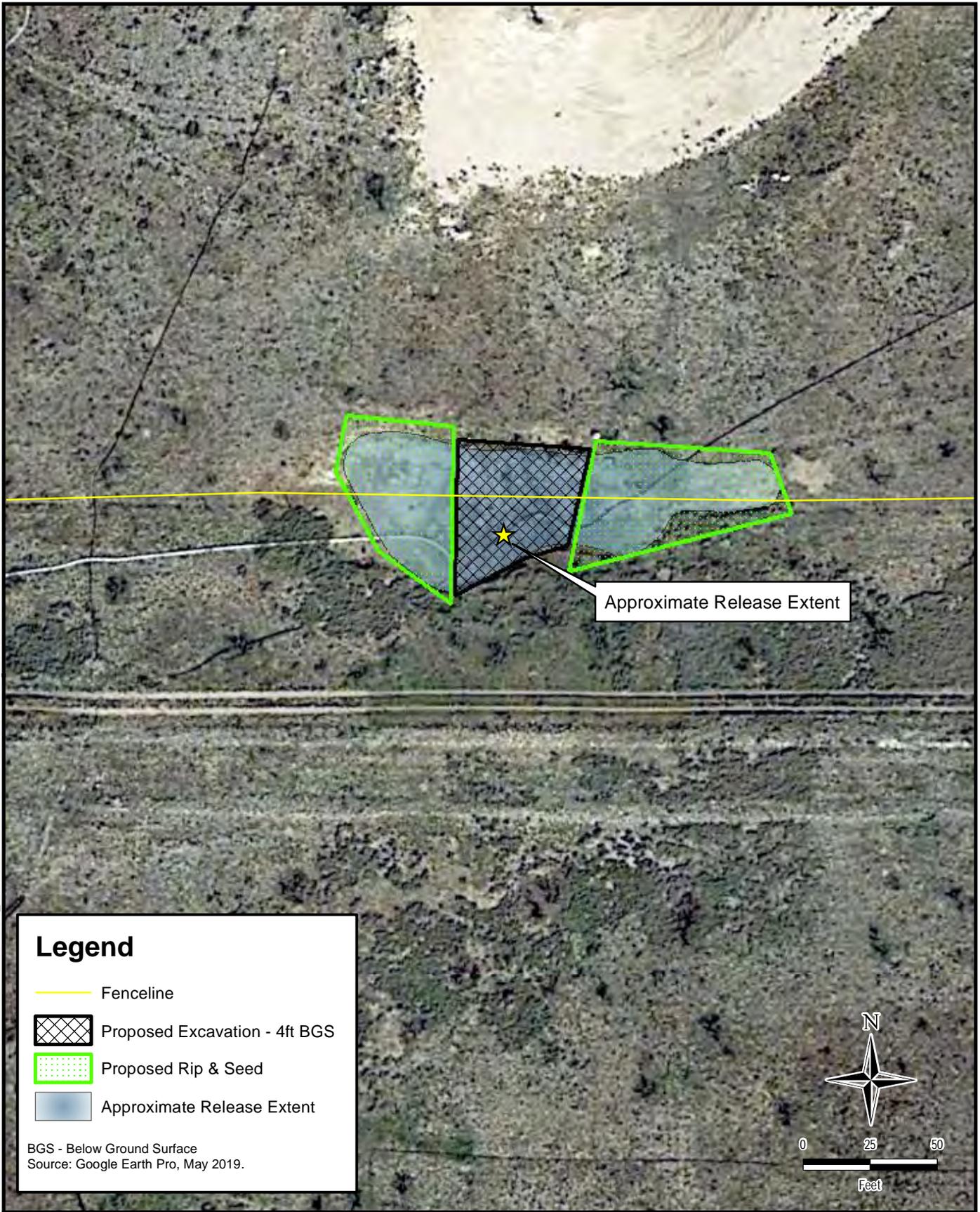


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CONOCOPHILLIPS
 1RP-735
 (32.791633°, -103.49285°)
 LEA COUNTY, NEW MEXICO
**EVGSAU SANTA FE 133 BATTERY TRUNK LINE RELEASE
 RELEASE EXTENT AND SITE ASSESSMENT**

PROJECT NO.: 212C-MD-02334
 DATE: DECEMBER 16, 2020
 DESIGNED BY: AAM

Figure No.
3



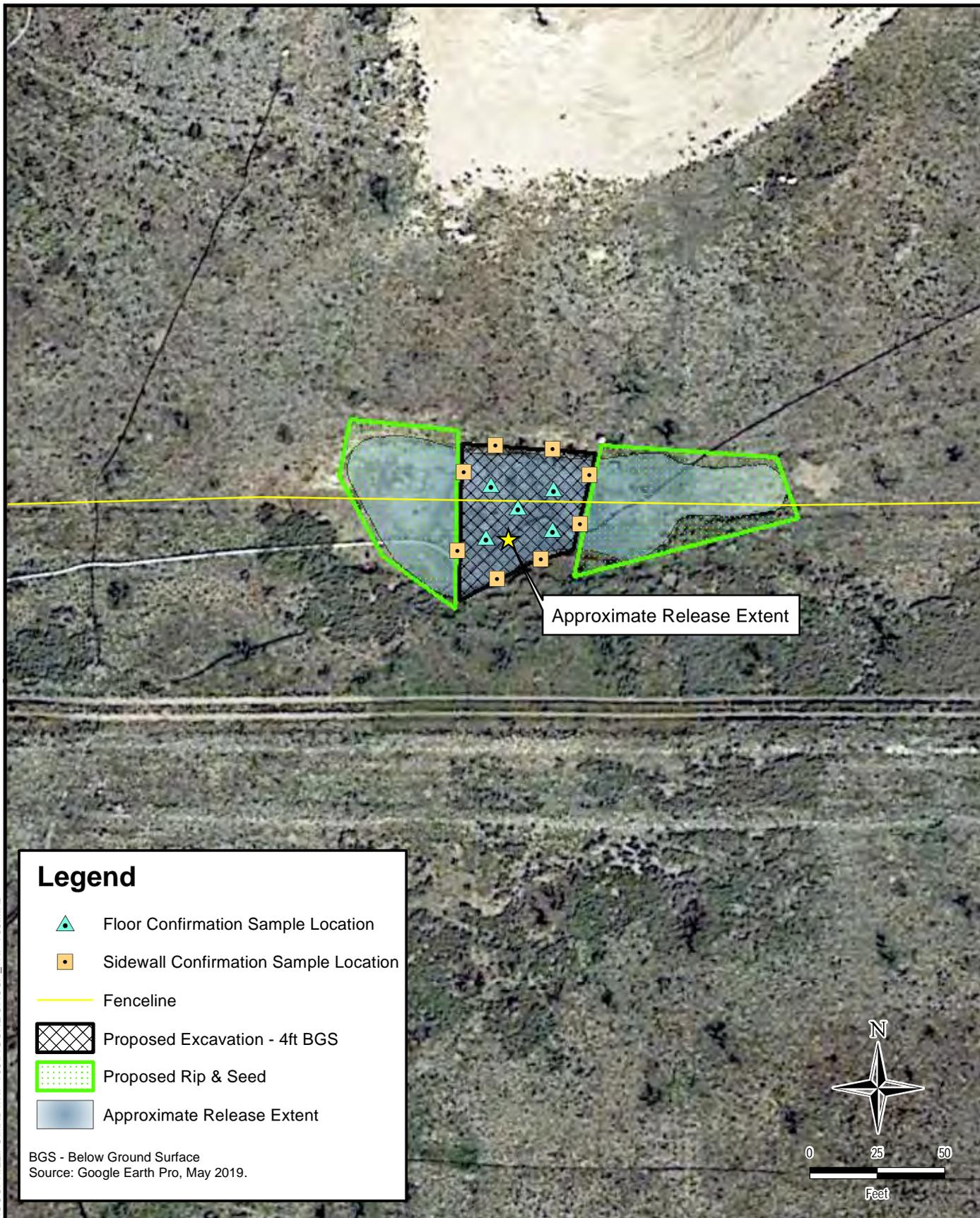
DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-735\FIGURE 4 SITE LOCATION_1RP-735.MXD

Legend

-  Fenceline
-  Proposed Excavation - 4ft BGS
-  Proposed Rip & Seed
-  Approximate Release Extent

BGS - Below Ground Surface
Source: Google Earth Pro, May 2019.

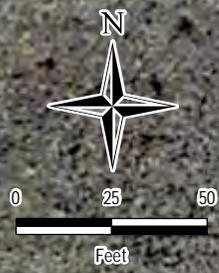
 www.tetratech.com 901 West Wall Street, Suite 100 Midland, Texas 79701 Phone: (432) 682-4559 Fax: (432) 682-3946	CONOCOPHILLIPS 1RP-735 (32.791633°, -103.49285°) LEA COUNTY, NEW MEXICO	PROJECT NO.: 212C-MD-02334
	EVGSAU SANTA FE 133 BATTERY TRUNK LINE RELEASE PROPOSED REMEDIATION EXTENT	DATE: DECEMBER 16, 2020
		DESIGNED BY: AAM
		Figure No. <h1 style="margin: 0;">4</h1>



Legend

- Floor Confirmation Sample Location
- Sidewall Confirmation Sample Location
- Fenceline
- Proposed Excavation - 4ft BGS
- Proposed Rip & Seed
- Approximate Release Extent

BGS - Below Ground Surface
Source: Google Earth Pro, May 2019.



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-735\FIGURE 5 ACSP_1RP-735.MXD

<p>TETRA TECH</p> <p>www.tetratech.com</p> <p>901 West Wall Street, Suite 100 Midland, Texas 79701 Phone: (432) 682-4559 Fax: (432) 682-3946</p>	<p>CONOCOPHILLIPS</p> <p>1RP-735 (32.791633°, -103.49285°) LEA COUNTY, NEW MEXICO</p>	<p>PROJECT NO.: 212C-MD-02334</p>
	<p>EVGSAU SANTA FE 133 BATTERY TRUNK LINE RELEASE ALTERNATIVE CONFIRMATION SAMPLING PLAN</p>	<p>DATE: DECEMBER 17, 2020</p> <p>DESIGNED BY: AAM</p>
		<p>Figure No. 5</p>

TABLES

TABLE 1
BORING LOCATION COORDINATES
SOIL ASSESSMENT - 1RP-735
CONOCOPHILLIPS
EVGSAU SANTA FE 133 BATTERY TRUNKLINE RELEASE
LEA COUNTY, NM

Boring ID	Latitude	Longitude
BH-1	32.791535	-103.493053
BH-2	32.791498	-103.492878
BH-3	32.791528	-103.492744
BH-4	32.791576	-103.493160
BH-5	32.791583	-103.492847
BH-6	32.791482	-103.492527
BH-7	32.791395	-103.492922

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
ADDITIONAL SOIL ASSESSMENT - 1RP-735
CONOCOPHILLIPS
EVGSAU SANTA FE 133 BATTERY TRUNKLINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Chloride ¹		BTEX ²							TPH ³									
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO ⁴		DRO		ORO		Total TPH (GRO+DRO+ORO)
					mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	
BH-1	10/29/2020	0-1	< 21.1		< 0.00111		< 0.00555		< 0.00277		0.00152	J	0.00152	< 0.105		17.2		44.0		61.2	
		2-3	< 21.2		< 0.00112		< 0.00561		< 0.00281		0.00152	J	0.00152	< 0.106		11.1		25.9		37.0	
		4-5	< 20.7		< 0.00107		< 0.00537		< 0.00268		0.00145	J	0.00145	0.0516	B J	2.12	J	3.64	J	5.81	
		6-7	61.1		< 0.00108		< 0.00541		< 0.00271		< 0.00704		-	0.0360	B J	< 4.16		1.05	J	1.09	
		9-10	24.1		< 0.00101		< 0.00507		< 0.00253		< 0.00659		-	0.0687	B J	31.5		39.9		71.5	
		14-15	< 20.1		< 0.00101		< 0.00507		< 0.00254		< 0.00660		-	< 0.102		< 4.03		0.810	J	0.810	
		19-20	46.9		< 0.00109		< 0.00546		< 0.00273		< 0.00710		-	< 0.105		< 4.19		0.354	J	0.354	
BH-2	10/29/2020	0-1	< 21.4		< 0.00114		< 0.00568		< 0.00284		0.00117	J	0.00117	0.0480	B J	404		126		530	
		2-3	< 21.5		< 0.00115		< 0.00575		< 0.00288		< 0.00748		-	< 0.108		56.2		120		176	
		4-5	16.2	J	0.000657	J	< 0.00548		< 0.00274		0.000986	J	0.00164	0.0346	B J	5.48		4.11	J	9.62	
		6-7	40.1		< 0.00118		< 0.00591		< 0.00296		< 0.00768		-	< 0.109		3.45	J	1.69	J	5.14	
		9-10	408		< 0.00114		< 0.00571		< 0.00286		< 0.00742		-	< 0.107		3.73	J	< 4.28		3.73	
		14-15	306		< 0.00112		< 0.00562		< 0.00281		< 0.00731		-	0.0247	B J	< 4.25		0.390	J	0.415	
		19-20	296		0.000776	J	0.00257	J	0.000998	J	0.00561	J	0.00995	0.0283	B J	< 4.22		0.963	J	0.991	
BH-3	10/29/2020	0-1	9.85	J	< 0.00112		< 0.00558		< 0.00279		< 0.00725		-	0.0267	B J	< 4.23		9.19		9.22	
		2-3	< 21.1		< 0.00111		< 0.00553		< 0.00276		< 0.00719		-	0.0270	B J	< 4.21		6.61		6.64	
		4-5	< 21.4		< 0.00114		< 0.00570		< 0.00285		0.00103	J	0.00103	0.0259	B J	< 4.28		1.08	J	1.11	
		6-7	< 21.8		< 0.00118		< 0.00590		< 0.00295		< 0.00767		-	< 0.109		< 4.36		< 4.36		-	
		9-10	136		< 0.00120		< 0.00600		< 0.00300		0.00117	J	0.00117	< 0.110		< 4.40		< 4.40		-	
		14-15	284		< 0.00114		< 0.00571		< 0.00286		0.00109	J	0.00109	< 0.107		< 4.28		< 4.28		-	
		19-20	151		< 0.00116		< 0.00578		< 0.00289		< 0.00752		-	< 0.108		< 4.31		< 4.31		-	
BH-4	10/30/2020	0-1	< 20.4		< 0.00104		< 0.00521		< 0.00261		0.00104	J	0.00104	< 0.102		8.09		13.6		21.7	
		3-4	< 20.3		< 0.00103		< 0.00517		< 0.00259		0.00101	J	0.00101	< 0.103		< 4.07		2.52	J	2.52	
BH-5	10/30/2020	0-1	30.2		< 0.00107		< 0.00537		< 0.00269		< 0.00698		-	< 0.105		< 4.15		7.47		7.47	
		3-4	52.3		< 0.00105		< 0.00523		< 0.00261		< 0.00680		-	< 0.102		2.22	J	6.16		8.38	
BH-6	10/30/2020	0-1	< 20.7		< 0.00107		< 0.00534		< 0.00267		0.00123	J	0.00123	< 0.103		< 4.13		0.712	J	0.712	
		3-4	< 20.3		< 0.00103		< 0.00517		< 0.00258		< 0.00672		-	< 0.102		< 4.07		0.337	J	0.337	
BH-7	10/30/2020	0-1	< 20.5		< 0.00105		< 0.00524		< 0.00262		< 0.00682		-	< 0.102		1.84	J	6.02		7.86	
		3-4	< 20.7		< 0.00107		< 0.00535		< 0.00267		0.00121	J	0.00121	< 0.103		< 4.14		0.757	J	0.757	

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 soil intervals proposed for excavation.

