TETRA TECH

February 7, 2022

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

Re: Release Characterization and Remediation Work Plan
ConocoPhillips
SEMU Strawn Battery Header Release
Unit Letter F, Section 25, Township 20 South, Range 37 East
Lea County, New Mexico
Incident ID# nRM2007037866

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips to assess a release that occurred at the Southeast Monument Unit (SEMU) Strawn Battery Header Release area (Site). The Site is located in Public Land Survey System (PLSS) Unit Letter F, Section 25, Township 20 South, and Range 37 East, Lea County, New Mexico. The coordinates of the release point are approximately 32.545414°, -103.205854°, located across a lease road approximately 120 feet southwest of the SEMU Strawn Battery, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico Oil Conservation District (NMOCD) C-141 Initial Report, the release was discovered on February 27, 2020 when a crew was in the process of uncovering flanges from the header to replace a flowline. The date of the release is unknown. Approximately 17.3 barrels (bbls) of produced water were reported released, and no free liquids were recovered during initial response actions. The SEMU Strawn Battery Header Release extent is shown in Figure 3. The (NMOCD) received the initial C-141 on March 10, 2020 and subsequently assigned the release the Incident ID nRM2007037866. The initial C-141 form is included as Appendix A.

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 19.15.09 New Mexico Administrative Code (NMAC). The Site is in an area of low karst potential.

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are no water wells within 800 meters (approximately ½ mile) of the Site. Based on data from three (3) water wells located within 3,800 meters (approximately 2.4 miles) of the Site, the average depth to groundwater is 72 feet below ground surface (bgs). The site characterization data is included in Appendix B.

REGULATORY FRAMEWORK

Based upon the release footprint location 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.

As described later in the report, in lieu of drilling a boring for groundwater depth verification, COP has elected to remediate to the most stringent RRALs. However, 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 (GRO+DRO+ORO)	2,500 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

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

Constituent	Reclamation Requirements
Chloride	600 mg/kg
TPH (GRO+DRO+ORO)	100 mg/kg

INITIAL RESPONSE ACTIVITIES

During the initial response activities, the approximately 12-foot by 12-foot release area was excavated to approximately 4 feet bgs and fenced shortly following the release date. No soil samples were collected immediately following excavation activities. Tetra Tech conducted a visual Site inspection on behalf of ConocoPhillips on May 19, 2021 to assess current Site conditions and take photographs of the open excavation and surrounding area. Stressed vegetation was observed in the pasture area surrounding the header in an area larger than the reported release extent. Tetra Tech also observed an additional impacted area approximately 130 feet southeast of the SEMU Strawn Battery Header. Photographic documentation of the Site visit is included in Appendix C.

Review of historical aerial imagery revealed that the area surrounding the header has been largely lacking sufficient vegetation since March 2012, and the vegetation may have been deliberately cleared with the installation of the header. However, vegetative cover surrounding the header has diminished over time, and may be due to historical impacts in the area. The additional impacted area southeast of the header is visible in historical imagery from as far back as 1997. Due to the age of this release and distance from the header, the additional impacted area is likely unrelated to the SEMU Strawn Battery Header release, however, will be addressed accordingly in this work plan.

Tetra Tech returned to the Site on July 14, 2021 to collect confirmation floor and sidewall samples from the release excavation to gauge the effectiveness of the initial response activities. One (1) floor sample and four (4) sidewall samples were collected and submitted to Pace Analytical in Mount Juliet, Tennessee to be analyzed for TPH (DRO and ORO) by EPA Method 8015, TPH Low Fraction (GRO) by EPA Method 8015D, BTEX by EPA Method 8260B, and chlorides by EPA Method 300.0. A copy of the laboratory analytical report and chain-of-custody documentation is included in Appendix D. Sample locations, along with the release extent and excavated area, are shown in Figure 4.

SITE ASSESSMENT ACTIVITIES

On August 9, 2021, Tetra Tech personnel returned to the Site to conduct additional soil sampling to assess the observed area of historical impact to the southeast of the SEMU Strawn Battery Header, as well as the area surrounding the header with stressed vegetation. A total of ten (10) hand auger borings were advanced to depths of 3 feet bgs. Five (5) borings (AH-1 through AH-5) were installed within and around the area of stressed vegetation surrounding the SEMU Strawn Battery Header. The remaining five (5) borings (AH-6

through AH-10) were installed within and around the observed area of observed historical impact to the southeast of the release Site, each to a total depth of 3 feet bgs. Soils at the Site consist of brown loose sands.

Tetra Tech again returned to the Site on October 7, 2021 to complete delineation of the historical release area. One hand auger boring (AH-11) was installed within the release extent to a depth of 8 feet bgs to vertically delineate the depth of impact. Three hand auger borings (AH-12 through AH-14) were installed to a depth of 3 feet bgs along the perimeter of the historical release extent to complete horizontal delineation. Assessment sampling locations are shown in Figure 5.

A total of thirty-one (31) samples were collected from the fourteen (14) borings and submitted to Pace Analytical (Pace) to be analyzed for TPH (DRO and ORO) by EPA Method 8015, TPH Low Fraction (GRO) by EPA Method 8015D, BTEX by EPA Method 8260B, and chlorides by EPA Method 300.0. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix D.

SUMMARY OF SAMPLING RESULTS

Results from the July 2021 confirmation sampling event are summarized in Table 1. Analytical results associated with the collected samples were below the Site reclamation requirements for chlorides, TPH, and BTEX. The data indicate that the initial response excavation activities were successful in remediating the reported SEMU Strawn Battery Header Release.

Results from the August and October 2021 soil sampling event are summarized in Table 2. The analytical results associated with the sample locations in and around the area of stressed vegetation surrounding the SEMU Strawn Battery Header release (AH-1 through AH-5) were below the Site reclamation requirements for all constituents.

Analytical results associated with the August 2021 sample locations in and around the area of observed historical contamination (AH-6 through AH-10) were below detection limits for chloride and BTEX but were above the Site reclamation requirements for TPH. Horizontal and vertical delineation of the historical release area was achieved with the October 2021 sampling results. The analytical results associated with sample location AH-11 were above the Site RRALs down to 5 feet bgs. The analytical results associated with horizontal delineation locations AH-12 through AH-14 were below Site reclamation requirements in all samples. Based on the results of the assessment work, the historical release area is horizontally and vertically delineated.

REMEDIATION WORK PLAN

Based on the analytical results from the additional assessment, ConocoPhillips proposes to remove the impacted material within the historical release extent as shown in Figure 6. In lieu of drilling a boring for groundwater depth verification, COP elects to remediate to the most stringent RRALs. Thus. impacted soils will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to a maximum depth of 6 feet below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the Site RRALs. Heavy equipment will come no more than 4 feet from any pressurized lines.

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 analytical 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 550 cubic yards.

ALTERNATIVE CONFIRMATION SAMPLING PLAN

In accordance with 19.15.29.12(D)(1)(b) NMAC, ConocoPhillips proposes the following alternative confirmation sampling plan to adhere with NMOCD requirements. The proposed confirmation sample locations are depicted in Figure 7. Nine (9) confirmation floor samples and thirteen (13) confirmation

sidewall samples are proposed for verification of remedial activities. The proposed excavation encompasses a surface area of approximately 3,900 square feet.

These confirmation sidewall and floor samples will be representative of no more than approximately 500 square feet of excavated area. Confirmation samples will be sent to 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

Post-remediation, the backfilled areas will be seeded (in the next first favorable growing season) to aid in revegetation. Additionally, the area of stressed vegetation near the header will be seeded and back dragged. 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. Final reclamation will create a landform that approximates and blends in with the surrounding landform, while controlling erosion.

CONCLUSION

ConocoPhillips proposes to begin remediation activities at the Site within 90 days of NMOCD plan approval. Upon completion of the proposed work, a final closure report detailing the remediation activities and the results of the confirmation sampling will be submitted to NMOCD. If you have any questions concerning the soil assessment or the proposed remediation activities for the Site, please call me at (512) 338-2861.

Sincerely,
Tetra Tech, Inc.

Christian M. Llull, P.G.
Program Manager

cc: Ms. Jenni Fortunato, RMR – ConocoPhillips

LIST OF ATTACHMENTS

Figures:

Figure 1 – Site Location Map
Figure 2 – Topographic Map
Figure 3 – Approximate Release Extent
Figure 4 – Initial Excavation and Confirmation Sampling
Figure 5 – Site Assessment Map
Figure 6 – Proposed Remediation Extent
Figure 7 – Alternative Confirmation Sampling Plan

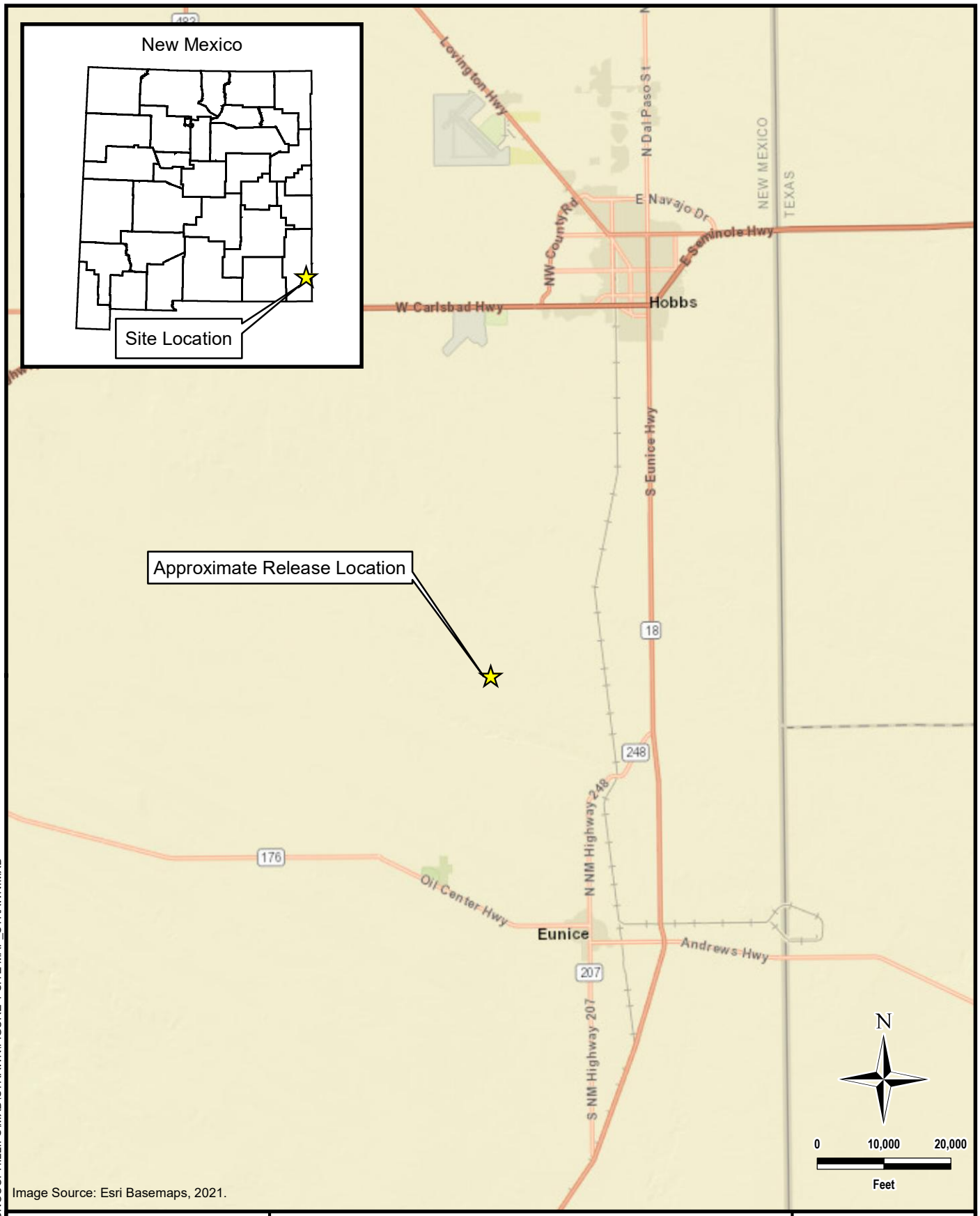
Tables:

Table 1 – Summary of Analytical Results – Confirmation Sampling
Table 2 – Summary of Analytical Results – Soil Assessment

Appendices:

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

FIGURES



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\STRAWN\FIGURE 1 SITE MAP_STRAWN.MXD

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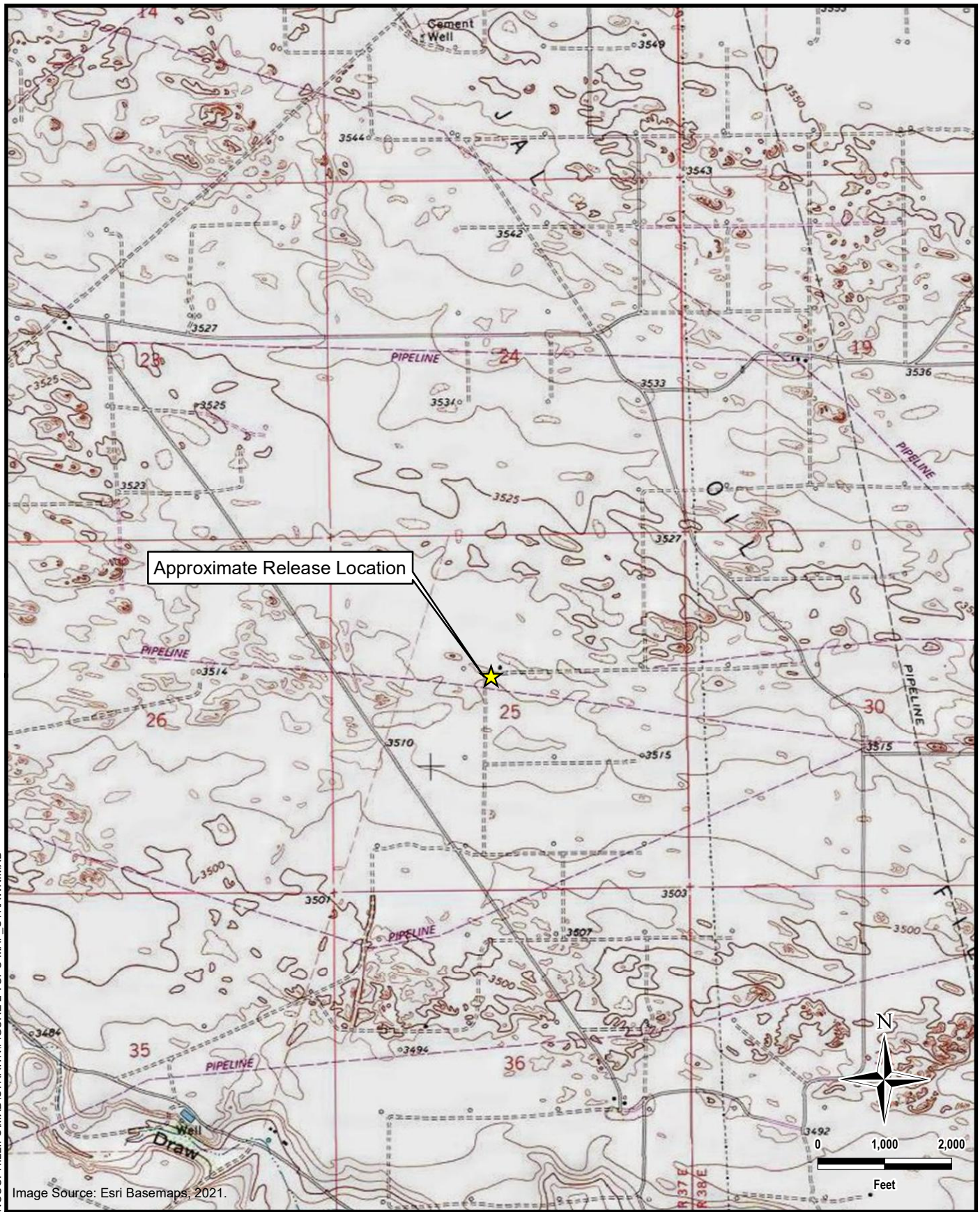
CONOCOPHILLIPS

NRM2007037866
(32.545414°, -103.205854°)
LEA COUNTY, NEW MEXICO

SEMU STRAWN BATTERY HEADER RELEASE
SITE LOCATION MAP

PROJECT NO.:	212C-MD-02506
DATE:	AUGUST 24, 2021
DESIGNED BY:	AAM

Figure No.
1



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\STRAWN\FIGURE 2 TOPO MAP_STRAWN.MXD

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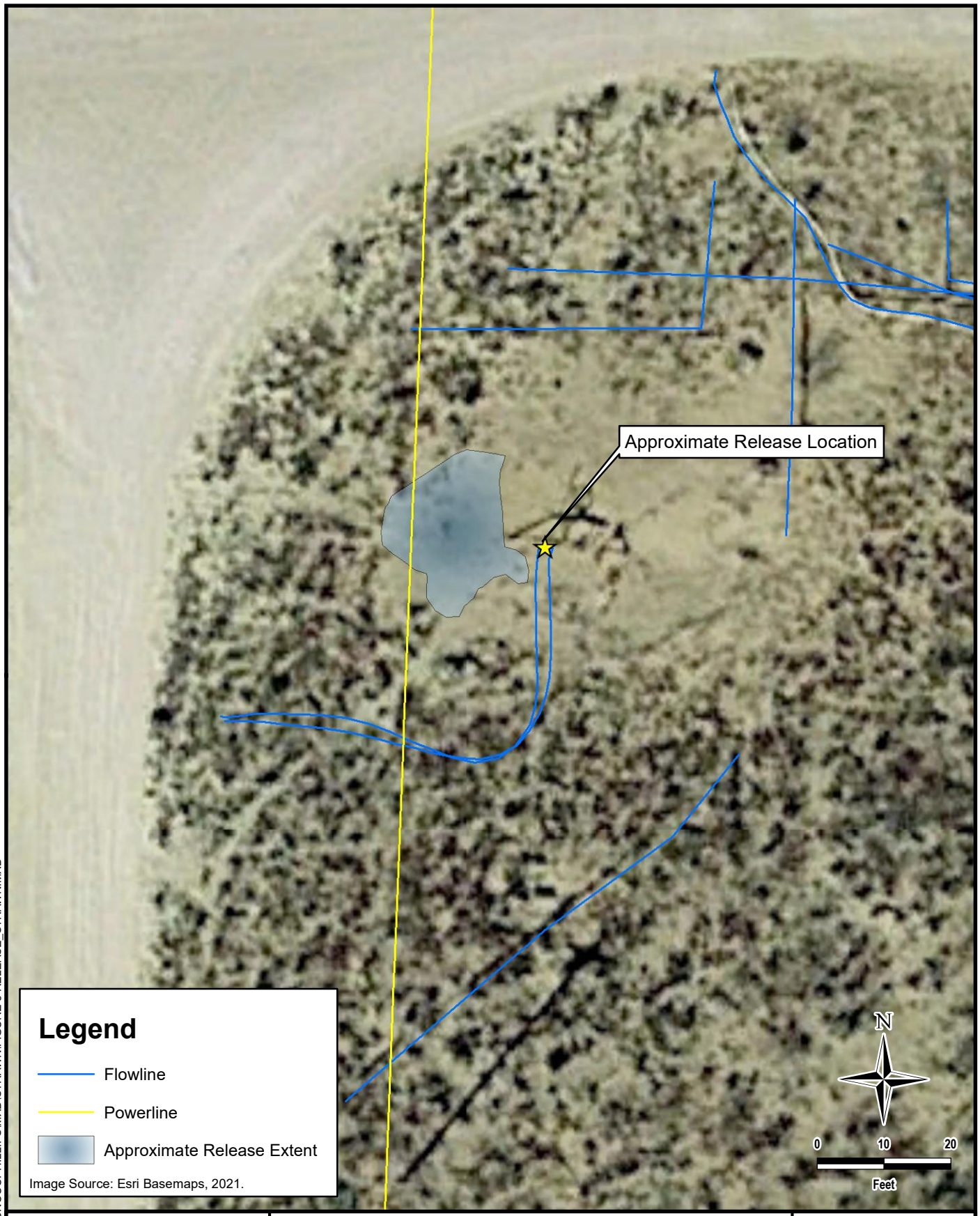
SEMU STRAWN BATTERY HEADER RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02506
DATE:	AUGUST 24, 2021
DESIGNED BY:	AAM

