TETRA TECH

March 24, 2021

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

Re: Release Characterization and Remediation Work Plan
ConocoPhillips
MCA Battery Unit #2 Trunk Line Release
Unit Letter C, Section 28, Township 17 South, Range 32 East
Lea County, New Mexico
1RP-959
Incident ID nPAC0619940049

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a historical release that occurred from a trunkline associated with the Maljamar Cooperative Agreement (MCA) Battery Unit #2. The release footprint is located in Public Land Survey System (PLSS) Unit Letter C, Section 28, Township 17 South, Range 32 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.81194°, -103.77518°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report (Appendix A), the release occurred on July 6, 2006 when a dresser sleeve on the produced water trunk line failed due to corrosion, age, and fatigue. The release consisted of 23 barrels (bbls) of produced water, with no fluid recovered. The affected area was reported as two areas, one 100-feet (ft) by 15-ft and the other 755-ft by 3.5-ft of sandy pasture. The New Mexico Oil Conservation District (NMOCD) received the C-141 report form for the release on June 27, 2007. The release was subsequently assigned Remediation Permit (RP) number 1RP-959 and the Incident ID nPAC0619940049. The 1RP-959 release is included in an Agreed Compliance Order-Releases (ACO-R) between COP and the NMOCD signed on May 7 and 9, 2019, respectively.

SITE CHARACTERIZATION

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

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are nine (9) water wells within 800 meters (approximately ½ mile) of the Site. The average depth to groundwater is 82 ft below ground surface (bgs). The site characterization data is included in Appendix B.

REGULATORY FRAMEWORK

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

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levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil.

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

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

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

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

SITE ASSESSMENT

The C-141 provided the approximate location and dimensions of the release. Given the age of this release, a desktop review of available historical imagery indicated discoloration of soils in the vicinity of the release in a drainage pattern that matches the provided dimensions. Review of historical imagery did not reveal evidence of remedial activities conducted in the release vicinity. On behalf of COP, Tetra Tech conducted a visual Site inspection in June 2020 to evaluate current Site conditions. Surficial staining and asphaltic soil were noted in the identified release area footprint in the pasture, as well as stressed vegetation. Photographic documentation of the June 2020 Site visit is included in Appendix C.

On behalf of COP, Tetra Tech personnel were on Site in January 2021 to conduct soil sampling to achieve vertical and horizontal delineation of the release. A total of six (6) hand auger borings (AH-1 through AH-6) were advanced along the perimeter of the release extent to depths of 3 ft bgs and a total of two (2) hand auger borings (AH-7 and AH-8) were advanced within the release extent to depths of 7 ft bgs.

Tetra Tech personnel returned to the Site in February 2021 to complete vertical delineation of the release. A total of two (2) hand auger borings (BH-1 and BH-2) were advanced within the release extent to depths of 7 ft bgs and 3 ft bgs, respectively. Surface and subsurface soils consist of light brown to tan loose silty sands. Figure 3 depicts the release extent and the 2021 soil boring locations, and GPS coordinates for the boring locations are presented in Table 1.

Soils were field screened for salinity using an ExTech EC400 ExStik and for volatile organics using a photoionization detector (PID) to determine sampling intervals. A total of twenty-eight (28) samples were collected from the ten (10) borings (AH-1 through AH-8, BH-1, and BH-2) 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.

SUMMARY OF SAMPLING RESULTS

Results from the January and February 2021 soil sampling event are summarized in Table 2. The analytical results associated with the AH-7 boring location exceeded the Site reclamation RRAL for TPH (100 mg/kg) in the 0-1 ft sample interval. The analytical results associated with the AH-8 boring location exceeded the Site reclamation RRAL for TPH in the 0-1 ft and 3-4 ft sample intervals, as well as the Site remediation RRAL for TPH (2,500 mg/kg) in the 6-7 ft sample interval. Finally, the analytical results associated with the 3-4 ft bgs sample interval at boring location BH-1 exceeded the Site reclamation RRAL for chloride. The

analytical results associated with the remainder of the samples analyzed were below the applicable Site reclamation and remediation RRALs for TPH. There were no analytical results which exceeded the Site remediation RRALs for chloride or BTEX during the Site assessment.

Following the January 2021 assessment activities, Tetra Tech personnel discovered that the southwestern portion of the 1RP-959 release extent coincided with an unrelated historical release (1RP-1991, MCA Station 2 Laguna Tank Release). Considering that the 1RP-959 release consisted of produced water and no oil, the TPH concentrations found in soils at boring location AH-8 are currently attributed to the 1RP-1991 release rather than the 1RP-959 release. As such, the 1RP-959 release is considered horizontally and vertically delineated.

REMEDIATION WORK PLAN

Based on the analytical results, COP proposes to remove the remaining impacted material as shown in Figure 4. Impacted soils will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to a maximum depth of 4 ft below the surrounding surface in the area around BH-1 and to a maximum depth of 1 ft below the surrounding surface in the area around AH-7, or until a representative sample from the walls and bottom of the excavation is below the RRALs.

As indicated in the figures, the release footprint and proposed remediation area presents numerous safety concerns give the abundant amount of surface lines and pipelines in the area. The proposed excavation depths may not be reached due to sidewall cave-ins and safety concerns for onsite personnel. In addition, impacted soil around oil and gas equipment, structures or lines may not be feasible or practicable to be removed due to safety concerns for onsite personnel. As such, COP will excavate the impacted soils to the maximum extent possible.

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 645 cubic yards.

As discussed in the previous section, an unrelated release (1RP-1991) coincides with the southwestern portion of the 1RP-959 release footprint. Remedial activities associated with 1RP-1991 will address impacted soils located in the southwestern portion of the 1RP-959 release. Approximately 5,490 square ft (sf) of the southwestern extent of 1RP-959 will be addressed during 1RP-1991 remedial activities (see Figure 4).

ALTERNATIVE CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, COP proposes the following alternative confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 5. Thirteen (13) confirmation floor samples and twenty-eight (28) confirmation sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses a surface area of approximately 6,355 sf.

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

SITE RECLAMATION AND RESTORATION PLAN

The backfilled areas will be seeded in Spring 2021 (first favorable growing season) to aid in revegetation. Based on the soils at the site, the New Mexico State Land Office (NMSLO) Sandy (S) 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 E.

CONCLUSION

ConocoPhillips proposes to begin remediation activities at the Site within 1 year of NMOCD plan approval. The MCA Battery Unit #2 Trunk Line Release (1RP-959) is included in an Agreed Compliance Order-Releases (ACO-R) between COP and the NMOCD signed on May 7 and 9, 2019, respectively. COP is dedicated to addressing and closing all historical releases included in the ACO-R, and given the number of releases to be addressed, 1 year is anticipated to be a practicable timeline. Upon completion of the proposed work, a final closure report detailing the remediation activities and the results of the confirmation sampling will be submitted to NMOCD.

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

Sincerely,
Tetra Tech, Inc.

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

Christian M, Llull, P.G.
Project Manager

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

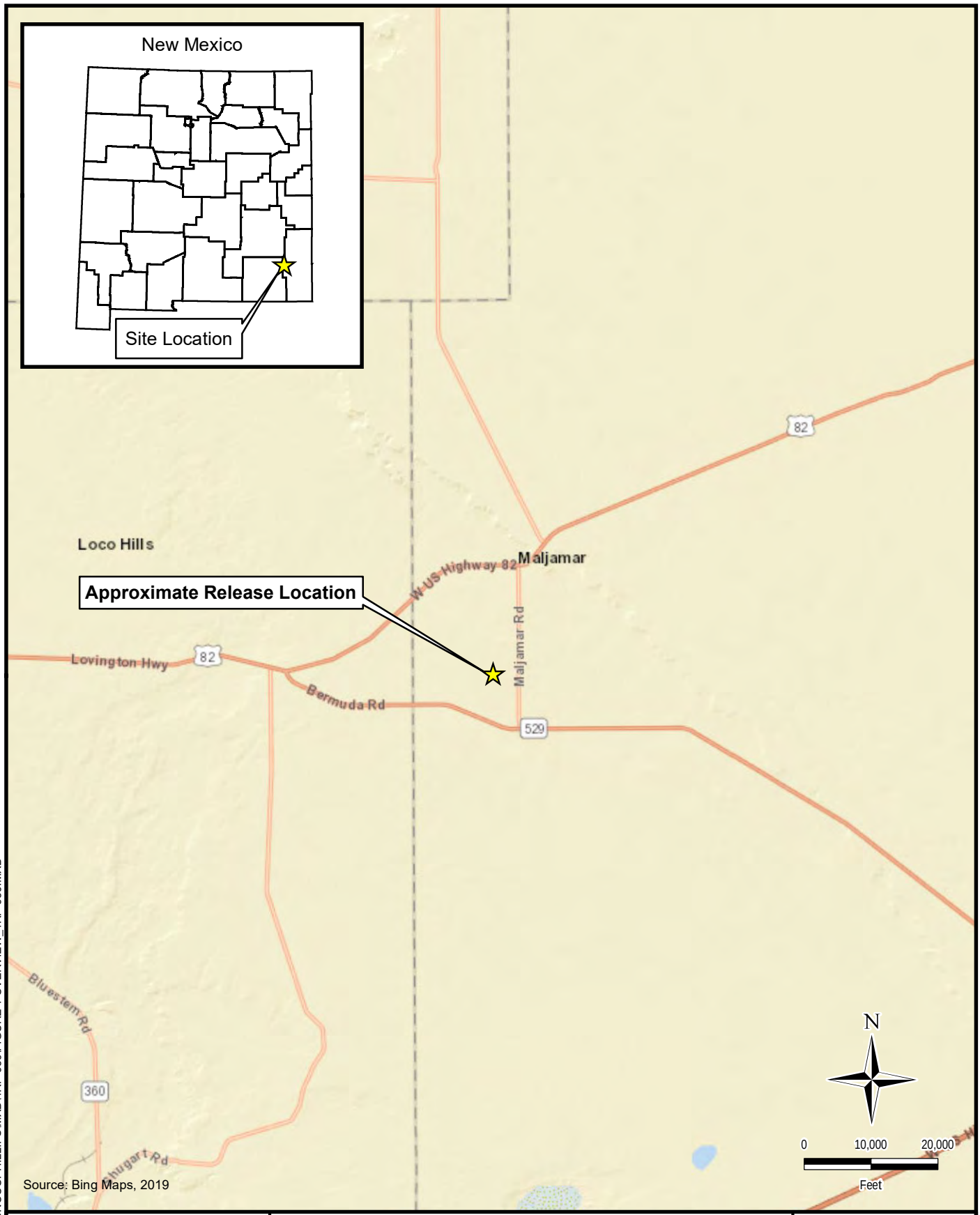
LIST OF ATTACHMENTS

Figures:

Tables:

Appendices:

FIGURES



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-959\FIGURE 1 OVERVIEW_1RP-959.MXD

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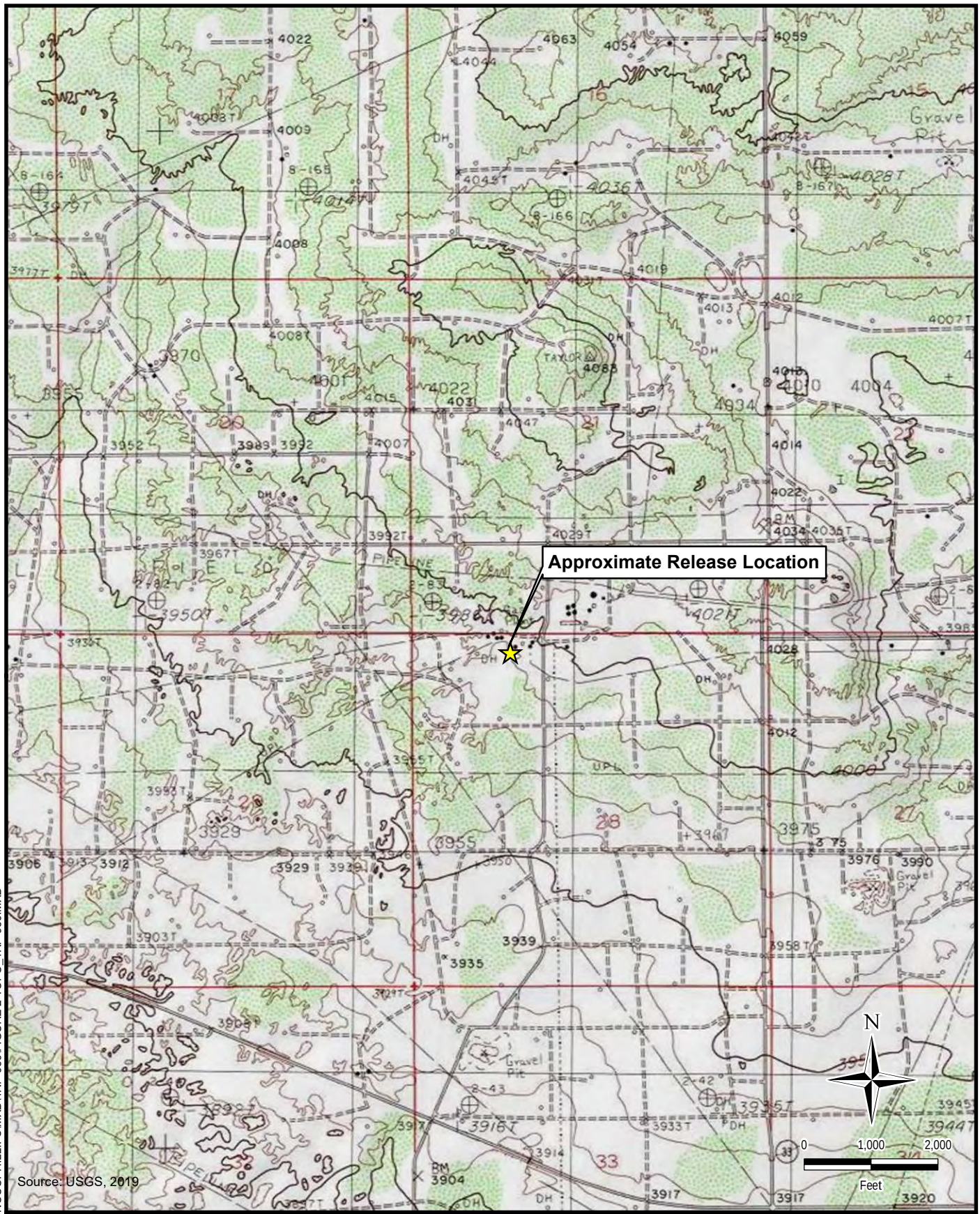
CONOCOPHILLIPS

1RP-959
(32.585491°, -103.229862°)
LEA COUNTY, NEW MEXICO

MCA BATTERY UNIT #2 TRUNK LINE RELEASE
OVERVIEW MAP

PROJECT NO.:	212C-MD-02334
DATE:	MARCH 10, 2021
DESIGNED BY:	AAM

Figure No.
1



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-959\FIGURE 2 TOPO_1RP-959.MXD

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CONOCOPHILLIPS

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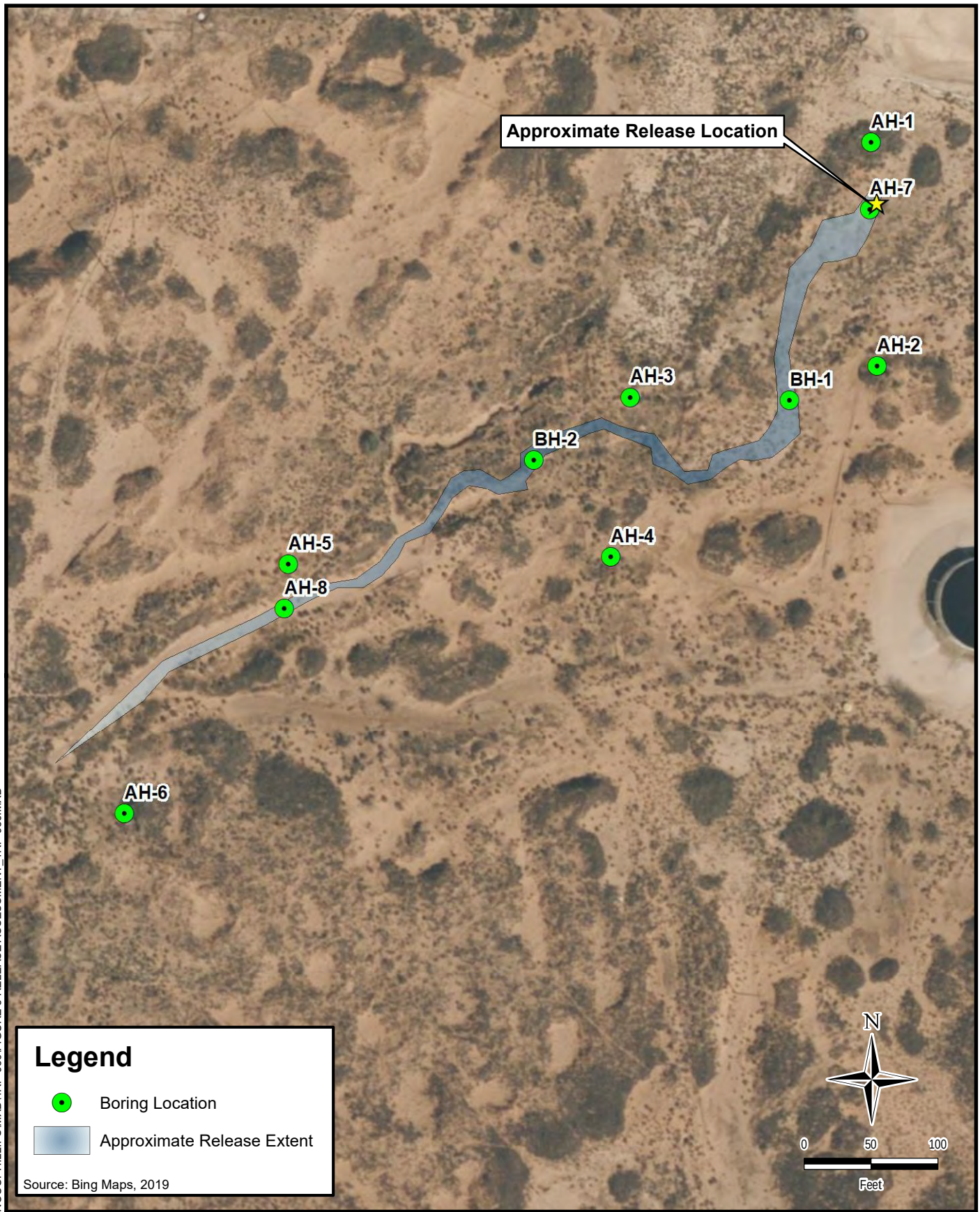
LEA COUNTY, NEW MEXICO

