SITE INFORMATION

Report Type: Work Plan and Deferral Request NRM2003744725

General Site Information:						
Site:	MCA 71 Release					
Company:	ConocoPhillips					
Section, Township and Range	Unit Letter I	Sec. 21	T 17S	R 32 E		
Lease Number:	Associated API No. 30-025-00612					
County:	Lea					
GPS:	32.818243°			-103.765013°		
Surface Owner:	State					
Mineral Owner:	N/A					
Directions:	From Maljamar, NM (US 82/Maljamar Road): Head south on Maljamar Road for 2.75 miles. Turn right on Conoco Road. Head west for 0.13 miles. Turn right onto lease road. Head north for 0.11 miles. Arrive on location.					

Release Data:		
Date Released:	1/21/2020	
Type Release:	Produced Water/Oil	
Source of Contamination:	Wellhead	
Fluid Released:	9.6	
Fluids Recovered:	2.0	

Official Communication:			
Name:	Jenni Fortunato	Christian M. Llull	Shelly Tucker
Company:	Conoco Phillips - RMR	Tetra Tech	BLM
Address:	935 N. Eldridge Pkwy.	8911 North Capital of Texas Hwy	620 E. Greene St
		Building 2, Suite 2310	
City:	Houston, Texas 77079	Austin, Texas	Carlsbad, NM 88220
Phone number:	(832) 486-2477	(512) 338-2861	575.234.5706 - Direct
Fax:			
Email:	jenni.fortunato@conocophillips.com	christian.llull@tetratech.com	stucker@blm.gov

Site Characterization	
Shallowest Depth to Groundwater:	*92' below surface*
Impact to groundwater or surface water:	*No*
Extents within 300 feet of a watercourse:	*No*
Extents within 200 feet of lakebed, sinkhole, or playa lake:	*No*
Extents within 300 feet of an occupied structure:	*No*
Extents within 500 horizontal feet of a private water well:	*No*
Extents within 1000 feet of any water well or spring:	*No*
Extents within incorporated municipal well field:	*No*
Extents within 300 feet of a wetland:	*No*
Extents overlying a subsurface mine:	*No*
Karst Potential:	*Low*
Extents within a 100-year floodplain:	*No*
Impact to areas not on a production site:	*No*

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

TETRA TECH

April 11, 2022

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

Re: Release Characterization
Remediation Work Plan
Deferral Request
ConocoPhillips
MCA 71 Release
Unit Letter I, Section 21, Township 17 South, Range 32 East
Lea County, New Mexico
Incident ID# NRM2003744725

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips to assess a release that occurred at the Maljamar Cooperative Agreement (MCA) 71 well, located in Unit Letter I, Section 21, Township 17 South, Range 32 East, in Lea County, New Mexico (Site). The release occurred at coordinates 32.8182487°, -103.7650299°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report (Appendix A), the release was discovered on January 21, 2020. The release occurred due to a corroded high-pressure line from the wellhead to the murphy switch causing a leak at ground level. The leak resulted in the release of 2.1 barrels (bbls) of crude oil and 7.5 bbls of produced water all on the well pad. During the initial response, 1 bbl of oil and 1 bbl of produced water were recovered. The release notification was received by the New Mexico Oil Conservation District (NMOCD) on February 2, 2020. The NMOCD Incident ID for this release is NRM2003744725.

SITE CHARACTERIZATION

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

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there is one water well in Section 21, Township 17 South, Range 32 East with a depth to groundwater of 92 feet (ft) below ground surface. The site characterization data is included in Appendix B.

REGULATORY FRAMEWORK

Based upon the release footprint and in accordance with Subsection E of 19.15.29.12 NMAC, per 19.15.29.11 NMAC, the site characterization data was used to determine recommended remedial action levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil.

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

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

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

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

INITIAL RESPONSE AND ASSESSMENT ACTIVITIES

The initial response to the release included the removal of approximately 2 ft of impacted material from an approximate 1,500-square ft area of the MCA 71 well pad. Following excavation activities, on February 18, 2020, ConocoPhillips collected soil samples from five (5) locations (SP #9 through SP #13) of the floor inside the excavation extent and eight (8) locations (SW #1 through SW #8) at the sidewalls of the excavation extent. These soil samples were sent to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for TPH by EPA method 8015 modified, BTEX by EPA Method 8021 and chlorides by standard method 4500Cl-B. Sample locations are shown on Figure 3.

The analytical results were compared to the site RRALs. The analytical results associated with sample locations SW #5, SW #6, SW #9 and SW #12 were above Site RRALs for TPH. The analytical results associated with SW #8 exceeded the Site RRAL for chloride. The remainder of analytical results were below Site RRALs. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix C. The analytical results are summarized in Table 1.

Based on the analytical results detailed above, delineation of the release was not achieved during the February 2020 sampling activities. The release extent is adjacent to the MCA 71 wellhead. Due to required accessibility of the well for routine maintenance, COP Operations decided to place a poly liner in the base of the open excavation, The excavation was backfilled to alleviate safety concerns with an open excavation being in close proximity to the wellhead.

ADDITIONAL SITE ASSESSMENT

To achieve horizontal and vertical delineation of the release extent, Tetra Tech personnel conducted soil sampling from May to July of 2020 on behalf of ConocoPhillips. On May 22, 2020, a total of two (2) soil borings (BH-1 and BH-2) were installed within the release extent using an air rotary drilling. Soil borings BH-1 and BH-2 were drilled to depths of 30 feet and 25 feet bgs, respectively, to define the vertical extent of the release.

On July 7 and 23, 2020, a total of six (6) soil borings (AH-1, AH-2, AH-2-2, AH-2-3, AH-3 and AH-4) were installed around the perimeter of the MCA 71 well pad using a hand auger. These hand auger soil borings were drilled to a depth of 3 feet bgs to horizontally delineate the release extent. Boring logs, included as Appendix D, present soil descriptions, sample depths, and field screening data from the May and July 2020 assessment activities.

A total of 27 soil samples were collected from the 8 boring locations from within and around the release area. Selected samples were field screened and submitted to Pace Analytical National Center for Testing

& Innovation (Pace) in Nashville, Tennessee to be analyzed for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix C. Soil boring locations are shown on Figure 4. Photographic documentation of the initial release extent and the additional site inspection is included in Appendix E.

Analytical results associated with BH-1 (14-15'), BH-1 (19-20') were above the Site RRAL for TPH. All other analytical associated with BH-1 and BH-2 were below Site RRALs for chloride, BTEX and TPH. Following the May 2020 assessment activities, the release is considered vertically delineated.

All analytical results from the July 2020 sampling events were below Site RRALs. However, analytical results for AH-2 (2-3') and AH-2-2 (0-1'), located in the pad-adjacent pasture, were above reclamation requirements for TPH. All other analytical results from the July 2020 sampling event were below reclamation requirements for chloride, TPH and BTEX. Following the July 2020 assessment activities, the release is considered horizontally delineated. The analytical results from the May and July 2020 sampling events are summarized in Table 2.

ADDITIONAL DELINEATION

Tetra Tech personnel remobilized to the site on May 10, 2021 to further characterize the release extent and flow path. A total of five (5) soil borings (AH-21-1, AH-21-2, AH-21-3, AH-21-4, and AH-21-5) were installed within and around the release footprint using a hand auger to a depth of 3 feet bgs. Selected samples were field screened and submitted to Pace to be analyzed for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B.

Analytical results associated with samples AH-21-1 (0-1') and AH-21-4 (2-3') were above Site RRALs for TPH. All other analytical results associated with the May 2021 assessment activities were below Site RRALs. Additionally, sample results for AH-21-2 and AH-21-3 were below reclamation requirements for chloride, TPH and BTEX which provides further horizontal delineation of the release extent to the east and south, respectively. The analytical results from the May 2021 sampling event are summarized in Table 2.

REMEDIATION WORK PLAN

Based on the analytical results, ConocoPhillips proposes to remove the remaining impacted material as shown on Figure 5. Impacted soils will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to a maximum depth of 4 feet below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the RRALs. The eastern portion of the release extent, located within the well pad extent, will be excavated to 2 feet bgs, and the western portion of the release footprint will be excavated to a depth of 4 feet bgs. The northern-central area of the release extent that abuts the pumping unit will be hand-dug to a depth of 4 feet or the maximum extent practicable and heavy equipment will come no more than 4 ft from any pressurized lines.

Although the analytical results from boring location AH-21-2 were below reclamation requirements and provide an eastern bound for the release extent, the area in the vicinity of boring locations AH-2 and AH-2-2 will be excavated to depths of 3 feet bgs and 1 foot bgs, respectively.

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

ALTERNATIVE CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, ConocoPhillips proposes the following alternative confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 6. Ten (10) confirmation floor samples and thirteen (13) confirmation

sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses a surface area of approximately 3,920 square feet.

These confirmation sidewall and floor samples will be representative of no more than approximately 500 square feet of excavated area. Confirmation samples will be sent to an accredited laboratory for analysis of TPH (Method 8015 modified), BTEX (Method 8260B), and chloride (USEPA Method 300.0).

DEFERRAL REQUEST

Based on the results of the site assessment, the analytical results from the deeper intervals in BH-1 exceed the proposed RRALs for the site. ConocoPhillips respectfully requests that NMOCD will consider delaying additional remediation activities at the Site until the end of life of the well. This contamination is located in close proximity to an active production well at depths of approximately 14 to 20 feet bgs. The approximate areal extent of this identified subsurface impact proposed for deferral is indicated on Figure 5.

At the time of abandonment, retrofit, or inactivity, remediation will be completed in addition to reclamation. The current release footprint is fully delineated. The contamination is located in areas immediately under and around the well and production equipment and does not cause an imminent risk to human health, the environment, or groundwater. Final remediation and reclamation shall take place in accordance with 19.15.29.12 and 19.15.29.13 NMAC once the Site is no longer being used for oil and gas operations.

SITE RECLAMATION AND RESTORATION PLAN

The backfilled areas in the pasture will be seeded in Spring 2022 (first favorable growing season) to aid in revegetation. Based on the soils at the site, the New Mexico State Land Office (NMSLO) Sandy Loam (SL) Sites Seed Mixture will be used for seeding and will be planted in the amount specified in the pounds pure live seed (PLS) per acre. The seed mixture will be spread by a drill equipped with a depth regulator or a hand-held broadcaster and raked. If a hand-held broadcaster is used for dispersal, the pounds pure live seed per acre will be doubled.

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

CONCLUSION

ConocoPhillips proposes to begin remediation activities at the Site within 120 days of NMOCD plan approval. Upon completion of the proposed work, a final closure report detailing the remediation activities and the results of the confirmation sampling will be submitted to NMOCD.

Based on the results of the site assessment and release delineation, COP believes the current release to be sufficiently delineated and the contamination proposed to remain in place at depth (in the vicinity of BH-1 at 14-20’ bgs) does not cause an imminent risk to human health, the environment, or groundwater. Final remediation and reclamation of the lease pad shall take place in accordance with 19.15.29.12 and 19.15.29.13 NMAC once the Site is no longer being used for oil and gas operations.

ConocoPhillips respectfully requests that NMOCD will consider delaying additional remediation activities of the subsurface impact adjacent to the well casing until the end of life of the well. At time of abandonment, retrofit, or inactivity, remediation will be completed in addition to reclamation. Based on the above, ConocoPhillips requests deferral for this impacted area in the subsurface, below the lease pad. The completed C-141 forms are enclosed in Appendix A.

If you have any questions or comments concerning the assessment or remediation activities for this site, please call us at either (512) 217-7254 or (512) 338-2861.

Sincerely,
Tetra Tech, Inc.

Ryan C. Dickerson
Project Manager

Christian M, Llull, P.G.
Program Manager

cc:
Ms. Jenni Fortunato, RMR – ConocoPhillips
Mr. Charles Beauvais, GPBU - ConocoPhillips

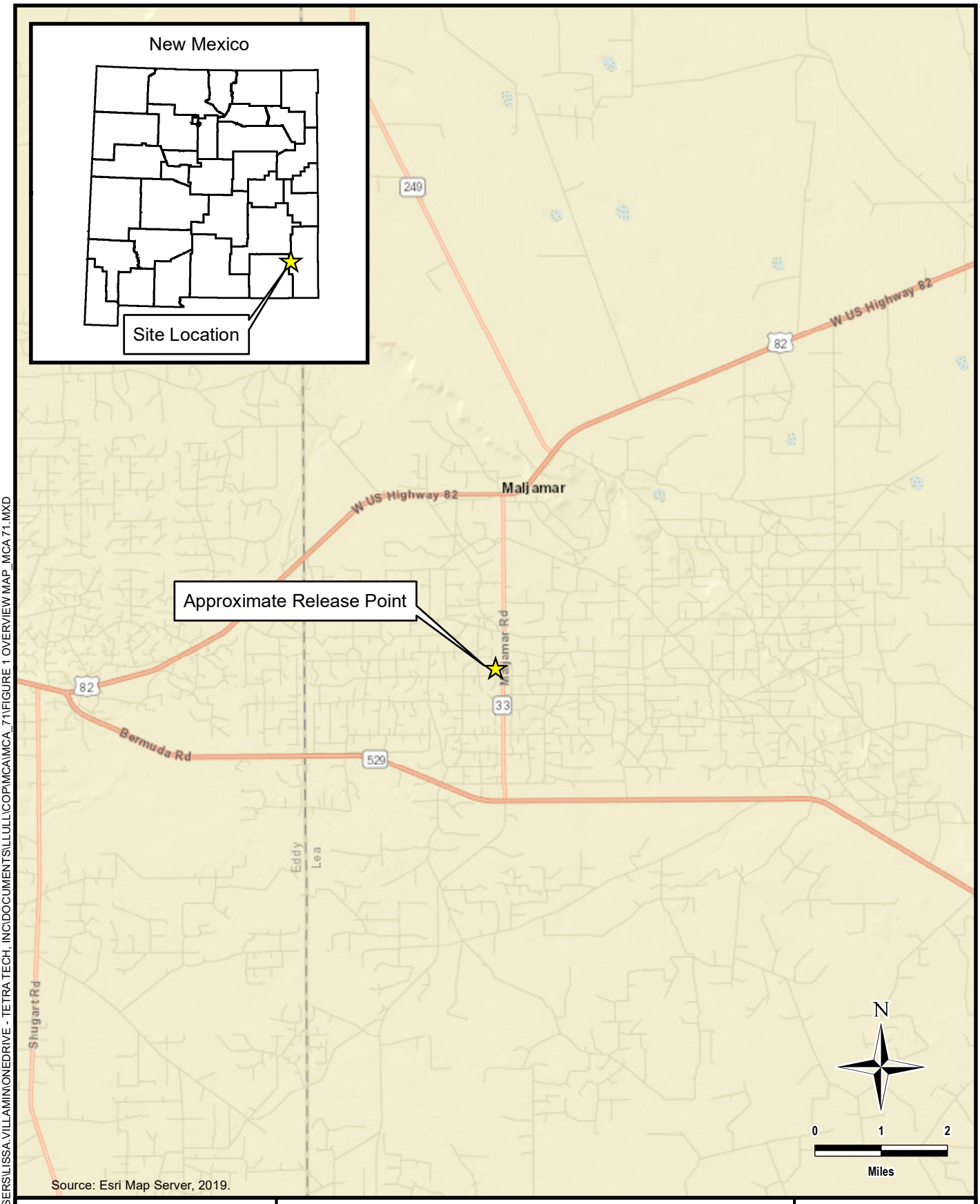
LIST OF ATTACHMENTS

Figures:

Tables:

Appendices:

FIGURES



Source: Esri Map Server, 2019.

DOCUMENT PATH: C:\USERS\LISSA.VILLAMIN\ONEDRIVE - TETRA TECH, INC\DOCUMENTS\LLULL\COP\MCA\MCA_71\FIGURE 1 OVERVIEW MAP_MCA 71.MXD

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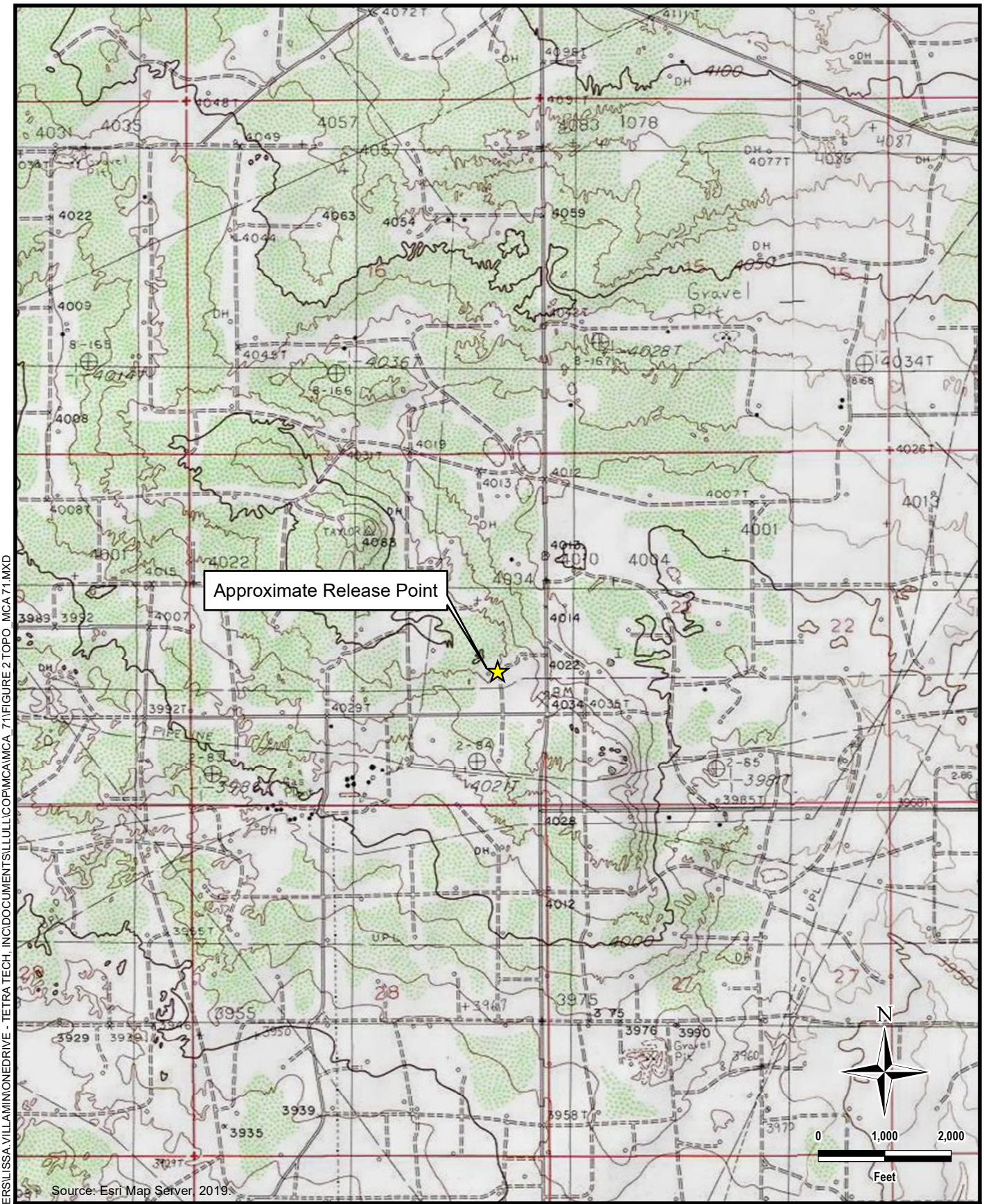
CONOCOPHILLIPS

NRM2003744725
(32.818243°, -103.765013°)
LEA COUNTY, NEW MEXICO

MCA 71 RELEASE OVERVIEW MAP

PROJECT NO.:	212C-MD-02163
DATE:	FEBRUARY 22, 2022
DESIGNED BY:	LMV

Figure No.
1



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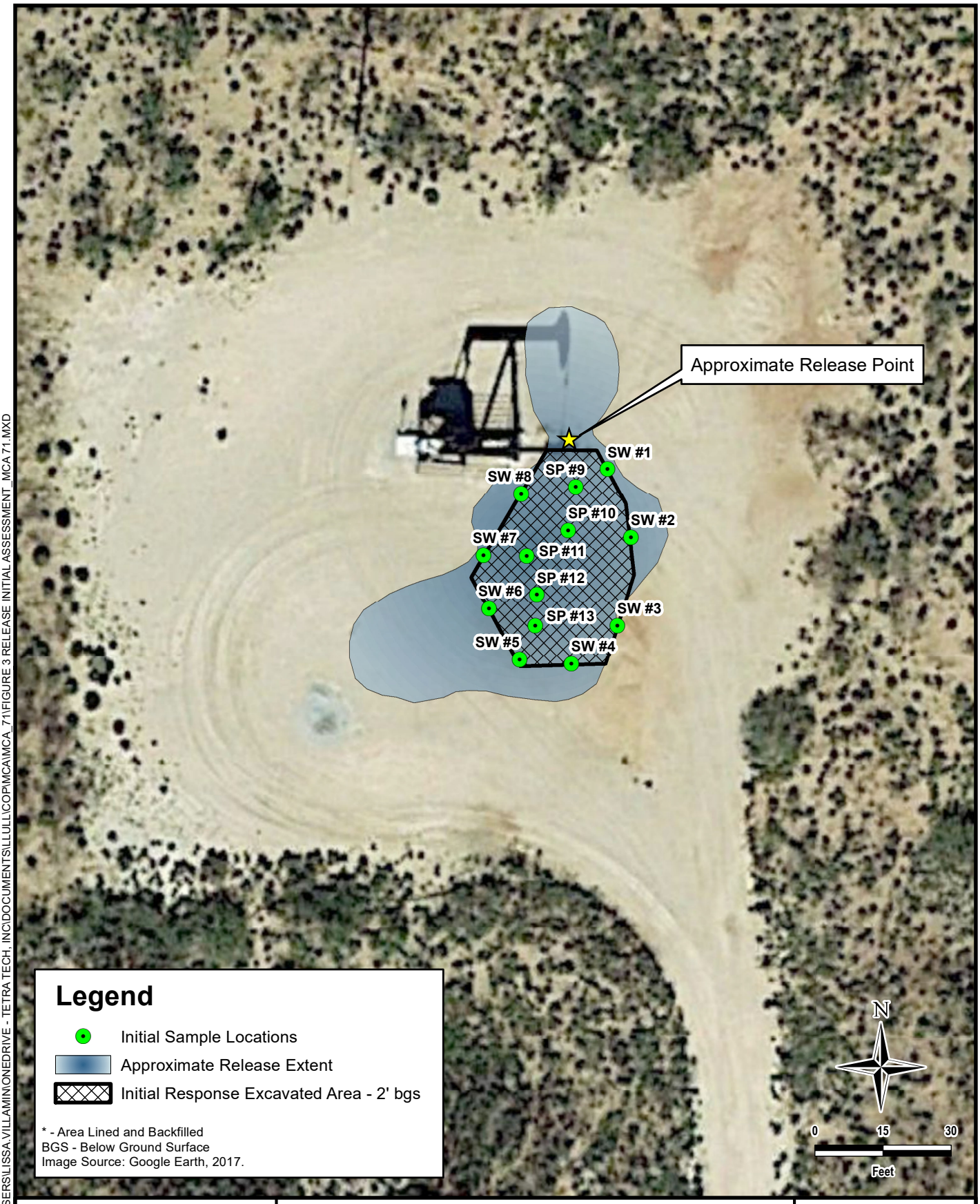
NRM2003744725
(32.818243°, -103.765013°)
LEA COUNTY, NEW MEXICO