- 1 EPA Method 300.0
- 2 EPA Method 8260B
- 3 EPA Method 8015
- 4 EPA Method 8015D/GRO

QUALIFIERS:

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

APPENDIX A C-141 Forms

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

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

Form C-141
Revised October 10, 2003
Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company ConocoPhillips	Contact Stephen Wilson
Address HC60 Box 66, Lovington, NM	Telephone No. 505-396-7962
Facility Name Santa Fe 133 Battery	Facility Type Oil and Gas

Surface Owner State of NM	Mineral Owner	Lease No Santa Fe 133 Battery
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LOCATION OF RELEASE

Unit Letter	Section 29	Township 17S	Range 35E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea, NM
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Latitude N ~~32° 47.498'~~ Longitude W ~~103° 29.571'~~ 77'

NATURE OF RELEASE

Type of Release Crude oil and Produced water	Volume of Release 7bbl (Soil, 2water)	Volume Recovered (4oil, 1water)
Source of Release Trunk line	Date and Hour of Occurrence 10-25-04 2:00pm	Date and Hour of Discovery 10-25-04 3:00pm
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

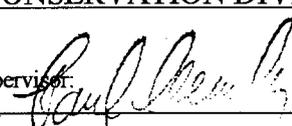
Describe Cause of Problem and Remedial Action Taken.*

bullet hole in trunk line

Describe Area Affected and Cleanup Action Taken.*

150' x 20' Pasture. Vacuum truck out pick loose fluid, backhoe to spread sand to secure site. A determination will be made as to the need for any further action. If further action is deemed necessary a follow up report will be filed. No cattle in the area.

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

OIL CONSERVATION DIVISION	
Signature:	Approved by District Supervisor: 
Printed Name: Stephen R. Wilson	Approval Date: 1-6-05 Expiration Date: UNLIMITED
Title: Sr. SHEAR Specialist	Conditions of Approval: ENVIRONMENTAL
E-mail Address: Stephen.R.Wilson@ConocoPhillips.com	Attached <input type="checkbox"/>
Date:	Phone: 505-396-7962

* Attach Additional Sheets If Necessary

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature: Charles R. Beauvais II Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 04/18/2023

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

- Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: _____ Title: _____

Signature: Charles R. Beauvais II Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 04/18/2023

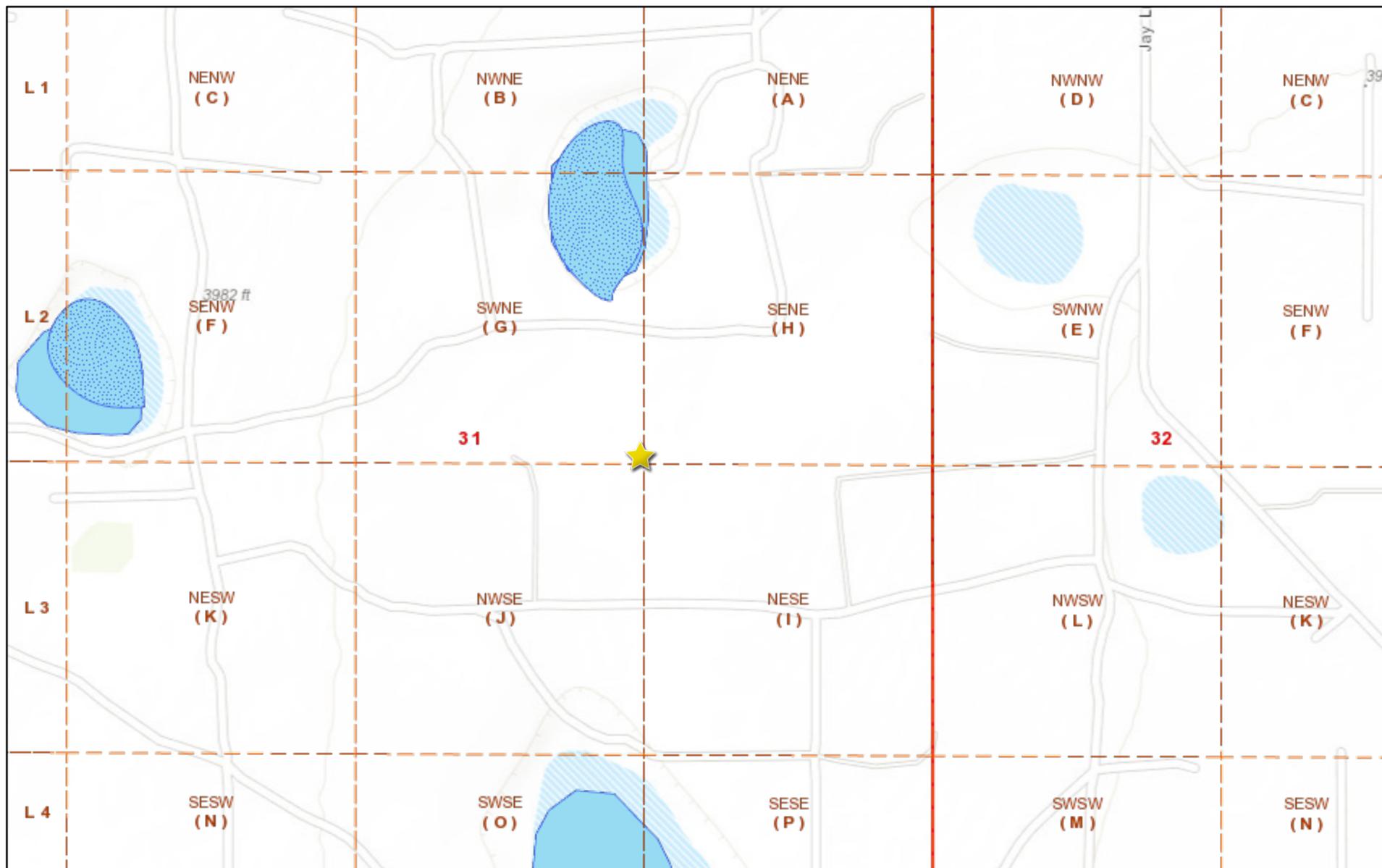
- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature:  Date: 04/18/2023

APPENDIX B

Site Characterization Data

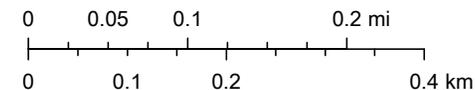
1RP-735



2/8/2021, 1:08:06 PM

1:9,028

-  Override 1
-  PLSS First Division
-  PLJV Probable Playas
-  OCD District Offices
-  PLSS Second Division
-  OSE Streams
-  OSE Water-bodies



Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin,

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

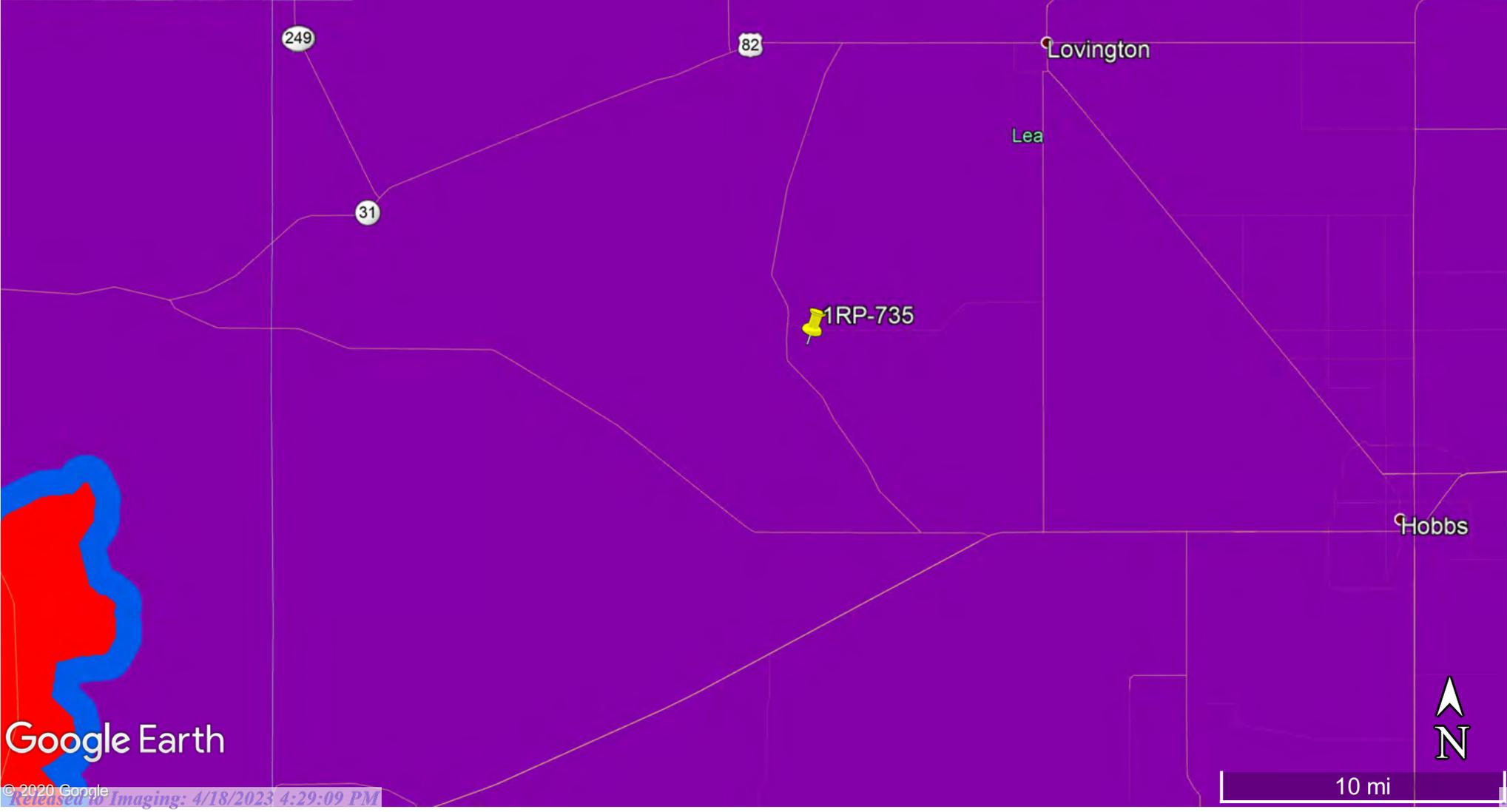
KARST POTENTIAL MAP

1RP-735



Legend

-  1RP-735
-  High
-  Low
-  Medium



Google Earth



10 mi

APPENDIX C
Environmental Site Investigation Report
(BBC, November 4, 2004)



CONOCOPHILLIPS

EVGSAU Santa Fe 133 Battery Trunkline Leak (10-25-04)

ENVIRONMENTAL SITE INVESTIGATION

PERFORMED BY:

BBC INTERNATIONAL, INC.
 WORLD-WIDE ENVIRONMENTAL SPECIALISTS
 1324 W. MARLAND BLVD.
 P. O. BOX 805
 HOBBS, NEW MEXICO 88240
 (505)397-6388 • FAX (505)397-0397
 EMAIL: bbc@bbcinternational.com
 WEBSITE: www.bbcinternational.com

November 4, 2004

PREPARED FOR:

MR. STEPHEN R. WILSON
CONOCOPHILLIPS
29 VACUUM COMPLEX RD.
LOVINGTON, NEW MEXICO 88260-9613

Conoco Phillips - 217817
facility - NPAC0605538757 inspect - e PAC0605538889
incident - NPAC0605538935
application - PAC0605539144

ConocoPhillips

EVGSAU Santa Fe 133 Battery Trunkline Leak (10-25-04)

1.0 INTRODUCTION

The subject site is located east of Buckeye, New Mexico in Section 29, Township 17 South, and Range 35 East. The site consists of undeveloped rangeland and petroleum production facilities. On October 25, 2004, the 4" poly trunkline from the Santa Fe 133 Battery leaked approximately 5 bbls of oil and 2 bbls of water, with approximately 4 bbls of oil and 1 bbl of water being recovered.

2.0 SITE CHARACTERIZATION

The leak area runs west to east and measures approximately 184 feet by 54 feet. A sketch of the leak area including the sample points can be reviewed in Appendix II of this report. The surface soil is brown topsoil. There is no water source within 1,000 feet of the site. There is no surface water within 1,000 feet of the site. Based on data from the New Mexico Office of the State Engineer, there are no recorded water wells located in Section 29, Township 17 South, and Range 35 East. The bedrock in the Buckeye area is very shallow and at this site it is approximately one foot below the surface of the topsoil.

3.0 SITE INVESTIGATION ACTIVITIES

On November 3, 2004, BBC personnel conducted an inspection of the site. Two samples were taken at a depth of one foot; SP1 from the west end of the leak area and SP2 from the east end of the leak area. The samples were taken to Cardinal Laboratories and analyzed for BTEX, TPH (GRO and DRO), and Chlorides. Laboratory analysis for SP1 @ 1' is: GRO – non detect, DRO – 62.8 ppm, Chlorides – 2800 ppm, Benzene – non detect, Toluene – non-detect, Ethyl Benzene – non-detect, and Total Xylenes – non-detect. Laboratory analysis for SP2 @ 1' is: GRO – 153 ppm, DRO – 721 ppm, Chlorides – 2100 ppm, Benzene – 0.360 ppm, Toluene – 1.24 ppm, Ethyl Benzene – 2.13 ppm, and Total Xylenes - 2.38 ppm. Laboratory analytical results for this sampling event can be reviewed in Appendix I of this report. The location of the sample points can be viewed on the site diagram in Appendix II of this report.

4.0 CONCLUSION AND RECOMMENDATION

The laboratory data for this site indicates that TPH and BTEX concentrations are below OCD guidelines for areas where depth to groundwater is greater than 50 feet, and the area of greatest chloride contamination is in the near surface portion of the leak area. Taking into consideration that the average depth to groundwater in the area is greater than 50 feet and the existence of the rock layer at a depth of approximately one foot below ground surface, the evidence indicates that the migration of contamination to groundwater is unlikely. Therefore, it is recommended that approximately 1 foot of topsoil, down to the rock layer, be removed and disposed of. This soil would be transported to an OCD approved landfarm or disposal site.



PHONE (505) 397-6388 • FAX (505) 397- 0397 • 1324 W. MARLAND • P.O. BOX 805 • HOBBS, NM 88241-0805
E-MAIL: bbc@bbcinternational.com

January 3, 2004

Paul Sheeley
NM Oil Conservation Division
1625 N. French Drive
Hobbs, NM 88240

**RE: ConocoPhillips – EVGSAU Santa Fe 133 Battery Trunkline Leak (10-25-04)
Section 29, Township 17 South, Range 35 East**

Dear Mr. Sheeley:

BBC International, Inc. respectfully submits this site investigation report for the EVGSAU Santa Fe Battery Trunkline Leak on behalf of ConocoPhillips.