MCA BATTERY UNIT #2 TRUNK LINE RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02334
DATE:	MARCH 10, 2021
DESIGNED BY:	AAM

Figure No.
2



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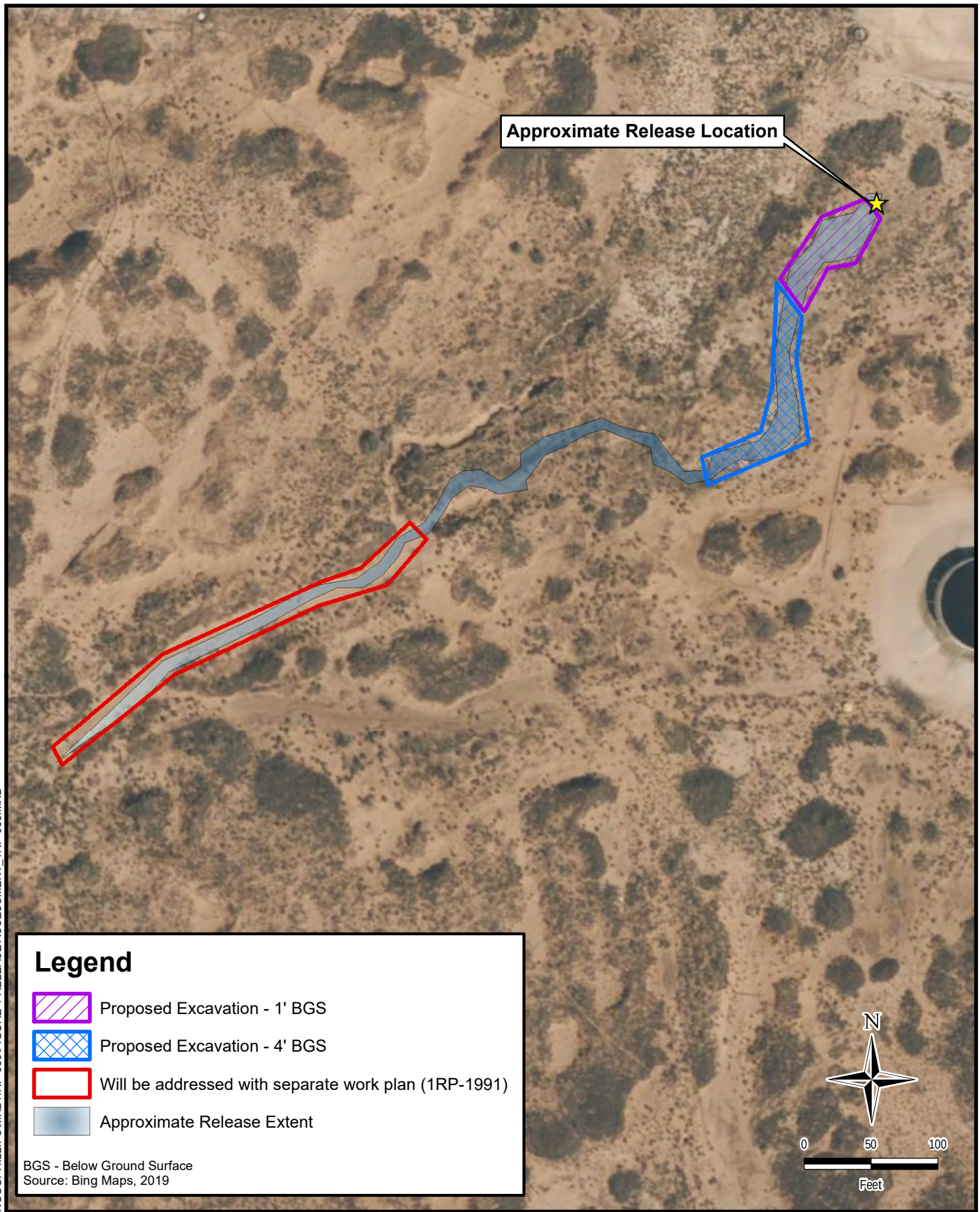
CONOCOPHILLIPS

1RP-959
(32.585491°, -103.229862°)
LEA COUNTY, NEW MEXICO

MCA BATTERY UNIT #2 TRUNK LINE RELEASE
RELEASE EXTENT AND SITE CHARACTERIZATION

PROJECT NO.:	212C-MD-02334
DATE:	MARCH 10, 2021
DESIGNED BY:	AAM

Figure No.
3



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-959\FIGURE 4 RELEASE ASSESSMENT_1RP-959.MXD

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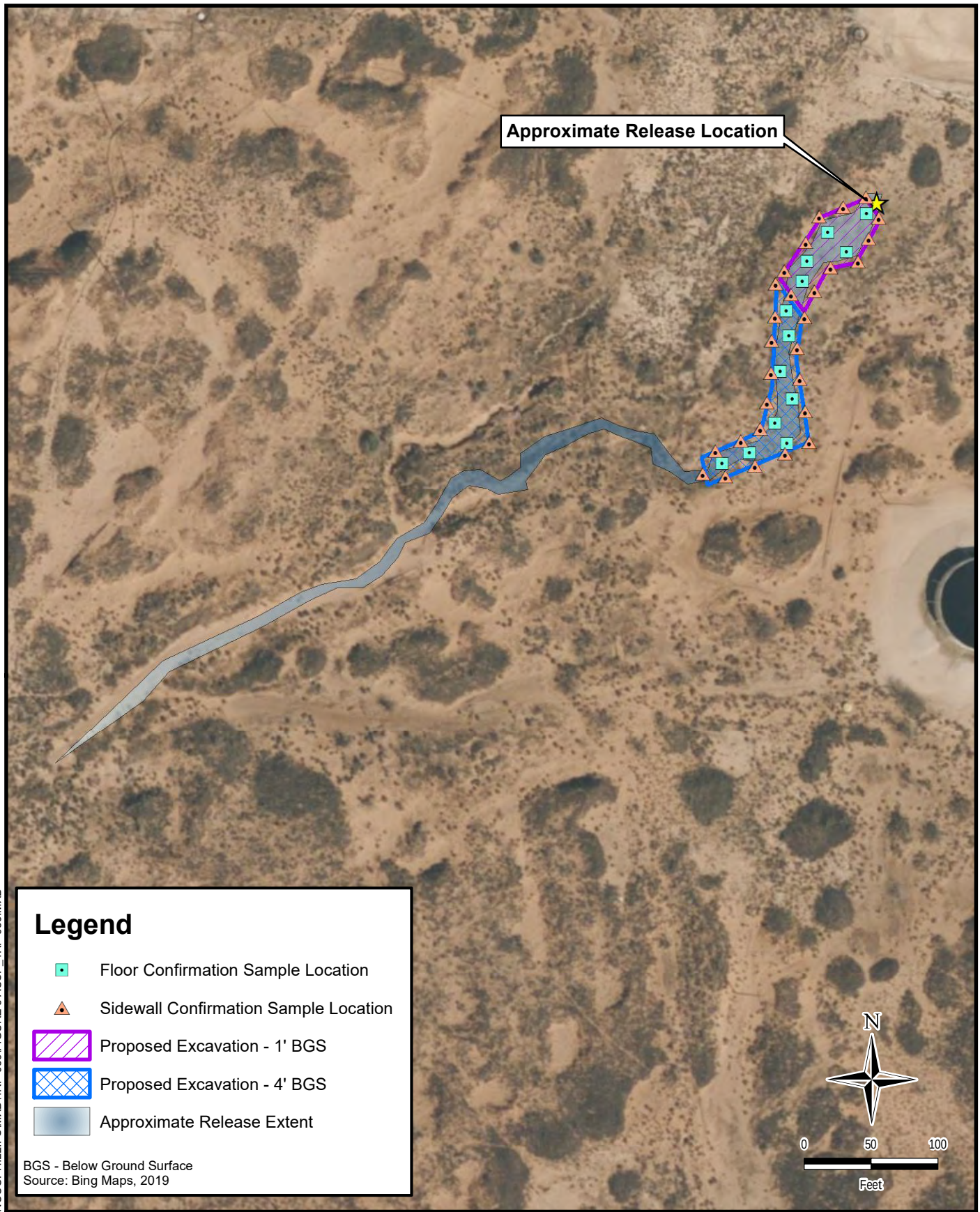
CONOCOPHILLIPS

1RP-959
(32.585491°, -103.229862°)
LEA COUNTY, NEW MEXICO

MCA BATTERY UNIT #2 TRUNK LINE RELEASE
PROPOSED REMEDIATION EXTENT

PROJECT NO.:	212C-MD-02334
DATE:	MARCH 10, 2021
DESIGNED BY:	AAM

Figure No.
4



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\1RP-959\FIGURE 5 ACSP_1RP-959.MXD

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CONOCOPHILLIPS

1RP-959
(32.585491°, -103.229862°)
LEA COUNTY, NEW MEXICO

MCA BATTERY UNIT #2 TRUNK LINE RELEASE
ALTERNATIVE CONFIRMATION SAMPLING PLAN

PROJECT NO.:	212C-MD-02334
DATE:	MARCH 10, 2021
DESIGNED BY:	AAM

Figure No.
5

TABLES

TABLE 1
BORING LOCATION COORDINATES
SOIL ASSESSMENT - 1RP-959
CONOCOPHILLIPS
MCA BATTERY UNIT #2 TRUNKLINE RELEASE
LEA COUNTY, NM

Boring ID	Latitude	Longitude
AH-1	32.812063	-103.775192
AH-2	32.811605	-103.775180
AH-3	32.811543	-103.775782
AH-4	32.811216	-103.775830
AH-5	32.811204	-103.776615
AH-6	32.810694	-103.777016
AH-7	32.811927	-103.775197
AH-8	32.811113	-103.776625
BH-1	32.811536	-103.775395
BH-2	32.811416	-103.776017

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT - 1RP-959
CONOCOPHILLIPS
MCA BATTERY UNIT #2 TRUNKLINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Field Screening Results		Chloride[1]		BTEX[2]										TPH[3]							
			Chloride	PID			Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO[4] C_3 - C_{10}		DRO C_{10} - C_{28}		ORO C_{28} - C_{40}		Total TPH (GRO+DRO+ORO)	
		ft. bgs	ppm		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	
AH-1	1/18/2021	0-1	76.3	3.1	< 20.4		< 0.00104		< 0.00522		< 0.00261		< 0.00678		-		0.0458	B J	9.97		37.7		47.7	
		2-3	71.1	3.2	< 20.4		< 0.00104		< 0.00520		< 0.00260		< 0.00676		-		0.0542	B J	10.6		42.6		53.3	
AH-2	1/18/2021	0-1	42.5	2.7	< 20.1		< 0.00101		< 0.00506		< 0.00253		< 0.00658		-		0.0392	B J	11.5		44.9		56.4	
		2-3	51.1	1.6	< 20.1		< 0.00101		< 0.00506		< 0.00253		< 0.00658		-		0.0346	B J	8.66		34.7		43.4	
AH-3	1/18/2021	0-1	59.6	1.8	< 20.1		< 0.00101		< 0.00505		< 0.00252		< 0.00656		-		0.0332	B J	6.19		24.6		30.8	
		2-3	55.4	1.9	< 20.1		< 0.00101		< 0.00504		< 0.00252		< 0.00655		-		0.0234	B J	8.69		28.7		37.4	
AH-4	1/18/2021	0-1	47.8	3.2	< 20.1		< 0.00101		< 0.00505		< 0.00253		< 0.00657		-		0.0282	B J	6.70		22.3		29.0	
		2-3	51.5	3.7	< 20.1		< 0.00101		< 0.00504		< 0.00252		< 0.00655		-		0.0244	B J	6.04		17.6		23.7	
AH-5	1/18/2021	0-1	73.7	3.3	< 20.2		< 0.00102		< 0.00510		< 0.00255		< 0.00663		-		0.0260	B J	5.53		15.6		21.2	
		2-3	61.2	3.1	< 20.2		< 0.00102		< 0.00508		< 0.00254		< 0.00660		-		0.0265	B J	5.85		13.4		19.3	
AH-6	1/18/2021	0-1	66.7	1.4	< 20.1		< 0.00102		< 0.00511		< 0.00256		< 0.00663		-		0.0254	B J	5.96		19.7		25.7	
		2-3	68.5	1.6	< 20.1		< 0.00101		< 0.00504		< 0.00252		< 0.00655		-		0.0331	B J	3.49	J	7.62		11.1	
AH-7	1/28/2021	0-1	-	-	< 20.2		< 0.00102		< 0.00508		< 0.00254		< 0.00660		-		< 0.101		873		2300		***3173***	
		3-4	-	-	29.1		< 0.00103		< 0.00513		< 0.00257		< 0.00667		-		< 0.101		< 4.05		3.60	J	3.60	
		6-7	-	-	104		< 0.00111		< 0.00556		< 0.00278		< 0.00723		-		< 0.106		4.69		9.97		14.7	
AH-8*	1/28/2021	0-1	-	-	< 20.1		< 0.00101		< 0.00507		0.00203	J	0.00140	J	0.00343		< 0.101		128		512		***640***	
		3-4	-	-	334		< 0.00964		< 0.0482		11.7		7.33		19.0		1430		8010		4620		***14060***	
		6-7	-	-	466		< 0.00977		< 0.0488		4.29		2.78		7.07		748		4900		2960		***8608***	
BH-1	2/23/2021	0-1	-	-	< 20.5		< 0.00105		< 0.00523		< 0.00262		< 0.00680		-		0.0297	B J	1.94	J	3.42	J	5.39	
		1-2	-	-	33.7	P1	< 0.00101		< 0.00504		< 0.00252		< 0.00656		-		0.0333	B J	6.51		11.2		17.7	
		2-3	-	-	61.9		< 0.00108		< 0.00539		< 0.00269		< 0.00700		-		0.0234	B J	2.10	J	4.90		7.02	
		3-4	-	-	215		< 0.00111		< 0.00555		< 0.00278		< 0.00722		-		0.0256	B J	22.7		120		***143***	
		4-5	-	-	202		< 0.00113		< 0.00563		< 0.00281		< 0.00732		-		0.0264	B J	2.64	J	3.98	J	6.65	
		5-6	-	-	149		< 0.00110		< 0.00551		< 0.00275		< 0.00716		-		0.0230	B J	7.38		20.9		28.3	
		6-7	-	-	165		< 0.00108		< 0.00538		< 0.00269		< 0.00700		-		0.0245	B J	13.9		31.9		45.8	
BH-2	2/23/2021	0-1	-	-	< 20.1		< 0.00101		< 0.00506		< 0.00253		< 0.00658		-		0.0359	B J	11.5		59.1		70.6	
		1-2	-	-	< 20.4		< 0.00104		< 0.00520		< 0.00260		< 0.00676		-		< 0.102		10.3		42.6		52.9	
		2-3	-	-	10.1	J	< 0.00115	J3	< 0.00573	J3	< 0.00287	J3	< 0.00745	J3	-		< 0.107		10.0		45.4		55.4	

NOTES:

ft. Feet

bgs Below ground surface

ppm Parts per million

mg/kg Milligrams per kilogram

TPH Total Petroleum Hydrocarbons

GRO Gasoline range organics

DRO Diesel range organics

ORO Oil range organics

1 EPA Method 300.0

2 EPA Method 8260B

3 EPA Method 8015

4 EPA Method 8015D/GRO

Bold and italicized values indicate exceedance of proposed RRALs

Shaded rows indicate intervals proposed for excavation.

* Intervals associated with this sample ID will be addressed through a separate work plan

QUALIFIERS:

B The same analyte is found in the associated blank.

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

J3 The associated batch QC was outside the established quality control range for precision.

P1 RPD value not applicable for sample concentrations less than 5 times the reporting limit.

APPENDIX A
C-141 Forms

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company **ConocoPhillips Company**	Contact **Kenneth N. Andersen**
Address **4001 Penbrook, Odessa, TX 79762-5917**	Telephone No. **505.391.3158**
Facility Name **MCA Unit Battery # 2**	Facility Type **Oil and Gas**

Surface Owner **BLM**	Mineral Owner **BLM**	Lease No **LC - 057210**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	**28**	**17S**	**32E**					**Lea Co.**

100+'

Latitude 32.81194N **Longitude -103.77518W**

NATURE OF RELEASE

Type of Release **Produced Water**	Volume of Release 23 bbl (0 oil, 23 water)	Volume Recovered (0 oil, 0 water)
Source of Release **MCA Unit Battery # 2 4" produced water trunk line.**	Date and Hour of Occurrence 07/06/2006 0530hrs	Date and Hour of Discovery 07/06/2006 0945hrs
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

Received
Hobbs
OCD

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A dresser sleeve failed due to corrosion, age, & fatigue on the produced water trunk line. The site will be delineated & a remediation plan will be submited to the NMOCD for approval.

Describe Area Affected and Cleanup Action Taken.*
100'X15' & 755'X3.5' of damp sandy pasture with no fluid recovered. However a vacuum truck was used to empy the 4" trunk line. The dresser sleeve was replaced with a flanged fiberglass spool.