MCA 71 RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02163
DATE:	FEBRUARY 22, 2022
DESIGNED BY:	LMV

Figure No.
2



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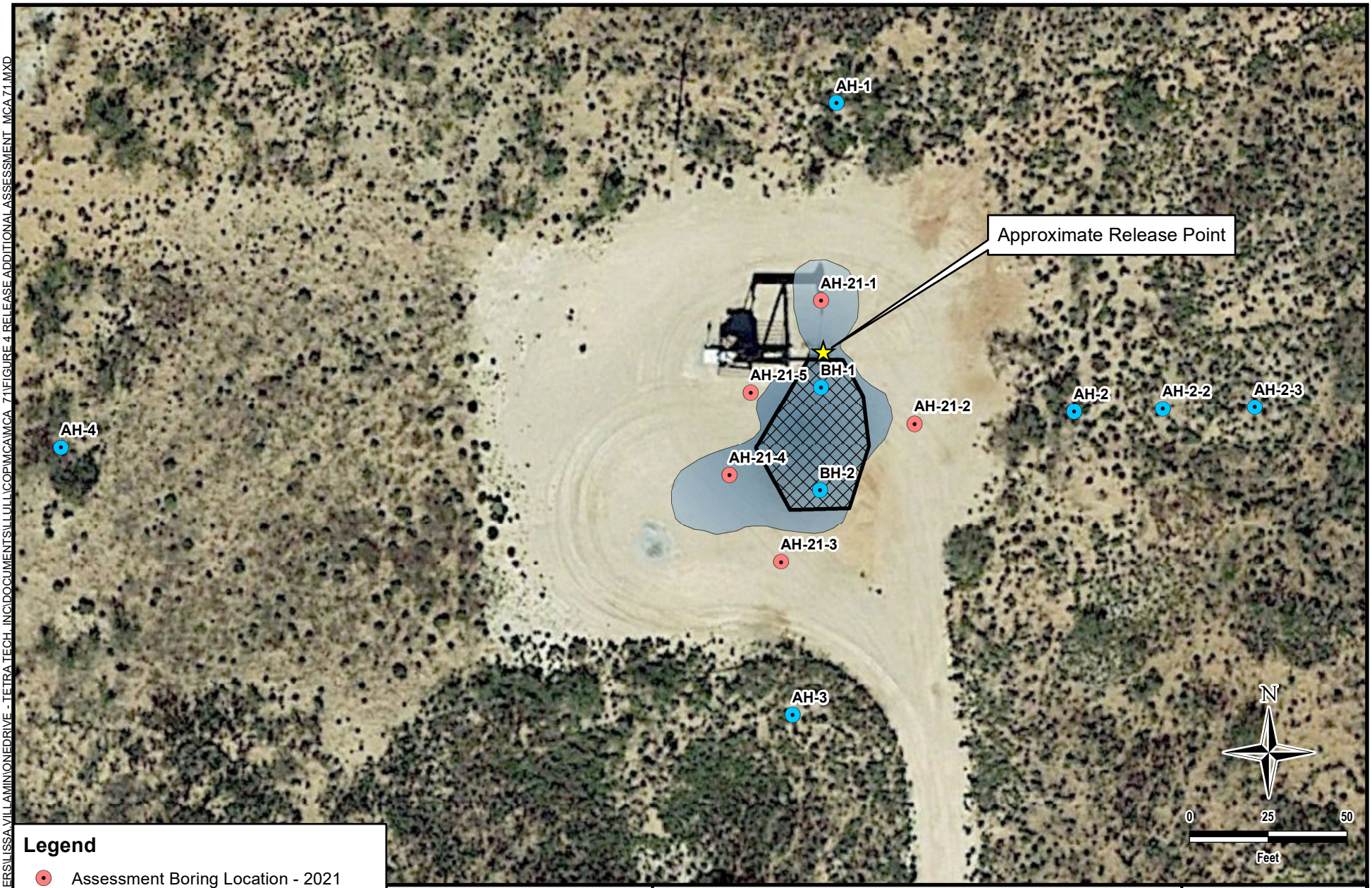
NRM2003744725
(32.818243°, -103.765013°)
LEA COUNTY, NEW MEXICO

MCA 71 RELEASE
APPROXIMATE RELEASE EXTENT AND INITIAL ASSESSMENT MAP

PROJECT NO.:	212C-MD-02163
DATE:	FEBRUARY 22, 2022
DESIGNED BY:	LMV

Figure No.
3



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Legend

- Assessment Boring Location - 2021
- Assessment Boring Location - 2020
- Approximate Release Extent
- Initial Response Excavated Area - 2' bgs

BGS - Below Ground Surface
Image Source: Google Earth, 2017.

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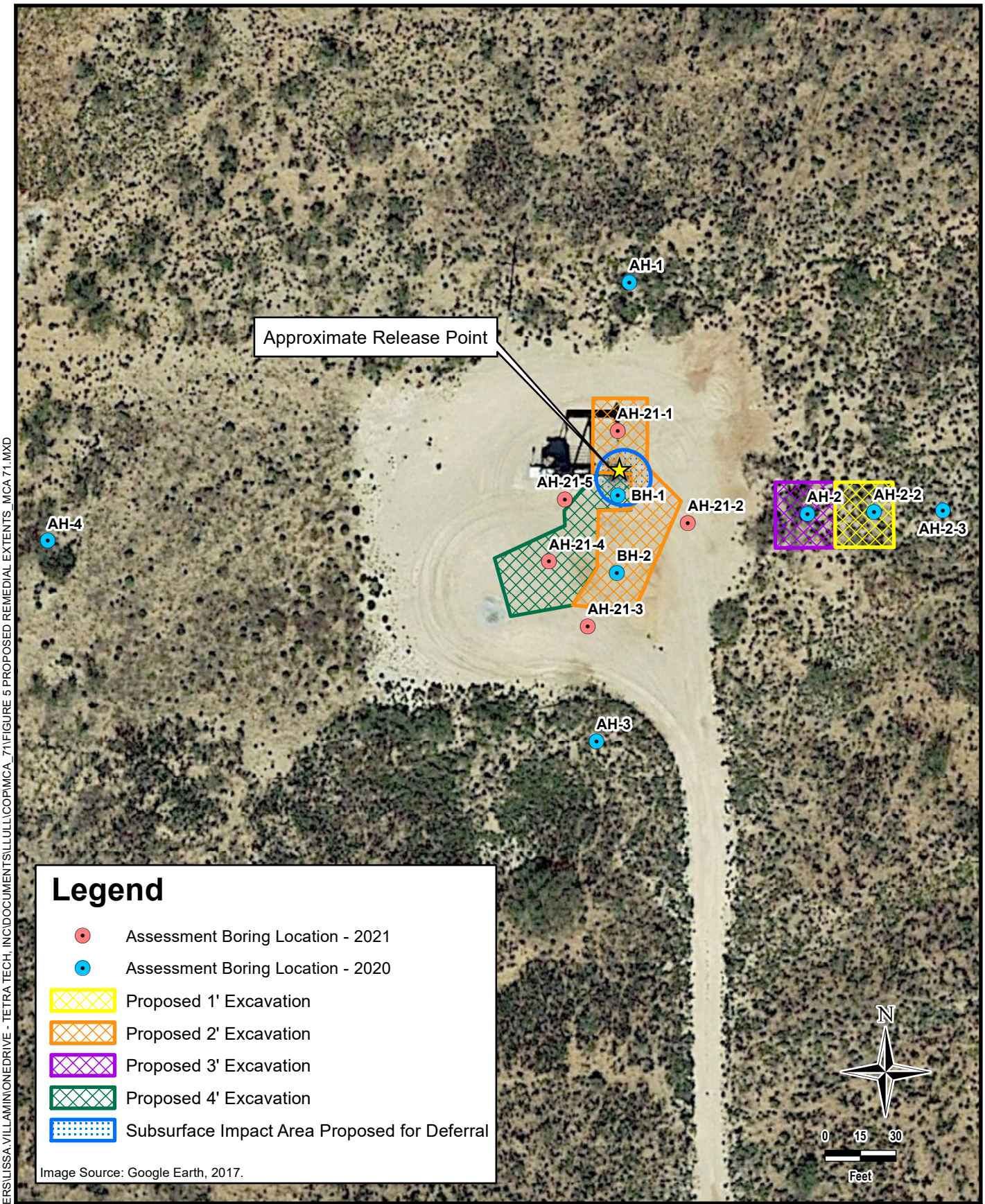
CONOCOPHILLIPS

NRM2003744725
(32.818243°, -103.765013°)
LEA COUNTY, NEW MEXICO

MCA 71 RELEASE
ADDITIONAL ASSESSMENT AND DELINEATION

PROJECT NO.:	212C-MD-02163
DATE:	FEBRUARY 22, 2022
DESIGNED BY:	LMV

Figure No.
4



DOCUMENT PATH: C:\USERS\LISSA.VILLAMIN\ONEDRIVE - TETRA TECH, INC\DOCUMENTS\LLULL\COP\MCA_71\FIGURE 5 PROPOSED REMEDIAL EXTENTS_MCA 71.MXD

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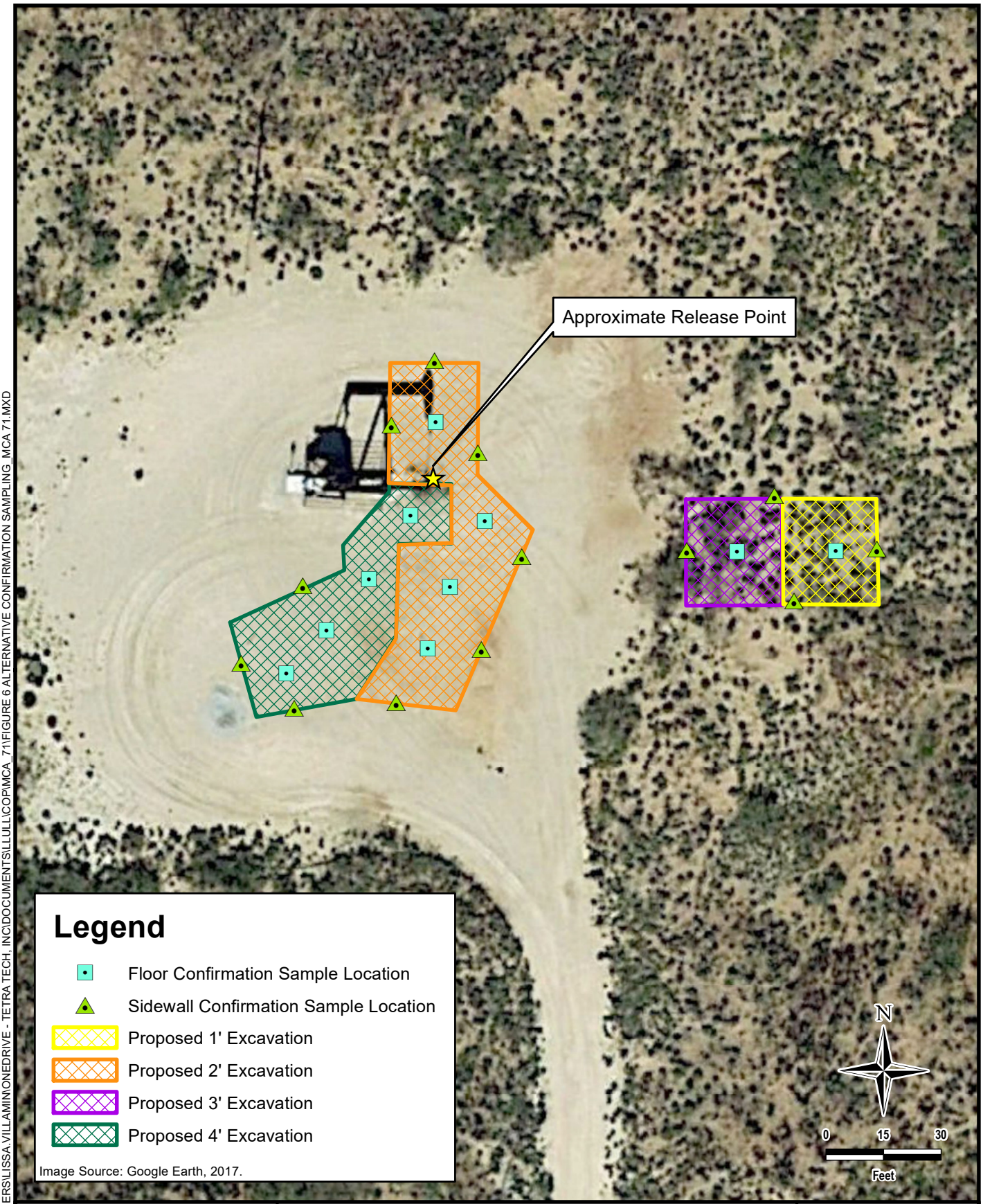
MCA 71 RELEASE
PROPOSED REMEDIAL EXTENTS

PROJECT NO.:	212C-MD-02163
DATE:	APRIL 08, 2022
DESIGNED BY:	LMV

Figure No.
5



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MCA 71 RELEASE
ALTERNATIVE CONFIRMATION SAMPLING PLAN

PROJECT NO.:	212C-MD-02163
DATE:	MARCH 01, 2022
DESIGNED BY:	LMV

Figure No.
6

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESSMENT - NRM2003744725
CONOCOPHILLIPS
MCA 71 RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Chloride[1]		BTEX[2]										TPH[3]						
				Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH
														C_6 - C_{10}		>C_{10} - C_{28}		>C_{28} - C_{36}		(GRO+DRO+EXT DRO)
		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
SW #1	2/18/2020	1250		< 0.050		< 0.050		0.064		< 0.150		-		< 10.0		168		39.1		207
SW #2	2/18/2020	144		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		434		236		670
SW #3	2/18/2020	528		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		15.1		< 10.0		15.1
SW #4	2/18/2020	3000		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		863		387		1250
SW #5	2/18/2020	3200		< 0.050		< 0.050		< 0.050		< 0.150		-		< 50.0		1130		301		***1431***
SW #6	2/18/2020	160		< 0.050		< 0.050		0.067		< 0.150		-		< 50.0		5370		2210		***7580***
SW #7	2/18/2020	512		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		144		60.4		204
SW #8	2/18/2020	***13600***		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		360		167		527
SP #9	2/18/2020	624		< 0.050		< 0.050		< 0.050		< 0.150		-		< 100		6310		1870		***8180***
SP #10	2/18/2020	368		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		239		166		405
SP #11	2/18/2020	3840		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		< 10.0		< 10.0		-
SP #12	2/18/2020	2120		< 0.050		< 0.050		< 0.050		< 0.150		-		18.7		1690		384		***2093***
SP #13	2/18/2020	96.0		< 0.050		< 0.050		< 0.050		< 0.150		-		< 10.0		198		156		354

NOTES:

Bold and italicized values indicate exceedance of proposed RRALs

mg/kg Milligrams per kilogram

TPH Total Petroleum Hydrocarbons

GRO Gasoline range organics

DRO Diesel range organics

1 Method SM4500Cl-B

2 Method 8260B

3 Method 8015M

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT - NRM2003744725
CONOCOPHILLIPS
MCA 71 RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Field Screening Results		Chloride[1]		BTEX[2]										TPH[3]								
			Chloride	PID			Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO[4] C_3 - C_{10}		DRO C_{10} - C_{28}		ORO C_{28} - C_{40}		Total TPH (GRO+DRO+ORO)	
		ft. bgs	ppm		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	
BH-1	5/22/2020	0-1	-	5.8	675		< 0.00106		< 0.00528		0.00109	J	0.00375	J	0.00484		< 0.106		10.1		21.7		31.8	
		2-3	-	5.5	678		< 0.00106		< 0.00530		< 0.00265		< 0.00689		-		< 0.106		15.7		46.2		61.9	
		4-5	-	10.0	235		< 0.00103		< 0.00517		< 0.00258		< 0.00672		-		< 0.103		35.4		67.3		103	
		6-7	1500	11.2	1700		< 0.00109		< 0.00546		< 0.00273		< 0.00710		-		< 0.109		80.5		118		199	
		9-10	1100	18.1	1190		< 0.00112		< 0.00562		< 0.00281		< 0.00731		-		< 0.112		44.0		76.8		121	
		14-15	-	394	445		< 0.00107		< 0.00533		0.0440		0.0292		0.0732		2.25		4360		2830		***7192***	
		19-20	-	564	784		< 0.00118		0.00385	J	0.923		0.404		1.33		74.4		10300		5180		***15554***	
		24-25	539	193	579		< 0.00114		< 0.00568		0.00642		0.00464	J	0.0111		0.257	B	344		260		604	
		29-30	223	119	94.3		< 0.00112		< 0.00561		< 0.00281		< 0.00729		-		< 0.112		145		114		259	
BH-2	5/22/2020	0-1	-	4.7	237		< 0.00117		< 0.00587		< 0.00293		< 0.00763		-		< 0.117		57.4		99.9		157	
		2-3	-	5.0	164		< 0.00102		< 0.00509		< 0.00255		< 0.00662		-		< 0.102		4.53		10.9		15.4	
		4-5	721	3.2	250		< 0.00125		< 0.00625		< 0.00313		< 0.00813		-		< 0.125		< 5.00		1.43	J	1.43	
		6-7	-	3.5	4660		< 0.00111		< 0.00553		< 0.00276		< 0.00719		-		< 0.111		2.09	J	4.21	J	6.30	
		9-10	1340	3.7	1740		< 0.00111		< 0.00557		< 0.00279		< 0.00725		-		0.0310	J	2.92	J	2.60	J	5.55	
		14-15	-	10.4	617		< 0.00105		< 0.00527		< 0.00263		< 0.00685		-		< 0.105		5.45		7.32		12.8	
		19-20	1000	11.2	1280		< 0.00117		< 0.00587		< 0.00293		< 0.00763		-		0.0478	B J	< 4.70		< 4.70		0.0478	
		24-25	329	7.4	196		< 0.00110		< 0.00549		< 0.00275		< 0.00714		-		0.0430	B J	8.77		7.54		16.4	
AH-1	7/7/2020	0-1	80.4	0.0	< 25.4		0.00111	J	< 0.00769		< 0.00384		0.00158	J	0.00269		< 0.127		18.0		46.3		64.3	
		2-3	67.1	0.0	< 24.5		0.000836	J	< 0.00727		< 0.00363		< 0.00945		0.000836		< 0.123		10.3		36.4		46.7	
AH-2	7/7/2020	0-1	153.4	0.0	< 20.4		< 0.00102		< 0.00510		< 0.00255		< 0.00664		-		< 0.102		3.80	J	25.0		28.8	
		2-3	167.8	0.0	10.2	J	0.000507	J	< 0.00507		< 0.00253		< 0.00659		0.000507		< 0.101		55.1		158		***213***	
AH-2-2	7/23/2020	0-1	50.2	3.2	< 21.7		< 0.00108		< 0.00541		< 0.00271		0.00119	J	0.00119		< 0.108		47.6		178		***226***	
		2-3	34.8	4.1	< 24.6		< 0.00146		< 0.00728		< 0.00364		< 0.00946		-		< 0.123		4.54	J	14.9		19.4	
AH-2-3	7/23/2020	0-1	68.6	3.7	11.3	J	< 0.00104		< 0.00521		< 0.00261		< 0.00678		-		< 0.104		5.41		20.2		25.6	
		2-3	57.8	5.4	< 21.5		< 0.00108		< 0.00538		< 0.00269		0.000995	J	0.000995		< 0.108		6.01		25.4		31.4	
AH-3	7/7/2020	0-1	152.7	0.0	10.5	J	0.000933	J	< 0.00505		< 0.00252		0.00106	J	0.00199		< 0.101		6.83		36.7		43.5	
		2-3	138.9	0.0	< 20.1		0.000906	J	< 0.00504		< 0.00252		< 0.00655		0.000906		< 0.101		16.9	J	59.1		76.0	
AH-4	7/7/2020	0-1	136.9	0.0	< 20.2		0.000531	J	< 0.00506		< 0.00253		0.000936	J	0.001467		< 0.101		6.74		45.4		52.1	
		2-3	127.4	0.0	< 20.3		< 0.00102		< 0.00508		< 0.00254		< 0.00660		-		< 0.102		6.29		36.9		43.2	
AH-21-1	5/10/2021	0-1	284	-	345		< 0.00116		< 0.00580		< 0.00290		< 0.00754		-		< 0.108		736		2180		***2916***	
		2-3	291	-	278		< 0.00146		< 0.00732		< 0.00366		< 0.00951		-		< 0.123		185		384		569	
AH-21-2	5/10/2021	0-1	75	-	28.4		< 0.00143		< 0.00716		< 0.00358		< 0.00931		-		< 0.122		< 4.86		0.670	J	0.670	
		2-3	123	-	13.0	J	< 0.00147		< 0.00734		< 0.00367		< 0.00954		-		< 0.123		< 4.93		< 4.93		-	
AH-21-3	5/10/2021	0-1	377	-	28.4		< 0.00145		< 0.00726		< 0.00363		< 0.00944		-		< 0.123		5.63		26.5		32.1	
		2-3	133	-	26.9		< 0.00143		< 0.00713		< 0.00357		< 0.00927		-		< 0.121		< 4.85		< 4.85		-	
AH-21-4	5/10/2021	0-1	731	-	512		< 0.00138		< 0.00689		< 0.00344		< 0.00896		-		< 0.119		776		1710		2486	
		2-3	273	-	117		< 0.00147		< 0.00737		< 0.00369		< 0.00958		-		0.0449	J	1710		2740		***4450***	
AH-21-5	5/10/2021	0-1	553	-	411		< 0.00148		< 0.00742		0.00533		0.00837	J	0.0137		< 0.124		573		1550		2123	

NOTES:

ft. Feet
bgs Below ground surface
ppm Parts per million
mg/kg Milligrams per kilogram
TPH Total Petroleum Hydrocarbons
GRO Gasoline range organics
DRO Diesel range organics
ORO Oil range organics

Bold and italicized values indicate exceedance of proposed RRALs

Shaded rows indicate depth intervals proposed for excavation and remediation

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

QUALIFIERS:

B The same analyte is found in the associated blank.

