TETRA TECH

March 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
Philmex #15 Flowline Release
Unit Letter E, Section 27, Township 17 South, Range 33 East
Lea County, New Mexico
1RP-3999
Incident ID nJXK1532944122

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a historical release that occurred from the flowline of the Philmex #15 well (Associated API No. 30-025-27402) The release footprint is located in Public Land Survey System (PLSS) Unit Letter E, Section 27, Township 17 South, Range 33 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.80891°, -103.65724°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report (Appendix A), a release from a fiber spar line was discovered on November 24, 2015. Approximately 2.5 barrels (bbls) of produced water and 5 bbls of oil (7.5 bbls in total) were released, of which 5 bbls of produced water/oil were recovered. The New Mexico Oil Conservation District (NMOCD) received the C-141 report form for the release on November 25, 2015. The release was subsequently assigned the Remediation Permit (RP) number 1RP-3999 and the Incident ID nJXK1532944122. The 1RP-3999 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 no water wells within 800 meters (approximately ½ mile) of the Site. However, there are five (5) water wells within 2,400 meters (approximately 2 miles) of the Site. The average depth to groundwater is 184 feet (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
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levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil.

Based on the site characterization 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	20,000 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

A Corrective Action Plan (CAP) dated August 3, 2016 documents initial assessment activities conducted by Basin Environmental Service Technologies (Basin) on behalf of COP (Appendix C). On December 4, 2015, Basin visited the Site to map and photograph the release extent. Basin returned to the Site on December 9th and 10th, 2015 to collect soil samples at three (3) locations (Points 1, 2 and 3) within the release extent footprint at depths ranging from 2.5 ft to 3.5 ft bgs. No samples were collected from the perimeter of the release extent. The samples were submitted to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for chloride via EPA Method SM45000Cl-B, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. The release extent and sample locations are shown in Figure 1 within the CAP (Appendix C).

Analytical results associated with all three (3) sample locations (Points 1, 2 and 3) exceeded the delineation concentration for chloride (600 mg/kg) at depths of 2 ft bgs, 1 ft bgs, and 1 ft bgs, respectively. The sample collected at 1 ft bgs at Point 2 exceeded the limit for TPH (100 mg/kg). In addition, the sample collected at 1 ft bgs at location Point 3 exceeded the delineation concentrations for both BTEX (50 mg/kg) and TPH (100 mg/kg). A copy of the analytical laboratory report and chain-of-custody documentation are included in Appendix B within the CAP (Appendix C). Sample results from the initial assessment are summarized in Figure 1 within the CAP (Appendix C). Photographic documentation of the initial release from December 4, 2015 is included in Appendix D.

SUMMARY OF REMEDIAL ACTIVITIES

Following the results of the initial Site assessment, Basin recommended that the release extent be excavated to depths of 3 ft bgs in the area around Point 1, 3.5 ft bgs in the area around Point 2, and 2.5 ft bgs in the area around Point 3, as shown in Figure 1 within the CAP (Appendix C). The CAP was submitted to the NMOCD on August 3, 2016 and subsequently approved.

Photographs taken on December 16, 2015 indicate evidence of remedial actions taken at the Site (Appendix D). The photograph captions in the CAP indicate that the top 1 ft bgs of soil in the release footprint was removed shortly following the initial assessment activities (Appendix C). Historical aerial imagery from February 2017 indicates an area of disturbed soils that is larger than the release footprint (see Figure 4). On behalf of COP, Tetra Tech conducted a visual Site inspection in July 2020 to evaluate current conditions at the Site. A lack of vegetative cover was noted in the observed excavated area. Photographic documentation of the visual Site inspection is included in Appendix D.

ADDITIONAL SITE ASSESSMENT

In order to verify that remedial actions taken at the Site were effective, Tetra Tech personnel conducted soil sampling on November and December 2020 on behalf of COP. A total of four (4) borings (BH-1 through BH-4) were installed using an air rotary drilling rig. One (1) of the borings (BH-1) was installed within the observed remediation extent and another boring (BH-2) was installed within the former release footprint, each to a depth of 20 ft bgs. The remaining 2 borings (BH-3 and BH-4) were installed along the perimeter of the release extent (to the east and north, respectively) to depths of 4 ft bgs to achieve horizontal delineation. In addition, a total of two (3) hand auger borings (AH-1 through AH-3) were advanced along the southern perimeter to depths of 1 ft bgs to complete horizontal delineation of the release extent. Soils at the Site consist of light brown to tan loose silty sands from the surface down to 20 ft bgs. Figure 3 depicts the release extent and the 2020 soil boring locations, and GPS coordinates for the boring locations are presented in Table 1.

A total of twenty (20) samples were collected from the seven (7) borings (BH-1 through BH-4 and AH-1 through AH-3) and submitted to Pace Analytical National Center for Testing & Innovation (Pace) in Nashville, Tennessee to be analyzed for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix E.

SUMMARY OF SAMPLING RESULTS

Results from the November and December 2020 soil sampling event are summarized in Table 2. The analytical results associated with the boring location AH-2 slightly exceeded the Site reclamation RRAL for TPH (100 mg/kg) in the 0-1 ft bgs sample interval (142 mg/kg). Boring location AH-2 is not located within the former release footprint, and is likely historical contamination not related to the 1RP-3999 release. The analytical results associated with the remaining sample locations were all below the applicable Site remediation and reclamation RRALs. Based on the analytical results, the remedial actions taken at the Site successfully removed impacted material within the former release footprint.

REMEDIATION WORK PLAN

Given that analytical results associated with boring location AH-2 exceeded the Site reclamation RRAL for TPH (100 mg/kg), COP proposes to remove the impacted material in the area around AH-2, as shown in Figure 4. Impacted soils will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to an approximate depth of 2 ft below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the RRALs to a maximum depth of 4 ft bgs. If confirmation sampling results indicate that soils below 4 ft bgs exceed the Site remediation RRALs, then COP proposes to install a liner at the base of the 4 ft excavation to prevent downward migration of contaminants.

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 60 cubic yards.

ALTERNATIVE CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, ConocoPhillips proposes the following alternative confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 5. One (1) confirmation floor samples and six (6) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses a surface area of approximately 780 SF.

These confirmation sidewall and floor samples will be representative of no more than approximately 500 SF 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 backfilled areas will be seeded in Spring 2021 (or first favorable growing season) to aid in revegetation (see Figure 5). Based on the soils at the site, the New Mexico State Land Office (NMSLO) Loamy (L) Sites Seed Mixture will be used for seeding and will be planted in the amount specified in the pounds pure live seed (PLS) per acre. The seed mixture will be spread by a drill equipped with a depth regulator or a hand-held broadcaster and raked. If a hand-held broadcaster is used for dispersal, the pounds pure live seed per acre will be doubled.

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

CONCLUSION

ConocoPhillips proposes to begin remediation activities at the Site within 1 year of NMOCD plan approval. The Philmex #15 Flowline Release (1RP-3999) 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 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 and reclamation activities 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

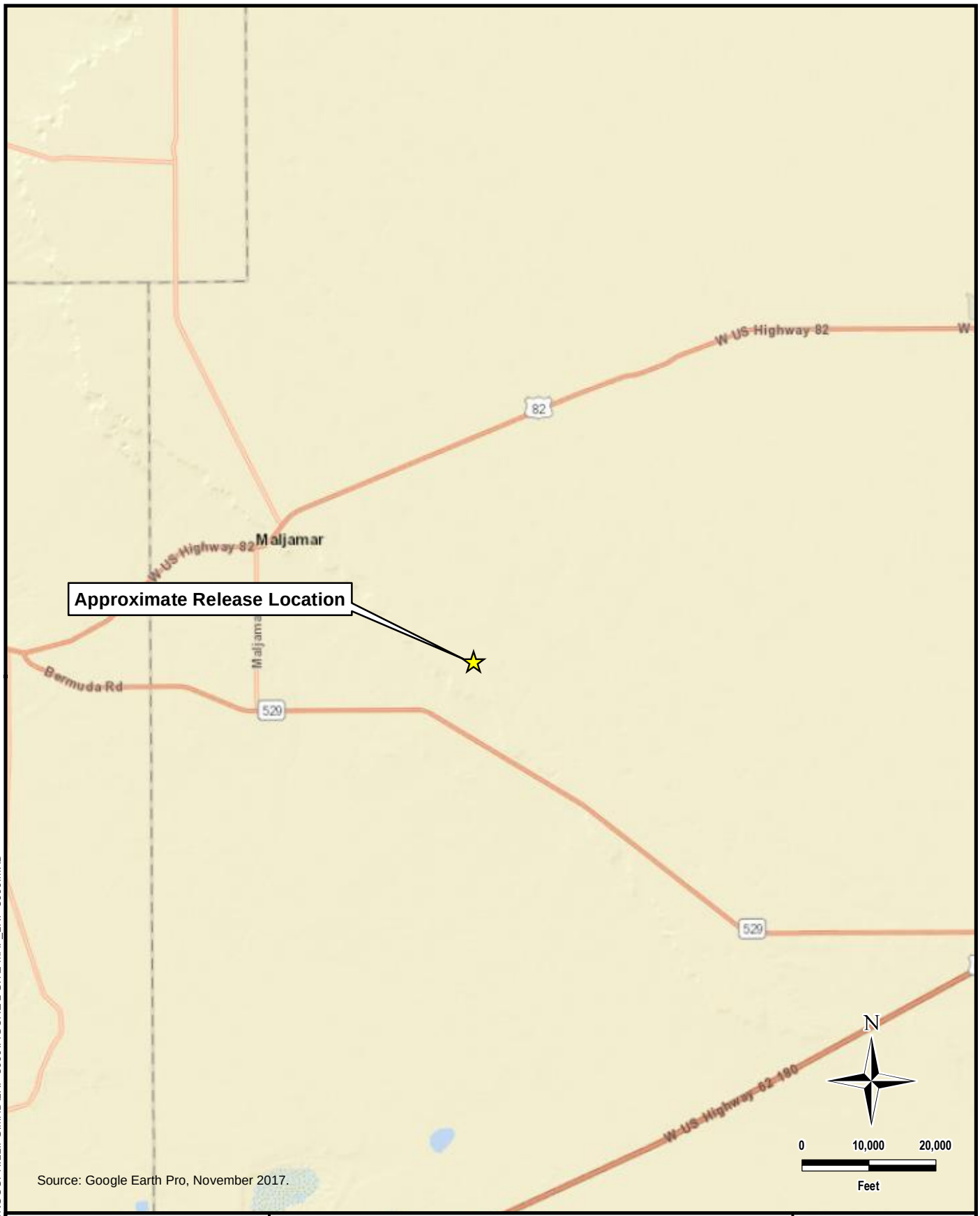
LIST OF ATTACHMENTS

Figures:

Tables:

Appendices:

FIGURES



Source: Google Earth Pro, November 2017.

DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-3999\FIGURE 1 SITE MAP_1RP-3999.MXD

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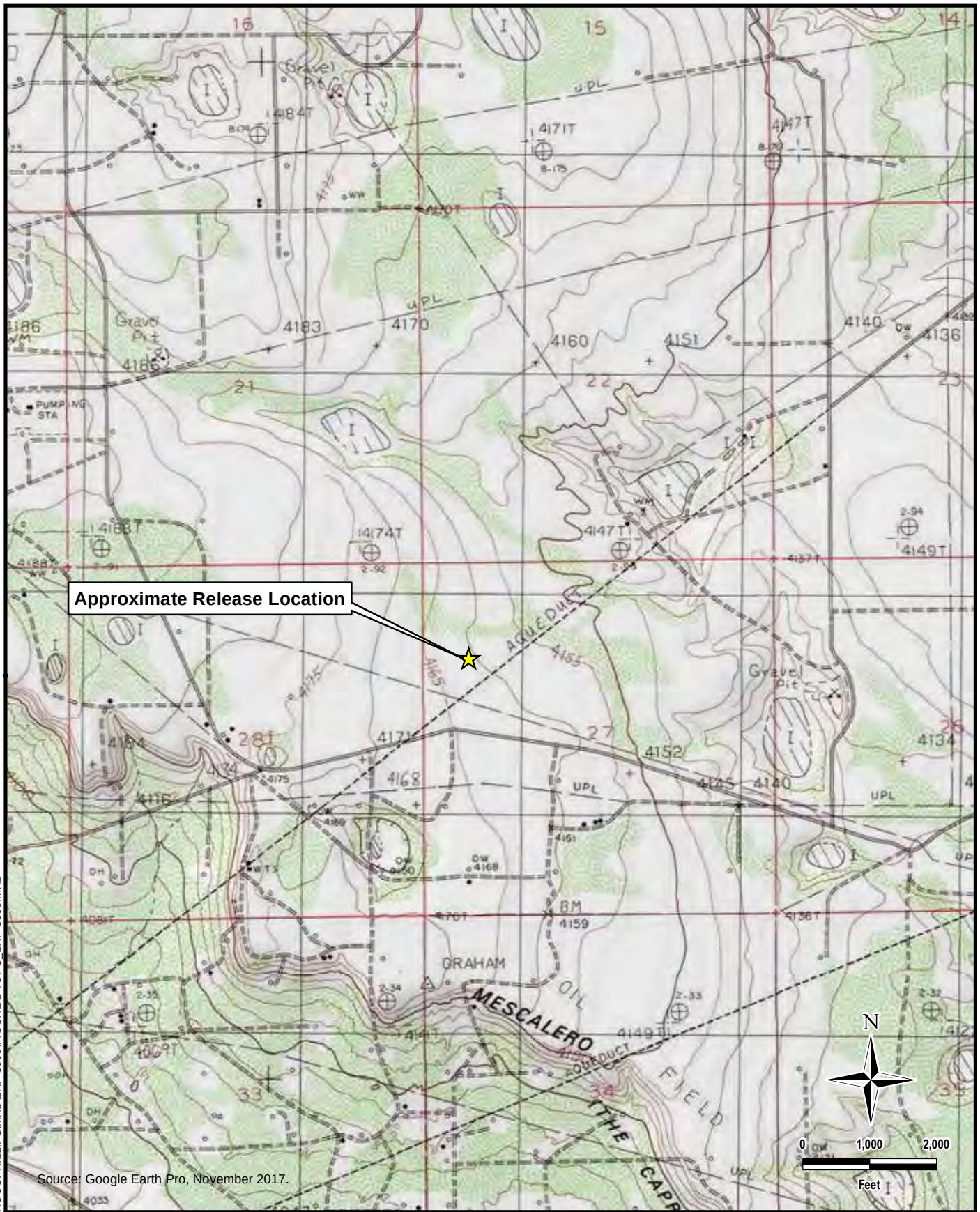
CONOCOPHILLIPS

1RP-3999
(32.808918°, -103.657241°)
LEA COUNTY, NEW MEXICO

PHILMEX #15 FLOWLINE RELEASE
SITE LOCATION MAP

PROJECT NO.:	212C-MD-02334
DATE:	DECEMBER 30, 2020
DESIGNED BY:	AJW

Figure No.
1



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-3999\FIGURE 2 TOPO_1RP-3999.MXD

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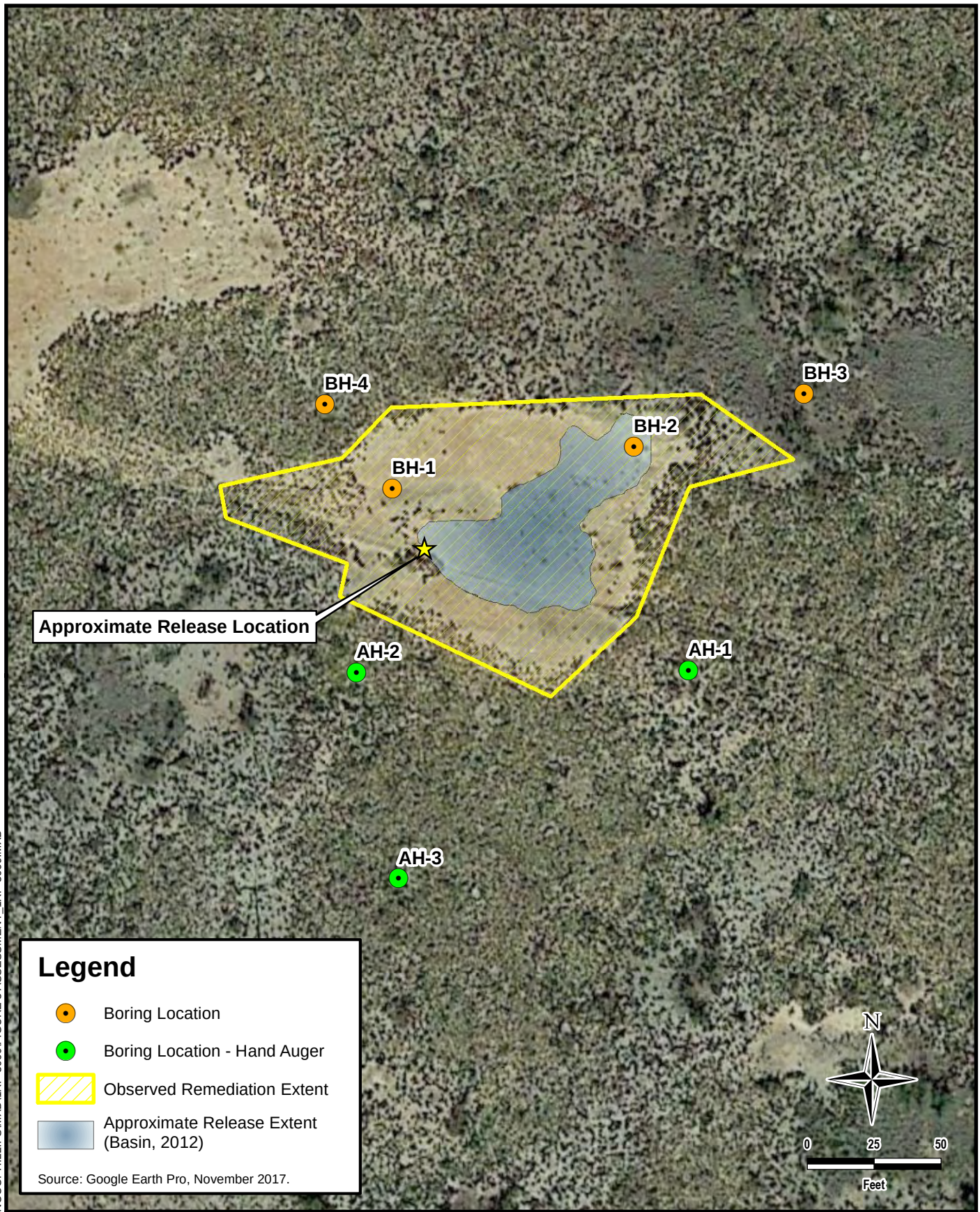
CONOCOPHILLIPS