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

Signature: Kenneth N. Andersen	OIL CONSERVATION DIVISION Approved by District Supervisor:	
Printed Name: **Kenneth N. Andersen**		
Title: **HSER PSM Lead**	Approval Date:	Expiration Date:
E-mail Address: ken.n.andersen@conocophillips.com	Conditions of Approval:	Attached ☐
Date: **07/08/2006** Phone: **505.391.3158**		

- Attach Additional Sheets If Necessary

Facility - fPAC0619939966
Incident - nPAC0619940049
Tank - nPAC0619940284

RP#959

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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature: Charles R. Beauvais II Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 04/25/2023

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

☐ Extents of contamination must be fully delineated.

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

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

Printed Name: _____ Title: _____

Signature: Charles R. Beauvais II Date: _____

email: _____ Telephone: _____

OCD Only

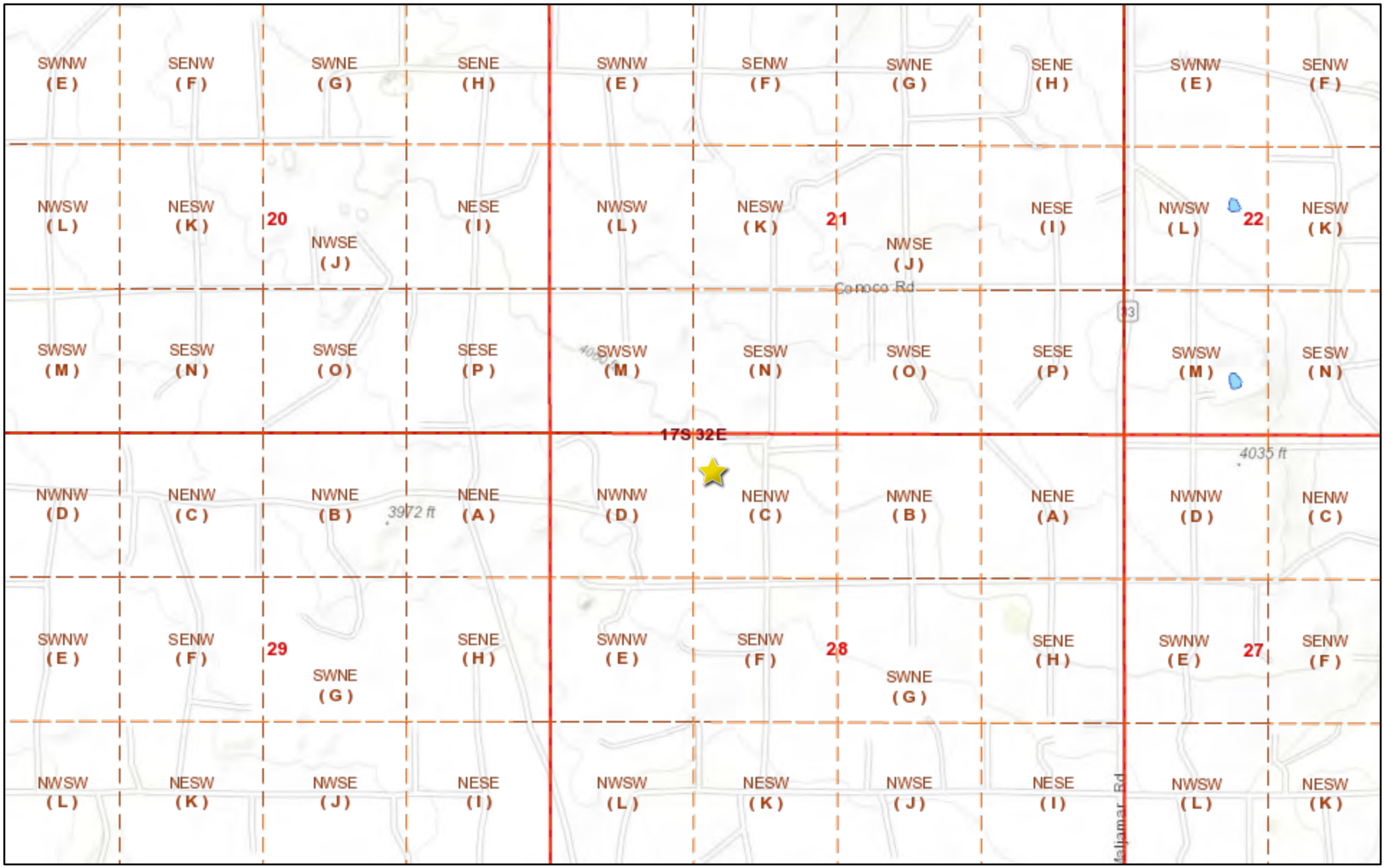
Received by: Jocelyn Harimon Date: 04/25/2023

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

Signature: _____ Date: 04/25/2023

APPENDIX B
Site Characterization Data

1RP-959 Water Bodies



3/12/2021, 3:13:20 PM

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Override 1

OCD District Offices

PLSS First Division

PLSS Second Division

PLSS Townships

OSE Water-bodies

PLJV Probable Playas

OSE Streams

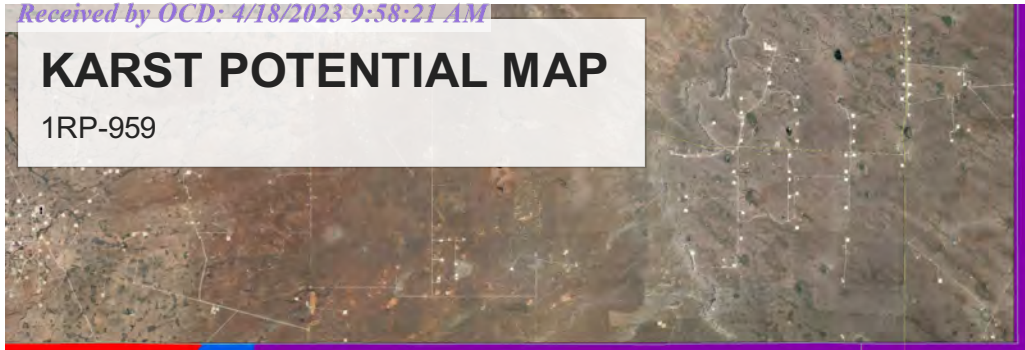
Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin,

New Mexico Oil Conservation Division

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

KARST POTENTIAL MAP

1RP-959



Legend

- 1RP-959
- High
- Low
- Medium

457

Hwy 82

Maljamar

1RP-959

Loco Hills

238

360

Google Earth

© 2020 Google

N

10 mi

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	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 10175		RA	LE		2	1	28	17S	32E	614814	3631005*	178	158		
RA 12020 POD1		RA	LE	2	2	1	28	17S	32E	614828	3630954	220	120	81	39
RA 12042 POD1		RA	LE	2	2	1	28	17S	32E	614891	3631181	240	400		
RA 12522 POD1		RA	LE	3	3	4	21	17S	32E	614941	3631122	277	100		
RA 12522 POD2		RA	LE	2	2	1	28	17S	32E	614949	3631098	285	100		
RA 12522 POD3		RA	LE	4	4	3	28	17S	32E	614980	3631093	316	100		
RA 12521 POD1		RA	LE	3	3	4	21	17S	32E	615127	3631271	492	105	92	13
RA 12020 POD3		RA	LE	2	1	2	28	17S	32E	615152	3631019	494	112	83	29
RA 12721 POD2		RA	LE	1	1	4	28	17S	32E	615055	3630407	797	124	75	49

Average Depth to Water: **82 feet**

Minimum Depth: **75 feet**

Maximum Depth: **92 feet**

Record Count: 9

UTMNAD83 Radius Search (in meters):

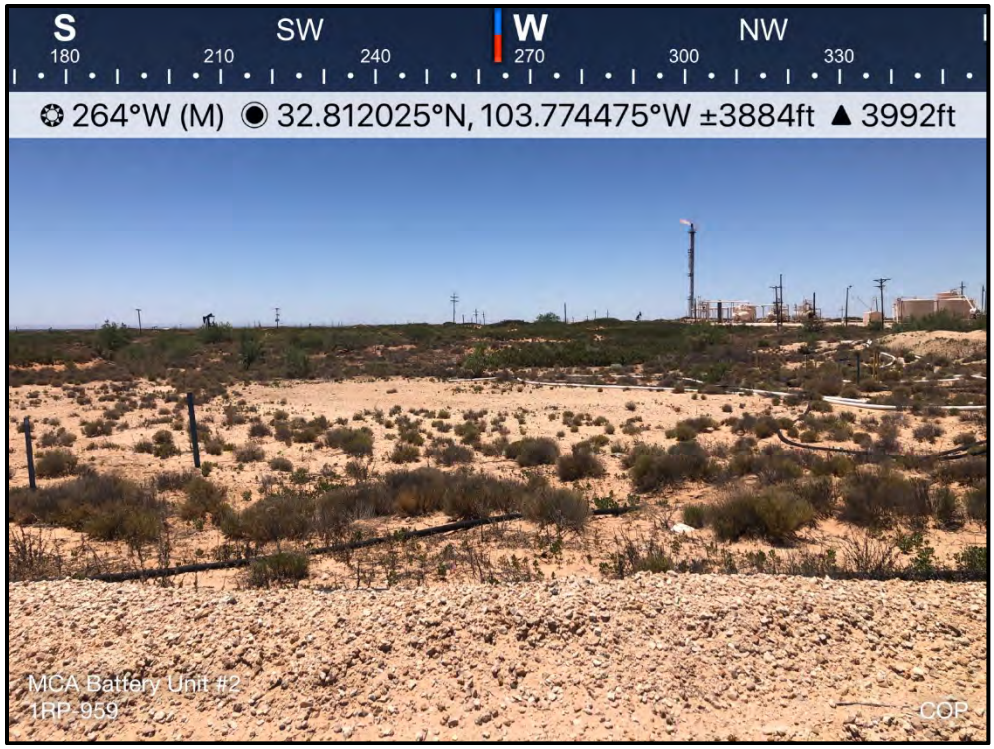
Easting (X): 614664.2 **Northing (Y):** 3631102.5 **Radius:** 800

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

10/23/20 9:11 AM

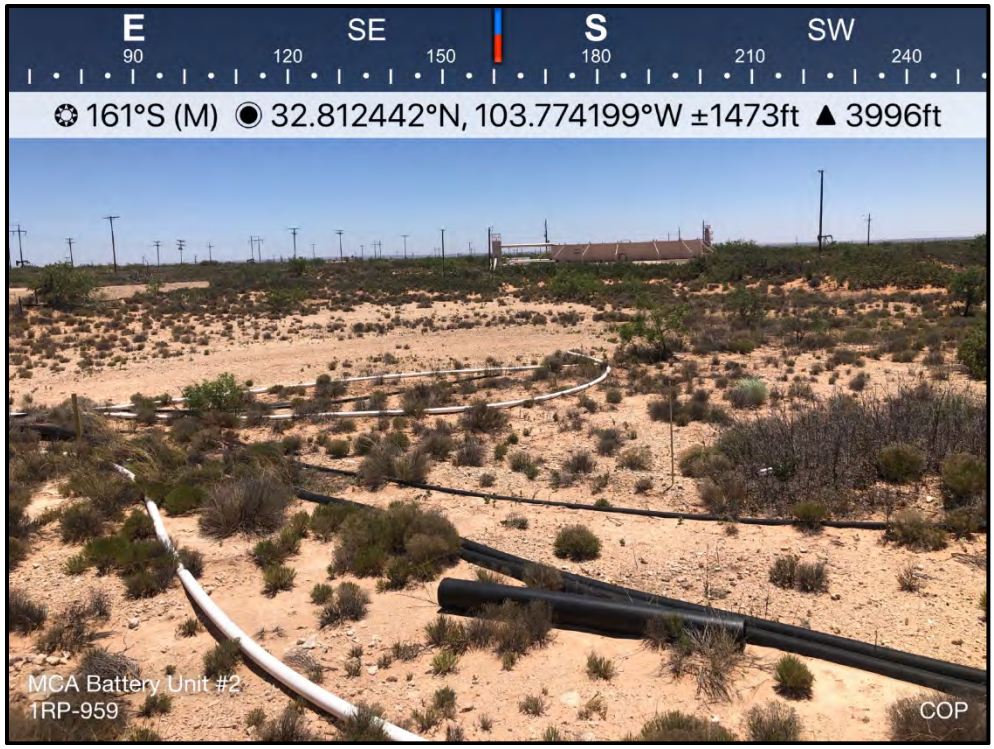
WATER COLUMN/ AVERAGE DEPTH TO WATER

APPENDIX C
Photographic Documentation

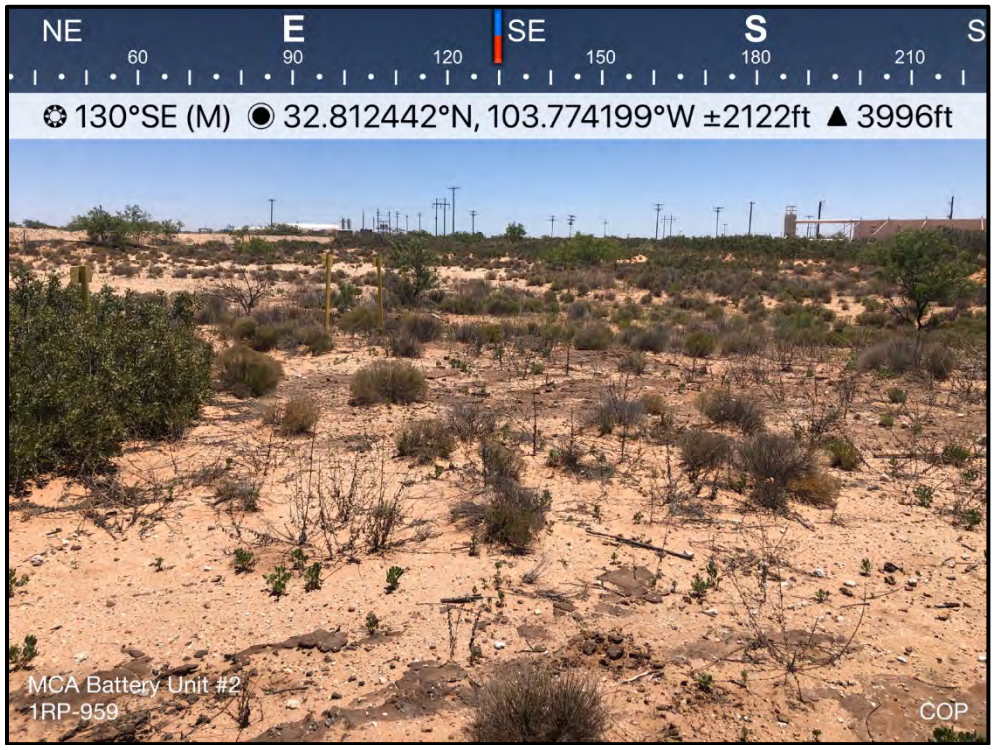


TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing west of release area.	1
	SITE NAME	MCA Battery Unit #2 Trunk Line Release	6/9/2020

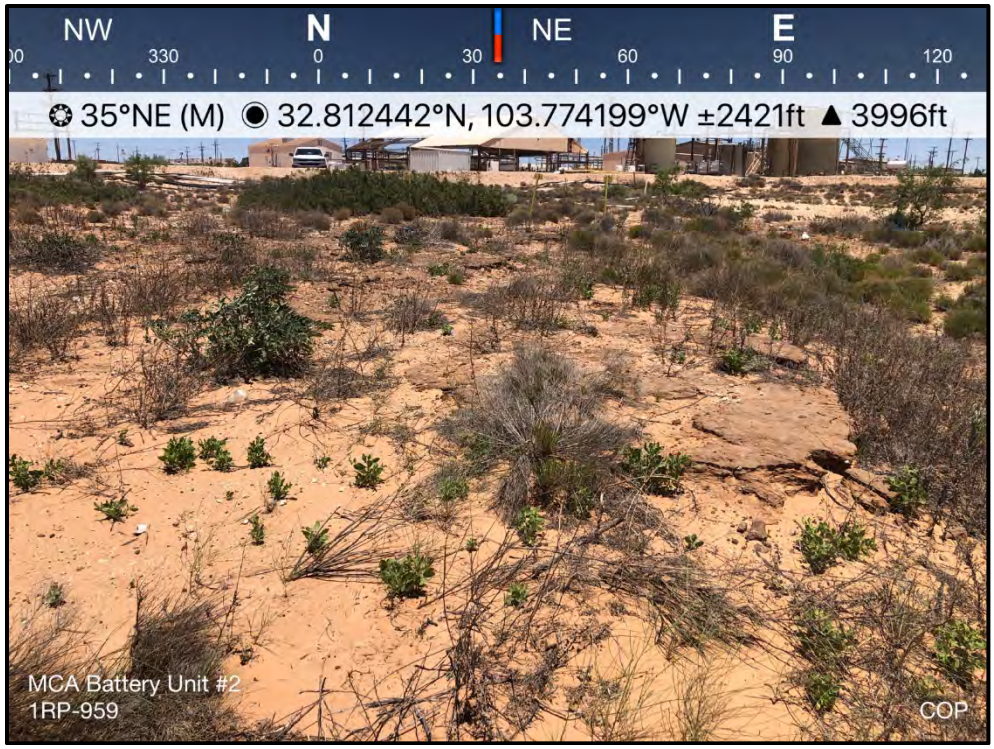
TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing southwest of above ground piping.	2
	SITE NAME	MCA Battery Unit #2 Trunk Line Release	6/9/2020