This site is an area that was investigated due to a trunkline leak that occurred on October 25, 2004. Approximately 7 barrels of oil and 2 barrels of produced water was released with 4 barrels of oil and 1 barrel of water recovered.

The investigation and sampling was conducted on November 3, 2004. The data indicates that the area of greatest contamination is in the upper portion of the leak area. Since the depth to groundwater in the area is greater 50 feet and there is a rock layer at approximately one foot below ground surface, it is recommended that approximately one foot of topsoil be removed and disposed of at an OCD approved disposal facility or landfarm, and the site closed.

I look forward to your review of this report and the agreement to our recommendation. If you have any questions, please do not hesitate to contact me at (505)397-6388, by email at kswinney@bbcinternational.com, or at the address above.

Sincerely,

BBC International, Inc.

Ken Swinney, CEI, CRS
Director of Operations

KS:jg

encl.

ENVIRONMENTAL CONSULTING AND REMEDIATION SERVICES
HOUSTON, TEXAS • WEBSITE: www.bbcinternational.com • CALGARY, ALBERTA

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

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

Form C-141
Revised October 10, 2003
Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company ConocoPhillips	Contact Stephen Wilson
Address HC60 Box 66, Lovington, NM	Telephone No. 505-396-7962
Facility Name Santa Fe 133 Battery	Facility Type Oil and Gas

Surface Owner State of NM	Mineral Owner	Lease No Santa Fe 133 Battery
----------------------------------	---------------	--------------------------------------

LOCATION OF RELEASE

Unit Letter	Section 29	Township 17S	Range 35E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea, NM
-------------	----------------------	------------------------	---------------------	---------------	------------------	---------------	----------------	--------------------------

Latitude N ~~32° 47.498'~~ Longitude W ~~103° 29.571'~~ 77'

NATURE OF RELEASE

Type of Release Crude oil and Produced water	Volume of Release 7bbl (Soil, 2water)	Volume Recovered (4oil, 1water)
Source of Release Trunk line	Date and Hour of Occurrence 10-25-04 2:00pm	Date and Hour of Discovery 10-25-04 3:00pm
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

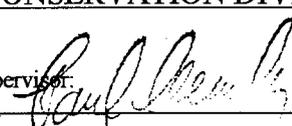
Describe Cause of Problem and Remedial Action Taken.*

bullet hole in trunk line

Describe Area Affected and Cleanup Action Taken.*

150' x 20' Pasture. Vacuum truck out pick loose fluid, backhoe to spread sand to secure site. A determination will be made as to the need for any further action. If further action is deemed necessary a follow up report will be filed. No cattle in the area.

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Stephen R. Wilson	Approved by District Supervisor: 	
Title: Sr. SHEAR Specialist	Approval Date: 1-6-05	Expiration Date: UNLIMITED
E-mail Address: Stephen.R.Wilson@ConocoPhillips.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date:	Phone: 505-396-7962	

* Attach Additional Sheets If Necessary



Permian Basin Asset

Record of Accidental Discharge of Crude Oil, Water or Hazardous Substances

Lease: Santa Fe Battery # 133		Lease # (API, RRC, State, or Federal)		Field: buckeye	
Discovered By: Chad Kleinsteuber			Date and Time Discovered: 10/25/04 @ 3:00pm		
Date and Time Discharge Began: 10/25/04 @ ?			Date and Time Discharge Ended: 10/25/04 @ 7:00pm		
Discharge Site: Unit Letter Sec. 29 Blk/TWP 17S Survey/Range 35E County/State: Lea, New Mexico					
Latitude N 32.47-498 Longitude W 103 29.571					
Highway Map Location: 30 miles west of hobbs on cr50 to buckeye office. leave office heading north to double cattle guard turn west down cr50 go 2.5 miles turn south onto lease road go about half a mile location on north side of road					
Location Of Discharge: middle of a field				<input checked="" type="checkbox"/> Flowline ——— 2600 Feet to Nearest Wellhead Number 30-01 <input type="checkbox"/> Injection. Line Feet to Nearest Wellhead Number	
Specific Source of Discharge: trunk line					
Describe Cause of Discharge : bullet hole in trunk line					
Actions taken to Prevent Reoccurrence: Replace bad part of trunk line					
Describe Nature and Extent of Area Affected: 150' x 20' Pasture					
Weather Conditions: Clear and Dry					
Clean-Up Action Taken: Vacuum truck pick loose fluid, backhoe to spread sand to securer site					
Remediation Action Taken: A determination will be made as to the need for any further action. If further action is deemed necessary a follow up report will be filed. No cattle in the area.					
Specific Source of Discharge <input checked="" type="checkbox"/> Flowline <input type="checkbox"/> Pump <input type="checkbox"/> Tank Piping <input type="checkbox"/> Vessel <input type="checkbox"/> Vessel Piping <input type="checkbox"/> Chemical Storage Container <input type="checkbox"/> Line Check Valve <input type="checkbox"/> Chemical Injection Equipment <input checked="" type="checkbox"/> Wellhead Connections <input type="checkbox"/> Casing/Tubing Communication <input type="checkbox"/> Tank <input checked="" type="checkbox"/> Other: Gun Shot			Possible Reasons For Failure <input type="checkbox"/> Corrosion <input checked="" type="checkbox"/> Human Error <input type="checkbox"/> External <input type="checkbox"/> Pressure <input type="checkbox"/> Internal <input type="checkbox"/> Instrumentation <input type="checkbox"/> Fatigue <input type="checkbox"/> Mechanical <input type="checkbox"/> Age <input type="checkbox"/> Weather		
Cost of Cleanup/Repair: 500.00					
Pipe Size = 3 inches					
<input type="checkbox"/> Steel <input type="checkbox"/> Buried <input type="checkbox"/> Coated <input type="checkbox"/> Plastic Lined <input type="checkbox"/> Fiberglass <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Internal <input type="checkbox"/> Fiberglass <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Bare <input type="checkbox"/> External <input type="checkbox"/> Was Line Chemically Treated <input type="checkbox"/> Transite <input type="checkbox"/> Cement Lined <input type="checkbox"/> Other					
Names and Volumes of Substances Spilled			Remedial Action Picked Up		
5 BBL Oil 2 BBL Produced Water			4 BBL Oil 1 BBL Produced Water		
Gallons Chemical Spilled			Gallons Chemical		Contained in Dike? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Gas Volume Released (MCF)			<input type="checkbox"/> Gas Leak	<input type="checkbox"/> Blowdown	<input type="checkbox"/> Upset
Other – Explain:					
Federal, State, and Local Agencies Notified:				Job Number	
Agency	Person Notified	Date and Time Notified	Method Used		Person Notifying
NMOCD	NA	@	<input type="checkbox"/> Phone	<input type="checkbox"/> Fax	
		@	<input type="checkbox"/> Phone	<input type="checkbox"/> Fax	
		@	<input type="checkbox"/> Phone	<input type="checkbox"/> Fax	
Landowner/Tennant: Giles Lee				Telephone No.	
I Hereby Certify That The Above Information Is True To The Best Of My Knowledge.					
Name and Title: Chad Kleinsteuber					

Appendix I



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
 BBC INTERNATIONAL, INC.
 ATTN: CLIFF BRUNSON
 P.O. BOX 805
 HOBBS, NM 88241
 FAX TO: (505) 397-0397

Receiving Date: 11/03/04
 Reporting Date: 11/05/04
 Project Owner: CONOCO PHILLIPS
 Project Name: SANTA FE BATTERY 133
 Project Location: BUCKEYE, NM

Sampling Date: 11/03/04
 Sample Type: SOIL
 Sample Condition: COOL & INTACT
 Sample Received By: AH
 Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₈) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		11/04/04	11/04/04	11/04/04
H9315-1	SP1 @ 1'	<10.0	62.8	2800
H9315-2	SP2 @ 1'	153	721	2100
Quality Control		731	796	1010
True Value QC		800	800	1000
% Recovery		91.4	99.5	101
Relative Percent Difference		0.5	3.1	1.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl: Std. Methods 4500-ClB
 *Analyses performed on 1:4 w:v aqueous extracts.

Brunson
 Chemist

11/5/04
 Date

H9315A.XLS

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



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
 BBC INTERNATIONAL, INC.
 ATTN: CLIFF BRUNSON
 P.O. BOX 805
 HOBBS, NM 88241
 FAX TO: (505) 397-0397

Receiving Date: 11/03/04
 Reporting Date: 11/05/04
 Project Owner: CONOCO PHILLIPS
 Project Name: SANTA FE BATTERY 133
 Project Location: BUCKEYE, NM

Sampling Date: 11/03/04
 Sample Type: SOIL
 Sample Condition: COOL & INTACT
 Sample Received By: AH
 Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		11/04/04	11/04/04	11/04/04	11/04/04
H9315-1	SP1 @ 1'	<0.005	<0.005	<0.005	<0.015
H9315-2	SP2 @ 1'	0.360	1.24	2.13	2.38
Quality Control		0.096	0.095	0.103	0.317
True Value QC		0.100	0.100	0.100	0.300
% Recovery		96.4	95.4	103	106.0
Relative Percent Difference		2.0	6.6	<0.1	0.6

METHOD: EPA SW-846 8260

Cliff Brunson
 Chemist

11/5/04
 Date

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

H9315B.XLS

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

BILL TO		ANALYSIS REQUEST										
Company Name: BBC International, Inc.		P.O. #:	PRESERV		SAMPLING		DATE		TIME			
Project Manager: Cliff Beason		Company:	MATRIX	OTHER:	ACID/BASE:	ICE/COOL:	OTHER:					
Address: 1324 W. Macleod		City: Hobbs	State: NM	Zip: 88240	GROUNDWATER	CRUDE OIL	SLUDGE					
Phone #: (505) 397-6388		Phone #: (505) 397-0397	Project Owner: ConocoPhillips	Project #: ~	WASTEWATER	SOIL						
Project Name: Santa Fe Battery 133		Project Location: Buckeye N. M.	Sampler Name: Ken Swinney	Sample I.D.:	# CONTAINERS	(G)RAB OR (C)OMP.						
Project #: ~		Project Owner: ConocoPhillips	Project #: ~	State: NM	Zip: 88240							
Project Name: Santa Fe Battery 133		Project Location: Buckeye N. M.	Sampler Name: Ken Swinney	Sample I.D.:								
Project #: ~		Project Owner: ConocoPhillips	Project #: ~	State: NM	Zip: 88240							
Project Name: Santa Fe Battery 133		Project Location: Buckeye N. M.	Sampler Name: Ken Swinney	Sample I.D.:								
Project #: ~		Project Owner: ConocoPhillips	Project #: ~	State: NM	Zip: 88240							
H9315-1	SP1@1'	1	11-3-04	11:30	✓	✓					TPH 8015 M	✓
-2	SP2@1'	1	11-3-04	11:31	✓	✓					BTEX	✓
											Chloride	✓

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

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 2 1/2% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished: Ken Swinney Date: 11-3-04 Time: 11:15

Relinquished By: Ken Swinney Date: 11-3-04 Time: 11:15

Received By: (Lab Staff) Amey Hill

Delivered By: (Circle One) Sampler UPS - Bus - Other: _____

Sample Condition: Intact (Initials) _____

Checked By: _____

Phone Result: Yes No Add'l Phone #: _____

Fax Result: Yes No Add'l Fax #: _____

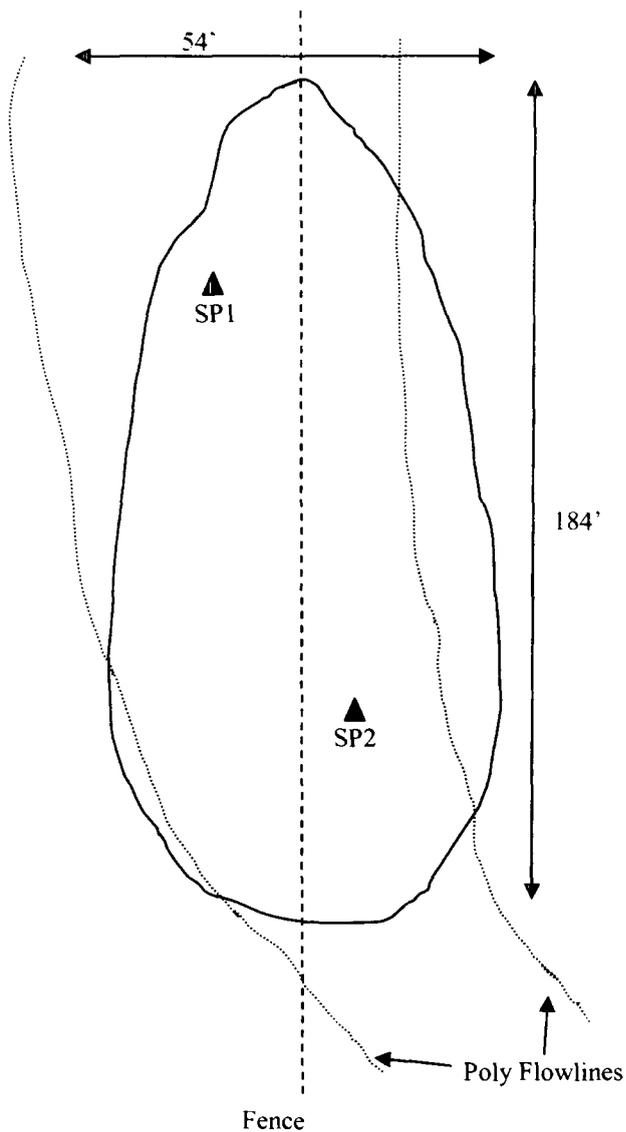
REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

Appendix II



CONOCOPHILLIPS SANTA FE 133 BATTERY LEAK



LEGEND	
▲	Sample Point
□	Contaminated Area

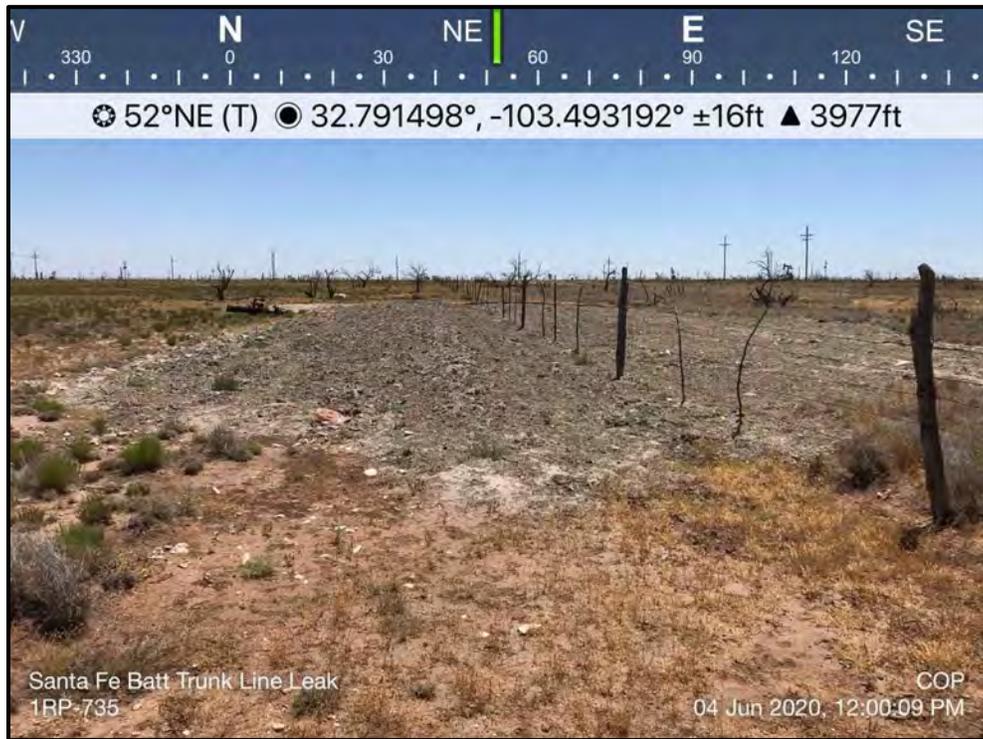
BBC INTERNATIONAL, INC.	
CONOCOPHILLIPS EAST VACUUM GLORIETTA	
Date: 11-8-04	Drawn By: JG
Disk:	Sheet 1 of 1 Sheets
Scale: Not to Scale	File Name