1RP-3999
(32.808918°, -103.657241°)
LEA COUNTY, NEW MEXICO

PHILMEX #15 FLOWLINE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02334
DATE:	DECEMBER 30, 2020
DESIGNED BY:	AJW

Figure No.
2



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-3999\FIGURE 3 ASSESSMENT_1RP-3999.MXD

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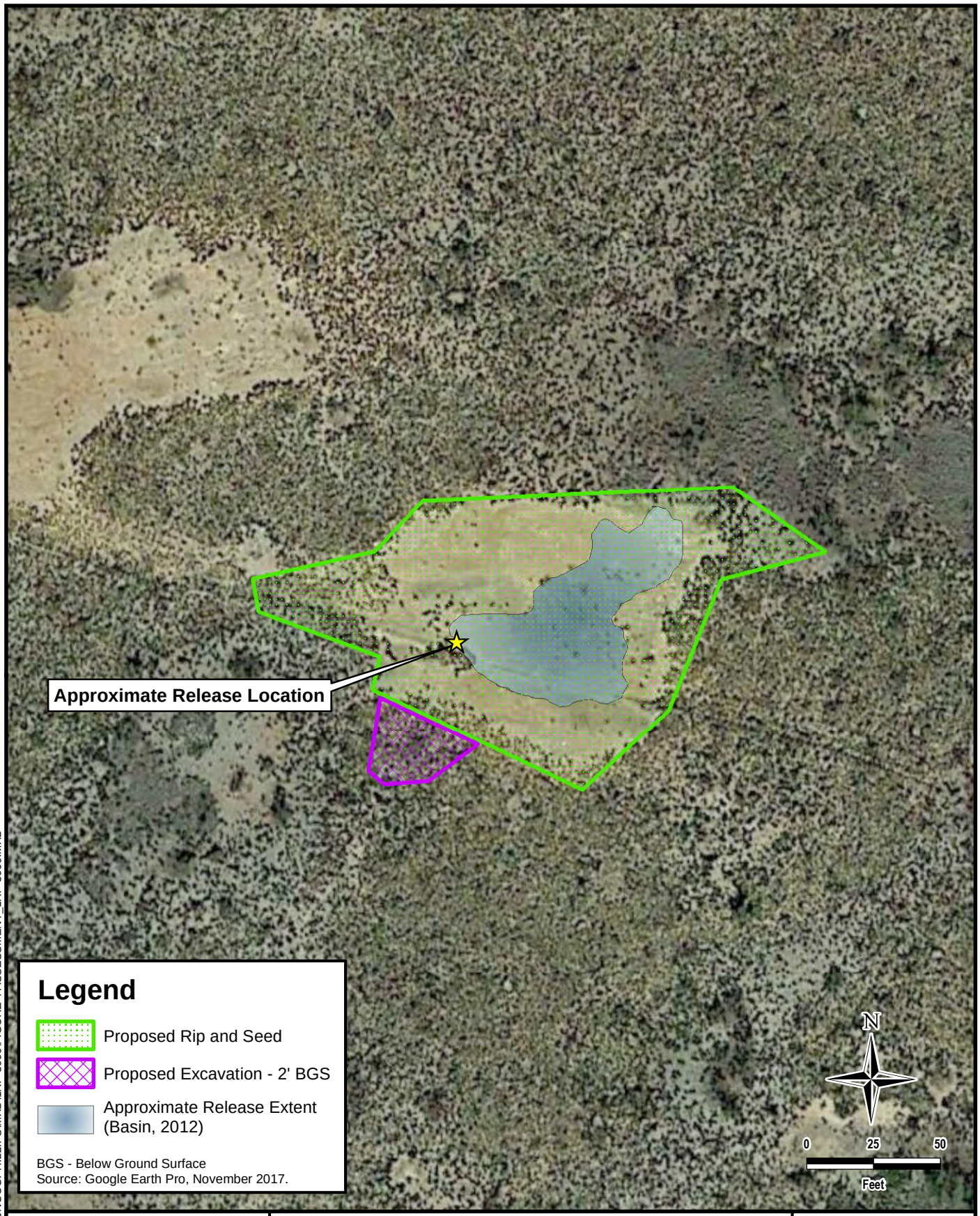
CONOCOPHILLIPS

1RP-3999
(32.808918°, -103.657241°)
LEA COUNTY, NEW MEXICO

PHILMEX #15 FLOWLINE RELEASE
RELEASE EXTENT AND SITE ASSESSMENT

PROJECT NO.:	212C-MD-02334
DATE:	FEBRUARY 22, 2021
DESIGNED BY:	AJW

Figure No.
3



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-3999\FIGURE 4 ASSESSMENT_1RP-3999.MXD

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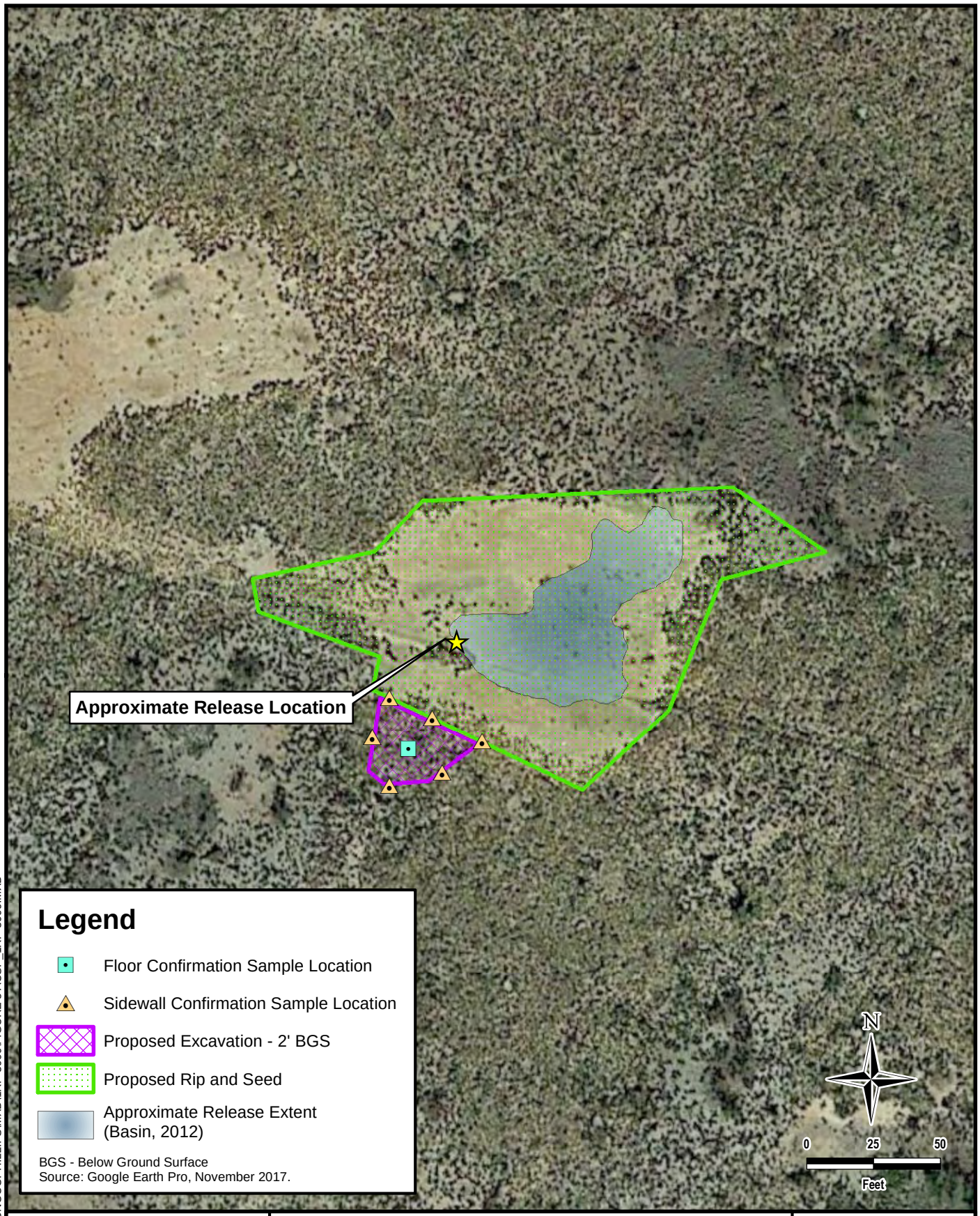
CONOCOPHILLIPS

1RP-3999
(32.808918°, -103.657241°)
LEA COUNTY, NEW MEXICO

PHILMEX #15 FLOWLINE RELEASE
PROPOSED REMEDIATION EXTENT

PROJECT NO.:	212C-MD-02334
DATE:	FEBRUARY 22, 2021
DESIGNED BY:	AJW

Figure No.
4



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-3999\FIGURE 5 ACSP_1RP-3999.MXD

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CONOCOPHILLIPS

1RP-3999
(32.808918°, -103.657241°)
LEA COUNTY, NEW MEXICO

PHILMEX #15 FLOWLINE RELEASE
ALTERNATIVE CONFIRMATION SAMPLING PLAN

PROJECT NO.:	212C-MD-02334
DATE:	FEBRUARY 22, 2021
DESIGNED BY:	AJW

Figure No.
5

TABLES

TABLE 1
BORING LOCATION COORDINATES
SOIL ASSESSMENT - 1RP-3999
CONOCOPHILLIPS
PHILMEX #15 RELEASE
LEA COUNTY, NM

Boring ID	Latitude	Longitude
AH-1	32.808790	-103.656921
AH-2	32.808790	-103.657325
AH-3	32.808579	-103.657275
BH-1	32.808979	-103.657280
BH-2	32.809020	-103.656986
BH-3	32.809073	-103.656778
BH-4	32.809066	-103.657361

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT - 1RP-3999
CONOCOPHILLIPS
PHILMEX #15 RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Chloride[1]		BTEX[2]									TPH[3]						
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX	GRO[4] C_3 - C_{10}		DRO C_{10} - C_{28}		ORO C_{28} - C_{40}		Total TPH (GRO+DRO+ORO)
		ft. bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
BH-1	11/16/2020	0-1	< 20.6		< 0.00106		< 0.00532		< 0.00266		< 0.00691		-	0.0224	J	4.91		10.6		15.5
		2-3	23.7		< 0.00106		< 0.00529		< 0.00265		< 0.00688		-	< 0.103		< 4.12		1.21	J	1.21
		4-5	9.78	J	< 0.00105		< 0.00525		< 0.00262		< 0.00682		-	< 0.102		< 4.10		0.778	J	0.778
		6-7	< 20.8		< 0.00108		< 0.00539		< 0.00270		< 0.00701		-	< 0.104		< 4.16		0.370	J	0.370
		9-10	12.0	J	< 0.00103		< 0.00513		< 0.00256		< 0.00667		-	< 0.101		< 4.05		< 4.05		-
		14-15	< 20.5		< 0.00105		< 0.00524		< 0.00262		< 0.00681		-	0.0277	B J	< 4.10		< 4.10		0.0277
		19-20	< 20.5		< 0.00105		< 0.00524		< 0.00262		< 0.00681		-	0.0258	B J	< 4.09		0.593	J	0.619
BH-2	11/16/2020	0-1	< 20.5		< 0.00105		< 0.00524		< 0.00262		0.00681		-	0.0355	B J	2.24	J	7.25		7.29
		2-3	114		< 0.00107		< 0.00533		< 0.00267		< 0.00693		-	0.0271	B J	6.26		18.9		25.2
		4-5	185		< 0.00103		< 0.00517		< 0.00259		< 0.00672		-	0.0255	B J	2.02	J	4.89		6.94
		6-7	241		< 0.00107		< 0.00536		< 0.00268		< 0.00697		-	0.0294	B J	< 4.15		0.462	J	0.462
		9-10	61.3		< 0.00109		< 0.00546		< 0.00273		< 0.00710		-	0.0287	B J	< 4.18		< 4.18		0.0287
		14-15	85.6		< 0.00112		< 0.00558		< 0.00279		< 0.00725		-	0.0244	B J	< 4.23		< 4.23		0.0244
		19-20	48.8		< 0.00109		< 0.00545		< 0.00272		< 0.00708			< 0.104		< 4.18		< 4.18		-
BH-3	11/16/2020	0-1	< 21.5		< 0.00115		< 0.00576		< 0.00288		< 0.00749		-	< 0.108		8.07		14.5		22.6
		3-4	< 20.8		< 0.00108		< 0.00540		< 0.00270		< 0.00701		-	< 0.104		5.63		7.60		13.2
BH-4	11/16/2020	0-1	< 20.4		< 0.00104		< 0.00521		< 0.00261		< 0.00678		-	0.0246	B J	4.16		9.35		13.5
		3-4	10.2	J	< 0.00105		< 0.00525		< 0.00262		< 0.00682		-	0.0278	B J	< 4.10		4.06	B J	4.09
AH-1	12/1/2020	0-1	< 20.3		< 0.00103		< 0.00516		< 0.00258		0.00132	J	0.00132	< 0.102		3.22	J	18.5		21.7
AH-2	12/1/2020	0-1	< 20.5		< 0.00105		< 0.00526		< 0.00263		0.00108	J	0.00108	< 0.103		49.7		92.7		***142***
AH-3	1/14/2021	0-1	< 21.6		< 0.00116		< 0.00582		< 0.00291		< 0.00757		-	< 0.108		4.37		15.5		19.9

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 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

RECEIVED
By JKeyes at 12:18 pm, Nov 25, 2015

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

State of New Mexico
Energy Minerals and Natural Resources

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

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: **ConocoPhillips**	Contact: **Spencer Cluff**
Address: **29 Vacuum Complex Lane**	Telephone No. **575-746-7248**
Facility Name: **Philmex 15**	Facility Type: **Well**

Surface Owner: NMOCD	Mineral Owner: NMOCD	API No. 30-025-27402

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	28	17S	33E	660	North	660	East	**LEA**

Latitude 32.8033257 **Longitude** 103.7240601 NAD83

NATURE OF RELEASE

Type of Release: **Spill**	Volume of Release: 7.50 BBLS	Volume Recovered: 5 BBLS
Source of Release: Fiber Spar Line	Date and Hour of Occurrence 11/23/2015 2:00 pm	Date and Hour of Discovery 11/24/2015 2:00 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Jamie Keyes**	
By Whom? **Spencer Cluff**	Date and Hour: **11/25/2015 11:05 am**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully *

Describe Cause of Problem and Remedial Action Taken.*

On November 24th, 2015 at 1400 hrs. MDT a flow line leak occurred at the Philmex 15. The immediate action by the MSO was to shut down the well, isolate the line, and repair the line. The spill released 5 bbls of oil and 2.5 bbls of produced water for a total of 7.5 bbls, with 5 bbls of fluid recovered. The spill will be remediated according to NMOCD and COPC guidelines.

Describe Area Affected and Cleanup Action Taken.*

The area was in the pasture and will be remediated according to NMOCD guidelines

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: Spencer A. Cluff	OIL CONSERVATION DIVISION	
Printed Name: Spencer A. Cluff	Approved by Environmental Specialist: Jamie Keyes	
Title: HSE Specialist	Approval Date: 11/25/2015	Expiration Date: 01/25/2016
E-mail Address: **spencer.a.cluff@conocophillips.com**	Conditions of Approval: Discrete site samples required. Delineate and remediate per NMOCD guidelines. Geotagged photos recommended.	Attached ☐ IRP 3999
Date: 11/25/2015 Phone:575-746-7248		

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature: Charles R. Beauvais II Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 04/21/2023

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

☐ Extents of contamination must be fully delineated.