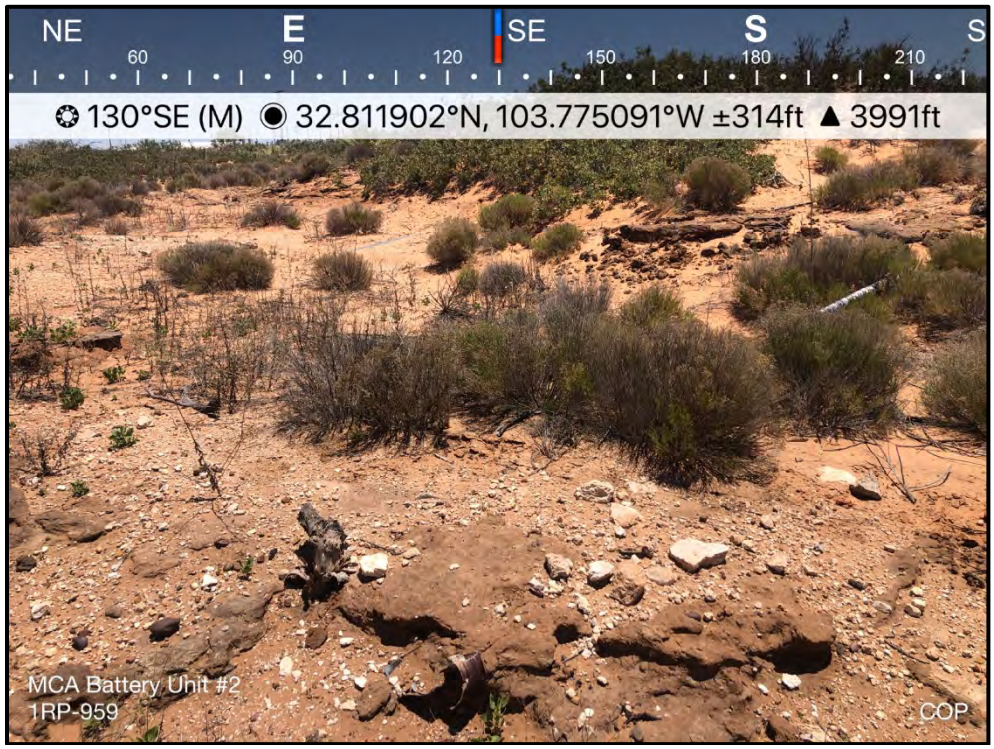
TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing southeast of above ground piping.	3
	SITE NAME	MCA Battery Unit #2 Trunk Line Release	6/9/2020



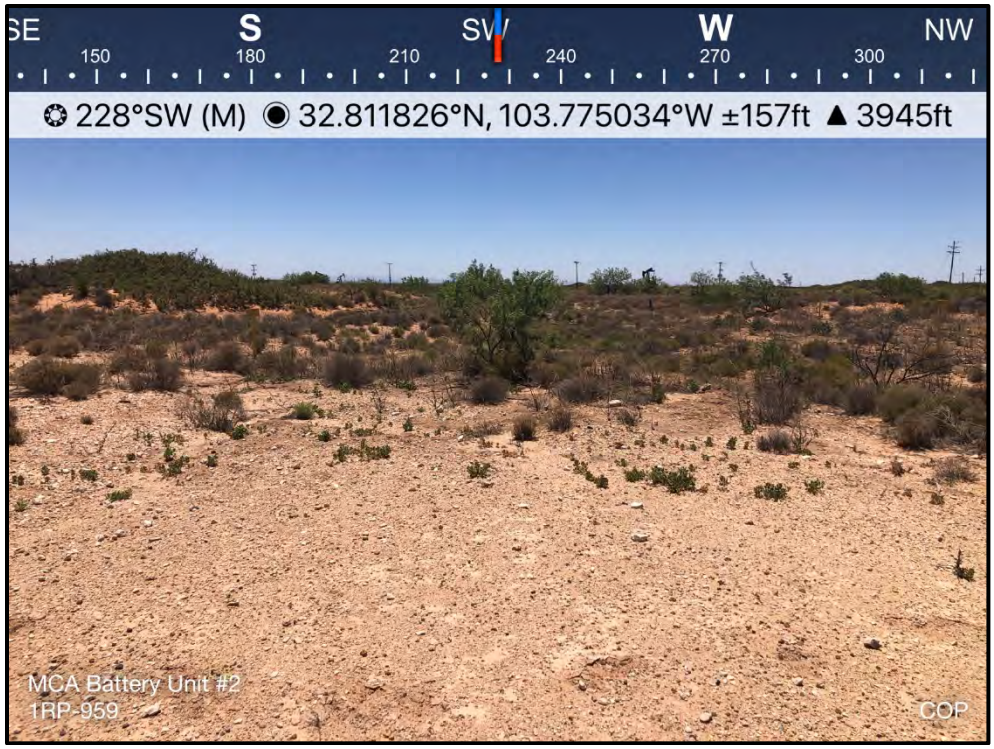
TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing southeast of release area.	4
	SITE NAME	MCA Battery Unit #2 Trunk Line Release	6/9/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing northeast of release area.	5
	SITE NAME	MCA Battery Unit #2 Trunk Line Release	6/9/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing southeast of release area.	6
	SITE NAME	MCA Battery Unit #2 Trunk Line Release	6/9/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02152	DESCRIPTION	View facing southwest of header area.	7
	SITE NAME	MCA Battery Unit #2 Trunk Line Release	6/9/2020

APPENDIX D
Laboratory Analytical Data

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

January 31, 2021

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1309410
Samples Received:	01/22/2021
Project Number:	212C-MD-02334TASK08
Description:	MCA Battery Unit#2 Trunkline Release

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

Entire Report Reviewed By:

Chris McCord
Project Manager

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

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

AH-1 (0-1) L1309410-01 Solid

Collected by: Devin Dominguez | Collected date/time: 01/18/21 00:00 | Received date/time: 01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612229	1	01/28/21 10:41	01/28/21 10:48	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1611004	1	01/28/21 22:16	01/29/21 11:09	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613341	1.01	01/23/21 15:18	01/29/21 16:20	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612463	1	01/23/21 15:18	01/28/21 16:57	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612307	1	01/28/21 16:17	01/29/21 07:23	DMG	Mt. Juliet, TN

AH-1 (2-3) L1309410-02 Solid

Collected by: Devin Dominguez | Collected date/time: 01/18/21 00:00 | Received date/time: 01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612229	1	01/28/21 10:41	01/28/21 10:48	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1611004	1	01/28/21 22:16	01/29/21 11:37	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613341	1.01	01/23/21 15:18	01/29/21 16:42	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612463	1	01/23/21 15:18	01/28/21 17:16	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612307	1	01/28/21 16:17	01/29/21 07:35	DMG	Mt. Juliet, TN

AH-2 (0-1) L1309410-03 Solid

Collected by: Devin Dominguez | Collected date/time: 01/18/21 00:00 | Received date/time: 01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612229	1	01/28/21 10:41	01/28/21 10:48	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1611004	1	01/28/21 22:16	01/29/21 11:56	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613341	1	01/23/21 15:18	01/29/21 17:04	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612463	1	01/23/21 15:18	01/28/21 17:35	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612307	1	01/28/21 16:17	01/29/21 07:48	DMG	Mt. Juliet, TN

AH-2 (2-3) L1309410-04 Solid

Collected by: Devin Dominguez | Collected date/time: 01/18/21 00:00 | Received date/time: 01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612229	1	01/28/21 10:41	01/28/21 10:48	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1611004	1	01/28/21 22:16	01/29/21 12:06	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613341	1.01	01/23/21 15:18	01/29/21 17:26	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612463	1	01/23/21 15:18	01/28/21 17:54	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612307	1	01/28/21 16:17	01/29/21 06:33	DMG	Mt. Juliet, TN

AH-3 (0-1) L1309410-05 Solid

Collected by: Devin Dominguez | Collected date/time: 01/18/21 00:00 | Received date/time: 01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612229	1	01/28/21 10:41	01/28/21 10:48	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1611004	1	01/28/21 22:16	01/29/21 12:15	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613341	1.01	01/23/21 15:18	01/29/21 17:48	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612463	1	01/23/21 15:18	01/28/21 18:14	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612307	1	01/28/21 16:17	01/29/21 06:20	DMG	Mt. Juliet, TN

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

AH-3 (2-3) L1309410-06 Solid

Collected by: Devin Dominguez | Collected date/time: 01/18/21 00:00 | Received date/time: 01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612229	1	01/28/21 10:41	01/28/21 10:48	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1611004	1	01/28/21 22:16	01/29/21 12:44	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613341	1	01/23/21 15:18	01/29/21 18:10	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612714	1	01/23/21 15:18	01/29/21 00:51	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612307	1	01/28/21 16:17	01/29/21 10:06	DMG	Mt. Juliet, TN

AH-4 (0-1) L1309410-07 Solid

Collected by: Devin Dominguez | Collected date/time: 01/18/21 00:00 | Received date/time: 01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612229	1	01/28/21 10:41	01/28/21 10:48	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1611004	1	01/28/21 22:16	01/29/21 12:53	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613341	1.01	01/23/21 15:18	01/29/21 18:32	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612714	1	01/23/21 15:18	01/29/21 04:18	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612307	1	01/28/21 16:17	01/29/21 10:19	DMG	Mt. Juliet, TN

AH-4 (2-3) L1309410-08 Solid

Collected by: Devin Dominguez | Collected date/time: 01/18/21 00:00 | Received date/time: 01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612229	1	01/28/21 10:41	01/28/21 10:48	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1611004	1	01/28/21 22:16	01/29/21 13:03	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613341	1	01/23/21 15:18	01/29/21 18:54	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612714	1	01/23/21 15:18	01/29/21 01:29	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612307	1	01/28/21 16:17	01/29/21 10:31	DMG	Mt. Juliet, TN

AH-5 (0-1) L1309410-09 Solid

Collected by: Devin Dominguez | Collected date/time: 01/18/21 00:00 | Received date/time: 01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612234	1	01/28/21 14:48	01/28/21 15:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1611004	1	01/28/21 22:16	01/29/21 13:12	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613341	1	01/23/21 15:18	01/29/21 19:16	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612714	1	01/23/21 15:18	01/29/21 01:48	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612307	1	01/28/21 16:17	01/29/21 10:44	DMG	Mt. Juliet, TN

AH-5 (2-3) L1309410-10 Solid

Collected by: Devin Dominguez | Collected date/time: 01/18/21 00:00 | Received date/time: 01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612234	1	01/28/21 14:48	01/28/21 15:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1611004	1	01/28/21 22:16	01/29/21 13:22	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613341	1	01/23/21 15:18	01/29/21 19:38	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612714	1	01/23/21 15:18	01/29/21 02:07	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612307	1	01/28/21 16:17	01/29/21 10:56	DMG	Mt. Juliet, TN

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

AH-6 (0-1) L1309410-11 Solid

Collected by: Devin Dominguez
Collected date/time: 01/18/21 00:00
Received date/time: 01/22/21 08:00

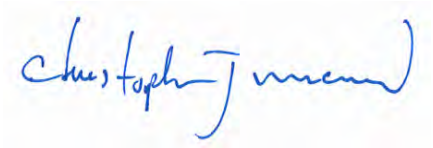
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612234	1	01/28/21 14:48	01/28/21 15:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1611004	1	01/28/21 22:16	01/29/21 13:31	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613341	1	01/23/21 15:18	01/29/21 20:00	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612714	1.01	01/23/21 15:18	01/29/21 02:26	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612307	1	01/28/21 16:17	01/29/21 11:09	DMG	Mt. Juliet, TN

AH-6 (2-3) L1309410-12 Solid

Collected by: Devin Dominguez
Collected date/time: 01/18/21 00:00
Received date/time: 01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612234	1	01/28/21 14:48	01/28/21 15:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1611004	1	01/28/21 22:16	01/29/21 13:41	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1613341	1	01/23/21 15:18	01/29/21 20:22	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612714	1	01/23/21 15:18	01/29/21 02:44	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612577	1	01/28/21 16:44	01/28/21 21:58	JDG	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	97.9		1	01/28/2021 10:48	WG1612229

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.40	20.4	1	01/29/2021 11:09	WG1611004

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	0.0458	B J	0.0224	0.103	1.01	01/29/2021 16:20	WG1613341
(S) a,a,a-Trifluorotoluene(FID)	*112*			*77.0-120*		*01/29/2021 16:20*	WG1613341

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	01/28/2021 16:57	WG1612463
Toluene	U		0.00136	0.00522	1	01/28/2021 16:57	WG1612463
Ethylbenzene	U		0.000769	0.00261	1	01/28/2021 16:57	WG1612463
Total Xylenes	U		0.000918	0.00678	1	01/28/2021 16:57	WG1612463
(S) Toluene-d8	*113*			*75.0-131*		*01/28/2021 16:57*	WG1612463
(S) 4-Bromofluorobenzene	*93.7*			*67.0-138*		*01/28/2021 16:57*	WG1612463
(S) 1,2-Dichloroethane-d4	*90.2*			*70.0-130*		*01/28/2021 16:57*	WG1612463

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	9.97		1.65	4.09	1	01/29/2021 07:23	WG1612307
C28-C40 Oil Range	37.7		0.280	4.09	1	01/29/2021 07:23	WG1612307
(S) o-Terphenyl	*65.8*			*18.0-148*		*01/29/2021 07:23*	WG1612307

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.0		1	01/28/2021 10:48	WG1612229

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		9.38	20.4	1	01/29/2021 11:37	WG1611004

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	0.0542	B J	0.0223	0.103	1.01	01/29/2021 16:42	WG1613341
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*01/29/2021 16:42*	WG1613341

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000486	0.00104	1	01/28/2021 17:16	WG1612463
Toluene	U		0.00135	0.00520	1	01/28/2021 17:16	WG1612463
Ethylbenzene	U		0.000767	0.00260	1	01/28/2021 17:16	WG1612463
Total Xylenes	U		0.000915	0.00676	1	01/28/2021 17:16	WG1612463
(S) Toluene-d8	*113*			*75.0-131*		*01/28/2021 17:16*	WG1612463
(S) 4-Bromofluorobenzene	*91.1*			*67.0-138*		*01/28/2021 17:16*	WG1612463
(S) 1,2-Dichloroethane-d4	*93.5*			*70.0-130*		*01/28/2021 17:16*	WG1612463

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	10.6		1.64	4.08	1	01/29/2021 07:35	WG1612307
C28-C40 Oil Range	42.6		0.279	4.08	1	01/29/2021 07:35	WG1612307
(S) o-Terphenyl	*75.8*			*18.0-148*		*01/29/2021 07:35*	WG1612307

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.4		1	01/28/2021 10:48	WG1612229

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		9.25	20.1	1	01/29/2021 11:56	WG1611004

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	0.0392	B J	0.0218	0.101	1	01/29/2021 17:04	WG1613341
(S) a,a,a-Trifluorotoluene(FID)	*112*			*77.0-120*		*01/29/2021 17:04*	WG1613341

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000473	0.00101	1	01/28/2021 17:35	WG1612463
Toluene	U		0.00132	0.00506	1	01/28/2021 17:35	WG1612463
Ethylbenzene	U		0.000746	0.00253	1	01/28/2021 17:35	WG1612463
Total Xylenes	U		0.000891	0.00658	1	01/28/2021 17:35	WG1612463
(S) Toluene-d8	*114*			*75.0-131*		*01/28/2021 17:35*	WG1612463
(S) 4-Bromofluorobenzene	*91.0*			*67.0-138*		*01/28/2021 17:35*	WG1612463
(S) 1,2-Dichloroethane-d4	*91.6*			*70.0-130*		*01/28/2021 17:35*	WG1612463

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	11.5		1.62	4.02	1	01/29/2021 07:48	WG1612307
C28-C40 Oil Range	44.9		0.276	4.02	1	01/29/2021 07:48	WG1612307
(S) o-Terphenyl	*75.4*			*18.0-148*		*01/29/2021 07:48*	WG1612307

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.4		1	01/28/2021 10:48	WG1612229

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		9.25	20.1	1	01/29/2021 12:06	WG1611004

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	0.0346	B J	0.0220	0.102	1.01	01/29/2021 17:26	WG1613341
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*01/29/2021 17:26*	WG1613341

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000472	0.00101	1	01/28/2021 17:54	WG1612463
Toluene	U		0.00132	0.00506	1	01/28/2021 17:54	WG1612463
Ethylbenzene	U		0.000746	0.00253	1	01/28/2021 17:54	WG1612463
Total Xylenes	U		0.000890	0.00658	1	01/28/2021 17:54	WG1612463
(S) Toluene-d8	*110*			*75.0-131*		*01/28/2021 17:54*	WG1612463
(S) 4-Bromofluorobenzene	*91.9*			*67.0-138*		*01/28/2021 17:54*	WG1612463
(S) 1,2-Dichloroethane-d4	*92.9*			*70.0-130*		*01/28/2021 17:54*	WG1612463

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	8.66		1.62	4.02	1	01/29/2021 06:33	WG1612307
C28-C40 Oil Range	34.7		0.276	4.02	1	01/29/2021 06:33	WG1612307
(S) o-Terphenyl	*76.1*			*18.0-148*		*01/29/2021 06:33*	WG1612307

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.5		1	01/28/2021 10:48	WG1612229

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		9.24	20.1	1	01/29/2021 12:15	WG1611004

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	0.0332	B J	0.0220	0.101	1.01	01/29/2021 17:48	WG1613341
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*01/29/2021 17:48*	WG1613341

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000471	0.00101	1	01/28/2021 18:14	WG1612463
Toluene	U		0.00131	0.00505	1	01/28/2021 18:14	WG1612463
Ethylbenzene	U		0.000744	0.00252	1	01/28/2021 18:14	WG1612463
Total Xylenes	U		0.000888	0.00656	1	01/28/2021 18:14	WG1612463
(S) Toluene-d8	*112*			*75.0-131*		*01/28/2021 18:14*	WG1612463
(S) 4-Bromofluorobenzene	*90.2*			*67.0-138*		*01/28/2021 18:14*	WG1612463
(S) 1,2-Dichloroethane-d4	*91.4*			*70.0-130*		*01/28/2021 18:14*	WG1612463

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	6.19		1.62	4.02	1	01/29/2021 06:20	WG1612307
C28-C40 Oil Range	24.6		0.275	4.02	1	01/29/2021 06:20	WG1612307
(S) o-Terphenyl	*69.1*			*18.0-148*		*01/29/2021 06:20*	WG1612307