APPENDIX A
C-141 Forms

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NRM2003744725
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.8182487 Longitude -103.7650299
(NAD 83 in decimal degrees to 5 decimal places)

Site Name MCA 71	Site Type Wellhead
Date Release Discovered 01/21/20	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
I	21	17S	32E	LEA

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

Nature and Volume of Release

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

☑ Crude Oil	Volume Released (bbls) 2.1	Volume Recovered (bbls) 1
☑ Produced Water	Volume Released (bbls) 7.50	Volume Recovered (bbls) 1
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

High pressure line from wellhead to murphy switch corroded causing a leak at ground level. Area of spill did not leave well pad

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM2003744725
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☑ No	If YES, for what reason(s) does the responsible party consider this a major release? <25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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

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

Printed Name: Gustavo Fejervary
Title: Environmental Coordinator
Signature:
Date: 2/2/20
email: g.fejervary@cop.com
Telephone: 432/210-7037

OCD Only

Received by: Ramona Marcus
Date: 2/6/2020

L48 Spill Volume Estimate Form

Facility Name & Number:	MCA 71
Asset Area:	Maljamar
Release Discovery Date & Time:	1/21/2020
Release Type:	Oil Mixture
Provide any known details about the event:	Line to pressure switch failed

Spill Calculation - Subsurface Spill - Rectangle

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

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	25.0	20.0	1.00	10.50%	7.417	0.779	14.00%	0.109	0.670
Rectangle B	8.0	17.0	0.50	10.50%	1.009	0.106	14.00%	0.015	0.091
Rectangle C	8.0	13.0	0.50	10.50%	0.771	0.081	14.00%	0.011	0.070
Rectangle D	15.0	20.0	1.50	10.50%	6.675	0.701	14.00%	0.098	0.603
Rectangle E	38.0	50.0	2.00	10.50%	56.367	5.919	14.00%	0.829	5.090
Rectangle F					0.000	0.000		0.000	0.000
Rectangle G					0.000	0.000		0.000	0.000
Rectangle H					0.000	0.000		0.000	0.000
Rectangle I					0.000	0.000		0.000	0.000
Rectangle J					0.000	0.000		0.000	0.000
					Total Volume Release:	7.585		1.062	6.523

State of New Mexico
Oil Conservation Division

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.

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: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

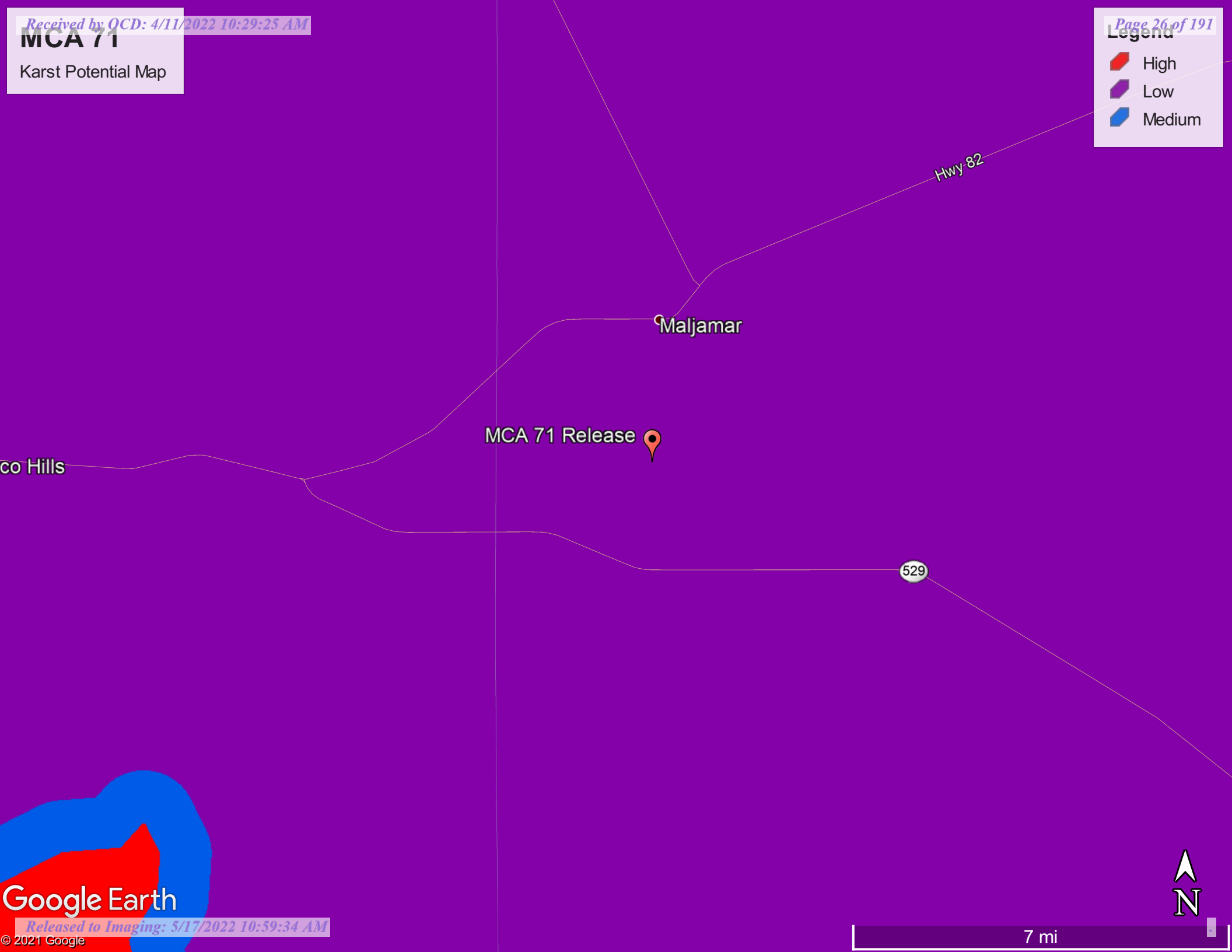
☒ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☒ Deferral Approved

Signature: Jennifer Nobui Date: _____

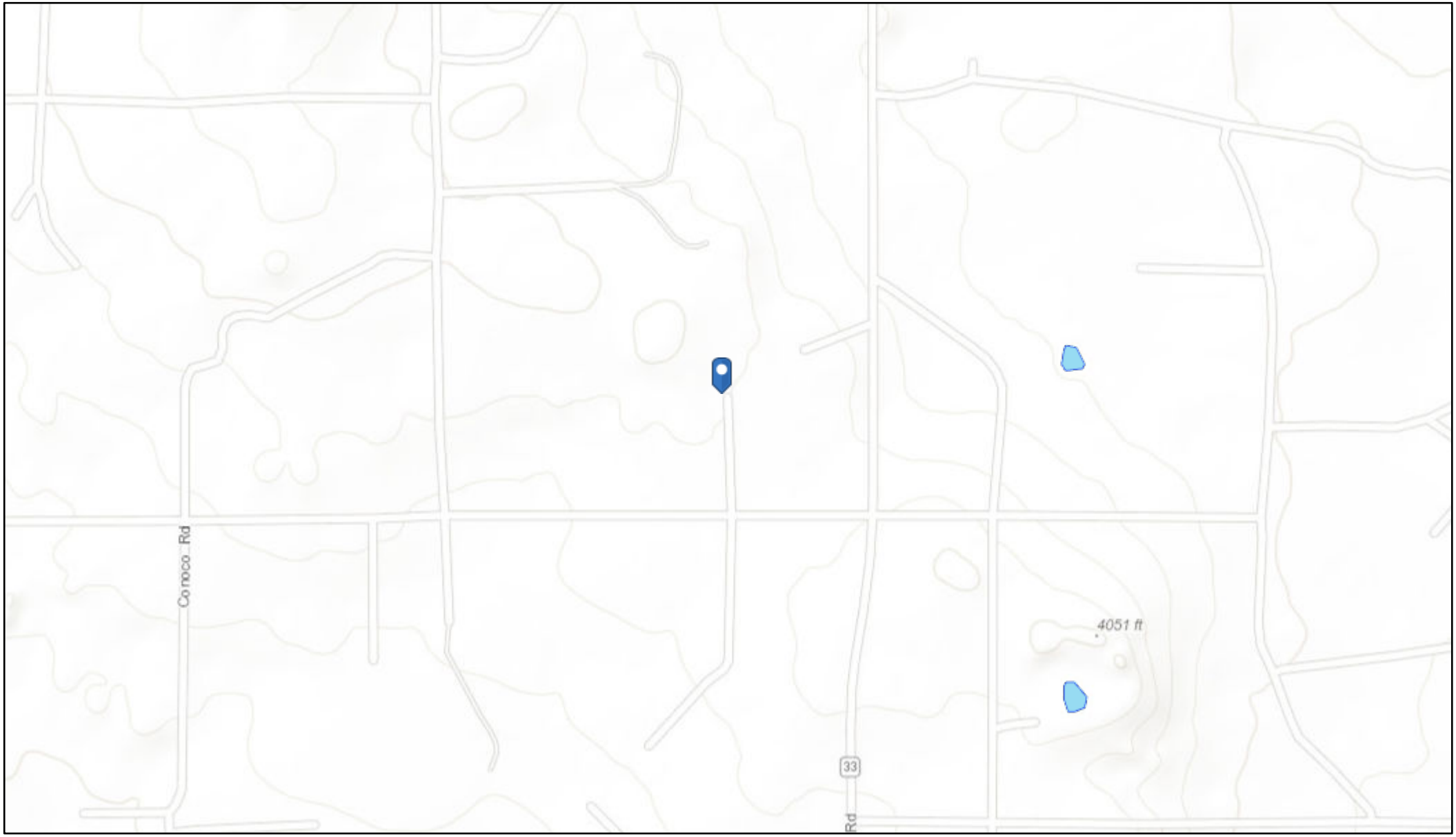
APPENDIX B
Site Characterization Data

MCA 71

Karst Potential Map



MCA 71 Waterbodies & Watercourses



5/12/2021, 11:26:39 AM

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

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

US Census Bureau, NMDOT, Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA

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

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

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

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

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 12521 POD1	RA	LE	3	3	4	21	17S	32E	615127	3631271	724	105	92	13

Average Depth to Water: **92 feet**

Minimum Depth: **92 feet**

Maximum Depth: **92 feet**

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 615607.896 **Northing (Y):** 3631812.375 **Radius:** 800

APPENDIX C
Analytical Laboratory Reports

CARDINAL Laboratories

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

February 25, 2020

JUSTIN WRIGHT

Conoco Phillips - Hobbs

P. O. BOX 325

Hobbs, NM 88240

RE: MCA #71

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

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 1 (H000530-01)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	**0.064**	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1250**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**168**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**39.1**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *87.0 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *99.7 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 2 (H000530-02)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**434**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**236**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *89.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *93.5 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 3 (H000530-03)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**528**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**15.1**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	<10.0	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *91.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *95.9 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 4 (H000530-04)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3000**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**863**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**387**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *87.9 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *111 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 5 (H000530-05)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3200**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**1130**	50.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**301**	50.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *99.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *125 %* *42.2-156*

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 6 (H000530-06)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	**0.067**	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.4 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	02/24/2020	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**5370**	50.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**2210**	50.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *98.9 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *302 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 7 (H000530-07)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**512**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**144**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**60.4**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *69.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *81.6 %* *42.2-156*

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 8 (H000530-08)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**13600**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**360**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**167**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *70.3 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *75.4 %* *42.2-156*

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SP - # 9 (H000530-09)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**624**	16.0	02/24/2020	ND	416	104	400	0.00	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<100	100	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**6310**	100	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**1870**	100	02/24/2020	ND					

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

Surrogate: 1-Chlorooctadecane *269 %* *42.2-156*

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SP - # 10 (H000530-10)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	02/24/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**239**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**166**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *96.2 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *92.9 %* *42.2-156*

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SP - # 11 (H000530-11)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3840**	16.0	02/24/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	<10.0	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	<10.0	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *93.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *97.7 %* *42.2-156*

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SP - # 12 (H000530-12)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2120**	16.0	02/24/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**18.7**	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**1690**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**384**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *101 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *124 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SP - # 13 (H000530-13)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.4 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	02/24/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2020	ND	193	96.4	200	2.80	
DRO >C10-C28*	**198**	10.0	02/22/2020	ND	188	94.0	200	2.59	
EXT DRO >C28-C36	**156**	10.0	02/22/2020	ND					

Surrogate: 1-Chlorooctane *80.7 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *70.8 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	ConocoPhillips	BILL TO	
Project Manager:	Justin Wright	P.O. #:	
Address:		Company:	COPC
City:	Hobbs St NM Zip #	Attn:	
Phone #:	575-631-9092 Fax #:	Address:	
Project #:	Project Owner: COPC	City:	
Project Name:	MCA 71	State:	Zip:
Project Location:	Lea County, NM	Phone #:	
Sampler Name:	Justin Wright	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides	BTEX	TPH
H200530																	
1	SW-#1	G				*					*		2-18		✓	✓	✓
2	SW-#2	G				*					*		2-18		✓	✓	✓
3	SW-#3	G				*					*		2-18		✓	✓	✓
4	SW-#4	G				*					*		2-18		✓	✓	✓
5	SW-#5	G				*					*		2-18		✓	✓	✓
6	SW-#6	G				*					*		2-18		✓	✓	✓
7	SW-#7	G				*					*		2-18		✓	✓	✓
8	SW-#8	G				*					*		2-18		✓	✓	✓
9	SP #9	G				*					*		2-18		✓	✓	✓
10	SP #10	G				*					*		2-18		✓	✓	✓

Relinquished By:	Date: 2-19-20 Time:	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: 4:10 PM Time:	Received By:	REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 6°C Corrected Temp. °C	Sample Condition Cool: ☒ Yes ☐ No Intact: ☒ Yes ☐ No	CHECKED BY: (Initials) MJ
Turnaround Time: Standard ☒ Rush ☐ Thermometer ID #97 Correction Factor +0.4 °C #113	Bacteria (only) Sample Condition Cool: ☐ Yes ☐ Nc Intact: ☐ Yes ☐ No	Observed Temp. °C	Corrected Temp. °C

FORM-006 R 3.0

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	ConocoPhillips	BILL TO	
Project Manager:	Justin Wright	P.O. #:	
Address:		Company:	COPC
City:	Hobbs	St NM	Zip #
Phone #:	575-631-9092	Fax #:	
Project #:		Project Owner:	COPC
Project Name:	MCA 71		
Project Location:	Lea County, NM		
Sampler Name:	Justin Wright		

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	BTEX	TPH								
H000530																									
11	SP#11	G				*					*		2-18		✓	✓	✓								
12	SP#12	G				*					*		2-18		✓	✓	✓								
13	SP#13	G				*					*		2-18		✓	✓	✓								
		G				*					*														
		G				*					*														
		G				*					*														
		G				*					*														
		G				*					*														
		G				*					*														
		G				*					*														

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Relinquished By:	Date: 2-19-20 Time: 2:10 PM	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: Time:	Received By:	REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C Corrected Temp. °C -6°C	Sample Condition Cool: ☒ Yes ☐ No Intact: ☒ Yes ☐ No	CHECKED BY: (Initials) KJ
Turnaround Time: Standard ☒ Rush ☐ Thermometer ID #97 Correction Factor +0.4 °C #113	Bacteria (only) Sample Condition Cool: ☐ Yes ☐ Nc Intact: ☐ Yes ☐ No	Observed Temp. °C Corrected Temp. °C	

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

May 22, 2020

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1218180
Samples Received:	05/13/2020
Project Number:	212C-MD-02163
Description:	COP MCA 71

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') L1218180-01 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 11:00 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479310	1	05/20/20 20:32	05/20/20 20:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	1	05/15/20 10:21	05/15/20 12:14	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477333	1	05/15/20 15:36	05/17/20 05:15	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/15/20 22:02	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	1	05/15/20 23:05	05/16/20 17:48	DMG	Mt. Juliet, TN

BH-1 (2-3') L1218180-02 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 11:10 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479310	1	05/20/20 20:32	05/20/20 20:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	1	05/15/20 10:21	05/15/20 12:33	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477333	1	05/15/20 15:36	05/17/20 05:36	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/15/20 22:21	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	1	05/15/20 23:05	05/16/20 18:28	DMG	Mt. Juliet, TN

BH-1 (4-5') L1218180-03 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 11:20 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479310	1	05/20/20 20:32	05/20/20 20:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	1	05/15/20 10:21	05/15/20 12:42	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477333	1	05/15/20 15:36	05/17/20 06:43	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/15/20 22:40	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	1	05/15/20 23:05	05/16/20 18:55	DMG	Mt. Juliet, TN

BH-1 (6-7') L1218180-04 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 11:30 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479310	1	05/20/20 20:32	05/20/20 20:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	5	05/15/20 10:21	05/15/20 12:52	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477333	1	05/15/20 15:36	05/17/20 07:03	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/15/20 23:00	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	5	05/15/20 23:05	05/17/20 14:13	AEG	Mt. Juliet, TN

BH-1 (9-10') L1218180-05 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 11:50 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479310	1	05/20/20 20:32	05/20/20 20:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	5	05/15/20 10:21	05/15/20 13:01	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477333	1	05/15/20 15:36	05/17/20 07:24	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/15/20 23:19	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	1	05/15/20 23:05	05/16/20 19:08	DMG	Mt. Juliet, TN

BH-1 (14-15') L1218180-06 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 12:00 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479310	1	05/20/20 20:32	05/20/20 20:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	1	05/15/20 10:21	05/15/20 13:11	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477333	1	05/15/20 15:36	05/17/20 07:45	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/15/20 23:38	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	20	05/15/20 23:05	05/16/20 20:14	DMG	Mt. Juliet, TN

BH-1 (19-20') L1218180-07 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 12:10 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479312	1	05/20/20 19:35	05/20/20 19:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	1	05/15/20 10:21	05/15/20 13:21	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477602	25	05/15/20 15:36	05/17/20 18:27	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/15/20 23:57	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	200	05/15/20 23:05	05/17/20 15:20	AEG	Mt. Juliet, TN

BH-1 (24-25') L1218180-08 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 12:30 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479312	1	05/20/20 19:35	05/20/20 19:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	1	05/15/20 10:21	05/15/20 13:49	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477602	1	05/15/20 15:36	05/17/20 18:50	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/16/20 00:16	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	1	05/15/20 23:05	05/16/20 19:35	DMG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	20	05/15/20 23:05	05/17/20 15:06	AEG	Mt. Juliet, TN

BH-1 (29-30') L1218180-09 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 13:00 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479312	1	05/20/20 19:35	05/20/20 19:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	1	05/15/20 10:21	05/15/20 14:18	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477333	1	05/15/20 15:36	05/17/20 08:47	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/16/20 00:35	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	1	05/15/20 23:05	05/16/20 19:21	DMG	Mt. Juliet, TN

BH-2 (0-1') L1218180-10 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 13:10 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479312	1	05/20/20 19:35	05/20/20 19:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	1	05/15/20 10:21	05/15/20 14:27	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477333	1	05/15/20 15:36	05/17/20 09:12	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/16/20 00:54	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	1	05/15/20 23:05	05/16/20 18:41	DMG	Mt. Juliet, TN

BH-2 (2-3') L1218180-11 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 13:20 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479312	1	05/20/20 19:35	05/20/20 19:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	1	05/15/20 10:21	05/15/20 14:37	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477333	1	05/15/20 15:36	05/17/20 09:33	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/16/20 01:13	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	1	05/15/20 23:05	05/16/20 18:15	DMG	Mt. Juliet, TN

BH-2 (4-5') L1218180-12 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 13:30 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479312	1	05/20/20 19:35	05/20/20 19:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	1	05/15/20 10:21	05/15/20 14:46	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477333	1	05/15/20 15:36	05/17/20 09:54	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/16/20 01:32	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	1	05/15/20 23:05	05/17/20 14:00	AEG	Mt. Juliet, TN

BH-2 (6-7') L1218180-13 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 14:00 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479312	1	05/20/20 19:35	05/20/20 19:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	10	05/15/20 10:21	05/15/20 14:56	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477333	1	05/15/20 15:36	05/17/20 10:14	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/16/20 01:51	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	1	05/15/20 23:05	05/16/20 18:01	DMG	Mt. Juliet, TN

BH-2 (9-10') L1218180-14 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 14:10 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479312	1	05/20/20 19:35	05/20/20 19:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	5	05/15/20 10:21	05/15/20 15:05	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477446	1	05/15/20 15:36	05/17/20 16:49	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/16/20 02:10	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1476317	1	05/15/20 23:05	05/16/20 16:55	DMG	Mt. Juliet, TN

BH-2 (14-15') L1218180-15 Solid

Collected by: Joe Tyler | Collected date/time: 05/04/20 14:20 | Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479312	1	05/20/20 19:35	05/20/20 19:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	1	05/15/20 10:21	05/15/20 15:15	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477446	1	05/15/20 15:36	05/17/20 17:09	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/16/20 02:29	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1477195	1	05/15/20 08:13	05/16/20 22:00	DMG	Mt. Juliet, TN

BH-2 (19-20') L1218180-16 Solid

Collected by: Joe Tyler
Collected date/time: 05/04/20 14:40
Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479312	1	05/20/20 19:35	05/20/20 19:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	5	05/15/20 10:21	05/15/20 15:43	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477699	1	05/15/20 15:36	05/17/20 21:26	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/16/20 02:48	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1477195	1	05/15/20 08:13	05/16/20 21:34	DMG	Mt. Juliet, TN

BH-2 (24-25') L1218180-17 Solid

Collected by: Joe Tyler
Collected date/time: 05/04/20 15:00
Received date/time: 05/13/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1479314	1	05/20/20 19:12	05/20/20 19:32	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1475879	1	05/15/20 10:21	05/15/20 15:53	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1477699	1.01	05/15/20 15:36	05/17/20 21:49	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1477017	1	05/15/20 15:36	05/16/20 03:07	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1477195	1	05/15/20 08:13	05/16/20 21:47	DMG	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	94.6		1	05/20/2020 20:54	WG1479310

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	675		9.72	21.1	1	05/15/2020 12:14	WG1475879

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0229	0.106	1	05/17/2020 05:15	WG1477333
(S) a,a,a-Trifluorotoluene(FID)	*106*			*77.0-120*		*05/17/2020 05:15*	WG1477333

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000493	0.00106	1	05/15/2020 22:02	WG1477017
Toluene	U		0.00137	0.00528	1	05/15/2020 22:02	WG1477017
Ethylbenzene	0.00109	J	0.000779	0.00264	1	05/15/2020 22:02	WG1477017
Total Xylenes	0.00375	J	0.000930	0.00687	1	05/15/2020 22:02	WG1477017
(S) Toluene-d8	*116*			*75.0-131*		*05/15/2020 22:02*	WG1477017
(S) 4-Bromofluorobenzene	*87.4*			*67.0-138*		*05/15/2020 22:02*	WG1477017
(S) 1,2-Dichloroethane-d4	*99.6*			*70.0-130*		*05/15/2020 22:02*	WG1477017

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	10.1		1.70	4.23	1	05/16/2020 17:48	WG1476317
C28-C40 Oil Range	21.7		0.290	4.23	1	05/16/2020 17:48	WG1476317
(S) o-Terphenyl	*52.1*			*18.0-148*		*05/16/2020 17:48*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.3		1	05/20/2020 20:54	WG1479310

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	678		9.76	21.2	1	05/15/2020 12:33	WG1475879

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0230	0.106	1	05/17/2020 05:36	WG1477333
(S) a,a,a-Trifluorotoluene(FID)	*104*			*77.0-120*		*05/17/2020 05:36*	WG1477333

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000495	0.00106	1	05/15/2020 22:21	WG1477017
Toluene	U		0.00138	0.00530	1	05/15/2020 22:21	WG1477017
Ethylbenzene	U		0.000782	0.00265	1	05/15/2020 22:21	WG1477017
Total Xylenes	U		0.000933	0.00689	1	05/15/2020 22:21	WG1477017
(S) Toluene-d8	*113*			*75.0-131*		*05/15/2020 22:21*	WG1477017
(S) 4-Bromofluorobenzene	*89.0*			*67.0-138*		*05/15/2020 22:21*	WG1477017
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*05/15/2020 22:21*	WG1477017