Figure No.
2



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\STRAWN\FIGURE 3 RELEASE_STRAWN.MXD

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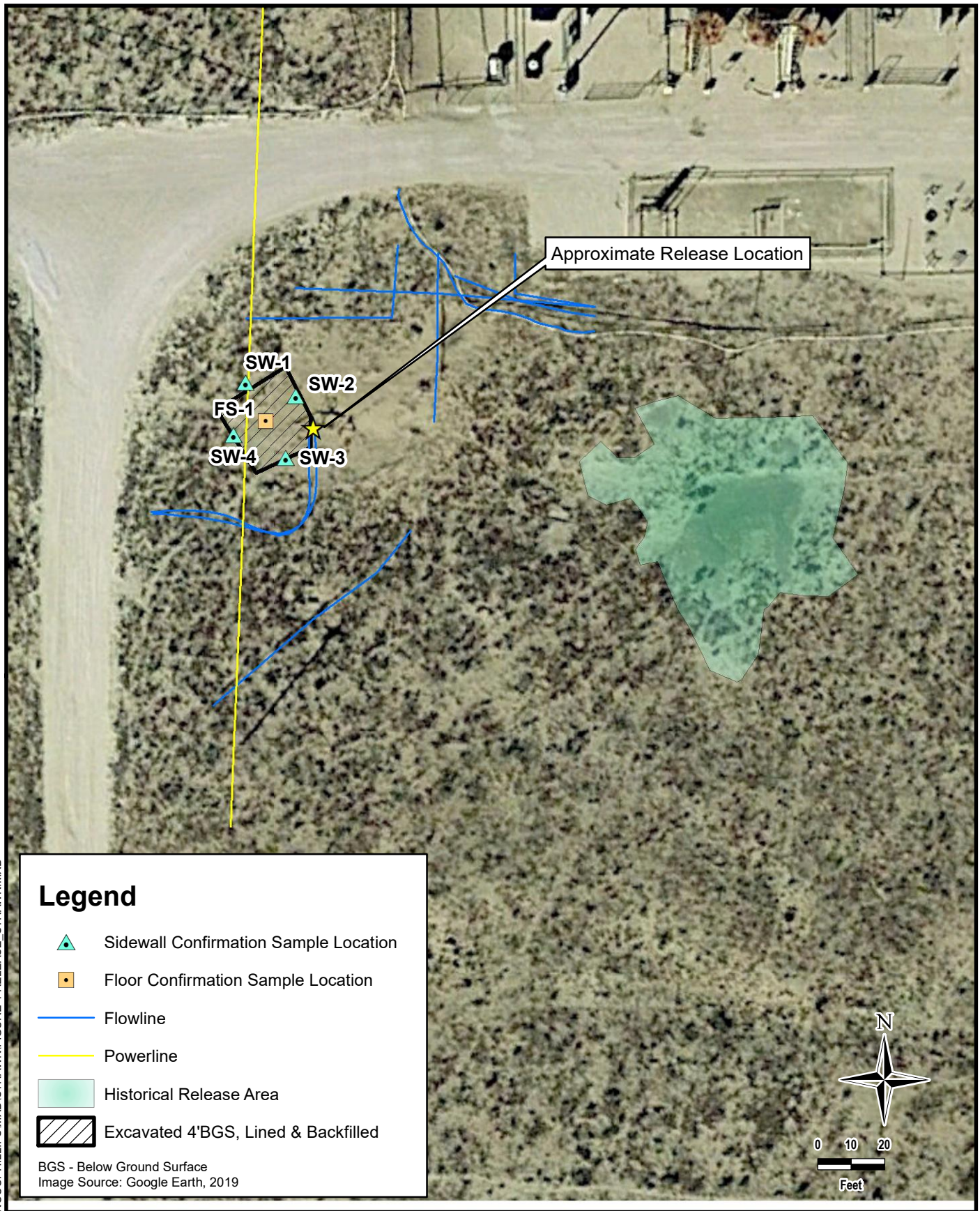
LEA COUNTY, NEW MEXICO

SEMU STRAWN BATTERY HEADER RELEASE
APPROXIMATE RELEASE EXTENT

PROJECT NO.:	212C-MD-02506
DATE:	AUGUST 24, 2021
DESIGNED BY:	AAM

Figure No.
3



Legend

- Sidewall Confirmation Sample Location
- Floor Confirmation Sample Location
- Flowline
- Powerline
- Historical Release Area
- Excavated 4'BGS, Lined & Backfilled

BGS - Below Ground Surface
Image Source: Google Earth, 2019

DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\STRAWN\FIGURE 4 RELEASE_STRAWN.MXD

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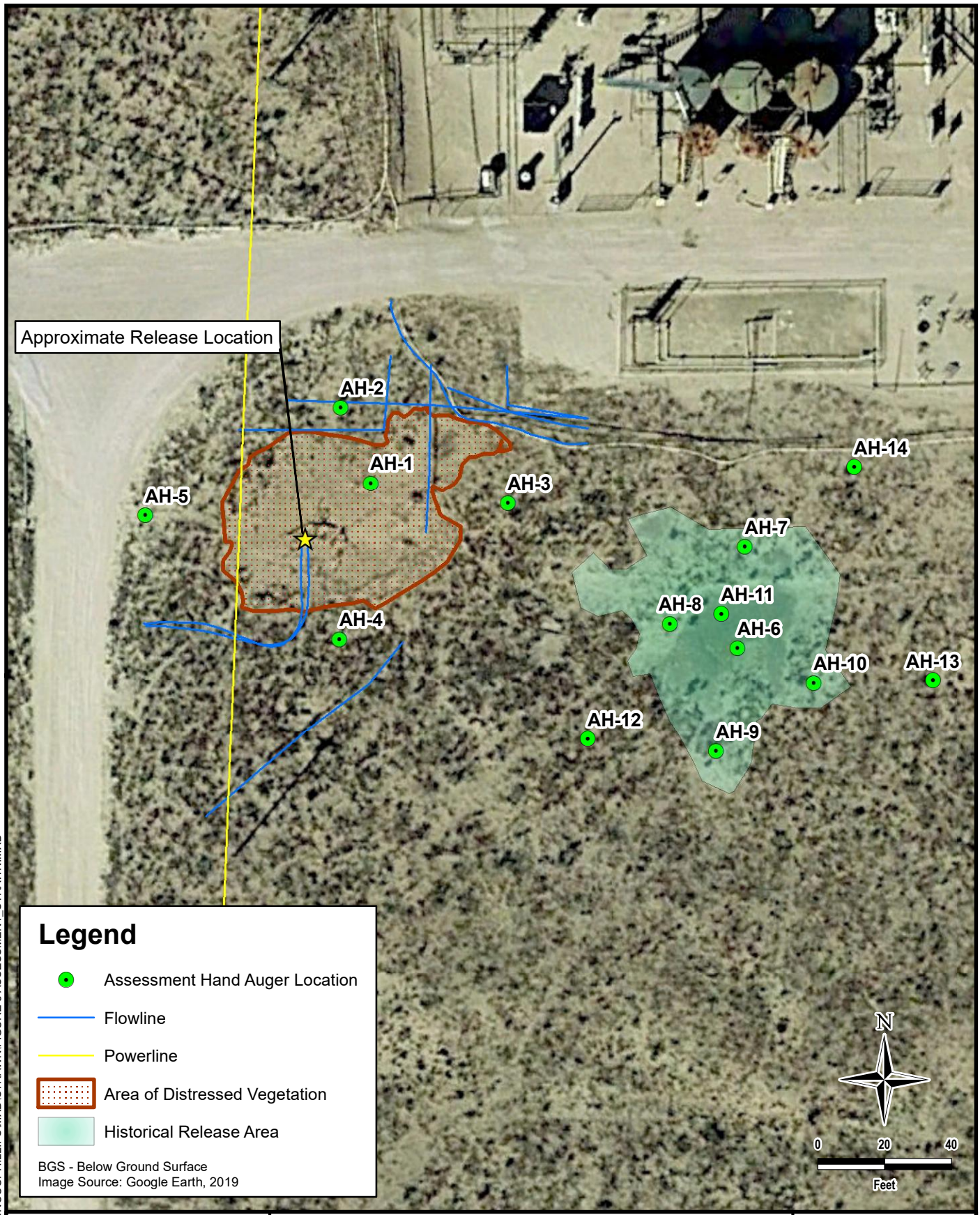
LEA COUNTY, NEW MEXICO

SEMU STRAWN BATTERY HEADER RELEASE
INITIAL RESPONSE AND CONFIRMATION SAMPLING

PROJECT NO.:	212C-MD-02506
DATE:	NOVEMBER 10, 2021
DESIGNED BY:	AAM

Figure No.
4



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\STRAWN\FIGURE 5 ASSESSMENT_STRAWN.MXD

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SEMU STRAWN BATTERY HEADER RELEASE
SITE ASSESSMENT MAP

PROJECT NO.:	212C-MD-02506
DATE:	NOVEMBER 10, 2021
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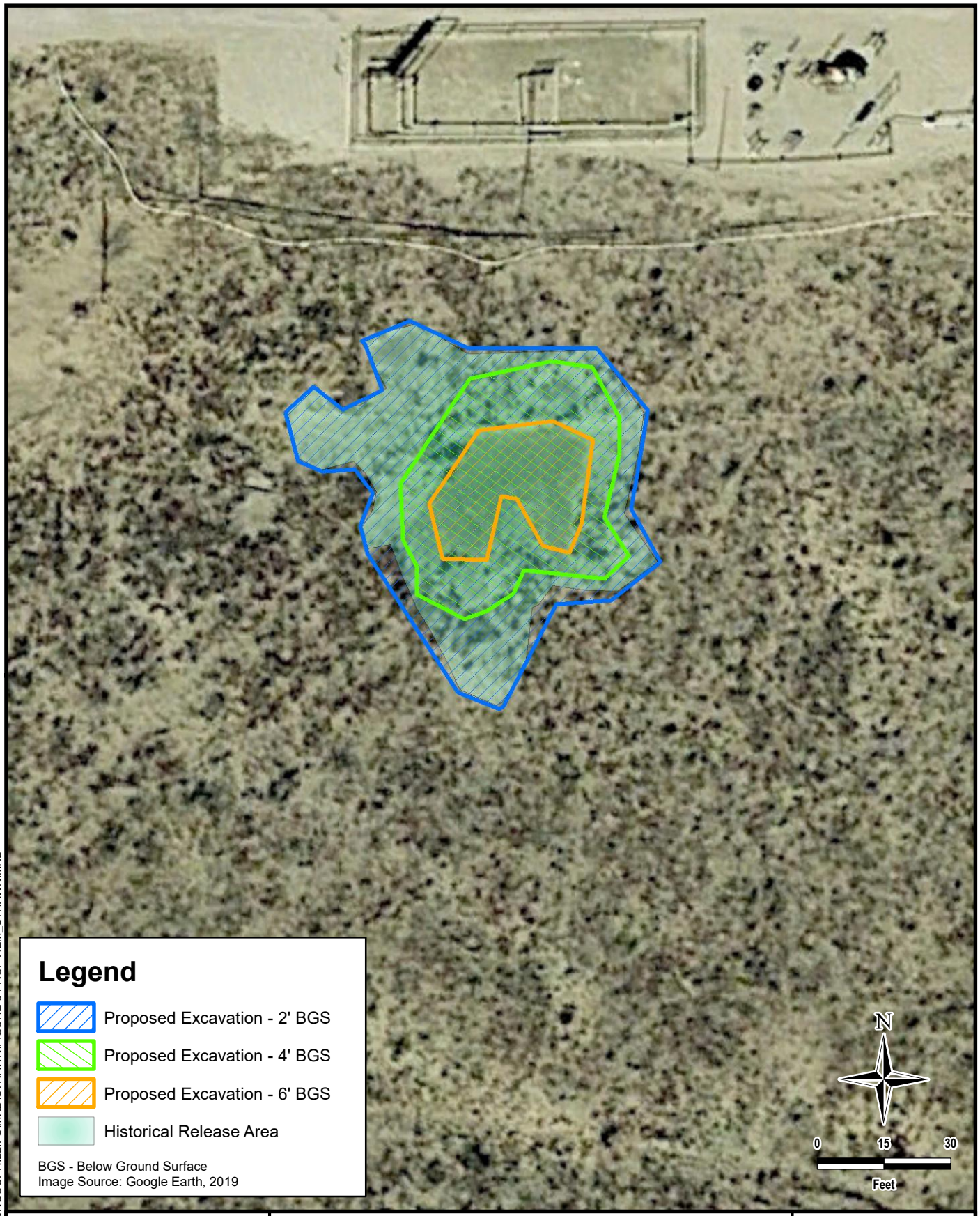
Figure No.
5



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\STRAWN\FIGURE 6 PROP REM_STRAWN.MXD

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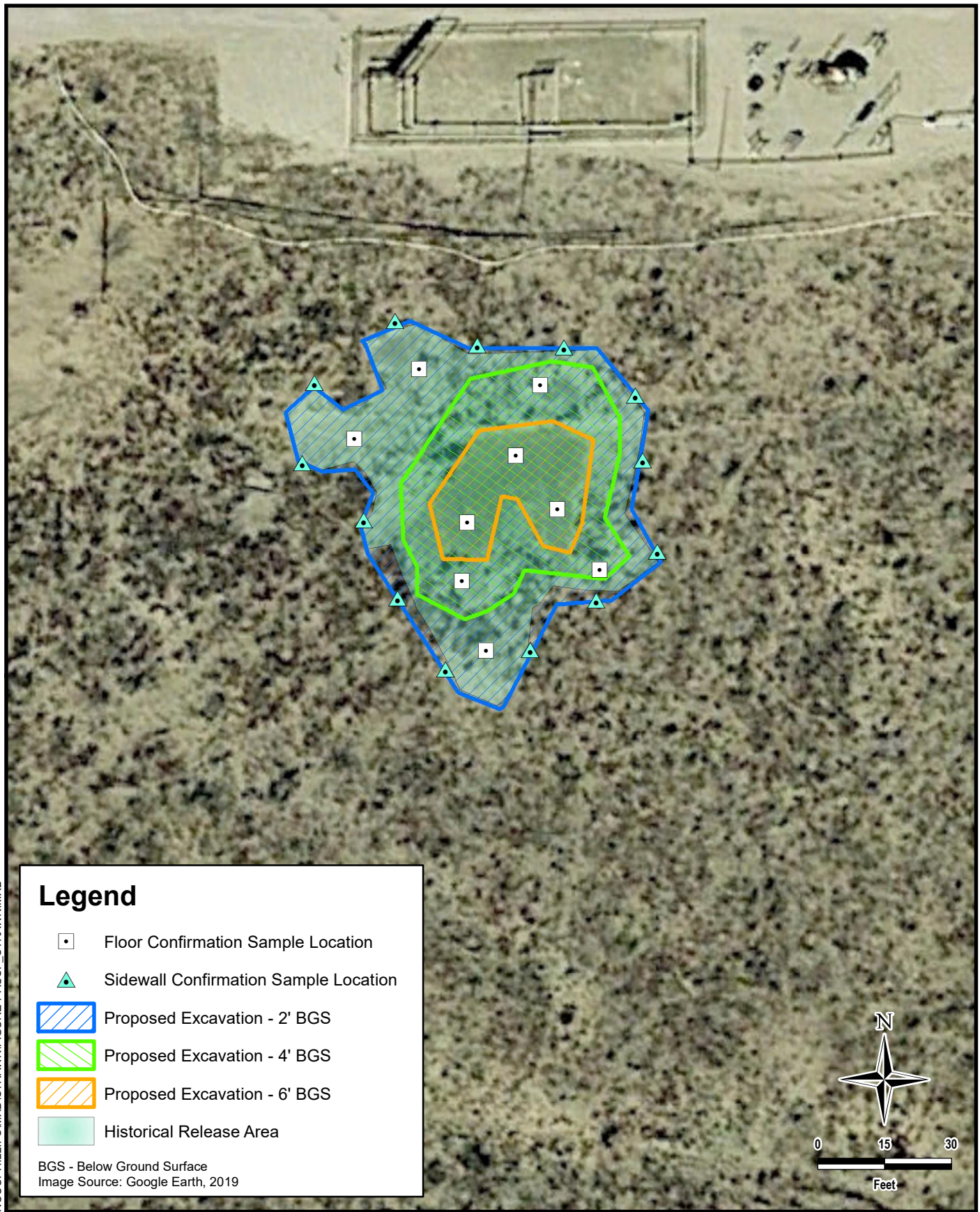
SEMU STRAWN BATTERY HEADER RELEASE
PROPOSED REMEDIATION EXTENT

PROJECT NO.:	212C-MD-02506
DATE:	NOVEMBER 10, 2021
DESIGNED BY:	AAM

Figure No.
6



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\STRAWN\FIGURE 7 ACSP_STRAWN.MXD

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CONOCOPHILLIPS

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LEA COUNTY, NEW MEXICO

SEMU STRAWN BATTERY HEADER RELEASE
ALTERNATIVE CONFIRMATION SAMPLING PLAN

PROJECT NO.:	212C-MD-02506
DATE:	NOVEMBER 10, 2021
DESIGNED BY:	AAM

Figure No.
7

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
NRM2007037866
CONFIRMATION SAMPLING
CONOCOPHILLIPS
SEMU STRAWN BATTERY 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
FS-1 (4')	7/14/2021	4	-	-	< 23.5		< 0.00135		< 0.00675		< 0.00337		< 0.00877		-	0.0404	B J	4.97		5.15		10.2
SW-1	7/14/2021	-	-	-	< 20.8		< 0.00108		< 0.00542		< 0.00271		< 0.00704		-	0.0396	B J	< 4.17		< 4.17		0.0396
SW-2	7/14/2021	-	-	-	< 20.9		< 0.00109		< 0.00547		< 0.00273		< 0.00711		-	0.0389	B J	< 4.19		1.11	J	1.15
SW-3	7/14/2021	-	-	-	< 21.0		< 0.00110		< 0.00548		< 0.00274		< 0.00713		-	0.0484	B J	2.18	J	2.87	J	5.10
SW-4	7/14/2021	-	-	-	< 20.8		< 0.00108		< 0.00541		< 0.00270		< 0.00703		-	0.0385	B J	< 4.16		< 4.16		0.0385

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 Remediation RRALs and Reclamation Requirements.

Shaded rows indicate intervals proposed for excavation.