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.6		1	01/28/2021 10:48	WG1612229

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		9.24	20.1	1	01/29/2021 12:44	WG1611004

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	0.0234	B J	0.0218	0.100	1	01/29/2021 18:10	WG1613341
(S) a,a,a-Trifluorotoluene(FID)	*112*			*77.0-120*		*01/29/2021 18:10*	WG1613341

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000471	0.00101	1	01/29/2021 00:51	WG1612714
Toluene	U		0.00131	0.00504	1	01/29/2021 00:51	WG1612714
Ethylbenzene	U		0.000743	0.00252	1	01/29/2021 00:51	WG1612714
Total Xylenes	U		0.000887	0.00655	1	01/29/2021 00:51	WG1612714
(S) Toluene-d8	*111*			*75.0-131*		*01/29/2021 00:51*	WG1612714
(S) 4-Bromofluorobenzene	*110*			*67.0-138*		*01/29/2021 00:51*	WG1612714
(S) 1,2-Dichloroethane-d4	*85.6*			*70.0-130*		*01/29/2021 00:51*	WG1612714

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	8.69		1.62	4.02	1	01/29/2021 10:06	WG1612307
C28-C40 Oil Range	28.7		0.275	4.02	1	01/29/2021 10:06	WG1612307
(S) o-Terphenyl	*81.4*			*18.0-148*		*01/29/2021 10:06*	WG1612307

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.5		1	01/28/2021 10:48	WG1612229

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		9.25	20.1	1	01/29/2021 12:53	WG1611004

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	0.0282	B J	0.0220	0.102	1.01	01/29/2021 18:32	WG1613341
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*01/29/2021 18:32*	WG1613341

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000472	0.00101	1	01/29/2021 04:18	WG1612714
Toluene	U		0.00131	0.00505	1	01/29/2021 04:18	WG1612714
Ethylbenzene	U		0.000745	0.00253	1	01/29/2021 04:18	WG1612714
Total Xylenes	U		0.000889	0.00657	1	01/29/2021 04:18	WG1612714
(S) Toluene-d8	*105*			*75.0-131*		*01/29/2021 04:18*	WG1612714
(S) 4-Bromofluorobenzene	*111*			*67.0-138*		*01/29/2021 04:18*	WG1612714
(S) 1,2-Dichloroethane-d4	*85.9*			*70.0-130*		*01/29/2021 04:18*	WG1612714

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	6.70		1.62	4.02	1	01/29/2021 10:19	WG1612307
C28-C40 Oil Range	22.3		0.275	4.02	1	01/29/2021 10:19	WG1612307
(S) o-Terphenyl	*69.3*			*18.0-148*		*01/29/2021 10:19*	WG1612307

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.6		1	01/28/2021 10:48	WG1612229

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		9.24	20.1	1	01/29/2021 13:03	WG1611004

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0244	B J	0.0218	0.100	1	01/29/2021 18:54	WG1613341
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*		*01/29/2021 18:54*	WG1613341

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000471	0.00101	1	01/29/2021 01:29	WG1612714
Toluene	U		0.00131	0.00504	1	01/29/2021 01:29	WG1612714
Ethylbenzene	U		0.000743	0.00252	1	01/29/2021 01:29	WG1612714
Total Xylenes	U		0.000887	0.00655	1	01/29/2021 01:29	WG1612714
(S) Toluene-d8	*109*			*75.0-131*		*01/29/2021 01:29*	WG1612714
(S) 4-Bromofluorobenzene	*112*			*67.0-138*		*01/29/2021 01:29*	WG1612714
(S) 1,2-Dichloroethane-d4	*86.1*			*70.0-130*		*01/29/2021 01:29*	WG1612714

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	6.04		1.62	4.02	1	01/29/2021 10:31	WG1612307
C28-C40 Oil Range	17.6		0.275	4.02	1	01/29/2021 10:31	WG1612307
(S) o-Terphenyl	*74.5*			*18.0-148*		*01/29/2021 10:31*	WG1612307

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.0		1	01/28/2021 15:00	WG1612234

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		9.29	20.2	1	01/29/2021 13:12	WG1611004

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	0.0260	B J	0.0219	0.101	1	01/29/2021 19:16	WG1613341
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*01/29/2021 19:16*	WG1613341

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	01/29/2021 01:48	WG1612714
Toluene	U		0.00133	0.00510	1	01/29/2021 01:48	WG1612714
Ethylbenzene	U		0.000752	0.00255	1	01/29/2021 01:48	WG1612714
Total Xylenes	U		0.000897	0.00663	1	01/29/2021 01:48	WG1612714
(S) Toluene-d8	*107*			*75.0-131*		*01/29/2021 01:48*	WG1612714
(S) 4-Bromofluorobenzene	*112*			*67.0-138*		*01/29/2021 01:48*	WG1612714
(S) 1,2-Dichloroethane-d4	*86.6*			*70.0-130*		*01/29/2021 01:48*	WG1612714

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	5.53		1.63	4.04	1	01/29/2021 10:44	WG1612307
C28-C40 Oil Range	15.6		0.277	4.04	1	01/29/2021 10:44	WG1612307
(S) o-Terphenyl	*78.1*			*18.0-148*		*01/29/2021 10:44*	WG1612307

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.3		1	01/28/2021 15:00	WG1612234

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		9.27	20.2	1	01/29/2021 13:22	WG1611004

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	0.0265	B J	0.0219	0.101	1	01/29/2021 19:38	WG1613341
(S) a,a,a-Trifluorotoluene(FID)	*112*			*77.0-120*		*01/29/2021 19:38*	WG1613341

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	01/29/2021 02:07	WG1612714
Toluene	U		0.00132	0.00508	1	01/29/2021 02:07	WG1612714
Ethylbenzene	U		0.000748	0.00254	1	01/29/2021 02:07	WG1612714
Total Xylenes	U		0.000893	0.00660	1	01/29/2021 02:07	WG1612714
(S) Toluene-d8	*108*			*75.0-131*		*01/29/2021 02:07*	WG1612714
(S) 4-Bromofluorobenzene	*110*			*67.0-138*		*01/29/2021 02:07*	WG1612714
(S) 1,2-Dichloroethane-d4	*84.1*			*70.0-130*		*01/29/2021 02:07*	WG1612714

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	5.85		1.62	4.03	1	01/29/2021 10:56	WG1612307
C28-C40 Oil Range	13.4		0.276	4.03	1	01/29/2021 10:56	WG1612307
(S) o-Terphenyl	*70.2*			*18.0-148*		*01/29/2021 10:56*	WG1612307

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.4		1	01/28/2021 15:00	WG1612234

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		9.25	20.1	1	01/29/2021 13:31	WG1611004

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	0.0254	B J	0.0218	0.101	1	01/29/2021 20:00	WG1613341
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*01/29/2021 20:00*	WG1613341

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	1.01	01/29/2021 02:26	WG1612714
Toluene	U		0.00132	0.00511	1.01	01/29/2021 02:26	WG1612714
Ethylbenzene	U		0.000752	0.00256	1.01	01/29/2021 02:26	WG1612714
Total Xylenes	U		0.000899	0.00663	1.01	01/29/2021 02:26	WG1612714
(S) Toluene-d8	*108*			*75.0-131*		*01/29/2021 02:26*	WG1612714
(S) 4-Bromofluorobenzene	*111*			*67.0-138*		*01/29/2021 02:26*	WG1612714
(S) 1,2-Dichloroethane-d4	*86.1*			*70.0-130*		*01/29/2021 02:26*	WG1612714

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	5.96		1.62	4.02	1	01/29/2021 11:09	WG1612307
C28-C40 Oil Range	19.7		0.276	4.02	1	01/29/2021 11:09	WG1612307
(S) o-Terphenyl	*72.5*			*18.0-148*		*01/29/2021 11:09*	WG1612307

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.6		1	01/28/2021 15:00	WG1612234

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		9.24	20.1	1	01/29/2021 13:41	WG1611004

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	0.0331	B J	0.0218	0.100	1	01/29/2021 20:22	WG1613341
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*01/29/2021 20:22*	WG1613341

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000471	0.00101	1	01/29/2021 02:44	WG1612714
Toluene	U		0.00131	0.00504	1	01/29/2021 02:44	WG1612714
Ethylbenzene	U		0.000743	0.00252	1	01/29/2021 02:44	WG1612714
Total Xylenes	U		0.000887	0.00655	1	01/29/2021 02:44	WG1612714
(S) Toluene-d8	*110*			*75.0-131*		*01/29/2021 02:44*	WG1612714
(S) 4-Bromofluorobenzene	*112*			*67.0-138*		*01/29/2021 02:44*	WG1612714
(S) 1,2-Dichloroethane-d4	*87.1*			*70.0-130*		*01/29/2021 02:44*	WG1612714

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	3.49	J	1.62	4.02	1	01/28/2021 21:58	WG1612577
C28-C40 Oil Range	7.62		0.275	4.02	1	01/28/2021 21:58	WG1612577
(S) o-Terphenyl	*75.0*			*18.0-148*		*01/28/2021 21:58*	WG1612577

Method Blank (MB)

(MB) R3617326-1 01/28/21 10:48

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

L1309406-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1309406-15 01/28/21 10:48 • (DUP) R3617326-3 01/28/21 10:48

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	97.4	97.3	1	0.0414		10

Laboratory Control Sample (LCS)

(LCS) R3617326-2 01/28/21 10:48

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

Method Blank (MB)

(MB) R3617386-1 01/28/21 15:00

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

L1309432-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1309432-02 01/28/21 15:00 • (DUP) R3617386-3 01/28/21 15:00

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	77.5	77.7	1	0.168		10

Laboratory Control Sample (LCS)

(LCS) R3617386-2 01/28/21 15:00

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

Method Blank (MB)

(MB) R3617589-1 01/29/21 10:38

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

L1309410-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1309410-02 01/29/21 11:37 • (DUP) R3617589-5 01/29/21 11:47

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

L1309821-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1309821-21 01/29/21 15:16 • (DUP) R3617589-6 01/29/21 15:26

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	20.3	19.7	1	2.82	J	20

Laboratory Control Sample (LCS)

(LCS) R3617589-2 01/29/21 10:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	198	98.9	90.0-110	

L1309410-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1309410-01 01/29/21 11:09 • (MS) R3617589-3 01/29/21 11:18 • (MSD) R3617589-4 01/29/21 11:28

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	511	U	443	442	86.8	86.5	1	80.0-120			0.280	20

Method Blank (MB)

(MB) R3617736-2 01/29/21 14:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0220	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*115*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3617736-1 01/29/21 13:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.64	103	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*108*	*77.0-120*	

Method Blank (MB)

(MB) R3617255-2 01/28/21 11:52

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	*114*			*75.0-131*
(S) 4-Bromofluorobenzene	*90.3*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*88.8*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3617255-1 01/28/21 10:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.125	100	70.0-123	
Ethylbenzene	0.125	0.130	104	74.0-126	
Toluene	0.125	0.127	102	75.0-121	
Xylenes, Total	0.375	0.383	102	72.0-127	
(S) Toluene-d8			*101*	*75.0-131*	
(S) 4-Bromofluorobenzene			*98.6*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*95.5*	*70.0-130*	

L1309410-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1309410-05 01/28/21 18:14 • (MS) R3617255-3 01/28/21 18:33 • (MSD) R3617255-4 01/28/21 18:52

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.126	U	0.0711	0.0859	56.3	68.1	1	10.0-149			18.9	37
Ethylbenzene	0.126	U	0.0729	0.0923	57.8	73.1	1	10.0-160			23.5	38
Toluene	0.126	U	0.0828	0.0972	65.6	77.0	1	10.0-156			16.0	38
Xylenes, Total	0.379	U	0.228	0.269	60.3	70.9	1	10.0-160			16.3	38
(S) Toluene-d8					*111*	*111*		*75.0-131*				
(S) 4-Bromofluorobenzene					*91.1*	*90.8*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*93.7*	*92.8*		*70.0-130*				

Method Blank (MB)

(MB) R3617438-3 01/28/21 23:36

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	*111*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*87.9*			*70.0-130*

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

(LCS) R3617438-1 01/28/21 22:21 • (LCSD) R3617438-2 01/28/21 22:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.135	0.128	108	102	70.0-123			5.32	20
Ethylbenzene	0.125	0.137	0.130	110	104	74.0-126			5.24	20
Toluene	0.125	0.134	0.128	107	102	75.0-121			4.58	20
Xylenes, Total	0.375	0.411	0.392	110	105	72.0-127			4.73	20
(S) Toluene-d8				*107*	*106*	*75.0-131*				
(S) 4-Bromofluorobenzene				*113*	*114*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*89.2*	*89.8*	*70.0-130*				

Method Blank (MB)

(MB) R3617296-1 01/28/21 23:42

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	*68.3*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3617296-2 01/28/21 23:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	34.6	69.2	50.0-150	
(S) o-Terphenyl			*79.6*	*18.0-148*	

L1309406-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1309406-16 01/29/21 06:45 • (MS) R3617296-3 01/29/21 06:58 • (MSD) R3617296-4 01/29/21 07:10

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	50.3	6.61	38.6	50.8	63.5	88.2	1	50.0-150		J3	27.4	20
(S) o-Terphenyl					*71.8*	*87.1*		*18.0-148*				

Method Blank (MB)

(MB) R3617449-1 01/28/21 21:32

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	*65.0*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3617449-2 01/28/21 21:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	35.8	71.6	50.0-150	
(S) o-Terphenyl			*57.1*	*18.0-148*	

L1310369-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1310369-01 01/29/21 00:08 • (MS) R3617449-3 01/29/21 00:21 • (MSD) R3617449-4 01/29/21 00:34

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	7.04	50.5	64.6	71.4	96.6	1	50.0-150		J3	24.5	20
(S) o-Terphenyl					*52.1*	*54.1*		*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

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

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

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

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

Alabama	40160
ANSI National Accreditation Board	L2239

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

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

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

Nevada	NV009412021-1

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

Texas	T104704328-20-18

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

L1304410

F163

Analysis Request of Chain of Custody Record

Page 1 of 2

Tetra Tech, Inc.

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

Client Name:	ConocoPhillips	Site Manager:	Sam Abbott
Project Name:	MCA Battery Unit #2 Trunkline Release		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-02334 Task 08
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	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R			Hold
-01	AH-1 (0-1')	1/18/2021			X				X			1	N	X			X												X							
-02	AH-1 (2'-3')	1/18/2021			X				X			1	N	X			X												X							
-03	AH-2 (0-1')	1/18/2021			X				X			1	N	X			X												X							
-04	AH-2 (2'-3')	1/18/2021			X				X			1	N	X			X												X							
-05	AH-3 (0-1')	1/18/2021			X				X			1	N	X			X												X							
-06	AH-3 (2'-3')	1/18/2021			X				X			1	N	X			X												X							
-07	AH-4 (0-1')	1/18/2021			X				X			1	N	X			X												X							
-08	AH-4 (2'-3')	1/18/2021			X				X			1	N	X			X												X							
-09	AH-5 (0-1')	1/18/2021			X				X			1	N	X			X												X							
-10	AH-5 (2'-3')	1/18/2021			X				X			1	N	X			X												X							

Relinquished by:	Date: 1-21-21	Time: 1400	Received by: Date: 1-21-21 Time: 14:00
Relinquished by:	Date: 1-21-21	Time: 16:30	Received by: Date: 1-21-21 Time: 16:30
Relinquished by:	Date:	Time:	Received by: Date: 1/22/21 Time: 800

LAB USE ONLY

Sample Temperature

2.6 +0.2=2.8

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

~~L1309~~
L1309410

Analysis Request of Chain of Custody Record

Page 2 of 2

Tetra Tech, Inc.

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

Client Name:	ConocoPhillips	**Site Manager:**	Sam Abbott
Project Name:	MCA Battery Unit #2 Trunkline Release		
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02334 Task 08
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 YEAR: 2021 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	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R			Hold
-11	AH-6 (0-1')	1/18/2021			X				X			1	N	X		X												X							
-12	AH-6 (2'-3')	1/18/2021			X				X			1	N	X		X												X							

Relinquished by:	Date: 1-21-21	Time: 14:00	Received by:	Date: 1-21-21	Time: 14:00
Relinquished by:	Date: 1-21-21	Time: 16:30	Received by:	Date: 1-21-21	Time: 16:30
Relinquished by:	Date:	Time:	Received by:	Date: 1/22/21	Time: 8:00

LAB USE ONLY

Sample Temperature

0.6+0=0.6

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: COPTETRA	L1305410	
Cooler Received/Opened On: 1 / 22 / 21 Temperature:	0.6	
Received By: Olivia Turner		
Signature: Olivia Turner		

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?			

L1309406/L1309410 COPTETRA NCF

R5

Time estimate: oh **Time spent:** oh

Members

Cole Medley (responsible) Christopher McCord EM Erica McNeese

- [x] Login Clarification needed
- [ ] Chain of custody is incomplete
- [ ] Please specify Metals requested
- [ ] Please specify TCLP requested
- [x] Received additional samples not listed on COC
- [x] Sample IDs on containers do not match IDs on COC
- [ ] Client did not "X" analysis
- [ ] Chain of Custody is missing
- [ ] If no COC: Received by:_____
- [ ] If no COC: Date/Time:_____
- [ ] If no COC: Temp./Cont.Rec./pH:_____
- [ ] If no COC: Carrier:_____
- [ ] If no COC: Tracking #:_____
- [x] Client informed by call
- [ ] Client informed by Email
- [ ] Client informed by Voicemail
- [x] Date/Time: 01/25/21 11:15
- [x] PM initials: CM
- [x] Client Contact: Christian Llull

Comments

Cole Medley *22 January 2021 4:02 PM*

1.For L1309406- Received additional samples not listed on COC.
AH-7 (0-1), AH-7 (2-3), AH-8 (0-1), and AH-8 (2-3).

