TETRA TECH

November 8, 2021

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

Re: Deferral Request
ConocoPhillips Company
Buck Federal Central Tank Battery
Unit Letter P, Section 17, Township 26 South, Range 32 East
Lea County, New Mexico
1RP-4275
Incident ID nJXK1613337497

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips Company (COP) to evaluate a release that occurred at the Buck Federal Central Tank Battery (CTB), Unit Letter P, Section 17, Township 26 South, Range 32 East, in Lea County, New Mexico (site). The site coordinates are 32.03722°, -103.6967°. The site location is shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report, the release was discovered on May 11, 2016, and released approximately 6 barrels of produced water due to a faulty valve. The release occurred within the earthen berm of the tank battery. Immediate action was to shut down and replace the valve. Vacuum trucks were dispatched to remove the freestanding fluids, recovering approximately 5 barrels of produced water. The initial C-141 Form is included in Appendix A.

The release was subsequently assigned the Remediation Permit (RP) number 1RP-4275 and the Incident ID nJXK1613337497. The 1RP-4275 release is included in an Agreed Compliance Order-Releases (ACO-R) between COP and the NMOCD signed on May 7 and 9, 2019, respectively.

SITE CHARACTERIZATION

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

According to the New Mexico Office of the State Engineers (NMOSE reporting system, there are no water wells within a ½ mile (800-meter) radius of the site. There are four (4) water wells within 1.1-mile (1900-meter) radius with an average depth to groundwater at 240 feet (ft.) below ground surface (bgs). The site characterization data is included in Appendix B.

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REGULATORY FRAMEWORK

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

Based on the site characterization and the high karst potential in the Site vicinity, the remediation RRALs for the Site are as follows:

Constituent	Site RRALs
Chloride	600 mg/kg
TPH	100 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

As this reported contamination is in areas immediately under or around production tanks and pipelines, full remediation would cause a major facility deconstruction. The full final remediation, restoration and reclamation for this release is requested to be deferred until the equipment is removed during other operations, or when the facility is retrofitted or abandoned, whichever comes first.

INITIAL SITE ASSESSMENT

On April 24, 2016, COP personnel were onsite to visually assess a previous release at the Buck Federal CTB. Photographs were taken of the release area inside the berm. Based on the visual assessment, COP was able to prepare a Corrective Action Plan (CAP) for this previous release at the site (1RP-4262), dated April 28, 2016. The CAP provided the C-141, photographs of the release area, and outlined actions to be taken to remediate the release (excavate down six inches bgs). The CAP also detailed that three discrete floor samples would be collected and analyzed for chloride, Gasoline Range Organics (GRO), Diesel Range Organics (DRO) and BTEX and that excavated soils would be taken to an NMOCD approved facility for disposal. The CAP was conditionally approved by the NMOCD, with a stipulation to provide a map of the spill area depicting the confirmation sampling points. The CAP was apparently revised and resubmitted (through available email correspondence) and marked conditionally approved.

A second CAP (erroneously dated April 28, 2016) was prepared for the additional (and subject of this report) release (1RP-4275) and also submitted to NMOCD. The CAP provided the C-141, a photograph of the release area, and again outlined actions to be taken to remediate the release. The CAP also detailed that three discrete floor samples would be collected and analyzed for chloride, GRO, DRO and BTEX and that excavated soils would be taken to an NMOCD approved facility for disposal. The second CAP was approved May 16, 2016.

The approximate release extent is indicated in Figure 3. The proposed remediation activities were described within the CAPs submitted to NMOCD. From email correspondence, it is apparent that excavation activities were conducted for the 1RP-4262 release, at least in part. Further correspondence between NMOCD and COP indicated that NMOCD had additional questions/comments. COP then drafted and submitted a mitigation deferral request to NMOCD on August 2, 2017. Email correspondence between NMOCD and COP indicated that NMOCD found the deferral request incomplete.

As a result of the additional correspondence, on October 19, 2017, a total of five (5) trenches (SP-1 through SP-5) were installed in the eastern portion of the release area by Stingray Environmental and Construction, LLC to assess and delineate the extent of impacted soil (Figure 4) to a depth of 7 feet bgs. Grab samples were field screened for chlorides and organic vapors with a PID at multiple depths. The samples collected from 7 feet bgs at each location were collected and analyzed for TPH by EPA method 8015 modified, BTEX

by EPA Method 8260B and chlorides by EPA method 300.0. The results of the sampling event are summarized in Table 1. Copies of analytical reports and chain-of-custody documentation are included in Appendix C.

The analytical results associated with the initial site assessment exceeded the specified RRAL (100 mg/kg) for total TPH (GRO + DRO + ORO) at 7' bgs at SP-1 and SP-2. However, the analytical results associated with all five of these sample locations were below the specified RRAL for chlorides and BTEX and the SP-3, SP-4 and SP-5 analytical results were below the most stringent RRALs for TPH, BTEX and chloride at a depth of 7 feet bgs.

COP submitted a second mitigation deferral request to NMOCD on November 14, 2017. Although the CAPs were approved, following the written remedial scope of work did not result in excavation floor samples below the RRALs. COP evaluated the Site for additional remediation and determined that full remediation would require a complete facility deconstruction.

ADDITIONAL SITE ASSESSMENT

Tetra Tech personnel were onsite to further delineate and sample the release area in 2018. On September 17 and October 4, 2018, a total of nine (9) soil borings (BH-1 through BH-9) ranging in total depth from 1 to 5 feet bgs were installed inside the berm to define the vertical extents of the release and to assess the extent of impacted soil. A total of 23 soil samples were collected from the nine boring locations from within the release area (Figure 4). Selected samples were field screened and submitted to an analytical laboratory to be analyzed for TPH by EPA method 8015 modified, BTEX by EPA Method 8260B and chlorides by EPA method 300.0. Copies of analytical reports and chain-of-custody documentation are included in Appendix C.

The analytical results associated with the additional site assessment within the release area were below the RRAL for BTEX at eight of nine locations. BH-1 (1-2') exceeded the RRAL for BTEX. The analytical results associated with the samples within the release area were above the RRALs for total TPH (GRO + DRO + ORO) and/or chloride in all samples except BH-1 (2-3'), BH-1 (3-4'), BH-2 (3-4') and BH-3 (0-1'). The sample locations are shown on Figure 4. The results of both the 2017 and 2018 sampling events are summarized in Table 1.

REMEDIATION ACTIVITIES AND CONFIRMATION SAMPLING

Because of the high karst potential at the Site, COP expressed a desire to remediate the impacted soil within the berm to the maximum extent practicable in order to reduce the environmental risk. On November 12 through December 10, 2018, Tetra Tech personnel were onsite to supervise the excavation and remediation activities. The excavated areas and depths of excavation are shown on Figure 5. The excavation widths and depths were guided based on the laboratory data to safely remove the impacted soils to the maximum extent practicable.

A total of twenty-nine (29) excavation floor samples were collected at locations AH-1 through AH-23. Additionally, nineteen (19) sidewall samples were collected. The samples were analyzed for TPH by EPA method 8015 modified, BTEX by EPA Method 8260B and chlorides by EPA method 300.0. Copies of laboratory analytical reports and chain-of-custody documentation are included in Appendix C.

As shown in Figure 5, the areas containing sample locations AH-1 through AH-5 and AH-7; AH-9 through AH-16; and AH-18 through AH-23 were excavated to a total depth of 3.0 feet bgs, either with machinery or via hand digging. The areas containing sample locations AH-6, AH-8 and AH-17 were excavated to a depth of 6 feet bgs. Excavations in the area immediately south of the tank battery were halted after a liner was encountered at 2 feet bgs. Therefore, a floor sample was not collected in this area.