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.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT - NRM2007037866
CONOCOPHILLIPS
SEMU STRAWN BATTERY HEADER 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	8/9/2021	0-1	20.8	-	< 24.0		< 0.00140		< 0.00702		< 0.00351		< 0.00913		-		0.0621	B J	4.35	J	5.70		10.1	
		2-3	26.7	-	14.7	J	< 0.00139		< 0.00693		< 0.00347		< 0.00901		-		0.0434	B J	< 4.77		< 4.77		0.0434	
AH-2	8/9/2021	0-1	25.1	-	< 20.6		< 0.00106		< 0.00532		< 0.00266		< 0.00691		-		0.0804	B J	< 4.13		1.37	J	1.45	
		2-3	12.8	-	< 24.5		< 0.00145		< 0.00725		< 0.00363		< 0.00943		-		0.0536	B J	< 4.90		0.717	J	0.771	
AH-3	8/9/2021	0-1	11.8	-	< 24.7		< 0.00147		< 0.00734		< 0.00367		< 0.00954		-		0.0645	B J	< 4.93		3.71	J	3.77	
		2-3	10.2	-	< 24.7		< 0.00147		< 0.00733		< 0.00367		< 0.00953		-		0.0555	B J	2.34	J	3.81	J	6.21	
AH-4	8/9/2021	0-1	10.9	-	< 24.5		< 0.00145		< 0.00724		< 0.00362		< 0.00941		-		0.0850	B J	< 4.89		3.74	J	3.83	
		2-3	10.6	-	< 21.4		< 0.00114		< 0.00571		< 0.00285		< 0.00742		-		0.0547	B J	2.77	J	5.04		7.86	
AH-5	8/9/2021	0-1	17.2	-	< 24.2		< 0.00142		< 0.00711		< 0.00355		< 0.00924		-		0.0600	B J	5.03		7.20		12.3	
		2-3	56.6	-	< 21.4		< 0.00114		< 0.00572		< 0.00286		< 0.00744		-		0.0587	B J	31.8		39.1		71.0	
AH-6	8/9/2021	0-1	5.3	-	25.4		< 0.00109		< 0.00544		< 0.00272		< 0.00708		-		0.0561	B J	96.4		219		***315***	
		2-3	17.6	-	< 22.0		< 0.00120		< 0.00600		< 0.00300		< 0.00781		-		0.0522	B J	645		1,110		***1,755***	
AH-7	8/9/2021	0-1	22.1	-	< 24.7		< 0.00147		< 0.00735		< 0.00367		< 0.00955		-		0.0687	B J	5.83		20.2		26.1	
		2-3	32.6	-	< 20.3		< 0.00103		< 0.00517		< 0.00259		< 0.00672		-		0.0502	B J	265		511		***776***	
AH-8	8/9/2021	0-1	28.1	-	< 24.4		< 0.00144		< 0.00721		< 0.00360		< 0.00937		-		0.0626	B J	< 4.88		3.66	J	3.72	
		2-3	95.2	-	< 24.7		< 0.00147		< 0.00733		< 0.00367		< 0.00953		-		0.0584	B J	56.5		127		***184***	
AH-9	8/9/2021	0-1	15.8	-	< 20.6		< 0.00106		< 0.00530		< 0.00265		< 0.00689		-		< 0.103		309		832		***1,141***	
		2-3	9.4	-	< 24.0		< 0.00140		< 0.00698		< 0.00349		< 0.00908		-		< 0.120		8.32		24.1		32.4	
AH-10	8/9/2021	0-1	9.8	-	< 23.9		< 0.00140		< 0.00698		< 0.00349		< 0.00907		-		< 0.120		5.86		12.6		18.5	
		2-3	21.1	-	< 20.2		< 0.00102		< 0.00508		< 0.00254		< 0.00660		-		< 0.101		146		362		***508***	
AH-11	10/7/2021	0-1	14.4	-	< 20.1		0.000673	J	0.0222		< 0.00252		0.0136		0.0365		0.451		2,400		4,410		***6,810***	
		2-3	248	-	< 22.1		< 0.00121		0.00338	J	< 0.00301		< 0.00784		0.00338		0.0333	J	4,610		9,110		***13,720***	
		4-5	79.1	-	< 20.3		< 0.00103		0.00501	J	< 0.00258		0.00452	J	0.00953		0.0404	J	2,610		4,420		***7,030***	
		6-7	76.3	-	< 21.3	J6	< 0.00113		< 0.00564		< 0.00282		< 0.00733		-		0.0361	J	5.77		8.00		13.8	
		7-8	132	-	< 21.7		< 0.00117		< 0.00587		< 0.00293		< 0.00763		-		0.0577	J	20.1		37.8		58.0	
AH-12	10/7/2021	0-1	5.6	-	< 20.4		< 0.00104		< 0.00522		< 0.00261		< 0.00679		-		0.0407	J	3.52	J	13.0		16.6	
		2-3	11.9	-	< 20.2		< 0.00102		< 0.00508		< 0.00254		< 0.00660		-		< 0.101		1.65	J	1.98	B J	3.63	
AH-13	10/7/2021	0-1	7.5	-	< 20.2		< 0.00102		< 0.00512		< 0.00256		< 0.00666		-		< 0.101		2.09	J	14.7		16.8	
		2-3	51.4	-	< 21.5		< 0.00115		< 0.00577		< 0.00288		< 0.00750		-		< 0.108		3.11	J	5.04		8.15	
AH-14	10/7/2021	0-1	14.3	-	< 20.4		< 0.00104		0.00362	J	< 0.00259		0.0104		0.0140		< 0.102		4.03	J	15.7		19.7	
		2-3	21.2	-	< 20.3		< 0.00103		0.00378	J	< 0.00258		0.00883		0.0126		< 0.102		2.61	J	4.17		6.78	

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 Remediation RRALs and/or Reclamation Requirements.

Shaded rows indicate intervals proposed for excavation.

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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

APPENDIX A
C-141 Forms

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NRM2007037866
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party ConocoPhillips	OGRID 217817
Contact Name Charles Beauvais	Contact Telephone + 575-988-2043
Contact email – charles.r.beauvais@conocophillips.com	Incident # *(assigned by OCD)*
Contact mailing address – 15 W London Rd, Loving, NM 88256	

Location of Release Source

Latitude 32.545414 Longitude -103.205854

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Header South of Strawn Battery – SEMU 146	Site Type: Header/Flowline
Date Release Discovered: 02/27/2020	API# *(if applicable)* 30-025-34977

Unit Letter	Section	Township	Range	County
F	25	20S	37E	LEA

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name: Deck Millard Est#4193, Terry Richey*)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 17.3	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Line was isolated for replacement. While crew was in the process of uncovering flanges from header, a past leak was discovered. Actual release date is unknown; however, the spill area was estimated at 17.3 bbls according to spill calculator.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM2007037866
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? An authorized release of a volume, excluding gas, in excess of 25 bbls.

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

Notification was made on 3/3/2020 to Mr. Billings, Mr. Griswold, and NMOCD general email. Notification was made by self, Charles Beauvais. To determine the volume we had to wait for one call and weather to clear. We have since excavated out the material to determine what the volume was.

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

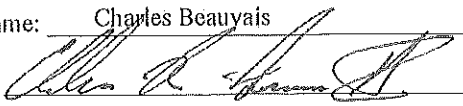
☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: Charles Beauvais Title: Environmental Coordinator

Signature:  Date: 3/9/2020

email: charles.r.beauvais@conocophillips.com Telephone: 575-988-2043

OCD Only

Received by: Ramona Marcus Date: 3/10/2020

L48 Spill Volume Estimate Form

Facility Name & Number:	Header south of Strawn Battery
Asset Area:	Hobbs
Release Discovery Date & Time:	2/27/2020
Release Type:	Produced Water
Provide any known details about the event:	While preparing header for decomissioning, group found spill area. One call and weather delay held estimation up.

Spill Calculation - Subsurface Spill - Rectangle

Was the release on pad or off-pad?	See reference table below
Has it rained at least a half inch in the last 24 hours?	See reference table below

Convert irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	12.0	12.0	70.00	11.55%	149.520	17.270			
Rectangle B					0.000	0.000			
Rectangle C					0.000	0.000			
Rectangle D					0.000	0.000			
Rectangle E					0.000	0.000			
Rectangle F					0.000	0.000			
Rectangle G					0.000	0.000			
Rectangle H					0.000	0.000			
Rectangle I					0.000	0.000			
Rectangle J					0.000	0.000			
					Total Volume Release:	17.270			

NRM2007037866

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: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

☐ Extents of contamination must be fully delineated.

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

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

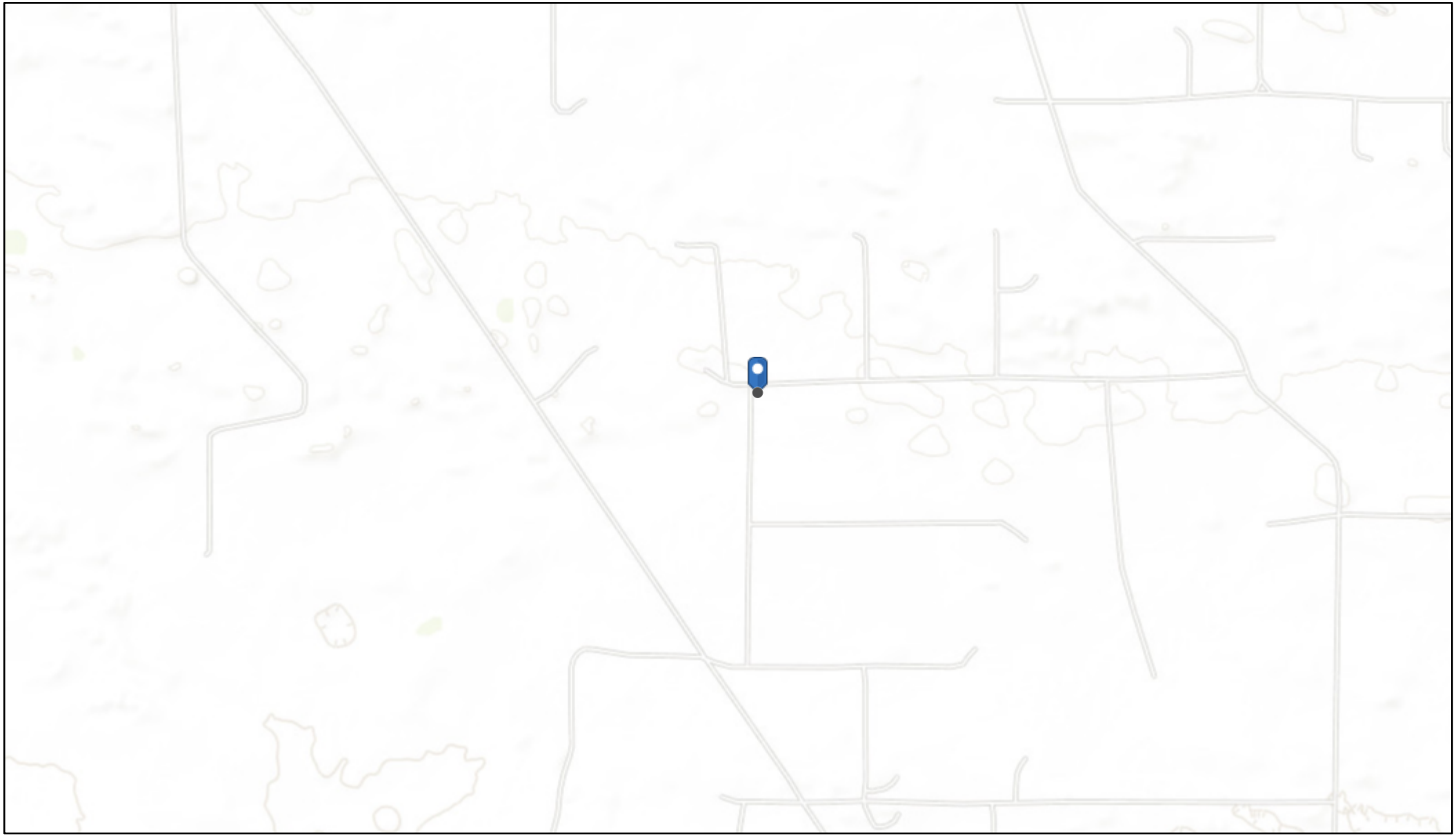
Received by: _____ Date: _____

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

Signature: _____ Date: _____

APPENDIX B
Site Characterization Data

NMOCD Waterbodies



5/20/2021, 3:33:29 PM

OSE Water-bodies

PLJV Probable Playas

OSE Streams

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

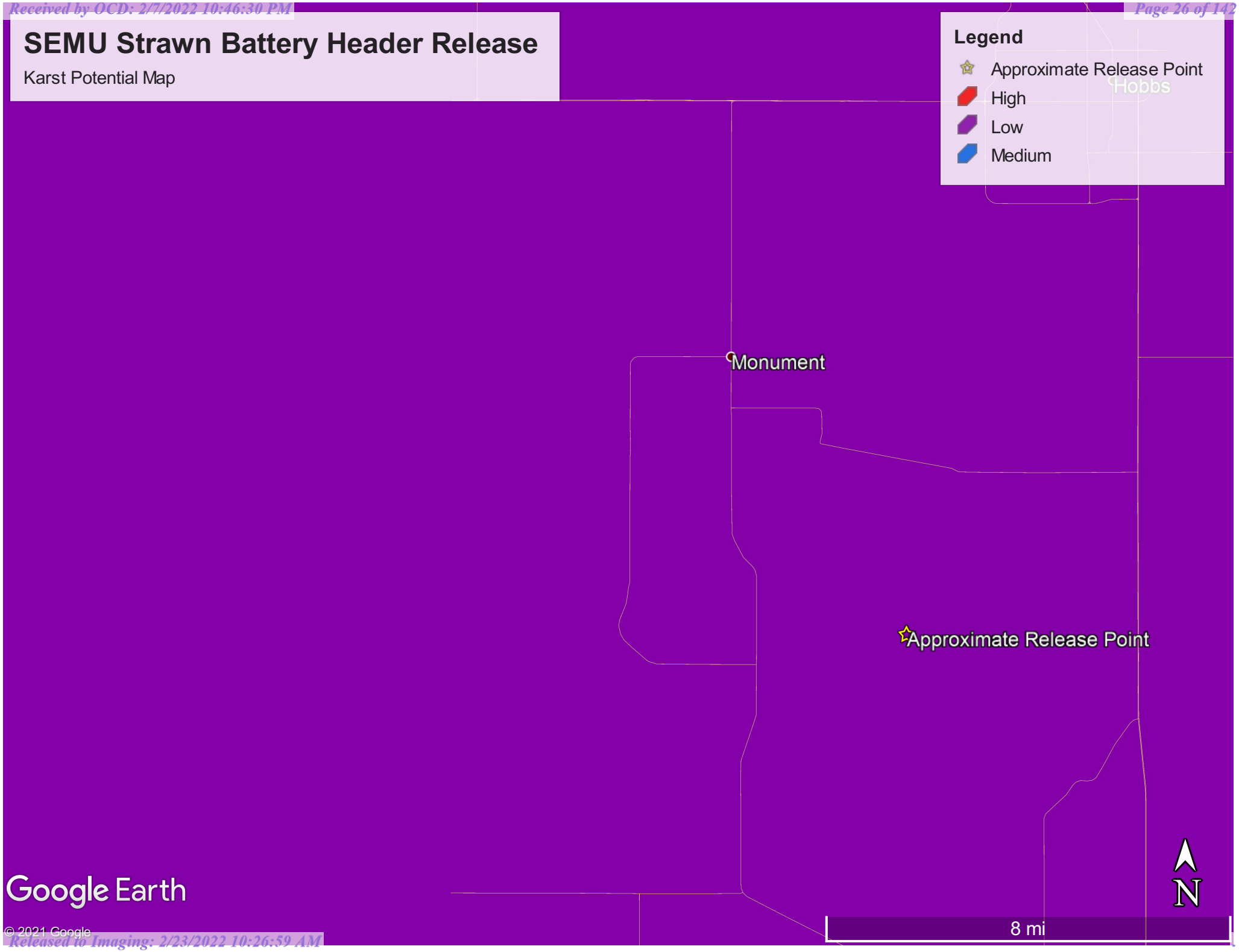
Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

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

SEMU Strawn Battery Header Release

Karst Potential Map



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

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

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

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

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 04412 S	L	LE	4	4	2	13	20S	37E	669189	3605491*	3259	155	84	71
L 04412	L	LE	4	2	2	13	20S	37E	669181	3605894*	3651	140	85	55
L 05350	L	LE		2	1	13	20S	37E	668279	3605980*	3672	100		
CP 01486 POD1	CP	LE	4	2	1	05	21S	37E	670333	3599085	3727	140	52	88
L 05351	L	LE		2	2	13	20S	37E	669082	3605995*	3733	115		
L 10117	L	LE	1	1	2	13	20S	37E	668580	3606086*	3775	130	70	60

Average Depth to Water: **72 feet**
Minimum Depth: **52 feet**
Maximum Depth: **85 feet**

Record Count: 6

UTMNAD83 Radius Search (in meters):

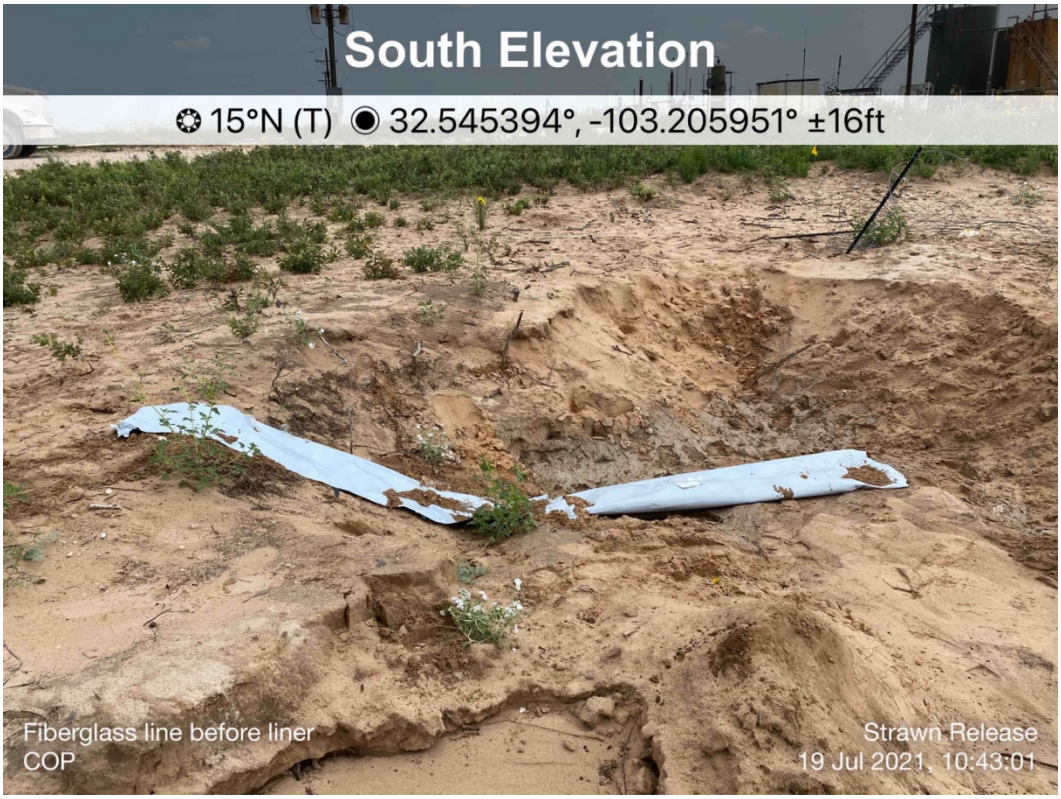
Easting (X): 668467.52 **Northing (Y):** 3602312.6 **Radius:** 3800

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

APPENDIX C
Photographic Documentation

TETRA TECH, INC. PROJECT NO. 212C-MD-02506	DESCRIPTION	Site signage; SEMU Strawn Battery	1
	SITE NAME	ConocoPhillips SEMU Strawn Battery Header Release	8/9/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02506	DESCRIPTION	View east southeast. Existing 4-foot excavation and exposed line.	2
	SITE NAME	ConocoPhillips SEMU Strawn Battery Header Release	7/19/2021

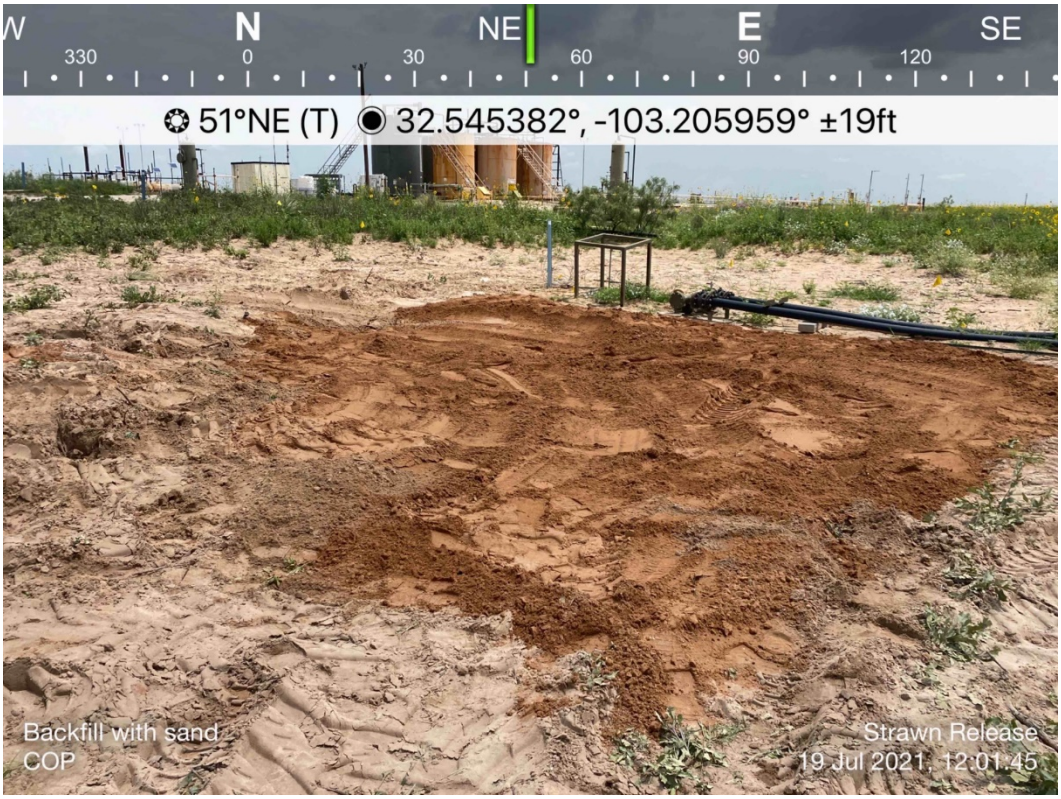


TETRA TECH, INC. PROJECT NO. 212C-MD-02506	DESCRIPTION	View north northeast. Existing 4-foot excavation and covered line.	3
	SITE NAME	ConocoPhillips SEMU Strawn Battery Header Release	7/19/2021