APPENDIX D

Photographic Documentation



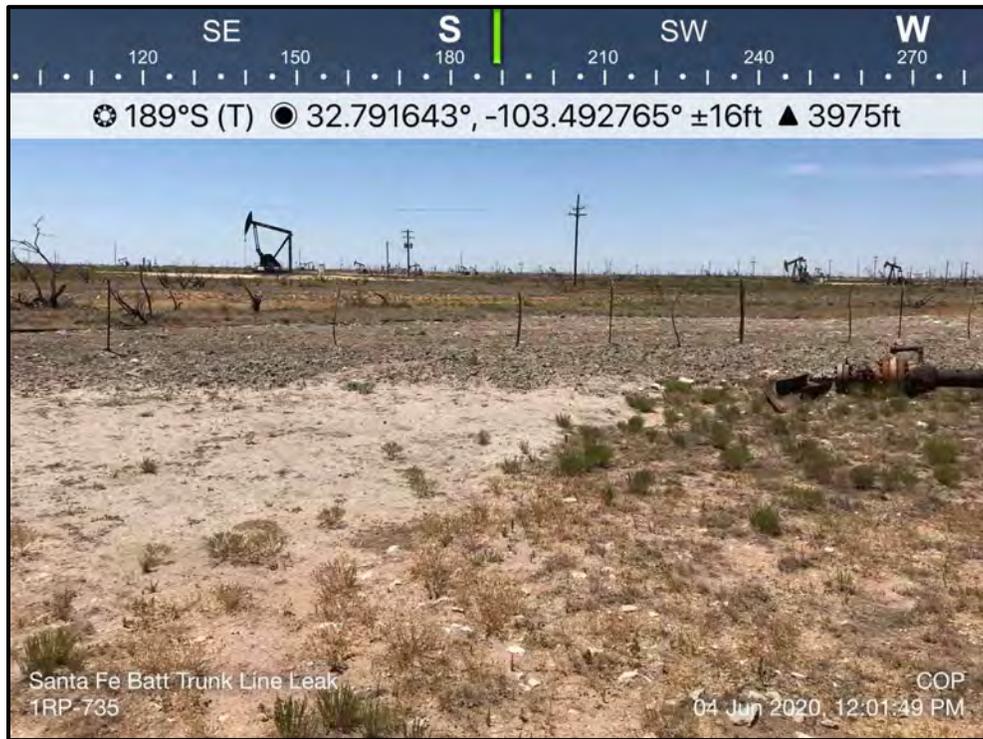
TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing east of trunk line release area.	1
	SITE NAME	EVGSAU Santa Fe 133 Battery Trunk Line Release	6/4/2020



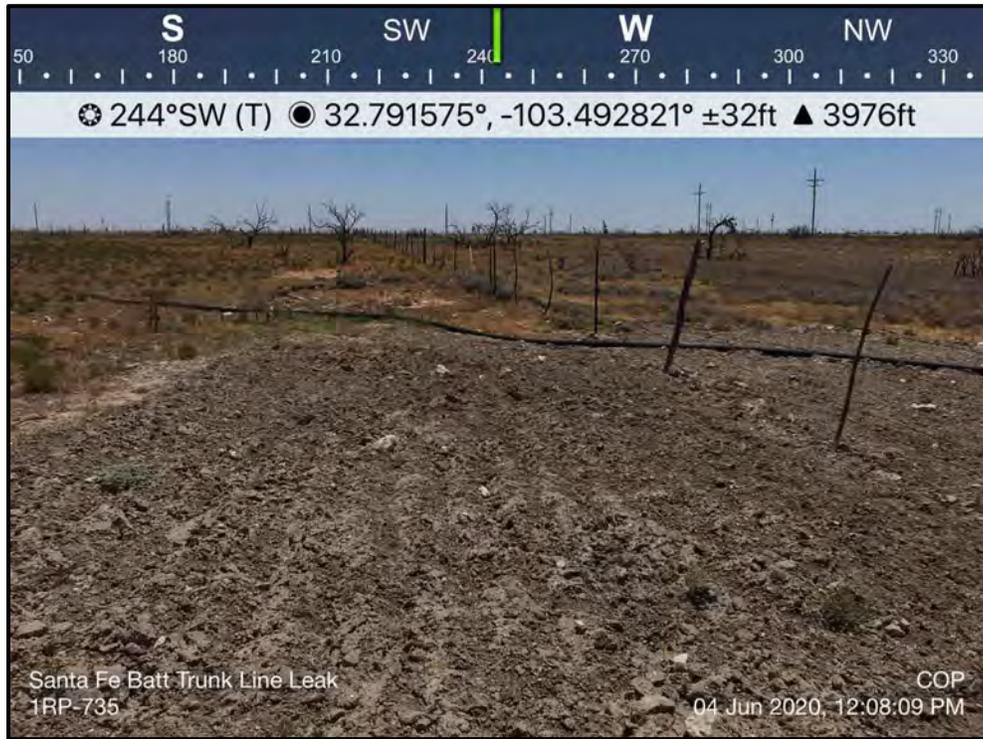
TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing northeast of trunk line release area.	2
	SITE NAME	EVGSAU Santa Fe 133 Battery Trunk Line Release	6/4/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing southwest of trunk line release area.	3
	SITE NAME	EVGSAU Santa Fe 133 Battery Trunk Line Release	6/4/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing south of trunk line release area.	4
	SITE NAME	EVGSAU Santa Fe 133 Battery Trunk Line Release	6/4/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing southwest of trunk line release area.	5
	SITE NAME	EVGSAU Santa Fe 133 Battery Trunk Line Release	6/4/2020

APPENDIX E

Laboratory Analytical Data



ANALYTICAL REPORT

November 11, 2020

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

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1280672
 Samples Received: 11/03/2020
 Project Number: 212C-MD-02334 TASK3
 Description: EVGSAU Santa Fe 133 Battery Trunk Line Release

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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Gl: Glossary of Terms

58

Al: Accreditations & Locations

59

Sc: Sample Chain of Custody

60

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

BH-1 (0'-1') L1280672-01 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 11:00
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570633	1	11/04/20 21:56	11/04/20 21:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1570289	1	11/04/20 10:20	11/04/20 16:34	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1570807	1	11/03/20 18:05	11/04/20 15:51	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1570809	1	11/03/20 18:05	11/04/20 16:23	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570537	1	11/03/20 22:23	11/04/20 08:48	JDG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

BH-1 (2'-3') L1280672-02 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 11:10
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570633	1	11/04/20 21:56	11/04/20 21:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1570289	1	11/04/20 10:20	11/04/20 16:43	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1570807	1	11/03/20 18:05	11/04/20 16:12	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1570809	1	11/03/20 18:05	11/04/20 16:42	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570537	1	11/03/20 22:23	11/04/20 08:35	JDG	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

BH-1 (4'-5') L1280672-03 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 11:20
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570633	1	11/04/20 21:56	11/04/20 21:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1570289	1	11/04/20 10:20	11/04/20 16:53	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1570807	1	11/03/20 18:05	11/04/20 16:33	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1570809	1	11/03/20 18:05	11/04/20 17:01	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570537	1	11/03/20 22:23	11/04/20 08:22	JDG	Mt. Juliet, TN

9 Sc

BH-1 (6'-7') L1280672-04 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 11:30
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570633	1	11/04/20 21:56	11/04/20 21:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1570289	1	11/04/20 10:20	11/04/20 17:02	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1570807	1	11/03/20 18:05	11/04/20 16:53	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573109	1	11/03/20 18:05	11/09/20 01:36	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570537	1	11/03/20 22:23	11/04/20 08:10	JDG	Mt. Juliet, TN

BH-1 (9'-10') L1280672-05 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 11:40
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570633	1	11/04/20 21:56	11/04/20 21:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1570289	1	11/04/20 10:20	11/04/20 17:12	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1570807	1	11/03/20 18:05	11/04/20 17:14	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573109	1	11/03/20 18:05	11/09/20 01:56	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570537	1	11/03/20 22:23	11/04/20 09:01	JDG	Mt. Juliet, TN

BH-1 (14'-15') L1280672-06 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 12:00
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570633	1	11/04/20 21:56	11/04/20 21:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1570289	1	11/04/20 10:20	11/04/20 17:21	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1570807	1.01	11/03/20 18:05	11/04/20 17:35	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573109	1	11/03/20 18:05	11/09/20 02:15	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570537	1	11/03/20 22:23	11/04/20 07:44	JDG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

BH-1 (19'-20') L1280672-07 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 12:30
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570633	1	11/04/20 21:56	11/04/20 21:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1570289	1	11/04/20 10:20	11/04/20 17:31	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1570807	1	11/03/20 18:05	11/04/20 17:56	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573109	1	11/03/20 18:05	11/09/20 02:34	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570537	1	11/03/20 22:23	11/04/20 07:57	JDG	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

BH-2 (0'-1') L1280672-08 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 13:00
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570633	1	11/04/20 21:56	11/04/20 21:56	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1570289	1	11/04/20 10:20	11/04/20 17:40	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1570807	1	11/03/20 18:05	11/04/20 18:17	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573109	1	11/03/20 18:05	11/09/20 08:24	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570695	5	11/04/20 16:33	11/06/20 10:10	JDG	Mt. Juliet, TN

9 Sc

BH-2 (2'-3') L1280672-09 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 13:10
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570634	1	11/04/20 21:24	11/04/20 21:48	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1570289	1	11/04/20 10:20	11/04/20 18:09	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1570807	1	11/03/20 18:05	11/04/20 18:38	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573109	1	11/03/20 18:05	11/09/20 08:43	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570695	1	11/04/20 16:33	11/06/20 08:53	JDG	Mt. Juliet, TN

BH-2 (4'-5') L1280672-10 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 13:20
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570634	1	11/04/20 21:24	11/04/20 21:48	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1570289	1	11/04/20 10:20	11/04/20 18:18	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1570807	1	11/03/20 18:05	11/04/20 18:58	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573485	1	11/03/20 18:05	11/09/20 13:27	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570695	1	11/04/20 16:33	11/05/20 11:32	TJD	Mt. Juliet, TN

BH-2 (6'-7') L1280672-11 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 13:30
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570634	1	11/04/20 21:24	11/04/20 21:48	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1570289	1	11/04/20 10:20	11/04/20 18:37	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1570807	1	11/03/20 18:05	11/04/20 19:19	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573485	1	11/03/20 18:05	11/09/20 13:46	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570695	1	11/04/20 16:33	11/05/20 11:45	TJD	Mt. Juliet, TN

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

BH-2 (9'-10') L1280672-12 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 13:40
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570634	1	11/04/20 21:24	11/04/20 21:48	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1570289	1	11/04/20 10:20	11/04/20 18:47	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1570807	1	11/03/20 18:05	11/04/20 19:40	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573485	1	11/03/20 18:05	11/09/20 14:05	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570696	1	11/04/20 16:28	11/05/20 07:02	JN	Mt. Juliet, TN

- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al

BH-2 (14'-15') L1280672-13 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 14:00
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570634	1	11/04/20 21:24	11/04/20 21:48	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1570289	1	11/04/20 10:20	11/04/20 18:56	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571125	1.01	11/03/20 18:05	11/05/20 05:12	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573485	1	11/03/20 18:05	11/09/20 14:24	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570696	1	11/04/20 16:28	11/05/20 07:15	JN	Mt. Juliet, TN

- 9 Sc

BH-2 (19'-20') L1280672-14 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 14:30
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570634	1	11/04/20 21:24	11/04/20 21:48	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 19:09	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571125	1	11/03/20 18:05	11/05/20 05:32	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 18:05	11/08/20 23:05	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570696	1	11/04/20 16:28	11/05/20 07:28	JN	Mt. Juliet, TN

BH-3 (0'-1') L1280672-15 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 15:00
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570634	1	11/04/20 21:24	11/04/20 21:48	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 19:37	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571125	1	11/03/20 18:05	11/05/20 05:53	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 18:05	11/08/20 23:24	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570696	1	11/04/20 16:28	11/05/20 07:47	JN	Mt. Juliet, TN

BH-3 (2'-3') L1280672-16 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 15:10
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570634	1	11/04/20 21:24	11/04/20 21:48	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 19:56	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571125	1	11/03/20 18:05	11/05/20 06:17	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 18:05	11/08/20 23:43	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570696	1	11/04/20 16:28	11/05/20 08:00	JN	Mt. Juliet, TN

1 Cp
 2 Tc
 3 Ss
 4 Cn

BH-3 (4'-5') L1280672-17 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 15:20
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570634	1	11/04/20 21:24	11/04/20 21:48	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 20:06	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571125	1	11/03/20 18:05	11/05/20 06:38	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 18:05	11/09/20 00:02	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570696	1	11/04/20 16:28	11/05/20 08:40	JN	Mt. Juliet, TN

5 Sr
 6 Qc
 7 Gl
 8 Al

BH-3 (6'-7') L1280672-18 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 15:30
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570634	1	11/04/20 21:24	11/04/20 21:48	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 20:16	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571125	1	11/03/20 18:05	11/05/20 06:59	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 18:05	11/09/20 00:21	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570696	1	11/04/20 16:28	11/05/20 08:53	JN	Mt. Juliet, TN

9 Sc

BH-3 (9'-10') L1280672-19 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 15:40
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570636	1	11/04/20 15:54	11/04/20 16:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 20:44	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571125	1	11/03/20 18:05	11/05/20 07:19	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 18:05	11/09/20 00:40	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570696	1	11/04/20 16:28	11/05/20 09:06	JN	Mt. Juliet, TN

BH-3 (14'-15') L1280672-20 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 16:00
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570636	1	11/04/20 15:54	11/04/20 16:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 20:54	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571125	1	11/03/20 20:42	11/05/20 07:40	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 20:42	11/09/20 00:59	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570696	1	11/04/20 16:28	11/05/20 09:20	JN	Mt. Juliet, TN

BH-3 (19'-20') L1280672-21 Solid

Collected by Joe Tyler
 Collected date/time 10/29/20 16:30
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570636	1	11/04/20 15:54	11/04/20 16:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 21:03	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571125	1	11/03/20 20:42	11/05/20 08:01	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 20:42	11/09/20 01:18	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570696	1	11/04/20 16:28	11/05/20 09:33	JN	Mt. Juliet, TN