The analytical results for all sidewall samples were below the RRAL for BTEX. Additionally, sidewall samples NSW-3, WSW-2, WSW-3 and ESW-3 were below RRALs for TPH and chlorides. The other fifteen sidewall samples exceeded the RRALs for TPH and/or chloride. However, the sidewalls within the

excavation areas were either in close proximity to production equipment, or extended to the foot of the containment berm, so it was not feasible to expand the excavation areas outward.

Approximately 750 cubic yards of material were transported to the R360 facility in Hobbs, New Mexico. Once remedial excavation areas were extended to the maximum extents practicable, the excavated areas were backfilled with clean material to surface grade. Copies of the waste manifests are included in Appendix D.

ADDITIONAL SITE DELINEATION

Based on review of analytical results from all previous sampling events, it appears that vertical delineation of contamination was attained as part of the assessment and remedial activities at the Site. In the northern portion of the release area, the sample results from SP-3, SP-4 and SP-5 indicate the TPH, BTEX and chloride levels are below the specified RRALs at a depth of 7 feet bgs. Sample results from AH-17, located in the southern portion of the Site, indicate TPH, BTEX and chloride levels are below the RRALs at a depth of 6 feet bgs.

Based on laboratory analytical results from the previous sampling events, the Site required additional assessment to delineate the horizontal extents of contamination. To define the horizontal extents of the release and to assess soil contamination in this area, if any, Tetra Tech personnel were onsite to investigate the release area perimeter in 2019. On October 8, 2019, a total of four (4) soil borings (BH-19-1 through BH-19-4) were installed to total depths ranging from 10 to 15 feet bgs around the exterior of the battery firewall. A total of 18 soil samples were collected from the four boring locations (Figure 6). Selected samples were field screened and submitted to an analytical laboratory for Total Petroleum Hydrocarbons (TPH), benzene, toluene, ethylbenzene and xylenes (BTEX) and chlorides (USEPA method 300.0) analysis. Copies of analytical reports and chain-of-custody documentation are included in Appendix C.

The results of the 2019 sampling event are summarized in Table 3. The analytical results associated with the release area perimeter samples were below the RRAL for BTEX, total TPH (GRO + DRO + ORO) and chloride in all samples. The boring locations are shown on Figure 6. Photographic documentation of the assessment and remediation activities is included as Appendix E.

2020 DEFERRAL REQUEST

Following the October 2019 additional site delineation activities, the Deferral Request was prepared by Tetra Tech on behalf of ConocoPhillips and submitted to NMOCD on January 2, 2020 with fee application payment PO Number 4FLOG-200102-C-1410. In addition to the 1RP-4275 release, the January 2020 report requested deferral for two other releases (1RP-4262 and 1RP-4431) that occurred at the Buck Federal CTB within the same general area. The Deferral Request was denied via email by Bradford Billings on Thursday, June 17, 2021 with the following reason for denial:

- *"Although deferral can be granted based on data presented, the following: Each individual incident number must be associated/attached to its own report. The offered report has three incident numbers attached. Again, this report can be used for each incident, but they must stand alone by incident. Resubmit each separately and they can be approved."*

CONCLUSION

After the remedial activities conducted at the Site, the contamination remaining in place does not cause an imminent risk to human health, the environment, or groundwater. The release was delineated horizontally and vertically, as detailed above.

Final remediation and reclamation shall take place in accordance with 19.15.29.12 and 19.15.29.13 NMAC once the site is no longer being used for oil and gas operations. ConocoPhillips respectfully requests that NMOCD will consider delaying final remediation activities at the site until the end of life of the battery. At

time of abandonment, retrofit, or inactivity, remediation will be completed in addition to reclamation. In accordance with the NMOCD-stated reasoning for denial of the January 2020 Deferral Request, ConocoPhillips requests deferral for the impacted area associated with the specific 1RP-4275 release (**nJXK1613337497)** until site abandonment. The completed C-141 forms are enclosed in Appendix A.

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

Sincerely,
Tetra Tech, Inc.

Christian M. Llull, P.G.
Program Manager

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

List of Attachments

Figures:

- Figure 1 – Site Location Map
- Figure 2 – Site Location/Topographic Map
- Figure 3 – Approximate Release Extent
- Figure 4 – Site Assessment Map
- Figure 5 – Remediation Extents and Confirmation Sampling Locations
- Figure 6 – Additional Horizontal Assessment

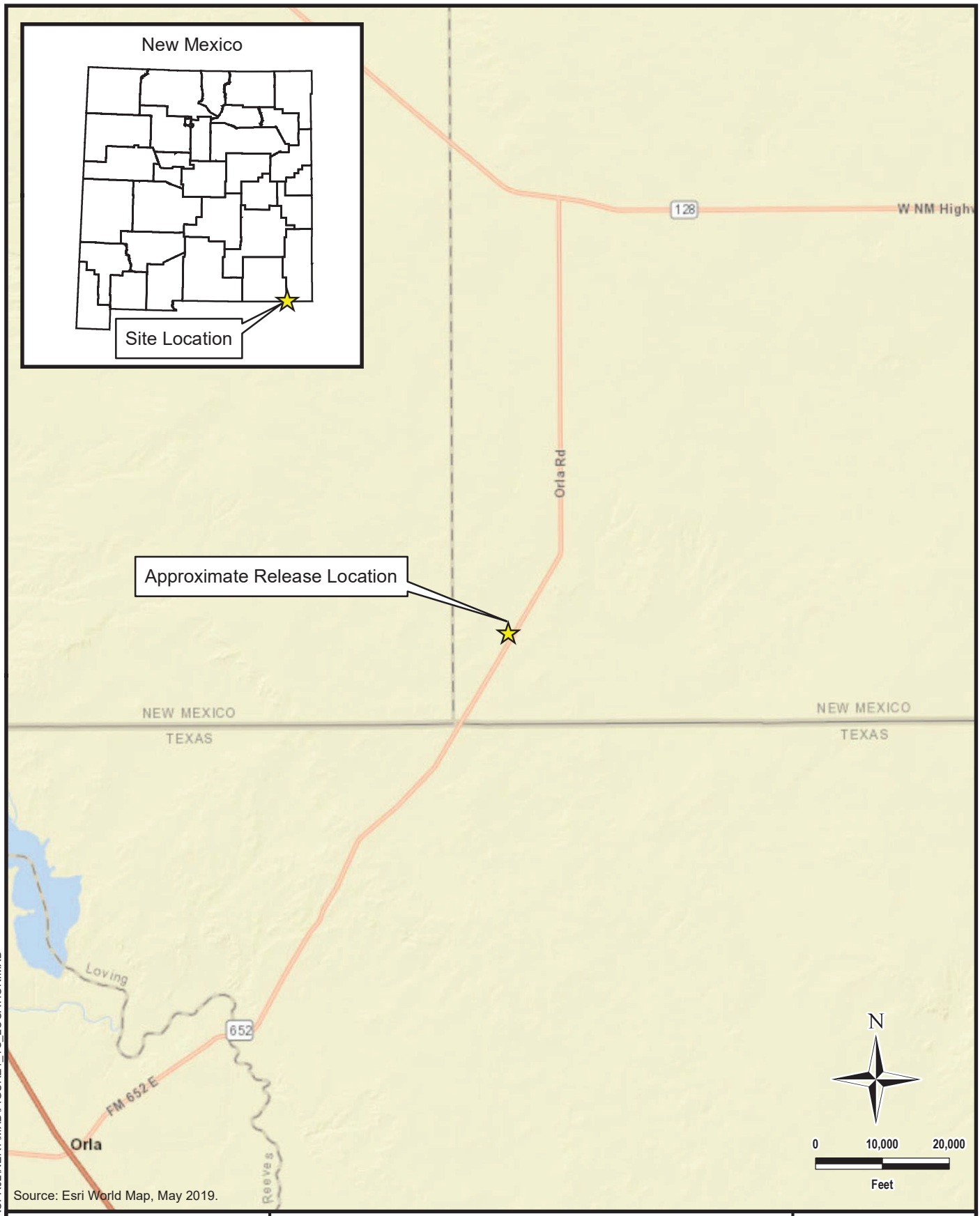
Tables:

- Table 1 – Summary of Analytical Results – Initial Soil Assessment
- Table 2 – Summary of Analytical Results – Confirmation Soil Sampling
- Table 3 – Summary of Analytical Results – Horizontal Delineation

Appendices:

- Appendix A – C-141 Form
- Appendix B – NMOSE Groundwater Data and Karst Potential Map
- Appendix C – Laboratory Analytical Reports
- Appendix D – Waste Manifests
- Appendix E – Photographic Documentation

FIGURES



\\TTS134FS1\SUP-GIS\ARCPRJ2\NERT\MXD\FIGURE1_TS_LOCATION.MXD

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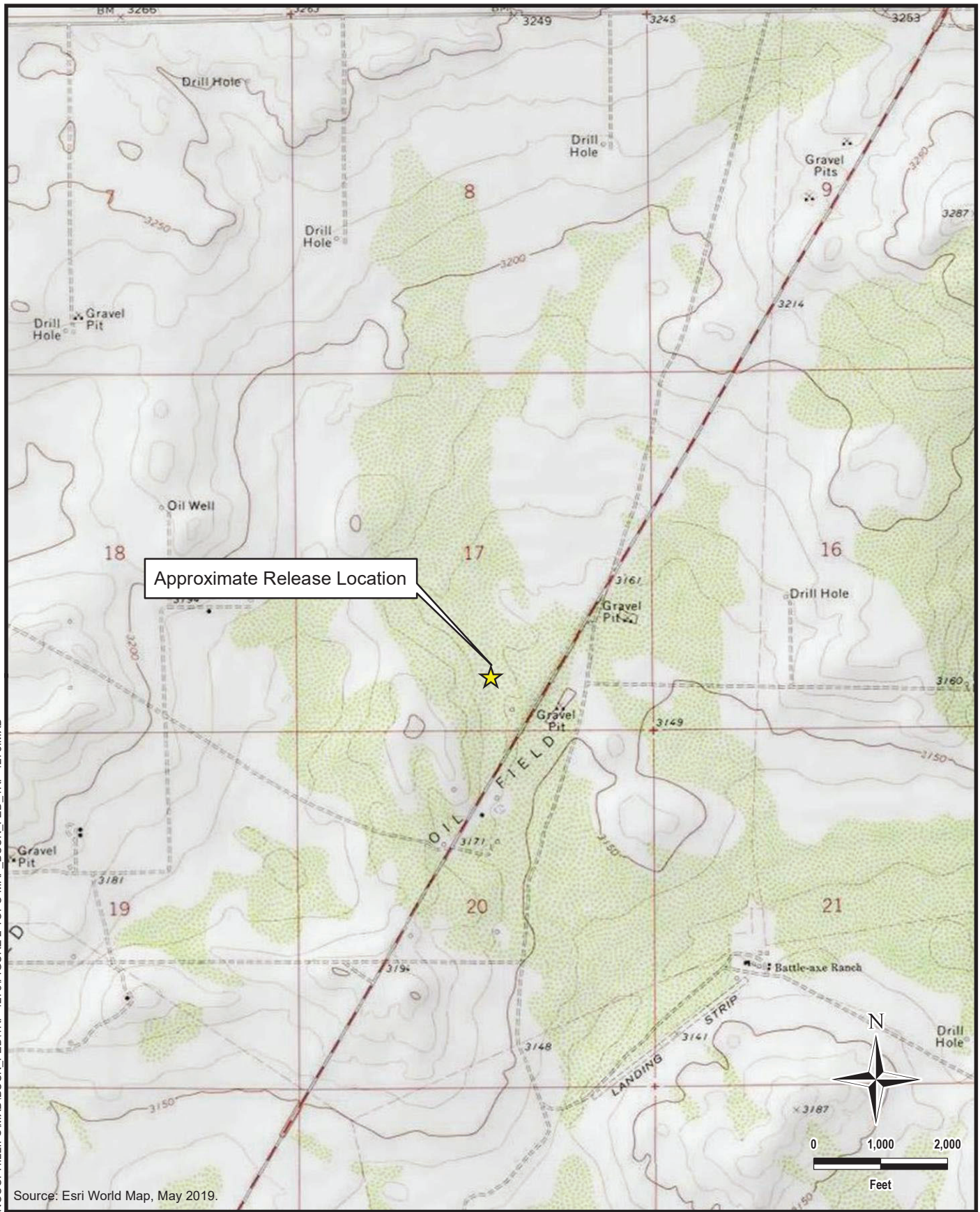
CONOCOPHILLIPS

1RP-4275
(32.037398°, -103.696659°)
LEA COUNTY, NEW MEXICO

BUCK FEDERAL CENTRAL TANK BATTERY
OVERVIEW MAP

PROJECT NO.:	212C-MD-01491
DATE:	OCTOBER 06, 2021
DESIGNED BY:	AAM

Figure No.
1



Source: Esri World Map, May 2019.

DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\BUCK_FED\1RP-4275\FIGURE 2 TOPO MAP_BUCK_FED_1RP-4275.MXD

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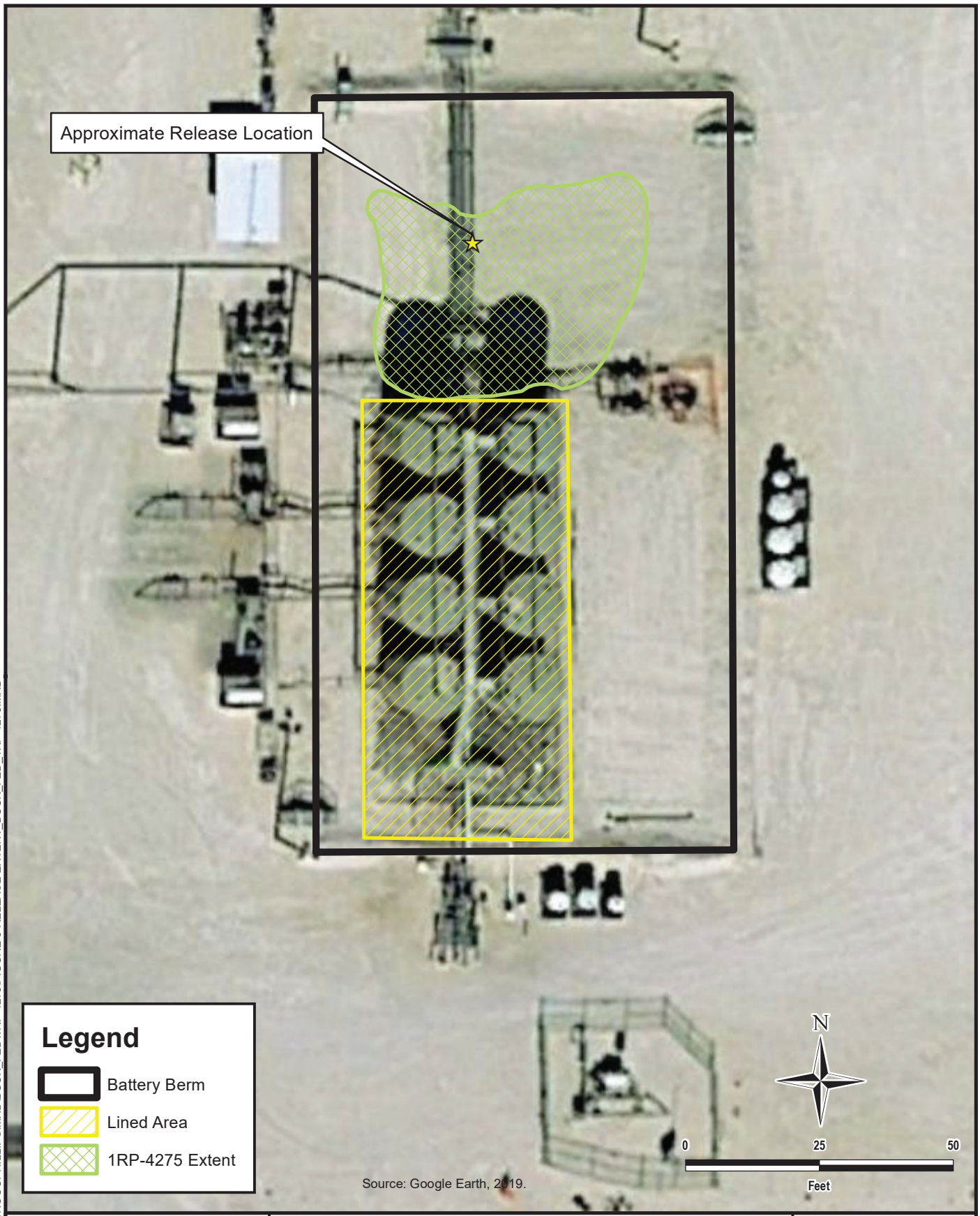
CONOCOPHILLIPS