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

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

Printed Name: _____ Title: _____

Signature: Charles R. Beauvais II Date: _____

email: _____ Telephone: _____

OCD Only

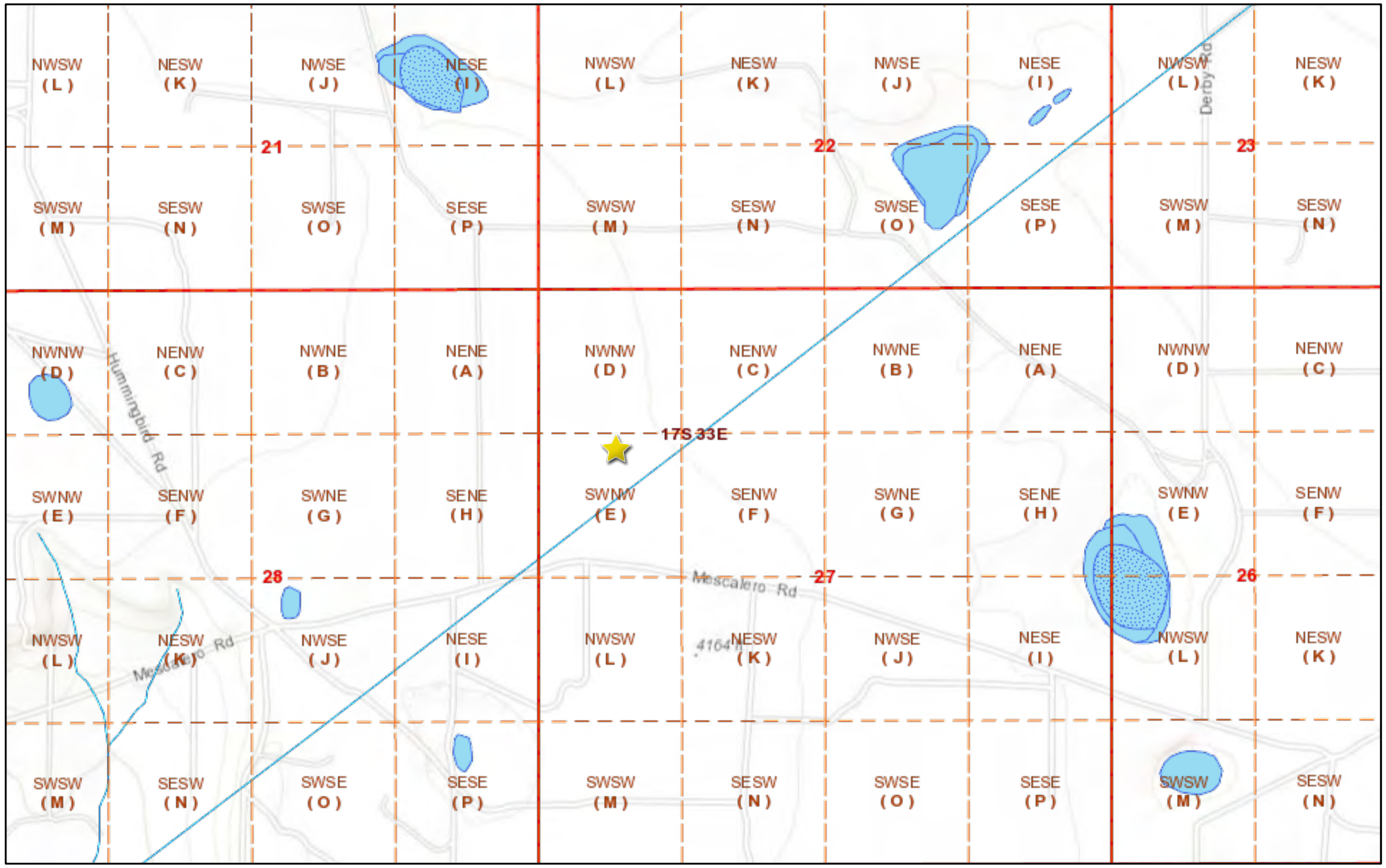
Received by: Jocelyn Harimon Date: 04/21/2023

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

Signature: _____ Date: 04/21/2023

APPENDIX B
Site Characterization Data

1RP-3999



2/5/2021, 3:43:36 PM

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Override 1

OCD District Offices

PLSS First Division

PLSS Second Division

PLSS Townships

OSE Water-bodies

PLJV Probable Playas

OSE Streams

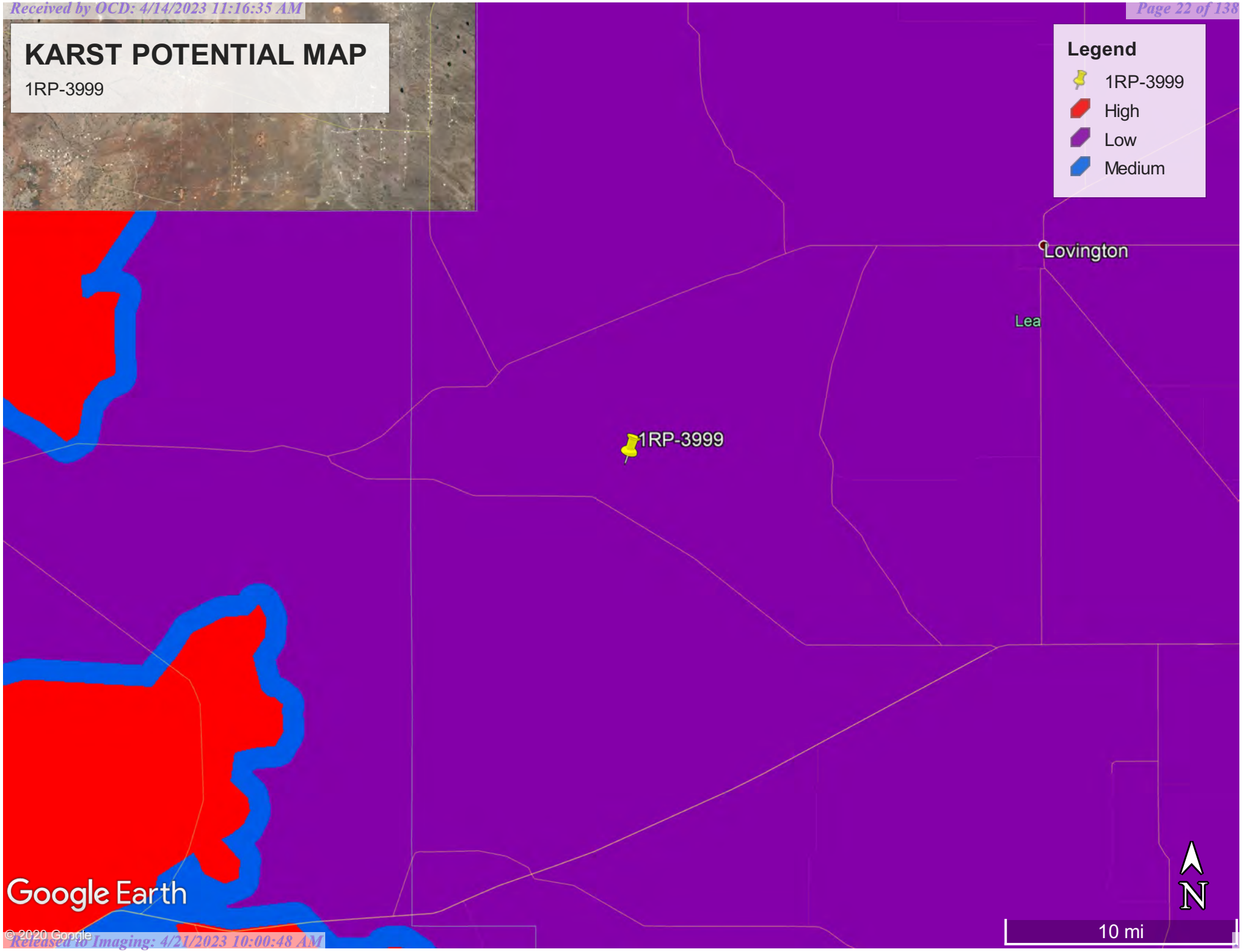
Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin,

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-3999



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

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

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

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

POD Number	POD Sub-basin	Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 03713	L		LE	3	4	1	28	17S	33E	624391	3630617*	1348	210		
L 03133	L		LE	3	1	3	23	17S	33E	627188	3631868*	1766	230		
L 14159 POD1	L		LE	3	1	3	28	17S	33E	624030	3630169	1832	298	165	133
L 13049 POD1	L		LE	2	2	2	29	17S	33E	623782	3631207*	1950	244	204	40
L 09891	L		LE		4	4	16	17S	33E	625264	3633144*	2285	190		

Average Depth to Water: **184 feet**

Minimum Depth: **165 feet**

Maximum Depth: **204 feet**

Record Count: 5

UTMNAD83 Radius Search (in meters):

Easting (X): 625709 **Northing (Y):** 3630902 **Radius:** 2400

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

APPENDIX C
Corrective Action Plan
(Basin, August 3, 2016)

APPROVED

ConocoPhillips

CONOCOPHILLIPS

P.O. Box 2197
Houston, TX 77252-2197
Phone 281.293.1000

PHILMEX #15

Corrective Action Plan

1RP-3999

API 30-025-27402

Release Date: November 11, 2015

Unit Letter A, Section 28, Township 17S, Range 33E

PO Box 2948 | Hobbs, NM 88241 | Phone 575.393.2967

August 3rd, 2016

Jamie Keyes
Environmental Specialist – New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
1625 N. French Dr.
Hobbs, NM 88240

RE: **Corrective Action Plan**
ConocoPhillips – Philmex 15 (1RP-3999)
UL/A sec. 28 T17S R33E
API No. 30-025-27402

Ms. Jones:

ConocoPhillips (CoP) has retained Basin Environmental Service Technologies (Basin) to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The site is located approximately 0.5 miles northeast of the intersection of Mescalero Road and Hummingbird Road in Lea County, New Mexico at Unit Letter F of Section 28, in Township 20 South of Range 37 East. The Global Positioning System (GPS) coordinates are: Latitude – 32.8033257, Longitude - -103.7240601. Utilizing the New Mexico Water and Infrastructure Data System (NM WAIDS), existing well records indicate that groundwater will likely be encountered at a depth of approximately one-hundred eighty (180) +/- feet.

On November 24th, 2015, CoP discovered a release from a flow-line. A total of seven and one-half (7.5) barrels (bbls) of crude oil and produced water were released over approximately two-thousand nine-hundred twenty-eight (2,928) square feet (ft^2) of pasture land. Approximately five (5) bbls total of fluid were recovered. The New Mexico Oil Conservation Division (NMOCD) was notified of the release on November 25th, 2015, and an initial C-141 was submitted the same day. NMOCD approved the initial C-141 on November 25th, 2015 (Appendix A).

Basin personnel were on site to assess the release December 4th, 2015. The release was mapped and photographed (Figure 1). On December 9th and 10th, 2015, samples were taken with depth and submitted to a NMOCD approved commercial laboratory for analysis (Appendix B). Laboratory analysis of the soil sample (Point 1) retrieved at two (2) feet below ground surface (bgs) showed an elevated chloride concentration of 6,560 mg/kg, gasoline range organics (GRO) concentration of 15.3 mg/kg, and diesel range organics (DRO) concentration of 101 mg/kg. Benzene concentration was below the applicable method detection limit. Toluene concentration was 0.361 mg/kg. Ethylbenzene concentration was 0.878 mg/kg. Xylenes concentration was 1.43

mg/kg. The total BTEX concentration was 2.67 mg/kg. The soil sample (Point 1) retrieved at three (3) feet bgs had a chloride concentration at 112 mg/kg. GRO and DRO concentrations were below the applicable detection limit.

The soil sample (Point 2) retrieved at one (1) feet (bgs) showed an elevated chloride concentration of 3,120 mg/kg, GRO concentration of 447 mg/kg, and DRO concentration of 4030 mg/kg. Benzene concentration was 0.268 mg/kg. Toluene concentration was 6.63 mg/kg. Ethylbenzene concentration was 14 mg/kg. Xylenes concentration was 24.3 mg/kg. The total BTEX concentration was 45.2 mg/kg. The soil sample (Point 2) retrieved at three and one-half (3.5) feet bgs had a chloride concentration less than the appropriate method detection limit. GRO and DRO concentrations were below the applicable detection limit.

The soil sample (Point 3) retrieved at one (1) feet (bgs) showed an elevated chloride concentration of 11,500 mg/kg, GRO concentration of 409 mg/kg, and DRO concentration of 3350 mg/kg. Benzene concentration was 0.639 mg/kg. Toluene concentration was 11.9 mg/kg. Ethylbenzene concentration was 19.2 mg/kg. Xylenes concentration was 28 mg/kg. The total BTEX concentration was 59.7 mg/kg. The soil sample (Point 3) retrieved at two and one-half (2.5) feet bgs had a chloride concentration of 48 mg/kg with GRO and DRO concentrations below the applicable detection limit.

Photo Documentation of the of these activities may be found in Appendix C.

Corrective Action Plan

Based on the assessment and sampling data, the release will be excavated down at various depths. The area around Point 1 as depicted in Figure 1, will be excavated to a depth of three (3) feet bgs. The area around Point 2 will be excavated to a depth of three and one-half (3.5) feet bgs. The area around Point 3 will be excavated to a depth of two and one-half (2.5) feet bgs. Once the entire excavation is completed, discreet wall samples from the excavation will be collected and field tested for chlorides and organic vapors. If the field data indicates that the wall samples will not achieve chloride, Gasoline Range Organics (GRO), Diesel Range Organics (DRO) and BTEX readings below regulatory standards, the walls of the excavation will be extended until field testing indicates that all constituents from the wall samples will return values below regulatory standards. The samples will then be taken to a commercial laboratory to confirm that all constituents return readings are below regulatory standards.

All excavated soil will be taken to a NMOCD approved facility for disposal. Clean soil will be imported to the site to serve as backfill. A sample of the backfill soil will be taken to a commercial laboratory to confirm that the chloride concentration is below the recommended regulatory standards. The excavated area will be backfilled with clean, imported topsoil and contoured to the surrounding location.

Revegetation of the site will be performed as follows:

Disturbed areas associated with the remediation efforts will be reseeded. If after one growing season the vegetation has not taken hold, seeding may need to be repeated until revegetation is successful. The seed will be spread using a hand-held broadcaster and the area raked or dragged

to cover the seed. Because the seed will be broadcast, the pounds per acre will be doubled. BLM #2 seed mix will be used.

The seed mixture will be planted in the amounts specified in pounds of pure live seed (PLS) per acre. Commercially sold seed will be either certified or registered. The area will be seeded following backfilling of the excavated area.

The site will be visited on a quarterly basis to assess the establishment of vegetative growth. Staff personnel performing the site visit will also look for the presence of noxious weeds at the site. If a noxious weed is observed at the site, CoP will determine the most effective manner to eradicate it.

Once these activities have been completed, a report will be sent to NMOCD requesting 'remediation termination' and site closure.

Basin appreciates the opportunity to work with you on this project. Please contact me if you have any questions or wish to discuss the site.

Sincerely,

Kyle Norman
Project Lead
Basin Environmental Service Technologies
(575) 942-8542

Attachments:

Figure 1 – Proposed Excavation
Appendix A – Initial C-141
Appendix B – Laboratory Analysis
Appendix C – Photo Documentation

Figures

Basin Environmental Service Technologies, LLC
P.O. Box 2948, Hobbs, NM 88241
Phone 575.393.2967

Proposed Excavation

Vertical 1

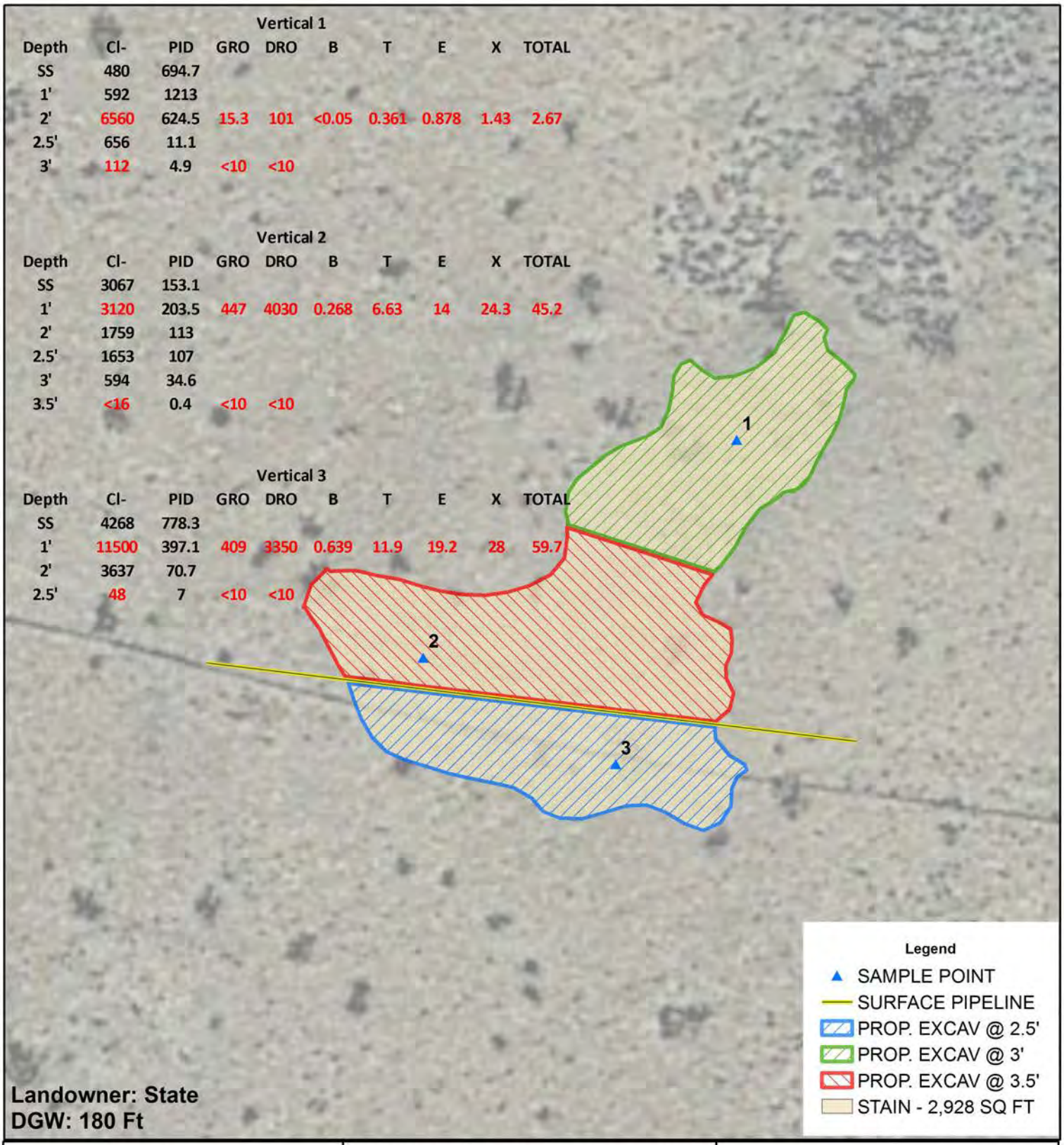
Depth	Cl-	PID	GRO	DRO	B	T	E	X	TOTAL
SS	480	694.7							
1'	592	1213							
2'	6560	624.5	15.3	101	<0.05	0.361	0.878	1.43	2.67
2.5'	656	11.1							
3'	112	4.9	<10	<10					