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

BH-4 (0'-1') L1280672-22 Solid

Collected by Joe Tyler
 Collected date/time 10/30/20 10:00
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570636	1	11/04/20 15:54	11/04/20 16:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 21:13	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571581	1	11/03/20 20:42	11/05/20 19:35	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 20:42	11/09/20 01:37	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570696	1	11/04/20 16:28	11/05/20 09:46	JN	Mt. Juliet, TN

- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al

BH-4 (3'-4') L1280672-23 Solid

Collected by Joe Tyler
 Collected date/time 10/30/20 10:10
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570636	1	11/04/20 15:54	11/04/20 16:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 21:22	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571814	1.01	11/03/20 20:42	11/05/20 23:42	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 20:42	11/09/20 01:56	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1570696	1	11/04/20 16:28	11/05/20 10:00	JN	Mt. Juliet, TN

- 9 Sc

BH-5 (0'-1') L1280672-24 Solid

Collected by Joe Tyler
 Collected date/time 10/30/20 10:30
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570636	1	11/04/20 15:54	11/04/20 16:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 21:32	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571814	1.01	11/03/20 20:42	11/06/20 00:05	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 20:42	11/09/20 02:15	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1573123	1	11/08/20 17:59	11/09/20 11:00	TJD	Mt. Juliet, TN

BH-5 (3'-4') L1280672-25 Solid

Collected by Joe Tyler
 Collected date/time 10/30/20 10:40
 Received date/time 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570636	1	11/04/20 15:54	11/04/20 16:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 21:41	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571814	1	11/03/20 20:42	11/06/20 00:27	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 20:42	11/09/20 02:34	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1573123	1	11/08/20 17:59	11/09/20 12:32	TJD	Mt. Juliet, TN

SAMPLE SUMMARY

BH-6 (0'-1') L1280672-26 Solid

Collected by: Joe Tyler
 Collected date/time: 10/30/20 11:00
 Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570636	1	11/04/20 15:54	11/04/20 16:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 21:51	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571814	1	11/03/20 20:42	11/06/20 00:50	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 20:42	11/09/20 02:53	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1573123	1	11/08/20 17:59	11/09/20 11:15	TJD	Mt. Juliet, TN

1 Cp
 2 Tc
 3 Ss
 4 Cn

BH-6 (3'-4') L1280672-27 Solid

Collected by: Joe Tyler
 Collected date/time: 10/30/20 11:10
 Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570636	1	11/04/20 15:54	11/04/20 16:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 22:00	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571814	1	11/03/20 20:42	11/06/20 01:12	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 20:42	11/09/20 03:12	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1573123	1	11/08/20 17:59	11/09/20 11:30	TJD	Mt. Juliet, TN

5 Sr
 6 Qc
 7 Gl
 8 Al

BH-7 (0'-1') L1280672-28 Solid

Collected by: Joe Tyler
 Collected date/time: 10/30/20 11:30
 Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570636	1	11/04/20 15:54	11/04/20 16:01	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 22:10	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571814	1	11/03/20 20:42	11/06/20 01:34	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 20:42	11/09/20 03:31	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1573123	1	11/08/20 17:59	11/09/20 12:02	TJD	Mt. Juliet, TN

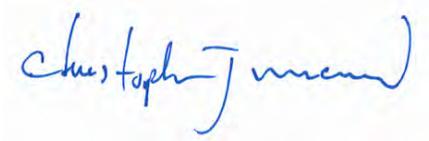
9 Sc

BH-7 (3'-4') L1280672-29 Solid

Collected by: Joe Tyler
 Collected date/time: 10/30/20 11:40
 Received date/time: 11/03/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1570638	1	11/04/20 15:46	11/04/20 15:53	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1571831	1	11/05/20 15:56	11/05/20 22:38	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1571814	1	11/03/20 20:42	11/06/20 01:56	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1573226	1	11/03/20 20:42	11/09/20 03:50	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1573123	1	11/08/20 17:59	11/09/20 12:17	TJD	Mt. Juliet, TN

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



Chris McCord
Project Manager

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

Collected date/time: 10/29/20 11:00

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	94.8		1	11/04/2020 21:56	WG1570633

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Chloride	U		9.70	21.1	1	11/04/2020 16:34	WG1570289

3 Ss

4 Cn

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
TPH (GC/FID) Low Fraction	U		0.0229	0.105	1	11/04/2020 15:51	WG1570807
(S) a,a,a-Trifluorotoluene(FID)	108			77.0-120		11/04/2020 15:51	WG1570807

5 Sr

6 Qc

7 Gl

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000518	0.00111	1	11/04/2020 16:23	WG1570809
Toluene	U		0.00144	0.00555	1	11/04/2020 16:23	WG1570809
Ethylbenzene	U		0.000818	0.00277	1	11/04/2020 16:23	WG1570809
Total Xylenes	0.00152	J	0.000976	0.00721	1	11/04/2020 16:23	WG1570809
(S) Toluene-d8	102			75.0-131		11/04/2020 16:23	WG1570809
(S) 4-Bromofluorobenzene	103			67.0-138		11/04/2020 16:23	WG1570809
(S) 1,2-Dichloroethane-d4	104			70.0-130		11/04/2020 16:23	WG1570809

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
C10-C28 Diesel Range	17.2		1.70	4.22	1	11/04/2020 08:48	WG1570537
C28-C40 Oil Range	44.0		0.289	4.22	1	11/04/2020 08:48	WG1570537
(S) o-Terphenyl	33.0			18.0-148		11/04/2020 08:48	WG1570537

Collected date/time: 10/29/20 11:10

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	94.2		1	11/04/2020 21:56	WG1570633

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Chloride	U		9.76	21.2	1	11/04/2020 16:43	WG1570289

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
TPH (GC/FID) Low Fraction	U		0.0230	0.106	1	11/04/2020 16:12	WG1570807
(S) a,a,a-Trifluorotoluene(FID)	104			77.0-120		11/04/2020 16:12	WG1570807

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000524	0.00112	1	11/04/2020 16:42	WG1570809
Toluene	U		0.00146	0.00561	1	11/04/2020 16:42	WG1570809
Ethylbenzene	U		0.000828	0.00281	1	11/04/2020 16:42	WG1570809
Total Xylenes	0.00152	J	0.000988	0.00730	1	11/04/2020 16:42	WG1570809
(S) Toluene-d8	106			75.0-131		11/04/2020 16:42	WG1570809
(S) 4-Bromofluorobenzene	106			67.0-138		11/04/2020 16:42	WG1570809
(S) 1,2-Dichloroethane-d4	107			70.0-130		11/04/2020 16:42	WG1570809

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
C10-C28 Diesel Range	11.1		1.71	4.25	1	11/04/2020 08:35	WG1570537
C28-C40 Oil Range	25.9		0.291	4.25	1	11/04/2020 08:35	WG1570537
(S) o-Terphenyl	36.8			18.0-148		11/04/2020 08:35	WG1570537

Collected date/time: 10/29/20 11:20

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	96.4		1	11/04/2020 21:56	WG1570633

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Chloride	U		9.54	20.7	1	11/04/2020 16:53	WG1570289

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
TPH (GC/FID) Low Fraction	0.0516	<u>B J</u>	0.0225	0.104	1	11/04/2020 16:33	WG1570807
(S) a,a,a-Trifluorotoluene(FID)	105			77.0-120		11/04/2020 16:33	WG1570807

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000502	0.00107	1	11/04/2020 17:01	WG1570809
Toluene	U		0.00140	0.00537	1	11/04/2020 17:01	WG1570809
Ethylbenzene	U		0.000792	0.00268	1	11/04/2020 17:01	WG1570809
Total Xylenes	0.00145	<u>J</u>	0.000945	0.00698	1	11/04/2020 17:01	WG1570809
(S) Toluene-d8	106			75.0-131		11/04/2020 17:01	WG1570809
(S) 4-Bromofluorobenzene	106			67.0-138		11/04/2020 17:01	WG1570809
(S) 1,2-Dichloroethane-d4	108			70.0-130		11/04/2020 17:01	WG1570809

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
C10-C28 Diesel Range	2.12	<u>J</u>	1.67	4.15	1	11/04/2020 08:22	WG1570537
C28-C40 Oil Range	3.64	<u>J</u>	0.284	4.15	1	11/04/2020 08:22	WG1570537
(S) o-Terphenyl	56.9			18.0-148		11/04/2020 08:22	WG1570537

Collected date/time: 10/29/20 11:30

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	96.0		1	11/04/2020 21:56	WG1570633

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Chloride	61.1		9.58	20.8	1	11/04/2020 17:02	WG1570289

3 Ss

4 Cn

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
TPH (GC/FID) Low Fraction	0.0360	B J	0.0226	0.104	1	11/04/2020 16:53	WG1570807
(S) a,a,a-Trifluorotoluene(FID)	106			77.0-120		11/04/2020 16:53	WG1570807

5 Sr

6 Qc

7 Gl

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000505	0.00108	1	11/09/2020 01:36	WG1573109
Toluene	U		0.00141	0.00541	1	11/09/2020 01:36	WG1573109
Ethylbenzene	U		0.000798	0.00271	1	11/09/2020 01:36	WG1573109
Total Xylenes	U		0.000952	0.00704	1	11/09/2020 01:36	WG1573109
(S) Toluene-d8	105			75.0-131		11/09/2020 01:36	WG1573109
(S) 4-Bromofluorobenzene	95.1			67.0-138		11/09/2020 01:36	WG1573109
(S) 1,2-Dichloroethane-d4	98.4			70.0-130		11/09/2020 01:36	WG1573109

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
C10-C28 Diesel Range	U		1.68	4.16	1	11/04/2020 08:10	WG1570537
C28-C40 Oil Range	1.05	J	0.285	4.16	1	11/04/2020 08:10	WG1570537
(S) o-Terphenyl	50.5			18.0-148		11/04/2020 08:10	WG1570537

Collected date/time: 10/29/20 11:40

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	99.3		1	11/04/2020 21:56	WG1570633

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Chloride	24.1		9.26	20.1	1	11/04/2020 17:12	WG1570289

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
TPH (GC/FID) Low Fraction	0.0687	B J	0.0218	0.101	1	11/04/2020 17:14	WG1570807
(S) a,a,a-Trifluorotoluene(FID)	106			77.0-120		11/04/2020 17:14	WG1570807

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000473	0.00101	1	11/09/2020 01:56	WG1573109
Toluene	U		0.00132	0.00507	1	11/09/2020 01:56	WG1573109
Ethylbenzene	U		0.000747	0.00253	1	11/09/2020 01:56	WG1573109
Total Xylenes	U		0.000892	0.00659	1	11/09/2020 01:56	WG1573109
(S) Toluene-d8	106			75.0-131		11/09/2020 01:56	WG1573109
(S) 4-Bromofluorobenzene	95.6			67.0-138		11/09/2020 01:56	WG1573109
(S) 1,2-Dichloroethane-d4	102			70.0-130		11/09/2020 01:56	WG1573109

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
C10-C28 Diesel Range	31.5		1.62	4.03	1	11/04/2020 09:01	WG1570537
C28-C40 Oil Range	39.9		0.276	4.03	1	11/04/2020 09:01	WG1570537
(S) o-Terphenyl	41.1			18.0-148		11/04/2020 09:01	WG1570537

Collected date/time: 10/29/20 12:00

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	99.3		1	11/04/2020 21:56	WG1570633

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.27	20.1	1	11/04/2020 17:21	WG1570289

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0221	0.102	1.01	11/04/2020 17:35	WG1570807
(S) a,a,a-Trifluorotoluene(FID)	105			77.0-120		11/04/2020 17:35	WG1570807

- 8 Al
- 9 Sc

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000474	0.00101	1	11/09/2020 02:15	WG1573109
Toluene	U		0.00132	0.00507	1	11/09/2020 02:15	WG1573109
Ethylbenzene	U		0.000748	0.00254	1	11/09/2020 02:15	WG1573109
Total Xylenes	U		0.000893	0.00660	1	11/09/2020 02:15	WG1573109
(S) Toluene-d8	105			75.0-131		11/09/2020 02:15	WG1573109
(S) 4-Bromofluorobenzene	94.8			67.0-138		11/09/2020 02:15	WG1573109
(S) 1,2-Dichloroethane-d4	102			70.0-130		11/09/2020 02:15	WG1573109

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.62	4.03	1	11/04/2020 07:44	WG1570537
C28-C40 Oil Range	0.810	J	0.276	4.03	1	11/04/2020 07:44	WG1570537
(S) o-Terphenyl	61.5			18.0-148		11/04/2020 07:44	WG1570537

Collected date/time: 10/29/20 12:30

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.6		1	11/04/2020 21:56	WG1570633

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	46.9		9.63	20.9	1	11/04/2020 17:31	WG1570289

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0227	0.105	1	11/04/2020 17:56	WG1570807
(S) a,a,a-Trifluorotoluene(FID)	107			77.0-120		11/04/2020 17:56	WG1570807

- 8 Al
- 9 Sc

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000510	0.00109	1	11/09/2020 02:34	WG1573109
Toluene	U		0.00142	0.00546	1	11/09/2020 02:34	WG1573109
Ethylbenzene	U		0.000805	0.00273	1	11/09/2020 02:34	WG1573109
Total Xylenes	U		0.000961	0.00710	1	11/09/2020 02:34	WG1573109
(S) Toluene-d8	106			75.0-131		11/09/2020 02:34	WG1573109
(S) 4-Bromofluorobenzene	96.4			67.0-138		11/09/2020 02:34	WG1573109
(S) 1,2-Dichloroethane-d4	99.2			70.0-130		11/09/2020 02:34	WG1573109

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.68	4.19	1	11/04/2020 07:57	WG1570537
C28-C40 Oil Range	0.354	J	0.287	4.19	1	11/04/2020 07:57	WG1570537
(S) o-Terphenyl	48.3			18.0-148		11/04/2020 07:57	WG1570537

Collected date/time: 10/29/20 13:00

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	93.6		1	11/04/2020 21:56	WG1570633

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Chloride	U		9.83	21.4	1	11/04/2020 17:40	WG1570289

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
TPH (GC/FID) Low Fraction	0.0480	B J	0.0232	0.107	1	11/04/2020 18:17	WG1570807
(S) a,a,a-Trifluorotoluene(FID)	106			77.0-120		11/04/2020 18:17	WG1570807

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000530	0.00114	1	11/09/2020 08:24	WG1573109
Toluene	U		0.00148	0.00568	1	11/09/2020 08:24	WG1573109
Ethylbenzene	U		0.000837	0.00284	1	11/09/2020 08:24	WG1573109
Total Xylenes	0.00117	J	0.00100	0.00738	1	11/09/2020 08:24	WG1573109
(S) Toluene-d8	105			75.0-131		11/09/2020 08:24	WG1573109
(S) 4-Bromofluorobenzene	104			67.0-138		11/09/2020 08:24	WG1573109
(S) 1,2-Dichloroethane-d4	109			70.0-130		11/09/2020 08:24	WG1573109

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
C10-C28 Diesel Range	404		8.60	21.4	5	11/06/2020 10:10	WG1570695
C28-C40 Oil Range	126		1.46	21.4	5	11/06/2020 10:10	WG1570695
(S) o-Terphenyl	35.6			18.0-148		11/06/2020 10:10	WG1570695