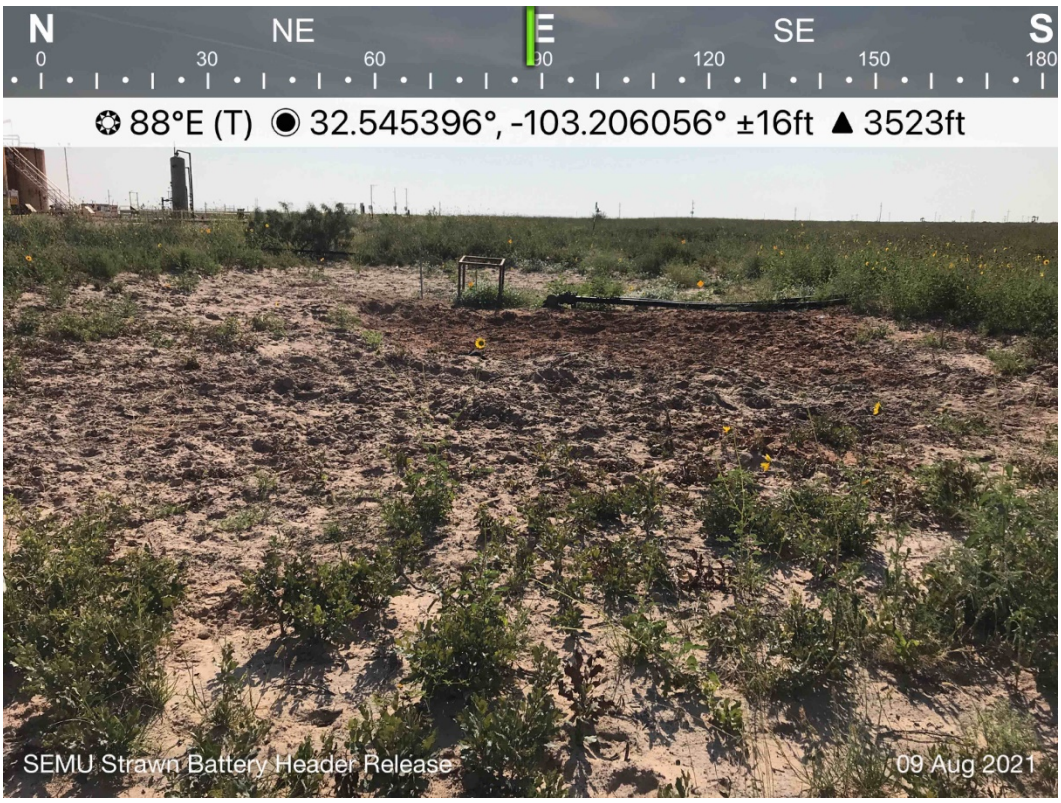
TETRA TECH, INC. PROJECT NO. 212C-MD-02506	DESCRIPTION	View northeast. Release area, existing 4-foot excavation with liner being installed.	4
	SITE NAME	ConocoPhillips SEMU Strawn Battery Header Release	7/19/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02506	DESCRIPTION	View northeast. Lined excavation being backfilled.	5
	SITE NAME	ConocoPhillips SEMU Strawn Battery Header Release	7/19/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02506	DESCRIPTION	View east. Backfilled release area.	6
	SITE NAME	ConocoPhillips SEMU Strawn Battery Header Release	7/19/2021

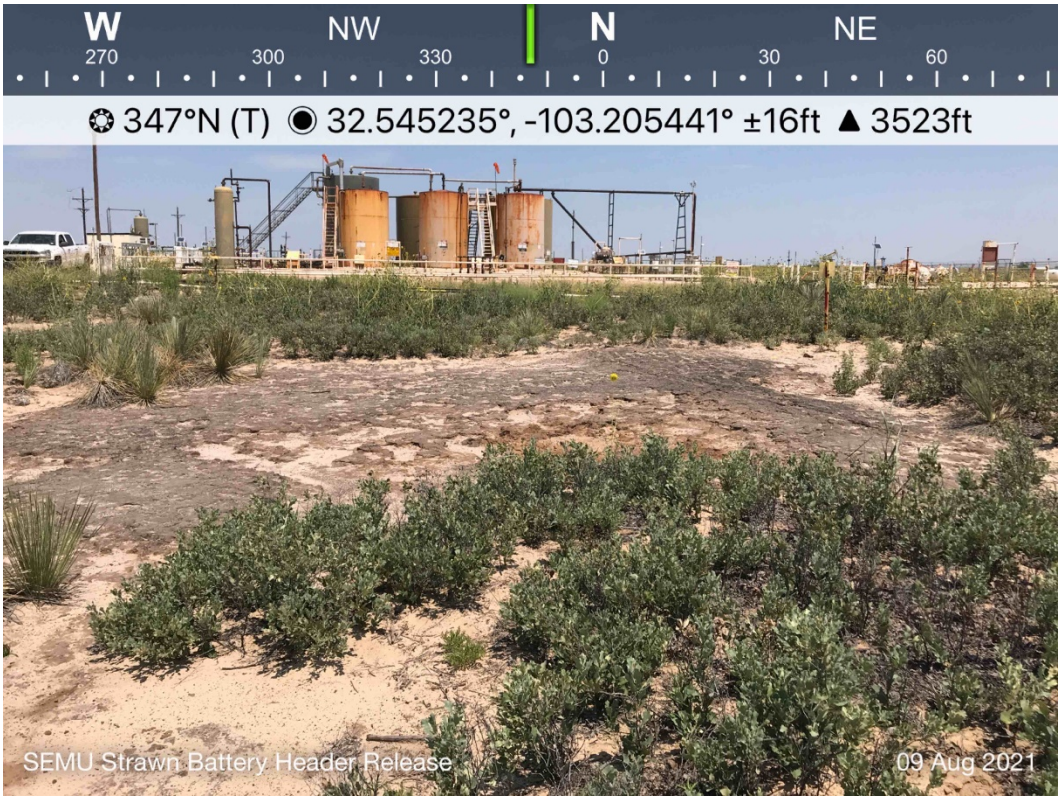


TETRA TECH, INC. PROJECT NO. 212C-MD-02506	DESCRIPTION	View northeast. Backfilled release area.	7
	SITE NAME	ConocoPhillips SEMU Strawn Battery Header Release	7/19/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02506	DESCRIPTION	View east from lease road. Area of observed stressed vegetation and backfilled release area.	8
	SITE NAME	ConocoPhillips SEMU Strawn Battery Header Release	8/9/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02506	DESCRIPTION	View east. Area of historic contamination	9
	SITE NAME	ConocoPhillips SEMU Strawn Battery Header Release	8/9/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02506	DESCRIPTION	View north. Area of historic contamination. SEMU Strawn Battery in back.	10
	SITE NAME	ConocoPhillips SEMU Strawn Battery Header Release	8/9/2021

APPENDIX D
Laboratory Analytical Data

Pace Analytical®

ANALYTICAL REPORT

July 27, 2021

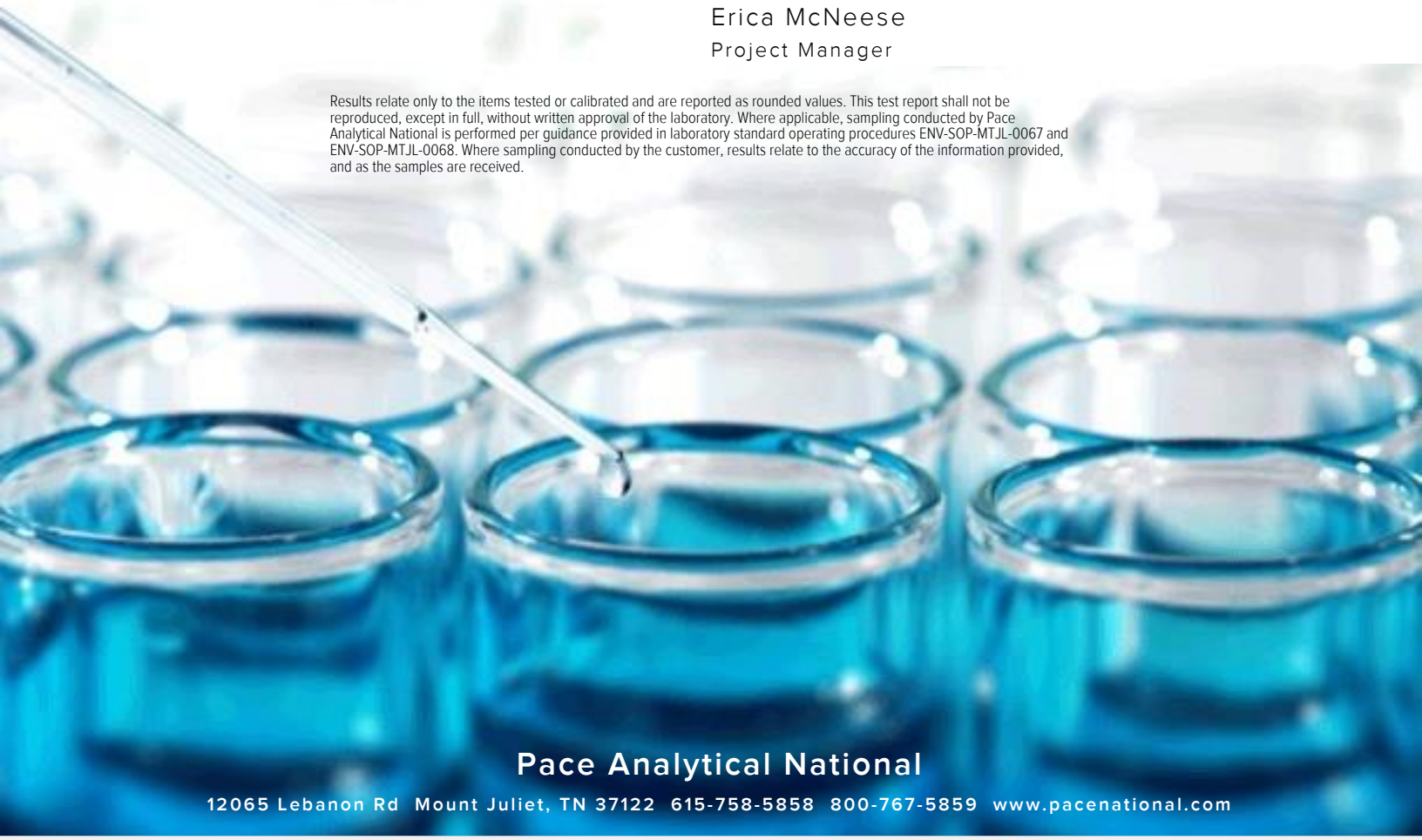
ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1379450
Samples Received:	07/16/2021
Project Number:	212C-MD-02506
Description:	COP SEMU Strawn Battery

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

Entire Report Reviewed By: Erica McNeese

Erica McNeese
Project Manager



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

TABLE OF CONTENTS

FS-1(4') L1379450-01 Solid

Collected by: Adrian | Collected date/time: 07/14/21 11:00 | Received date/time: 07/16/21 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1708355	1	07/21/21 14:48	07/21/21 15:03	KDW	Minneapolis, MN
Wet Chemistry by Method 300.0	WG1708710	1	07/20/21 17:15	07/21/21 02:11	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1707328	1	07/17/21 19:49	07/18/21 19:32	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1707224	1	07/17/21 19:49	07/18/21 00:00	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1710167	1	07/23/21 14:02	07/24/21 03:57	JN	Mt. Juliet, TN

SW-1 L1379450-02 Solid

Collected by: Adrian | Collected date/time: 07/14/21 11:10 | Received date/time: 07/16/21 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1708355	1	07/21/21 14:48	07/21/21 15:03	KDW	Minneapolis, MN
Wet Chemistry by Method 300.0	WG1708710	1	07/20/21 17:15	07/21/21 02:21	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1707328	1	07/17/21 19:49	07/18/21 19:55	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1707224	1	07/17/21 19:49	07/18/21 00:19	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1710167	1	07/23/21 14:02	07/24/21 04:11	JN	Mt. Juliet, TN

SW-2 L1379450-03 Solid

Collected by: Adrian | Collected date/time: 07/14/21 11:20 | Received date/time: 07/16/21 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1708355	1	07/21/21 14:48	07/21/21 15:03	KDW	Minneapolis, MN
Wet Chemistry by Method 300.0	WG1708710	1	07/20/21 17:15	07/21/21 02:31	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1707328	1	07/17/21 19:49	07/18/21 20:19	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1707224	1	07/17/21 19:49	07/18/21 00:38	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1710167	1	07/23/21 14:02	07/24/21 04:25	JN	Mt. Juliet, TN

SW-3 L1379450-04 Solid

Collected by: Adrian | Collected date/time: 07/14/21 11:30 | Received date/time: 07/16/21 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1708355	1	07/21/21 14:48	07/21/21 15:03	KDW	Minneapolis, MN
Wet Chemistry by Method 300.0	WG1708710	1	07/20/21 17:15	07/21/21 02:50	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1707328	1	07/17/21 19:49	07/18/21 20:43	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1707224	1	07/17/21 19:49	07/18/21 00:57	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1710167	1	07/23/21 14:02	07/24/21 04:38	JN	Mt. Juliet, TN

SW-4 L1379450-05 Solid

Collected by: Adrian | Collected date/time: 07/14/21 11:50 | Received date/time: 07/16/21 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1708355	1	07/21/21 14:48	07/21/21 15:03	KDW	Minneapolis, MN
Wet Chemistry by Method 300.0	WG1708710	1	07/20/21 17:15	07/21/21 02:59	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1707328	1	07/17/21 19:49	07/18/21 21:06	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1707224	1	07/17/21 19:49	07/18/21 01:16	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1710167	1	07/23/21 14:02	07/24/21 04:52	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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.2		1	07/21/2021 15:03	WG1708355

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		10.8	23.5	1	07/21/2021 02:11	WG1708710

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	0.0404	B J	0.0255	0.117	1	07/18/2021 19:32	WG1707328
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/18/2021 19:32*	WG1707328

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		0.000630	0.00135	1	07/18/2021 00:00	WG1707224
Toluene	U		0.00175	0.00675	1	07/18/2021 00:00	WG1707224
Ethylbenzene	U		0.000994	0.00337	1	07/18/2021 00:00	WG1707224
Total Xylenes	U		0.00119	0.00877	1	07/18/2021 00:00	WG1707224
(S) Toluene-d8	*93.9*			*75.0-131*		*07/18/2021 00:00*	WG1707224
(S) 4-Bromofluorobenzene	*95.5*			*67.0-138*		*07/18/2021 00:00*	WG1707224
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*		*07/18/2021 00:00*	WG1707224

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	4.97		1.89	4.70	1	07/24/2021 03:57	WG1710167
C28-C36 Motor Oil Range	5.15		0.322	4.70	1	07/24/2021 03:57	WG1710167
(S) o-Terphenyl	*62.5*			*18.0-148*		*07/24/2021 03:57*	WG1710167

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.0		1	07/21/2021 15:03	WG1708355

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		9.58	20.8	1	07/21/2021 02:21	WG1708710

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	0.0396	B J	0.0226	0.104	1	07/18/2021 19:55	WG1707328
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/18/2021 19:55*	WG1707328

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000506	0.00108	1	07/18/2021 00:19	WG1707224
Toluene	U		0.00141	0.00542	1	07/18/2021 00:19	WG1707224
Ethylbenzene	U		0.000799	0.00271	1	07/18/2021 00:19	WG1707224
Total Xylenes	U		0.000954	0.00704	1	07/18/2021 00:19	WG1707224
(S) Toluene-d8	*95.3*			*75.0-131*		*07/18/2021 00:19*	WG1707224
(S) 4-Bromofluorobenzene	*95.8*			*67.0-138*		*07/18/2021 00:19*	WG1707224
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*07/18/2021 00:19*	WG1707224

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.68	4.17	1	07/24/2021 04:11	WG1710167
C28-C36 Motor Oil Range	U		0.285	4.17	1	07/24/2021 04:11	WG1710167
(S) o-Terphenyl	*56.9*			*18.0-148*		*07/24/2021 04:11*	WG1710167

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.5		1	07/21/2021 15:03	WG1708355

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		9.63	20.9	1	07/21/2021 02:31	WG1708710

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	0.0389	B J	0.0227	0.105	1	07/18/2021 20:19	WG1707328
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/18/2021 20:19*	WG1707328

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		0.000511	0.00109	1	07/18/2021 00:38	WG1707224
Toluene	U		0.00142	0.00547	1	07/18/2021 00:38	WG1707224
Ethylbenzene	U		0.000806	0.00273	1	07/18/2021 00:38	WG1707224
Total Xylenes	U		0.000962	0.00711	1	07/18/2021 00:38	WG1707224
(S) Toluene-d8	*93.9*			*75.0-131*		*07/18/2021 00:38*	WG1707224
(S) 4-Bromofluorobenzene	*96.9*			*67.0-138*		*07/18/2021 00:38*	WG1707224
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*07/18/2021 00:38*	WG1707224

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.68	4.19	1	07/24/2021 04:25	WG1710167
C28-C36 Motor Oil Range	1.11	J	0.287	4.19	1	07/24/2021 04:25	WG1710167
(S) o-Terphenyl	*58.0*			*18.0-148*		*07/24/2021 04:25*	WG1710167

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.4		1	07/21/2021 15:03	WG1708355

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		9.64	21.0	1	07/21/2021 02:50	WG1708710

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	0.0484	B J	0.0227	0.105	1	07/18/2021 20:43	WG1707328
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*07/18/2021 20:43*	WG1707328

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		0.000512	0.00110	1	07/18/2021 00:57	WG1707224
Toluene	U		0.00143	0.00548	1	07/18/2021 00:57	WG1707224
Ethylbenzene	U		0.000808	0.00274	1	07/18/2021 00:57	WG1707224
Total Xylenes	U		0.000965	0.00713	1	07/18/2021 00:57	WG1707224
(S) Toluene-d8	*95.2*			*75.0-131*		*07/18/2021 00:57*	WG1707224
(S) 4-Bromofluorobenzene	*97.9*			*67.0-138*		*07/18/2021 00:57*	WG1707224
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*07/18/2021 00:57*	WG1707224

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.18	J	1.69	4.19	1	07/24/2021 04:38	WG1710167
C28-C36 Motor Oil Range	2.87	J	0.287	4.19	1	07/24/2021 04:38	WG1710167
(S) o-Terphenyl	*66.3*			*18.0-148*		*07/24/2021 04:38*	WG1710167

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.1		1	07/21/2021 15:03	WG1708355

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		9.58	20.8	1	07/21/2021 02:59	WG1708710

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	0.0385	B J	0.0226	0.104	1	07/18/2021 21:06	WG1707328
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*07/18/2021 21:06*	WG1707328

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000505	0.00108	1	07/18/2021 01:16	WG1707224
Toluene	U		0.00141	0.00541	1	07/18/2021 01:16	WG1707224
Ethylbenzene	U		0.000797	0.00270	1	07/18/2021 01:16	WG1707224
Total Xylenes	U		0.000952	0.00703	1	07/18/2021 01:16	WG1707224
(S) Toluene-d8	*95.8*			*75.0-131*		*07/18/2021 01:16*	WG1707224
(S) 4-Bromofluorobenzene	*95.9*			*67.0-138*		*07/18/2021 01:16*	WG1707224
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*07/18/2021 01:16*	WG1707224

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.68	4.16	1	07/24/2021 04:52	WG1710167
C28-C36 Motor Oil Range	U		0.285	4.16	1	07/24/2021 04:52	WG1710167
(S) o-Terphenyl	*57.8*			*18.0-148*		*07/24/2021 04:52*	WG1710167

Method Blank (MB)

(MB) R3682490-1 07/21/21 15:03

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

L1379450-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1379450-04 07/21/21 15:03 • (DUP) R3682490-3 07/21/21 15:03

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	95.4	95.7	1	0.238		10

Laboratory Control Sample (LCS)