Vertical 2

Depth	Cl-	PID	GRO	DRO	B	T	E	X	TOTAL
SS	3067	153.1							
1'	3120	203.5	447	4030	0.268	6.63	14	24.3	45.2
2'	1759	113							
2.5'	1653	107							
3'	594	34.6							
3.5'	<16	0.4	<10	<10					

Vertical 3

Depth	Cl-	PID	GRO	DRO	B	T	E	X	TOTAL
SS	4268	778.3							
1'	11500	397.1	409	3350	0.639	11.9	19.2	28	59.7
2'	3637	70.7							
2.5'	48	7	<10	<10					



Basin Environmental Service Technologies
Effective Solutions

CONOCOPHILLIPS
PHILMEX #15
1RP-3999

UL A SECTION 28
T-17-S R-33-E
LEA COUNTY, NM

Figure 1

GPS: 32.811329 -103.661798

0 10 20 Feet

GPS date: 11/4/15 JK
Drawing date: 3/16/16
Drafted by: T. Grieco

N W E S

Appendix A

Intial C-141

Basin Environmental Service Technologies, LLC
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

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

State of New Mexico
Energy Minerals and Natural Resources

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

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: **ConocoPhillips**	Contact: **Spencer Cluff**
Address: **29 Vacuum Complex Lane**	Telephone No. **575-746-7248**
Facility Name: **Philmex 15**	Facility Type: **Well**

Surface Owner: NMOCD	Mineral Owner: NMOCD	API No. 30-025-27402

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	28	17S	33E	660	North	660	East	**LEA**

Latitude 32.8033257**Longitude** 103.7240601 NAD83

NATURE OF RELEASE

Type of Release: **Spill**	Volume of Release: 7.50 BBLS	Volume Recovered: 5 BBLS
Source of Release: Fiber Spar Line	Date and Hour of Occurrence 11/23/2015 2:00 pm	Date and Hour of Discovery 11/24/2015 2:00 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Jamie Keyes**	
By Whom? **Spencer Cluff**	Date and Hour: 11/**25/2015 11:05 am**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

On November 24th, 2015 at 1400 hrs. MDT a flow line leak occurred at the Philmex 15. The immediate action by the MSO was to shut down the well, isolate the line, and repair the line. The spill released 5 bbls of oil and 2.5 bbls of produced water for a total of 7.5 bbls, with 5 bbls of fluid recovered. The spill will be remediated according to NMOCD and COPC guidelines.

Describe Area Affected and Cleanup Action Taken.*

The area was in the pasture and will be remediated according to NMOCD guidelines

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: *Spencer A. Cluff*

Printed Name: Spencer A. Cluff

Title: HSE Specialist

E-mail Address: ***spencer.a.cluff@conocophillips.com***

Date: 11/25/2015 Phone:575-746-7248

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 11/25/2015 Expiration Date: 01/25/2016

Conditions of Approval:
Discrete site samples required. Delineate and remediate per NMOCD guidelines.
Geotagged photos recommended.

Attached ☐

1RP 3999

* Attach Additional Sheets If Necessary

Appendix B

Laboratory Analysis

Basin Environmental Service Technologies, LLC
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

CARDINAL Laboratories

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

December 17, 2015

KYLE NORMAN

BASIN ENVIRONMENTAL - HOBBS

419 W. CAIN

HOBBS, NM 88240

RE: PHILMEX #15

Enclosed are the results of analyses for samples received by the laboratory on 12/15/15 8:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BASIN ENVIRONMENTAL - HOBBS
KYLE NORMAN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 393-0293

Received:	12/15/2015	Sampling Date:	12/09/2015
Reported:	12/17/2015	Sampling Type:	Soil
Project Name:	PHILMEX #15	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VERTICAL 1 @ 2' (H503248-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/16/2015	ND	1.95	97.5	2.00	0.179	
Toluene*	**0.361**	0.050	12/16/2015	ND	1.97	98.6	2.00	0.739	
Ethylbenzene*	**0.878**	0.050	12/16/2015	ND	2.00	100	2.00	0.0556	
Total Xylenes*	**1.43**	0.150	12/16/2015	ND	5.99	99.9	6.00	0.291	
Total BTEX	**2.67**	0.300	12/16/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *73.6-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6560**	16.0	12/15/2015	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**15.3**	10.0	12/15/2015	ND	206	103	200	3.57	
DRO >C10-C28	**101**	10.0	12/15/2015	ND	190	95.1	200	4.23	

Surrogate: 1-Chlorooctane *107 %* *35-147*

Surrogate: 1-Chlorooctadecane *94.5 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BASIN ENVIRONMENTAL - HOBBS
KYLE NORMAN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 393-0293

Received:	12/15/2015	Sampling Date:	12/09/2015
Reported:	12/17/2015	Sampling Type:	Soil
Project Name:	PHILMEX #15	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VERTICAL 1 @ 3' (H503248-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	12/15/2015	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/15/2015	ND	206	103	200	3.57	
DRO >C10-C28	<10.0	10.0	12/15/2015	ND	190	95.1	200	4.23	

Surrogate: 1-Chlorooctane	*108 %*	*35-147*
Surrogate: 1-Chlorooctadecane	*95.1 %*	*28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BASIN ENVIRONMENTAL - HOBBS
KYLE NORMAN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 393-0293

Received:	12/15/2015	Sampling Date:	12/09/2015
Reported:	12/17/2015	Sampling Type:	Soil
Project Name:	PHILMEX #15	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VERTICAL 2 @ 1' (H503248-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.268**	0.200	12/16/2015	ND	1.95	97.5	2.00	0.179	
Toluene*	**6.63**	0.200	12/16/2015	ND	1.97	98.6	2.00	0.739	
Ethylbenzene*	**14.0**	0.200	12/16/2015	ND	2.00	100	2.00	0.0556	
Total Xylenes*	**24.3**	0.600	12/16/2015	ND	5.99	99.9	6.00	0.291	
Total BTEX	**45.2**	1.20	12/16/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID *123 %* *73.6-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3120**	16.0	12/15/2015	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**447**	100	12/15/2015	ND	206	103	200	3.57	
DRO >C10-C28	**4030**	100	12/15/2015	ND	190	95.1	200	4.23	

Surrogate: 1-Chlorooctane *169 %* *35-147*

Surrogate: 1-Chlorooctadecane *166 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BASIN ENVIRONMENTAL - HOBBS
KYLE NORMAN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 393-0293

Received:	12/15/2015	Sampling Date:	12/10/2015
Reported:	12/17/2015	Sampling Type:	Soil
Project Name:	PHILMEX #15	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VERTICAL 2 @ 3.5' (H503248-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/15/2015	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/15/2015	ND	206	103	200	3.57	
DRO >C10-C28	<10.0	10.0	12/15/2015	ND	190	95.1	200	4.23	

Surrogate: 1-Chlorooctane	*107 %*	*35-147*
Surrogate: 1-Chlorooctadecane	*102 %*	*28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BASIN ENVIRONMENTAL - HOBBS
KYLE NORMAN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 393-0293

Received:	12/15/2015	Sampling Date:	12/10/2015
Reported:	12/17/2015	Sampling Type:	Soil
Project Name:	PHILMEX #15	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VERTICAL 3 @ 1' (H503248-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.639**	0.200	12/16/2015	ND	1.95	97.5	2.00	0.179	
Toluene*	**11.9**	0.200	12/16/2015	ND	1.97	98.6	2.00	0.739	
Ethylbenzene*	**19.2**	0.200	12/16/2015	ND	2.00	100	2.00	0.0556	
Total Xylenes*	**28.0**	0.600	12/16/2015	ND	5.99	99.9	6.00	0.291	
Total BTEX	**59.7**	1.20	12/16/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID *118 %* *73.6-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**11500**	16.0	12/15/2015	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**409**	50.0	12/16/2015	ND	206	103	200	3.57	
DRO >C10-C28	**3350**	50.0	12/16/2015	ND	190	95.1	200	4.23	

Surrogate: 1-Chlorooctane *104 %* *35-147*

Surrogate: 1-Chlorooctadecane *93.1 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BASIN ENVIRONMENTAL - HOBBS
KYLE NORMAN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 393-0293

Received:	12/15/2015	Sampling Date:	12/10/2015
Reported:	12/17/2015	Sampling Type:	Soil
Project Name:	PHILMEX #15	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VERTICAL 3 @ 2.5' (H503248-06)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	12/15/2015	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/16/2015	ND	206	103	200	3.57	
DRO >C10-C28	<10.0	10.0	12/16/2015	ND	190	95.1	200	4.23	

Surrogate: 1-Chlorooctane	*107 %*	*35-147*
Surrogate: 1-Chlorooctadecane	*96.1 %*	*28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name: ConocoPhillips	**BILL TO** P.O. #:
Project Manager: Kyle Norman	Company: Basin
Address: 419 W Cain	Attn:
City: Hobbs State: NM Zip: 88240	Address: 419 W Cain
Phone #: 575-393-2967 Fax #: 575-393-0293	City: Hobbs
Project #: Project Owner:	State: NM Zip: 88240
Project Name:	Phone #: 575-393-2967
Project Location: Phillmex #15	Fax #: 575-393-0293
Sampler Name: JKamplain	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS
H5003248																				
1	Vert 1 @ 2'	G	1			✓					✓		12-9-15	3:30	✓	✓	✓			
2	Vert 1 @ 3'	G	1			✓					✓			3:45	✓	✓				
3	Vert 2 @ 1'	G	1			✓					✓			4:00	✓	✓	✓			
4	Vert 2 @ 3.5'	G	1			✓					✓		12-10-15	3:30	✓	✓				
5	Vert 3 @ 1'	G	1			✓					✓			3:45	✓	✓	✓			
6	Vert 3 @ 2.5'	G	1			✓					✓			4:00	✓	✓				

Relinquished By:	Date: 12-11-15	Received By:	
	Time: 3:00		
Relinquished By:	Date: 12-15-15	Received By: Jodi Henson	
	Time: 8:15		
Delivered By: (Circle One)		Sample Condition: Cool ☑ Yes ☐ No / Intact ☑ Yes ☐ No	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	~14.6°C		

Phone Result: ☐ Yes ☑ No Add'l Phone #:
Fax Result: ☐ Yes ☑ No Add'l Fax #:
REMARKS:

email results:
hconder@basinenv.com; knorman@basinenv.com;
jkamplain@basinenv; lflores@basinenv; lweinheimer@basinenv;
cursanic@basinenv; sedwards@basinenv
environmental tech: @basinenv

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

#54

Appendix C
Photo Documentation

Basin Environmental Service Technologies, LLC
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

Conoco Phillips - Philmex #015

Unit Letter A, Section 28, T17S, R33E

Initial release, facing northeast 12/4/15

Initial release, facing southwest 12/4/15

Top 1' removed, facing northeast 12/16/15

Top 1' removed, facing northwest 3/22/12

APPENDIX D
Photographic Documentation

TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	View facing northeast of flowline release. (Basin, 2015)	1
	SITE NAME	Philmex #15 Flowline Release	12/4/2015

TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	View facing north of flowline release. (Initial Site Visit)	2
	SITE NAME	Philmex #15 Flowline Release	12/4/2015

TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	View facing west of flowline release. (Initial Site Visit)	3
	SITE NAME	Philmex #15 Flowline Release	12/4/2015

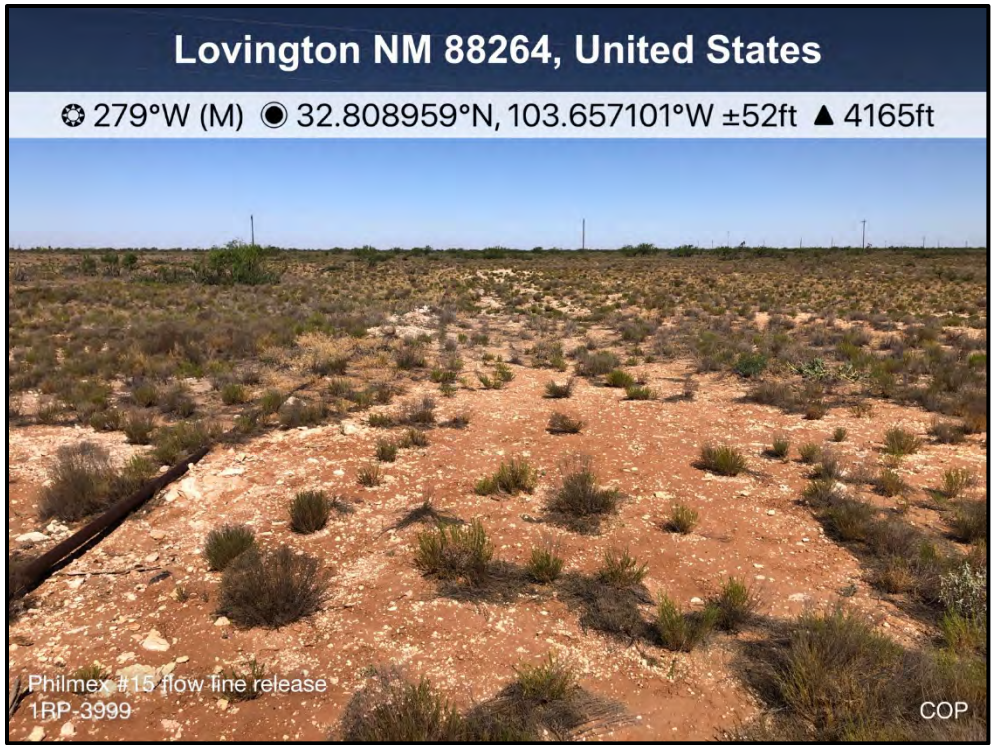
TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	Overview of flowline release excavation activities.	4
	SITE NAME	Philmex #15 Flowline Release	12/9/2015

TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	Overview of excavation activities.	5
	SITE NAME	Philmex #15 Flowline Release	12/9/2015

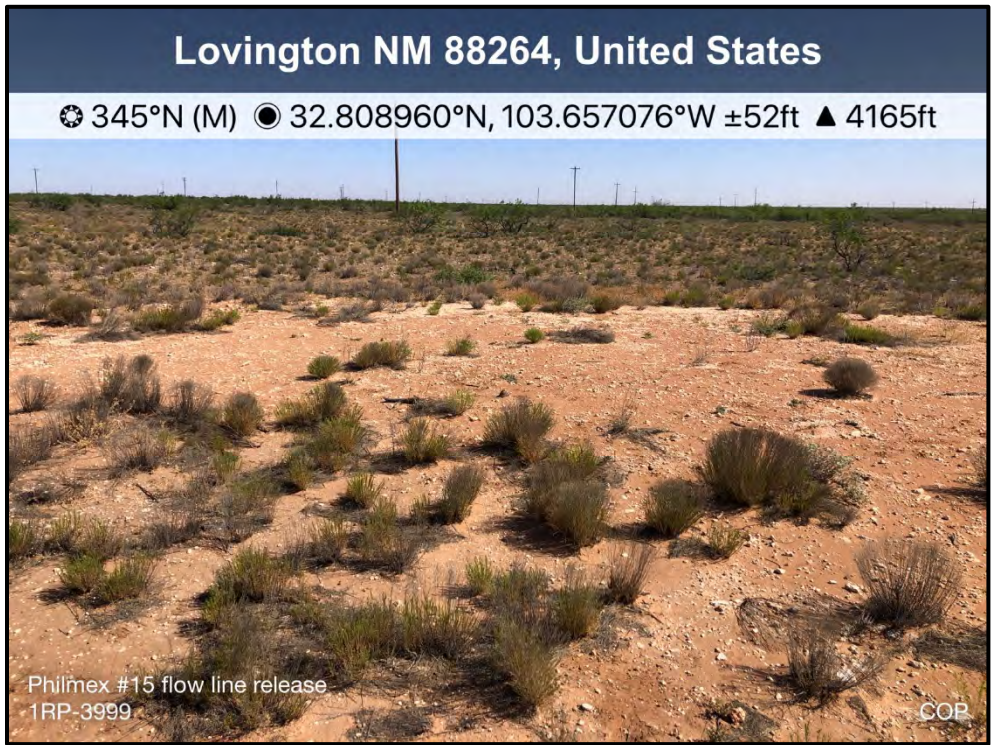
TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	View facing northwest of excavation activities in the flowline release area.	6
	SITE NAME	Philmex #15 Flowline Release	12/9/2015

TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	Overview of flowline release excavation area.	7
	SITE NAME	Philmex #15 Flowline Release	12/16/2015

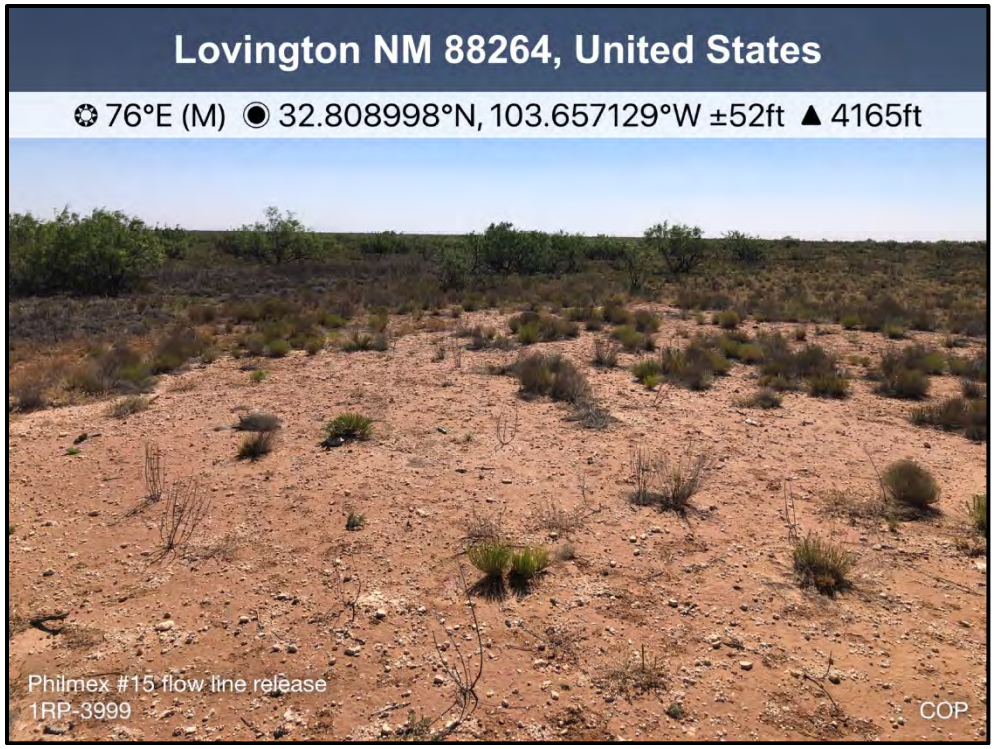
TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	Overview of flowline release excavation area (note flowline in place).	8
	SITE NAME	Philmex #15 Flowline Release	12/16/2015



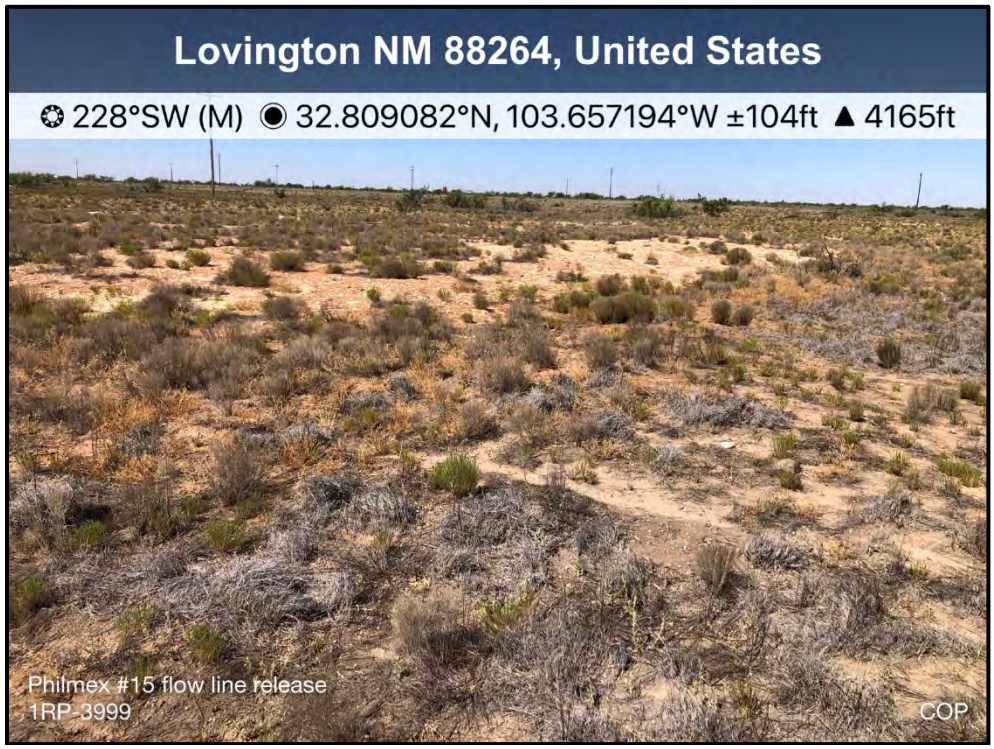
TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	View facing west of the former flowline release area.	9
	SITE NAME	Philmex #15 Flowline Release	6/9/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	View facing northwest of the former flowline release area.	10
	SITE NAME	Philmex #15 Flowline Release	6/9/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	View facing northeast of sparse vegetation in the former flowline release area.	11
	SITE NAME	Philmex #15 Flowline Release	6/9/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	View facing northwest of the former flowline release area.	12
	SITE NAME	Philmex #15 Flowline Release	6/9/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	View facing northwest of the former flowline release area.	13
	SITE NAME	Philmex #15 Flowline Release	6/9/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02334	DESCRIPTION	View facing east of the former flowline release area.	14
	SITE NAME	Philmex #15 Flowline Release	6/9/2020

APPENDIX E
Laboratory Analytical Data

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 04, 2020

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1289009
Samples Received:	11/21/2020
Project Number:	212C-MD-02334
Description:	Philmex #15 Release (1RP-3999)

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

Entire Report Reviewed By:

Chris McCord
Project Manager

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

TABLE OF CONTENTS

BH-1 (0-1') L1289009-01 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 10:00 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584483	1	12/02/20 03:40	12/02/20 03:46	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 01:52	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1583666	1	11/26/20 13:41	11/29/20 03:01	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/27/20 21:02	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 07:31	JN	Mt. Juliet, TN

BH-1 (2-3') L1289009-02 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 10:10 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584483	1	12/02/20 03:40	12/02/20 03:46	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 02:01	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1583666	1	11/26/20 13:41	11/29/20 04:08	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/27/20 21:59	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 04:34	JN	Mt. Juliet, TN

BH-1 (4-5') L1289009-03 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 10:20 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584483	1	12/02/20 03:40	12/02/20 03:46	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 02:11	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1583666	1	11/26/20 13:41	11/29/20 04:29	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/27/20 22:18	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 04:47	JN	Mt. Juliet, TN

BH-1 (6-7') L1289009-04 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 10:30 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584483	1	12/02/20 03:40	12/02/20 03:46	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 02:21	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1583666	1	11/26/20 13:41	11/29/20 04:50	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/27/20 21:21	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 05:00	JN	Mt. Juliet, TN

BH-1 (9-10') L1289009-05 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 10:40 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584483	1	12/02/20 03:40	12/02/20 03:46	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 02:40	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1583666	1	11/26/20 13:41	11/29/20 05:10	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/27/20 21:40	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 05:12	JN	Mt. Juliet, TN

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

BH-1 (14-15') L1289009-06 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 11:00 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584483	1	12/02/20 03:40	12/02/20 03:46	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 02:49	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1583666	1	11/26/20 13:41	11/29/20 05:59	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/27/20 22:37	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 06:16	JN	Mt. Juliet, TN

BH-1 (19-20') L1289009-07 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 11:30 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584483	1	12/02/20 03:40	12/02/20 03:46	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 02:59	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1583666	1	11/26/20 13:41	11/29/20 06:20	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/27/20 22:56	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 06:28	JN	Mt. Juliet, TN

BH-2 (0-1') L1289009-08 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 13:00 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584483	1	12/02/20 03:40	12/02/20 03:46	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 03:27	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1584203	1	11/26/20 13:41	11/30/20 14:13	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/27/20 23:15	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 07:44	JN	Mt. Juliet, TN

BH-2 (2-3') L1289009-09 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 13:10 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584483	1	12/02/20 03:40	12/02/20 03:46	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 03:37	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1584203	1	11/26/20 13:41	11/30/20 14:33	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/28/20 00:14	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 07:57	JN	Mt. Juliet, TN

BH-2 (4-5') L1289009-10 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 13:20 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584483	1	12/02/20 03:40	12/02/20 03:46	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 03:46	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1584203	1	11/26/20 13:41	11/30/20 14:54	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/28/20 00:33	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 08:10	JN	Mt. Juliet, TN

BH-2 (6-7') L1289009-11 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 13:30 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584485	1	12/02/20 03:26	12/02/20 03:37	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 03:56	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1584203	1	11/26/20 13:41	11/30/20 15:15	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/28/20 00:52	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 06:41	JN	Mt. Juliet, TN

BH-2 (9-10') L1289009-12 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 13:40 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584485	1	12/02/20 03:26	12/02/20 03:37	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 04:05	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1584203	1	11/26/20 13:41	11/30/20 15:36	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/28/20 01:11	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 06:53	JN	Mt. Juliet, TN

BH-2 (14-15') L1289009-13 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 14:00 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584485	1	12/02/20 03:26	12/02/20 03:37	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 04:34	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1584203	1	11/26/20 13:41	11/30/20 21:47	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/28/20 01:30	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 07:06	JN	Mt. Juliet, TN

BH-2 (19-20') L1289009-14 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 14:30 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584485	1	12/02/20 03:26	12/02/20 03:37	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 04:43	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1584203	1	11/26/20 13:41	11/30/20 16:17	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/28/20 01:49	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583379	1	11/28/20 13:06	11/29/20 07:19	JN	Mt. Juliet, TN

BH-3 (0-1') L1289009-15 Solid

Collected by: Joe Tyler | Collected date/time: 11/16/20 15:00 | Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584485	1	12/02/20 03:26	12/02/20 03:37	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 04:53	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1584203	1	11/26/20 13:41	11/30/20 16:38	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/28/20 02:08	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583882	1	11/28/20 10:08	11/29/20 22:15	JN	Mt. Juliet, TN

BH-3 (3-4') L1289009-16 Solid

Collected by: Joe Tyler
Collected date/time: 11/16/20 15:10
Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584485	1	12/02/20 03:26	12/02/20 03:37	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 05:21	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1584203	1	11/26/20 13:41	11/30/20 16:58	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/28/20 02:27	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583882	1	11/28/20 10:08	11/29/20 22:28	JN	Mt. Juliet, TN

BH-4 (0-1') L1289009-17 Solid

Collected by: Joe Tyler
Collected date/time: 11/16/20 15:30
Received date/time: 11/21/20 09:30

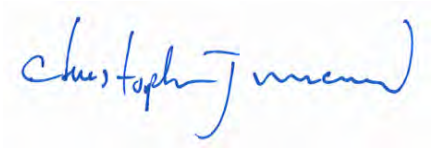
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584485	1	12/02/20 03:26	12/02/20 03:37	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 05:31	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1584203	1	11/26/20 13:41	11/30/20 17:19	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/28/20 02:46	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583882	1	11/28/20 10:08	11/29/20 22:03	JN	Mt. Juliet, TN

BH-4 (3-4') L1289009-18 Solid

Collected by: Joe Tyler
Collected date/time: 11/16/20 15:40
Received date/time: 11/21/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1584485	1	12/02/20 03:26	12/02/20 03:37	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1585204	1	12/02/20 21:12	12/03/20 05:40	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1584203	1	11/26/20 13:41	11/30/20 17:40	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1583309	1	11/26/20 13:41	11/28/20 03:05	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1583882	1	11/28/20 10:08	11/29/20 22:41	JN	Mt. Juliet, TN

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



Chris McCord
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.9		1	12/02/2020 03:46	WG1584483

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.49	20.6	1	12/03/2020 01:52	WG1585204

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	0.0224	J	0.0224	0.103	1	11/29/2020 03:01	WG1583666
(S) a,a,a-Trifluorotoluene(FID)	*93.7*			*77.0-120*		*11/29/2020 03:01*	WG1583666

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000497	0.00106	1	11/27/2020 21:02	WG1583309
Toluene	U		0.00138	0.00532	1	11/27/2020 21:02	WG1583309
Ethylbenzene	U		0.000784	0.00266	1	11/27/2020 21:02	WG1583309
Total Xylenes	U		0.000936	0.00691	1	11/27/2020 21:02	WG1583309
(S) Toluene-d8	*100*			*75.0-131*		*11/27/2020 21:02*	WG1583309
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*11/27/2020 21:02*	WG1583309
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*11/27/2020 21:02*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	4.91		1.66	4.13	1	11/29/2020 07:31	WG1583379
C28-C40 Oil Range	10.6		0.283	4.13	1	11/29/2020 07:31	WG1583379
(S) o-Terphenyl	*62.8*			*18.0-148*		*11/29/2020 07:31*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.2		1	12/02/2020 03:46	WG1584483

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	23.7		9.47	20.6	1	12/03/2020 02:01	WG1585204

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0223	0.103	1	11/29/2020 04:08	WG1583666
(S) a,a,a-Trifluorotoluene(FID)	*93.3*			*77.0-120*		*11/29/2020 04:08*	WG1583666

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000494	0.00106	1	11/27/2020 21:59	WG1583309
Toluene	U		0.00138	0.00529	1	11/27/2020 21:59	WG1583309
Ethylbenzene	U		0.000780	0.00265	1	11/27/2020 21:59	WG1583309
Total Xylenes	U		0.000931	0.00688	1	11/27/2020 21:59	WG1583309
(S) Toluene-d8	*108*			*75.0-131*		*11/27/2020 21:59*	WG1583309
(S) 4-Bromofluorobenzene	*96.8*			*67.0-138*		*11/27/2020 21:59*	WG1583309
(S) 1,2-Dichloroethane-d4	*93.1*			*70.0-130*		*11/27/2020 21:59*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.66	4.12	1	11/29/2020 04:34	WG1583379
C28-C40 Oil Range	1.21	J	0.282	4.12	1	11/29/2020 04:34	WG1583379
(S) o-Terphenyl	*67.0*			*18.0-148*		*11/29/2020 04:34*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.6		1	12/02/2020 03:46	WG1584483

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	9.78	J	9.43	20.5	1	12/03/2020 02:11	WG1585204

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0222	0.102	1	11/29/2020 04:29	WG1583666
(S) a,a,a-Trifluorotoluene(FID)	*93.6*			*77.0-120*		*11/29/2020 04:29*	WG1583666

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000490	0.00105	1	11/27/2020 22:18	WG1583309
Toluene	U		0.00136	0.00525	1	11/27/2020 22:18	WG1583309
Ethylbenzene	U		0.000774	0.00262	1	11/27/2020 22:18	WG1583309
Total Xylenes	U		0.000924	0.00682	1	11/27/2020 22:18	WG1583309
(S) Toluene-d8	*107*			*75.0-131*		*11/27/2020 22:18*	WG1583309
(S) 4-Bromofluorobenzene	*87.1*			*67.0-138*		*11/27/2020 22:18*	WG1583309
(S) 1,2-Dichloroethane-d4	*97.2*			*70.0-130*		*11/27/2020 22:18*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.65	4.10	1	11/29/2020 04:47	WG1583379
C28-C40 Oil Range	0.778	J	0.281	4.10	1	11/29/2020 04:47	WG1583379
(S) o-Terphenyl	*64.9*			*18.0-148*		*11/29/2020 04:47*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.2		1	12/02/2020 03:46	WG1584483

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.56	20.8	1	12/03/2020 02:21	WG1585204

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0226	0.104	1	11/29/2020 04:50	WG1583666
(S) a,a,a-Trifluorotoluene(FID)	*93.3*			*77.0-120*		*11/29/2020 04:50*	WG1583666

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		0.000504	0.00108	1	11/27/2020 21:21	WG1583309
Toluene	U		0.00140	0.00539	1	11/27/2020 21:21	WG1583309
Ethylbenzene	U		0.000795	0.00270	1	11/27/2020 21:21	WG1583309
Total Xylenes	U		0.000949	0.00701	1	11/27/2020 21:21	WG1583309
(S) Toluene-d8	*104*			*75.0-131*		*11/27/2020 21:21*	WG1583309
(S) 4-Bromofluorobenzene	*96.3*			*67.0-138*		*11/27/2020 21:21*	WG1583309
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*11/27/2020 21:21*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.67	4.16	1	11/29/2020 05:00	WG1583379
C28-C40 Oil Range	0.370	J	0.285	4.16	1	11/29/2020 05:00	WG1583379
(S) o-Terphenyl	*73.6*			*18.0-148*		*11/29/2020 05:00*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.7		1	12/02/2020 03:46	WG1584483