1RP-4275
(32.037398°, -103.696659°)
LEA COUNTY, NEW MEXICO

BUCK FEDERAL CENTRAL TANK BATTERY
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-01491
DATE:	OCTOBER 07, 2021
DESIGNED BY:	AAM

Figure No.
2



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\BUCK_FED\1RP-4275\FIGURE 3 RELEASE EXTENT_BUCK_FED_1RP-4275.MXD

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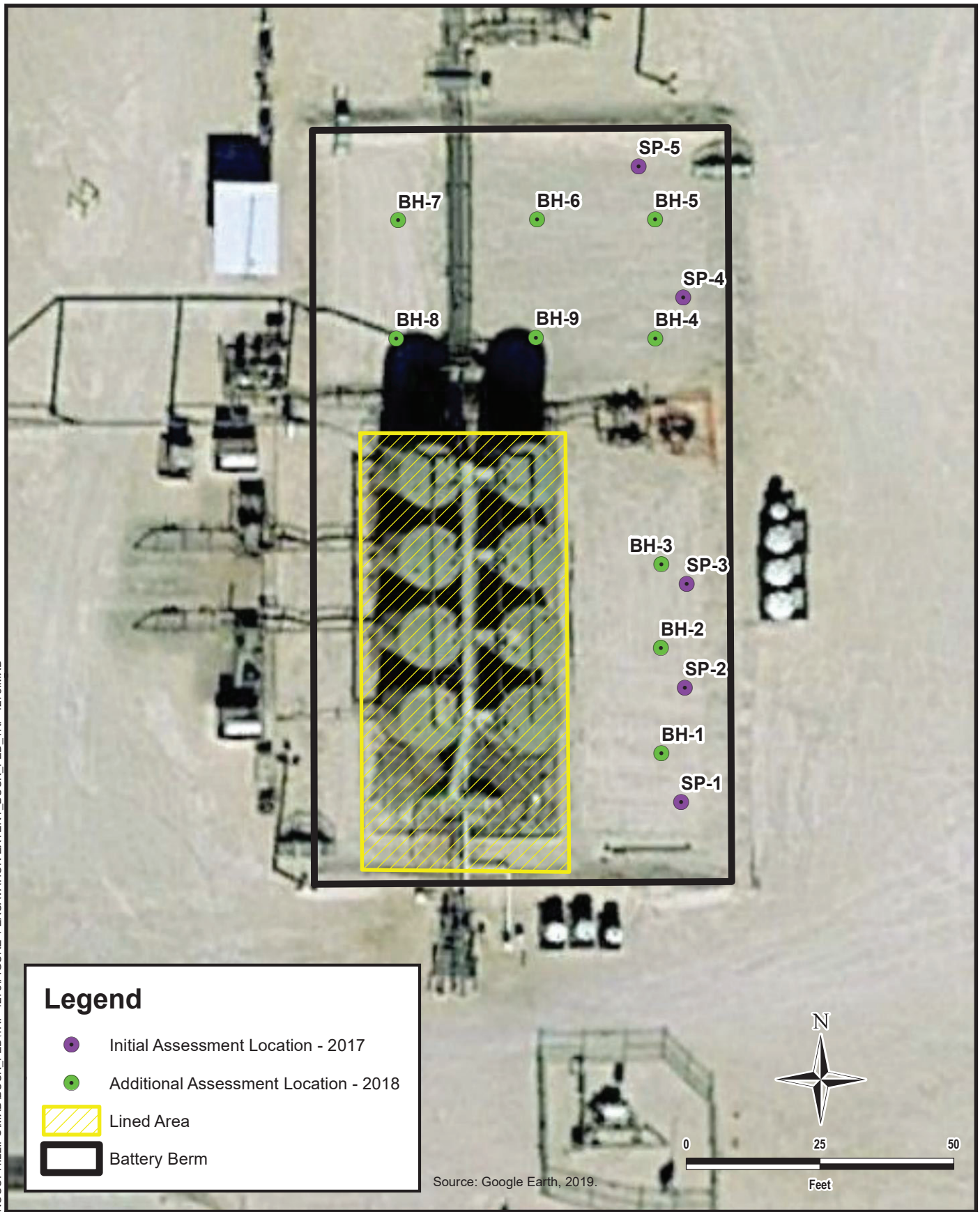
BUCK FEDERAL CENTRAL TANK BATTERY
APPROXIMATE RELEASE EXTENT