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	15.7		1.71	4.24	1	05/16/2020 18:28	WG1476317
C28-C40 Oil Range	46.2		0.291	4.24	1	05/16/2020 18:28	WG1476317
(S) o-Terphenyl	*56.9*			*18.0-148*		*05/16/2020 18:28*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.8		1	05/20/2020 20:54	WG1479310

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	235		9.50	20.7	1	05/15/2020 12:42	WG1475879

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0224	0.103	1	05/17/2020 06:43	WG1477333
(S) a,a,a-Trifluorotoluene(FID)	*104*			*77.0-120*		*05/17/2020 06:43*	WG1477333

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000482	0.00103	1	05/15/2020 22:40	WG1477017
Toluene	U		0.00134	0.00517	1	05/15/2020 22:40	WG1477017
Ethylbenzene	U		0.000761	0.00258	1	05/15/2020 22:40	WG1477017
Total Xylenes	U		0.000909	0.00672	1	05/15/2020 22:40	WG1477017
(S) Toluene-d8	*114*			*75.0-131*		*05/15/2020 22:40*	WG1477017
(S) 4-Bromofluorobenzene	*90.0*			*67.0-138*		*05/15/2020 22:40*	WG1477017
(S) 1,2-Dichloroethane-d4	*98.2*			*70.0-130*		*05/15/2020 22:40*	WG1477017

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	35.4		1.66	4.13	1	05/16/2020 18:55	WG1476317
C28-C40 Oil Range	67.3		0.283	4.13	1	05/16/2020 18:55	WG1476317
(S) o-Terphenyl	*54.3*			*18.0-148*		*05/16/2020 18:55*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.6		1	05/20/2020 20:54	WG1479310

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	1700		50.2	109	5	05/15/2020 12:52	WG1475879

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0237	0.109	1	05/17/2020 07:03	WG1477333
(S) a,a,a-Trifluorotoluene(FID)	*105*			*77.0-120*		*05/17/2020 07:03*	WG1477333

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000510	0.00109	1	05/15/2020 23:00	WG1477017
Toluene	U		0.00142	0.00546	1	05/15/2020 23:00	WG1477017
Ethylbenzene	U		0.000805	0.00273	1	05/15/2020 23:00	WG1477017
Total Xylenes	U		0.000961	0.00710	1	05/15/2020 23:00	WG1477017
(S) Toluene-d8	*110*			*75.0-131*		*05/15/2020 23:00*	WG1477017
(S) 4-Bromofluorobenzene	*87.9*			*67.0-138*		*05/15/2020 23:00*	WG1477017
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*05/15/2020 23:00*	WG1477017

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	80.5		8.79	21.8	5	05/17/2020 14:13	WG1476317
C28-C40 Oil Range	118		1.50	21.8	5	05/17/2020 14:13	WG1476317
(S) o-Terphenyl	*66.2*			*18.0-148*		*05/17/2020 14:13*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.0		1	05/20/2020 20:54	WG1479310

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	1190		51.7	112	5	05/15/2020 13:01	WG1475879

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		0.0244	0.112	1	05/17/2020 07:24	WG1477333
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*05/17/2020 07:24*	WG1477333

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000525	0.00112	1	05/15/2020 23:19	WG1477017
Toluene	U		0.00146	0.00562	1	05/15/2020 23:19	WG1477017
Ethylbenzene	U		0.000828	0.00281	1	05/15/2020 23:19	WG1477017
Total Xylenes	U		0.000989	0.00731	1	05/15/2020 23:19	WG1477017
(S) Toluene-d8	*112*			*75.0-131*		*05/15/2020 23:19*	WG1477017
(S) 4-Bromofluorobenzene	*88.1*			*67.0-138*		*05/15/2020 23:19*	WG1477017
(S) 1,2-Dichloroethane-d4	*99.9*			*70.0-130*		*05/15/2020 23:19*	WG1477017

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	44.0		1.81	4.50	1	05/16/2020 19:08	WG1476317
C28-C40 Oil Range	76.8		0.308	4.50	1	05/16/2020 19:08	WG1476317
(S) o-Terphenyl	*44.8*			*18.0-148*		*05/16/2020 19:08*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.8		1	05/20/2020 20:54	WG1479310

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	445		9.81	21.3	1	05/15/2020 13:11	WG1475879

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	2.25		0.0231	0.107	1	05/17/2020 07:45	WG1477333
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*77.0-120*		*05/17/2020 07:45*	WG1477333

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	05/15/2020 23:38	WG1477017
Toluene	U		0.00139	0.00533	1	05/15/2020 23:38	WG1477017
Ethylbenzene	0.0440		0.000786	0.00267	1	05/15/2020 23:38	WG1477017
Total Xylenes	0.0292		0.000938	0.00693	1	05/15/2020 23:38	WG1477017
(S) Toluene-d8	*109*			*75.0-131*		*05/15/2020 23:38*	WG1477017
(S) 4-Bromofluorobenzene	*126*			*67.0-138*		*05/15/2020 23:38*	WG1477017
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*05/15/2020 23:38*	WG1477017

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	4360		34.3	85.3	20	05/16/2020 20:14	WG1476317
C28-C40 Oil Range	2830		5.84	85.3	20	05/16/2020 20:14	WG1476317
(S) o-Terphenyl	*730*	J7		*18.0-148*		*05/16/2020 20:14*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.4		1	05/20/2020 19:53	WG1479312

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	784		10.9	23.7	1	05/15/2020 13:21	WG1475879

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	74.4		0.643	2.96	25	05/17/2020 18:27	WG1477602
(S) a,a,a-Trifluorotoluene(FID)	*86.2*			*77.0-120*		*05/17/2020 18:27*	WG1477602

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		0.000553	0.00118	1	05/15/2020 23:57	WG1477017
Toluene	0.00385	J	0.00154	0.00592	1	05/15/2020 23:57	WG1477017
Ethylbenzene	0.923		0.000873	0.00296	1	05/15/2020 23:57	WG1477017
Total Xylenes	0.404		0.00104	0.00770	1	05/15/2020 23:57	WG1477017
(S) Toluene-d8	*108*			*75.0-131*		*05/15/2020 23:57*	WG1477017
(S) 4-Bromofluorobenzene	*150*	J1		*67.0-138*		*05/15/2020 23:57*	WG1477017
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*		*05/15/2020 23:57*	WG1477017

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	10300		382	948	200	05/17/2020 15:20	WG1476317
C28-C40 Oil Range	5180		64.9	948	200	05/17/2020 15:20	WG1476317
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*05/17/2020 15:20*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.0		1	05/20/2020 19:53	WG1479312

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	579		10.5	22.7	1	05/15/2020 13:49	WG1475879

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	0.257	B	0.0247	0.114	1	05/17/2020 18:50	WG1477602
(S) a,a,a-Trifluorotoluene(FID)	*90.3*			*77.0-120*		*05/17/2020 18:50*	WG1477602

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000531	0.00114	1	05/16/2020 00:16	WG1477017
Toluene	U		0.00148	0.00568	1	05/16/2020 00:16	WG1477017
Ethylbenzene	0.00642		0.000838	0.00284	1	05/16/2020 00:16	WG1477017
Total Xylenes	0.00464	J	0.00100	0.00739	1	05/16/2020 00:16	WG1477017
(S) Toluene-d8	*112*			*75.0-131*		*05/16/2020 00:16*	WG1477017
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*05/16/2020 00:16*	WG1477017
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*05/16/2020 00:16*	WG1477017

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	344		1.83	4.55	1	05/16/2020 19:35	WG1476317
C28-C40 Oil Range	260		6.23	90.9	20	05/17/2020 15:06	WG1476317
(S) o-Terphenyl	*112*	J7		*18.0-148*		*05/17/2020 15:06*	WG1476317
(S) o-Terphenyl	*57.0*			*18.0-148*		*05/16/2020 19:35*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.1		1	05/20/2020 19:53	WG1479312

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	94.3		10.3	22.4	1	05/15/2020 14:18	WG1475879

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		0.0243	0.112	1	05/17/2020 08:47	WG1477333
(S) a,a,a-Trifluorotoluene(FID)	*105*			*77.0-120*		*05/17/2020 08:47*	WG1477333

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		0.000524	0.00112	1	05/16/2020 00:35	WG1477017
Toluene	U		0.00146	0.00561	1	05/16/2020 00:35	WG1477017
Ethylbenzene	U		0.000827	0.00281	1	05/16/2020 00:35	WG1477017
Total Xylenes	U		0.000987	0.00729	1	05/16/2020 00:35	WG1477017
(S) Toluene-d8	*113*			*75.0-131*		*05/16/2020 00:35*	WG1477017
(S) 4-Bromofluorobenzene	*89.8*			*67.0-138*		*05/16/2020 00:35*	WG1477017
(S) 1,2-Dichloroethane-d4	*97.1*			*70.0-130*		*05/16/2020 00:35*	WG1477017

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	145		1.81	4.49	1	05/16/2020 19:21	WG1476317
C28-C40 Oil Range	114		0.307	4.49	1	05/16/2020 19:21	WG1476317
(S) o-Terphenyl	*68.5*			*18.0-148*		*05/16/2020 19:21*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.2		1	05/20/2020 19:53	WG1479312

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	237		10.8	23.5	1	05/15/2020 14:27	WG1475879

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		0.0255	0.117	1	05/17/2020 09:12	WG1477333
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*05/17/2020 09:12*	WG1477333

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		0.000548	0.00117	1	05/16/2020 00:54	WG1477017
Toluene	U		0.00153	0.00587	1	05/16/2020 00:54	WG1477017
Ethylbenzene	U		0.000865	0.00293	1	05/16/2020 00:54	WG1477017
Total Xylenes	U		0.00103	0.00763	1	05/16/2020 00:54	WG1477017
(S) Toluene-d8	*112*			*75.0-131*		*05/16/2020 00:54*	WG1477017
(S) 4-Bromofluorobenzene	*89.4*			*67.0-138*		*05/16/2020 00:54*	WG1477017
(S) 1,2-Dichloroethane-d4	*99.9*			*70.0-130*		*05/16/2020 00:54*	WG1477017

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	57.4		1.89	4.70	1	05/16/2020 18:41	WG1476317
C28-C40 Oil Range	99.9		0.322	4.70	1	05/16/2020 18:41	WG1476317
(S) o-Terphenyl	*53.2*			*18.0-148*		*05/16/2020 18:41*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.2		1	05/20/2020 19:53	WG1479312

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	164		9.37	20.4	1	05/15/2020 14:37	WG1475879

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0221	0.102	1	05/17/2020 09:33	WG1477333
(S) a,a,a-Trifluorotoluene(FID)	*105*			*77.0-120*		*05/17/2020 09:33*	WG1477333

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000476	0.00102	1	05/16/2020 01:13	WG1477017
Toluene	U		0.00132	0.00509	1	05/16/2020 01:13	WG1477017
Ethylbenzene	U		0.000751	0.00255	1	05/16/2020 01:13	WG1477017
Total Xylenes	U		0.000896	0.00662	1	05/16/2020 01:13	WG1477017
(S) Toluene-d8	*111*			*75.0-131*		*05/16/2020 01:13*	WG1477017
(S) 4-Bromofluorobenzene	*90.1*			*67.0-138*		*05/16/2020 01:13*	WG1477017
(S) 1,2-Dichloroethane-d4	*95.5*			*70.0-130*		*05/16/2020 01:13*	WG1477017

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	4.53		1.64	4.07	1	05/16/2020 18:15	WG1476317
C28-C40 Oil Range	10.9		0.279	4.07	1	05/16/2020 18:15	WG1476317
(S) o-Terphenyl	*70.2*			*18.0-148*		*05/16/2020 18:15*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.0		1	05/20/2020 19:53	WG1479312

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	250		11.5	25.0	1	05/15/2020 14:46	WG1475879

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0271	0.125	1	05/17/2020 09:54	WG1477333
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*		*05/17/2020 09:54*	WG1477333

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		0.000584	0.00125	1	05/16/2020 01:32	WG1477017
Toluene	U		0.00163	0.00625	1	05/16/2020 01:32	WG1477017
Ethylbenzene	U		0.000921	0.00313	1	05/16/2020 01:32	WG1477017
Total Xylenes	U		0.00110	0.00813	1	05/16/2020 01:32	WG1477017
(S) Toluene-d8	*113*			*75.0-131*		*05/16/2020 01:32*	WG1477017
(S) 4-Bromofluorobenzene	*90.9*			*67.0-138*		*05/16/2020 01:32*	WG1477017
(S) 1,2-Dichloroethane-d4	*98.8*			*70.0-130*		*05/16/2020 01:32*	WG1477017

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		2.01	5.00	1	05/17/2020 14:00	WG1476317
C28-C40 Oil Range	1.43	J	0.343	5.00	1	05/17/2020 14:00	WG1476317
(S) o-Terphenyl	*34.1*			*18.0-148*		*05/17/2020 14:00*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.4		1	05/20/2020 19:53	WG1479312

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	4660		102	221	10	05/15/2020 14:56	WG1475879

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0240	0.111	1	05/17/2020 10:14	WG1477333
(S) a,a,a-Trifluorotoluene(FID)	*104*			*77.0-120*		*05/17/2020 10:14*	WG1477333

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		0.000516	0.00111	1	05/16/2020 01:51	WG1477017
Toluene	U		0.00144	0.00553	1	05/16/2020 01:51	WG1477017
Ethylbenzene	U		0.000815	0.00276	1	05/16/2020 01:51	WG1477017
Total Xylenes	U		0.000973	0.00719	1	05/16/2020 01:51	WG1477017
(S) Toluene-d8	*110*			*75.0-131*		*05/16/2020 01:51*	WG1477017
(S) 4-Bromofluorobenzene	*92.6*			*67.0-138*		*05/16/2020 01:51*	WG1477017
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*05/16/2020 01:51*	WG1477017

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	2.09	J	1.78	4.42	1	05/16/2020 18:01	WG1476317
C28-C40 Oil Range	4.21	J	0.303	4.42	1	05/16/2020 18:01	WG1476317
(S) o-Terphenyl	*60.9*			*18.0-148*		*05/16/2020 18:01*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.7		1	05/20/2020 19:53	WG1479312

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	1740		51.3	111	5	05/15/2020 15:05	WG1475879

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	0.0310	J	0.0242	0.111	1	05/17/2020 16:49	WG1477446
(S) a,a,a-Trifluorotoluene(FID)	*92.5*			*77.0-120*		*05/17/2020 16:49*	WG1477446

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	0.00111	1	05/16/2020 02:10	WG1477017
Toluene	U		0.00145	0.00557	1	05/16/2020 02:10	WG1477017
Ethylbenzene	U		0.000821	0.00279	1	05/16/2020 02:10	WG1477017
Total Xylenes	U		0.000981	0.00725	1	05/16/2020 02:10	WG1477017
(S) Toluene-d8	*110*			*75.0-131*		*05/16/2020 02:10*	WG1477017
(S) 4-Bromofluorobenzene	*89.8*			*67.0-138*		*05/16/2020 02:10*	WG1477017
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*05/16/2020 02:10*	WG1477017

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	2.92	J	1.79	4.46	1	05/16/2020 16:55	WG1476317
C28-C40 Oil Range	2.60	J	0.305	4.46	1	05/16/2020 16:55	WG1476317
(S) o-Terphenyl	*73.0*			*18.0-148*		*05/16/2020 16:55*	WG1476317

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.9		1	05/20/2020 19:53	WG1479312

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	617		9.69	21.1	1	05/15/2020 15:15	WG1475879

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0229	0.105	1	05/17/2020 17:09	WG1477446
(S) a,a,a-Trifluorotoluene(FID)	*93.3*			*77.0-120*		*05/17/2020 17:09*	WG1477446

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000492	0.00105	1	05/16/2020 02:29	WG1477017
Toluene	U		0.00137	0.00527	1	05/16/2020 02:29	WG1477017
Ethylbenzene	U		0.000777	0.00263	1	05/16/2020 02:29	WG1477017
Total Xylenes	U		0.000927	0.00685	1	05/16/2020 02:29	WG1477017
(S) Toluene-d8	*110*			*75.0-131*		*05/16/2020 02:29*	WG1477017
(S) 4-Bromofluorobenzene	*91.6*			*67.0-138*		*05/16/2020 02:29*	WG1477017
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*05/16/2020 02:29*	WG1477017

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.45		1.70	4.21	1	05/16/2020 22:00	WG1477195
C28-C40 Oil Range	7.32		0.289	4.21	1	05/16/2020 22:00	WG1477195
(S) o-Terphenyl	*70.4*			*18.0-148*		*05/16/2020 22:00*	WG1477195

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.2		1	05/20/2020 19:53	WG1479312

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	1280		54.0	117	5	05/15/2020 15:43	WG1475879

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	0.0478	B J	0.0255	0.117	1	05/17/2020 21:26	WG1477699
(S) a,a,a-Trifluorotoluene(FID)	*91.3*			*77.0-120*		*05/17/2020 21:26*	WG1477699

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		0.000548	0.00117	1	05/16/2020 02:48	WG1477017
Toluene	U		0.00153	0.00587	1	05/16/2020 02:48	WG1477017
Ethylbenzene	U		0.000865	0.00293	1	05/16/2020 02:48	WG1477017
Total Xylenes	U		0.00103	0.00763	1	05/16/2020 02:48	WG1477017
(S) Toluene-d8	*113*			*75.0-131*		*05/16/2020 02:48*	WG1477017
(S) 4-Bromofluorobenzene	*90.8*			*67.0-138*		*05/16/2020 02:48*	WG1477017
(S) 1,2-Dichloroethane-d4	*95.9*			*70.0-130*		*05/16/2020 02:48*	WG1477017

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		1.89	4.70	1	05/16/2020 21:34	WG1477195
C28-C40 Oil Range	U		0.322	4.70	1	05/16/2020 21:34	WG1477195
(S) o-Terphenyl	*66.5*			*18.0-148*		*05/16/2020 21:34*	WG1477195

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.0		1	05/20/2020 19:32	WG1479314

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	196		10.1	22.0	1	05/15/2020 15:53	WG1475879

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	0.0430	B J	0.0241	0.111	1.01	05/17/2020 21:49	WG1477699
(S) a,a,a-Trifluorotoluene(FID)	*91.6*			*77.0-120*		*05/17/2020 21:49*	WG1477699

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		0.000513	0.00110	1	05/16/2020 03:07	WG1477017
Toluene	U		0.00143	0.00549	1	05/16/2020 03:07	WG1477017
Ethylbenzene	U		0.000810	0.00275	1	05/16/2020 03:07	WG1477017
Total Xylenes	U		0.000967	0.00714	1	05/16/2020 03:07	WG1477017
(S) Toluene-d8	*112*			*75.0-131*		*05/16/2020 03:07*	WG1477017
(S) 4-Bromofluorobenzene	*88.4*			*67.0-138*		*05/16/2020 03:07*	WG1477017
(S) 1,2-Dichloroethane-d4	*96.6*			*70.0-130*		*05/16/2020 03:07*	WG1477017

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	8.77		1.77	4.39	1	05/16/2020 21:47	WG1477195
C28-C40 Oil Range	7.54		0.301	4.39	1	05/16/2020 21:47	WG1477195
(S) o-Terphenyl	*66.9*			*18.0-148*		*05/16/2020 21:47*	WG1477195

Method Blank (MB)

(MB) R3530528-1 05/20/20 20:54

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

L1218180-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1218180-02 05/20/20 20:54 • (DUP) R3530528-3 05/20/20 20:54

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	94.3	93.9	1	0.382		10

Laboratory Control Sample (LCS)

(LCS) R3530528-2 05/20/20 20:54

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) R3530484-1 05/20/20 19:53

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

L1218180-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1218180-13 05/20/20 19:53 • (DUP) R3530484-3 05/20/20 19:53

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	90.4	91.0	1	0.639		10

Laboratory Control Sample (LCS)

(LCS) R3530484-2 05/20/20 19:53

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) R3530479-1 05/20/20 19:32

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

Laboratory Control Sample (LCS)

(LCS) R3530479-2 05/20/20 19:32

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) R3528440-1 05/15/20 11:27

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

L1218180-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1218180-01 05/15/20 12:14 • (DUP) R3528440-3 05/15/20 12:23

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	675	660	1	2.32		20

L1218180-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1218180-17 05/15/20 15:53 • (DUP) R3528440-6 05/15/20 16:02

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	196	202	1	3.13		20

Laboratory Control Sample (LCS)

(LCS) R3528440-2 05/15/20 11:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	192	96.0	90.0-110	

L1218180-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1218180-08 05/15/20 13:49 • (MS) R3528440-4 05/15/20 13:59 • (MSD) R3528440-5 05/15/20 14:08

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	568	579	1160	910	102	80.2	1	80.0-120	E		11.3	20

Method Blank (MB)

(MB) R3528745-3 05/17/20 00:02

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)	*105*			*77.0-120*

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

(LCS) R3528745-1 05/16/20 23:00 • (LCSD) R3528745-2 05/16/20 23:21

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	5.82	5.85	106	106	72.0-127			0.514	20
(S) a,a,a-Trifluorotoluene(FID)				*102*	*99.7*	*77.0-120*				

Method Blank (MB)

(MB) R3529162-2 05/17/20 12:11

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)	*94.6*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3529162-1 05/17/20 11:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.15	112	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*112*	*77.0-120*	

Method Blank (MB)

(MB) R3528947-3 05/17/20 16:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0493	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*92.5*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3528947-2 05/17/20 15:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	3.97	72.2	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*93.5*	*77.0-120*	

Method Blank (MB)

(MB) R3528948-3 05/17/20 16:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0493	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*92.5*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3528948-2 05/17/20 15:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	3.97	72.2	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*93.5*	*77.0-120*	

Method Blank (MB)

(MB) R3528703-2 05/15/20 21:24

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	*110*			*75.0-131*
(S) 4-Bromofluorobenzene	*91.4*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3528703-1 05/15/20 20:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.124	99.2	70.0-123	
Ethylbenzene	0.125	0.157	126	74.0-126	
Toluene	0.125	0.136	109	75.0-121	
Xylenes, Total	0.375	0.412	110	72.0-127	
(S) Toluene-d8			*108*	*75.0-131*	
(S) 4-Bromofluorobenzene			*91.6*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*112*	*70.0-130*	

L1218180-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1218180-17 05/16/20 03:07 • (MS) R3528703-3 05/16/20 03:26 • (MSD) R3528703-4 05/16/20 03:45

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.137	U	0.160	0.156	117	114	1	10.0-149			2.78	37
Ethylbenzene	0.137	U	0.205	0.198	150	144	1	10.0-160			3.81	38
Toluene	0.137	U	0.186	0.179	135	130	1	10.0-156			3.61	38
Xylenes, Total	0.412	U	0.535	0.449	130	109	1	10.0-160			17.4	38
(S) Toluene-d8					*112*	*109*		*75.0-131*				
(S) 4-Bromofluorobenzene					*93.0*	*86.8*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*105*	*100*		*70.0-130*				

Method Blank (MB)

(MB) R3528753-1 05/16/20 11:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*68.6*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3528753-2 05/16/20 12:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.5	73.0	50.0-150	
(S) o-Terphenyl			*91.6*	*18.0-148*	

L1218180-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1218180-14 05/16/20 16:55 • (MS) R3528753-3 05/16/20 17:08 • (MSD) R3528753-4 05/16/20 17:21

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	54.4	2.92	39.9	37.1	68.0	62.1	1	50.0-150			7.24	20
(S) o-Terphenyl					*80.0*	*82.1*		*18.0-148*				

Method Blank (MB)

(MB) R3528757-1 05/16/20 12:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*67.5*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3528757-2 05/16/20 12:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.7	73.4	50.0-150	
(S) o-Terphenyl			*93.5*	*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.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

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

State Accreditations

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

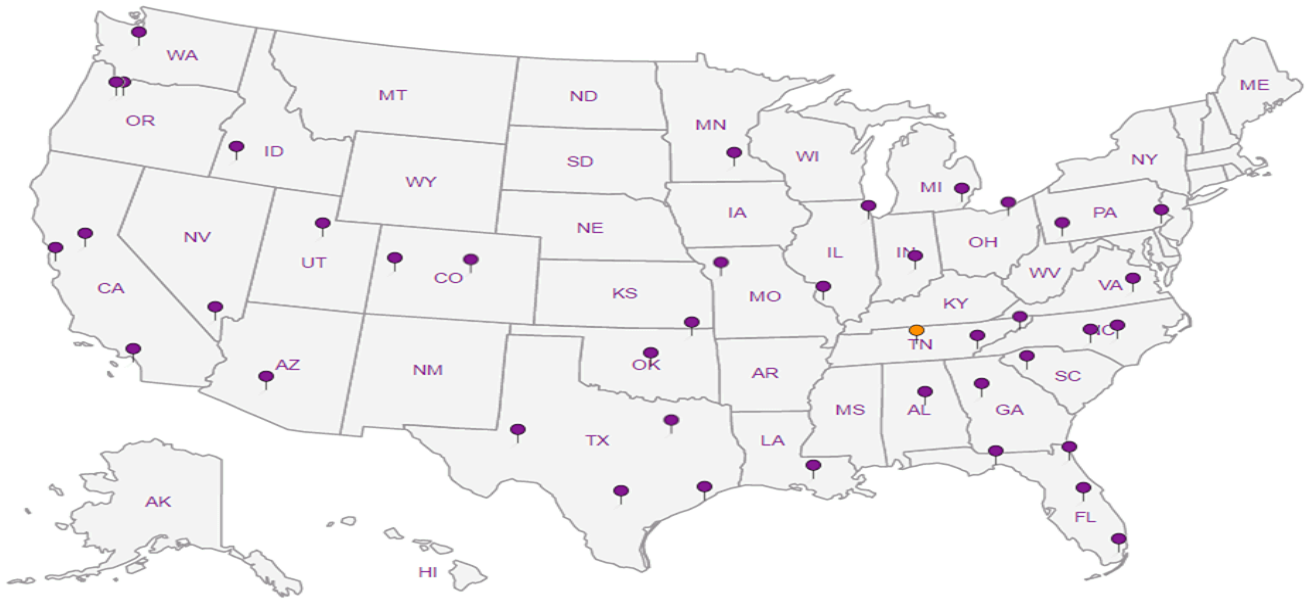
Third Party Federal Accreditations

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

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

Our Locations

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



Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	COP MCA 71	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02163
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.)