Collected date/time: 10/29/20 13:10

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.0		1	11/04/2020 21:48	WG1570634

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.89	21.5	1	11/04/2020 18:09	WG1570289

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0233	0.108	1	11/04/2020 18:38	WG1570807
(S) a,a,a-Trifluorotoluene(FID)	106			77.0-120		11/04/2020 18:38	WG1570807

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000537	0.00115	1	11/09/2020 08:43	WG1573109
Toluene	U		0.00150	0.00575	1	11/09/2020 08:43	WG1573109
Ethylbenzene	U		0.000848	0.00288	1	11/09/2020 08:43	WG1573109
Total Xylenes	U		0.00101	0.00748	1	11/09/2020 08:43	WG1573109
(S) Toluene-d8	106			75.0-131		11/09/2020 08:43	WG1573109
(S) 4-Bromofluorobenzene	97.7			67.0-138		11/09/2020 08:43	WG1573109
(S) 1,2-Dichloroethane-d4	104			70.0-130		11/09/2020 08:43	WG1573109

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	56.2		1.73	4.30	1	11/06/2020 08:53	WG1570695
C28-C40 Oil Range	120		0.295	4.30	1	11/06/2020 08:53	WG1570695
(S) o-Terphenyl	40.3			18.0-148		11/06/2020 08:53	WG1570695

Collected date/time: 10/29/20 13:20

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	95.4		1	11/04/2020 21:48	WG1570634

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Chloride	16.2	J	9.64	21.0	1	11/04/2020 18:18	WG1570289

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
TPH (GC/FID) Low Fraction	0.0346	B J	0.0227	0.105	1	11/04/2020 18:58	WG1570807
(S) a,a,a-Trifluorotoluene(FID)	112			77.0-120		11/04/2020 18:58	WG1570807

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	0.000657	J	0.000512	0.00110	1	11/09/2020 13:27	WG1573485
Toluene	U		0.00142	0.00548	1	11/09/2020 13:27	WG1573485
Ethylbenzene	U		0.000808	0.00274	1	11/09/2020 13:27	WG1573485
Total Xylenes	0.000986	J	0.000964	0.00712	1	11/09/2020 13:27	WG1573485
(S) Toluene-d8	109			75.0-131		11/09/2020 13:27	WG1573485
(S) 4-Bromofluorobenzene	102			67.0-138		11/09/2020 13:27	WG1573485
(S) 1,2-Dichloroethane-d4	111			70.0-130		11/09/2020 13:27	WG1573485

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
C10-C28 Diesel Range	5.48		1.69	4.19	1	11/05/2020 11:32	WG1570695
C28-C40 Oil Range	4.11	J	0.287	4.19	1	11/05/2020 11:32	WG1570695
(S) o-Terphenyl	47.4			18.0-148		11/05/2020 11:32	WG1570695

Collected date/time: 10/29/20 13:30

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.7		1	11/04/2020 21:48	WG1570634

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	40.1		10.0	21.8	1	11/04/2020 18:37	WG1570289

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0237	0.109	1	11/04/2020 19:19	WG1570807
(S) a,a,a-Trifluorotoluene(FID)	106			77.0-120		11/04/2020 19:19	WG1570807

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000552	0.00118	1	11/09/2020 13:46	WG1573485
Toluene	U		0.00154	0.00591	1	11/09/2020 13:46	WG1573485
Ethylbenzene	U		0.000871	0.00296	1	11/09/2020 13:46	WG1573485
Total Xylenes	U		0.00104	0.00768	1	11/09/2020 13:46	WG1573485
(S) Toluene-d8	107			75.0-131		11/09/2020 13:46	WG1573485
(S) 4-Bromofluorobenzene	98.6			67.0-138		11/09/2020 13:46	WG1573485
(S) 1,2-Dichloroethane-d4	103			70.0-130		11/09/2020 13:46	WG1573485

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	3.45	J	1.76	4.36	1	11/05/2020 11:45	WG1570695
C28-C40 Oil Range	1.69	J	0.299	4.36	1	11/05/2020 11:45	WG1570695
(S) o-Terphenyl	61.3			18.0-148		11/05/2020 11:45	WG1570695

Collected date/time: 10/29/20 13:40

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.4		1	11/04/2020 21:48	WG1570634

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

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	408		9.85	21.4	1	11/04/2020 18:47	WG1570289

- 5 Sr
- 6 Qc
- 7 Gl

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	11/04/2020 19:40	WG1570807
(S) a,a,a-Trifluorotoluene(FID)	107			77.0-120		11/04/2020 19:40	WG1570807

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		0.000533	0.00114	1	11/09/2020 14:05	WG1573485
Toluene	U		0.00148	0.00571	1	11/09/2020 14:05	WG1573485
Ethylbenzene	U		0.000842	0.00286	1	11/09/2020 14:05	WG1573485
Total Xylenes	U		0.00101	0.00742	1	11/09/2020 14:05	WG1573485
(S) Toluene-d8	105			75.0-131		11/09/2020 14:05	WG1573485
(S) 4-Bromofluorobenzene	96.8			67.0-138		11/09/2020 14:05	WG1573485
(S) 1,2-Dichloroethane-d4	101			70.0-130		11/09/2020 14:05	WG1573485

- 8 Al
- 9 Sc

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	3.73	J	1.72	4.28	1	11/05/2020 07:02	WG1570696
C28-C40 Oil Range	U		0.293	4.28	1	11/05/2020 07:02	WG1570696
(S) o-Terphenyl	37.8			18.0-148		11/05/2020 07:02	WG1570696

Collected date/time: 10/29/20 14:00

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.1		1	11/04/2020 21:48	WG1570634

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

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	306		9.77	21.2	1	11/04/2020 18:56	WG1570289

- 5 Sr
- 6 Qc
- 7 Gl

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	0.0247	<u>B J</u>	0.0233	0.107	1.01	11/05/2020 05:12	WG1571125
(S) a,a,a-Trifluorotoluene(FID)	94.3			77.0-120		11/05/2020 05:12	WG1571125

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		0.000525	0.00112	1	11/09/2020 14:24	WG1573485
Toluene	U		0.00146	0.00562	1	11/09/2020 14:24	WG1573485
Ethylbenzene	U		0.000829	0.00281	1	11/09/2020 14:24	WG1573485
Total Xylenes	U		0.000989	0.00731	1	11/09/2020 14:24	WG1573485
(S) Toluene-d8	105			75.0-131		11/09/2020 14:24	WG1573485
(S) 4-Bromofluorobenzene	96.9			67.0-138		11/09/2020 14:24	WG1573485
(S) 1,2-Dichloroethane-d4	105			70.0-130		11/09/2020 14:24	WG1573485

- 8 Al
- 9 Sc

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	11/05/2020 07:15	WG1570696
C28-C40 Oil Range	0.390	<u>J</u>	0.291	4.25	1	11/05/2020 07:15	WG1570696
(S) o-Terphenyl	48.6			18.0-148		11/05/2020 07:15	WG1570696

Collected date/time: 10/29/20 14:30

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.9		1	11/04/2020 21:48	WG1570634

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	296		9.70	21.1	1	11/05/2020 19:09	WG1571831

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0283	<u>B J</u>	0.0229	0.105	1	11/05/2020 05:32	WG1571125
(S) a,a,a-Trifluorotoluene(FID)	92.5			77.0-120		11/05/2020 05:32	WG1571125

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.000776	<u>J</u>	0.000518	0.00111	1	11/08/2020 23:05	WG1573226
Toluene	0.00257	<u>J</u>	0.00144	0.00554	1	11/08/2020 23:05	WG1573226
Ethylbenzene	0.000998	<u>J</u>	0.000817	0.00277	1	11/08/2020 23:05	WG1573226
Total Xylenes	0.00561	<u>J</u>	0.000975	0.00720	1	11/08/2020 23:05	WG1573226
(S) Toluene-d8	111			75.0-131		11/08/2020 23:05	WG1573226
(S) 4-Bromofluorobenzene	102			67.0-138		11/08/2020 23:05	WG1573226
(S) 1,2-Dichloroethane-d4	104			70.0-130		11/08/2020 23:05	WG1573226

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.70	4.22	1	11/05/2020 07:28	WG1570696
C28-C40 Oil Range	0.963	<u>J</u>	0.289	4.22	1	11/05/2020 07:28	WG1570696
(S) o-Terphenyl	56.7			18.0-148		11/05/2020 07:28	WG1570696

Collected date/time: 10/29/20 15:00

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.5		1	11/04/2020 21:48	WG1570634

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	9.85	J	9.73	21.2	1	11/05/2020 19:37	WG1571831

3 Ss

4 Cn

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0267	B J	0.0230	0.106	1	11/05/2020 05:53	WG1571125
(S) a,a,a-Trifluorotoluene(FID)	93.0			77.0-120		11/05/2020 05:53	WG1571125

5 Sr

6 Qc

7 Gl

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000521	0.00112	1	11/08/2020 23:24	WG1573226
Toluene	U		0.00145	0.00558	1	11/08/2020 23:24	WG1573226
Ethylbenzene	U		0.000822	0.00279	1	11/08/2020 23:24	WG1573226
Total Xylenes	U		0.000982	0.00725	1	11/08/2020 23:24	WG1573226
(S) Toluene-d8	116			75.0-131		11/08/2020 23:24	WG1573226
(S) 4-Bromofluorobenzene	106			67.0-138		11/08/2020 23:24	WG1573226
(S) 1,2-Dichloroethane-d4	96.8			70.0-130		11/08/2020 23:24	WG1573226

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.70	4.23	1	11/05/2020 07:47	WG1570696
C28-C40 Oil Range	9.19		0.290	4.23	1	11/05/2020 07:47	WG1570696
(S) o-Terphenyl	48.9			18.0-148		11/05/2020 07:47	WG1570696

Collected date/time: 10/29/20 15:10

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.0		1	11/04/2020 21:48	WG1570634

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.69	21.1	1	11/05/2020 19:56	WG1571831

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0270	B J	0.0228	0.105	1	11/05/2020 06:17	WG1571125
(S) a,a,a-Trifluorotoluene(FID)	93.3			77.0-120		11/05/2020 06:17	WG1571125

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000516	0.00111	1	11/08/2020 23:43	WG1573226
Toluene	U		0.00144	0.00553	1	11/08/2020 23:43	WG1573226
Ethylbenzene	U		0.000815	0.00276	1	11/08/2020 23:43	WG1573226
Total Xylenes	U		0.000973	0.00719	1	11/08/2020 23:43	WG1573226
(S) Toluene-d8	106			75.0-131		11/08/2020 23:43	WG1573226
(S) 4-Bromofluorobenzene	92.0			67.0-138		11/08/2020 23:43	WG1573226
(S) 1,2-Dichloroethane-d4	99.2			70.0-130		11/08/2020 23:43	WG1573226

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.70	4.21	1	11/05/2020 08:00	WG1570696
C28-C40 Oil Range	6.61		0.289	4.21	1	11/05/2020 08:00	WG1570696
(S) o-Terphenyl	63.1			18.0-148		11/05/2020 08:00	WG1570696

Collected date/time: 10/29/20 15:20

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.4		1	11/04/2020 21:48	WG1570634

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.85	21.4	1	11/05/2020 20:06	WG1571831

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0259	<u>B J</u>	0.0232	0.107	1	11/05/2020 06:38	WG1571125
(S) a,a,a-Trifluorotoluene(FID)	94.1			77.0-120		11/05/2020 06:38	WG1571125

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000533	0.00114	1	11/09/2020 00:02	WG1573226
Toluene	U		0.00148	0.00570	1	11/09/2020 00:02	WG1573226
Ethylbenzene	U		0.000841	0.00285	1	11/09/2020 00:02	WG1573226
Total Xylenes	0.00103	<u>J</u>	0.00100	0.00742	1	11/09/2020 00:02	WG1573226
(S) Toluene-d8	117			75.0-131		11/09/2020 00:02	WG1573226
(S) 4-Bromofluorobenzene	93.9			67.0-138		11/09/2020 00:02	WG1573226
(S) 1,2-Dichloroethane-d4	95.0			70.0-130		11/09/2020 00:02	WG1573226

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.72	4.28	1	11/05/2020 08:40	WG1570696
C28-C40 Oil Range	1.08	<u>J</u>	0.293	4.28	1	11/05/2020 08:40	WG1570696
(S) o-Terphenyl	52.5			18.0-148		11/05/2020 08:40	WG1570696

Collected date/time: 10/29/20 15:30

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.7		1	11/04/2020 21:48	WG1570634

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		10.0	21.8	1	11/05/2020 20:16	WG1571831

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0237	0.109	1	11/05/2020 06:59	WG1571125
(S) a,a,a-Trifluorotoluene(FID)	94.2			77.0-120		11/05/2020 06:59	WG1571125

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000551	0.00118	1	11/09/2020 00:21	WG1573226
Toluene	U		0.00153	0.00590	1	11/09/2020 00:21	WG1573226
Ethylbenzene	U		0.000870	0.00295	1	11/09/2020 00:21	WG1573226
Total Xylenes	U		0.00104	0.00767	1	11/09/2020 00:21	WG1573226
(S) Toluene-d8	112			75.0-131		11/09/2020 00:21	WG1573226
(S) 4-Bromofluorobenzene	94.6			67.0-138		11/09/2020 00:21	WG1573226
(S) 1,2-Dichloroethane-d4	97.9			70.0-130		11/09/2020 00:21	WG1573226

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.76	4.36	1	11/05/2020 08:53	WG1570696
C28-C40 Oil Range	U		0.299	4.36	1	11/05/2020 08:53	WG1570696
(S) o-Terphenyl	63.4			18.0-148		11/05/2020 08:53	WG1570696

Collected date/time: 10/29/20 15:40

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.9		1	11/04/2020 16:01	WG1570636

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	136		10.1	22.0	1	11/05/2020 20:44	WG1571831

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0239	0.110	1	11/05/2020 07:19	WG1571125
(S) a,a,a-Trifluorotoluene(FID)	93.0			77.0-120		11/05/2020 07:19	WG1571125

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000560	0.00120	1	11/09/2020 00:40	WG1573226
Toluene	U		0.00156	0.00600	1	11/09/2020 00:40	WG1573226
Ethylbenzene	U		0.000884	0.00300	1	11/09/2020 00:40	WG1573226
Total Xylenes	0.00117	J	0.00106	0.00780	1	11/09/2020 00:40	WG1573226
(S) Toluene-d8	113			75.0-131		11/09/2020 00:40	WG1573226
(S) 4-Bromofluorobenzene	96.6			67.0-138		11/09/2020 00:40	WG1573226
(S) 1,2-Dichloroethane-d4	106			70.0-130		11/09/2020 00:40	WG1573226

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.77	4.40	1	11/05/2020 09:06	WG1570696
C28-C40 Oil Range	U		0.301	4.40	1	11/05/2020 09:06	WG1570696
(S) o-Terphenyl	36.7			18.0-148		11/05/2020 09:06	WG1570696

Collected date/time: 10/29/20 16:00

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.4		1	11/04/2020 16:01	WG1570636

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

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	284		9.85	21.4	1	11/05/2020 20:54	WG1571831