PROJECT NO.:	212C-MD-01491
DATE:	OCTOBER 06, 2021
DESIGNED BY:	AAM

Figure No.
3



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\BUCK_FED\1RP-4275\FIGURE 4 EXCAVATION EXTENT_BUCK_FED_1RP-4275.MXD

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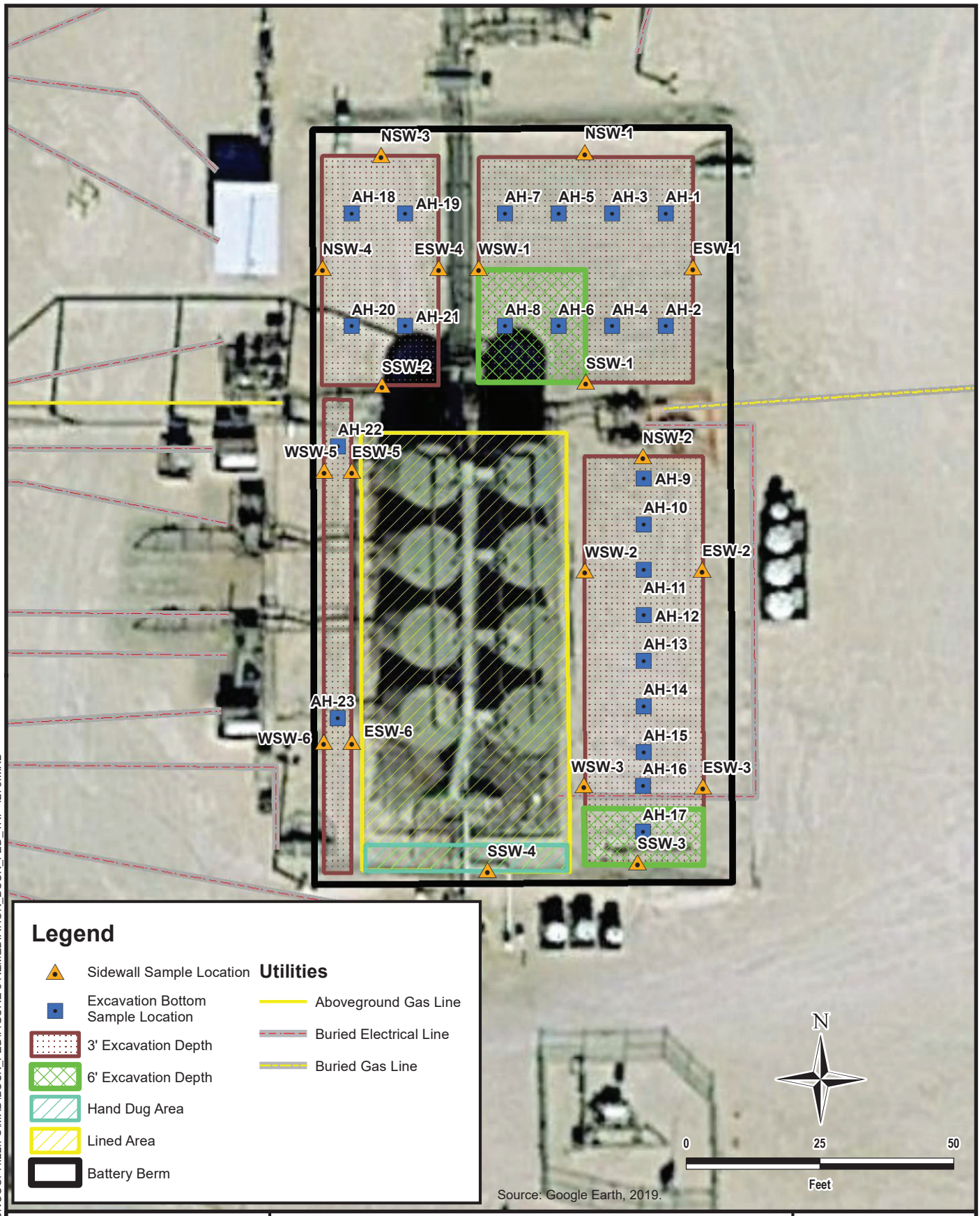
BUCK FEDERAL CENTRAL TANK BATTERY
SITE ASSESSMENT MAP

PROJECT NO.:	212C-MD-02589
DATE:	OCTOBER 22, 2021
DESIGNED BY:	AAM

Figure No.
4



Legend

- Sidewall Sample Location
- Excavation Bottom Sample Location
- 3' Excavation Depth
- 6' Excavation Depth
- Hand Dug Area
- Lined Area
- Battery Berm

Utilities

- Aboveground Gas Line
- Buried Electrical Line
- Buried Gas Line

DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\BUCK_FED\FIGURE 5 REMEDIATION_BUCK_FED_1RP-4275.MXD

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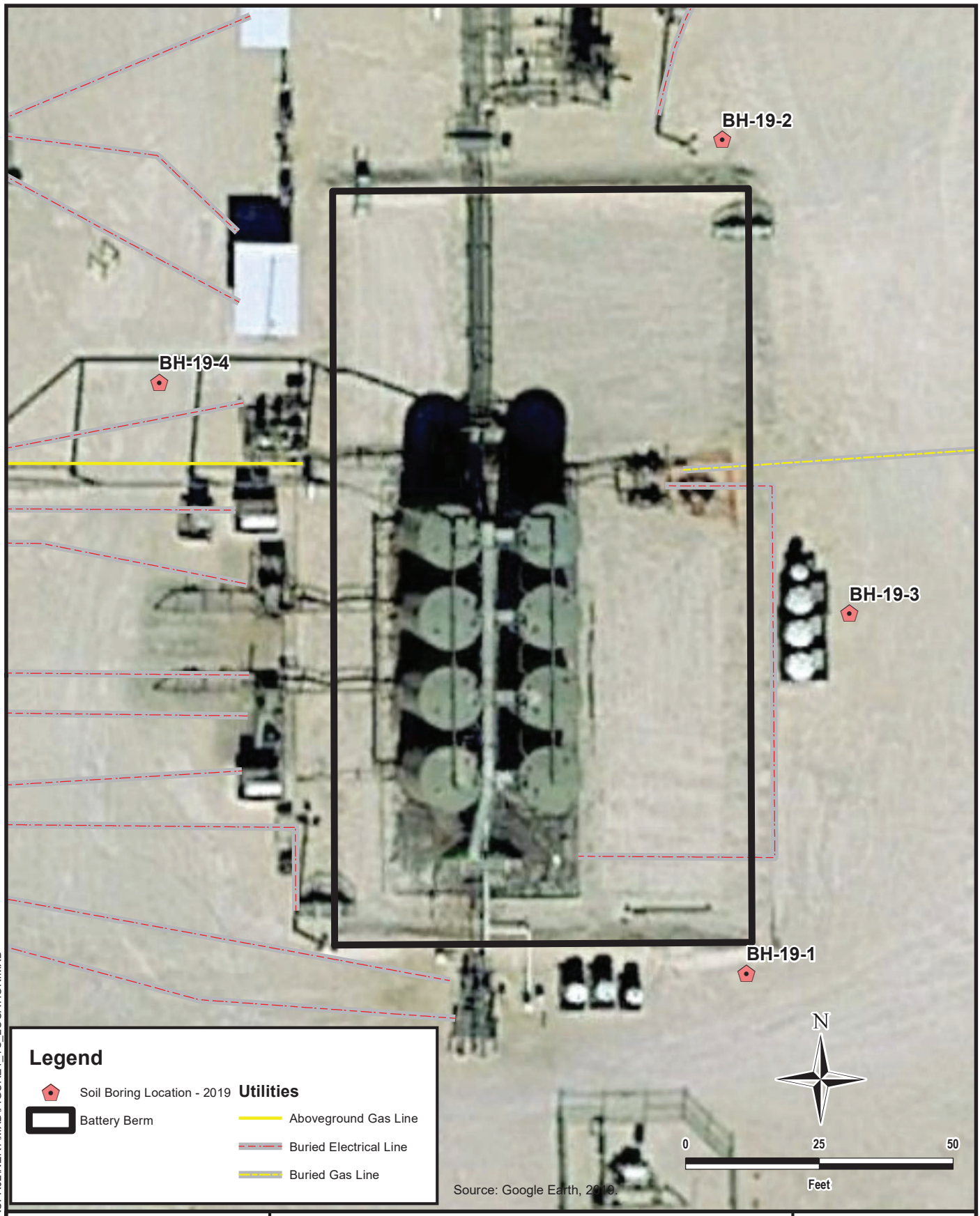
1RP-4275
(32.037398°, -103.696659°)
LEA COUNTY, NEW MEXICO

BUCK FEDERAL CENTRAL TANK BATTERY
REMEDIATION EXTENTS AND CONFIRMATION SAMPLE LOCATIONS

PROJECT NO.:	212C-MD-02589
DATE:	OCTOBER 22, 2021
DESIGNED BY:	AAM

Figure No.
5



Legend

- Soil Boring Location - 2019
- Battery Berm

Utilities

- Aboveground Gas Line
- Buried Electrical Line
- Buried Gas Line

\\TTS134FS1\SUP-GIS\ARCPRJ2\INERT\MXD\FIGURE1_TS_LOCATION.MXD

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LEA COUNTY, NEW MEXICO

BUCK FEDERAL CENTRAL TANK BATTERY
ADDITIONAL HORIZONTAL ASSESSMENT

PROJECT NO.:	212C-MD-02589
DATE:	OCTOBER 22, 2021
DESIGNED BY:	AAM

Figure No.
6

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESMENT
BUCK FEDERAL CTB
1RP-4275
LEA COUNTY, NM