E023

LAB # (LAB USE ONLY) L1218180	SAMPLE IDENTIFICATION	SAMPLING DATE (YEAR: 2020)	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
-01	BH-1 (0'-1')	05/04/20	1100		X				X			1	N	X		X												X						
02	BH-1 (2'-3')	05/04/20	1110		X				X			1	N	X		X												X						
03	BH-1 (4'-5')	05/04/20	1120		X				X			1	N	X		X												X						
04	BH-1 (6'-7')	05/04/20	1130		X				X			1	N	X		X												X						
05	BH-1 (9'-10')	05/04/20	1150		X				X			1	N	X		X												X						
06	BH-1 (14'-15')	05/04/20	1200		X				X			1	N	X		X												X						
07	BH-1 (19'-20')	05/04/20	1210		X				X			1	N	X		X												X						
08	BH-1 (24'-25')	05/04/20	1230		X				X			1	N	X		X												X						
09	BH-1 (29'-30')	05/04/20	1300		X				X			1	N	X		X												X						
10	BH-2 (0'-1')	05/04/20	1310		X				X			1	N	X		X												X						

	Date:	Time:		Date:	Time:
Relinquished by: Bill G. Lucid	5-12-20	Bico	Received by:	5-12-20	Bico
Relinquished by:	5-12-20	16:00	Received by: Fedex	5-12-20	16:00
Relinquished by:			Received by:		1300 085

ORIGINAL COPY

TR 4430212377 1

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 #: _____

2.0+.1=2.1 AJ

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:	COP MCA 71	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02163
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	# 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
L1218180		YEAR: 2020																															
11	BH-2 (2'-3')	05/04/20	1320		X				X			1	N	X		X											X						
12	BH-2 (4'-5')	05/04/20	1330		X				X			1	N	X		X											X						
13	BH-2 (6'-7')	05/04/20	1400		X				X			1	N	X		X											X						
14	BH-2 (9'-10')	05/04/20	1410		X				X			1	N	X		X											X						
15	BH-2 (14'-15')	05/04/20	1420		X				X			1	N	X		X											X						
16	BH-2 (19'-20')	05/04/20	1440		X				X			1	N	X		X											X						
17	BH-2 (24'-25')	05/04/20	1500		X				X			1	N	X		X											X						

Relinquished by:	Date: 5-2-20	Time: 13:00	Received by: Date: 5-2-20 Time: 13:00
Relinquished by:	Date: 5-2-20	Time: 16:00	Received by: Date: 5-2-20 Time: 16:00
Relinquished by:	Date:	Time:	Received by: Date: Time: 1300 0825

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 #: _____

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: COPTETRA	L1718180	
Cooler Received/Opened On: 4/13/20 Temperature:	2.1	
Received By: joey brent		
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

July 20, 2020

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1238356
Samples Received:	07/10/2020
Project Number:	212C-MD-02163
Description:	COP MCA 71

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.

AH-1 0-1FT L1238356-01 Solid

Collected by: John Myler | Collected date/time: 07/07/20 11:20 | Received date/time: 07/10/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1508862	1	07/15/20 10:07	07/15/20 10:19	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1507970	1	07/14/20 16:21	07/14/20 19:32	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1507614	1	07/11/20 09:03	07/12/20 07:05	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1507972	1	07/11/20 09:03	07/14/20 13:36	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1508400	1	07/14/20 16:53	07/17/20 15:46	FM	Mt. Juliet, TN

AH-1 2-3FT L1238356-02 Solid

Collected by: John Myler | Collected date/time: 07/07/20 11:50 | Received date/time: 07/10/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1508862	1	07/15/20 10:07	07/15/20 10:19	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1507970	1	07/14/20 16:21	07/14/20 20:17	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1507614	1	07/11/20 09:03	07/12/20 07:28	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1507972	1	07/11/20 09:03	07/14/20 13:55	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1508400	1	07/14/20 16:53	07/17/20 00:04	KLM	Mt. Juliet, TN

AH-2 0-1FT L1238356-03 Solid

Collected by: John Myler | Collected date/time: 07/07/20 12:10 | Received date/time: 07/10/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1508864	1	07/15/20 09:51	07/15/20 10:06	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1507970	1	07/14/20 16:21	07/14/20 20:32	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1507614	1	07/11/20 09:03	07/12/20 07:50	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1507972	1	07/11/20 09:03	07/14/20 14:15	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1508400	1	07/14/20 16:53	07/15/20 21:42	JN	Mt. Juliet, TN

AH-2 2-3FT L1238356-04 Solid

Collected by: John Myler | Collected date/time: 07/07/20 12:40 | Received date/time: 07/10/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1508864	1	07/15/20 09:51	07/15/20 10:06	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1507970	1	07/14/20 16:21	07/14/20 20:47	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1507614	1	07/11/20 09:03	07/12/20 08:12	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1507972	1	07/11/20 09:03	07/14/20 14:34	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1508400	5	07/14/20 16:53	07/16/20 00:14	JN	Mt. Juliet, TN

AH-3 0-1FT L1238356-05 Solid

Collected by: John Myler | Collected date/time: 07/07/20 13:10 | Received date/time: 07/10/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1508864	1	07/15/20 09:51	07/15/20 10:06	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1507970	1	07/14/20 16:21	07/14/20 21:02	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1507614	1	07/11/20 09:03	07/12/20 08:34	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1507972	1	07/11/20 09:03	07/14/20 14:53	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1508400	1	07/14/20 16:53	07/17/20 00:17	KLM	Mt. Juliet, TN

AH-3 2-3FT L1238356-06 Solid

Collected by: John Myler
Collected date/time: 07/07/20 13:40
Received date/time: 07/10/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1508864	1	07/15/20 09:51	07/15/20 10:06	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1507970	1	07/14/20 16:21	07/14/20 21:17	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1507614	1	07/11/20 09:03	07/12/20 08:57	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1507972	1	07/11/20 09:03	07/14/20 15:11	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1508400	5	07/14/20 16:53	07/17/20 17:43	FM	Mt. Juliet, TN

AH-4 0-1FT L1238356-07 Solid

Collected by: John Myler
Collected date/time: 07/07/20 14:10
Received date/time: 07/10/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1508864	1	07/15/20 09:51	07/15/20 10:06	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1507970	1	07/14/20 16:21	07/14/20 21:32	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1507614	1	07/11/20 09:03	07/12/20 09:19	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1507972	1	07/11/20 09:03	07/14/20 15:30	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1508400	1	07/14/20 16:53	07/15/20 19:46	JN	Mt. Juliet, TN

AH-4 2-3FT L1238356-08 Solid

Collected by: John Myler
Collected date/time: 07/07/20 14:40
Received date/time: 07/10/20 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1508864	1	07/15/20 09:51	07/15/20 10:06	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1507970	1	07/14/20 16:21	07/14/20 21:47	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1507614	1	07/11/20 09:03	07/12/20 09:41	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1507972	1	07/11/20 09:03	07/14/20 15:49	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1508400	1	07/14/20 16:53	07/15/20 20:38	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	78.8		1	07/15/2020 10:19	WG1508862

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		11.7	25.4	1	07/14/2020 19:32	WG1507970

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		0.0275	0.127	1	07/12/2020 07:05	WG1507614
(S) a,a,a-Trifluorotoluene(FID)	*98.0*			*77.0-120*		*07/12/2020 07:05*	WG1507614

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.00111	J	0.000718	0.00154	1	07/14/2020 13:36	WG1507972
Toluene	U		0.00200	0.00769	1	07/14/2020 13:36	WG1507972
Ethylbenzene	U		0.00113	0.00384	1	07/14/2020 13:36	WG1507972
Total Xylenes	0.00158	J	0.00135	0.00999	1	07/14/2020 13:36	WG1507972
(S) Toluene-d8	*102*			*75.0-131*		*07/14/2020 13:36*	WG1507972
(S) 4-Bromofluorobenzene	*96.3*			*67.0-138*		*07/14/2020 13:36*	WG1507972
(S) 1,2-Dichloroethane-d4	*88.9*			*70.0-130*		*07/14/2020 13:36*	WG1507972

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	18.0		2.04	5.07	1	07/17/2020 15:46	WG1508400
C28-C40 Oil Range	46.3		0.348	5.07	1	07/17/2020 15:46	WG1508400
(S) o-Terphenyl	*47.1*			*18.0-148*		*07/17/2020 15:46*	WG1508400

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.5		1	07/15/2020 10:19	WG1508862

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		11.3	24.5	1	07/14/2020 20:17	WG1507970

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		0.0266	0.123	1	07/12/2020 07:28	WG1507614
(S) a,a,a-Trifluorotoluene(FID)	*99.1*			*77.0-120*		*07/12/2020 07:28*	WG1507614

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.000836	J	0.000679	0.00145	1	07/14/2020 13:55	WG1507972
Toluene	U		0.00189	0.00727	1	07/14/2020 13:55	WG1507972
Ethylbenzene	U		0.00107	0.00363	1	07/14/2020 13:55	WG1507972
Total Xylenes	U		0.00128	0.00945	1	07/14/2020 13:55	WG1507972
(S) Toluene-d8	*101*			*75.0-131*		*07/14/2020 13:55*	WG1507972
(S) 4-Bromofluorobenzene	*96.3*			*67.0-138*		*07/14/2020 13:55*	WG1507972
(S) 1,2-Dichloroethane-d4	*92.3*			*70.0-130*		*07/14/2020 13:55*	WG1507972

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	10.3		1.97	4.90	1	07/17/2020 00:04	WG1508400
C28-C40 Oil Range	36.4		0.336	4.90	1	07/17/2020 00:04	WG1508400
(S) o-Terphenyl	*68.1*			*18.0-148*		*07/17/2020 00:04*	WG1508400

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.0		1	07/15/2020 10:06	WG1508864

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.39	20.4	1	07/14/2020 20:32	WG1507970

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0222	0.102	1	07/12/2020 07:50	WG1507614
(S) a,a,a-Trifluorotoluene(FID)	*99.2*			*77.0-120*		*07/12/2020 07:50*	WG1507614

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000477	0.00102	1	07/14/2020 14:15	WG1507972
Toluene	U		0.00133	0.00510	1	07/14/2020 14:15	WG1507972
Ethylbenzene	U		0.000752	0.00255	1	07/14/2020 14:15	WG1507972
Total Xylenes	U		0.000898	0.00664	1	07/14/2020 14:15	WG1507972
(S) Toluene-d8	*103*			*75.0-131*		*07/14/2020 14:15*	WG1507972
(S) 4-Bromofluorobenzene	*93.7*			*67.0-138*		*07/14/2020 14:15*	WG1507972
(S) 1,2-Dichloroethane-d4	*93.3*			*70.0-130*		*07/14/2020 14:15*	WG1507972

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	3.80	J	1.64	4.08	1	07/15/2020 21:42	WG1508400
C28-C40 Oil Range	25.0		0.280	4.08	1	07/15/2020 21:42	WG1508400
(S) o-Terphenyl	*71.0*			*18.0-148*		*07/15/2020 21:42*	WG1508400

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.6		1	07/15/2020 10:06	WG1508864

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	9.33	20.3	1	07/14/2020 20:47	WG1507970

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0220	0.101	1	07/12/2020 08:12	WG1507614
(S) a,a,a-Trifluorotoluene(FID)	*98.9*			*77.0-120*		*07/12/2020 08:12*	WG1507614

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.000507	J	0.000473	0.00101	1	07/14/2020 14:34	WG1507972
Toluene	U		0.00132	0.00507	1	07/14/2020 14:34	WG1507972
Ethylbenzene	U		0.000747	0.00253	1	07/14/2020 14:34	WG1507972
Total Xylenes	U		0.000892	0.00659	1	07/14/2020 14:34	WG1507972
(S) Toluene-d8	*103*			*75.0-131*		*07/14/2020 14:34*	WG1507972
(S) 4-Bromofluorobenzene	*92.4*			*67.0-138*		*07/14/2020 14:34*	WG1507972
(S) 1,2-Dichloroethane-d4	*87.6*			*70.0-130*		*07/14/2020 14:34*	WG1507972

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	55.1		8.16	20.3	5	07/16/2020 00:14	WG1508400
C28-C40 Oil Range	158		1.39	20.3	5	07/16/2020 00:14	WG1508400
(S) o-Terphenyl	*60.6*			*18.0-148*		*07/16/2020 00:14*	WG1508400

AH-3 0-1' L1238356
Collected date/time: 07/07/20 13:10

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.1		1	07/15/2020 10:06	WG1508864

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	10.5	J	9.28	20.2	1	07/14/2020 21:02	WG1507970

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0219	0.101	1	07/12/2020 08:34	WG1507614
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*77.0-120*		*07/12/2020 08:34*	WG1507614

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.000933	J	0.000471	0.00101	1	07/14/2020 14:53	WG1507972
Toluene	U		0.00131	0.00505	1	07/14/2020 14:53	WG1507972
Ethylbenzene	U		0.000744	0.00252	1	07/14/2020 14:53	WG1507972
Total Xylenes	0.00106	J	0.000888	0.00656	1	07/14/2020 14:53	WG1507972
(S) Toluene-d8	*102*			*75.0-131*		*07/14/2020 14:53*	WG1507972
(S) 4-Bromofluorobenzene	*95.6*			*67.0-138*		*07/14/2020 14:53*	WG1507972
(S) 1,2-Dichloroethane-d4	*92.9*			*70.0-130*		*07/14/2020 14:53*	WG1507972

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	6.83		1.62	4.04	1	07/17/2020 00:17	WG1508400
C28-C40 Oil Range	36.7		0.276	4.04	1	07/17/2020 00:17	WG1508400
(S) o-Terphenyl	*66.3*			*18.0-148*		*07/17/2020 00:17*	WG1508400

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.3		1	07/15/2020 10:06	WG1508864

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		9.26	20.1	1	07/14/2020 21:17	WG1507970

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0219	0.101	1	07/12/2020 08:57	WG1507614
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*77.0-120*		*07/12/2020 08:57*	WG1507614

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.000906	J	0.000470	0.00101	1	07/14/2020 15:11	WG1507972
Toluene	U		0.00131	0.00504	1	07/14/2020 15:11	WG1507972
Ethylbenzene	U		0.000742	0.00252	1	07/14/2020 15:11	WG1507972
Total Xylenes	U		0.000886	0.00655	1	07/14/2020 15:11	WG1507972
(S) Toluene-d8	*99.8*			*75.0-131*		*07/14/2020 15:11*	WG1507972
(S) 4-Bromofluorobenzene	*95.5*			*67.0-138*		*07/14/2020 15:11*	WG1507972
(S) 1,2-Dichloroethane-d4	*93.4*			*70.0-130*		*07/14/2020 15:11*	WG1507972

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	16.9	J	8.11	20.1	5	07/17/2020 17:43	WG1508400
C28-C40 Oil Range	59.1		1.38	20.1	5	07/17/2020 17:43	WG1508400
(S) o-Terphenyl	*79.2*			*18.0-148*		*07/17/2020 17:43*	WG1508400

Sample Narrative:

L1238356-06 WG1508400: Cannot run at lower dilution due to viscosity of extract

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.8		1	07/15/2020 10:06	WG1508864

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		9.31	20.2	1	07/14/2020 21:32	WG1507970

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0220	0.101	1	07/12/2020 09:19	WG1507614
(S) a,a,a-Trifluorotoluene(FID)	*98.9*			*77.0-120*		*07/12/2020 09:19*	WG1507614

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.000531	J	0.000473	0.00101	1	07/14/2020 15:30	WG1507972
Toluene	U		0.00132	0.00506	1	07/14/2020 15:30	WG1507972
Ethylbenzene	U		0.000746	0.00253	1	07/14/2020 15:30	WG1507972
Total Xylenes	0.000936	J	0.000890	0.00658	1	07/14/2020 15:30	WG1507972
(S) Toluene-d8	*98.5*			*75.0-131*		*07/14/2020 15:30*	WG1507972
(S) 4-Bromofluorobenzene	*95.5*			*67.0-138*		*07/14/2020 15:30*	WG1507972
(S) 1,2-Dichloroethane-d4	*94.3*			*70.0-130*		*07/14/2020 15:30*	WG1507972

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	6.74		1.63	4.05	1	07/15/2020 19:46	WG1508400
C28-C40 Oil Range	45.4		0.277	4.05	1	07/15/2020 19:46	WG1508400
(S) o-Terphenyl	*70.9*			*18.0-148*		*07/15/2020 19:46*	WG1508400

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.5		1	07/15/2020 10:06	WG1508864

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	07/14/2020 21:47	WG1507970

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0220	0.102	1	07/12/2020 09:41	WG1507614
(S) a,a,a-Trifluorotoluene(FID)	*98.1*			*77.0-120*		*07/12/2020 09:41*	WG1507614

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000474	0.00102	1	07/14/2020 15:49	WG1507972
Toluene	U		0.00132	0.00508	1	07/14/2020 15:49	WG1507972
Ethylbenzene	U		0.000748	0.00254	1	07/14/2020 15:49	WG1507972
Total Xylenes	U		0.000894	0.00660	1	07/14/2020 15:49	WG1507972
(S) Toluene-d8	*99.1*			*75.0-131*		*07/14/2020 15:49*	WG1507972
(S) 4-Bromofluorobenzene	*96.1*			*67.0-138*		*07/14/2020 15:49*	WG1507972
(S) 1,2-Dichloroethane-d4	*98.9*			*70.0-130*		*07/14/2020 15:49*	WG1507972

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	6.29		1.63	4.06	1	07/15/2020 20:38	WG1508400
C28-C40 Oil Range	36.9		0.278	4.06	1	07/15/2020 20:38	WG1508400
(S) o-Terphenyl	*73.9*			*18.0-148*		*07/15/2020 20:38*	WG1508400

Method Blank (MB)

(MB) R3550028-1 07/15/20 10:19

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

L1238352-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1238352-01 07/15/20 10:19 • (DUP) R3550028-3 07/15/20 10:19

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	83.5	82.9	1	0.725		10

Laboratory Control Sample (LCS)

(LCS) R3550028-2 07/15/20 10:19

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) R3550026-1 07/15/20 10:06

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

L1238356-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1238356-06 07/15/20 10:06 • (DUP) R3550026-3 07/15/20 10:06

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	99.3	99.3	1	0.0324		10

Laboratory Control Sample (LCS)

(LCS) R3550026-2 07/15/20 10:06

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) R3549544-1 07/14/20 17:03

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

L1238060-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1238060-01 07/14/20 18:03 • (DUP) R3549544-3 07/14/20 18:18

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	362	366	1	1.11		20

L1239080-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1239080-01 07/14/20 23:31 • (DUP) R3549544-6 07/14/20 23:46

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

Laboratory Control Sample (LCS)

(LCS) R3549544-2 07/14/20 17:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	199	99.7	90.0-110	

L1238292-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1238292-01 07/14/20 18:47 • (MS) R3549544-4 07/14/20 19:02 • (MSD) R3549544-5 07/14/20 19:17

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	151	671	668	104	103	1	80.0-120			0.510	20

Method Blank (MB)

(MB) R3550799-3 07/12/20 03:23

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)	*99.8*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3550799-2 07/12/20 02:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.71	85.6	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*101*	*77.0-120*	

Method Blank (MB)

(MB) R3550795-2 07/14/20 10:15

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	*102*			*75.0-131*
(S) 4-Bromofluorobenzene	*97.2*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*91.0*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3550795-1 07/14/20 09:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.122	97.6	70.0-123	
Ethylbenzene	0.125	0.118	94.4	74.0-126	
Toluene	0.125	0.116	92.8	75.0-121	
Xylenes, Total	0.375	0.382	102	72.0-127	
(S) Toluene-d8			*94.7*	*75.0-131*	
(S) 4-Bromofluorobenzene			*103*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*101*	*70.0-130*	

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

Method Blank (MB)

(MB) R3549738-1 07/15/20 10:33

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	*76.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3549738-2 07/15/20 10:46

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.1	72.2	50.0-150	
(S) o-Terphenyl			*79.1*	*18.0-148*	

L1238448-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1238448-03 07/15/20 23:36 • (MS) R3549738-3 07/15/20 23:49 • (MSD) R3549738-4 07/16/20 00:01

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 %
C10-C28 Diesel Range	50.0	62.2	91.4	76.4	58.4	28.4	5	50.0-150		J6	17.9	20
(S) o-Terphenyl					*72.5*	*65.0*		*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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

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

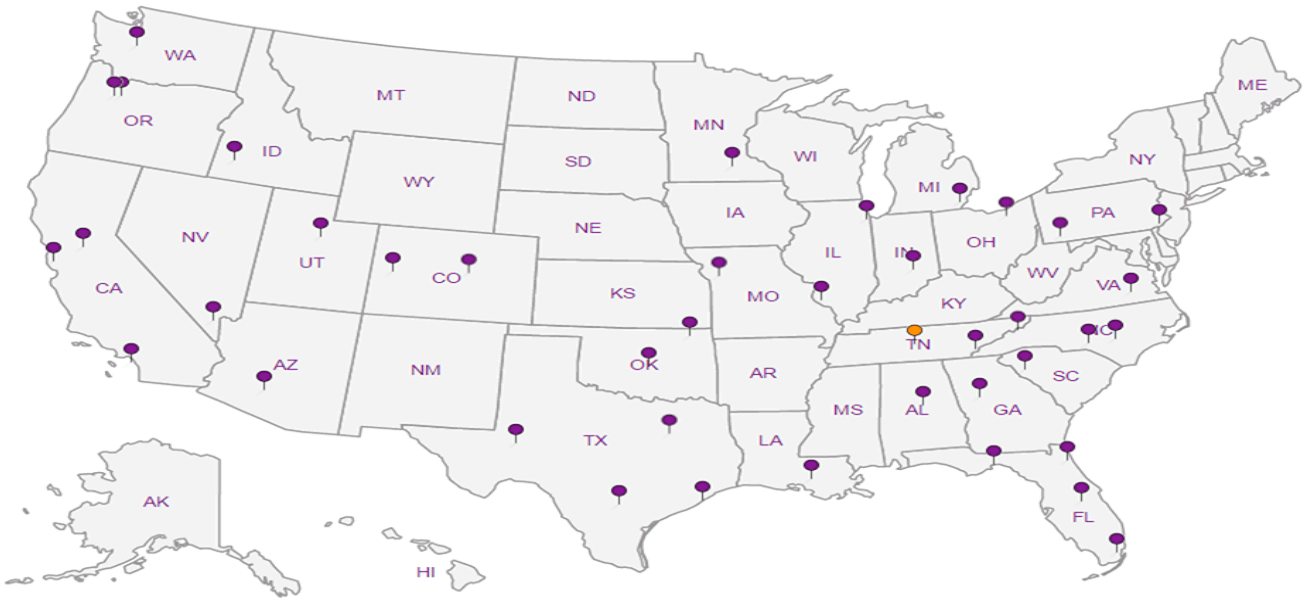
Third Party Federal Accreditations

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.