- 5 Sr
- 6 Qc
- 7 Gl

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	11/05/2020 07:40	WG1571125
(S) a,a,a-Trifluorotoluene(FID)	93.3			77.0-120		11/05/2020 07:40	WG1571125

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		0.000534	0.00114	1	11/09/2020 00:59	WG1573226
Toluene	U		0.00149	0.00571	1	11/09/2020 00:59	WG1573226
Ethylbenzene	U		0.000842	0.00286	1	11/09/2020 00:59	WG1573226
Total Xylenes	0.00109	J	0.00101	0.00743	1	11/09/2020 00:59	WG1573226
(S) Toluene-d8	111			75.0-131		11/09/2020 00:59	WG1573226
(S) 4-Bromofluorobenzene	94.9			67.0-138		11/09/2020 00:59	WG1573226
(S) 1,2-Dichloroethane-d4	97.9			70.0-130		11/09/2020 00:59	WG1573226

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.72	4.28	1	11/05/2020 09:20	WG1570696
C28-C40 Oil Range	U		0.293	4.28	1	11/05/2020 09:20	WG1570696
(S) o-Terphenyl	53.8			18.0-148		11/05/2020 09:20	WG1570696

Collected date/time: 10/29/20 16:30

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	92.8		1	11/04/2020 16:01	WG1570636

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Chloride	151		9.92	21.6	1	11/05/2020 21:03	WG1571831

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
TPH (GC/FID) Low Fraction	U		0.0234	0.108	1	11/05/2020 08:01	WG1571125
(S) a,a,a-Trifluorotoluene(FID)	93.5			77.0-120		11/05/2020 08:01	WG1571125

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000540	0.00116	1	11/09/2020 01:18	WG1573226
Toluene	U		0.00150	0.00578	1	11/09/2020 01:18	WG1573226
Ethylbenzene	U		0.000852	0.00289	1	11/09/2020 01:18	WG1573226
Total Xylenes	U		0.00102	0.00752	1	11/09/2020 01:18	WG1573226
(S) Toluene-d8	116			75.0-131		11/09/2020 01:18	WG1573226
(S) 4-Bromofluorobenzene	95.1			67.0-138		11/09/2020 01:18	WG1573226
(S) 1,2-Dichloroethane-d4	97.6			70.0-130		11/09/2020 01:18	WG1573226

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
C10-C28 Diesel Range	U		1.74	4.31	1	11/05/2020 09:33	WG1570696
C28-C40 Oil Range	U		0.295	4.31	1	11/05/2020 09:33	WG1570696
(S) o-Terphenyl	59.5			18.0-148		11/05/2020 09:33	WG1570696

Collected date/time: 10/30/20 10:00

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	97.9		1	11/04/2020 16:01	WG1570636

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Chloride	U		9.40	20.4	1	11/05/2020 21:13	WG1571831

3 Ss

4 Cn

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
TPH (GC/FID) Low Fraction	U		0.0222	0.102	1	11/05/2020 19:35	WG1571581
(S) a,a,a-Trifluorotoluene(FID)	94.5			77.0-120		11/05/2020 19:35	WG1571581

5 Sr

6 Qc

7 Gl

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000487	0.00104	1	11/09/2020 01:37	WG1573226
Toluene	U		0.00136	0.00521	1	11/09/2020 01:37	WG1573226
Ethylbenzene	U		0.000769	0.00261	1	11/09/2020 01:37	WG1573226
Total Xylenes	0.00104	J	0.000918	0.00678	1	11/09/2020 01:37	WG1573226
(S) Toluene-d8	93.9			75.0-131		11/09/2020 01:37	WG1573226
(S) 4-Bromofluorobenzene	76.3			67.0-138		11/09/2020 01:37	WG1573226
(S) 1,2-Dichloroethane-d4	94.6			70.0-130		11/09/2020 01:37	WG1573226

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
C10-C28 Diesel Range	8.09		1.64	4.09	1	11/05/2020 09:46	WG1570696
C28-C40 Oil Range	13.6		0.280	4.09	1	11/05/2020 09:46	WG1570696
(S) o-Terphenyl	74.8			18.0-148		11/05/2020 09:46	WG1570696

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

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	98.3		1	11/04/2020 16:01	WG1570636

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Chloride	U		9.36	20.3	1	11/05/2020 21:22	WG1571831

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
TPH (GC/FID) Low Fraction	U		0.0223	0.103	1.01	11/05/2020 23:42	WG1571814
(S) a,a,a-Trifluorotoluene(FID)	98.7			77.0-120		11/05/2020 23:42	WG1571814

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000483	0.00103	1	11/09/2020 01:56	WG1573226
Toluene	U		0.00134	0.00517	1	11/09/2020 01:56	WG1573226
Ethylbenzene	U		0.000762	0.00259	1	11/09/2020 01:56	WG1573226
Total Xylenes	0.00101	J	0.000910	0.00672	1	11/09/2020 01:56	WG1573226
(S) Toluene-d8	111			75.0-131		11/09/2020 01:56	WG1573226
(S) 4-Bromofluorobenzene	94.6			67.0-138		11/09/2020 01:56	WG1573226
(S) 1,2-Dichloroethane-d4	101			70.0-130		11/09/2020 01:56	WG1573226

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
C10-C28 Diesel Range	U		1.64	4.07	1	11/05/2020 10:00	WG1570696
C28-C40 Oil Range	2.52	J	0.279	4.07	1	11/05/2020 10:00	WG1570696
(S) o-Terphenyl	62.0			18.0-148		11/05/2020 10:00	WG1570696

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

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	96.4		1	11/04/2020 16:01	WG1570636

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Chloride	30.2		9.54	20.7	1	11/05/2020 21:32	WG1571831

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
TPH (GC/FID) Low Fraction	U		0.0227	0.105	1.01	11/06/2020 00:05	WG1571814
(S) a,a,a-Trifluorotoluene(FID)	98.4			77.0-120		11/06/2020 00:05	WG1571814

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000502	0.00107	1	11/09/2020 02:15	WG1573226
Toluene	U		0.00140	0.00537	1	11/09/2020 02:15	WG1573226
Ethylbenzene	U		0.000792	0.00269	1	11/09/2020 02:15	WG1573226
Total Xylenes	U		0.000945	0.00698	1	11/09/2020 02:15	WG1573226
(S) Toluene-d8	114			75.0-131		11/09/2020 02:15	WG1573226
(S) 4-Bromofluorobenzene	94.8			67.0-138		11/09/2020 02:15	WG1573226
(S) 1,2-Dichloroethane-d4	97.9			70.0-130		11/09/2020 02:15	WG1573226

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
C10-C28 Diesel Range	U		1.67	4.15	1	11/09/2020 11:00	WG1573123
C28-C40 Oil Range	7.47		0.284	4.15	1	11/09/2020 11:00	WG1573123
(S) o-Terphenyl	58.5			18.0-148		11/09/2020 11:00	WG1573123

Collected date/time: 10/30/20 10:40

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.8		1	11/04/2020 16:01	WG1570636

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	52.3		9.41	20.5	1	11/05/2020 21:41	WG1571831

3 Ss

4 Cn

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0222	0.102	1	11/06/2020 00:27	WG1571814
(S) a,a,a-Trifluorotoluene(FID)	98.4			77.0-120		11/06/2020 00:27	WG1571814

5 Sr

6 Qc

7 Gl

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000488	0.00105	1	11/09/2020 02:34	WG1573226
Toluene	U		0.00136	0.00523	1	11/09/2020 02:34	WG1573226
Ethylbenzene	U		0.000771	0.00261	1	11/09/2020 02:34	WG1573226
Total Xylenes	U		0.000920	0.00680	1	11/09/2020 02:34	WG1573226
(S) Toluene-d8	113			75.0-131		11/09/2020 02:34	WG1573226
(S) 4-Bromofluorobenzene	120			67.0-138		11/09/2020 02:34	WG1573226
(S) 1,2-Dichloroethane-d4	95.9			70.0-130		11/09/2020 02:34	WG1573226

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.22	J	1.65	4.09	1	11/09/2020 12:32	WG1573123
C28-C40 Oil Range	6.16		0.280	4.09	1	11/09/2020 12:32	WG1573123
(S) o-Terphenyl	131			18.0-148		11/09/2020 12:32	WG1573123

Collected date/time: 10/30/20 11:00

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	96.8		1	11/04/2020 16:01	WG1570636

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Chloride	U		9.51	20.7	1	11/05/2020 21:51	WG1571831

- 5 Sr

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
TPH (GC/FID) Low Fraction	U		0.0224	0.103	1	11/06/2020 00:50	WG1571814
(S) a,a,a-Trifluorotoluene(FID)	99.0			77.0-120		11/06/2020 00:50	WG1571814

- 6 Qc

- 7 Gl

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000498	0.00107	1	11/09/2020 02:53	WG1573226
Toluene	U		0.00139	0.00534	1	11/09/2020 02:53	WG1573226
Ethylbenzene	U		0.000786	0.00267	1	11/09/2020 02:53	WG1573226
Total Xylenes	0.00123	J	0.000939	0.00694	1	11/09/2020 02:53	WG1573226
(S) Toluene-d8	114			75.0-131		11/09/2020 02:53	WG1573226
(S) 4-Bromofluorobenzene	124			67.0-138		11/09/2020 02:53	WG1573226
(S) 1,2-Dichloroethane-d4	96.0			70.0-130		11/09/2020 02:53	WG1573226

- 8 Al

- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
C10-C28 Diesel Range	U		1.66	4.13	1	11/09/2020 11:15	WG1573123
C28-C40 Oil Range	0.712	J	0.283	4.13	1	11/09/2020 11:15	WG1573123
(S) o-Terphenyl	64.4			18.0-148		11/09/2020 11:15	WG1573123

Collected date/time: 10/30/20 11:10

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	98.4		1	11/04/2020 16:01	WG1570636

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Chloride	U		9.35	20.3	1	11/05/2020 22:00	WG1571831

- 5 Sr
- 6 Qc
- 7 Gl

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
TPH (GC/FID) Low Fraction	U		0.0221	0.102	1	11/06/2020 01:12	WG1571814
(S) a,a,a-Trifluorotoluene(FID)	99.7			77.0-120		11/06/2020 01:12	WG1571814

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Benzene	U		0.000483	0.00103	1	11/09/2020 03:12	WG1573226
Toluene	U		0.00134	0.00517	1	11/09/2020 03:12	WG1573226
Ethylbenzene	U		0.000762	0.00258	1	11/09/2020 03:12	WG1573226
Total Xylenes	U		0.000909	0.00672	1	11/09/2020 03:12	WG1573226
(S) Toluene-d8	113			75.0-131		11/09/2020 03:12	WG1573226
(S) 4-Bromofluorobenzene	95.0			67.0-138		11/09/2020 03:12	WG1573226
(S) 1,2-Dichloroethane-d4	101			70.0-130		11/09/2020 03:12	WG1573226

- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
C10-C28 Diesel Range	U		1.64	4.07	1	11/09/2020 11:30	WG1573123
C28-C40 Oil Range	0.337	J	0.279	4.07	1	11/09/2020 11:30	WG1573123
(S) o-Terphenyl	72.7			18.0-148		11/09/2020 11:30	WG1573123

Collected date/time: 10/30/20 11:30

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.6		1	11/04/2020 16:01	WG1570636

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.43	20.5	1	11/05/2020 22:10	WG1571831

3 Ss

4 Cn

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0222	0.102	1	11/06/2020 01:34	WG1571814
(S) a,a,a-Trifluorotoluene(FID)	98.9			77.0-120		11/06/2020 01:34	WG1571814

5 Sr

6 Qc

7 Gl

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000490	0.00105	1	11/09/2020 03:31	WG1573226
Toluene	U		0.00136	0.00524	1	11/09/2020 03:31	WG1573226
Ethylbenzene	U		0.000773	0.00262	1	11/09/2020 03:31	WG1573226
Total Xylenes	U		0.000923	0.00682	1	11/09/2020 03:31	WG1573226
(S) Toluene-d8	113			75.0-131		11/09/2020 03:31	WG1573226
(S) 4-Bromofluorobenzene	94.3			67.0-138		11/09/2020 03:31	WG1573226
(S) 1,2-Dichloroethane-d4	98.6			70.0-130		11/09/2020 03:31	WG1573226

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	1.84	J	1.65	4.10	1	11/09/2020 12:02	WG1573123
C28-C40 Oil Range	6.02		0.281	4.10	1	11/09/2020 12:02	WG1573123
(S) o-Terphenyl	109			18.0-148		11/09/2020 12:02	WG1573123

Collected date/time: 10/30/20 11:40

L1280672

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.6		1	11/04/2020 15:53	WG1570638

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	U		9.52	20.7	1	11/05/2020 22:38	WG1571831

3 Ss

4 Cn

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0225	0.103	1	11/06/2020 01:56	WG1571814
(S) a,a,a-Trifluorotoluene(FID)	99.1			77.0-120		11/06/2020 01:56	WG1571814

5 Sr

6 Qc

7 Gl

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000499	0.00107	1	11/09/2020 03:50	WG1573226
Toluene	U		0.00139	0.00535	1	11/09/2020 03:50	WG1573226
Ethylbenzene	U		0.000788	0.00267	1	11/09/2020 03:50	WG1573226
Total Xylenes	0.00121	J	0.000941	0.00695	1	11/09/2020 03:50	WG1573226
(S) Toluene-d8	110			75.0-131		11/09/2020 03:50	WG1573226
(S) 4-Bromofluorobenzene	94.9			67.0-138		11/09/2020 03:50	WG1573226
(S) 1,2-Dichloroethane-d4	99.6			70.0-130		11/09/2020 03:50	WG1573226

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.67	4.14	1	11/09/2020 12:17	WG1573123
C28-C40 Oil Range	0.757	J	0.284	4.14	1	11/09/2020 12:17	WG1573123
(S) o-Terphenyl	69.1			18.0-148		11/09/2020 12:17	WG1573123

Total Solids by Method 2540 G-2011

[L1280672-01,02,03,04,05,06,07,08](#)

Method Blank (MB)

(MB) R3589768-1 11/04/20 21:56

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1280672-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1280672-02 11/04/20 21:56 • (DUP) R3589768-3 11/04/20 21:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	94.2	95.2	1	1.06		10

Laboratory Control Sample (LCS)

(LCS) R3589768-2 11/04/20 21:56

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

Total Solids by Method 2540 G-2011

[L1280672-09,10,11,12,13,14,15,16,17,18](#)

Method Blank (MB)

(MB) R3589763-1 11/04/20 21:48

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

L1280672-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1280672-12 11/04/20 21:48 • (DUP) R3589763-3 11/04/20 21:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	93.4	90.6	1	3.00		10

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3589763-2 11/04/20 21:48

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

Total Solids by Method 2540 G-2011

[L1280672-19,20,21,22,23,24,25,26,27,28](#)

Method Blank (MB)

(MB) R3589743-1 11/04/20 16:01

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1280672-28 Original Sample (OS) • Duplicate (DUP)

(OS) L1280672-28 11/04/20 16:01 • (DUP) R3589743-3 11/04/20 16:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	97.6	97.6	1	0.0413		10

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS)

(LCS) R3589743-2 11/04/20 16:01

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

⁹ Sc

Total Solids by Method 2540 G-2011

[L1280672-29](#)

Method Blank (MB)