(LCS) R3682490-2 07/21/21 15:03

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) R3682065-1 07/20/21 22:17

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

L1375778-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1375778-04 07/20/21 23:04 • (DUP) R3682065-3 07/20/21 23:14

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	86.9	93.1	1	6.84		20

L1379450-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1379450-03 07/21/21 02:31 • (DUP) R3682065-6 07/21/21 02:40

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) R3682065-2 07/20/21 22:26

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	201	101	90.0-110	

L1378224-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1378224-01 07/20/21 23:23 • (MS) R3682065-4 07/20/21 23:33 • (MSD) R3682065-5 07/20/21 23:42

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	542	38700	46900	44100	1510	996	100	80.0-120	V	V	6.12	20

Method Blank (MB)

(MB) R3682722-2 07/18/21 14:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0262	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3682722-1 07/18/21 14:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.51	100	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*111*	*77.0-120*	

L1379332-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379332-01 07/18/21 23:04 • (MS) R3682722-3 07/18/21 23:28 • (MSD) R3682722-4 07/18/21 23:51

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	545	262	788	800	96.5	98.7	100	10.0-151			1.51	28
(S) a,a,a-Trifluorotoluene(FID)					*117*	*118*		*77.0-120*				

Method Blank (MB)

(MB) R3684440-2 07/17/21 20:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*94.0*			*75.0-131*
(S) 4-Bromofluorobenzene	*96.6*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3684440-1 07/17/21 19:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.146	117	70.0-123	
Ethylbenzene	0.125	0.100	80.0	74.0-126	
Toluene	0.125	0.106	84.8	75.0-121	
Xylenes, Total	0.375	0.301	80.3	72.0-127	
(S) Toluene-d8			*88.8*	*75.0-131*	
(S) 4-Bromofluorobenzene			*101*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*130*	*70.0-130*	

L1379323-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379323-01 07/18/21 01:35 • (MS) R3684440-3 07/18/21 03:47 • (MSD) R3684440-4 07/18/21 04:06

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	1.00	0.0124	1.46	1.48	145	147	8	10.0-149			1.36	37
Ethylbenzene	1.00	4.26	5.14	4.93	88.0	67.0	8	10.0-160			4.17	38
Toluene	1.00	3.03	3.99	3.89	96.0	86.0	8	10.0-156			2.54	38
Xylenes, Total	3.00	31.6	32.3	32.2	23.3	20.0	8	10.0-160			0.310	38
(S) Toluene-d8					*87.6*	*88.8*		*75.0-131*				
(S) 4-Bromofluorobenzene					*98.2*	*102*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*133*	*128*		*70.0-130*	J1			

Method Blank (MB)

(MB) R3683579-1 07/24/21 03:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*60.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3683579-2 07/24/21 03:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	37.1	74.2	50.0-150	
(S) o-Terphenyl			*67.0*	*18.0-148*	

L1379394-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379394-01 07/24/21 07:37 • (MS) R3683579-3 07/24/21 07:50 • (MSD) R3683579-4 07/24/21 08:04

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	48.9	25.3	62.0	47.0	75.2	44.6	1	50.0-150		J3 J6	27.7	20
(S) o-Terphenyl					*65.4*	*57.5*		*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
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.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

L-198

Page : 1 of 1

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	COP SEMU Strawn Battery	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02506
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	# 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
	FS-1 (4')	7/14/2021	1100		X				X		1	N	X		X												X						-01
	SW-1	7/14/2021	1110		X				X		1	N	X		X												X						-02
	SW-2	7/14/2021	1120		X				X		1	N	X		X												X						-03
	SW-3	7/14/2021	1130		X				X		1	N	X		X												X						-04
	SW-4	7/14/2021	1150		X				X		1	N	X		X												X						-05

Relinquished by: Adrian Date: 7.15.21	Time: 7/14/21 13:37	Received by:	Date: 7.15.21 Time: 13:37
Relinquished by:	Date: 7.15.21 Time: 16:10	Received by: SWA	Date: 7.15.21 Time: 16:10
Relinquished by:	Date: Time:	Received by:	Date: 7.16.21 Time: 0815

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 #: _____

L137 1950

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:		
Cooler Received/Opened On: 7/16/21 Temperature:	4.2	
Received By: Bobby Acberry		
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?		✓	

ANALYTICAL REPORT

August 25, 2021

ConocoPhillips - Tetra Tech

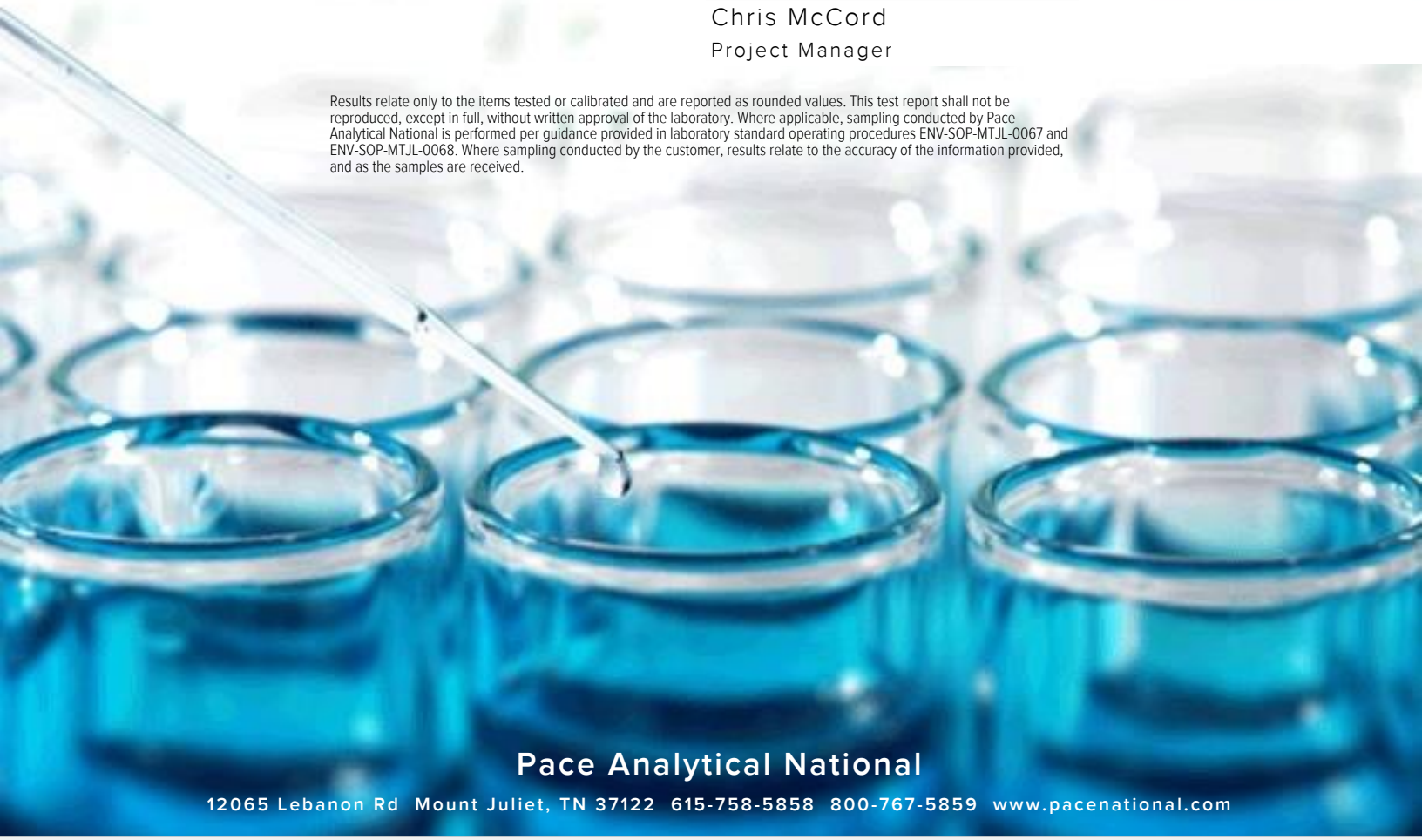
Sample Delivery Group:	L1389289
Samples Received:	08/11/2021
Project Number:	212C-MD-02506
Description:	COP SEMU Strawn Battery

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') L1389289-01 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 08:30 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723777	1	08/17/21 10:58	08/17/21 11:06	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 03:08	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 15:24	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/12/21 21:14	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725444	1	08/19/21 16:03	08/22/21 07:40	CAG	Mt. Juliet, TN

AH-1 (2-3') L1389289-02 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 08:45 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723778	1	08/18/21 06:43	08/18/21 06:49	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 03:18	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 15:48	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/12/21 21:33	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725444	1	08/19/21 16:03	08/22/21 07:54	CAG	Mt. Juliet, TN

AH-2 (0-1') L1389289-03 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 09:00 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723778	1	08/18/21 06:43	08/18/21 06:49	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 03:27	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 16:11	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/12/21 21:52	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725447	1	08/20/21 08:56	08/20/21 17:09	CAG	Mt. Juliet, TN

AH-2 (2-3') L1389289-04 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 09:15 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723778	1	08/18/21 06:43	08/18/21 06:49	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 03:37	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 16:35	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/12/21 22:12	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725447	1	08/20/21 08:56	08/20/21 16:56	CAG	Mt. Juliet, TN

AH-3 (0-1') L1389289-05 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 09:30 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723778	1	08/18/21 06:43	08/18/21 06:49	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 03:46	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 16:59	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/12/21 22:30	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725447	1	08/20/21 08:56	08/20/21 17:23	CAG	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') L1389289-06 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 09:45 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723778	1	08/18/21 06:43	08/18/21 06:49	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 03:56	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 17:22	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/12/21 22:49	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725447	1	08/20/21 08:56	08/20/21 17:36	CAG	Mt. Juliet, TN

AH-4 (0-1') L1389289-07 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 10:00 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723778	1	08/18/21 06:43	08/18/21 06:49	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 04:05	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 17:46	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/12/21 23:08	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725447	1	08/20/21 08:56	08/20/21 17:49	CAG	Mt. Juliet, TN

AH-4 (2-3') L1389289-08 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 10:15 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723778	1	08/18/21 06:43	08/18/21 06:49	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 04:43	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 18:09	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/12/21 23:27	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725447	1	08/20/21 08:56	08/20/21 18:02	CAG	Mt. Juliet, TN

AH-5 (0-1') L1389289-09 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 10:30 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723778	1	08/18/21 06:43	08/18/21 06:49	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 04:53	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 18:33	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/12/21 23:46	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725447	1	08/20/21 08:56	08/20/21 18:15	CAG	Mt. Juliet, TN

AH-5 (2-3') L1389289-10 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 10:45 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723778	1	08/18/21 06:43	08/18/21 06:49	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 05:02	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 18:56	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/13/21 00:05	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725447	1	08/20/21 08:56	08/20/21 18:28	CAG	Mt. Juliet, TN

Cp
Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

AH-6 (0-1') L1389289-11 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 11:00 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723778	1	08/18/21 06:43	08/18/21 06:49	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 05:12	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 19:19	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/13/21 00:24	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725447	10	08/20/21 08:56	08/20/21 19:21	CAG	Mt. Juliet, TN

AH-6 (2-3') L1389289-12 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 11:15 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723779	1	08/18/21 06:33	08/18/21 06:42	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 05:21	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 19:43	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/13/21 00:43	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725447	10	08/20/21 08:56	08/20/21 19:34	CAG	Mt. Juliet, TN

AH-7 (0-1') L1389289-13 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 11:30 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723779	1	08/18/21 06:33	08/18/21 06:42	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 05:31	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 20:06	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/13/21 01:02	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725447	1	08/20/21 08:56	08/20/21 18:55	CAG	Mt. Juliet, TN

AH-7 (2-3') L1389289-14 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 11:45 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723779	1	08/18/21 06:33	08/18/21 06:42	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 05:40	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 20:30	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/13/21 01:22	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725448	40	08/20/21 08:54	08/23/21 02:16	CAG	Mt. Juliet, TN

AH-8 (0-1') L1389289-15 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 12:00 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723779	1	08/18/21 06:33	08/18/21 06:42	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 05:50	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 20:53	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/13/21 01:41	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725448	1	08/20/21 08:54	08/23/21 01:49	CAG	Mt. Juliet, TN

AH-8 (2-3') L1389289-16 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 12:15 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723779	1	08/18/21 06:33	08/18/21 06:42	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 06:00	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722789	1	08/12/21 16:32	08/14/21 21:17	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/13/21 02:00	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725448	5	08/20/21 08:54	08/23/21 02:29	CAG	Mt. Juliet, TN

AH-9 (0-1') L1389289-17 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 12:30 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723779	1	08/18/21 06:33	08/18/21 06:42	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 06:09	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722977	1	08/12/21 16:32	08/14/21 06:19	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/13/21 02:19	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725448	40	08/20/21 08:54	08/21/21 21:17	CAG	Mt. Juliet, TN

AH-9 (2-3') L1389289-18 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 12:45 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723779	1	08/18/21 06:33	08/18/21 06:42	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 07:06	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722977	1	08/12/21 16:32	08/14/21 08:14	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/13/21 02:38	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725448	1	08/20/21 08:54	08/21/21 18:53	CAG	Mt. Juliet, TN

AH-10 (0-1') L1389289-19 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 13:00 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723779	1	08/18/21 06:33	08/18/21 06:42	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 07:16	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722977	1	08/12/21 16:32	08/14/21 08:35	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/13/21 02:57	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725448	1	08/20/21 08:54	08/23/21 02:03	CAG	Mt. Juliet, TN

AH-10 (2-3') L1389289-20 Solid

Collected by: Andrew Garcia | Collected date/time: 08/09/21 13:15 | Received date/time: 08/11/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1723779	1	08/18/21 06:33	08/18/21 06:42	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1722198	1	08/12/21 19:57	08/13/21 07:25	MSP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1722977	1	08/12/21 16:32	08/14/21 08:57	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1722516	1	08/12/21 16:32	08/13/21 03:16	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1725448	10	08/20/21 08:54	08/23/21 02:42	CAG	Mt. Juliet, TN

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

CASE NARRATIVE

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

Chris McCord
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.2		1	08/17/2021 11:06	WG1723777

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.1	24.0	1	08/13/2021 03:08	WG1722198

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	0.0621	B J	0.0261	0.120	1	08/14/2021 15:24	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*77.0-120*		*08/14/2021 15:24*	WG1722789

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		0.000656	0.00140	1	08/12/2021 21:14	WG1722516
Toluene	U		0.00183	0.00702	1	08/12/2021 21:14	WG1722516
Ethylbenzene	U		0.00104	0.00351	1	08/12/2021 21:14	WG1722516
Total Xylenes	U		0.00124	0.00913	1	08/12/2021 21:14	WG1722516
(S) Toluene-d8	*106*			*75.0-131*		*08/12/2021 21:14*	WG1722516
(S) 4-Bromofluorobenzene	*96.9*			*67.0-138*		*08/12/2021 21:14*	WG1722516
(S) 1,2-Dichloroethane-d4	*117*			*70.0-130*		*08/12/2021 21:14*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	4.35	J	1.93	4.81	1	08/22/2021 07:40	WG1725444
C28-C36 Motor Oil Range	5.70		0.329	4.81	1	08/22/2021 07:40	WG1725444
(S) o-Terphenyl	*56.1*			*18.0-148*		*08/22/2021 07:40*	WG1725444

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.8		1	08/18/2021 06:49	WG1723778

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	14.7	J	11.0	23.9	1	08/13/2021 03:18	WG1722198

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	0.0434	B J	0.0259	0.119	1	08/14/2021 15:48	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*98.8*			*77.0-120*		*08/14/2021 15:48*	WG1722789

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		0.000647	0.00139	1	08/12/2021 21:33	WG1722516
Toluene	U		0.00180	0.00693	1	08/12/2021 21:33	WG1722516
Ethylbenzene	U		0.00102	0.00347	1	08/12/2021 21:33	WG1722516
Total Xylenes	U		0.00122	0.00901	1	08/12/2021 21:33	WG1722516
(S) Toluene-d8	*107*			*75.0-131*		*08/12/2021 21:33*	WG1722516
(S) 4-Bromofluorobenzene	*81.8*			*67.0-138*		*08/12/2021 21:33*	WG1722516
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*08/12/2021 21:33*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.92	4.77	1	08/22/2021 07:54	WG1725444
C28-C36 Motor Oil Range	U		0.327	4.77	1	08/22/2021 07:54	WG1725444
(S) o-Terphenyl	*51.5*			*18.0-148*		*08/22/2021 07:54*	WG1725444

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.9		1	08/18/2021 06:49	WG1723778

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.49	20.6	1	08/13/2021 03:27	WG1722198

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	0.0804	B J	0.0224	0.103	1	08/14/2021 16:11	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*98.6*			*77.0-120*		*08/14/2021 16:11*	WG1722789

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000497	0.00106	1	08/12/2021 21:52	WG1722516
Toluene	U		0.00138	0.00532	1	08/12/2021 21:52	WG1722516
Ethylbenzene	U		0.000784	0.00266	1	08/12/2021 21:52	WG1722516
Total Xylenes	U		0.000936	0.00691	1	08/12/2021 21:52	WG1722516
(S) Toluene-d8	*99.1*			*75.0-131*		*08/12/2021 21:52*	WG1722516
(S) 4-Bromofluorobenzene	*80.4*			*67.0-138*		*08/12/2021 21:52*	WG1722516
(S) 1,2-Dichloroethane-d4	*92.9*			*70.0-130*		*08/12/2021 21:52*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.66	4.13	1	08/20/2021 17:09	WG1725447
C28-C36 Motor Oil Range	1.37	J	0.283	4.13	1	08/20/2021 17:09	WG1725447
(S) o-Terphenyl	*68.8*			*18.0-148*		*08/20/2021 17:09*	WG1725447

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.7		1	08/18/2021 06:49	WG1723778

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.3	24.5	1	08/13/2021 03:37	WG1722198

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	0.0536	B J	0.0266	0.122	1	08/14/2021 16:35	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*77.0-120*		*08/14/2021 16:35*	WG1722789

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		0.000677	0.00145	1	08/12/2021 22:12	WG1722516
Toluene	U		0.00189	0.00725	1	08/12/2021 22:12	WG1722516
Ethylbenzene	U		0.00107	0.00363	1	08/12/2021 22:12	WG1722516
Total Xylenes	U		0.00128	0.00943	1	08/12/2021 22:12	WG1722516
(S) Toluene-d8	*111*			*75.0-131*		*08/12/2021 22:12*	WG1722516
(S) 4-Bromofluorobenzene	*94.6*			*67.0-138*		*08/12/2021 22:12*	WG1722516
(S) 1,2-Dichloroethane-d4	*97.9*			*70.0-130*		*08/12/2021 22:12*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.97	4.90	1	08/20/2021 16:56	WG1725447
C28-C36 Motor Oil Range	0.717	J	0.335	4.90	1	08/20/2021 16:56	WG1725447
(S) o-Terphenyl	*64.2*			*18.0-148*		*08/20/2021 16:56*	WG1725447

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.1		1	08/18/2021 06:49	WG1723778

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.3	24.7	1	08/13/2021 03:46	WG1722198

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	0.0645	B J	0.0268	0.123	1	08/14/2021 16:59	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*99.0*			*77.0-120*		*08/14/2021 16:59*	WG1722789

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000686	0.00147	1	08/12/2021 22:30	WG1722516
Toluene	U		0.00191	0.00734	1	08/12/2021 22:30	WG1722516
Ethylbenzene	U		0.00108	0.00367	1	08/12/2021 22:30	WG1722516
Total Xylenes	U		0.00129	0.00954	1	08/12/2021 22:30	WG1722516
(S) Toluene-d8	*109*			*75.0-131*		*08/12/2021 22:30*	WG1722516
(S) 4-Bromofluorobenzene	*93.1*			*67.0-138*		*08/12/2021 22:30*	WG1722516
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*		*08/12/2021 22:30*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.99	4.93	1	08/20/2021 17:23	WG1725447
C28-C36 Motor Oil Range	3.71	J	0.338	4.93	1	08/20/2021 17:23	WG1725447
(S) o-Terphenyl	*64.4*			*18.0-148*		*08/20/2021 17:23*	WG1725447

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.1		1	08/18/2021 06:49	WG1723778

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.3	24.7	1	08/13/2021 03:56	WG1722198

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	0.0555	B J	0.0268	0.123	1	08/14/2021 17:22	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*98.6*			*77.0-120*		*08/14/2021 17:22*	WG1722789