ConocoPhillips - Tetra Tech

901 West Wall
Suite 100
Midland, TX 79701

Billing Information:
Accounts Payable
901 West Wall
Suite 100
Midland, TX 79701

Pres Chk

Report to: Christian Llull

Email To: christian.llull@tetratech.com

Project Description: COP MCA 71

City/State Collected: Hobbs, NM

Please Circle: PT MT CT ET

Phone: 512-338-1667

Client Project # 212C-MD-02163

Lab Project # COPTETRA-212CMD02163

Collected by (print): JOHN MYLER

Site/Facility ID #

P.O. #

Collected by (signature): John Myler

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Standard, No Rush

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG # D134

L1238356

Acctnum: COPTETRA

Template: T170395

Prelogin: P784177

PM: 526 - Chris McCord

PB: 7/1/20 MM

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE-300 4ozClr-NoPres	GRO,V8260BTEX 4ozClr-NoPres	TPH-DRO/ORO 4ozClr-NoPres	Remarks	Sample # (lab only)
AH-1	Grab	SS	0'-1'	7/7/20	11:20	1					-01
AH-1			2'-3'		11:50						-02
AH-2			0'-1'		12:10						-03
AH-2			2'-3'		12:40						-04
AH-3			0'-1'		13:10						-05
AH-3			2'-3'		13:40						-06
AH-4			0'-1'		14:10						-07
AH-4			2'-3'		14:40						-08
Trip Blank-1	—	—	—	—	—						-09

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other _____

Remarks: Blue Cooler

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking # 4510 1155 5120

Sample Receipt Checklist

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

	Date:	Time:	
Relinquished by : (Signature) John Myler	7/9/20	10:30	Received by: (Signature) Kelsey Kilcrease
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No (1) HCL MeoH TBR

Temp: 1.7 °C Bottles Received: 8

Date: 7-10-20 Time: 07:30

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Troy Dunlap

Login #: L1238356	Client: COPTETRA	Date: 7/10/20	Evaluated by: Troy Dunlap

Non-Conformance (check applicable items)

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

Login Comments: Trip Blank not marked for analysis.

Client informed by:		Call		Email		Voice Mail		Date: 7/13/20	Time: 13:58
TSR Initials: CM	Client Contact:								

Login Instructions:

Keep on hold.

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 05, 2020

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1243727
Samples Received:	07/25/2020
Project Number:	212C-MD-02163
Description:	COP MCA 71

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-2-2 (0-1') L1243727-01 Solid

Collected by: Devin Dominguez | Collected date/time: 07/23/20 00:00 | Received date/time: 07/25/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1518217	1	07/31/20 22:59	07/31/20 23:33	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1516371	1	07/30/20 11:47	07/31/20 03:06	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1518152	1	07/29/20 16:58	07/31/20 16:28	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1517465	1	07/29/20 16:58	07/29/20 23:34	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1518400	5	07/31/20 12:52	08/01/20 02:39	TH	Mt. Juliet, TN

AH-2-2 (2-3') L1243727-02 Solid

Collected by: Devin Dominguez | Collected date/time: 07/23/20 00:00 | Received date/time: 07/25/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1518217	1	07/31/20 22:59	07/31/20 23:33	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1516371	1	07/30/20 11:47	07/31/20 03:35	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1519012	1	07/29/20 16:58	08/02/20 11:23	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1517465	1	07/29/20 16:58	07/29/20 23:54	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1518400	1	07/31/20 12:52	08/01/20 01:09	TH	Mt. Juliet, TN

AH-2-3 (0-1') L1243727-03 Solid

Collected by: Devin Dominguez | Collected date/time: 07/23/20 00:00 | Received date/time: 07/25/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1518217	1	07/31/20 22:59	07/31/20 23:33	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1516371	1	07/30/20 11:47	07/31/20 03:44	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1518152	1	07/29/20 16:58	07/31/20 17:12	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1517465	1	07/29/20 16:58	07/30/20 00:15	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1518400	1	07/31/20 12:52	08/01/20 01:22	TH	Mt. Juliet, TN

AH-2-3 (2-3') L1243727-04 Solid

Collected by: Devin Dominguez | Collected date/time: 07/23/20 00:00 | Received date/time: 07/25/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1518217	1	07/31/20 22:59	07/31/20 23:33	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1516371	1	07/30/20 11:47	07/31/20 04:03	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1518152	1	07/29/20 16:58	07/31/20 17:34	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1517465	1	07/29/20 16:58	07/30/20 00:35	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1518400	1	07/31/20 12:52	08/01/20 02:13	TH	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	92.4		1	07/31/2020 23:33	WG1518217

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		9.96	21.7	1	07/31/2020 03:06	WG1516371

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0235	0.108	1	07/31/2020 16:28	WG1518152
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*07/31/2020 16:28*	WG1518152

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000506	0.00108	1	07/29/2020 23:34	WG1517465
Toluene	U		0.00141	0.00541	1	07/29/2020 23:34	WG1517465
Ethylbenzene	U		0.000798	0.00271	1	07/29/2020 23:34	WG1517465
Total Xylenes	0.00119	J	0.000953	0.00704	1	07/29/2020 23:34	WG1517465
(S) Toluene-d8	*94.4*			*75.0-131*		*07/29/2020 23:34*	WG1517465
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*07/29/2020 23:34*	WG1517465
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*07/29/2020 23:34*	WG1517465

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	47.6		8.71	21.7	5	08/01/2020 02:39	WG1518400
C28-C40 Oil Range	178		1.48	21.7	5	08/01/2020 02:39	WG1518400
(S) o-Terphenyl	*82.8*			*18.0-148*		*08/01/2020 02:39*	WG1518400

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.5		1	07/31/2020 23:33	WG1518217

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		11.3	24.6	1	07/31/2020 03:35	WG1516371

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		0.0266	0.123	1	08/02/2020 11:23	WG1519012
(S) a,a,a-Trifluorotoluene(FID)	*90.4*			*77.0-120*		*08/02/2020 11:23*	WG1519012

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		0.000680	0.00146	1	07/29/2020 23:54	WG1517465
Toluene	U		0.00189	0.00728	1	07/29/2020 23:54	WG1517465
Ethylbenzene	U		0.00107	0.00364	1	07/29/2020 23:54	WG1517465
Total Xylenes	U		0.00128	0.00946	1	07/29/2020 23:54	WG1517465
(S) Toluene-d8	*92.4*			*75.0-131*		*07/29/2020 23:54*	WG1517465
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*07/29/2020 23:54*	WG1517465
(S) 1,2-Dichloroethane-d4	*94.7*			*70.0-130*		*07/29/2020 23:54*	WG1517465

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	4.54	J	1.98	4.91	1	08/01/2020 01:09	WG1518400
C28-C40 Oil Range	14.9		0.336	4.91	1	08/01/2020 01:09	WG1518400
(S) o-Terphenyl	*80.8*			*18.0-148*		*08/01/2020 01:09*	WG1518400

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.9		1	07/31/2020 23:33	WG1518217

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	11.3	J	9.59	20.8	1	07/31/2020 03:44	WG1516371

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	07/31/2020 17:12	WG1518152
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*07/31/2020 17:12*	WG1518152

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	07/30/2020 00:15	WG1517465
Toluene	U		0.00136	0.00521	1	07/30/2020 00:15	WG1517465
Ethylbenzene	U		0.000768	0.00261	1	07/30/2020 00:15	WG1517465
Total Xylenes	U		0.000917	0.00678	1	07/30/2020 00:15	WG1517465
(S) Toluene-d8	*96.7*			*75.0-131*		*07/30/2020 00:15*	WG1517465
(S) 4-Bromofluorobenzene	*98.9*			*67.0-138*		*07/30/2020 00:15*	WG1517465
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*07/30/2020 00:15*	WG1517465

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	5.41		1.68	4.17	1	08/01/2020 01:22	WG1518400
C28-C40 Oil Range	20.2		0.286	4.17	1	08/01/2020 01:22	WG1518400
(S) o-Terphenyl	*78.8*			*18.0-148*		*08/01/2020 01:22*	WG1518400

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.0		1	07/31/2020 23:33	WG1518217

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		9.89	21.5	1	07/31/2020 04:03	WG1516371

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		0.0233	0.108	1	07/31/2020 17:34	WG1518152
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*07/31/2020 17:34*	WG1518152

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		0.000502	0.00108	1	07/30/2020 00:35	WG1517465
Toluene	U		0.00140	0.00538	1	07/30/2020 00:35	WG1517465
Ethylbenzene	U		0.000792	0.00269	1	07/30/2020 00:35	WG1517465
Total Xylenes	0.000995	J	0.000946	0.00699	1	07/30/2020 00:35	WG1517465
(S) Toluene-d8	*95.7*			*75.0-131*		*07/30/2020 00:35*	WG1517465
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*07/30/2020 00:35*	WG1517465
(S) 1,2-Dichloroethane-d4	*99.1*			*70.0-130*		*07/30/2020 00:35*	WG1517465

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	6.01		1.73	4.30	1	08/01/2020 02:13	WG1518400
C28-C40 Oil Range	25.4		0.295	4.30	1	08/01/2020 02:13	WG1518400
(S) o-Terphenyl	*83.6*			*18.0-148*		*08/01/2020 02:13*	WG1518400

Method Blank (MB)

(MB) R3555381-1 07/31/20 23:33

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

L1243727-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1243727-01 07/31/20 23:33 • (DUP) R3555381-3 07/31/20 23:33

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	92.4	92.5	1	0.189		10

Laboratory Control Sample (LCS)

(LCS) R3555381-2 07/31/20 23:33

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) R3555058-1 07/30/20 23:46

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

L1243725-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1243725-02 07/31/20 00:15 • (DUP) R3555058-3 07/31/20 00:24

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

L1243727-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1243727-03 07/31/20 03:44 • (DUP) R3555058-6 07/31/20 03:54

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	11.3	11.1	1	2.37	J	20

Laboratory Control Sample (LCS)

(LCS) R3555058-2 07/30/20 23:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	192	96.2	90.0-110	

L1243725-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1243725-04 07/31/20 00:43 • (MS) R3555058-4 07/31/20 00:53 • (MSD) R3555058-5 07/31/20 01:02

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	116	608	613	98.4	99.4	1	80.0-120			0.881	20

Method Blank (MB)

(MB) R3555189-2 07/31/20 11:46

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)	*105*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3555189-1 07/31/20 11:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.63	121	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*77.0-120*	

L1244028-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1244028-03 07/31/20 20:11 • (MS) R3555189-3 07/31/20 20:55 • (MSD) R3555189-4 07/31/20 21:18

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	550	601	998	968	72.2	66.7	100	10.0-151			3.05	28
(S) a,a,a-Trifluorotoluene(FID)					*102*	*99.8*		*77.0-120*				

Method Blank (MB)

(MB) R3555643-3 08/02/20 09:13

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)	*94.0*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3555643-2 08/02/20 08:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.93	89.6	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*107*	*77.0-120*	

Method Blank (MB)

(MB) R3554887-2 07/29/20 22:01

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	*93.8*			*75.0-131*
(S) 4-Bromofluorobenzene	*97.8*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*97.8*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3554887-1 07/29/20 21:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.127	102	70.0-123	
Ethylbenzene	0.125	0.113	90.4	74.0-126	
Toluene	0.125	0.110	88.0	75.0-121	
Xylenes, Total	0.375	0.332	88.5	72.0-127	
(S) Toluene-d8			*95.3*	*75.0-131*	
(S) 4-Bromofluorobenzene			*95.5*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*108*	*70.0-130*	

L1244098-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1244098-10 07/30/20 04:58 • (MS) R3554887-3 07/30/20 06:19 • (MSD) R3554887-4 07/30/20 06:40

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.124	U	0.149	0.151	120	122	1	10.0-149			1.33	37
Ethylbenzene	0.124	0.000941	0.137	0.135	110	108	1	10.0-160			1.47	38
Toluene	0.124	U	0.126	0.126	102	102	1	10.0-156			0.000	38
Xylenes, Total	0.372	0.00525	0.398	0.402	106	107	1	10.0-160			1.00	38
(S) Toluene-d8					*94.4*	*93.4*		*75.0-131*				
(S) 4-Bromofluorobenzene					*118*	*121*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*103*	*101*		*70.0-130*				

Method Blank (MB)

(MB) R3555333-1 07/31/20 16:05

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	*83.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3555333-2 07/31/20 16:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	37.1	74.2	50.0-150	
(S) o-Terphenyl			*71.3*	*18.0-148*	

L1243727-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1243727-03 08/01/20 01:22 • (MS) R3555433-1 08/01/20 01:35 • (MSD) R3555433-2 08/01/20 01:47

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.6	5.41	45.3	39.3	79.0	67.0	1	50.0-150			14.3	20
(S) o-Terphenyl					*75.9*	*67.8*		*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	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

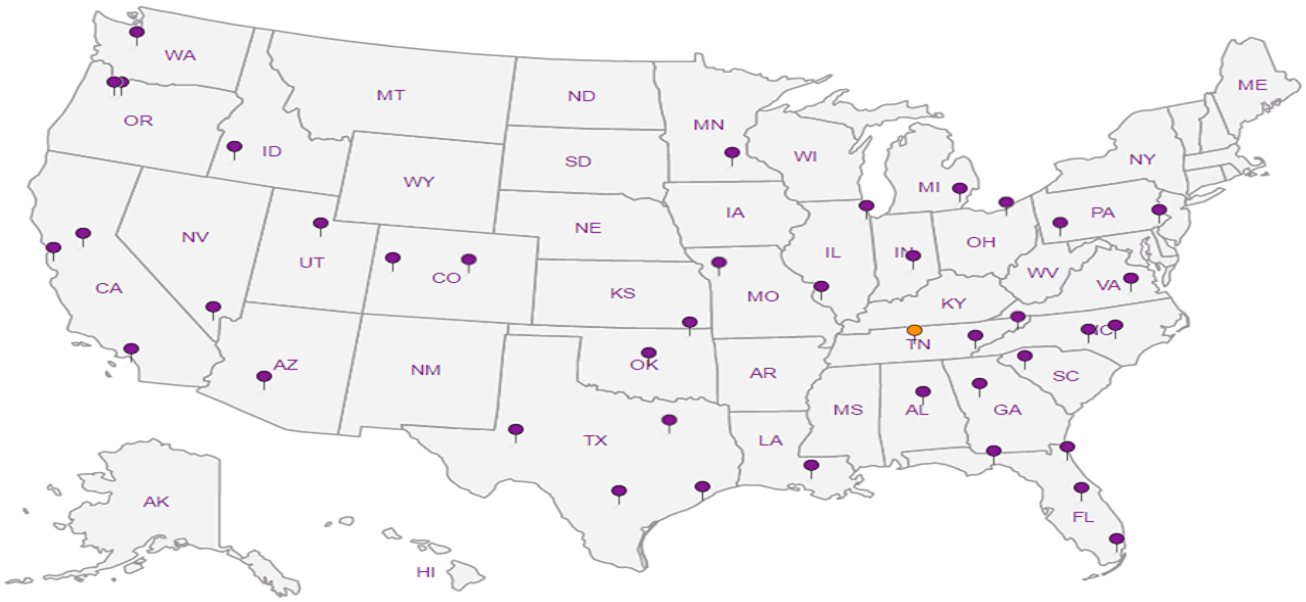
Third Party Federal Accreditations

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

L1243725 F025 L1243727

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	MCA 71	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02163
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Devin Dominguez
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
-01	AH-2-2 (0-1')	7/23/2020			X				X			1	N	X		X												X						
-02	AH-2-2 (2-3')	7/23/2020			X				X			1	N	X		X												X						

Relinquished by:	Date: 7/24	Time: 15:00	Received by:	Date: 7.24.20	Time: 15:00
Relinquished by:	Date: 7/24/20	Time: 17:00	Received by: FedEx	Date: 7.24.20	Time: 17:00
Relinquished by:	Date:	Time:	Received by:	Date: 7-25-20	Time: 900

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 #: _____

3.4-2-3.2

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

~~4243725~~ 4243727

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	MCA 71	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02163
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Devin Dominguez
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
-03	AH-2-3 (0-1')	7/23/2020			X				X			1	N	X		X												X						
-04	AH-2-3 (2-3')	7/23/2020			X				X			1	N	X		X												X						

Relinquished by:	Date: 7/24	Time: 15:00	Received by:	Date: 7/24/20	Time: 15:00
Relinquished by:	Date: 7/24/20	Time: 17:00	Received by: Fedex	Date: 7/24/20	Time: 17:00
Relinquished by:	Date:	Time:	Received by:	Date: 7-25-20	Time: 900

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 #: _____

3.4 - 2 = 3.2 MM

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

L1243727

Client: Tetra Tech	~~L1243725~~	
Cooler Received/Opened On: 7 / 25 / 20 Temperature:	3.2	
Received By: Bryan Burgess		
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?			

CARDINAL Laboratories

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

February 25, 2020

JUSTIN WRIGHT

Conoco Phillips - Hobbs

P. O. BOX 325

Hobbs, NM 88240

RE: MCA #71

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

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 1 (H000530-01)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	**0.064**	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1250**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**168**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**39.1**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *87.0 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *99.7 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 2 (H000530-02)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**434**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**236**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *89.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *93.5 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 3 (H000530-03)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**528**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**15.1**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	<10.0	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *91.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *95.9 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 4 (H000530-04)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3000**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**863**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**387**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *87.9 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *111 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 5 (H000530-05)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3200**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**1130**	50.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**301**	50.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *99.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *125 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 6 (H000530-06)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	**0.067**	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.4 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	02/24/2020	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**5370**	50.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**2210**	50.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *98.9 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *302 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 7 (H000530-07)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**512**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**144**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**60.4**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *69.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *81.6 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SW - # 8 (H000530-08)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**13600**	16.0	02/24/2020	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**360**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**167**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *70.3 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *75.4 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SP - # 9 (H000530-09)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**624**	16.0	02/24/2020	ND	416	104	400	0.00	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<100	100	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**6310**	100	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**1870**	100	02/24/2020	ND					

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

Surrogate: 1-Chlorooctadecane *269 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SP - # 10 (H000530-10)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	02/24/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**239**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**166**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *96.2 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *92.9 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SP - # 11 (H000530-11)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3840**	16.0	02/24/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	<10.0	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	<10.0	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *93.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *97.7 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SP - # 12 (H000530-12)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2120**	16.0	02/24/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**18.7**	10.0	02/24/2020	ND	190	95.1	200	2.53	
DRO >C10-C28*	**1690**	10.0	02/24/2020	ND	178	88.8	200	0.329	
EXT DRO >C28-C36	**384**	10.0	02/24/2020	ND					

Surrogate: 1-Chlorooctane *101 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *124 %* *42.2-156*

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/19/2020	Sampling Date:	02/18/2020
Reported:	02/25/2020	Sampling Type:	Soil
Project Name:	MCA #71	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COPC - LEA COUNTY, NM		

Sample ID: SP - # 13 (H000530-13)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2020	ND	1.77	88.3	2.00	6.87	
Toluene*	<0.050	0.050	02/24/2020	ND	1.75	87.6	2.00	6.95	
Ethylbenzene*	<0.050	0.050	02/24/2020	ND	1.76	88.1	2.00	7.53	
Total Xylenes*	<0.150	0.150	02/24/2020	ND	5.09	84.9	6.00	7.38	
Total BTEX	<0.300	0.300	02/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.4 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	02/24/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2020	ND	193	96.4	200	2.80	
DRO >C10-C28*	**198**	10.0	02/22/2020	ND	188	94.0	200	2.59	
EXT DRO >C28-C36	**156**	10.0	02/22/2020	ND					

Surrogate: 1-Chlorooctane *80.7 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *70.8 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	ConocoPhillips	BILL TO	
Project Manager:	Justin Wright	P.O. #:	
Address:		Company:	COPC
City:	Hobbs St NM Zip #	Attn:	
Phone #:	575-631-9092 Fax #:	Address:	
Project #:	Project Owner: COPC	City:	
Project Name:	MCA 71	State:	Zip:
Project Location:	Lea County, NM	Phone #:	
Sampler Name:	Justin Wright	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides	BTEX	TPH
H200530																	
1	SW-#1	G				*					*		2-18		✓	✓	✓
2	SW-#2	G				*					*		2-18		✓	✓	✓
3	SW-#3	G				*					*		2-18		✓	✓	✓
4	SW-#4	G				*					*		2-18		✓	✓	✓
5	SW-#5	G				*					*		2-18		✓	✓	✓
6	SW-#6	G				*					*		2-18		✓	✓	✓
7	SW-#7	G				*					*		2-18		✓	✓	✓
8	SW-#8	G				*					*		2-18		✓	✓	✓
9	SP #9	G				*					*		2-18		✓	✓	✓
10	SP #10	G				*					*		2-18		✓	✓	✓