1. For L1309410- Did not receive IDs:AH-7 (0-1), AH-7 (2-3), AH-8 (0-1), and AH-8 (2-3). Also all (2-3) depths on COC are labeled as (3-4) on containers.
   Logged per COC.

Christopher McCord *25 January 2021 11:42 AM*

1. Page 2 of COCL1309140 goes with L1309406. Page 2 of COCL1309406 goes with L1309140. This will correct the missing samples issue.

Keep sample depths logged as (2-3) per COC.

Cole Medley *26 January 2021 11:18 AM*

Done.

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

February 09, 2021

ConocoPhillips - Tetra Tech

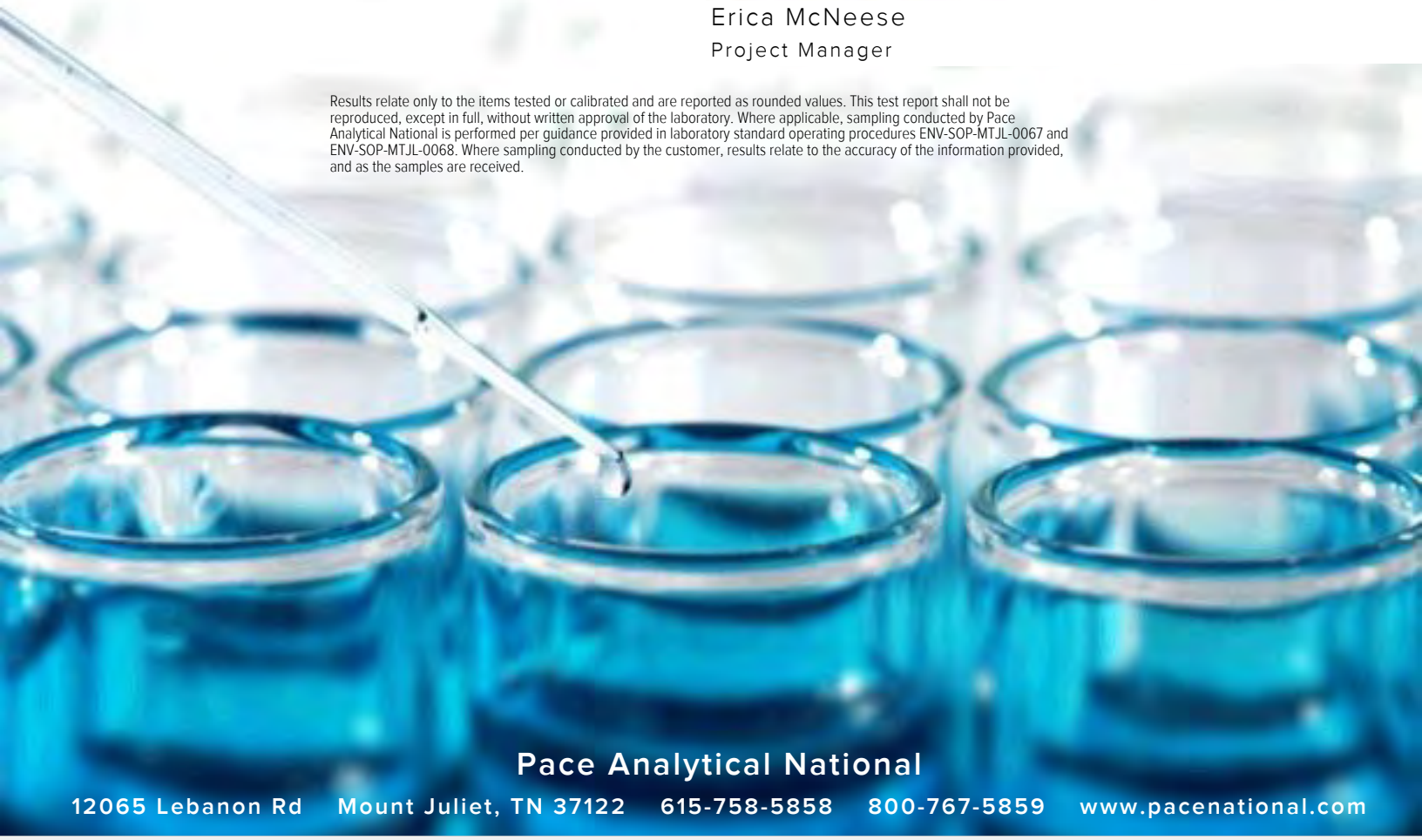
Sample Delivery Group:	L1312445
Samples Received:	02/02/2021
Project Number:	212C-MD-02334TASK08
Description:	MCA Battery Unit #2 Trunk Line Release (1RP-959)

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-7 (0-1) L1312445-01 Solid

Collected by: Adrian Garcia | Collected date/time: 01/28/21 13:30 | Received date/time: 02/02/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1616038	1	02/05/21 11:46	02/05/21 11:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615914	1	02/05/21 17:12	02/06/21 02:17	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1616272	1	02/02/21 20:22	02/04/21 20:08	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1615719	1	02/02/21 20:22	02/03/21 18:08	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1616476	20	02/04/21 15:38	02/05/21 14:43	JN	Mt. Juliet, TN

AH-7 (3-4) L1312445-02 Solid

Collected by: Adrian Garcia | Collected date/time: 01/28/21 14:00 | Received date/time: 02/02/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1616038	1	02/05/21 11:46	02/05/21 11:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615914	1	02/05/21 17:12	02/06/21 02:34	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1616272	1	02/02/21 20:22	02/04/21 20:29	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1615719	1	02/02/21 20:22	02/03/21 18:26	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1616476	1	02/04/21 15:38	02/05/21 04:55	DMG	Mt. Juliet, TN

AH-7 (6-7) L1312445-03 Solid

Collected by: Adrian Garcia | Collected date/time: 01/28/21 14:30 | Received date/time: 02/02/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1616038	1	02/05/21 11:46	02/05/21 11:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615914	1	02/05/21 17:12	02/06/21 03:09	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1616272	1	02/02/21 20:22	02/04/21 20:50	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1615719	1	02/02/21 20:22	02/03/21 18:45	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1616476	1	02/04/21 15:38	02/05/21 05:21	DMG	Mt. Juliet, TN

AH-8 (0-1) L1312445-04 Solid

Collected by: Adrian Garcia | Collected date/time: 01/29/21 10:30 | Received date/time: 02/02/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1616038	1	02/05/21 11:46	02/05/21 11:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615914	1	02/05/21 17:12	02/06/21 03:27	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1616559	1	02/02/21 20:22	02/05/21 05:53	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1615719	1	02/02/21 20:22	02/03/21 19:04	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1616476	10	02/04/21 15:38	02/05/21 06:27	DMG	Mt. Juliet, TN

AH-8 (3-4) L1312445-05 Solid

Collected by: Adrian Garcia | Collected date/time: 01/29/21 11:00 | Received date/time: 02/02/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1616038	1	02/05/21 11:46	02/05/21 11:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615914	1	02/05/21 17:12	02/06/21 04:19	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1617125	1000	02/02/21 20:22	02/06/21 03:34	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1615719	8	02/02/21 20:22	02/03/21 19:42	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1616476	50	02/04/21 15:38	02/05/21 15:09	WCR	Mt. Juliet, TN

AH-8 (6-7) L1312445-06 Solid

Collected by: Adrian Garcia
Collected date/time: 01/29/21 11:30
Received date/time: 02/02/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1616039	1	02/05/21 15:52	02/05/21 16:13	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1615914	1	02/05/21 17:12	02/06/21 04:36	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1616559	100	02/02/21 20:22	02/05/21 10:45	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1615719	8	02/02/21 20:22	02/03/21 20:02	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1616476	50	02/04/21 15:38	02/05/21 15:22	WCR	Mt. Juliet, TN

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

Erica McNeese
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.3		1	02/05/2021 11:54	WG1616038

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		9.27	20.2	1	02/06/2021 02:17	WG1615914

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	02/04/2021 20:08	WG1616272
(S) a,a,a-Trifluorotoluene(FID)	*93.9*			*77.0-120*		*02/04/2021 20:08*	WG1616272

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	02/03/2021 18:08	WG1615719
Toluene	U		0.00132	0.00508	1	02/03/2021 18:08	WG1615719
Ethylbenzene	U		0.000748	0.00254	1	02/03/2021 18:08	WG1615719
Total Xylenes	U		0.000893	0.00660	1	02/03/2021 18:08	WG1615719
(S) Toluene-d8	*103*			*75.0-131*		*02/03/2021 18:08*	WG1615719
(S) 4-Bromofluorobenzene	*94.9*			*67.0-138*		*02/03/2021 18:08*	WG1615719
(S) 1,2-Dichloroethane-d4	*95.9*			*70.0-130*		*02/03/2021 18:08*	WG1615719

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	873		32.4	80.6	20	02/05/2021 14:43	WG1616476
C28-C40 Oil Range	2300		5.52	80.6	20	02/05/2021 14:43	WG1616476
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*02/05/2021 14:43*	WG1616476

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.7		1	02/05/2021 11:54	WG1616038

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	29.1		9.32	20.3	1	02/06/2021 02:34	WG1615914

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	02/04/2021 20:29	WG1616272
(S) a,a,a-Trifluorotoluene(FID)	*92.9*			*77.0-120*		*02/04/2021 20:29*	WG1616272

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000479	0.00103	1	02/03/2021 18:26	WG1615719
Toluene	U		0.00133	0.00513	1	02/03/2021 18:26	WG1615719
Ethylbenzene	U		0.000757	0.00257	1	02/03/2021 18:26	WG1615719
Total Xylenes	U		0.000903	0.00667	1	02/03/2021 18:26	WG1615719
(S) Toluene-d8	*103*			*75.0-131*		*02/03/2021 18:26*	WG1615719
(S) 4-Bromofluorobenzene	*92.3*			*67.0-138*		*02/03/2021 18:26*	WG1615719
(S) 1,2-Dichloroethane-d4	*96.1*			*70.0-130*		*02/03/2021 18:26*	WG1615719

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.63	4.05	1	02/05/2021 04:55	WG1616476
C28-C40 Oil Range	3.60	J	0.278	4.05	1	02/05/2021 04:55	WG1616476
(S) o-Terphenyl	*61.4*			*18.0-148*		*02/05/2021 04:55*	WG1616476

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.7		1	02/05/2021 11:54	WG1616038

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	104		9.71	21.1	1	02/06/2021 03:09	WG1615914

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	02/04/2021 20:50	WG1616272
(S) a,a,a-Trifluorotoluene(FID)	*92.5*			*77.0-120*		*02/04/2021 20:50*	WG1616272

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		0.000519	0.00111	1	02/03/2021 18:45	WG1615719
Toluene	U		0.00145	0.00556	1	02/03/2021 18:45	WG1615719
Ethylbenzene	U		0.000819	0.00278	1	02/03/2021 18:45	WG1615719
Total Xylenes	U		0.000978	0.00723	1	02/03/2021 18:45	WG1615719
(S) Toluene-d8	*104*			*75.0-131*		*02/03/2021 18:45*	WG1615719
(S) 4-Bromofluorobenzene	*94.1*			*67.0-138*		*02/03/2021 18:45*	WG1615719
(S) 1,2-Dichloroethane-d4	*95.9*			*70.0-130*		*02/03/2021 18:45*	WG1615719

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	4.69		1.70	4.22	1	02/05/2021 05:21	WG1616476
C28-C40 Oil Range	9.97		0.289	4.22	1	02/05/2021 05:21	WG1616476
(S) o-Terphenyl	*46.3*			*18.0-148*		*02/05/2021 05:21*	WG1616476

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.3		1	02/05/2021 11:54	WG1616038

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		9.27	20.1	1	02/06/2021 03:27	WG1615914

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	02/05/2021 05:53	WG1616559
(S) a,a,a-Trifluorotoluene(FID)	*91.4*			*77.0-120*		*02/05/2021 05:53*	WG1616559

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	0.00101	1	02/03/2021 19:04	WG1615719
Toluene	U		0.00132	0.00507	1	02/03/2021 19:04	WG1615719
Ethylbenzene	0.00203	J	0.000748	0.00254	1	02/03/2021 19:04	WG1615719
Total Xylenes	0.00140	J	0.000893	0.00660	1	02/03/2021 19:04	WG1615719
(S) Toluene-d8	*104*			*75.0-131*		*02/03/2021 19:04*	WG1615719
(S) 4-Bromofluorobenzene	*92.9*			*67.0-138*		*02/03/2021 19:04*	WG1615719
(S) 1,2-Dichloroethane-d4	*94.1*			*70.0-130*		*02/03/2021 19:04*	WG1615719

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	128		16.2	40.3	10	02/05/2021 06:27	WG1616476
C28-C40 Oil Range	512		2.76	40.3	10	02/05/2021 06:27	WG1616476
(S) o-Terphenyl	*41.9*			*18.0-148*		*02/05/2021 06:27*	WG1616476

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.7		1	02/05/2021 11:54	WG1616038

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	334		10.1	22.0	1	02/06/2021 04:19	WG1615914

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	1430		26.1	120	1000	02/06/2021 03:34	WG1617125
(S) a,a,a-Trifluorotoluene(FID)	*94.7*			*77.0-120*		*02/06/2021 03:34*	WG1617125

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		0.00451	0.00964	8	02/03/2021 19:42	WG1615719
Toluene	U		0.0125	0.0482	8	02/03/2021 19:42	WG1615719
Ethylbenzene	11.7		0.00711	0.0241	8	02/03/2021 19:42	WG1615719
Total Xylenes	7.33		0.00848	0.0627	8	02/03/2021 19:42	WG1615719
(S) Toluene-d8	*102*			*75.0-131*		*02/03/2021 19:42*	WG1615719
(S) 4-Bromofluorobenzene	*129*			*67.0-138*		*02/03/2021 19:42*	WG1615719
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*02/03/2021 19:42*	WG1615719

Sample Narrative:

L1312445-05 WG1615719: Non-target compounds too high to run at a lower dilution.

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	8010		88.7	220	50	02/05/2021 15:09	WG1616476
C28-C40 Oil Range	4620		15.1	220	50	02/05/2021 15:09	WG1616476
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*02/05/2021 15:09*	WG1616476

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.1		1	02/05/2021 16:13	WG1616039

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	466		10.2	22.2	1	02/06/2021 04:36	WG1615914

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	748		2.65	12.2	100	02/05/2021 10:45	WG1616559
(S) a,a,a-Trifluorotoluene(FID)	*93.2*			*77.0-120*		*02/05/2021 10:45*	WG1616559

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		0.00457	0.00977	8	02/03/2021 20:02	WG1615719
Toluene	U		0.0127	0.0488	8	02/03/2021 20:02	WG1615719
Ethylbenzene	4.29		0.00720	0.0244	8	02/03/2021 20:02	WG1615719
Total Xylenes	2.78		0.00860	0.0635	8	02/03/2021 20:02	WG1615719
(S) Toluene-d8	*95.3*			*75.0-131*		*02/03/2021 20:02*	WG1615719
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*02/03/2021 20:02*	WG1615719
(S) 1,2-Dichloroethane-d4	*95.6*			*70.0-130*		*02/03/2021 20:02*	WG1615719

Sample Narrative:

L1312445-06 WG1615719: Non-target compounds too high to run at a lower dilution.

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	4900		89.4	222	50	02/05/2021 15:22	WG1616476
C28-C40 Oil Range	2960		15.2	222	50	02/05/2021 15:22	WG1616476
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*02/05/2021 15:22*	WG1616476

Method Blank (MB)

(MB) R3620006-1 02/05/21 11:54

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

L1311380-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1311380-02 02/05/21 11:54 • (DUP) R3620006-3 02/05/21 11:54

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	96.7	96.7	1	0.0173		10

Laboratory Control Sample (LCS)

(LCS) R3620006-2 02/05/21 11:54

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) R3620343-1 02/05/21 16:13

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

L1312454-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1312454-01 02/05/21 16:13 • (DUP) R3620343-3 02/05/21 16:13

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	98.6	98.2	1	0.389		10

Laboratory Control Sample (LCS)

(LCS) R3620343-2 02/05/21 16:13

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) R3620146-1 02/05/21 20:59

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

L1312227-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1312227-16 02/05/21 23:05 • (DUP) R3620146-5 02/05/21 23:23

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

L1312445-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1312445-02 02/06/21 02:34 • (DUP) R3620146-6 02/06/21 02:52

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	29.1	28.3	1	2.93		20

Laboratory Control Sample (LCS)

(LCS) R3620146-2 02/05/21 21:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	202	101	90.0-110	

L1312227-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1312227-15 02/05/21 22:13 • (MS) R3620146-3 02/05/21 22:31 • (MSD) R3620146-4 02/05/21 22:48

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	620	U	590	587	95.2	94.6	1	80.0-120			0.637	20

Method Blank (MB)

(MB) R3619879-2 02/04/21 10:51

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)	*96.8*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3619879-1 02/04/21 10:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.41	98.4	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*110*	*77.0-120*	

L1312356-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1312356-01 02/04/21 19:48 • (MS) R3619879-3 02/04/21 21:31 • (MSD) R3619879-4 02/04/21 21:52

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	172	U	179	159	104	92.8	25	10.0-151			11.8	28
(S) a,a,a-Trifluorotoluene(FID)					*111*	*109*		*77.0-120*				

Method Blank (MB)

(MB) R3619665-2 02/05/21 00:49

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)	*97.0*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3619665-1 02/05/21 00:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.60	102	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*111*	*77.0-120*	

L1313684-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1313684-06 02/05/21 10:03 • (MS) R3619665-3 02/05/21 11:26 • (MSD) R3619665-4 02/05/21 11:47

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 %
TPH (GC/FID) Low Fraction	151	U	128	160	84.8	106	25	10.0-151			21.8	28
(S) a,a,a-Trifluorotoluene(FID)					*108*	*111*		*77.0-120*				

Method Blank (MB)

(MB) R3620061-2 02/06/21 01:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*95.8*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3620061-1 02/06/21 01:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.19	113	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*112*	*77.0-120*	

Method Blank (MB)

(MB) R3620193-2 02/03/21 11:15

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	*105*			*75.0-131*
(S) 4-Bromofluorobenzene	*92.3*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*93.2*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3620193-1 02/03/21 10:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.125	100	70.0-123	
Ethylbenzene	0.125	0.124	99.2	74.0-126	
Toluene	0.125	0.125	100	75.0-121	
Xylenes, Total	0.375	0.360	96.0	72.0-127	
(S) Toluene-d8			*98.6*	*75.0-131*	
(S) 4-Bromofluorobenzene			*94.5*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*97.9*	*70.0-130*	

L1312186-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1312186-04 02/03/21 13:19 • (MS) R3620193-3 02/03/21 20:21 • (MSD) R3620193-4 02/03/21 20:39

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.128	U	0.104	0.102	80.8	79.4	1	10.0-149			1.80	37
Ethylbenzene	0.128	U	0.105	0.110	81.6	85.6	1	10.0-160			4.78	38
Toluene	0.128	U	0.102	0.108	79.4	84.0	1	10.0-156			5.68	38
Xylenes, Total	0.385	U	0.291	0.310	75.7	80.5	1	10.0-160			6.14	38
(S) Toluene-d8					*102*	*105*		*75.0-131*				
(S) 4-Bromofluorobenzene					*95.8*	*94.9*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*87.6*	*92.3*		*70.0-130*				

Method Blank (MB)

(MB) R3619632-1 02/04/21 21:39

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*49.2*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3619632-2 02/04/21 21:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	38.3	76.6	50.0-150	
(S) o-Terphenyl			*55.6*	*18.0-148*	

L1312450-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1312450-01 02/05/21 14:04 • (MS) R3619632-3 02/05/21 14:17 • (MSD) R3619632-4 02/05/21 14:30

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	56.5	11.2	42.6	33.4	55.7	39.5	1	50.0-150		J3 J6	24.4	20
(S) o-Terphenyl					*36.5*	*28.2*		*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.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

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

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

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

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

Alabama	40160
ANSI National Accreditation Board	L2239

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

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

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

Nevada	NV009412021-1

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

Texas	T104704328-20-18

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

Analysis Request of Chain of Custody Record

Page : 1 of 1

Tetra Tech, Inc.