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	12.0	J	9.32	20.3	1	12/03/2020 02:40	WG1585204

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0220	0.101	1	11/29/2020 05:10	WG1583666
(S) a,a,a-Trifluorotoluene(FID)	*93.7*			*77.0-120*		*11/29/2020 05:10*	WG1583666

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000479	0.00103	1	11/27/2020 21:40	WG1583309
Toluene	U		0.00133	0.00513	1	11/27/2020 21:40	WG1583309
Ethylbenzene	U		0.000756	0.00256	1	11/27/2020 21:40	WG1583309
Total Xylenes	U		0.000903	0.00667	1	11/27/2020 21:40	WG1583309
(S) Toluene-d8	*106*			*75.0-131*		*11/27/2020 21:40*	WG1583309
(S) 4-Bromofluorobenzene	*95.2*			*67.0-138*		*11/27/2020 21:40*	WG1583309
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*11/27/2020 21:40*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.63	4.05	1	11/29/2020 05:12	WG1583379
C28-C40 Oil Range	U		0.278	4.05	1	11/29/2020 05:12	WG1583379
(S) o-Terphenyl	*77.9*			*18.0-148*		*11/29/2020 05:12*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.7		1	12/02/2020 03:46	WG1584483

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.42	20.5	1	12/03/2020 02:49	WG1585204

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	0.0277	B J	0.0222	0.102	1	11/29/2020 05:59	WG1583666
(S) a,a,a-Trifluorotoluene(FID)	*93.0*			*77.0-120*		*11/29/2020 05:59*	WG1583666

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000489	0.00105	1	11/27/2020 22:37	WG1583309
Toluene	U		0.00136	0.00524	1	11/27/2020 22:37	WG1583309
Ethylbenzene	U		0.000772	0.00262	1	11/27/2020 22:37	WG1583309
Total Xylenes	U		0.000922	0.00681	1	11/27/2020 22:37	WG1583309
(S) Toluene-d8	*105*			*75.0-131*		*11/27/2020 22:37*	WG1583309
(S) 4-Bromofluorobenzene	*94.6*			*67.0-138*		*11/27/2020 22:37*	WG1583309
(S) 1,2-Dichloroethane-d4	*99.9*			*70.0-130*		*11/27/2020 22:37*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.65	4.10	1	11/29/2020 06:16	WG1583379
C28-C40 Oil Range	U		0.281	4.10	1	11/29/2020 06:16	WG1583379
(S) o-Terphenyl	*76.6*			*18.0-148*		*11/29/2020 06:16*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.7		1	12/02/2020 03:46	WG1584483

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.42	20.5	1	12/03/2020 02:59	WG1585204

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0258	B J	0.0222	0.102	1	11/29/2020 06:20	WG1583666
(S) a,a,a-Trifluorotoluene(FID)	*93.2*			*77.0-120*		*11/29/2020 06:20*	WG1583666

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000489	0.00105	1	11/27/2020 22:56	WG1583309
Toluene	U		0.00136	0.00524	1	11/27/2020 22:56	WG1583309
Ethylbenzene	U		0.000772	0.00262	1	11/27/2020 22:56	WG1583309
Total Xylenes	U		0.000922	0.00681	1	11/27/2020 22:56	WG1583309
(S) Toluene-d8	*106*			*75.0-131*		*11/27/2020 22:56*	WG1583309
(S) 4-Bromofluorobenzene	*92.2*			*67.0-138*		*11/27/2020 22:56*	WG1583309
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*11/27/2020 22:56*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.65	4.09	1	11/29/2020 06:28	WG1583379
C28-C40 Oil Range	0.593	J	0.280	4.09	1	11/29/2020 06:28	WG1583379
(S) o-Terphenyl	*74.9*			*18.0-148*		*11/29/2020 06:28*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.6		1	12/02/2020 03:46	WG1584483

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.42	20.5	1	12/03/2020 03:27	WG1585204

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	0.0355	B J	0.0222	0.102	1	11/30/2020 14:13	WG1584203
(S) a,a,a-Trifluorotoluene(FID)	*99.1*			*77.0-120*		*11/30/2020 14:13*	WG1584203

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000490	0.00105	1	11/27/2020 23:15	WG1583309
Toluene	U		0.00136	0.00524	1	11/27/2020 23:15	WG1583309
Ethylbenzene	U		0.000773	0.00262	1	11/27/2020 23:15	WG1583309
Total Xylenes	U		0.000923	0.00681	1	11/27/2020 23:15	WG1583309
(S) Toluene-d8	*107*			*75.0-131*		*11/27/2020 23:15*	WG1583309
(S) 4-Bromofluorobenzene	*92.4*			*67.0-138*		*11/27/2020 23:15*	WG1583309
(S) 1,2-Dichloroethane-d4	*91.8*			*70.0-130*		*11/27/2020 23:15*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.24	J	1.65	4.10	1	11/29/2020 07:44	WG1583379
C28-C40 Oil Range	7.25		0.281	4.10	1	11/29/2020 07:44	WG1583379
(S) o-Terphenyl	*71.0*			*18.0-148*		*11/29/2020 07:44*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.8		1	12/02/2020 03:46	WG1584483

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	114		9.51	20.7	1	12/03/2020 03:37	WG1585204

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	0.0271	B J	0.0224	0.103	1	11/30/2020 14:33	WG1584203
(S) a,a,a-Trifluorotoluene(FID)	*98.2*			*77.0-120*		*11/30/2020 14:33*	WG1584203

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000498	0.00107	1	11/28/2020 00:14	WG1583309
Toluene	U		0.00139	0.00533	1	11/28/2020 00:14	WG1583309
Ethylbenzene	U		0.000786	0.00267	1	11/28/2020 00:14	WG1583309
Total Xylenes	U		0.000938	0.00693	1	11/28/2020 00:14	WG1583309
(S) Toluene-d8	*100*			*75.0-131*		*11/28/2020 00:14*	WG1583309
(S) 4-Bromofluorobenzene	*117*			*67.0-138*		*11/28/2020 00:14*	WG1583309
(S) 1,2-Dichloroethane-d4	*120*			*70.0-130*		*11/28/2020 00:14*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	6.26		1.66	4.13	1	11/29/2020 07:57	WG1583379
C28-C40 Oil Range	18.9		0.283	4.13	1	11/29/2020 07:57	WG1583379
(S) o-Terphenyl	*66.1*			*18.0-148*		*11/29/2020 07:57*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.3		1	12/02/2020 03:46	WG1584483

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	185		9.36	20.3	1	12/03/2020 03:46	WG1585204

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	0.0255	B J	0.0221	0.102	1	11/30/2020 14:54	WG1584203
(S) a,a,a-Trifluorotoluene(FID)	*96.7*			*77.0-120*		*11/30/2020 14:54*	WG1584203

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000483	0.00103	1	11/28/2020 00:33	WG1583309
Toluene	U		0.00134	0.00517	1	11/28/2020 00:33	WG1583309
Ethylbenzene	U		0.000762	0.00259	1	11/28/2020 00:33	WG1583309
Total Xylenes	U		0.000910	0.00672	1	11/28/2020 00:33	WG1583309
(S) Toluene-d8	*109*			*75.0-131*		*11/28/2020 00:33*	WG1583309
(S) 4-Bromofluorobenzene	*88.2*			*67.0-138*		*11/28/2020 00:33*	WG1583309
(S) 1,2-Dichloroethane-d4	*99.6*			*70.0-130*		*11/28/2020 00:33*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.02	J	1.64	4.07	1	11/29/2020 08:10	WG1583379
C28-C40 Oil Range	4.89		0.279	4.07	1	11/29/2020 08:10	WG1583379
(S) o-Terphenyl	*77.5*			*18.0-148*		*11/29/2020 08:10*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.5		1	12/02/2020 03:37	WG1584485

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	241		9.53	20.7	1	12/03/2020 03:56	WG1585204

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	0.0294	B J	0.0225	0.104	1	11/30/2020 15:15	WG1584203
(S) a,a,a-Trifluorotoluene(FID)	*96.7*			*77.0-120*		*11/30/2020 15:15*	WG1584203

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		0.000501	0.00107	1	11/28/2020 00:52	WG1583309
Toluene	U		0.00139	0.00536	1	11/28/2020 00:52	WG1583309
Ethylbenzene	U		0.000791	0.00268	1	11/28/2020 00:52	WG1583309
Total Xylenes	U		0.000944	0.00697	1	11/28/2020 00:52	WG1583309
(S) Toluene-d8	*104*			*75.0-131*		*11/28/2020 00:52*	WG1583309
(S) 4-Bromofluorobenzene	*90.8*			*67.0-138*		*11/28/2020 00:52*	WG1583309
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*11/28/2020 00:52*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.67	4.15	1	11/29/2020 06:41	WG1583379
C28-C40 Oil Range	0.462	J	0.284	4.15	1	11/29/2020 06:41	WG1583379
(S) o-Terphenyl	*72.0*			*18.0-148*		*11/29/2020 06:41*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.6		1	12/02/2020 03:37	WG1584485

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	61.3		9.62	20.9	1	12/03/2020 04:05	WG1585204

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	0.0287	B J	0.0227	0.105	1	11/30/2020 15:36	WG1584203
(S) a,a,a-Trifluorotoluene(FID)	*94.8*			*77.0-120*		*11/30/2020 15:36*	WG1584203

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000510	0.00109	1	11/28/2020 01:11	WG1583309
Toluene	U		0.00142	0.00546	1	11/28/2020 01:11	WG1583309
Ethylbenzene	U		0.000805	0.00273	1	11/28/2020 01:11	WG1583309
Total Xylenes	U		0.000961	0.00710	1	11/28/2020 01:11	WG1583309
(S) Toluene-d8	*107*			*75.0-131*		*11/28/2020 01:11*	WG1583309
(S) 4-Bromofluorobenzene	*94.9*			*67.0-138*		*11/28/2020 01:11*	WG1583309
(S) 1,2-Dichloroethane-d4	*93.1*			*70.0-130*		*11/28/2020 01:11*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.68	4.18	1	11/29/2020 06:53	WG1583379
C28-C40 Oil Range	U		0.287	4.18	1	11/29/2020 06:53	WG1583379
(S) o-Terphenyl	*75.8*			*18.0-148*		*11/29/2020 06:53*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.6		1	12/02/2020 03:37	WG1584485

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	85.6		9.73	21.2	1	12/03/2020 04:34	WG1585204

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	0.0244	B J	0.0229	0.106	1	11/30/2020 21:47	WG1584203
(S) a,a,a-Trifluorotoluene(FID)	*95.8*			*77.0-120*		*11/30/2020 21:47*	WG1584203

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		0.000521	0.00112	1	11/28/2020 01:30	WG1583309
Toluene	U		0.00145	0.00558	1	11/28/2020 01:30	WG1583309
Ethylbenzene	U		0.000822	0.00279	1	11/28/2020 01:30	WG1583309
Total Xylenes	U		0.000981	0.00725	1	11/28/2020 01:30	WG1583309
(S) Toluene-d8	*106*			*75.0-131*		*11/28/2020 01:30*	WG1583309
(S) 4-Bromofluorobenzene	*91.5*			*67.0-138*		*11/28/2020 01:30*	WG1583309
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*11/28/2020 01:30*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.70	4.23	1	11/29/2020 07:06	WG1583379
C28-C40 Oil Range	U		0.290	4.23	1	11/29/2020 07:06	WG1583379
(S) o-Terphenyl	*81.6*			*18.0-148*		*11/29/2020 07:06*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.7		1	12/02/2020 03:37	WG1584485

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	48.8		9.61	20.9	1	12/03/2020 04:43	WG1585204

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0227	0.104	1	11/30/2020 16:17	WG1584203
(S) a,a,a-Trifluorotoluene(FID)	*95.8*			*77.0-120*		*11/30/2020 16:17*	WG1584203

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		0.000509	0.00109	1	11/28/2020 01:49	WG1583309
Toluene	U		0.00142	0.00545	1	11/28/2020 01:49	WG1583309
Ethylbenzene	U		0.000803	0.00272	1	11/28/2020 01:49	WG1583309
Total Xylenes	U		0.000959	0.00708	1	11/28/2020 01:49	WG1583309
(S) Toluene-d8	*108*			*75.0-131*		*11/28/2020 01:49*	WG1583309
(S) 4-Bromofluorobenzene	*89.3*			*67.0-138*		*11/28/2020 01:49*	WG1583309
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*11/28/2020 01:49*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.68	4.18	1	11/29/2020 07:19	WG1583379
C28-C40 Oil Range	U		0.286	4.18	1	11/29/2020 07:19	WG1583379
(S) o-Terphenyl	*75.2*			*18.0-148*		*11/29/2020 07:19*	WG1583379

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.9		1	12/02/2020 03:37	WG1584485

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.90	21.5	1	12/03/2020 04:53	WG1585204

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		0.0234	0.108	1	11/30/2020 16:38	WG1584203
(S) a,a,a-Trifluorotoluene(FID)	*94.5*			*77.0-120*		*11/30/2020 16:38*	WG1584203

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		0.000538	0.00115	1	11/28/2020 02:08	WG1583309
Toluene	U		0.00150	0.00576	1	11/28/2020 02:08	WG1583309
Ethylbenzene	U		0.000849	0.00288	1	11/28/2020 02:08	WG1583309
Total Xylenes	U		0.00101	0.00749	1	11/28/2020 02:08	WG1583309
(S) Toluene-d8	*108*			*75.0-131*		*11/28/2020 02:08*	WG1583309
(S) 4-Bromofluorobenzene	*94.3*			*67.0-138*		*11/28/2020 02:08*	WG1583309
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*11/28/2020 02:08*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	8.07		1.73	4.30	1	11/29/2020 22:15	WG1583882
C28-C40 Oil Range	14.5		0.295	4.30	1	11/29/2020 22:15	WG1583882
(S) o-Terphenyl	*78.0*			*18.0-148*		*11/29/2020 22:15*	WG1583882

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.2		1	12/02/2020 03:37	WG1584485

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.56	20.8	1	12/03/2020 05:21	WG1585204

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0226	0.104	1	11/30/2020 16:58	WG1584203
(S) a,a,a-Trifluorotoluene(FID)	*95.8*			*77.0-120*		*11/30/2020 16:58*	WG1584203

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		0.000504	0.00108	1	11/28/2020 02:27	WG1583309
Toluene	U		0.00140	0.00540	1	11/28/2020 02:27	WG1583309
Ethylbenzene	U		0.000795	0.00270	1	11/28/2020 02:27	WG1583309
Total Xylenes	U		0.000950	0.00701	1	11/28/2020 02:27	WG1583309
(S) Toluene-d8	*105*			*75.0-131*		*11/28/2020 02:27*	WG1583309
(S) 4-Bromofluorobenzene	*88.9*			*67.0-138*		*11/28/2020 02:27*	WG1583309
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*11/28/2020 02:27*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.63		1.67	4.16	1	11/29/2020 22:28	WG1583882
C28-C40 Oil Range	7.60		0.285	4.16	1	11/29/2020 22:28	WG1583882
(S) o-Terphenyl	*75.7*			*18.0-148*		*11/29/2020 22:28*	WG1583882

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.9		1	12/02/2020 03:37	WG1584485

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.40	20.4	1	12/03/2020 05:31	WG1585204

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	0.0246	B J	0.0222	0.102	1	11/30/2020 17:19	WG1584203
(S) a,a,a-Trifluorotoluene(FID)	*95.7*			*77.0-120*		*11/30/2020 17:19*	WG1584203

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000487	0.00104	1	11/28/2020 02:46	WG1583309
Toluene	U		0.00136	0.00521	1	11/28/2020 02:46	WG1583309
Ethylbenzene	U		0.000769	0.00261	1	11/28/2020 02:46	WG1583309
Total Xylenes	U		0.000918	0.00678	1	11/28/2020 02:46	WG1583309
(S) Toluene-d8	*106*			*75.0-131*		*11/28/2020 02:46*	WG1583309
(S) 4-Bromofluorobenzene	*89.6*			*67.0-138*		*11/28/2020 02:46*	WG1583309
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*11/28/2020 02:46*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	4.16		1.64	4.09	1	11/29/2020 22:03	WG1583882
C28-C40 Oil Range	9.35		0.280	4.09	1	11/29/2020 22:03	WG1583882
(S) o-Terphenyl	*93.2*			*18.0-148*		*11/29/2020 22:03*	WG1583882

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.6		1	12/02/2020 03:37	WG1584485

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	10.2	J	9.43	20.5	1	12/03/2020 05:40	WG1585204

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	0.0278	B J	0.0222	0.102	1	11/30/2020 17:40	WG1584203
(S) a,a,a-Trifluorotoluene(FID)	*96.3*			*77.0-120*		*11/30/2020 17:40*	WG1584203

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000490	0.00105	1	11/28/2020 03:05	WG1583309
Toluene	U		0.00136	0.00525	1	11/28/2020 03:05	WG1583309
Ethylbenzene	U		0.000774	0.00262	1	11/28/2020 03:05	WG1583309
Total Xylenes	U		0.000924	0.00682	1	11/28/2020 03:05	WG1583309
(S) Toluene-d8	*111*			*75.0-131*		*11/28/2020 03:05*	WG1583309
(S) 4-Bromofluorobenzene	*95.4*			*67.0-138*		*11/28/2020 03:05*	WG1583309
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*11/28/2020 03:05*	WG1583309