Relinquished By:	Date: 2-19-20 Time:	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: 4:10 PM Time:	Received By:	REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 6°C Corrected Temp. °C	Sample Condition Cool: ☒ Yes ☐ No Intact: ☒ Yes ☐ No	CHECKED BY: (Initials) LHJ	Turnaround Time: Standard ☒ Rush ☐ Thermometer ID #97 Correction Factor +0.4 °C #113

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

FORM-006 R 3.0

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	ConocoPhillips	BILL TO	
Project Manager:	Justin Wright	P.O. #:	
Address:		Company:	COPC
City:	Hobbs	St NM	Zip #
Phone #:	575-631-9092	Fax #:	
Project #:		Project Owner:	COPC
Project Name:	MCA 71		
Project Location:	Lea County, NM		
Sampler Name:	Justin Wright		

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	BTEX	TPH								
H000530																									
11	SP#11	G				*					*		2-18		✓	✓	✓								
12	SP#12	G				*					*		2-18		✓	✓	✓								
13	SP#13	G				*					*		2-18		✓	✓	✓								
		G				*					*														
		G				*					*														
		G				*					*														
		G				*					*														
		G				*					*														
		G				*					*														
		G				*					*														

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

Relinquished By:	Date: 2-19-20 Time: 2:10 PM	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: Time:	Received By:	REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C Corrected Temp. °C -6°C	Sample Condition Cool: ☒ Yes ☐ No Intact: ☒ Yes ☐ No	CHECKED BY: (Initials) KJ
Turnaround Time: Standard ☒ Rush ☐ Thermometer ID #97 Correction Factor +0.4 °C #113	Bacteria (only) Sample Condition Cool: ☐ Yes ☐ Nc Intact: ☐ Yes ☐ No	Observed Temp. °C Corrected Temp. °C	

FORM-006 R 3.0

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Pace Analytical®

ANALYTICAL REPORT

May 26, 2021

ConocoPhillips - Tetra Tech

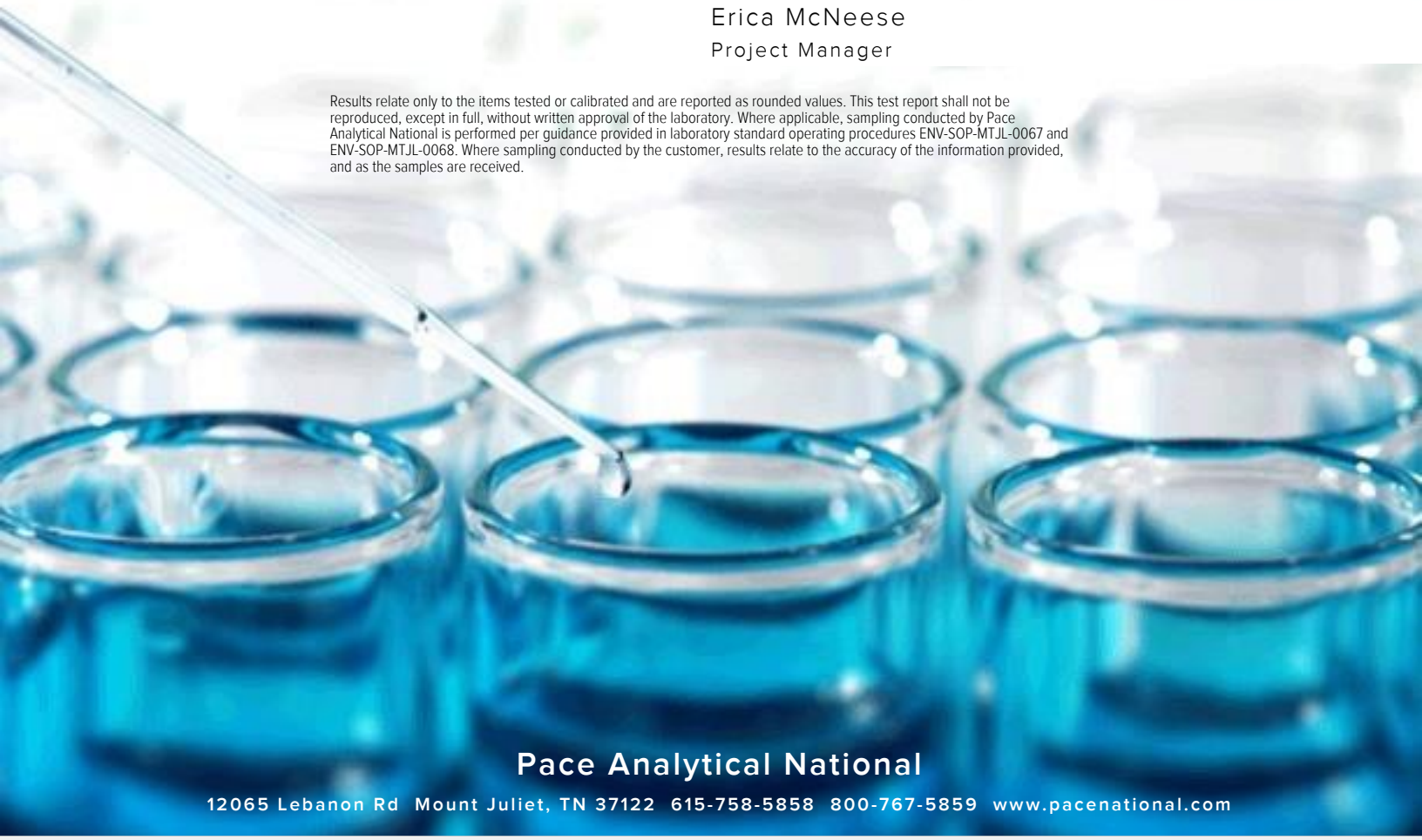
Sample Delivery Group:	L1353559
Samples Received:	05/14/2021
Project Number:	212C-MD-02163
Description:	COP MCA 71 Release

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

Entire Report Reviewed By: Erica McNeese

Erica McNeese
Project Manager

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



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

TABLE OF CONTENTS

AH-21-1 (0'-1') L1353559-01 Solid

Collected by: Andrew Garcia | Collected date/time: 05/10/21 10:00 | Received date/time: 05/14/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1673733	1	05/20/21 11:03	05/20/21 11:12	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1675836	1	05/25/21 12:28	05/25/21 15:11	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1673232	1	05/18/21 17:53	05/19/21 15:58	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1673309	1	05/18/21 17:53	05/19/21 16:01	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1674386	10	05/20/21 17:57	05/21/21 13:25	WCR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1674386	20	05/20/21 17:57	05/22/21 00:29	CAG	Mt. Juliet, TN

AH-21-1 (2'-3') L1353559-02 Solid

Collected by: Andrew Garcia | Collected date/time: 05/10/21 10:45 | Received date/time: 05/14/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1673733	1	05/20/21 11:03	05/20/21 11:12	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1675836	1	05/25/21 12:28	05/25/21 15:20	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1673232	1	05/18/21 17:53	05/19/21 16:20	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1673309	1	05/18/21 17:53	05/19/21 16:20	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1674386	10	05/20/21 17:57	05/22/21 00:17	CAG	Mt. Juliet, TN

AH-21-2 (0'-1') L1353559-03 Solid

Collected by: Andrew Garcia | Collected date/time: 05/10/21 11:30 | Received date/time: 05/14/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1673736	1	05/20/21 10:37	05/20/21 10:44	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1675836	1	05/25/21 12:28	05/25/21 15:30	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1673232	1	05/18/21 17:53	05/19/21 16:42	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1673309	1	05/18/21 17:53	05/19/21 18:27	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1674386	1	05/20/21 17:57	05/21/21 09:49	WCR	Mt. Juliet, TN

AH-21-2 (2'-3') L1353559-04 Solid

Collected by: Andrew Garcia | Collected date/time: 05/10/21 12:15 | Received date/time: 05/14/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1673736	1	05/20/21 10:37	05/20/21 10:44	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1675836	1	05/25/21 12:28	05/25/21 15:59	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1673232	1	05/18/21 17:53	05/19/21 17:04	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1673309	1	05/18/21 17:53	05/19/21 18:46	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1674386	1	05/20/21 17:57	05/21/21 10:02	WCR	Mt. Juliet, TN

AH-21-3 (0'-1') L1353559-05 Solid

Collected by: Andrew Garcia | Collected date/time: 05/10/21 13:00 | Received date/time: 05/14/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1673736	1	05/20/21 10:37	05/20/21 10:44	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1675836	1	05/25/21 12:28	05/25/21 16:08	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1673232	1	05/18/21 17:53	05/19/21 17:26	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1673309	1	05/18/21 17:53	05/19/21 19:05	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1674386	1	05/20/21 17:57	05/21/21 13:12	WCR	Mt. Juliet, TN

AH-21-3 (2'-3') L1353559-06 Solid

Collected by: Andrew Garcia | Collected date/time: 05/10/21 13:45 | Received date/time: 05/14/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1673736	1	05/20/21 10:37	05/20/21 10:44	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1675836	1	05/25/21 12:28	05/25/21 16:18	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1674583	1	05/18/21 17:53	05/20/21 21:35	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1673309	1	05/18/21 17:53	05/19/21 19:24	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1674386	1	05/20/21 17:57	05/21/21 10:15	WCR	Mt. Juliet, TN

AH-21-4 (0'-1') L1353559-07 Solid

Collected by: Andrew Garcia | Collected date/time: 05/10/21 14:30 | Received date/time: 05/14/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1673736	1	05/20/21 10:37	05/20/21 10:44	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1675836	5	05/25/21 12:28	05/25/21 16:27	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1673232	1	05/18/21 17:53	05/19/21 18:10	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1673309	1	05/18/21 17:53	05/19/21 19:43	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1674386	10	05/20/21 17:57	05/21/21 13:51	WCR	Mt. Juliet, TN

AH-21-4 (2'-3') L1353559-08 Solid

Collected by: Andrew Garcia | Collected date/time: 05/10/21 15:15 | Received date/time: 05/14/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1673736	1	05/20/21 10:37	05/20/21 10:44	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1675836	1	05/25/21 12:28	05/25/21 16:37	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1674583	1	05/18/21 17:53	05/20/21 21:59	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1673309	1	05/18/21 17:53	05/19/21 20:02	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1674386	10	05/20/21 17:57	05/21/21 14:03	CAG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1674386	20	05/20/21 17:57	05/22/21 00:42	CAG	Mt. Juliet, TN

AH-21-5 (0'-1') L1353559-09 Solid

Collected by: Andrew Garcia | Collected date/time: 05/10/21 16:00 | Received date/time: 05/14/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1673736	1	05/20/21 10:37	05/20/21 10:44	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1675836	1	05/25/21 12:28	05/25/21 16:46	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1673232	1	05/18/21 17:53	05/19/21 18:54	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1673623	1	05/18/21 17:53	05/19/21 15:37	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1674386	10	05/20/21 17:57	05/21/21 14:16	WCR	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.

Erica McNeese
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.6		1	05/20/2021 11:12	WG1673733

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	345		9.93	21.6	1	05/25/2021 15:11	WG1675836

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	05/19/2021 15:58	WG1673232
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*		*05/19/2021 15:58*	WG1673232

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		0.000542	0.00116	1	05/19/2021 16:01	WG1673309
Toluene	U		0.00151	0.00580	1	05/19/2021 16:01	WG1673309
Ethylbenzene	U		0.000855	0.00290	1	05/19/2021 16:01	WG1673309
Total Xylenes	U		0.00102	0.00754	1	05/19/2021 16:01	WG1673309
(S) Toluene-d8	*107*			*75.0-131*		*05/19/2021 16:01*	WG1673309
(S) 4-Bromofluorobenzene	*89.3*			*67.0-138*		*05/19/2021 16:01*	WG1673309
(S) 1,2-Dichloroethane-d4	*76.9*			*70.0-130*		*05/19/2021 16:01*	WG1673309

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	736		17.4	43.2	10	05/21/2021 13:25	WG1674386
C28-C40 Oil Range	2180		5.92	86.4	20	05/22/2021 00:29	WG1674386
(S) o-Terphenyl	*98.9*			*18.0-148*		*05/21/2021 13:25*	WG1674386
(S) o-Terphenyl	*65.0*	J7		*18.0-148*		*05/22/2021 00:29*	WG1674386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.2		1	05/20/2021 11:12	WG1673733

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	278		11.3	24.6	1	05/25/2021 15:20	WG1675836

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		0.0267	0.123	1	05/19/2021 16:20	WG1673232
(S) a,a,a-Trifluorotoluene(FID)	*112*			*77.0-120*		*05/19/2021 16:20*	WG1673232

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		0.000683	0.00146	1	05/19/2021 16:20	WG1673309
Toluene	U		0.00190	0.00732	1	05/19/2021 16:20	WG1673309
Ethylbenzene	U		0.00108	0.00366	1	05/19/2021 16:20	WG1673309
Total Xylenes	U		0.00129	0.00951	1	05/19/2021 16:20	WG1673309
(S) Toluene-d8	*108*			*75.0-131*		*05/19/2021 16:20*	WG1673309
(S) 4-Bromofluorobenzene	*86.4*			*67.0-138*		*05/19/2021 16:20*	WG1673309
(S) 1,2-Dichloroethane-d4	*77.7*			*70.0-130*		*05/19/2021 16:20*	WG1673309

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	185		19.8	49.2	10	05/22/2021 00:17	WG1674386
C28-C40 Oil Range	384		3.37	49.2	10	05/22/2021 00:17	WG1674386
(S) o-Terphenyl	*106*			*18.0-148*		*05/22/2021 00:17*	WG1674386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.2		1	05/20/2021 10:44	WG1673736

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	28.4		11.2	24.3	1	05/25/2021 15:30	WG1675836

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		0.0264	0.122	1	05/19/2021 16:42	WG1673232
(S) a,a,a-Trifluorotoluene(FID)	*116*			*77.0-120*		*05/19/2021 16:42*	WG1673232

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		0.000669	0.00143	1	05/19/2021 18:27	WG1673309
Toluene	U		0.00186	0.00716	1	05/19/2021 18:27	WG1673309
Ethylbenzene	U		0.00106	0.00358	1	05/19/2021 18:27	WG1673309
Total Xylenes	U		0.00126	0.00931	1	05/19/2021 18:27	WG1673309
(S) Toluene-d8	*104*			*75.0-131*		*05/19/2021 18:27*	WG1673309
(S) 4-Bromofluorobenzene	*93.0*			*67.0-138*		*05/19/2021 18:27*	WG1673309
(S) 1,2-Dichloroethane-d4	*88.1*			*70.0-130*		*05/19/2021 18:27*	WG1673309

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		1.96	4.86	1	05/21/2021 09:49	WG1674386
C28-C40 Oil Range	0.670	J	0.333	4.86	1	05/21/2021 09:49	WG1674386
(S) o-Terphenyl	*69.0*			*18.0-148*		*05/21/2021 09:49*	WG1674386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.1		1	05/20/2021 10:44	WG1673736

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	13.0	J	11.3	24.7	1	05/25/2021 15:59	WG1675836

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		0.0268	0.123	1	05/19/2021 17:04	WG1673232
(S) a,a,a-Trifluorotoluene(FID)	*116*			*77.0-120*		*05/19/2021 17:04*	WG1673232

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		0.000686	0.00147	1	05/19/2021 18:46	WG1673309
Toluene	U		0.00191	0.00734	1	05/19/2021 18:46	WG1673309
Ethylbenzene	U		0.00108	0.00367	1	05/19/2021 18:46	WG1673309
Total Xylenes	U		0.00129	0.00954	1	05/19/2021 18:46	WG1673309
(S) Toluene-d8	*105*			*75.0-131*		*05/19/2021 18:46*	WG1673309
(S) 4-Bromofluorobenzene	*86.9*			*67.0-138*		*05/19/2021 18:46*	WG1673309
(S) 1,2-Dichloroethane-d4	*76.0*			*70.0-130*		*05/19/2021 18:46*	WG1673309

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		1.99	4.93	1	05/21/2021 10:02	WG1674386
C28-C40 Oil Range	U		0.338	4.93	1	05/21/2021 10:02	WG1674386
(S) o-Terphenyl	*49.4*			*18.0-148*		*05/21/2021 10:02*	WG1674386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.6		1	05/20/2021 10:44	WG1673736

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	28.4		11.3	24.5	1	05/25/2021 16:08	WG1675836

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		0.0266	0.123	1	05/19/2021 17:26	WG1673232
(S) a,a,a-Trifluorotoluene(FID)	*115*			*77.0-120*		*05/19/2021 17:26*	WG1673232

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		0.000678	0.00145	1	05/19/2021 19:05	WG1673309
Toluene	U		0.00189	0.00726	1	05/19/2021 19:05	WG1673309
Ethylbenzene	U		0.00107	0.00363	1	05/19/2021 19:05	WG1673309
Total Xylenes	U		0.00128	0.00944	1	05/19/2021 19:05	WG1673309
(S) Toluene-d8	*103*			*75.0-131*		*05/19/2021 19:05*	WG1673309
(S) 4-Bromofluorobenzene	*90.2*			*67.0-138*		*05/19/2021 19:05*	WG1673309
(S) 1,2-Dichloroethane-d4	*72.7*			*70.0-130*		*05/19/2021 19:05*	WG1673309

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		1.97	4.90	1	05/21/2021 13:12	WG1674386
C28-C40 Oil Range	26.5		0.336	4.90	1	05/21/2021 13:12	WG1674386
(S) o-Terphenyl	*36.4*			*18.0-148*		*05/21/2021 13:12*	WG1674386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.5		1	05/20/2021 10:44	WG1673736

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	26.9		11.2	24.3	1	05/25/2021 16:18	WG1675836

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		0.0263	0.121	1	05/20/2021 21:35	WG1674583
(S) a,a,a-Trifluorotoluene(FID)	*93.7*			*77.0-120*		*05/20/2021 21:35*	WG1674583

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		0.000666	0.00143	1	05/19/2021 19:24	WG1673309
Toluene	U		0.00185	0.00713	1	05/19/2021 19:24	WG1673309
Ethylbenzene	U		0.00105	0.00357	1	05/19/2021 19:24	WG1673309
Total Xylenes	U		0.00126	0.00927	1	05/19/2021 19:24	WG1673309
(S) Toluene-d8	*104*			*75.0-131*		*05/19/2021 19:24*	WG1673309
(S) 4-Bromofluorobenzene	*89.9*			*67.0-138*		*05/19/2021 19:24*	WG1673309
(S) 1,2-Dichloroethane-d4	*71.9*			*70.0-130*		*05/19/2021 19:24*	WG1673309

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		1.95	4.85	1	05/21/2021 10:15	WG1674386
C28-C40 Oil Range	U		0.332	4.85	1	05/21/2021 10:15	WG1674386
(S) o-Terphenyl	*58.8*			*18.0-148*		*05/21/2021 10:15*	WG1674386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.1		1	05/20/2021 10:44	WG1673736

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	512		54.7	119	5	05/25/2021 16:27	WG1675836

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		0.0258	0.119	1	05/19/2021 18:10	WG1673232
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*		*05/19/2021 18:10*	WG1673232

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		0.000643	0.00138	1	05/19/2021 19:43	WG1673309
Toluene	U		0.00179	0.00689	1	05/19/2021 19:43	WG1673309
Ethylbenzene	U		0.00102	0.00344	1	05/19/2021 19:43	WG1673309
Total Xylenes	U		0.00121	0.00896	1	05/19/2021 19:43	WG1673309
(S) Toluene-d8	*105*			*75.0-131*		*05/19/2021 19:43*	WG1673309
(S) 4-Bromofluorobenzene	*89.3*			*67.0-138*		*05/19/2021 19:43*	WG1673309
(S) 1,2-Dichloroethane-d4	*69.6*	J2		*70.0-130*		*05/19/2021 19:43*	WG1673309

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	776		19.1	47.5	10	05/21/2021 13:51	WG1674386
C28-C40 Oil Range	1710		3.26	47.5	10	05/21/2021 13:51	WG1674386
(S) o-Terphenyl	*0.000*	J2		*18.0-148*		*05/21/2021 13:51*	WG1674386

Sample Narrative:

L1353559-07 WG1674386: Surrogate failure due to matrix interference

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.9		1	05/20/2021 10:44	WG1673736

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	117		11.4	24.7	1	05/25/2021 16:37	WG1675836

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	0.0449	J	0.0268	0.124	1	05/20/2021 21:59	WG1674583
(S) a,a,a-Trifluorotoluene(FID)	*78.8*			*77.0-120*		*05/20/2021 21:59*	WG1674583

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		0.000688	0.00147	1	05/19/2021 20:02	WG1673309
Toluene	U		0.00192	0.00737	1	05/19/2021 20:02	WG1673309
Ethylbenzene	U		0.00109	0.00369	1	05/19/2021 20:02	WG1673309
Total Xylenes	U		0.00130	0.00958	1	05/19/2021 20:02	WG1673309
(S) Toluene-d8	*98.6*			*75.0-131*		*05/19/2021 20:02*	WG1673309
(S) 4-Bromofluorobenzene	*86.7*			*67.0-138*		*05/19/2021 20:02*	WG1673309
(S) 1,2-Dichloroethane-d4	*80.9*			*70.0-130*		*05/19/2021 20:02*	WG1673309

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	1710		19.9	49.5	10	05/21/2021 14:03	WG1674386
C28-C40 Oil Range	2740		6.78	98.9	20	05/22/2021 00:42	WG1674386
(S) o-Terphenyl	*38.8*			*18.0-148*		*05/21/2021 14:03*	WG1674386
(S) o-Terphenyl	*57.0*	J7		*18.0-148*		*05/22/2021 00:42*	WG1674386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.6		1	05/20/2021 10:44	WG1673736

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	411		11.4	24.8	1	05/25/2021 16:46	WG1675836

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		0.0269	0.124	1	05/19/2021 18:54	WG1673232
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*		*05/19/2021 18:54*	WG1673232

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		0.000693	0.00148	1	05/19/2021 15:37	WG1673623
Toluene	U		0.00193	0.00742	1	05/19/2021 15:37	WG1673623
Ethylbenzene	0.00533		0.00109	0.00371	1	05/19/2021 15:37	WG1673623
Total Xylenes	0.00837	J	0.00131	0.00964	1	05/19/2021 15:37	WG1673623
(S) Toluene-d8	*104*			*75.0-131*		*05/19/2021 15:37*	WG1673623
(S) 4-Bromofluorobenzene	*97.5*			*67.0-138*		*05/19/2021 15:37*	WG1673623
(S) 1,2-Dichloroethane-d4	*74.7*			*70.0-130*		*05/19/2021 15:37*	WG1673623

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	573		20.0	49.6	10	05/21/2021 14:16	WG1674386
C28-C40 Oil Range	1550		3.40	49.6	10	05/21/2021 14:16	WG1674386
(S) o-Terphenyl	*98.0*			*18.0-148*		*05/21/2021 14:16*	WG1674386

Method Blank (MB)