Sample ID	Sample Date	Sample Interval	FIELD SCREENING PID*	Chloride[1]	BTEX[2]										TPH[3]							
					Benzene		Toluene		Ethylbenzene		Xylene		Total BTEX		C_6 - C_{12}		C_{12} - C_{28}		C_{28} - C_{35}		Total TPH (C_6 - C_{35})	
		ft. bgs	ppm	mg/kg	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	
SP-1	10/19/2017	7	33	277	<0.00114		<0.00227		<0.00114		<0.00114		-		<28.4		125		186		***311***	
SP-2	10/19/2017	7	38	199	<0.00109		<0.00217		<0.00109		<0.00109		-		<27.2		77.1		83.3		***160***	
SP-3	10/19/2017	7	38	241	<0.00111		<0.00222		<0.00111		<0.00111		-		<27.8		<27.8		<27.8		-	
SP-4	10/19/2017	7	22	32.7	<0.00111		<0.00222		<0.00111		<0.00111		-		<27.8		<27.8		<27.8		-	
SP-5	10/19/2017	7	36	338	<0.00115		<0.00230		<0.00115		<0.00115		-		<27.8		37.6		33.3		70.8	
BH-1	10/4/2018***	0-1	-	***5,850***	0.240		7.97		0.924		17.3		26.43		332		1,640		294		***2,266***	
	10/4/2018***	1-2	-	***1,060***	3.24		36.0		7.66		103		***149.9***		2,150		5,030		1,420		***8,600***	
	9/17/2018	2-3	63.0	307	<0.000454		<0.00142		<0.000602		<0.00543		-		0.0696	J	32.6	J5	9.86		42.5	
	9/17/2018	3-4	60.2	264	<0.000455		<0.00142		<0.000603		<0.00544		-		0.0567	J	30.1		10.9		41.1	
BH-2	10/4/2018***	0-1	-	***717***	<0.00047		0.00293	J	<0.000623		0.00644	J	0.009		2.57		484		137		***624***	
	10/4/2018***	1-2	-	581	<0.000466		0.00452	J	<0.000617		0.0112		0.016		0.581		170		48.6		***219***	
	9/17/2018	2-3	10.9	***723***	<0.000454		<0.00145		<0.000615		<0.00554		-		0.0268	J	2.95	J	0.785		3.8	
	9/17/2018	3-4	20.2	567	<0.000448		<0.00140		<0.000594		<0.00536		-		0.051	J	73.1		26.7		99.9	
BH-3	10/4/2018***	0-1	-	456	<0.000486		<0.00152		<0.000644		<0.00236		-		0.0346	J	51.2		19.9		71.135	
	10/4/2018***	1-2	-	***3,950***	<0.00044		<0.00138		<0.000583		<0.00526		-		0.121		1,610		786		***2,396***	
	9/17/2018	2-3	16.3	-	-		-		-		-		-		-		-		-		-	
	9/17/2018	3-4	37.0	***3,850***	<0.000421		<0.00132		<0.000558		<0.00504		-		0.101	J	95.6		57.3		***153***	
	9/17/2018	4-5	19.0	***754***	<0.000468		<0.00146		<0.00062		<0.00559		-		0.0488	J	2.76	J	1.8	J	4.6	
BH-4	10/4/2018***	0-1	-	***3,780***	<0.000477		0.00865		0.0156		0.199		0.22		116		5,060		1,620		***6,796***	
	10/4/2018***	1-2	-	***2,540***	<0.000449		<0.0014		<0.000595		<0.00537		-		2.51		1,110		466		***1,579***	
	9/17/2018	2-3	61.2	***1,640***	<0.000497		<0.00155		<0.000659		<0.00594		-		0.0404	J	<2.00		<0.341		0.0404	
BH-5	10/4/2018***	0-1	68.9	***2,660***	0.000833	J	0.00294	J	<0.00062		0.152		0.16		183		6,240		1,770		***8,193***	
BH-6	10/4/2018***	0-1	58.3	248	<0.000473		<0.00148		<0.000626		<0.00565		-		0.0463	J	1,040		442		***1,482***	
	10/4/2018***	1-2	425.1	586	0.00336		0.313		0.0505		2.26		2.63		150		3,080		1,070		***4,300***	
BH-7	10/4/2018***	0-1	16.0	64.9	0.000495	J	<0.00154		<0.000653		<0.00589		-		0.0507	J	1,080		557		***1,637***	
BH-8	10/4/2018***	0-1	83.8	***1420***	<0.000432		<0.00135		<0.000573		<0.00516		-		0.731		3,550		1,340		***4,891***	
BH-9	10/4/2018***	0-1	381.0	289	<0.000463		<0.00145		<0.000613		<0.00553		-		147		5,110		1,420		***6,677***	
	10/4/2018***	1-2	283.0	***1,790***	<0.000445		<0.00139		<0.00059		<0.00532		-		3.28		1,030		362		***1,395***	

NOTES:

ft.	Feet
bgs	Below ground surface
mg/kg	Milligrams per kilogram
ppm	Parts per million
TPH	Total Petroleum Hydrocarbons
*	Field screening measurement
1	Method 300.0
2	Method 8260B
3	TCEQ Method 1005

Shaded intervals indicate areas initially proposed for soil blending.
Bold and italicized values indicate exceedance of 100 mg/kg limit for TPH.

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.
J5	The sample matrix interfered with the ability to make accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make accurate determination; spike is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.
U	Not detected at the Sample Detection Limit (SDL).

*** Samples arrived at laboratory outside temperature range due to shipping error

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
CONFIRMATION SOIL SAMPLING
BUCK FEDERAL CTB
1RP-4275
LEA COUNTY, NM