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

1122

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	MCA Battery Unit #2 Trunk Line Release (1RP-959)	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02334, Task No. 08
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Adrian Garcia
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
131245		YEAR: 2021																															
01	AH-7 (0'-1')	01/28/21	1330		X				X			1	N	X		X												X					
02	AH-7 (3'-4')	01/28/21	1400		X				X			1	N	X		X												X					
03	AH-7 (6'-7')	01/28/21	1430		X				X			1	N	X		X												X					
04	AH-8 (0'-1')	01/29/21	1030		X				X			1	N	X		X												X					
05	AH-8 (3'-4')	01/29/21	1100		X				X			1	N	X		X												X					
06	AH-8 (6'-7')	01/29/21	1130		X				X			1	N	X		X												X					

Relinquished by: Brad D. Smith	Date: 2-1-2021	Time: 1500	Received by: [signature]
Relinquished by: [signature]	Date: 2-1-21	Time: 16:00	Received by: [signature]
Relinquished by:	Date:	Time:	Received by: [signature]
	Date: 02/02/21	Time: 08:00	

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 #: _____

.3 + .1 = .4 AF BB

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	Coterra	1312445
Cooler Received/Opened On:	2 / 02 / 21 Temperature:	.4
Received By:	Gisely Quiles	
Signature:		

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 09, 2021

Revised Report

ConocoPhillips - Tetra Tech

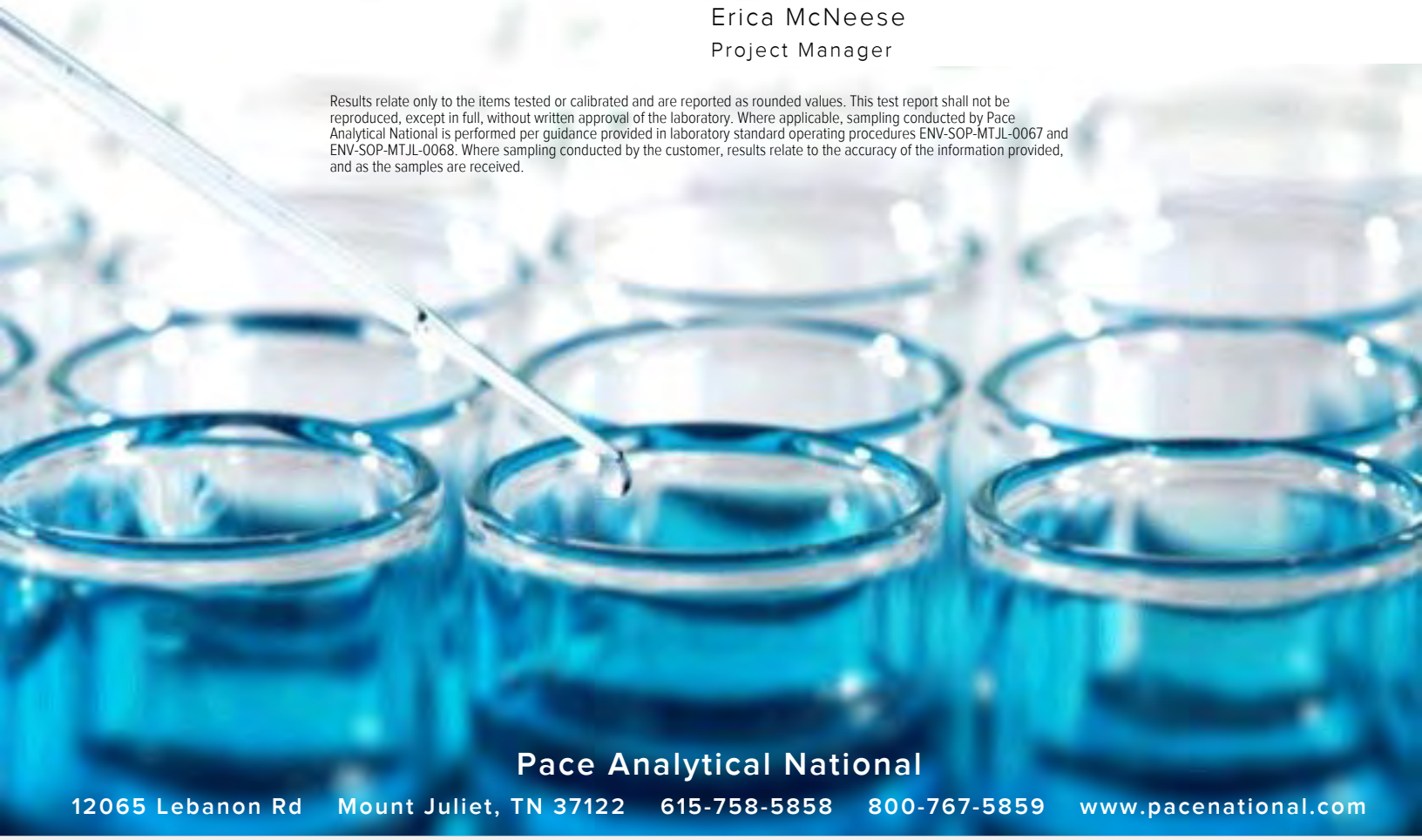
Sample Delivery Group:	L1319750
Samples Received:	02/25/2021
Project Number:	212C-MD-02334 TASK08
Description:	IRP-959

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

BH-1 (0-1') L1319750-01 Solid

Collected by: Adrian | Collected date/time: 02/23/21 08:00 | Received date/time: 02/25/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1625845	1	02/26/21 09:51	02/26/21 10:02	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1626553	1	02/26/21 16:06	02/26/21 23:00	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1625820	1	02/25/21 11:22	02/26/21 01:51	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1625841	1	02/25/21 11:22	02/25/21 22:15	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1625717	1	02/25/21 15:18	02/26/21 17:13	WCR	Mt. Juliet, TN

BH-1 (1-2') L1319750-02 Solid

Collected by: Adrian | Collected date/time: 02/23/21 08:30 | Received date/time: 02/25/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1625845	1	02/26/21 09:51	02/26/21 10:02	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1626553	1	02/26/21 16:06	02/26/21 23:28	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1625820	1	02/25/21 11:22	02/26/21 02:13	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1625841	1	02/25/21 11:22	02/25/21 22:34	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1625717	1	02/25/21 15:18	02/26/21 08:19	JDG	Mt. Juliet, TN

BH-1 (2-3') L1319750-03 Solid

Collected by: Adrian | Collected date/time: 02/23/21 09:00 | Received date/time: 02/25/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1625845	1	02/26/21 09:51	02/26/21 10:02	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1626553	1	02/26/21 16:06	02/27/21 00:07	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1625820	1	02/25/21 11:22	02/26/21 02:35	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1625841	1	02/25/21 11:22	02/25/21 22:53	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1625717	1	02/25/21 15:18	02/26/21 08:33	JDG	Mt. Juliet, TN

BH-1 (3-4') L1319750-04 Solid

Collected by: Adrian | Collected date/time: 02/23/21 09:30 | Received date/time: 02/25/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1625845	1	02/26/21 09:51	02/26/21 10:02	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1626553	1	02/26/21 16:06	02/27/21 00:16	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1625820	1	02/25/21 11:22	02/26/21 02:57	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1625841	1	02/25/21 11:22	02/25/21 23:12	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1625717	1	02/25/21 15:18	03/01/21 06:26	JN	Mt. Juliet, TN

BH-1 (4-5') L1319750-05 Solid

Collected by: Adrian | Collected date/time: 02/23/21 10:00 | Received date/time: 02/25/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1625845	1	02/26/21 09:51	02/26/21 10:02	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1626553	1	02/26/21 16:06	02/27/21 00:26	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1625820	1	02/25/21 11:22	02/26/21 03:19	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1625841	1	02/25/21 11:22	02/25/21 23:31	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1625717	1	02/25/21 15:18	02/26/21 08:46	JDG	Mt. Juliet, TN

BH-1 (5-6') L1319750-06 Solid

Collected by: Adrian | Collected date/time: 02/23/21 10:30 | Received date/time: 02/25/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1625845	1	02/26/21 09:51	02/26/21 10:02	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1626553	1	02/26/21 16:06	02/27/21 00:35	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1625820	1	02/25/21 11:22	02/26/21 03:41	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1625841	1	02/25/21 11:22	02/25/21 23:50	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1625717	1	02/25/21 15:18	02/26/21 08:58	JDG	Mt. Juliet, TN

BH-1 (6-7') L1319750-07 Solid

Collected by: Adrian | Collected date/time: 02/23/21 11:00 | Received date/time: 02/25/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1625845	1	02/26/21 09:51	02/26/21 10:02	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1626553	1	02/26/21 16:06	02/27/21 00:45	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1625820	1	02/25/21 11:22	02/26/21 04:03	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1625841	1	02/25/21 11:22	02/26/21 00:08	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1625717	1	02/25/21 15:18	02/26/21 17:40	WCR	Mt. Juliet, TN

BH-2 (0-1') L1319750-08 Solid

Collected by: Adrian | Collected date/time: 02/23/21 11:30 | Received date/time: 02/25/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1625845	1	02/26/21 09:51	02/26/21 10:02	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1626553	1	02/26/21 16:06	02/27/21 00:54	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1625820	1	02/25/21 11:22	02/26/21 04:25	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1625841	1	02/25/21 11:22	02/26/21 00:27	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1626714	1	02/27/21 16:53	02/28/21 12:44	CAG	Mt. Juliet, TN

BH-2 (1-2') L1319750-09 Solid

Collected by: Adrian | Collected date/time: 02/23/21 12:00 | Received date/time: 02/25/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1625845	1	02/26/21 09:51	02/26/21 10:02	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1626553	1	02/26/21 16:06	02/27/21 01:23	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1625820	1	02/25/21 11:22	02/26/21 04:47	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1625841	1	02/25/21 11:22	02/26/21 00:46	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1625717	1	02/25/21 15:18	03/01/21 05:59	JN	Mt. Juliet, TN

BH-2 (2-3') L1319750-10 Solid

Collected by: Adrian | Collected date/time: 02/23/21 12:30 | Received date/time: 02/25/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1625846	1	02/26/21 10:38	02/26/21 10:48	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1626553	1	02/26/21 16:06	02/27/21 01:32	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1625820	1	02/25/21 11:22	02/26/21 05:10	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1625841	1	02/25/21 11:22	02/26/21 01:05	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1625717	1	02/25/21 15:18	03/01/21 04:38	JN	Mt. Juliet, TN

Cp Tc Ss Cn Sr Qc Gl Al Sc

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

Erica McNeese
Project Manager

Report Revision History

Level II Report - Version 1: 03/01/21 13:52

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.7		1	02/26/2021 10:02	WG1625845

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.42	20.5	1	02/26/2021 23:00	WG1626553

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	0.0297	B J	0.0222	0.102	1	02/26/2021 01:51	WG1625820
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*		*02/26/2021 01:51*	WG1625820

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000489	0.00105	1	02/25/2021 22:15	WG1625841
Toluene	U		0.00136	0.00523	1	02/25/2021 22:15	WG1625841
Ethylbenzene	U		0.000771	0.00262	1	02/25/2021 22:15	WG1625841
Total Xylenes	U		0.000921	0.00680	1	02/25/2021 22:15	WG1625841
(S) Toluene-d8	*120*			*75.0-131*		*02/25/2021 22:15*	WG1625841
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*02/25/2021 22:15*	WG1625841
(S) 1,2-Dichloroethane-d4	*92.3*			*70.0-130*		*02/25/2021 22:15*	WG1625841

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1.94	J	1.65	4.09	1	02/26/2021 17:13	WG1625717
C28-C40 Oil Range	3.42	J	0.280	4.09	1	02/26/2021 17:13	WG1625717
(S) o-Terphenyl	*68.8*			*18.0-148*		*02/26/2021 17:13*	WG1625717

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.6		1	02/26/2021 10:02	WG1625845

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	33.7	P1	9.24	20.1	1	02/26/2021 23:28	WG1626553

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	0.0333	B J	0.0218	0.100	1	02/26/2021 02:13	WG1625820
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*02/26/2021 02:13*	WG1625820

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000471	0.00101	1	02/25/2021 22:34	WG1625841
Toluene	U		0.00131	0.00504	1	02/25/2021 22:34	WG1625841
Ethylbenzene	U		0.000743	0.00252	1	02/25/2021 22:34	WG1625841
Total Xylenes	U		0.000888	0.00656	1	02/25/2021 22:34	WG1625841
(S) Toluene-d8	*117*			*75.0-131*		*02/25/2021 22:34*	WG1625841
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*02/25/2021 22:34*	WG1625841
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*02/25/2021 22:34*	WG1625841

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	6.51		1.62	4.02	1	02/26/2021 08:19	WG1625717
C28-C40 Oil Range	11.2		0.275	4.02	1	02/26/2021 08:19	WG1625717
(S) o-Terphenyl	*63.8*			*18.0-148*		*02/26/2021 08:19*	WG1625717

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.3		1	02/26/2021 10:02	WG1625845

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	61.9		9.56	20.8	1	02/27/2021 00:07	WG1626553

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	0.0234	B J	0.0225	0.104	1	02/26/2021 02:35	WG1625820
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*		*02/26/2021 02:35*	WG1625820

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		0.000503	0.00108	1	02/25/2021 22:53	WG1625841
Toluene	U		0.00140	0.00539	1	02/25/2021 22:53	WG1625841
Ethylbenzene	U		0.000794	0.00269	1	02/25/2021 22:53	WG1625841
Total Xylenes	U		0.000948	0.00700	1	02/25/2021 22:53	WG1625841
(S) Toluene-d8	*118*			*75.0-131*		*02/25/2021 22:53*	WG1625841
(S) 4-Bromofluorobenzene	*108*			*67.0-138*		*02/25/2021 22:53*	WG1625841
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*02/25/2021 22:53*	WG1625841

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	2.10	J	1.67	4.15	1	02/26/2021 08:33	WG1625717
C28-C40 Oil Range	4.90		0.285	4.15	1	02/26/2021 08:33	WG1625717
(S) o-Terphenyl	*43.8*			*18.0-148*		*02/26/2021 08:33*	WG1625717

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.8		1	02/26/2021 10:02	WG1625845

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	215		9.71	21.1	1	02/27/2021 00:16	WG1626553

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	0.0256	B J	0.0229	0.106	1	02/26/2021 02:57	WG1625820
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*02/26/2021 02:57*	WG1625820

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		0.000519	0.00111	1	02/25/2021 23:12	WG1625841
Toluene	U		0.00144	0.00555	1	02/25/2021 23:12	WG1625841
Ethylbenzene	U		0.000819	0.00278	1	02/25/2021 23:12	WG1625841
Total Xylenes	U		0.000977	0.00722	1	02/25/2021 23:12	WG1625841
(S) Toluene-d8	*119*			*75.0-131*		*02/25/2021 23:12*	WG1625841
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*02/25/2021 23:12*	WG1625841
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*02/25/2021 23:12*	WG1625841

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	22.7		1.70	4.22	1	03/01/2021 06:26	WG1625717
C28-C40 Oil Range	120		0.289	4.22	1	03/01/2021 06:26	WG1625717
(S) o-Terphenyl	*55.3*			*18.0-148*		*03/01/2021 06:26*	WG1625717

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.1		1	02/26/2021 10:02	WG1625845

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	202		9.78	21.3	1	02/27/2021 00:26	WG1626553

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	0.0264	B J	0.0231	0.106	1	02/26/2021 03:19	WG1625820
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*		*02/26/2021 03:19*	WG1625820

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		0.000526	0.00113	1	02/25/2021 23:31	WG1625841
Toluene	U		0.00146	0.00563	1	02/25/2021 23:31	WG1625841
Ethylbenzene	U		0.000830	0.00281	1	02/25/2021 23:31	WG1625841
Total Xylenes	U		0.000991	0.00732	1	02/25/2021 23:31	WG1625841
(S) Toluene-d8	*118*			*75.0-131*		*02/25/2021 23:31*	WG1625841
(S) 4-Bromofluorobenzene	*109*			*67.0-138*		*02/25/2021 23:31*	WG1625841
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*02/25/2021 23:31*	WG1625841