(MB) R3657521-1 05/20/21 11:12

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00500			

L1353552-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1353552-11 05/20/21 11:12 • (DUP) R3657521-3 05/20/21 11:12

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	88.6	87.3	1	1.46		10

Laboratory Control Sample (LCS)

(LCS) R3657521-2 05/20/21 11:12

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

Method Blank (MB)

(MB) R3657489-1 05/20/21 10:44

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

L1353562-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1353562-03 05/20/21 10:44 • (DUP) R3657489-3 05/20/21 10:44

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	82.7	83.8	1	1.25		10

Laboratory Control Sample (LCS)

(LCS) R3657489-2 05/20/21 10:44

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

Method Blank (MB)

(MB) R3659343-1 05/25/21 13:39

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

L1353456-55 Original Sample (OS) • Duplicate (DUP)

(OS) L1353456-55 05/25/21 14:33 • (DUP) R3659343-3 05/25/21 14:42

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	524	512	1	2.48		20

L1353759-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1353759-07 05/25/21 18:12 • (DUP) R3659343-6 05/25/21 18:21

Analyte	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	142	175	1	20.5	J3	20

Laboratory Control Sample (LCS)

(LCS) R3659343-2 05/25/21 13:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	194	96.8	90.0-110	

L1353456-55 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1353456-55 05/25/21 14:33 • (MS) R3659343-4 05/25/21 14:52 • (MSD) R3659343-5 05/25/21 15:01

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 %
Chloride	500	524	1010	1040	97.8	102	1	80.0-120	E	E	2.23	20

Method Blank (MB)

(MB) R3657152-3 05/19/21 12:09

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)	*120*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3657152-2 05/19/21 11:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.20	94.5	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*111*	*77.0-120*	

L1353569-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1353569-01 05/19/21 19:16 • (MS) R3657152-6 05/19/21 21:50 • (MSD) R3657152-7 05/19/21 22:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	209	U	144	141	68.9	67.5	38	10.0-151			2.11	28
(S) a,a,a-Trifluorotoluene(FID)					*110*	*109*		*77.0-120*				

Method Blank (MB)

(MB) R3657362-2 05/20/21 19:53

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)	*99.5*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3657362-1 05/20/21 19:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.21	94.7	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*107*	*77.0-120*	

Method Blank (MB)

(MB) R3656985-2 05/19/21 15:42

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	*107*			*75.0-131*
(S) 4-Bromofluorobenzene	*89.4*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*80.2*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3656985-1 05/19/21 15:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.122	97.6	70.0-123	
Ethylbenzene	0.125	0.120	96.0	74.0-126	
Toluene	0.125	0.128	102	75.0-121	
Xylenes, Total	0.375	0.374	99.7	72.0-127	
(S) Toluene-d8			*103*	*75.0-131*	
(S) 4-Bromofluorobenzene			*92.8*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*94.6*	*70.0-130*	

L1354140-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1354140-12 05/19/21 23:51 • (MS) R3656985-3 05/20/21 01:25 • (MSD) R3656985-4 05/20/21 01:44

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.111	U	0.0771	0.0529	69.6	47.7	1	10.0-149		J3	37.2	37
Ethylbenzene	0.111	U	0.0758	0.0531	68.5	47.9	1	10.0-160			35.4	38
Toluene	0.111	U	0.0861	0.0604	77.7	54.5	1	10.0-156			35.1	38
Xylenes, Total	0.332	0.0116	0.233	0.175	66.5	49.1	1	10.0-160			28.4	38
(S) Toluene-d8					*108*	*106*		*75.0-131*				
(S) 4-Bromofluorobenzene					*91.9*	*88.4*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*78.3*	*84.1*		*70.0-130*				

Method Blank (MB)

(MB) R3657594-2 05/19/21 10:20

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	*107*			*75.0-131*
(S) 4-Bromofluorobenzene	*96.6*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*85.2*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3657594-1 05/19/21 09:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.119	95.2	70.0-123	
Ethylbenzene	0.125	0.119	95.2	74.0-126	
Toluene	0.125	0.117	93.6	75.0-121	
Xylenes, Total	0.375	0.355	94.7	72.0-127	
(S) Toluene-d8			*99.2*	*75.0-131*	
(S) 4-Bromofluorobenzene			*97.5*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*98.4*	*70.0-130*	

Method Blank (MB)

(MB) R3657570-1 05/21/21 02:30

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	*73.1*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3657570-2 05/21/21 02:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.1	78.2	50.0-150	
(S) o-Terphenyl			*63.1*	*18.0-148*	

L1353533-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1353533-17 05/21/21 12:34 • (MS) R3657793-1 05/21/21 12:47 • (MSD) R3657793-2 05/21/21 13:00

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	48.8	18.9	79.3	73.7	124	113	1	50.0-150			7.32	20
(S) o-Terphenyl					*80.6*	*80.1*		*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

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		

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

* 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 Analytical.

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

LBS3559

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	MCA 71 Release	**Contact Info:**	Email: Christian.Llull@tetratech.com Phone: (512) 565-0190
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02163
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Andrew Garcia
Comments:	COPTETRA Acctnum		

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE (YEAR: 2021)	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
-01	AH-21-1 (0'-1')	05/10/21	1000		X			X		1	N	X		X												X						
-02	AH-21-1 (2'-3')	05/10/21	1045		X			X		1	N	X		X												X						
-03	AH-21-2 (0'-1')	05/10/21	1130		X			X		1	N	X		X												X						
-04	AH-21-2 (2'-3')	05/10/21	1215		X			X		1	N	X		X												X						
-05	AH-21-3 (0'-1')	05/10/21	1300		X			X		1	N	X		X												X						
-06	AH-21-3 (2'-3')	05/10/21	1345		X			X		1	N	X		X												X						
-07	AH-21-4 (0'-1')	05/10/21	1430		X			X		1	N	X		X												X						
-08	AH-21-4 (2'-3')	05/10/21	1515		X			X		1	N	X		X												X						
-09	AH-21-5 (0'-1')	05/10/21	1600		X			X		1	N	X		X												X						

ANALYSIS REQUEST
(Circle or Specify Method No.)

Relinquished by: Andrew Garcia — Date: 5/11/2021 — Time: 1000
Received by: — Date: 5-13-21 — Time: 12:00

Relinquished by: — Date: 5-13-21 — Time: 17:00
Received by: — Date: 5-13-21 — Time: 17:00

Relinquished by: — Date: — Time:
Received by: Irivia Robertson — Date: 5/14/21 — Time: 8:00

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 #: _____

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		

J177

CNP=9 TB=0

AZLN 2.9-1-28

APPENDIX D
Soil Boring Logs

212C-MD-02163	TETRA TECH	**LOG OF BORING AH-2-2**	Page 1 of 1

Project Name: MCA 71 Release

Borehole Location: GPS: 32.818192°, -103.764664° | Surface Elevation: 4041 ft

Borehole Number: AH-2-2 | Borehole Diameter (in.): 2 | Date Started: 7/23/2020 | Date Finished: 7/23/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			50.2	3.2								**-SM-** SILTY SAND; Brown, medium dense, dry, with odor, with no staining.	1.5	AH-2-2 (0'-1')
			34.8	4.1								**-SM-** SILTY SAND; Brown, medium dense, dry, with odor, with no staining.	3	AH-2-2 (2'-3')

Bottom of borehole at 3.0 feet.

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

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

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

Logger: Devin Dominguez | Drilling Equipment: Hand Auger | Driller: Tetra Tech

212C-MD-02163	TETRA TECH	**LOG OF BORING AH-2-3**	Page 1 of 1

Project Name: MCA 71 Release

Borehole Location: GPS: 32.818192°, -103.764569° | Surface Elevation: 4041 ft

Borehole Number: AH-2-3 | Borehole Diameter (in.): 2 | Date Started: 7/23/2020 | Date Finished: 7/23/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
			68.6	3.7								**-SM-** SILTY SAND; Brown, medium dense, dry, with odor, with no staining.	1.5	AH-2-3 (0'-1')
			57.8	5.4								**-SM-** SILTY SAND; Brown, medium dense, dry, with odor, with no staining.	3	AH-2-3 (2'-3')

Bottom of borehole at 3.0 feet.

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

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

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

Logger: Devin Dominguez | Drilling Equipment: Hand Auger | Driller: Tetra Tech

212C-MD-02163	TETRA TECH	**LOG OF BORING BH-1**	Page 1 of 1

Project Name: MCA 71 Release

Borehole Location: GPS: 32.818212°, -103.765016° | Surface Elevation: 4041 ft

Borehole Number: BH-1 | Borehole Diameter (in.): 8 | Date Started: 5/4/2020 | Date Finished: 5/4/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
				5.8								-- FILL MATERIAL; Brownish tan, with few gravel, poorly cemented, with no odor, with no staining.		BH-1 (0'-1')
				5.5										BH-1 (2'-3')
5				10										BH-1 (4'-5')
													5.5	
			1,500	11.2								-SM- SILTY SAND; Brown, medium dense, dry, with odor, with no staining.		BH-1 (6'-7')
10			1,100	18.1										BH-1 (9'-10')
15				394										BH-1 (14'-15')
													17	
												-SM- SILTY SAND; Brown, medium dense, dry, with no odor, with no staining.		
20				564										BH-1 (19'-20')
25			539	193										BH-1 (24'-25')
30			223	119									30	BH-1 (29'-30')

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

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

Bottom of borehole at 30.0 feet.

Notes:

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

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

212C-MD-02163	TETRA TECH	**LOG OF BORING BH-2**	Page 1 of 1

Project Name: MCA 71 Release

Borehole Location: GPS: 32.818122°, -103.765018° | Surface Elevation: 4041 ft

Borehole Number: BH-2 | Borehole Diameter (in.): 8 | Date Started: 5/4/2020 | Date Finished: 5/4/2020

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
				4.7								-- FILL MATERIAL; Brownish tan, with few gravel, poorly cemented, with no odor, with no staining.		BH-2 (0'-1')
				5										BH-2 (2'-3')
													3.5	
5			721	3.2								**-SM-** SILTY SAND; Brown, medium dense, dry, with no odor, with no staining.		BH-2 (4'-5')
				3.5										BH-2 (6'-7')
10			1,340	3.7										BH-2 (9'-10')
15				10.4										BH-2 (14'-15')
20			1,000	11.2										BH-2 (19'-20')
25			329	7.4									25	BH-2 (24'-25')

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

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

Bottom of borehole at 25.0 feet.

Notes:

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

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

APPENDIX E
Photographic Documentation

TETRA TECH, INC. PROJECT NO. 212C-MD-02163	DESCRIPTION	View west. Southern portion of initial excavation floor.	1
	SITE NAME	MCA 71 Release	2/3/2020

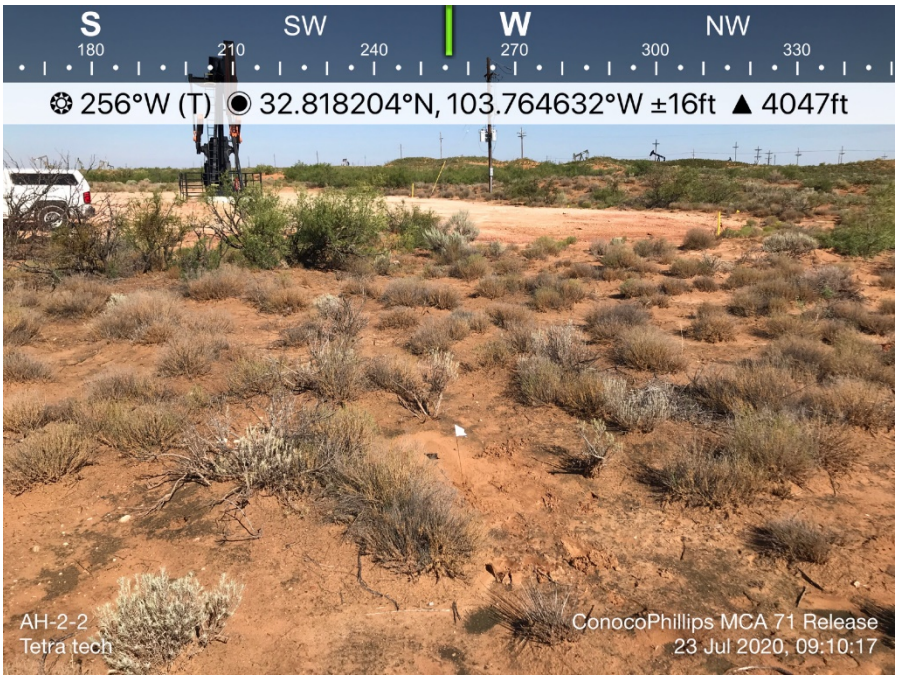
TETRA TECH, INC. PROJECT NO. 212C-MD-02163	DESCRIPTION	View west. Southern extent of initial excavation.	2
	SITE NAME	MCA 71 Release	2/3/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02163	DESCRIPTION	View northwest. Northern extent of initial excavation.	3
	SITE NAME	MCA 71 Release	2/3/2020

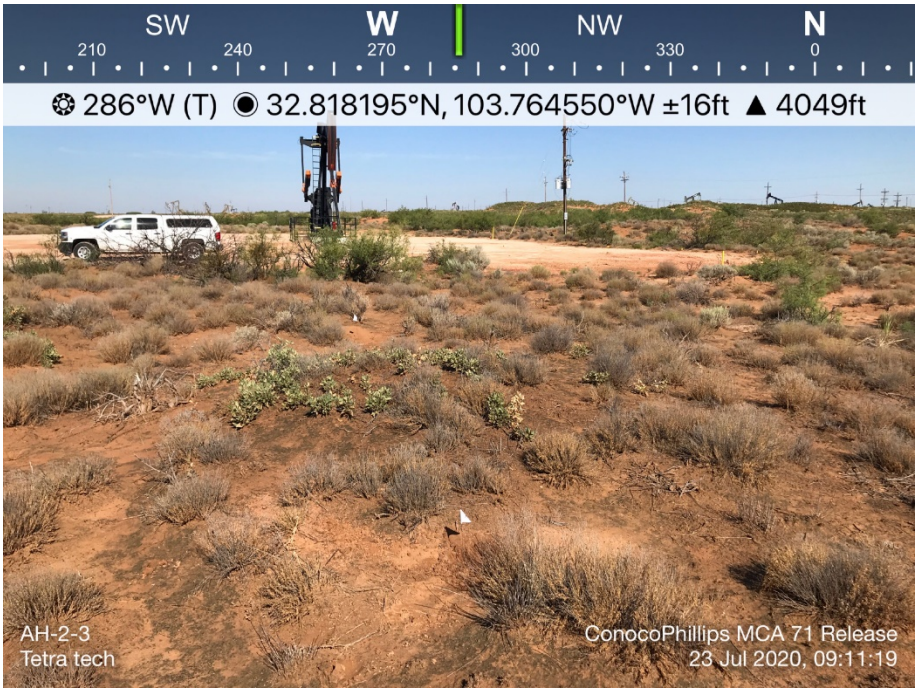
TETRA TECH, INC. PROJECT NO. 212C-MD-02163	DESCRIPTION	View northwest. Northern portion of initial excavation floor.	4
	SITE NAME	MCA 71 Release	2/3/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02163	DESCRIPTION	View southwest. Overview of original excavation.	5
	SITE NAME	MCA 71 Release	7/7/2020

TETRA TECH, INC. PROJECT NO. 212C-MD-02163	DESCRIPTION	View west. Overview of original excavation & AH-2.	6
	SITE NAME	MCA 71 Release	7/7/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02163	DESCRIPTION	View west. Overview of AH-2-2.	7
	SITE NAME	MCA 71 Release	7/23/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02163	DESCRIPTION	View west. Overview of AH-2-3.	8
	SITE NAME	MCA 71 Release	7/23/2020

APPENDIX F
NMSLO Seed Mixture Details

United States Department of Agriculture

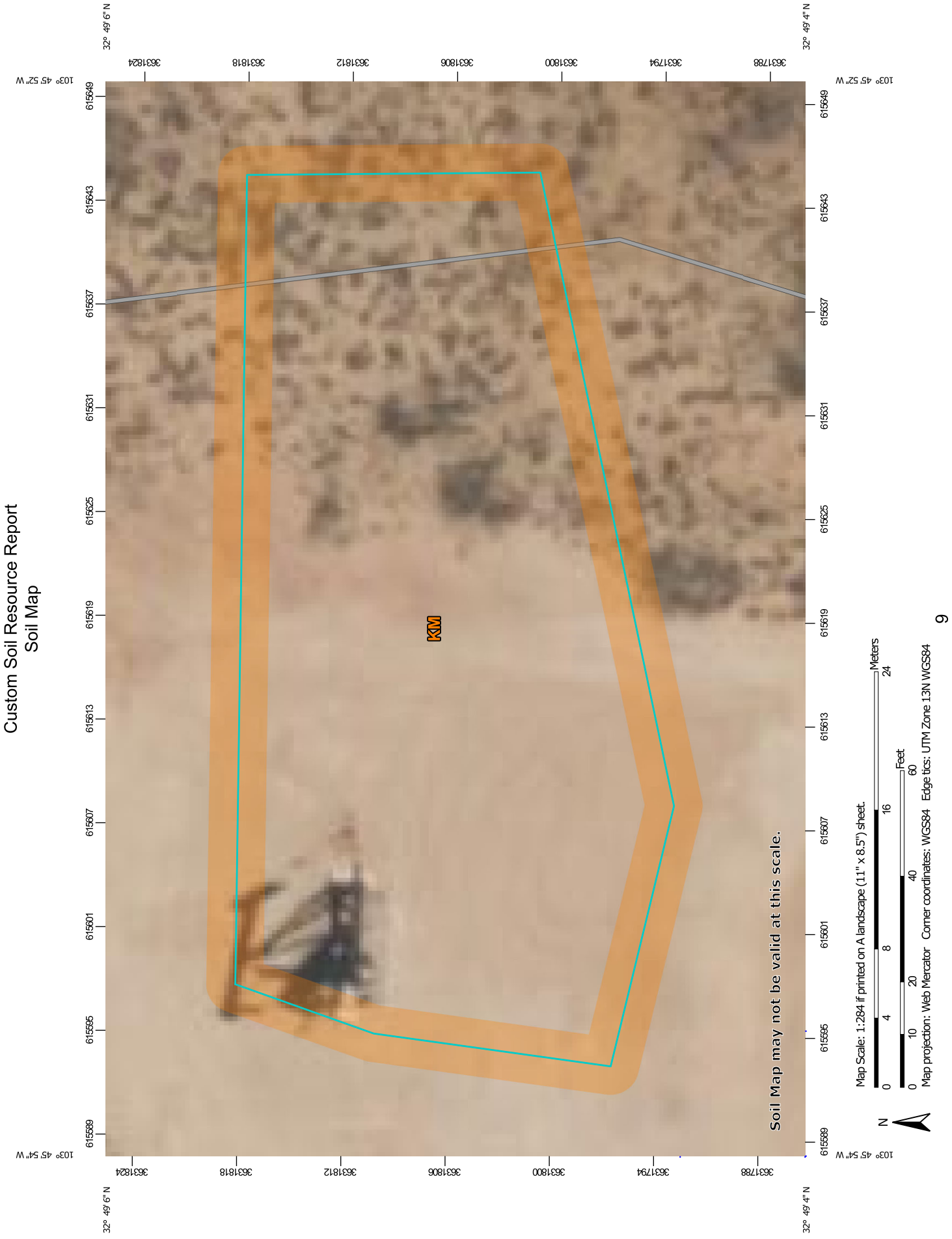
NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Lea County, New Mexico

March 1, 2022


Custom Soil Resource Report
Soil Map
KM
Soil Map may not be valid at this scale.
Map Scale: 1:284 if printed on A landscape (11" x 8.5") sheet.
Meters
Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84
N
32° 49' 6" N
32° 49' 4" N
103° 45' 52" W
103° 45' 54" W
615649
615643
615637
615631
615625
615619
615613
615607
615601
615595
615589
363182
363181
363180
363179
363178

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 18, Sep 10, 2021

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
KM	Kermit soils and Dune land, 0 to 12 percent slopes	0.3	100.0%
Totals for Area of Interest		**0.3**	**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

KM—Kermit soils and Dune land, 0 to 12 percent slopes

Map Unit Setting

National map unit symbol: dmpx
Elevation: 3,000 to 4,400 feet
Mean annual precipitation: 10 to 15 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Kermit and similar soils: 46 percent
Dune land: 44 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kermit

Setting

Landform: Dunes
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex
Parent material: Calcareous sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 8 inches: fine sand
C - 8 to 60 inches: fine sand

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very high (20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 3 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R042XC022NM - Sandhills
Hydric soil rating: No

Description of Dune Land

Setting

Landform: Dunes
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 6 inches: fine sand
C - 6 to 60 inches: fine sand

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Pyote

Percent of map unit: 3 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Palomas

Percent of map unit: 3 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Wink

Percent of map unit: 2 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Maljamar

Percent of map unit: 2 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

1 REVEGETATION PLANS

The following Revegetation Plans were developed for revegetation of sites in southeastern New Mexico. To determine which revegetation plan is appropriate follow procedures in the section titled Determining the Revegetation Plan.

Revegetation Plans contain seed mixtures, as well as seed bed preparation and planting requirements. The detailed instructions for seedbed preparation and planting can be found in the section Revegetation Techniques.

Table 3 - Revegetation Plans, Codes, and Soil Types for Southeastern New Mexico

REVEGTATION PLANS	CODE	SOIL TEXTURES
Clay	C	Clay, Silty Clay, Stony Silty Clay, Clay Loam, Silty Clay Loam (including saline and sodic Clay soils)
Loam	L	Silty Loam, Cobbly Silt Loam, Stony Silt Loam, Silt, Loam, Sandy, Clay Loam
Sandy Loam	SL	Very Fine Sandy Loam, Fine Sandy Loam, Cobbly Fine Sandy Loam, Sandy Loam, Cobbly Sandy Loam, Gravelly Fine Sandy Loam, Very Gravelly Fine Sand Loam, Stony Fine Sandy Loam, Stony Sandy Loam
Shallow	SH	Rocky Loam, Cobbly Loam
Course	CS	Gravelly Loam, very Gravelly Loam, Gravelly Sandy Loam, Very Gravelly Sandy Loam, Stony Loam, Stony Sandy Loam
Sandy	S	Loamy Fine Sand, Loam Sand, Very Gravelly Loamy Fine Sand
Blow Sand	BS	Fine Sand, Sand, Coarse Sand
Mountain Meadow	MM	Clay, Loam
Mountain Upland	MU	Clay Loam, Loam

NMSLO Seed Mix Sandy (S)

SANDY (S) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Sand bluestem	Elida, VNS, So.	2.0	F
Little bluestem	Cimarron, Pastura	3.0	F
Black grama	VNS, Southern	1.0	D
Sand dropseed	VNS, Southern	4.0	S
Plains bristlegrass	VNS, Southern	2.0	D
Forbs:			
Firewheel (Gaillardia)	VNS, Southern	1.0	D
Annual Sunflower	VNS, Southern	1.0	D
Shrubs:			
Fourwing Saltbush	VNS, Southern	1.0	F
	Total PLS/acre	**16.0**	

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
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District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 97258
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Remediation Plan and Deferral Request Approved.	5/17/2022