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		0.000685	0.00147	1	08/12/2021 22:49	WG1722516
Toluene	U		0.00191	0.00733	1	08/12/2021 22:49	WG1722516
Ethylbenzene	U		0.00108	0.00367	1	08/12/2021 22:49	WG1722516
Total Xylenes	U		0.00129	0.00953	1	08/12/2021 22:49	WG1722516
(S) Toluene-d8	*105*			*75.0-131*		*08/12/2021 22:49*	WG1722516
(S) 4-Bromofluorobenzene	*88.0*			*67.0-138*		*08/12/2021 22:49*	WG1722516
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*08/12/2021 22:49*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.34	J	1.99	4.93	1	08/20/2021 17:36	WG1725447
C28-C36 Motor Oil Range	3.81	J	0.338	4.93	1	08/20/2021 17:36	WG1725447
(S) o-Terphenyl	*60.9*			*18.0-148*		*08/20/2021 17:36*	WG1725447

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.7		1	08/18/2021 06:49	WG1723778

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.3	24.5	1	08/13/2021 04:05	WG1722198

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	0.0850	B J	0.0266	0.122	1	08/14/2021 17:46	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*98.6*			*77.0-120*		*08/14/2021 17:46*	WG1722789

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		0.000676	0.00145	1	08/12/2021 23:08	WG1722516
Toluene	U		0.00188	0.00724	1	08/12/2021 23:08	WG1722516
Ethylbenzene	U		0.00107	0.00362	1	08/12/2021 23:08	WG1722516
Total Xylenes	U		0.00127	0.00941	1	08/12/2021 23:08	WG1722516
(S) Toluene-d8	*108*			*75.0-131*		*08/12/2021 23:08*	WG1722516
(S) 4-Bromofluorobenzene	*84.5*			*67.0-138*		*08/12/2021 23:08*	WG1722516
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*08/12/2021 23:08*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.97	4.89	1	08/20/2021 17:49	WG1725447
C28-C36 Motor Oil Range	3.74	J	0.335	4.89	1	08/20/2021 17:49	WG1725447
(S) o-Terphenyl	*55.4*			*18.0-148*		*08/20/2021 17:49*	WG1725447

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.4		1	08/18/2021 06:49	WG1723778

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		9.85	21.4	1	08/13/2021 04:43	WG1722198

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	0.0547	B J	0.0232	0.107	1	08/14/2021 18:09	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*98.6*			*77.0-120*		*08/14/2021 18:09*	WG1722789

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000533	0.00114	1	08/12/2021 23:27	WG1722516
Toluene	U		0.00148	0.00571	1	08/12/2021 23:27	WG1722516
Ethylbenzene	U		0.000841	0.00285	1	08/12/2021 23:27	WG1722516
Total Xylenes	U		0.00100	0.00742	1	08/12/2021 23:27	WG1722516
(S) Toluene-d8	*109*			*75.0-131*		*08/12/2021 23:27*	WG1722516
(S) 4-Bromofluorobenzene	*86.6*			*67.0-138*		*08/12/2021 23:27*	WG1722516
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*08/12/2021 23:27*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.77	J	1.72	4.28	1	08/20/2021 18:02	WG1725447
C28-C36 Motor Oil Range	5.04		0.293	4.28	1	08/20/2021 18:02	WG1725447
(S) o-Terphenyl	*74.9*			*18.0-148*		*08/20/2021 18:02*	WG1725447

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.7		1	08/18/2021 06:49	WG1723778

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.1	24.2	1	08/13/2021 04:53	WG1722198

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	0.0600	B J	0.0263	0.121	1	08/14/2021 18:33	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*99.0*			*77.0-120*		*08/14/2021 18:33*	WG1722789

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		0.000664	0.00142	1	08/12/2021 23:46	WG1722516
Toluene	U		0.00185	0.00711	1	08/12/2021 23:46	WG1722516
Ethylbenzene	U		0.00105	0.00355	1	08/12/2021 23:46	WG1722516
Total Xylenes	U		0.00125	0.00924	1	08/12/2021 23:46	WG1722516
(S) Toluene-d8	*108*			*75.0-131*		*08/12/2021 23:46*	WG1722516
(S) 4-Bromofluorobenzene	*88.9*			*67.0-138*		*08/12/2021 23:46*	WG1722516
(S) 1,2-Dichloroethane-d4	*99.6*			*70.0-130*		*08/12/2021 23:46*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.03		1.95	4.84	1	08/20/2021 18:15	WG1725447
C28-C36 Motor Oil Range	7.20		0.332	4.84	1	08/20/2021 18:15	WG1725447
(S) o-Terphenyl	*62.0*			*18.0-148*		*08/20/2021 18:15*	WG1725447

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.3		1	08/18/2021 06:49	WG1723778

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		9.86	21.4	1	08/13/2021 05:02	WG1722198

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	0.0587	B J	0.0233	0.107	1	08/14/2021 18:56	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*99.3*			*77.0-120*		*08/14/2021 18:56*	WG1722789

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		0.000535	0.00114	1	08/13/2021 00:05	WG1722516
Toluene	U		0.00149	0.00572	1	08/13/2021 00:05	WG1722516
Ethylbenzene	U		0.000844	0.00286	1	08/13/2021 00:05	WG1722516
Total Xylenes	U		0.00101	0.00744	1	08/13/2021 00:05	WG1722516
(S) Toluene-d8	*108*			*75.0-131*		*08/13/2021 00:05*	WG1722516
(S) 4-Bromofluorobenzene	*85.6*			*67.0-138*		*08/13/2021 00:05*	WG1722516
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*		*08/13/2021 00:05*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	31.8		1.73	4.29	1	08/20/2021 18:28	WG1725447
C28-C36 Motor Oil Range	39.1		0.294	4.29	1	08/20/2021 18:28	WG1725447
(S) o-Terphenyl	*63.1*			*18.0-148*		*08/20/2021 18:28*	WG1725447

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.8		1	08/18/2021 06:49	WG1723778

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	25.4		9.61	20.9	1	08/13/2021 05:12	WG1722198

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	0.0561	B J	0.0227	0.104	1	08/14/2021 19:19	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*96.3*			*77.0-120*		*08/14/2021 19:19*	WG1722789

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		0.000508	0.00109	1	08/13/2021 00:24	WG1722516
Toluene	U		0.00142	0.00544	1	08/13/2021 00:24	WG1722516
Ethylbenzene	U		0.000802	0.00272	1	08/13/2021 00:24	WG1722516
Total Xylenes	U		0.000958	0.00708	1	08/13/2021 00:24	WG1722516
(S) Toluene-d8	*111*			*75.0-131*		*08/13/2021 00:24*	WG1722516
(S) 4-Bromofluorobenzene	*81.4*			*67.0-138*		*08/13/2021 00:24*	WG1722516
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*08/13/2021 00:24*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	96.4		16.8	41.8	10	08/20/2021 19:21	WG1725447
C28-C36 Motor Oil Range	219		2.86	41.8	10	08/20/2021 19:21	WG1725447
(S) o-Terphenyl	*83.2*			*18.0-148*		*08/20/2021 19:21*	WG1725447

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.9		1	08/18/2021 06:42	WG1723779

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		10.1	22.0	1	08/13/2021 05:21	WG1722198

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	0.0522	B J	0.0239	0.110	1	08/14/2021 19:43	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*96.5*			*77.0-120*		*08/14/2021 19:43*	WG1722789

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		0.000561	0.00120	1	08/13/2021 00:43	WG1722516
Toluene	U		0.00156	0.00600	1	08/13/2021 00:43	WG1722516
Ethylbenzene	U		0.000885	0.00300	1	08/13/2021 00:43	WG1722516
Total Xylenes	U		0.00106	0.00781	1	08/13/2021 00:43	WG1722516
(S) Toluene-d8	*110*			*75.0-131*		*08/13/2021 00:43*	WG1722516
(S) 4-Bromofluorobenzene	*88.8*			*67.0-138*		*08/13/2021 00:43*	WG1722516
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*08/13/2021 00:43*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	645		17.7	44.0	10	08/20/2021 19:34	WG1725447
C28-C36 Motor Oil Range	1110		3.01	44.0	10	08/20/2021 19:34	WG1725447
(S) o-Terphenyl	*94.8*			*18.0-148*		*08/20/2021 19:34*	WG1725447

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.1		1	08/18/2021 06:42	WG1723779

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.3	24.7	1	08/13/2021 05:31	WG1722198

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	0.0687	B J	0.0268	0.123	1	08/14/2021 20:06	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*98.5*			*77.0-120*		*08/14/2021 20:06*	WG1722789

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000686	0.00147	1	08/13/2021 01:02	WG1722516
Toluene	U		0.00191	0.00735	1	08/13/2021 01:02	WG1722516
Ethylbenzene	U		0.00108	0.00367	1	08/13/2021 01:02	WG1722516
Total Xylenes	U		0.00129	0.00955	1	08/13/2021 01:02	WG1722516
(S) Toluene-d8	*103*			*75.0-131*		*08/13/2021 01:02*	WG1722516
(S) 4-Bromofluorobenzene	*95.0*			*67.0-138*		*08/13/2021 01:02*	WG1722516
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*08/13/2021 01:02*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.83		1.99	4.93	1	08/20/2021 18:55	WG1725447
C28-C36 Motor Oil Range	20.2		0.338	4.93	1	08/20/2021 18:55	WG1725447
(S) o-Terphenyl	*66.7*			*18.0-148*		*08/20/2021 18:55*	WG1725447

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.3		1	08/18/2021 06:42	WG1723779

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		9.36	20.3	1	08/13/2021 05:40	WG1722198

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	0.0502	B J	0.0221	0.102	1	08/14/2021 20:30	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*96.9*			*77.0-120*		*08/14/2021 20:30*	WG1722789

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000483	0.00103	1	08/13/2021 01:22	WG1722516
Toluene	U		0.00134	0.00517	1	08/13/2021 01:22	WG1722516
Ethylbenzene	U		0.000762	0.00259	1	08/13/2021 01:22	WG1722516
Total Xylenes	U		0.000910	0.00672	1	08/13/2021 01:22	WG1722516
(S) Toluene-d8	*108*			*75.0-131*		*08/13/2021 01:22*	WG1722516
(S) 4-Bromofluorobenzene	*87.5*			*67.0-138*		*08/13/2021 01:22*	WG1722516
(S) 1,2-Dichloroethane-d4	*97.4*			*70.0-130*		*08/13/2021 01:22*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	265		65.5	163	40	08/23/2021 02:16	WG1725448
C28-C36 Motor Oil Range	511		11.2	163	40	08/23/2021 02:16	WG1725448
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*08/23/2021 02:16*	WG1725448

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.0		1	08/18/2021 06:42	WG1723779

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.2	24.4	1	08/13/2021 05:50	WG1722198

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	0.0626	B J	0.0265	0.122	1	08/14/2021 20:53	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*99.2*			*77.0-120*		*08/14/2021 20:53*	WG1722789

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		0.000673	0.00144	1	08/13/2021 01:41	WG1722516
Toluene	U		0.00187	0.00721	1	08/13/2021 01:41	WG1722516
Ethylbenzene	U		0.00106	0.00360	1	08/13/2021 01:41	WG1722516
Total Xylenes	U		0.00127	0.00937	1	08/13/2021 01:41	WG1722516
(S) Toluene-d8	*113*			*75.0-131*		*08/13/2021 01:41*	WG1722516
(S) 4-Bromofluorobenzene	*86.3*			*67.0-138*		*08/13/2021 01:41*	WG1722516
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*08/13/2021 01:41*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.96	4.88	1	08/23/2021 01:49	WG1725448
C28-C36 Motor Oil Range	3.66	J	0.334	4.88	1	08/23/2021 01:49	WG1725448
(S) o-Terphenyl	*64.5*			*18.0-148*		*08/23/2021 01:49*	WG1725448

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.1		1	08/18/2021 06:42	WG1723779

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.3	24.7	1	08/13/2021 06:00	WG1722198

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	0.0584	B J	0.0268	0.123	1	08/14/2021 21:17	WG1722789
(S) a,a,a-Trifluorotoluene(FID)	*97.8*			*77.0-120*		*08/14/2021 21:17*	WG1722789

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		0.000685	0.00147	1	08/13/2021 02:00	WG1722516
Toluene	U		0.00191	0.00733	1	08/13/2021 02:00	WG1722516
Ethylbenzene	U		0.00108	0.00367	1	08/13/2021 02:00	WG1722516
Total Xylenes	U		0.00129	0.00953	1	08/13/2021 02:00	WG1722516
(S) Toluene-d8	*120*			*75.0-131*		*08/13/2021 02:00*	WG1722516
(S) 4-Bromofluorobenzene	*87.3*			*67.0-138*		*08/13/2021 02:00*	WG1722516
(S) 1,2-Dichloroethane-d4	*93.3*			*70.0-130*		*08/13/2021 02:00*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	56.5		9.92	24.7	5	08/23/2021 02:29	WG1725448
C28-C36 Motor Oil Range	127		1.69	24.7	5	08/23/2021 02:29	WG1725448
(S) o-Terphenyl	*61.1*			*18.0-148*		*08/23/2021 02:29*	WG1725448

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.1		1	08/18/2021 06:42	WG1723779

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		9.48	20.6	1	08/13/2021 06:09	WG1722198

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0223	0.103	1	08/14/2021 06:19	WG1722977
(S) a,a,a-Trifluorotoluene(FID)	*106*			*77.0-120*		*08/14/2021 06:19*	WG1722977

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000495	0.00106	1	08/13/2021 02:19	WG1722516
Toluene	U		0.00138	0.00530	1	08/13/2021 02:19	WG1722516
Ethylbenzene	U		0.000781	0.00265	1	08/13/2021 02:19	WG1722516
Total Xylenes	U		0.000933	0.00689	1	08/13/2021 02:19	WG1722516
(S) Toluene-d8	*107*			*75.0-131*		*08/13/2021 02:19*	WG1722516
(S) 4-Bromofluorobenzene	*85.8*			*67.0-138*		*08/13/2021 02:19*	WG1722516
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*08/13/2021 02:19*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	309		66.3	165	40	08/21/2021 21:17	WG1725448
C28-C36 Motor Oil Range	832		11.3	165	40	08/21/2021 21:17	WG1725448
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*08/21/2021 21:17*	WG1725448

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.5		1	08/18/2021 06:42	WG1723779

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.0	24.0	1	08/13/2021 07:06	WG1722198

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		0.0260	0.120	1	08/14/2021 08:14	WG1722977
(S) a,a,a-Trifluorotoluene(FID)	*109*			*77.0-120*		*08/14/2021 08:14*	WG1722977

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		0.000652	0.00140	1	08/13/2021 02:38	WG1722516
Toluene	U		0.00182	0.00698	1	08/13/2021 02:38	WG1722516
Ethylbenzene	U		0.00103	0.00349	1	08/13/2021 02:38	WG1722516
Total Xylenes	U		0.00123	0.00908	1	08/13/2021 02:38	WG1722516
(S) Toluene-d8	*115*			*75.0-131*		*08/13/2021 02:38*	WG1722516
(S) 4-Bromofluorobenzene	*85.9*			*67.0-138*		*08/13/2021 02:38*	WG1722516
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*08/13/2021 02:38*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	8.32		1.93	4.79	1	08/21/2021 18:53	WG1725448
C28-C36 Motor Oil Range	24.1		0.328	4.79	1	08/21/2021 18:53	WG1725448
(S) o-Terphenyl	*65.2*			*18.0-148*		*08/21/2021 18:53*	WG1725448

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.6		1	08/18/2021 06:42	WG1723779

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		11.0	23.9	1	08/13/2021 07:16	WG1722198

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		0.0260	0.120	1	08/14/2021 08:35	WG1722977
(S) a,a,a-Trifluorotoluene(FID)	*109*			*77.0-120*		*08/14/2021 08:35*	WG1722977

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		0.000652	0.00140	1	08/13/2021 02:57	WG1722516
Toluene	U		0.00181	0.00698	1	08/13/2021 02:57	WG1722516
Ethylbenzene	U		0.00103	0.00349	1	08/13/2021 02:57	WG1722516
Total Xylenes	U		0.00123	0.00907	1	08/13/2021 02:57	WG1722516
(S) Toluene-d8	*108*			*75.0-131*		*08/13/2021 02:57*	WG1722516
(S) 4-Bromofluorobenzene	*86.4*			*67.0-138*		*08/13/2021 02:57*	WG1722516
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*08/13/2021 02:57*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.86		1.93	4.79	1	08/23/2021 02:03	WG1725448
C28-C36 Motor Oil Range	12.6		0.328	4.79	1	08/23/2021 02:03	WG1725448
(S) o-Terphenyl	*57.9*			*18.0-148*		*08/23/2021 02:03*	WG1725448

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.2		1	08/18/2021 06:42	WG1723779

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	08/13/2021 07:25	WG1722198

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	08/14/2021 08:57	WG1722977
(S) a,a,a-Trifluorotoluene(FID)	*108*			*77.0-120*		*08/14/2021 08:57*	WG1722977

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	08/13/2021 03:16	WG1722516
Toluene	U		0.00132	0.00508	1	08/13/2021 03:16	WG1722516
Ethylbenzene	U		0.000748	0.00254	1	08/13/2021 03:16	WG1722516
Total Xylenes	U		0.000894	0.00660	1	08/13/2021 03:16	WG1722516
(S) Toluene-d8	*108*			*75.0-131*		*08/13/2021 03:16*	WG1722516
(S) 4-Bromofluorobenzene	*84.6*			*67.0-138*		*08/13/2021 03:16*	WG1722516
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*08/13/2021 03:16*	WG1722516

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	146		16.2	40.3	10	08/23/2021 02:42	WG1725448
C28-C36 Motor Oil Range	362		2.76	40.3	10	08/23/2021 02:42	WG1725448
(S) o-Terphenyl	*92.7*			*18.0-148*		*08/23/2021 02:42*	WG1725448

Method Blank (MB)

(MB) R3693203-1 08/17/21 11:06

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

L1389285-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1389285-23 08/17/21 11:06 • (DUP) R3693203-3 08/17/21 11:06

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	75.6	75.0	1	0.754		10

Laboratory Control Sample (LCS)

(LCS) R3693203-2 08/17/21 11:06

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

Method Blank (MB)

(MB) R3693505-1 08/18/21 06:49

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

L1389289-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1389289-05 08/18/21 06:49 • (DUP) R3693505-3 08/18/21 06:49

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	81.1	81.7	1	0.802		10

Laboratory Control Sample (LCS)

(LCS) R3693505-2 08/18/21 06:49

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) R3693500-1 08/18/21 06:42

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

L1389289-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1389289-16 08/18/21 06:42 • (DUP) R3693500-3 08/18/21 06:42

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	81.1	82.1	1	1.16		10

Laboratory Control Sample (LCS)

(LCS) R3693500-2 08/18/21 06:42

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) R3692018-1 08/13/21 02:49

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

L1389289-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1389289-07 08/13/21 04:05 • (DUP) R3692018-3 08/13/21 04:15

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

L1389289-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1389289-17 08/13/21 06:09 • (DUP) R3692018-4 08/13/21 06:38

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) R3692018-2 08/13/21 02:59

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

L1389289-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1389289-17 08/13/21 06:09 • (MS) R3692018-5 08/13/21 06:47 • (MSD) R3692018-6 08/13/21 06:57

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	515	U	510	514	99.1	99.8	1	80.0-120			0.775	20

Method Blank (MB)

(MB) R3694107-3 08/14/21 12:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0378	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*

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

(LCS) R3694107-1 08/14/21 11:41 • (LCSD) R3694107-2 08/14/21 12:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.94	6.08	108	111	72.0-127			2.33	20
(S) a,a,a-Trifluorotoluene(FID)				*111*	*111*	*77.0-120*				

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

Method Blank (MB)

(MB) R3692763-2 08/14/21 00:14

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)	*114*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3692763-1 08/13/21 23:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.29	114	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*77.0-120*	

L1389092-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1389092-01 08/14/21 02:23 • (MS) R3692763-3 08/14/21 09:39 • (MSD) R3692763-4 08/14/21 10:01

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	165	U	155	160	94.2	97.1	25	10.0-151			3.03	28
(S) a,a,a-Trifluorotoluene(FID)					*106*	*107*		*77.0-120*				

Method Blank (MB)

(MB) R3694429-2 08/12/21 19:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*86.8*			*75.0-131*
(S) 4-Bromofluorobenzene	*86.7*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*96.3*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3694429-1 08/12/21 18:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.109	87.2	70.0-123	
Ethylbenzene	0.125	0.108	86.4	74.0-126	
Toluene	0.125	0.114	91.2	75.0-121	
Xylenes, Total	0.375	0.340	90.7	72.0-127	
(S) Toluene-d8			*106*	*75.0-131*	
(S) 4-Bromofluorobenzene			*89.9*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*109*	*70.0-130*	

L1389289-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1389289-01 08/12/21 21:14 • (MS) R3694429-3 08/13/21 03:35 • (MSD) R3694429-4 08/13/21 03:54

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	0.174	U	0.181	0.171	104	98.4	1	10.0-149			5.58	37
Ethylbenzene	0.174	U	0.184	0.181	106	104	1	10.0-160			1.54	38
Toluene	0.174	U	0.176	0.188	101	108	1	10.0-156			6.95	38
Xylenes, Total	0.523	U	0.573	0.551	110	105	1	10.0-160			4.00	38
(S) Toluene-d8					*95.7*	*103*		*75.0-131*				
(S) 4-Bromofluorobenzene					*89.8*	*84.9*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*104*	*115*		*70.0-130*				

Method Blank (MB)

(MB) R3694950-1 08/22/21 06:45

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-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*59.6*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3694950-2 08/22/21 06:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	32.7	65.4	50.0-150	
(S) o-Terphenyl			*44.6*	*18.0-148*	

Method Blank (MB)

(MB) R3694742-1 08/20/21 16:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*72.2*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3694742-2 08/20/21 16:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	41.7	83.4	50.0-150	
(S) o-Terphenyl			*70.0*	*18.0-148*	

Method Blank (MB)

(MB) R3694946-1 08/21/21 16:28

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-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*68.3*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3694946-2 08/21/21 16:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	40.0	80.0	50.0-150	
(S) o-Terphenyl			*65.5*	*18.0-148*	

L1389289-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1389289-18 08/21/21 18:53 • (MS) R3694946-3 08/21/21 19:06 • (MSD) R3694946-4 08/21/21 19:19

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	58.1	8.32	57.6	53.9	84.9	79.0	1	50.0-150			6.66	20
(S) o-Terphenyl					*60.4*	*57.6*		*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.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Analysis Request of Chain of Custody Record

Page : 1 of 2

Tetra Tech, Inc.