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.65	4.10	1	11/29/2020 22:41	WG1583882
C28-C40 Oil Range	4.06	B J	0.281	4.10	1	11/29/2020 22:41	WG1583882
(S) o-Terphenyl	*87.6*			*18.0-148*		*11/29/2020 22:41*	WG1583882

Method Blank (MB)

(MB) R3599458-1 12/02/20 03:46

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

L1289009-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1289009-01 12/02/20 03:46 • (DUP) R3599458-3 12/02/20 03:46

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	96.9	97.2	1	0.240		10

Laboratory Control Sample (LCS)

(LCS) R3599458-2 12/02/20 03:46

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

Method Blank (MB)

(MB) R3599456-1 12/02/20 03:37

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

L1289009-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1289009-12 12/02/20 03:37 • (DUP) R3599456-3 12/02/20 03:37

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	95.6	95.7	1	0.169		10

Laboratory Control Sample (LCS)

(LCS) R3599456-2 12/02/20 03:37

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

Method Blank (MB)

(MB) R3599916-1 12/03/20 01:24

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

L1289009-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1289009-04 12/03/20 02:21 • (DUP) R3599916-3 12/03/20 02:30

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

L1289013-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1289013-02 12/03/20 05:59 • (DUP) R3599916-6 12/03/20 06:09

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

Laboratory Control Sample (LCS)

(LCS) R3599916-2 12/03/20 01:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	200	100	90.0-110	

L1289009-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1289009-12 12/03/20 04:05 • (MS) R3599916-4 12/03/20 04:15 • (MSD) R3599916-5 12/03/20 04:24

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	523	61.3	584	584	100	100	1	80.0-120			0.00890	20

Method Blank (MB)

(MB) R3598334-3 11/28/20 21:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0290	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*96.9*			*77.0-120*

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

(LCS) R3598334-1 11/28/20 20:23 • (LCSD) R3598334-2 11/28/20 20:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.80	5.27	105	95.8	72.0-127			9.58	20
(S) a,a,a-Trifluorotoluene(FID)				*113*	*110*	*77.0-120*				

L1288775-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1288775-01 11/28/20 22:32 • (MS) R3598334-4 11/29/20 06:41 • (MSD) R3598334-5 11/29/20 07:01

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	121	1.08	76.3	74.7	62.2	60.8	25	10.0-151			2.12	28
(S) a,a,a-Trifluorotoluene(FID)					*105*	*107*		*77.0-120*				

Method Blank (MB)

(MB) R3598783-2 11/30/20 12:22

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0320	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.6*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3598783-1 11/30/20 11:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.17	112	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*109*	*77.0-120*	

L1289013-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1289013-03 11/30/20 18:42 • (MS) R3598783-3 11/30/20 20:26 • (MSD) R3598783-4 11/30/20 20:46

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	U	4.81	5.26	87.5	95.6	1	10.0-151			8.94	28
(S) a,a,a-Trifluorotoluene(FID)					*103*	*104*		*77.0-120*				

Method Blank (MB)

(MB) R3598478-2 11/27/20 20:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*109*			*75.0-131*
(S) 4-Bromofluorobenzene	*93.3*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*93.1*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3598478-1 11/27/20 19:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.118	94.4	70.0-123	
Ethylbenzene	0.125	0.130	104	74.0-126	
Toluene	0.125	0.114	91.2	75.0-121	
Xylenes, Total	0.375	0.374	99.7	72.0-127	
(S) Toluene-d8			*99.9*	*75.0-131*	
(S) 4-Bromofluorobenzene			*101*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*114*	*70.0-130*	

L1289009-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1289009-02 11/27/20 21:59 • (MS) R3598478-3 11/28/20 03:24 • (MSD) R3598478-4 11/28/20 03:43

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.132	U	0.0802	0.0799	60.6	60.4	1	10.0-149			0.397	37
Ethylbenzene	0.132	U	0.0843	0.0917	63.8	69.4	1	10.0-160			8.41	38
Toluene	0.132	U	0.0844	0.0831	63.8	62.8	1	10.0-156			1.64	38
Xylenes, Total	0.397	U	0.241	0.259	60.8	65.3	1	10.0-160			7.19	38
(S) Toluene-d8					*107*	*106*		*75.0-131*				
(S) 4-Bromofluorobenzene					*91.3*	*94.3*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*104*	*112*		*70.0-130*				

Method Blank (MB)

(MB) R3598182-1 11/29/20 04:09

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	*80.6*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3598182-2 11/29/20 04:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	42.1	84.2	50.0-150	
(S) o-Terphenyl			*88.0*	*18.0-148*	

Method Blank (MB)

(MB) R3598276-1 11/29/20 21:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	0.483	J	0.274	4.00
(S) o-Terphenyl	*91.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3598276-2 11/29/20 21:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	49.6	99.2	50.0-150	
(S) o-Terphenyl			*105*	*18.0-148*	

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

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

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

State Accreditations

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

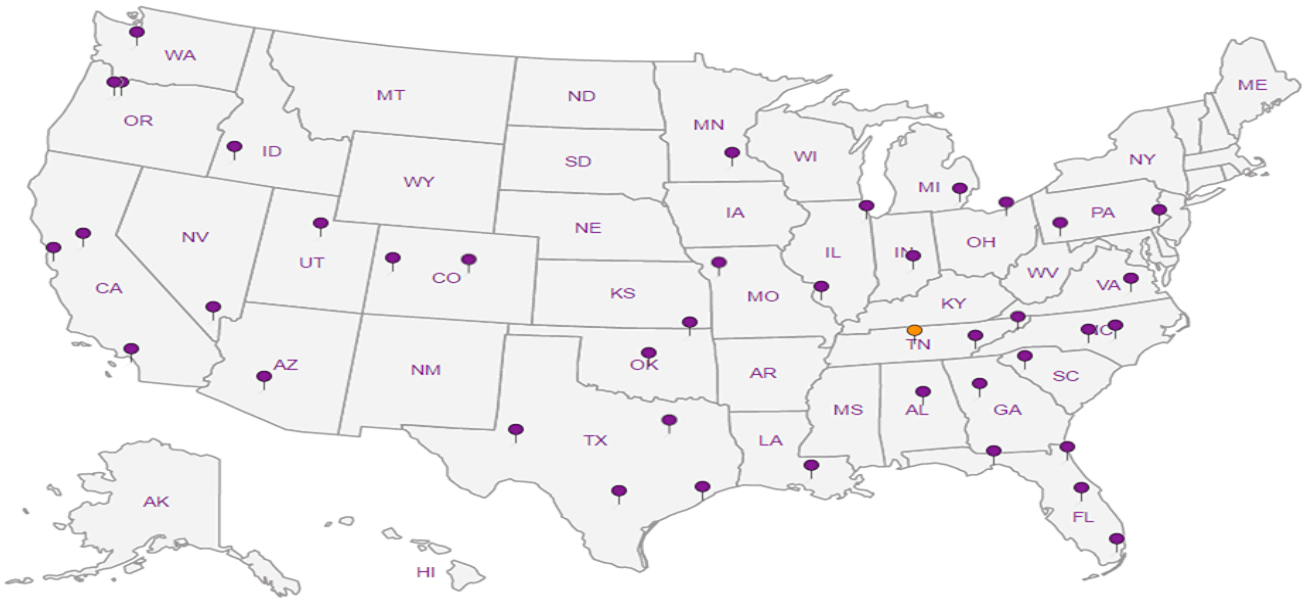
Third Party Federal Accreditations

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

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

Our Locations

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



Analysis Request of Chain of Custody Record

Page : 1 of 2

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	Philmex #15 Release (1RP-3999)	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02334, Task No. 25
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Joe Tyler

Comments: COPTETRA Acctnum

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
L12 89009		YEAR: 2020																															
-01	BH-1 (0'-1')	11/16/20	1000		X				X			1	N	X		X												X					
02	BH-1 (2'-3')	11/16/20	1010		X				X			1	N	X		X												X					
03	BH-1 (4'-5')	11/16/20	1020		X				X			1	N	X		X												X					
04	BH-1 (6'-7')	11/16/20	1030		X				X			1	N	X		X												X					
05	BH-1 (9'-10')	11/16/20	1040		X				X			1	N	X		X												X					
06	BH-1 (14'-15')	11/16/20	1100		X				X			1	N	X		X												X					
07	BH-1 (19'-20')	11/16/20	1130		X				X			1	N	X		X												X					
08	BH-2 (0'-1')	11/16/20	1300		X				X			1	N	X		X												X					
09	BH-2 (2'-3')	11/16/20	1310		X				X			1	N	X		X												X					
10	BH-2 (4'-5')	11/16/20	1320		X				X			1	N	X		X												X					

Relinquished by: Joe Tyler	Date: 11-20-20	Time: 12:00	Received by:	Date: 11-20-20	Time: 12:00
Relinquished by:	Date: 11-20-20	Time: 14:30	Received by: SLOA	Date: 11-20-20	Time: 14:30
Relinquished by:	Date:	Time:	Received by:	Date: 11/21/2020	Time: 09:30

ORIGINAL COPY

LAB USE ONLY

Sample Temperature

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

G095

MPAB 2042=22

RAD SCREEN: <0.5 mR/hr

Analysis Request of Chain of Custody Record

Page 2 of 2

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	Philmex #15 Release (1RP-3999)	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02334, Task No. 25
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Joe Tyler
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
L1289004		YEAR: 2020																															
-11	BH-2 (6'-7')	11/16/20	1330		X				X			1	N	X		X												X					
12	BH-2 (9'-10')	11/16/20	1340		X				X			1	N	X		X												X					
13	BH-2 (14'-15')	11/16/20	1400		X				X			1	N	X		X												X					
14	BH-2 (19'-20')	11/16/20	1430		X				X			1	N	X		X												X					
15	BH-3 (0'-1')	11/16/20	1500		X				X			1	N	X		X												X					
16	BH-3 (3'-4')	11/16/20	1510		X				X			1	N	X		X												X					
17	BH-4 (0'-1')	11/16/20	1530		X				X			1	N	X		X												X					
18	BH-4 (3'-4')	11/16/20	1540		X				X			1	N	X		X												X					

Relinquished by:	Joe Tyler	Date: 11-20-20	Time: 12:00	Received by:	Date: 11-20-20	Time: 12:00
Relinquished by:		Date: 11-20-20	Time: 14:30	Received by:	Date: 11-20-20	Time: 14:30
Relinquished by:		Date:	Time:	Received by:	Date: 11/21/2020	Time: 09:30

ORIGINAL COPY

LAB USE ONLY

Sample Temperature

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

NOAB 2042=22

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	COPTETRA	L1289609
Cooler Received/Opened On: 11 / 21 / 20	Temperature:	2.2
Received By:	Gisely Quiles	
Signature:		

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 16, 2020

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1293361
Samples Received:	12/05/2020
Project Number:	212C-MD-02334 TASK25
Description:	Philmex #15 Release (1RP-3999)

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

Entire Report Reviewed By:

Chris McCord
Project Manager

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

TABLE OF CONTENTS

AH-1 (BH-5) (0'-1') L1293361-01 Solid

Collected by: Joe Tyler
Collected date/time: 12/01/20 14:30
Received date/time: 12/05/20 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1591959	1	12/16/20 04:01	12/16/20 04:09	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1591069	1	12/15/20 13:32	12/16/20 03:57	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1591774	1	12/08/20 18:34	12/14/20 22:15	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1590056	1	12/08/20 17:35	12/10/20 22:26	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1591822	1	12/14/20 23:17	12/15/20 11:34	TJD	Mt. Juliet, TN

AH-2 (BH-6) (0'-1') L1293361-02 Solid

Collected by: Joe Tyler
Collected date/time: 12/01/20 15:00
Received date/time: 12/05/20 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1591959	1	12/16/20 04:01	12/16/20 04:09	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1591069	1	12/15/20 13:32	12/16/20 04:25	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1591774	1	12/08/20 17:35	12/14/20 22:36	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1590056	1	12/08/20 17:35	12/10/20 22:44	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1591822	1	12/14/20 23:17	12/15/20 12:39	TJD	Mt. Juliet, TN

CASE NARRATIVE

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

Chris McCord
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.5		1	12/16/2020 04:09	WG1591959

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.34	20.3	1	12/16/2020 03:57	WG1591069

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0220	0.102	1	12/14/2020 22:15	WG1591774
(S) a,a,a-Trifluorotoluene(FID)	*107*			*77.0-120*		*12/14/2020 22:15*	WG1591774

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000482	0.00103	1	12/10/2020 22:26	WG1590056
Toluene	U		0.00134	0.00516	1	12/10/2020 22:26	WG1590056
Ethylbenzene	U		0.000760	0.00258	1	12/10/2020 22:26	WG1590056
Total Xylenes	0.00132	J	0.000907	0.00670	1	12/10/2020 22:26	WG1590056
(S) Toluene-d8	*101*			*75.0-131*		*12/10/2020 22:26*	WG1590056
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*12/10/2020 22:26*	WG1590056
(S) 1,2-Dichloroethane-d4	*89.6*			*70.0-130*		*12/10/2020 22:26*	WG1590056

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	3.22	J	1.64	4.06	1	12/15/2020 11:34	WG1591822
C28-C40 Oil Range	18.5		0.278	4.06	1	12/15/2020 11:34	WG1591822
(S) o-Terphenyl	*93.3*			*18.0-148*		*12/15/2020 11:34*	WG1591822

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.4		1	12/16/2020 04:09	WG1591959

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.44	20.5	1	12/16/2020 04:25	WG1591069

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0223	0.103	1	12/14/2020 22:36	WG1591774
(S) a,a,a-Trifluorotoluene(FID)	*104*			*77.0-120*		*12/14/2020 22:36*	WG1591774

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000492	0.00105	1	12/10/2020 22:44	WG1590056
Toluene	U		0.00137	0.00526	1	12/10/2020 22:44	WG1590056
Ethylbenzene	U		0.000776	0.00263	1	12/10/2020 22:44	WG1590056
Total Xylenes	0.00108	J	0.000926	0.00684	1	12/10/2020 22:44	WG1590056
(S) Toluene-d8	*103*			*75.0-131*		*12/10/2020 22:44*	WG1590056
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*12/10/2020 22:44*	WG1590056
(S) 1,2-Dichloroethane-d4	*128*			*70.0-130*		*12/10/2020 22:44*	WG1590056

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	49.7		1.65	4.11	1	12/15/2020 12:39	WG1591822
C28-C40 Oil Range	92.7		0.281	4.11	1	12/15/2020 12:39	WG1591822
(S) o-Terphenyl	*88.0*			*18.0-148*		*12/15/2020 12:39*	WG1591822

Method Blank (MB)

(MB) R3604173-1 12/16/20 04:09

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

L1293357-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1293357-16 12/16/20 04:09 • (DUP) R3604173-3 12/16/20 04:09

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	90.3	90.2	1	0.0648		10

Laboratory Control Sample (LCS)

(LCS) R3604173-2 12/16/20 04:09

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

Method Blank (MB)

(MB) R3603970-1 12/15/20 23:47

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

L1293317-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1293317-01 12/16/20 00:35 • (DUP) R3603970-5 12/16/20 00:44

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

L1293361-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1293361-02 12/16/20 04:25 • (DUP) R3603970-6 12/16/20 04:35

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

Laboratory Control Sample (LCS)

(LCS) R3603970-2 12/15/20 23:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	199	99.5	90.0-110	

L1293307-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1293307-01 12/16/20 00:06 • (MS) R3603970-3 12/16/20 00:16 • (MSD) R3603970-4 12/16/20 00:25

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	500	U	463	470	92.7	93.9	1	80.0-120			1.35	20

Method Blank (MB)

(MB) R3603512-1 12/14/20 19:08

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)	*110*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3603512-2 12/14/20 19:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.62	120	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*100*	*77.0-120*	

Method Blank (MB)

(MB) R3602888-2 12/10/20 16:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*116*			*75.0-131*
(S) 4-Bromofluorobenzene	*120*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3602888-1 12/10/20 15:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.109	87.2	70.0-123	
Ethylbenzene	0.125	0.109	87.2	74.0-126	
Toluene	0.125	0.111	88.8	75.0-121	
Xylenes, Total	0.375	0.346	92.3	72.0-127	
(S) Toluene-d8			*99.5*	*75.0-131*	
(S) 4-Bromofluorobenzene			*109*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*102*	*70.0-130*	

Semi-Volatile Organic Compounds (GC) by Method 8015

L1293361-01,02

Method Blank (MB)

(MB) R3603820-1 12/15/20 09:36

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	*86.3*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3603820-2 12/15/20 09:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	43.4	86.8	50.0-150	
(S) o-Terphenyl			*89.0*	*18.0-148*	

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

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

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	KY90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-20-18
Maine	TN00003	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	998093910
Montana	CERT0086	Wyoming	A2LA

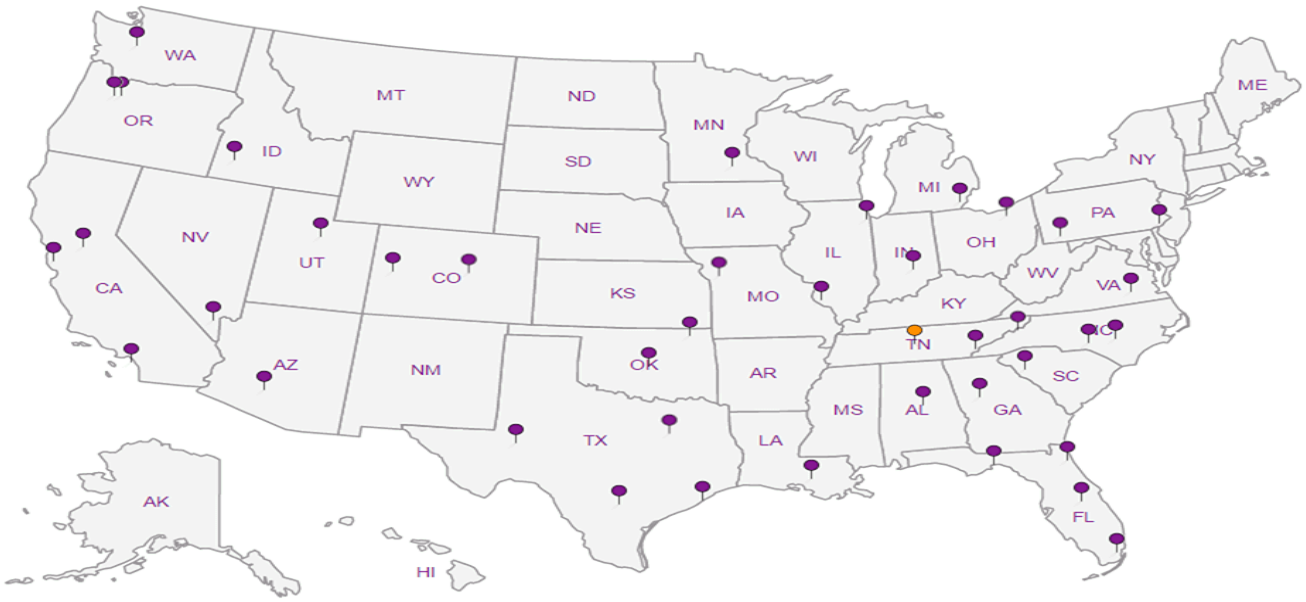
Third Party Federal Accreditations

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

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

Our Locations

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



Analysis Request of Chain of Custody Record

Page : 1 of 1

Tetra Tech, Inc.