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	2.64	J	1.71	4.25	1	02/26/2021 08:46	WG1625717
C28-C40 Oil Range	3.98	J	0.291	4.25	1	02/26/2021 08:46	WG1625717
(S) o-Terphenyl	*53.3*			*18.0-148*		*02/26/2021 08:46*	WG1625717

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.2		1	02/26/2021 10:02	WG1625845

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	149		9.67	21.0	1	02/27/2021 00:35	WG1626553

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	0.0230	B J	0.0228	0.105	1	02/26/2021 03:41	WG1625820
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*		*02/26/2021 03:41*	WG1625820

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		0.000515	0.00110	1	02/25/2021 23:50	WG1625841
Toluene	U		0.00143	0.00551	1	02/25/2021 23:50	WG1625841
Ethylbenzene	U		0.000812	0.00275	1	02/25/2021 23:50	WG1625841
Total Xylenes	U		0.000970	0.00716	1	02/25/2021 23:50	WG1625841
(S) Toluene-d8	*118*			*75.0-131*		*02/25/2021 23:50*	WG1625841
(S) 4-Bromofluorobenzene	*110*			*67.0-138*		*02/25/2021 23:50*	WG1625841
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*02/25/2021 23:50*	WG1625841

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	7.38		1.69	4.20	1	02/26/2021 08:58	WG1625717
C28-C40 Oil Range	20.9		0.288	4.20	1	02/26/2021 08:58	WG1625717
(S) o-Terphenyl	*43.8*			*18.0-148*		*02/26/2021 08:58*	WG1625717

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.3		1	02/26/2021 10:02	WG1625845

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	165		9.55	20.8	1	02/27/2021 00:45	WG1626553

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	0.0245	B J	0.0225	0.104	1	02/26/2021 04:03	WG1625820
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*		*02/26/2021 04:03*	WG1625820

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		0.000503	0.00108	1	02/26/2021 00:08	WG1625841
Toluene	U		0.00140	0.00538	1	02/26/2021 00:08	WG1625841
Ethylbenzene	U		0.000793	0.00269	1	02/26/2021 00:08	WG1625841
Total Xylenes	U		0.000947	0.00700	1	02/26/2021 00:08	WG1625841
(S) Toluene-d8	*117*			*75.0-131*		*02/26/2021 00:08*	WG1625841
(S) 4-Bromofluorobenzene	*108*			*67.0-138*		*02/26/2021 00:08*	WG1625841
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*02/26/2021 00:08*	WG1625841

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	13.9		1.67	4.15	1	02/26/2021 17:40	WG1625717
C28-C40 Oil Range	31.9		0.284	4.15	1	02/26/2021 17:40	WG1625717
(S) o-Terphenyl	*56.0*			*18.0-148*		*02/26/2021 17:40*	WG1625717

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.4		1	02/26/2021 10:02	WG1625845

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	02/27/2021 00:54	WG1626553

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	0.0359	B J	0.0218	0.101	1	02/26/2021 04:25	WG1625820
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*		*02/26/2021 04:25*	WG1625820

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000473	0.00101	1	02/26/2021 00:27	WG1625841
Toluene	U		0.00132	0.00506	1	02/26/2021 00:27	WG1625841
Ethylbenzene	U		0.000746	0.00253	1	02/26/2021 00:27	WG1625841
Total Xylenes	U		0.000891	0.00658	1	02/26/2021 00:27	WG1625841
(S) Toluene-d8	*120*			*75.0-131*		*02/26/2021 00:27*	WG1625841
(S) 4-Bromofluorobenzene	*110*			*67.0-138*		*02/26/2021 00:27*	WG1625841
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*02/26/2021 00:27*	WG1625841

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	11.5		1.62	4.02	1	02/28/2021 12:44	WG1626714
C28-C40 Oil Range	59.1		0.276	4.02	1	02/28/2021 12:44	WG1626714
(S) o-Terphenyl	*55.0*			*18.0-148*		*02/28/2021 12:44*	WG1626714

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.0		1	02/26/2021 10:02	WG1625845

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	02/27/2021 01:23	WG1626553

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	02/26/2021 04:47	WG1625820
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*		*02/26/2021 04:47*	WG1625820

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000486	0.00104	1	02/26/2021 00:46	WG1625841
Toluene	U		0.00135	0.00520	1	02/26/2021 00:46	WG1625841
Ethylbenzene	U		0.000767	0.00260	1	02/26/2021 00:46	WG1625841
Total Xylenes	U		0.000915	0.00676	1	02/26/2021 00:46	WG1625841
(S) Toluene-d8	*117*			*75.0-131*		*02/26/2021 00:46*	WG1625841
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*02/26/2021 00:46*	WG1625841
(S) 1,2-Dichloroethane-d4	*97.6*			*70.0-130*		*02/26/2021 00:46*	WG1625841

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		1.64	4.08	1	03/01/2021 05:59	WG1625717
C28-C40 Oil Range	42.6		0.280	4.08	1	03/01/2021 05:59	WG1625717
(S) o-Terphenyl	*58.9*			*18.0-148*		*03/01/2021 05:59*	WG1625717

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.2		1	02/26/2021 10:48	WG1625846

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	10.1	J	9.87	21.5	1	02/27/2021 01:32	WG1626553

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	0.107	1	02/26/2021 05:10	WG1625820
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*02/26/2021 05:10*	WG1625820

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	J3	0.000535	0.00115	1	02/26/2021 01:05	WG1625841
Toluene	U	J3	0.00149	0.00573	1	02/26/2021 01:05	WG1625841
Ethylbenzene	U	J3	0.000845	0.00287	1	02/26/2021 01:05	WG1625841
Total Xylenes	U	J3	0.00101	0.00745	1	02/26/2021 01:05	WG1625841
(S) Toluene-d8	*120*			*75.0-131*		*02/26/2021 01:05*	WG1625841
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*02/26/2021 01:05*	WG1625841
(S) 1,2-Dichloroethane-d4	*94.3*			*70.0-130*		*02/26/2021 01:05*	WG1625841

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	10.0		1.73	4.29	1	03/01/2021 04:38	WG1625717
C28-C40 Oil Range	45.4		0.294	4.29	1	03/01/2021 04:38	WG1625717
(S) o-Terphenyl	*48.0*			*18.0-148*		*03/01/2021 04:38*	WG1625717

Method Blank (MB)

(MB) R3625659-1 02/26/21 10:02

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

L1319497-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1319497-02 02/26/21 10:02 • (DUP) R3625659-3 02/26/21 10:02

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	87.1	86.9	1	0.314		10

Laboratory Control Sample (LCS)

(LCS) R3625659-2 02/26/21 10:02

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) R3625665-1 02/26/21 10:48

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

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3625665-3 02/26/21 10:48

Analyte	Original Result	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids		87.0	1	0.114		10

Laboratory Control Sample (LCS)

(LCS) R3625665-2 02/26/21 10:48

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

Method Blank (MB)

(MB) R3625682-1 02/26/21 20:08

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

L1319750-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1319750-02 02/26/21 23:28 • (DUP) R3625682-3 02/26/21 23:38

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	33.7	21.8	1	43.0	P1	20

L1319879-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1319879-01 02/27/21 01:42 • (DUP) R3625682-6 02/27/21 01:51

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) R3625682-2 02/26/21 20:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	207	104	90.0-110	

L1319750-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1319750-02 02/26/21 23:28 • (MS) R3625682-4 02/26/21 23:48 • (MSD) R3625682-5 02/26/21 23:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	502	33.7	510	506	94.8	94.0	1	80.0-120			0.790	20

Method Blank (MB)

(MB) R3625815-3 02/26/21 00:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0319	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*115*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3625815-2 02/25/21 23:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.64	84.4	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*104*	*77.0-120*	

L1319533-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1319533-01 02/26/21 01:29 • (MS) R3625815-4 02/26/21 09:13 • (MSD) R3625815-5 02/26/21 09:35

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	223	4.41	255	239	112	105	40.5	10.0-151			6.48	28
(S) a,a,a-Trifluorotoluene(FID)					*109*	*107*		*77.0-120*				

Method Blank (MB)

(MB) R3625550-3 02/25/21 17:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*117*			*75.0-131*
(S) 4-Bromofluorobenzene	*110*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*

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

(LCS) R3625550-1 02/25/21 16:00 • (LCSD) R3625550-2 02/25/21 16:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.118	0.114	94.4	91.2	70.0-123			3.45	20
Ethylbenzene	0.125	0.142	0.142	114	114	74.0-126			0.000	20
Toluene	0.125	0.139	0.138	111	110	75.0-121			0.722	20
Xylenes, Total	0.375	0.438	0.430	117	115	72.0-127			1.84	20
(S) Toluene-d8				*118*	*119*	*75.0-131*				
(S) 4-Bromofluorobenzene				*107*	*107*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*108*	*104*	*70.0-130*				

L1319750-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1319750-10 02/26/21 01:05 • (MS) R3625550-4 02/26/21 01:24 • (MSD) R3625550-5 02/26/21 01:43

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.143	U	0.0752	0.0464	52.5	32.4	1	10.0-149		J3	47.3	37
Ethylbenzene	0.143	U	0.0907	0.0526	63.3	36.7	1	10.0-160		J3	53.1	38
Toluene	0.143	U	0.0902	0.0538	63.0	37.5	1	10.0-156		J3	50.6	38
Xylenes, Total	0.430	U	0.294	0.178	68.3	41.3	1	10.0-160		J3	49.1	38
(S) Toluene-d8					*119*	*118*		*75.0-131*				
(S) 4-Bromofluorobenzene					*106*	*107*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*97.5*	*105*		*70.0-130*				

Method Blank (MB)

(MB) R3625484-1 02/26/21 03:59

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	*89.9*			*18.0-148*

Method Blank (MB)

(MB) R3625637-1 02/26/21 17:00

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	*68.3*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3625484-2 02/26/21 04:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	37.7	75.4	50.0-150	
(S) o-Terphenyl			*65.3*	*18.0-148*	

Method Blank (MB)

(MB) R3625843-1 02/28/21 06:39

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*58.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3625843-2 02/28/21 06:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	29.0	58.0	50.0-150	
(S) o-Terphenyl			*79.3*	*18.0-148*	

L1320467-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1320467-02 02/28/21 08:54 • (MS) R3625843-3 02/28/21 08:13 • (MSD) R3625843-4 02/28/21 08:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	49.8	428	652	945	450	1050	5	50.0-150	V	J3 V	36.7	20
(S) o-Terphenyl					*43.8*	*53.8*		*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
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

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

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	LA000356
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

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

B224 139750

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	1RP-959	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02334 Task 08
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Adrian
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING 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-1 (0-1')	2/23/2021	800		X				X			1	N	X		X												X				-01
-02	AH-1 (1-2')	2/23/2021	830		X				X			1	N	X		X												X				-02
-03	AH-1 (2-3')	2/23/2021	900		X				X			1	N	X		X												X				-03
-04	AH-1 (3-4')	2/23/2021	930		X				X			1	N	X		X												X				
-05	AH-1 (4-5')	2/23/2021	1000		X				X			1	N	X		X												X				
-06	AH-1 (5-6')	2/23/2021	1030		X				X			1	N	X		X												X				
-07	AH-1 (6-7')	2/23/2021	1100		X				X			1	N	X		X												X				
-08	AH-2 (0-1')	2/23/2021	1130		X				X			1	N	X		X												X				
-09	AH-2 (1-2')	2/23/2021	1200		X				X			1	N	X		X												X				
-10	AH-2 (2-3')	2/23/2021	1230		X				X			1	N	X		X												X				

	Relinquished by:	Date:	Time:	Received by:	Date:	Time:
1	Edrian Baeza	2/24/21	15:00	[signature]	2-24-21	15:00
2	[signature]	2-24-21	16:15	SwA	2-24-21	16:15
3	[signature] DG			[signature] ORIGINAL COPY	2/25/21	8:00

LAB USE ONLY
Sample Temperature

REMARKS:
- ☐ 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 #: _____

.6+0=.6

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: COPTETRA	LB19750	
Cooler Received/Opened On: 2 / 25 / 21 Temperature:	0.6	
Received By: Decarso Goode		
Signature: Decarso Goode		

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?			

L1319750 COPTETRA NCF HM

R1/R2

Time estimate: oh **Time spent:** oh

Members

HM Hailey Melson (responsible) Christopher McCord

- [ ] Login Clarification needed
- [ ] Chain of custody is incomplete
- [ ] Please specify Metals requested
- [ ] Please specify TCLP requested
- [ ] Received additional samples not listed on COC
- [x] Sample IDs on containers do not match IDs on COC
- [ ] Client did not "X" analysis
- [ ] Chain of Custody is missing
- [ ] If no COC: Received by:_____
- [ ] If no COC: Date/Time:_____
- [ ] If no COC: Temp./Cont.Rec./pH:_____
- [ ] If no COC: Carrier:_____
- [ ] If no COC: Tracking #:_____
- [ ] Client informed by call
- [ ] Client informed by Email
- [ ] Client informed by Voicemail
- [x] Date/Time: 2/25/21 1007
- [x] PM initials: CM
- [ ] Client Contact:_____

Comments

Hailey Melson *25 February 2021 9:57 AM*

All samples have BH on them while the COC says AH. Logged per COC

Christopher McCord *25 February 2021 10:07 AM*

Log per COC.

Erica McNeese

From: Abbott, Sam <Sam.Abbott@tetratech.com>
Sent: Tuesday, March 9, 2021 3:50 PM
To: Chris McCord; Erica McNeese
Subject: FW: Pace Analytical National Level II Report for 212C-MD-02334 TASK08 IRP-959 L1319750
Attachments: L1319750.pdf

Importance: High

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon,

Could we please have these sample IDs changed from AH-1 to BH-1 and AH-2 to BH-2?

Thank you!
Sam

Samantha Abbott, PG | Senior Staff Geoscientist
Direct **+1 (512) 338-2852** | Business **+1 (512) 338-1667** | Mobile **+1 (512) 739-7874** | Sam.Abbott@tetratech.com

Tetra Tech, Inc. | *Leading with Science®* | OGA
8911 N Capital of Texas Hwy #2310 | Austin, TX 78759 | tetratech.com

---

From: Llull, Christian <Christian.Llull@tetratech.com>
Sent: Monday, March 1, 2021 3:05 PM
To: Furse, Nik <Nik.Furse@tetratech.com>; Abbott, Sam <Sam.Abbott@tetratech.com>
Subject: FW: Pace Analytical National Level II Report for 212C-MD-02334 TASK08 IRP-959 L1319750
Importance: High

212C-MD-02334
Task 08

Christian

From: erica.mcneese@pacelabs.com <erica.mcneese@pacelabs.com>
Sent: Monday, March 01, 2021 1:52 PM
To: Llull, Christian <Christian.Llull@tetratech.com>

Subject: Pace Analytical National Level II Report for 212C-MD-02334 TASK08 IRP-959 L1319750
Importance: High

"Privileged and Confidential"

Thank you for choosing Pace National!

Please find enclosed PDF report containing your laboratory analysis and chain of custody.

Pace Analytical® is the first commercial laboratory in the US to offer testing of wastewater for SARS-COV2 (the virus that causes COVID-19).
https://www.pacelabs.com/environmental-sciences/testing-services/specialty-services/covid-19-wastewater-testing.html

Pace National is leading the laboratory industry with our On-line Data Management tools. Please contact your Project Manager to learn how to create historical Excel tables or access data in real time using powerful and intuitive software that is only available at https://www.pacenational.com.

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Erica McNeese
Project Manager
--
erica.mcneese@pacelabs.com

Pace Analytical National
12065 Lebanon Rd
Mount Juliet, TN 37122
www.pacenational.com

Recipients configured to receive report file: christian.llull@tetratech.com

APPENDIX E
NMSLO Seed Mixture Details

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Lea County, New Mexico

1RP-959

December 30, 2020

Preface

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

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

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

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

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

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

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Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

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

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

Date(s) aerial images were photographed: 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	10.0	97.9%
MF	Maljamar and Palomas fine sands, 0 to 3 percent slopes	0.2	2.1%
Totals for Area of Interest		**10.2**	**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: Convex, linear, concave
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 capacity: 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: Convex, linear, concave
Across-slope shape: Convex

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): 8e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Palomas

Percent of map unit: 3 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Pyote

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

MF—Maljamar and Palomas fine sands, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: dmqb
Elevation: 3,000 to 3,900 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: Farmland of statewide importance

Map Unit Composition

Maljamar and similar soils: 46 percent
Palomas and similar soils: 44 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Maljamar

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 24 inches: fine sand
Bt - 24 to 50 inches: sandy clay loam
Bkm - 50 to 60 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 40 to 60 inches to petrocalcic
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Description of Palomas

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sandstone

Typical profile

A - 0 to 16 inches: fine sand
Bt - 16 to 60 inches: sandy clay loam
Bk - 60 to 66 inches: sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 45 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 capacity: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 5 percent
Ecological site: R042XC022NM - Sandhills
Hydric soil rating: No

Wink

Percent of map unit: 5 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

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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
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 208687

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 208687
	Action Type: [IM-SD] Admin Order Support Doc (ENV) (IM-BAO)

CONDITIONS

Created By	Condition	Condition Date
jharimon	Workplan/Remediation Plan is approved with the following conditions: • Please make sure the floor confirmation samples are delineated/excavated to meet closure criteria standards for proven depth to water determination. • When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to ground water within a ½ mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for ground water at a depth of 50 feet or less.	4/25/2023
jharimon	• Sidewall samples should be delineated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. • The request for variance for an alternative confirmation sampling plan is approved with conditions. Confirmation sidewall and floor samples will be representative of no more than approximately 400 square ft of excavated area.	4/25/2023