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

J196

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	SEMU Strawn Battery Header Release	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, NM	**Project #:**	212C-MD-02506
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Andrew Garcia
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

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

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached	Anion/Cation Balance	TPH 8015R	HOLD
1389289		YEAR: 2021																													
01	AH-1 (0'-1')	8/9/21	830		X			X		1	N	X		X											X						
02	AH-1 (2'-3')	8/9/21	845		X			X		1	N	X		X											X						
03	AH-2 (0'-1')	8/9/21	900		X			X		1	N	X		X											X						
04	AH-2 (2'-3')	8/9/21	915		X			X		1	N	X		X											X						
05	AH-3 (0'-1')	8/9/21	930		X			X		1	N	X		X											X						
06	AH-3 (2'-3')	8/9/21	945		X			X		1	N	X		X											X						
07	AH-4 (0'-1')	8/9/21	1000		X			X		1	N	X		X											X						
08	AH-4 (2'-3')	8/9/21	1015		X			X		1	N	X		X											X						
09	AH-5 (0'-1')	8/9/21	1030		X			X		1	N	X		X											X						
10	AH-5 (2'-3')	8/9/21	1045		X			X		1	N	X		X											X						

Relinquished by: Andrew Garcia	Date: 8/10/21	Time: 13:00	Received by: [signature] Date: 8-10-21 Time: 13:00
Relinquished by: [signature]	Date: 8-10-21	Time: 16:00	Received by: [signature] Date: 8-10-21 Time: 16:00
Relinquished by:	Date:	Time:	Received by: T. Robertson Date: 8/11/21 Time: 8:00

ORIGINAL COPY

LAB USE ONLY

Sample Temperature
1.0 + 1.1
A60+

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 #: _____

Cnt=20 TB=0

Analysis Request of Chain of Custody Record

Page : 2 of 2

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	SEMU Strawn Battery Header Release	**Contact Info:**	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, NM	**Project #:**	212C-MD-02506
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Andrew Garcia
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE (YEAR: 2021)	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
1389279																																
11	AH-6 (0'-1')	8/9/21	1100		X			X		1	N	X		X												X						
12	AH-6 (2'-3')	8/9/21	1115		X			X		1	N	X		X												X						
13	AH-7 (0'-1')	8/9/21	1130		X			X		1	N	X		X												X						
14	AH-7 (2'-3')	8/9/21	1145		X			X		1	N	X		X												X						
15	AH-8 (0'-1')	8/9/21	1200		X			X		1	N	X		X												X						
16	AH-8 (2'-3')	8/9/21	1215		X			X		1	N	X		X												X						
17	AH-9 (0'-1')	8/9/21	1230		X			X		1	N	X		X												X						
18	AH-9 (2'-3')	8/9/21	1245		X			X		1	N	X		X												X						
19	AH-10 (0'-1')	8/9/21	1300		X			X		1	N	X		X												X						
20	AH-10 (2'-3')	8/9/21	1315		X			X		1	N	X		X												X						

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Andrew Garcia	8/10/21	13:00		8-10-21	13:00
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	8-10-21	16:00		8-10-21	16:00
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
			T. Robertson	8/11/21	806

ORIGINAL COPY

LAB USE ONLY

Sample Temperature 1.0+1=1.1 AGOT

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 #: _____

ANALYTICAL REPORT

October 26, 2021

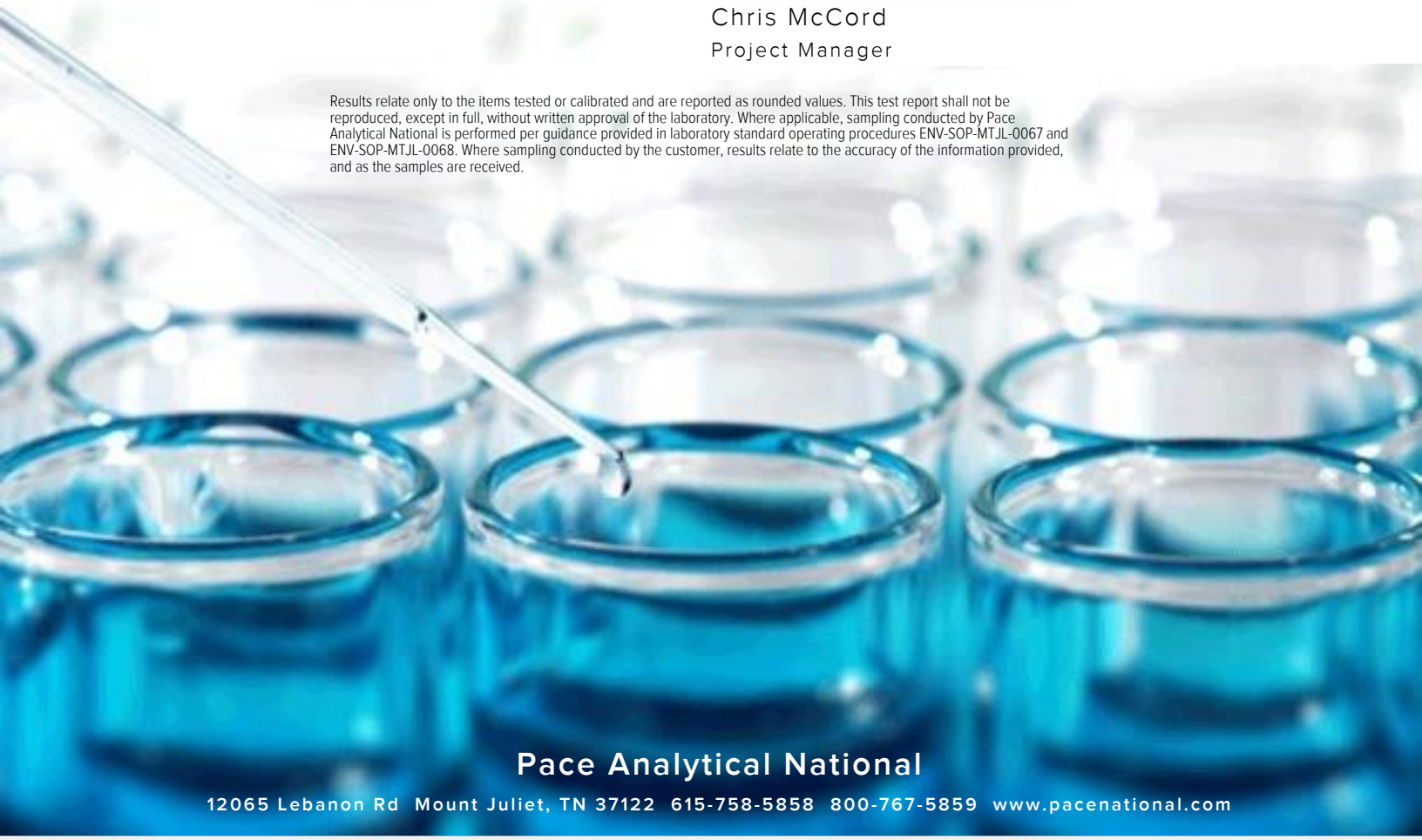
ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1415900
Samples Received:	10/09/2021
Project Number:	212C-MD-02506
Description:	COP SEMU Strawn Battery
Site:	LEA COUNTY,NEW MEXICO
Report To:	Christian Llull
	901 West Wall
	Suite 100
	Midland, TX 79701

Entire Report Reviewed By:

Chris McCord
Project Manager

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



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

TABLE OF CONTENTS

AH-11 (0-1) L1415900-01 Solid

Collected by: Andrew Garcia | Collected date/time: 10/07/21 08:30 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1757591	1	10/15/21 12:45	10/15/21 12:57	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1760693	1	10/20/21 20:54	10/21/21 15:52	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1755314	1	10/13/21 19:22	10/16/21 23:30	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758133	1	10/13/21 19:22	10/16/21 07:33	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1759978	40	10/20/21 05:47	10/20/21 14:42	TJD	Mt. Juliet, TN

AH-11 (2-3) L1415900-02 Solid

Collected by: Andrew Garcia | Collected date/time: 10/07/21 09:00 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1757591	1	10/15/21 12:45	10/15/21 12:57	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1760693	1	10/20/21 20:54	10/21/21 16:01	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1755314	1	10/13/21 19:22	10/16/21 23:53	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758133	1	10/13/21 19:22	10/16/21 07:53	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1759978	100	10/20/21 05:47	10/20/21 17:42	TJD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1759978	40	10/20/21 05:47	10/20/21 14:54	TJD	Mt. Juliet, TN

AH-11 (4-5) L1415900-03 Solid

Collected by: Andrew Garcia | Collected date/time: 10/07/21 09:30 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1757591	1	10/15/21 12:45	10/15/21 12:57	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1760693	1	10/20/21 20:54	10/21/21 16:10	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1755314	1	10/13/21 19:22	10/17/21 00:17	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758133	1	10/13/21 19:22	10/16/21 08:14	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1759978	40	10/20/21 05:47	10/20/21 15:07	TJD	Mt. Juliet, TN

AH-11 (6-7) L1415900-04 Solid

Collected by: Andrew Garcia | Collected date/time: 10/07/21 10:00 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1757750	1	10/16/21 07:52	10/16/21 07:57	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1760693	1	10/20/21 20:54	10/21/21 16:20	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1755314	1	10/13/21 19:22	10/17/21 00:41	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758133	1	10/13/21 19:22	10/16/21 08:34	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1759978	1	10/20/21 05:47	10/20/21 12:01	TJD	Mt. Juliet, TN

AH-11 (7-8) L1415900-05 Solid

Collected by: Andrew Garcia | Collected date/time: 10/07/21 10:30 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1757750	1	10/16/21 07:52	10/16/21 07:57	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1760693	1	10/20/21 20:54	10/21/21 16:58	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1755314	1	10/13/21 19:22	10/17/21 01:05	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758133	1	10/13/21 19:22	10/16/21 08:55	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1759978	1	10/20/21 05:47	10/20/21 13:02	TJD	Mt. Juliet, TN

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

AH-12 (0-1) L1415900-06 Solid

Collected by: Andrew Garcia | Collected date/time: 10/07/21 11:00 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1757750	1	10/16/21 07:52	10/16/21 07:57	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1760693	1	10/20/21 20:54	10/21/21 17:26	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1755314	1	10/13/21 19:22	10/17/21 01:28	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758133	1	10/13/21 19:22	10/16/21 09:16	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1759978	1	10/20/21 05:47	10/20/21 11:48	TJD	Mt. Juliet, TN

AH-12 (2-3) L1415900-07 Solid

Collected by: Andrew Garcia | Collected date/time: 10/07/21 11:30 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1757750	1	10/16/21 07:52	10/16/21 07:57	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1760693	1	10/20/21 20:54	10/21/21 17:36	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1759217	1	10/13/21 19:22	10/20/21 03:47	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758133	1	10/13/21 19:22	10/16/21 09:37	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1759978	1	10/20/21 05:47	10/20/21 10:46	TJD	Mt. Juliet, TN

AH-13 (0-1) L1415900-08 Solid

Collected by: Andrew Garcia | Collected date/time: 10/07/21 13:00 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1757750	1	10/16/21 07:52	10/16/21 07:57	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1760693	1	10/20/21 20:54	10/21/21 17:46	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1759217	1	10/13/21 19:22	10/20/21 04:09	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758133	1	10/13/21 19:22	10/16/21 09:57	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1759978	1	10/20/21 05:47	10/20/21 11:23	TJD	Mt. Juliet, TN

AH-13 (2-3) L1415900-09 Solid

Collected by: Andrew Garcia | Collected date/time: 10/07/21 13:30 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1757750	1	10/16/21 07:52	10/16/21 07:57	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1760693	1	10/20/21 20:54	10/21/21 17:55	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1759217	1	10/13/21 19:22	10/20/21 04:30	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758133	1	10/13/21 19:22	10/16/21 10:18	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1759978	1	10/20/21 05:47	10/20/21 10:59	TJD	Mt. Juliet, TN

AH-14 (0-1) L1415900-10 Solid

Collected by: Andrew Garcia | Collected date/time: 10/07/21 14:30 | Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1757750	1	10/16/21 07:52	10/16/21 07:57	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1760693	1	10/20/21 20:54	10/21/21 18:05	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1759217	1	10/13/21 19:22	10/20/21 04:52	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758133	1	10/13/21 19:22	10/16/21 10:38	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1759978	1	10/20/21 05:47	10/20/21 12:13	TJD	Mt. Juliet, TN

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

SAMPLE SUMMARY

AH-14 (2-3) L1415900-11 Solid

Collected by: Andrew Garcia
Collected date/time: 10/07/21 15:00
Received date/time: 10/09/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1757750	1	10/16/21 07:52	10/16/21 07:57	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1760693	1	10/20/21 20:54	10/21/21 18:14	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1759217	1	10/13/21 19:22	10/20/21 05:14	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758133	1	10/13/21 19:22	10/16/21 10:58	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1759978	1	10/20/21 05:47	10/20/21 11:36	TJD	Mt. Juliet, TN

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

Chris McCord
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.6		1	10/15/2021 12:57	WG1757591

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		9.23	20.1	1	10/21/2021 15:52	WG1760693

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	0.451		0.0218	0.100	1	10/16/2021 23:30	WG1755314
(S) a,a,a-Trifluorotoluene(FID)	*93.0*			*77.0-120*		*10/16/2021 23:30*	WG1755314

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.000673	J	0.000470	0.00101	1	10/16/2021 07:33	WG1758133
Toluene	0.0222		0.00131	0.00504	1	10/16/2021 07:33	WG1758133
Ethylbenzene	U		0.000742	0.00252	1	10/16/2021 07:33	WG1758133
Total Xylenes	0.0136		0.000886	0.00655	1	10/16/2021 07:33	WG1758133
(S) Toluene-d8	*105*			*75.0-131*		*10/16/2021 07:33*	WG1758133
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*10/16/2021 07:33*	WG1758133
(S) 1,2-Dichloroethane-d4	*81.1*			*70.0-130*		*10/16/2021 07:33*	WG1758133

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2400		64.6	161	40	10/20/2021 14:42	WG1759978
C28-C36 Motor Oil Range	4410		11.0	161	40	10/20/2021 14:42	WG1759978
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*10/20/2021 14:42*	WG1759978

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.7		1	10/15/2021 12:57	WG1757591

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		10.1	22.1	1	10/21/2021 16:01	WG1760693

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	J	0.0239	0.110	1	10/16/2021 23:53	WG1755314
(S) a,a,a-Trifluorotoluene(FID)	*80.5*			*77.0-120*		*10/16/2021 23:53*	WG1755314

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		0.000563	0.00121	1	10/16/2021 07:53	WG1758133
Toluene	0.00338	J	0.00157	0.00603	1	10/16/2021 07:53	WG1758133
Ethylbenzene	U		0.000889	0.00301	1	10/16/2021 07:53	WG1758133
Total Xylenes	U		0.00106	0.00784	1	10/16/2021 07:53	WG1758133
(S) Toluene-d8	*108*			*75.0-131*		*10/16/2021 07:53*	WG1758133
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*10/16/2021 07:53*	WG1758133
(S) 1,2-Dichloroethane-d4	*80.7*			*70.0-130*		*10/16/2021 07:53*	WG1758133

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	4610		71.0	176	40	10/20/2021 14:54	WG1759978
C28-C36 Motor Oil Range	9110		30.2	441	100	10/20/2021 17:42	WG1759978
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*10/20/2021 17:42*	WG1759978
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*10/20/2021 14:54*	WG1759978

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.4		1	10/15/2021 12:57	WG1757591

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		9.35	20.3	1	10/21/2021 16:10	WG1760693

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	0.0404	J	0.0220	0.102	1	10/17/2021 00:17	WG1755314
(S) a,a,a-Trifluorotoluene(FID)	*97.0*			*77.0-120*		*10/17/2021 00:17*	WG1755314

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000482	0.00103	1	10/16/2021 08:14	WG1758133
Toluene	0.00501	J	0.00134	0.00516	1	10/16/2021 08:14	WG1758133
Ethylbenzene	U		0.000761	0.00258	1	10/16/2021 08:14	WG1758133
Total Xylenes	0.00452	J	0.000908	0.00671	1	10/16/2021 08:14	WG1758133
(S) Toluene-d8	*108*			*75.0-131*		*10/16/2021 08:14*	WG1758133
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*10/16/2021 08:14*	WG1758133
(S) 1,2-Dichloroethane-d4	*76.8*			*70.0-130*		*10/16/2021 08:14*	WG1758133

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2610		65.4	163	40	10/20/2021 15:07	WG1759978
C28-C36 Motor Oil Range	4420		11.2	163	40	10/20/2021 15:07	WG1759978
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*10/20/2021 15:07*	WG1759978

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.0		1	10/16/2021 07:57	WG1757750

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	J6	9.79	21.3	1	10/21/2021 16:20	WG1760693

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	0.0361	J	0.0231	0.106	1	10/17/2021 00:41	WG1755314
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*10/17/2021 00:41*	WG1755314

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		0.000527	0.00113	1	10/16/2021 08:34	WG1758133
Toluene	U		0.00147	0.00564	1	10/16/2021 08:34	WG1758133
Ethylbenzene	U		0.000831	0.00282	1	10/16/2021 08:34	WG1758133
Total Xylenes	U		0.000993	0.00733	1	10/16/2021 08:34	WG1758133
(S) Toluene-d8	*109*			*75.0-131*		*10/16/2021 08:34*	WG1758133
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*10/16/2021 08:34*	WG1758133
(S) 1,2-Dichloroethane-d4	*74.4*			*70.0-130*		*10/16/2021 08:34*	WG1758133

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.77		1.71	4.26	1	10/20/2021 12:01	WG1759978
C28-C36 Motor Oil Range	8.00		0.291	4.26	1	10/20/2021 12:01	WG1759978
(S) o-Terphenyl	*53.2*			*18.0-148*		*10/20/2021 12:01*	WG1759978

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.0		1	10/16/2021 07:57	WG1757750

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		10.0	21.7	1	10/21/2021 16:58	WG1760693

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	0.0577	J	0.0236	0.109	1	10/17/2021 01:05	WG1755314
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*		*10/17/2021 01:05*	WG1755314