Type	Sample ID	Sample Date	Sample Interval	PID*	Chloride[1]	BTEX[2]										TPH[3]							
					mg/kg	Benzene		Toluene		Ethylbenzene		Xylene		Total BTEX		C_6 - C_{12}		C_{12} - C_{28}		C_{28} - C_{35}		Total TPH (C_6 - C_{35})	
			ft. bgs	ppm		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	
Bottom Hole Confirmation Samples	**AH-1**	11/14/18	3	49.1	***1,060***	<0.000437		<0.00137		<0.000579		<0.00523		-		0.0503	J	328		129		***457.05***	
	AH-2	11/14/18	3	103.9	***1,900***	<0.000435		<0.00136		<0.000576		<0.00520		-		0.538		476		159		***635.54***	
	AH-3	11/14/18	3	7.8	***945***	<0.000442		<0.00138		<0.000586		<0.00528		-		0.0355	BJ	75.4		23.7		99.14	
	AH-4	11/14/18	3	55.9	***819***	<0.000441		<0.00138		<0.000585		<0.00527		-		1.08		405		127		***533.08***	
	AH-5	11/14/18	3	63.1	***1,210***	<0.000438		<0.00137		<0.000580		<0.00523		-		0.573		1,000		325		***1,325.57***	
	AH-6	11/14/18	3	357.2	***912***	<0.00369		<0.0115		<0.00488		<0.0440		-		134		4,260		1,270		***5,664***	
	AH-6 (6')*	11/30/18	6	588.0	***637***	<0.00359		0.00775		0.283		3.46		3.75		225		3,050		735		***4,010***	
	AH-7	11/14/18	3	102.0	***1,310***	<0.000442		<0.00138		<0.000586		<0.00528		-		2.53		83.1		224		***309.63***	
	AH-8	11/14/18	3	712.1	***686***	0.03		1.0		0.81		11.7		11.7		582		6,590		1380		***8,552***	
	AH-8 (6')*	11/30/18	6	1081.0	*343*	<0.00882		0.159		0.414		3.74		4.31		263		3,680		912		***4,855***	
	AH-9	11/15/18	3	21.1	***1,850***	<0.000445		<0.00139		<0.000590		<0.00532		-		0.066	J	112		44		***156.07***	
	AH-10	11/15/18	3	5.1	***719***	<0.000450		<0.00141		<0.000596		<0.00538		-		0.0261	J	15.4		14.1		29.53	
	AH-11	11/15/18	3	3.9	541	<0.000451		<0.00141		<0.000597		<0.00539		-		<0.0245		7.13		2.83		9.96	
	AH-12	11/15/18	3	7	***947***	<0.000434		<0.00135		<0.000575		<0.00518		-		<0.0235		29.4		10.9		40.30	
	AH-13	11/15/18	3	2.8	85	<0.000461		<0.00144		<0.000610		<0.00551		-		0.0296	J	45.5		21.4		66.93	
	AH-14	11/15/18	3	2.4	424	<0.000433		<0.00135		<0.000573		<0.00517		-		0.0243	J	3.38	J	0.999	J	4.40	
	AH-15	11/15/18	3	3.1	377	<0.000460		<0.00144		<0.000609		<0.00549		-		<0.0249		3.53	J	1.09	J	4.62	
	AH-16	11/15/18	3	3.5	***1,160***	<0.000489		<0.00153		<0.000648		<0.00585		-		0.0324	J	<1.97		<0.335		0.03	
	AH-17	11/15/18	3	1412	***638***	<0.00358		1.08		0.852		9.1		9.09		381		2,500		768		***3,649***	
	AH-17 (4')*	11/16/18	4	714.1	409	<0.00363		0.51		0.10		7.65		7.65		345		1,950		366		***2,661***	
	AH-17 (6')*	11/30/18	6	9.7	294	<0.000469		<0.00146		<0.000621		<0.00560		-		0.0318	J	<1.89		<0.321		0.03	
	AH-18	11/21/18	3	1.8	***1,060***	<0.000467		<0.00146		<0.000618		<0.00558		-		<0.0253		2.88	J	2.30	J	5.18	
	AH-19	11/19/18	3	4.9	***788***	<0.000479		<0.00150		<0.000634		<0.00572		-		<0.0260		44.70		23.0		67.70	
	AH-20	11/19/18	3	475.1	***1,650***	<0.000470		<0.00147		0.00111	J	0.0143		0.01541		12.2		1,100		262		***1,374.20***	
	AH-21	11/19/18	3	122.0	***1,510***	<0.000479		<0.00150		<0.000635		<0.00573		-		1.29		119		47.8		***168.09***	
	AH-22	11/27/18	2	618	***2,340***	0.081		3.26		1.85		21.8		26.991		443		6,710		2,660		***9,813***	
	AH-22 (3')*	12/06/18	3	498	***920***	<0.00355		0.0280	J	0.0632		1.05		1.141		122		2,240		573		***2,935***	
	AH-23	11/27/18	2	549	***1,730***	0.00154		0.235		0.231		2.45		2.9175		126		3,500		1,040		***4,666***	
	AH-23 (3')*	12/06/18	3	409	***825***	<0.000450		<0.00141		0.000731	J	0.103		0.10373		90.5		939		211		***1,240.50***	

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
CONFIRMATION SOIL SAMPLING
BUCK FEDERAL CTB
1RP-4275
LEA COUNTY, NM

Type	Sample ID	Sample Date	Sample Interval	PID*	Chloride[1]	BTEX[2]										TPH[3]						
						Benzene		Toluene		Ethylbenzene		Xylene		Total BTEX		C_6 - C_{12}		C_{12} - C_{28}		C_{28} - C_{35}		Total TPH (C_6 - C_{35})
			ft. bgs	ppm	mg/kg	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
North Sidewall Confirmation Samples	NSW-1	11/14/18	-	11.3	441	<0.000434		<0.00136		<0.000575		<0.00519		-		0.0574	BJ	330		142		***472.06***
	NSW-2	11/15/18	-	52.4	***2670***	<0.000420		0.00166		<0.000557		<0.00502		-		0.206		808		349		***1,157.21***
	NSW-3	11/19/18	-	2.2	202	0.000438	J	<0.00137		<0.000580		<0.00523		0.000438		<0.0237		10.8		8.74		19.54
South Sidewall Confirmation Samples	SSW-1	11/14/18	-	221.3	***1520***	<0.000441		<0.00138		<0.000584		0.00614	J	0.000614		0.916		552		194		***747***
	SSW-2	11/15/18	-	623.2	***3450***	0.323		5.1		1.5		15.5		15.5		669		8440		2760		***11,869***
	SSW-3	11/20/18	-	50.1	467	<0.000438		<0.00137		<0.000580		<0.00523		-		0.0907	J	104	J3,J5	55.5		***159.59***
	SSW-4	11/27/18	-	325	***1320***	<0.000426		0.00172	J	0.000992	J	0.611		0.613712		354		1320		554		***2,228***
West Sidewall Confirmation Samples	WSW-1	11/14/18	-	517.9	354	<0.00353		0.134		0.00654	J	7.53		7.67054		553		8780		2170		***11,503***
	WSW-2	11/16/18	-	3.9	343	<0.000422		<0.00132		<0.000560		<0.00505		-		<0.0229		2.25	J	2.61	J	4.86
	WSW-3	11/16/18	-	6	553	<0.000444	J3	<0.00139	J3	<0.000588	J3	<0.00531	J3	-		0.0362	J	17.1		10.9		28.04
	WSW-4	11/16/18	-	693.2	***1440***	<0.00352		2.13		0.92		12.4		15.45		487		13300	V	2800		***16,587***
	WSW-5	11/27/18	-	607	***723***	<0.000435		0.00179		0.00204	J	0.0174		0.02123		2.97		142		59.3		***204.27***
	WSW-6	11/21/18	-	1.5	114	<0.000412		<0.00129		<0.000546		<0.00492		-		114		9.48		8.87		***132.35***
East Sidewall Confirmation Samples	ESW-1	11/14/18	-	35.1	***1990***	<0.000442		<0.00138		<0.000585		<0.00528		-		0.0623	B,J	329		159		***488.06***
	ESW-2	11/16/18	-	21.8	***1300***	<0.000423		<0.00132		0.000771		<0.00506		-		0.0522	J	317		123		***440.05***
	ESW-3	11/16/18	-	4.7	252	<0.000433		<0.00135		<0.000574		<0.00518		-		0.0298	J	3.7		5.28		9.01
	ESW-4	11/16/18	-	572.9	***1360***	<0.00354		1.31		1.25		12.9		15.46		439		2830		1130		***4,399***
	ESW-5	11/27/18	-	594	***1700***	0.00565		0.441		0.353		5.78		6.57965		170		4050		1550		***5,770***
	ESW-6	11/21/18	-	3.4	***610***	<0.000413		<0.00129		<0.000547		<0.00493		-		0.0342	J	105		54.8		***159.83***

NOTES:

* These iterative samples are located to encompass the original sample location that triggered removal, with further excavation in each area indicated in ().