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

J224

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	Philmex #15 Release (1RP-3999)	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: **(county, state)**	Lea County, New Mexico	**Project #:**	212C-MD-02334, Task No. 25
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Joe Tyler

Comments: COPTETRA Acctnum

L1293361

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R	HOLD
-01	AH-1 (BH-5) (0'-1')	12/01/20	1430		X				X		1	N	X		X												X					
-02	AH-2 (BH-6) (0'-1')	12/01/20	1500		X				X		1	N	X		X												X					

Sample Receipt Checklist
COC Seal Present/Intact: __Y__N
COC Signed/Accurate: ✓Y__N
Bottles arrive intact: ✓Y__N
Correct bottles used: ✓Y__N
Sufficient volume sent: ✓Y__N
RAD Screen <0.5 mR/hr: ✓Y__N
If Applicable
VOA Zero Headspace: __Y__N
Pres.Correct/Check: __Y__N

Relinquished by: Joe Tyler	Date: 12-04-20	Time: 14:00	Received by:	Date: 12.4.20	Time: 14:00
Relinquished by:	Date: 12.4.20	Time: 16:30	Received by: SWA	Date: 12.4.20	Time: 16:30
Relinquished by:	Date:	Time:	Received by:	Date: 12/5/20	Time: 10:00

ORIGINAL COPY

LAB USE ONLY
Sample Temperature

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

AG KET .9 ÷ .1 = 1.0

RAD SCREEN: <0.5 mR/hr

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

January 26, 2021

Revised Report

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1307335
Samples Received:	01/16/2021
Project Number:	212C-MD-02334 TASK25
Description:	1RP-3999

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

Entire Report Reviewed By: Erica McNeese

Erica McNeese
Project Manager

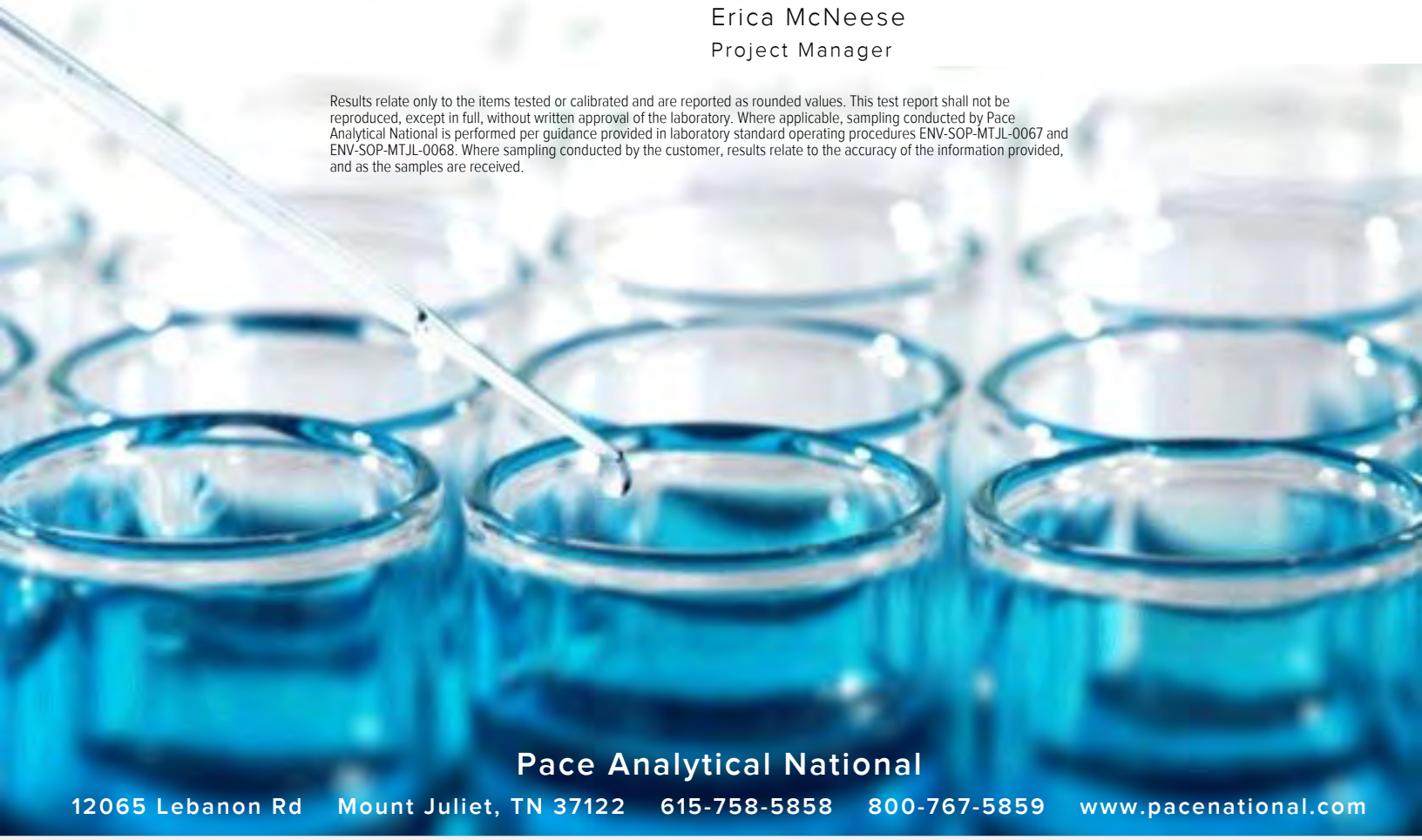


TABLE OF CONTENTS

SAMPLE SUMMARY

AH-3 (0-1') L1307335-01 Solid

Collected by: Adrian Garcia
Collected date/time: 01/14/21 11:00
Received date/time: 01/16/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1607928	1	01/22/21 09:30	01/22/21 09:42	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1606938	1	01/20/21 17:15	01/20/21 19:14	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1609773	1	01/20/21 11:05	01/21/21 23:55	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1609427	1	01/20/21 11:05	01/21/21 18:51	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1609433	1	01/21/21 22:54	01/22/21 14:19	WCR	Mt. Juliet, TN

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

Erica McNeese
Project Manager

Report Revision History

Level II Report - Version 1: 01/25/21 11:36

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.4		1	01/22/2021 09:42	WG1607928

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.95	21.6	1	01/20/2021 19:14	WG1606938

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0235	0.108	1	01/21/2021 23:55	WG1609773
(S) a,a,a-Trifluorotoluene(FID)	*90.8*			*77.0-120*		*01/21/2021 23:55*	WG1609773

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		0.000544	0.00116	1	01/21/2021 18:51	WG1609427
Toluene	U		0.00151	0.00582	1	01/21/2021 18:51	WG1609427
Ethylbenzene	U		0.000858	0.00291	1	01/21/2021 18:51	WG1609427
Total Xylenes	U		0.00102	0.00757	1	01/21/2021 18:51	WG1609427
(S) Toluene-d8	*123*			*75.0-131*		*01/21/2021 18:51*	WG1609427
(S) 4-Bromofluorobenzene	*97.8*			*67.0-138*		*01/21/2021 18:51*	WG1609427
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*01/21/2021 18:51*	WG1609427

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	4.37		1.74	4.33	1	01/22/2021 14:19	WG1609433
C28-C40 Oil Range	15.5		0.296	4.33	1	01/22/2021 14:19	WG1609433
(S) o-Terphenyl	*82.6*			*18.0-148*		*01/22/2021 14:19*	WG1609433

Method Blank (MB)

(MB) R3615478-1 01/22/21 09:42

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

L1307337-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1307337-01 01/22/21 09:42 • (DUP) R3615478-3 01/22/21 09:42

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	94.8	93.4	1	1.46		10

Laboratory Control Sample (LCS)

(LCS) R3615478-2 01/22/21 09:42

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

Method Blank (MB)

(MB) R3614945-1 01/20/21 18:13

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

L1307330-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1307330-01 01/20/21 18:37 • (DUP) R3614945-3 01/20/21 18:46

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

L1308441-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1308441-04 01/20/21 22:24 • (DUP) R3614945-6 01/20/21 22:34

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3614945-2 01/20/21 18:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	203	101	90.0-110	

L1307347-43 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1307347-43 01/20/21 20:40 • (MS) R3614945-4 01/20/21 20:49 • (MSD) R3614945-5 01/20/21 20:59

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	508	U	544	468	107	92.1	1	80.0-120			15.1	20

Method Blank (MB)

(MB) R3615563-2 01/21/21 21:20

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

Laboratory Control Sample (LCS)

(LCS) R3615563-1 01/21/21 20:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.91	107	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*110*	*77.0-120*	

Method Blank (MB)

(MB) R3615080-2 01/21/21 13:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*123*			*75.0-131*
(S) 4-Bromofluorobenzene	*97.4*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3615080-1 01/21/21 12:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.123	98.4	70.0-123	
Ethylbenzene	0.125	0.149	119	74.0-126	
Toluene	0.125	0.143	114	75.0-121	
Xylenes, Total	0.375	0.434	116	72.0-127	
(S) Toluene-d8			*120*	*75.0-131*	
(S) 4-Bromofluorobenzene			*95.4*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*110*	*70.0-130*	

Method Blank (MB)

(MB) R3615428-1 01/22/21 08:39

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	*64.4*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3615428-2 01/22/21 08:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	34.4	68.8	50.0-150	
(S) o-Terphenyl			*74.3*	*18.0-148*	

L1307109-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1307109-01 01/22/21 09:57 • (MS) R3615428-3 01/22/21 10:12 • (MSD) R3615428-4 01/22/21 10:28

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	59.2	U	33.6	30.4	56.8	51.4	1	50.0-150			9.89	20
(S) o-Terphenyl					*59.4*	*47.4*		*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

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

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

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Alabama	40160
ANSI National Accreditation Board	L2239

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

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

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

Nevada	NV009412021-1

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

Texas	T104704328-20-18

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

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	1RP-3999	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02334 Task 25
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Adrian Garcia
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B / BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
L1307335														BTEX 8021B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		
-01	BH 3 (0'-1')	01/14/21	1100		X				X			1	N	X		X											X						

Relinquished by:	Date: 1/15/21	Time: 13:00	Received by:	Date: 1-15-21	Time: 13:00
Relinquished by:	Date: 1-15-21	Time: 16:00	Received by:	Date: 1-15-21	Time: 16:00
Relinquished by:	Date:	Time:	Received by:	Date: 1/16/21	Time: 9:45

ORIGINAL COPY

LAB USE ONLY

Sample Temperature

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

Sample Receipt Checklist

COC Seal Present/Intact:	Y N	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres.Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RAD Screen <0.5 mR/hr:	Y N		

C097

2.7+0=2.7

APPENDIX F
NMSLO Seed Mixture Details

United States Department of Agriculture

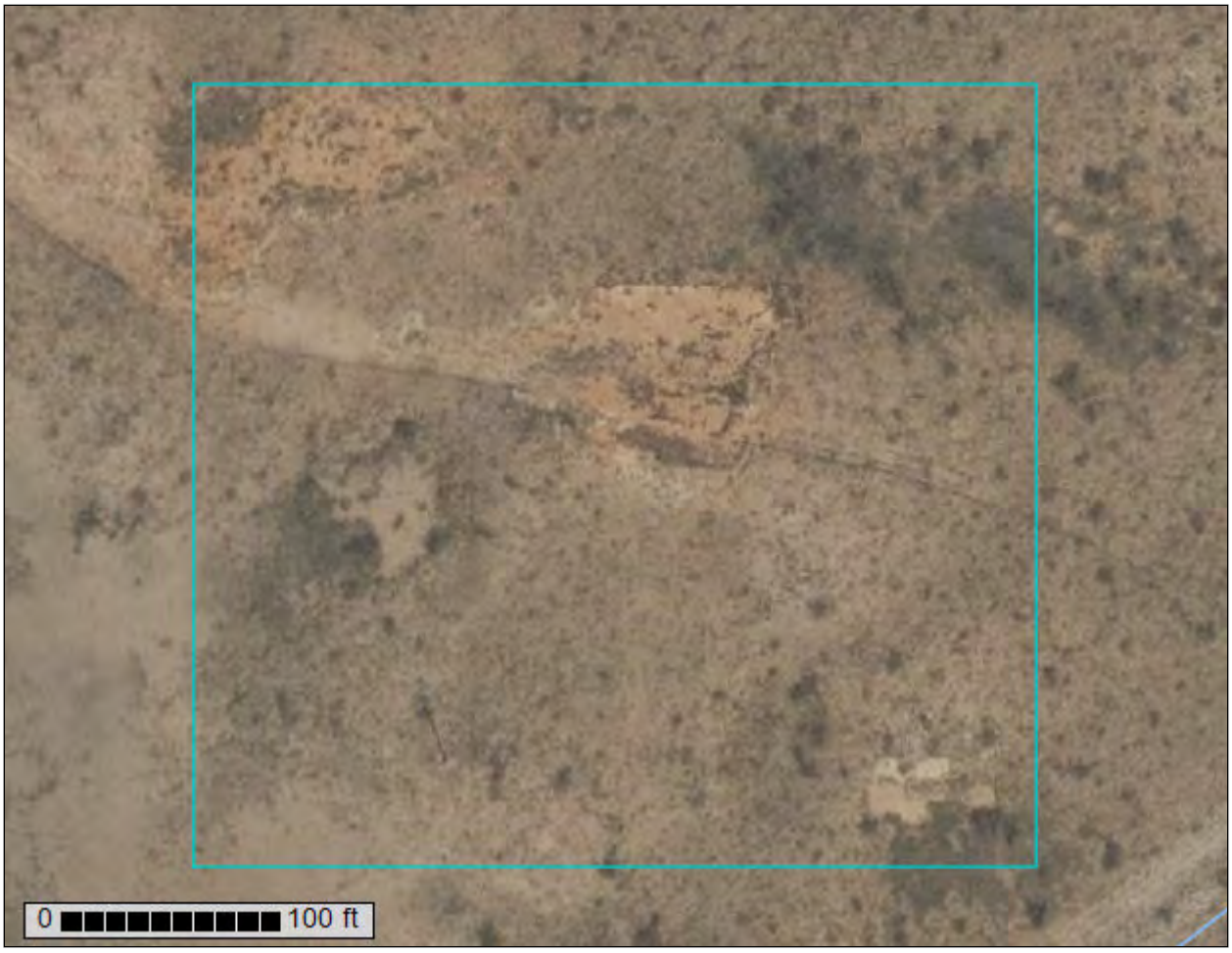
NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Lea County, New Mexico

1RP-3999



December 31, 2020

Preface

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

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

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

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

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

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

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

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

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

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

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KU	Kimbrough-Lea complex, dry, 0 to 3 percent slopes	3.1	100.0%
Totals for Area of Interest		**3.1**	**100.0%**

Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

Lea County, New Mexico

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

Map Unit Setting

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

Map Unit Composition

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

Description of Kimbrough

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Description of Lea

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Douro

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

Kenhill

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

Spraberry

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

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NMSLO Seed Mix Loamy (L)

LOAMY (L) SITES SEED MIXTURE:

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

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

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Operator:	OGRID:
Maverick Permian LLC 1111 Bagby Street Suite 1600 Houston, TX 77002	331199
	Action Number: 207922
	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: Floor confirmation samples must be delineated/excavated to meet closure criteria standards for proven depth to water determination. Sidewall samples must be delineated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. The variance request for the use of a liner is not approved. The variance for an alternative confirmation sampling plan is approved for confirmation sidewall and floor samples representative of no more than approximately 400 SF.	4/21/2023