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000548	0.00117	1	10/16/2021 08:55	WG1758133
Toluene	U		0.00153	0.00587	1	10/16/2021 08:55	WG1758133
Ethylbenzene	U		0.000865	0.00293	1	10/16/2021 08:55	WG1758133
Total Xylenes	U		0.00103	0.00763	1	10/16/2021 08:55	WG1758133
(S) Toluene-d8	*105*			*75.0-131*		*10/16/2021 08:55*	WG1758133
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*10/16/2021 08:55*	WG1758133
(S) 1,2-Dichloroethane-d4	*73.6*			*70.0-130*		*10/16/2021 08:55*	WG1758133

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	20.1		1.75	4.35	1	10/20/2021 13:02	WG1759978
C28-C36 Motor Oil Range	37.8		0.298	4.35	1	10/20/2021 13:02	WG1759978
(S) o-Terphenyl	*48.0*			*18.0-148*		*10/20/2021 13:02*	WG1759978

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.8		1	10/16/2021 07:57	WG1757750

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	10/21/2021 17:26	WG1760693

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	0.0407	J	0.0222	0.102	1	10/17/2021 01:28	WG1755314
(S) a,a,a-Trifluorotoluene(FID)	*99.0*			*77.0-120*		*10/17/2021 01:28*	WG1755314

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000488	0.00104	1	10/16/2021 09:16	WG1758133
Toluene	U		0.00136	0.00522	1	10/16/2021 09:16	WG1758133
Ethylbenzene	U		0.000770	0.00261	1	10/16/2021 09:16	WG1758133
Total Xylenes	U		0.000919	0.00679	1	10/16/2021 09:16	WG1758133
(S) Toluene-d8	*105*			*75.0-131*		*10/16/2021 09:16*	WG1758133
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*10/16/2021 09:16*	WG1758133
(S) 1,2-Dichloroethane-d4	*79.2*			*70.0-130*		*10/16/2021 09:16*	WG1758133

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3.52	J	1.65	4.09	1	10/20/2021 11:48	WG1759978
C28-C36 Motor Oil Range	13.0		0.280	4.09	1	10/20/2021 11:48	WG1759978
(S) o-Terphenyl	*67.2*			*18.0-148*		*10/20/2021 11:48*	WG1759978

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	99.2		1	10/16/2021 07:57	WG1757750

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	10/21/2021 17:36	WG1760693

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	10/20/2021 03:47	WG1759217
(S) a,a,a-Trifluorotoluene(FID)	*109*			*77.0-120*		*10/20/2021 03:47*	WG1759217

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	10/16/2021 09:37	WG1758133
Toluene	U		0.00132	0.00508	1	10/16/2021 09:37	WG1758133
Ethylbenzene	U		0.000749	0.00254	1	10/16/2021 09:37	WG1758133
Total Xylenes	U		0.000894	0.00660	1	10/16/2021 09:37	WG1758133
(S) Toluene-d8	*108*			*75.0-131*		*10/16/2021 09:37*	WG1758133
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*10/16/2021 09:37*	WG1758133
(S) 1,2-Dichloroethane-d4	*76.6*			*70.0-130*		*10/16/2021 09:37*	WG1758133

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1.65	J	1.62	4.03	1	10/20/2021 10:46	WG1759978
C28-C36 Motor Oil Range	1.98	B J	0.276	4.03	1	10/20/2021 10:46	WG1759978
(S) o-Terphenyl	*89.4*			*18.0-148*		*10/20/2021 10:46*	WG1759978

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.8		1	10/16/2021 07:57	WG1757750

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.31	20.2	1	10/21/2021 17:46	WG1760693

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	10/20/2021 04:09	WG1759217
(S) a,a,a-Trifluorotoluene(FID)	*109*			*77.0-120*		*10/20/2021 04:09*	WG1759217

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		0.000478	0.00102	1	10/16/2021 09:57	WG1758133
Toluene	U		0.00133	0.00512	1	10/16/2021 09:57	WG1758133
Ethylbenzene	U		0.000755	0.00256	1	10/16/2021 09:57	WG1758133
Total Xylenes	U		0.000901	0.00666	1	10/16/2021 09:57	WG1758133
(S) Toluene-d8	*108*			*75.0-131*		*10/16/2021 09:57*	WG1758133
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*10/16/2021 09:57*	WG1758133
(S) 1,2-Dichloroethane-d4	*74.9*			*70.0-130*		*10/16/2021 09:57*	WG1758133

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.09	J	1.63	4.05	1	10/20/2021 11:23	WG1759978
C28-C36 Motor Oil Range	14.7		0.277	4.05	1	10/20/2021 11:23	WG1759978
(S) o-Terphenyl	*82.0*			*18.0-148*		*10/20/2021 11:23*	WG1759978

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.9		1	10/16/2021 07:57	WG1757750

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	U		9.90	21.5	1	10/21/2021 17:55	WG1760693

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0234	0.108	1	10/20/2021 04:30	WG1759217
(S) a,a,a-Trifluorotoluene(FID)	*108*			*77.0-120*		*10/20/2021 04:30*	WG1759217

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		0.000539	0.00115	1	10/16/2021 10:18	WG1758133
Toluene	U		0.00150	0.00577	1	10/16/2021 10:18	WG1758133
Ethylbenzene	U		0.000850	0.00288	1	10/16/2021 10:18	WG1758133
Total Xylenes	U		0.00101	0.00750	1	10/16/2021 10:18	WG1758133
(S) Toluene-d8	*108*			*75.0-131*		*10/16/2021 10:18*	WG1758133
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*10/16/2021 10:18*	WG1758133
(S) 1,2-Dichloroethane-d4	*79.6*			*70.0-130*		*10/16/2021 10:18*	WG1758133

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3.11	J	1.73	4.31	1	10/20/2021 10:59	WG1759978
C28-C36 Motor Oil Range	5.04		0.295	4.31	1	10/20/2021 10:59	WG1759978
(S) o-Terphenyl	*81.6*			*18.0-148*		*10/20/2021 10:59*	WG1759978

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.2		1	10/16/2021 07:57	WG1757750

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		9.37	20.4	1	10/21/2021 18:05	WG1760693

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	10/20/2021 04:52	WG1759217
(S) a,a,a-Trifluorotoluene(FID)	*108*			*77.0-120*		*10/20/2021 04:52*	WG1759217

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		0.000484	0.00104	1	10/16/2021 10:38	WG1758133
Toluene	0.00362	J	0.00135	0.00519	1	10/16/2021 10:38	WG1758133
Ethylbenzene	U		0.000764	0.00259	1	10/16/2021 10:38	WG1758133
Total Xylenes	0.0104		0.000913	0.00674	1	10/16/2021 10:38	WG1758133
(S) Toluene-d8	*106*			*75.0-131*		*10/16/2021 10:38*	WG1758133
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*10/16/2021 10:38*	WG1758133
(S) 1,2-Dichloroethane-d4	*74.6*			*70.0-130*		*10/16/2021 10:38*	WG1758133

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	4.03	J	1.64	4.07	1	10/20/2021 12:13	WG1759978
C28-C36 Motor Oil Range	15.7		0.279	4.07	1	10/20/2021 12:13	WG1759978
(S) o-Terphenyl	*75.8*			*18.0-148*		*10/20/2021 12:13*	WG1759978

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.3		1	10/16/2021 07:57	WG1757750

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		9.35	20.3	1	10/21/2021 18:14	WG1760693

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	10/20/2021 05:14	WG1759217
(S) a,a,a-Trifluorotoluene(FID)	*109*			*77.0-120*		*10/20/2021 05:14*	WG1759217

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000483	0.00103	1	10/16/2021 10:58	WG1758133
Toluene	0.00378	J	0.00134	0.00517	1	10/16/2021 10:58	WG1758133
Ethylbenzene	U		0.000762	0.00258	1	10/16/2021 10:58	WG1758133
Total Xylenes	0.00883		0.000910	0.00672	1	10/16/2021 10:58	WG1758133
(S) Toluene-d8	*109*			*75.0-131*		*10/16/2021 10:58*	WG1758133
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*10/16/2021 10:58*	WG1758133
(S) 1,2-Dichloroethane-d4	*73.6*			*70.0-130*		*10/16/2021 10:58*	WG1758133

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.61	J	1.64	4.07	1	10/20/2021 11:36	WG1759978
C28-C36 Motor Oil Range	4.17		0.279	4.07	1	10/20/2021 11:36	WG1759978
(S) o-Terphenyl	*87.8*			*18.0-148*		*10/20/2021 11:36*	WG1759978

Method Blank (MB)

(MB) R3717274-1 10/15/21 12:57

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

L1415799-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1415799-08 10/15/21 12:57 • (DUP) R3717274-3 10/15/21 12:57

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	86.2	84.8	1	1.62		10

Laboratory Control Sample (LCS)

(LCS) R3717274-2 10/15/21 12:57

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) R3717646-1 10/16/21 07:57

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

L1415900-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1415900-08 10/16/21 07:57 • (DUP) R3717646-3 10/16/21 07:57

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	98.8	98.9	1	0.0528		10

Laboratory Control Sample (LCS)

(LCS) R3717646-2 10/16/21 07:57

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

Method Blank (MB)

(MB) R3720185-1 10/21/21 15:18

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

L1415900-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1415900-04 10/21/21 16:20 • (DUP) R3720185-3 10/21/21 16:29

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

L1415900-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1415900-11 10/21/21 18:14 • (DUP) R3720185-6 10/21/21 18:24

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) R3720185-2 10/21/21 15:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	192	96.1	90.0-110	

L1415900-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1415900-04 10/21/21 16:20 • (MS) R3720185-4 10/21/21 16:39 • (MSD) R3720185-5 10/21/21 16:48

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	532	U	379	398	71.2	74.9	1	80.0-120	J6	J6	5.02	20

Method Blank (MB)

(MB) R3718162-3 10/16/21 17:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3718162-1 10/16/21 16:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.32	96.7	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*77.0-120*	

Method Blank (MB)

(MB) R3721497-2 10/20/21 03:26

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)	*109*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3721497-1 10/20/21 02:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.15	75.5	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*99.3*	*77.0-120*	

L1416117-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416117-01 10/20/21 07:23 • (MS) R3721497-3 10/20/21 10:59 • (MSD) R3721497-4 10/20/21 11:21

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.56	U	2.42	2.36	43.6	42.5	1	10.0-151			2.53	28
(S) a,a,a-Trifluorotoluene(FID)					*83.0*	*83.4*		*77.0-120*				

Method Blank (MB)

(MB) R3721306-3 10/16/21 06:11

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	*106*			*75.0-131*
(S) 4-Bromofluorobenzene	*101*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*77.0*			*70.0-130*

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

(LCS) R3721306-1 10/16/21 04:49 • (LCSD) R3721306-2 10/16/21 05:10

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	0.111	0.119	88.8	95.2	70.0-123			6.96	20
Ethylbenzene	0.125	0.114	0.114	91.2	91.2	74.0-126			0.000	20
Toluene	0.125	0.125	0.127	100	102	75.0-121			1.59	20
Xylenes, Total	0.375	0.376	0.382	100	102	72.0-127			1.58	20
(S) Toluene-d8				*106*	*105*	*75.0-131*				
(S) 4-Bromofluorobenzene				*98.7*	*102*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*80.0*	*83.7*	*70.0-130*				

L1415776-32 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1415776-32 10/16/21 12:21 • (MS) R3721306-4 10/16/21 13:50 • (MSD) R3721306-5 10/16/21 14:11

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	49.5	18.1	36.9	54.8	38.0	74.1	396	10.0-149		J3	39.0	37
Ethylbenzene	49.5	5.81	30.3	50.9	49.5	91.1	396	10.0-160		J3	50.7	38
Toluene	49.5	19.1	41.6	60.8	45.5	84.2	396	10.0-156			37.5	38
Xylenes, Total	148	U	113	174	76.4	118	396	10.0-160		J3	42.5	38
(S) Toluene-d8					*108*	*110*		*75.0-131*				
(S) 4-Bromofluorobenzene					*104*	*104*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*81.1*	*83.5*		*70.0-130*				

Method Blank (MB)

(MB) R3719155-1 10/20/21 10:22

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-C36 Motor Oil Range	0.358	J	0.274	4.00
(S) o-Terphenyl	*90.1*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3719155-2 10/20/21 10:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	43.6	87.2	50.0-150	
(S) o-Terphenyl			*88.1*	*18.0-148*	

L1415900-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1415900-10 10/20/21 12:13 • (MS) R3719155-3 10/20/21 12:25 • (MSD) R3719155-4 10/20/21 12:38

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	49.5	4.03	42.3	43.7	77.2	78.7	1	50.0-150			3.32	20
(S) o-Terphenyl					*61.1*	*64.2*		*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
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.
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.

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	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Analysis Request of Chain of Custody Record

Page : 1 of 2

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	SEMU Strawn Battery Header Release	**Contact Info:**	Email: Christian.Llull@tetratech.com Phone: (512) 565-0190
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02506
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Andrew Garcia
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	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
L1415900																																
-01	AH-11 (0'-1')	10/07/21	830		X			X		1	N	X		X												X						
-02	AH-11 (2'-3')	10/07/21	900		X			X		1	N	X		X												X						
-03	AH-11 (4'-5')	10/07/21	930		X			X		1	N	X		X												X						
-04	AH-11 (6'-7')	10/07/21	1000		X			X		1	N	X		X												X						
-05	AH-11 (7'-8')	10/07/21	1030		X			X		1	N	X		X												X						
-06	AH-12 (0'-1')	10/07/21	1100		X			X		1	N	X		X												X						
-07	AH-12 (2'-3')	10/07/21	1130		X			X		1	N	X		X												X						
-08	AH-13 (0'-1')	10/07/21	1300		X			X		1	N	X		X												X						
-09	AH-13 (2'-3')	10/07/21	1330		X			X		1	N	X		X												X						
-10	AH-14 (0'-1')	10/07/21	1430		X			X		1	N	X		X												X						

Relinquished by: Andrew Garcia	Date: 8-Oct-21	Time: 13:00	Received by:	Date: 10-8-21	Time: 13:00
Relinquished by:	Date: 10-8-21	Time: 16:00	Received by: SwA	Date: 10-8-21	Time: 16:00
Relinquished by:	Date:	Time:	Received by:	Date: 10/9/21	Time: 0930

ORIGINAL COPY

H100

1.0+0=1.0

LAB USE ONLY

Sample Temperature

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

Analysis Request of Chain of Custody Record

Page : 2 of 2

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	SEMU Strawn Battery Header Release	**Contact Info:**	Email: Christian.Llull@tetratech.com Phone: (512) 565-0190
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-02506
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	Andrew Garcia
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY) L1415900	SAMPLE IDENTIFICATION	DATE (YEAR: 2021)	TIME	WATER	SOIL	HCL	HNO_3	ICE	NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
-11	AH-14 (2'-3')	10/07/21	1500		X			X		1	N	X		X												X						

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Andrew Garcia [signature]	8-Oct-21	13:00	[signature]	10-8-21	13:00
[signature]	10-8-21	16:00	[signature]	10-8-21	16:00

LAB USE ONLY

Sample Temperature

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: ___________

ORIGINAL COPY

1.0±0=1.0 A790

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

SEMU Strawn Battery Header Release

October 20, 2021

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.

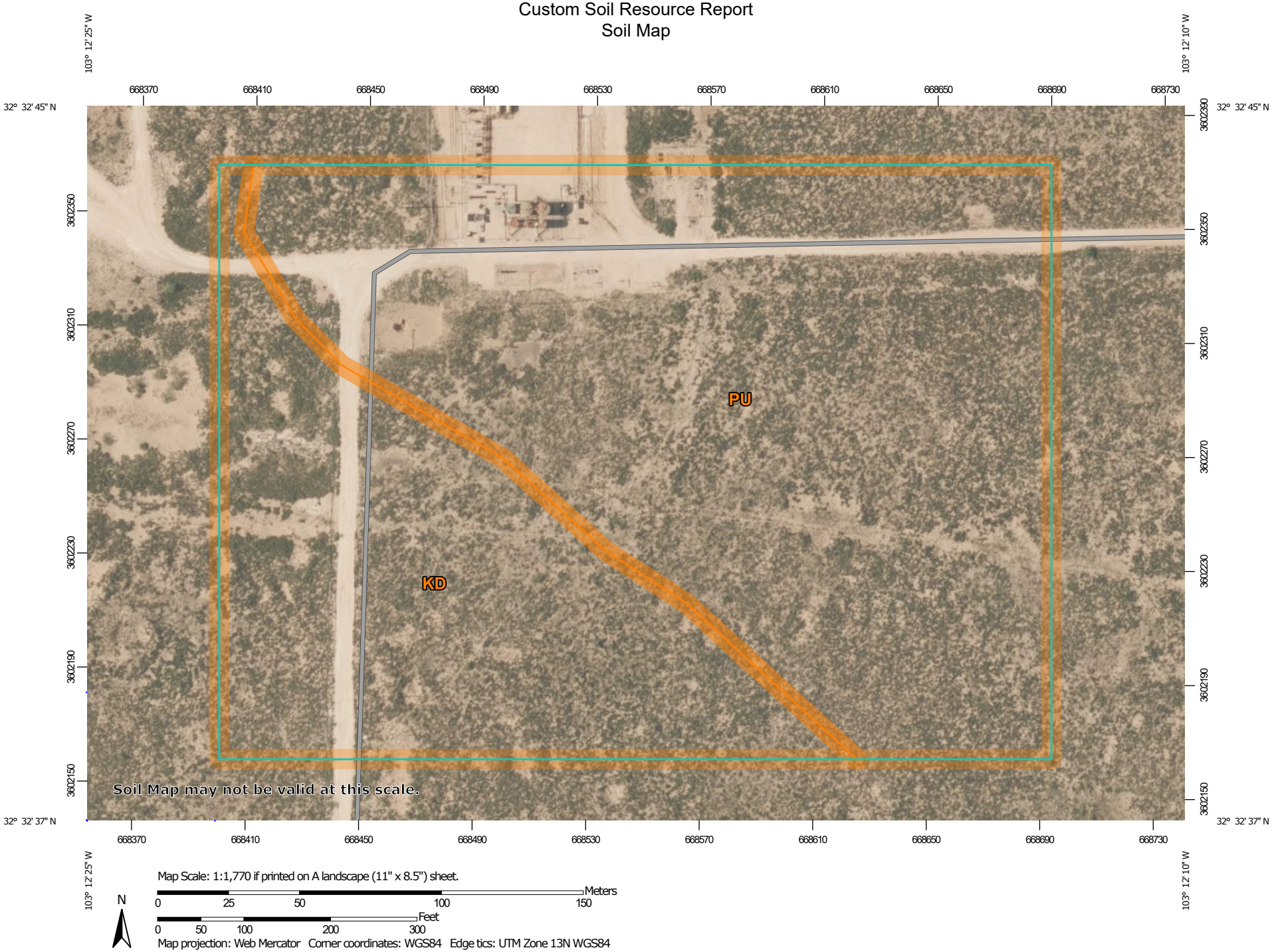
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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 18, Sep 10, 2021

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

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

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KD	Kermit-Palomas fine sands, 0 to 12 percent slopes	5.2	34.3%
PU	Pyote and Maljamar fine sands	10.0	65.7%
Totals for Area of Interest		**15.2**	**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

KD—Kermit-Palomas fine sands, 0 to 12 percent slopes

Map Unit Setting

National map unit symbol: dmpv
Elevation: 3,000 to 4,400 feet
Mean annual precipitation: 10 to 12 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: 70 percent
Palomas and similar soils: 20 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kermit

Setting

Landform: Dunes
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex
Parent material: Calcareous sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 8 inches: fine sand
C - 8 to 60 inches: fine sand

Properties and qualities

Slope: 3 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
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R042XC005NM - Deep Sand
Hydric soil rating: No

Description of Palomas

Setting

Landform: Dunes

Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex
Parent material: 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 5 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: 50 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: 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

Maljamar

Percent of map unit: 4 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Pyote

Percent of map unit: 4 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Palomas

Percent of map unit: 1 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Dune land

Percent of map unit: 1 percent
Hydric soil rating: No

PU—Pyote and Maljamar fine sands

Map Unit Setting

National map unit symbol: dmqq
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 12 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

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

Description of Pyote

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 30 inches: fine sand
Bt - 30 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A

Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

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
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 6e
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: 10 percent
Ecological site: R042XC022NM - Sandhills
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 79347

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 79347
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	Closure report due 05/23/2022	2/23/2022
chensley	NOTE: The OCD requires a copy of all correspondence relative to remedial projects be included in all proposal and/or final closure reports. Correspondence required to be included in reports may include, but not necessarily limited to, extension requests, liner inspection notifications, sample event notifications, spill/release/fire notifications, and variance requests. This will allow for notifications and requests to become a documented part of the incident file.	2/23/2022