(MB) R3589740-1 11/04/20 15:53

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

L1280757-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1280757-11 11/04/20 15:53 • (DUP) R3589740-3 11/04/20 15:53

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	89.9	89.4	1	0.564		10

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3589740-2 11/04/20 15:53

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

9 Sc

Wet Chemistry by Method 300.0

[L1280672-01,02,03,04,05,06,07,08,09,10,11,12,13](#)

Method Blank (MB)

(MB) R3589512-1 11/04/20 14:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		9.20	20.0

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1280669-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1280669-21 11/04/20 14:39 • (DUP) R3589512-3 11/04/20 14:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	33.3	23.8	1	33.3	P1	20

L1280672-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1280672-10 11/04/20 18:18 • (DUP) R3589512-6 11/04/20 18:28

Analyte	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	16.2	13.7	1	16.7	J	20

Laboratory Control Sample (LCS)

(LCS) R3589512-2 11/04/20 14:30

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	200	185	92.3	90.0-110	

L1280669-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280669-22 11/04/20 14:58 • (MS) R3589512-4 11/04/20 15:08 • (MSD) R3589512-5 11/04/20 15:18

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Chloride	500	362	855	781	98.6	83.9	1	80.0-120			8.98	20

Wet Chemistry by Method 300.0

[L1280672-14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29](#)

Method Blank (MB)

(MB) R3590060-1 11/05/20 18:40

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		9.20	20.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1280672-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1280672-15 11/05/20 19:37 • (DUP) R3590060-5 11/05/20 19:47

Analyte	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	9.85	9.84	1	0.0862	↓	20

L1280672-29 Original Sample (OS) • Duplicate (DUP)

(OS) L1280672-29 11/05/20 22:38 • (DUP) R3590060-6 11/05/20 22:48

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

Laboratory Control Sample (LCS)

(LCS) R3590060-2 11/05/20 18:50

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	200	193	96.6	90.0-110	

L1280672-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280672-14 11/05/20 19:09 • (MS) R3590060-3 11/05/20 19:18 • (MSD) R3590060-4 11/05/20 19:28

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Chloride	527	296	820	818	99.5	99.1	1	80.0-120			0.301	20

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

[L1280672-01,02,03,04,05,06,07,08,09,10,11,12](#)

Method Blank (MB)

(MB) R3589597-2 11/04/20 12:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPH (GC/FID) Low Fraction	0.0506	↓	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	111			77.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3589597-1 11/04/20 12:01

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.04	110	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			106	77.0-120	

L1280672-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280672-05 11/04/20 17:14 • (MS) R3589597-3 11/04/20 20:01 • (MSD) R3589597-4 11/04/20 20:22

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TPH (GC/FID) Low Fraction	5.54	0.0687	5.35	4.49	95.5	79.8	1	10.0-151			17.6	28
(S) a,a,a-Trifluorotoluene(FID)					100	98.9		77.0-120				

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

[L1280672-13,14,15,16,17,18,19,20,21](#)

Method Blank (MB)

(MB) R3590331-2 11/05/20 00:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPH (GC/FID) Low Fraction	0.0261	↓	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	95.4			77.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3590331-1 11/04/20 23:24

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.06	110	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			111	77.0-120	

L1280016-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280016-01 11/05/20 01:00 • (MS) R3590331-3 11/05/20 08:21 • (MSD) R3590331-4 11/05/20 08:42

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TPH (GC/FID) Low Fraction	136	1.44	84.1	77.5	61.6	56.8	25	10.0-151			8.20	28
(S) a,a,a-Trifluorotoluene(FID)					104	101		77.0-120				

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

[L1280672-22](#)

Method Blank (MB)

(MB) R3590630-2 11/05/20 11:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0294	↓	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	96.1			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3590630-1 11/05/20 10:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.01	109	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			105	77.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

[L1280672-23,24,25,26,27,28,29](#)

Method Blank (MB)

(MB) R3590669-3 11/05/20 15:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	100			77.0-120

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS)

(LCS) R3590669-2 11/05/20 14:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.35	97.3	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			101	77.0-120	

5 Sr

6 Qc

7 Gl

L1280407-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280407-01 11/05/20 22:35 • (MS) R3590669-4 11/06/20 03:03 • (MSD) R3590669-5 11/06/20 03:25

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	184	U	257	290	96.7	109	33.5	10.0-151			12.1	28
(S) a,a,a-Trifluorotoluene(FID)					101	103		77.0-120				

8 Al

9 Sc

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

[L1280672-01,02,03](#)

Method Blank (MB)

(MB) R3589409-2 11/04/20 10:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	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	99.2			67.0-138
(S) 1,2-Dichloroethane-d4	110			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3589409-1 11/04/20 09:48

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Benzene	0.125	0.145	116	70.0-123	
Ethylbenzene	0.125	0.130	104	74.0-126	
Toluene	0.125	0.131	105	75.0-121	
Xylenes, Total	0.375	0.380	101	72.0-127	
(S) Toluene-d8			99.8	75.0-131	
(S) 4-Bromofluorobenzene			98.1	67.0-138	
(S) 1,2-Dichloroethane-d4			112	70.0-130	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

[L1280672-04,05,06,07,08,09](#)

Method Blank (MB)

(MB) R3591437-2 11/08/20 22:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	106			75.0-131
(S) 4-Bromofluorobenzene	99.3			67.0-138
(S) 1,2-Dichloroethane-d4	99.2			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3591437-1 11/08/20 21:27

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Benzene	0.125	0.117	93.6	70.0-123	
Ethylbenzene	0.125	0.132	106	74.0-126	
Toluene	0.125	0.116	92.8	75.0-121	
Xylenes, Total	0.375	0.385	103	72.0-127	
(S) Toluene-d8			99.7	75.0-131	
(S) 4-Bromofluorobenzene			101	67.0-138	
(S) 1,2-Dichloroethane-d4			115	70.0-130	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

[L1280672-14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29](#)

Method Blank (MB)

(MB) R3591509-3 11/08/20 18:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	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	112			75.0-131
(S) 4-Bromofluorobenzene	94.6			67.0-138
(S) 1,2-Dichloroethane-d4	97.8			70.0-130

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

(LCS) R3591509-1 11/08/20 17:15 • (LCSD) R3591509-2 11/08/20 17:34

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Benzene	0.125	0.127	0.127	102	102	70.0-123			0.000	20
Ethylbenzene	0.125	0.137	0.141	110	113	74.0-126			2.88	20
Toluene	0.125	0.134	0.137	107	110	75.0-121			2.21	20
Xylenes, Total	0.375	0.422	0.401	113	107	72.0-127			5.10	20
(S) Toluene-d8				108	111	75.0-131				
(S) 4-Bromofluorobenzene				98.4	94.8	67.0-138				
(S) 1,2-Dichloroethane-d4				110	103	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

[L1280672-10,11,12,13](#)

Method Blank (MB)

(MB) R3591443-3 11/09/20 12:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	103			75.0-131
(S) 4-Bromofluorobenzene	96.8			67.0-138
(S) 1,2-Dichloroethane-d4	105			70.0-130

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

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

(LCS) R3591443-1 11/09/20 11:08 • (LCSD) R3591443-2 11/09/20 11:27

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Benzene	0.125	0.118	0.124	94.4	99.2	70.0-123			4.96	20
Ethylbenzene	0.125	0.136	0.134	109	107	74.0-126			1.48	20
Toluene	0.125	0.120	0.119	96.0	95.2	75.0-121			0.837	20
Xylenes, Total	0.375	0.388	0.409	103	109	72.0-127			5.27	20
(S) Toluene-d8				101	102	75.0-131				
(S) 4-Bromofluorobenzene				107	104	67.0-138				
(S) 1,2-Dichloroethane-d4				120	120	70.0-130				

6 Qc

7 Gl

8 Al

9 Sc

L1280672-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280672-13 11/09/20 14:24 • (MS) R3591443-4 11/09/20 19:48 • (MSD) R3591443-5 11/09/20 20:07

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Benzene	0.141	U	0.109	0.136	77.3	96.8	1	10.0-149			22.4	37
Ethylbenzene	0.141	U	0.126	0.150	89.6	106	1	10.0-160			17.1	38
Toluene	0.141	U	0.114	0.136	80.8	96.8	1	10.0-156			18.0	38
Xylenes, Total	0.422	U	0.377	0.441	89.3	105	1	10.0-160			15.7	38
(S) Toluene-d8					102	103		75.0-131				
(S) 4-Bromofluorobenzene					99.7	100		67.0-138				
(S) 1,2-Dichloroethane-d4					101	102		70.0-130				

Semi-Volatile Organic Compounds (GC) by Method 8015

[L1280672-01,02,03,04,05,06,07](#)

Method Blank (MB)

(MB) R3589156-1 11/04/20 07:19

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	45.6			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3589156-2 11/04/20 07:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	28.7	57.4	50.0-150	
(S) o-Terphenyl			61.9	18.0-148	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

[L1280672-08,09,10,11](#)

Method Blank (MB)

(MB) R3589806-1 11/05/20 02:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	63.8			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3589806-2 11/05/20 03:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	40.8	81.6	50.0-150	
(S) o-Terphenyl			81.1	18.0-148	

L1280669-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280669-19 11/06/20 09:31 • (MS) R3590159-1 11/06/20 09:44 • (MSD) R3590159-2 11/06/20 09:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	52.2	19.8	67.9	66.5	92.1	89.5	1	50.0-150			2.04	20
(S) o-Terphenyl					68.0	34.5		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

[L1280672-12,13,14,15,16,17,18,19,20,21,22,23](#)

Method Blank (MB)

(MB) R3589681-1 11/05/20 04:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	58.0			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3589681-2 11/05/20 04:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
C10-C28 Diesel Range	50.0	36.5	73.0	50.0-150	
(S) o-Terphenyl			79.1	18.0-148	

L1280672-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1280672-16 11/05/20 08:00 • (MS) R3589681-3 11/05/20 08:13 • (MSD) R3589681-4 11/05/20 08:26

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
C10-C28 Diesel Range	52.3	U	33.0	33.6	63.0	65.1	1	50.0-150			1.90	20
(S) o-Terphenyl					58.5	64.8		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

[L1280672-24,25,26,27,28,29](#)

Method Blank (MB)

(MB) R3591150-1 11/09/20 10:29

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	62.6			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3591150-2 11/09/20 10:44

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
C10-C28 Diesel Range	50.0	43.6	87.2	50.0-150	
(S) o-Terphenyl			85.4	18.0-148	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

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

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* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

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

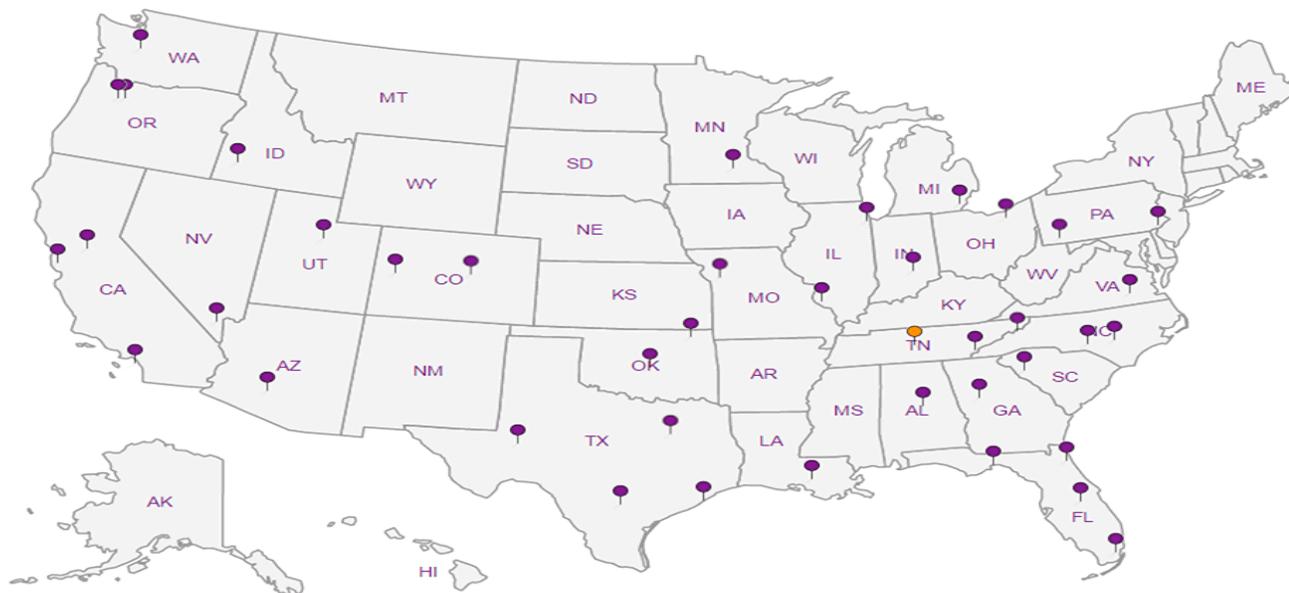
Third Party Federal Accreditations

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

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

Our Locations

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



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

APPENDIX F NMSLO Seed Mixture Details



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

1RP-735



December 17, 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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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

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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

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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



Soil Map may not be valid at this scale.

Map Scale: 1:476 if printed on A landscape (11" x 8.5") sheet.
0 5 10 20 30 Meters
0 20 40 80 120 Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

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

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

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

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

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KU	Kimbrough-Lea complex, dry, 0 to 3 percent slopes	1.0	100.0%
Totals for Area of Interest		1.0	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.

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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.

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Lea County, New Mexico**KU—Kimbrough-Lea complex, dry, 0 to 3 percent slopes****Map Unit Setting**

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

Map Unit Composition

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

Description of Kimbrough**Setting**

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Custom Soil Resource Report

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

Custom Soil Resource Report

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**Loamy (L)****LOAMY (L) SITES SEED MIXTURE:**

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Black grama	VNS, Southern	1.0	D
Blue grama	Lovington	1.0	D
Sideoats grama	Vaughn, El Reno	4.0	F
Sand dropseed	VNS, Southern	2.0	S
Alkali sacaton	VNS, Southern	1.0	
Little bluestem	Cimarron, Pastura	1.5	F
Forbs:			
Firewheel (<i>Gaillardia</i>)	VNS, Southern	1.0	D
Shrubs:			
Fourwing saltbush	Marana, Santa Rita	1.0	D
Common winterfat	VNS, Southern	0.5	F
		Total PLS/acre	18.0

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box
 VNS = Variety Not Stated, PLS = Pure Live Seed

- Seed mixes should be provided in bags separating seed types into the three categories: small (S), standard (D) and fluffy (F).
- VNS, Southern – Seed should be from a southern latitude collection of this species.
- Double seed application rate for broadcast or hydroseeding.
- If one species is not available, contact the SLO for an approved substitute; alternatively the SLO may require other species proportionately increased.
- Additional information on these seed species can be found on the USDA Plants Database website at <http://plants.usda.gov>.



District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720
District II
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District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 207900

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 207900
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
jharimon	Workplan/Remediation Plan is approved with the following conditions: Please make sure the floor confirmation samples are delineated/excavated to meet closure criteria standards for proven depth to water determination. Sidewall samples should be delineated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. The Variance is approved for collecting Five (5) confirmation floor samples and eight (8) confirmation sidewall samples as proposed for verification of remedial activities.	4/18/2023