ft.	Feet	***Bold and italicized values indicate exceedance of proposed RRALs.***	
bgs	Below ground surface	B	The same analyte is found in the associated blank.
mg/kg	Milligrams per kilogram	J	The identification of the analyte is acceptable; the reported value is an estimate.
ppm	Parts per million	J3	The associated batch QC was outside the established quality control range for precision.
TPH	Total Petroleum Hydrocarbons	J5	The sample matrix interfered with the ability to make accurate determination; spike value is high.
*	Field screening measurement	J6	The sample matrix interfered with the ability to make accurate determination; spike is low.
1	Method 300.0	V	The sample concentration is too high to evaluate accurate spike recoveries.
2	Method 8260B	U	Not detected at the Sample Detection Limit (SDL).
3	TCEQ Method 1005		

TABLE 3
SUMMARY OF ANALYTICAL RESULTS
HORIZONTAL DELINEATION
BUCK FEDERAL CTB
1RP-4275
LEA COUNTY, NM

Sample ID	Sample Date	Sample Interval	Field Screening Results		Chloride[1]		BTEX[2]										TPH[3]							
							Benzene		Toluene		Ethylbenzene		Xylene		Total BTEX	GRO (C_3 - C_{10})[4]		DRO (C_{10} - C_{28})		ORO (C_{28} - C_{40})		TPH (C_3 - C_{40})
		ft bgs	Chloride	PID																			
			ppm		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
BH-19-1	10/08/19	0-1	220	0.0	143		< 0.00106		< 0.00528		< 0.00264		< 0.00686		-	0.0763	B J	3.02	J	< 4.22		3.0963
		2-3	189	0.0	86.7		< 0.00109		< 0.00543		< 0.00271		< 0.00705		-	0.0766	B J	7.07		16.4		23.5466
		4-5	NM	0.0	126		< 0.00108		< 0.00538		< 0.00269		< 0.00700		-	0.0837	B J	< 4.31		0.362	J	0.4457
BH-19-2	10/08/19	0-1	148	2.2	30.0	B	< 0.00108		< 0.00540		< 0.00270		< 0.00702		-	0.0691	B J	< 4.32		0.837	J	0.9061
		2-3	127	6.0	77.7		< 0.00108		< 0.00540		< 0.00270		< 0.00702		-	0.0767	B J	< 4.32		0.488	J	0.5647
		4-5	NM	8.0	59.7		< 0.00108		< 0.00539		< 0.00269		< 0.00701		-	0.0718	B J	< 4.31		< 4.31		0.0718
BH-19-3	10/08/19	0-1	158	7.9	80.7		< 0.00107		< 0.00534		< 0.00267		< 0.00694		-	0.0739	B J	< 4.27		0.903	J	0.9769
		2-3	153	9.0	69.7		< 0.00106		< 0.00528		< 0.00264		< 0.00686		-	0.0690	B J	< 4.22		4.14	J	4.2090
		4-5	124	12.3	74.4		< 0.00106		< 0.00532		< 0.00266		< 0.00692		-	0.0819	B J	< 4.26		0.786	J	0.8679
		6-7	69.8	8.8	15.5	B	< 0.00103		< 0.00513		< 0.00256		< 0.00667		-	0.0698	B J	< 4.10		< 4.10		0.0698
		9-10	201	10.7	129		< 0.00104		< 0.00521		< 0.00261		< 0.00678		-	0.0811	B J	< 4.17		< 4.17		0.0811
		14-15	281	9.4	121		< 0.00105		< 0.00526		< 0.00263		< 0.00684		-	0.0780	B J	< 4.21		< 4.21		0.0780
BH-19-4	10/08/19	0-1	NM	7.1	42.9	B	< 0.00110		< 0.00549		< 0.00275		< 0.00714		-	< 0.110		< 4.39		< 4.39		-
		2-3	91.4	10.4	47.7		< 0.00108		< 0.00541		< 0.00270		< 0.00703		-	< 0.108		< 4.32		< 4.32		-
		4-5	NM	9.0	53.2		< 0.00112		< 0.00559		< 0.00279		< 0.00726		-	< 0.122		< 4.47		0.562	J	0.562
		6-7	240	10.7	66.4		< 0.00105		< 0.00525		< 0.00263		< 0.00683		-	< 0.105		< 4.20		< 4.20		-
		9-10	NM	10.9	200		< 0.00106		< 0.00528		< 0.00264		< 0.00686		-	0.0323	B J	< 4.22		0.293	J	0.3253
		14-15	165	8.5	76.0		< 0.00102		< 0.00509		< 0.00255		< 0.00662		-	0.0298	B J	< 4.07		< 4.07		0.0298

NOTES:

ft	Feet
bgs	Below ground surface
ppm	Parts per million
mg/kg	Milligrams per kilogram
NM	Not measured
TPH	Total Petroleum Hydrocarbons
GRO	Gasoline range organics
DRO	Diesel range organics
ORO	Oil range organics

Bold and italicized values indicate exceedance of RRALs.

1	Method 300.0
2	Method 8260B
3	Method 8015
4	Method 8015D/GRO
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.

APPENDIX A
C-141 Forms

RECEIVED
By JKeyes at 10:28 am, May 12, 2016

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: **ConocoPhillips**	Contact: **Joseph McLaughlin**
Address: **3695 Highway 285, Orla TX**	Telephone No. **806-567-2790**
Facility Name: **Buck Federal CTB**	Facility Type: **Central Tank Battery**

Surface Owner: NMOCD	Mineral Owner: NMOCD	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	17	26S	32E		North		West	**LEA**

Latitude N32°2'14" Longitude W103°41'48"

NATURE OF RELEASE

Type of Release: Produced Water **Spill**	Volume of Release: 6 BBLS	Volume Recovered: 5 BBLS
Source of Release: Produced Water tank over flow (see Lat/Long above).	Date and Hour of Occurrence **05/11/2016 11:00 am**	Date and Hour of Discovery **05/11/2016 11:40 am**
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Jamie Keyes, NMOCD Jim, BLM**	
By Whom? **Joseph McLaughlin**	Date and Hour: **05/12/2016 08:10 am**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Describe Area Affected and Cleanup Action Taken.*

A 6 BBL Produced Water release occurred on the ConocoPhillips Buck Federal CTB located in Lea County, New Mexico: MSO was preparing to start up SWD. MSO removed locks and opened valves to send water from other facilities. Another MSO was passing by when he noticed water in berm, notified MSO to close valves from other facilities. After further investigation MSO saw fluid coming from body of a 3 inch valve. Vacuum truck was called to location 5 barrels were recovered. Location will be remediated in accordance with NMOCD and COPC policies with confirmation soil samples.

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

Joseph McLaughlin
Signature:

Printed Name: Joseph McLaughlin

Title: HSE

E-mail Address: ***Joe.P.McLaughlin@conocophillips.com***

Date: 05/12/2016 Phone:806-567-2790

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Jamie Keyes

Approval Date: 05/12/2016 Expiration Date: 07/12/2016

Conditions of Approval:
Discrete samples only. Delineate and remediate per NMOCD guidelines.

Attached ☐
1RP 4275

* Attach Additional Sheets If Necessary

nJXK1613337497
pJXK1613337629

State of New Mexico
Oil Conservation Division

Incident ID	nJXK1613337497
District RP	1RP-4275
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?	125 (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	nJXK1613337497
District RP	1RP-4275
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: jenni.fortunato@cop.com Title: Program Manager, Risk Management & Remediation

Signature: Date: 11.8.2021

email: Jenni.Fortunato@cop.com Telephone: 832-486-2477

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	nJXK1613337497
District RP	1RP-4275
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: Jenni Fortunato Title: Program Manager, Remediation

Signature: [signature] Date: 11/8/21

email: jenni.fortunato@cop.com Telephone: 832-486-2477

OCD Only

Received by: _____ Date: _____

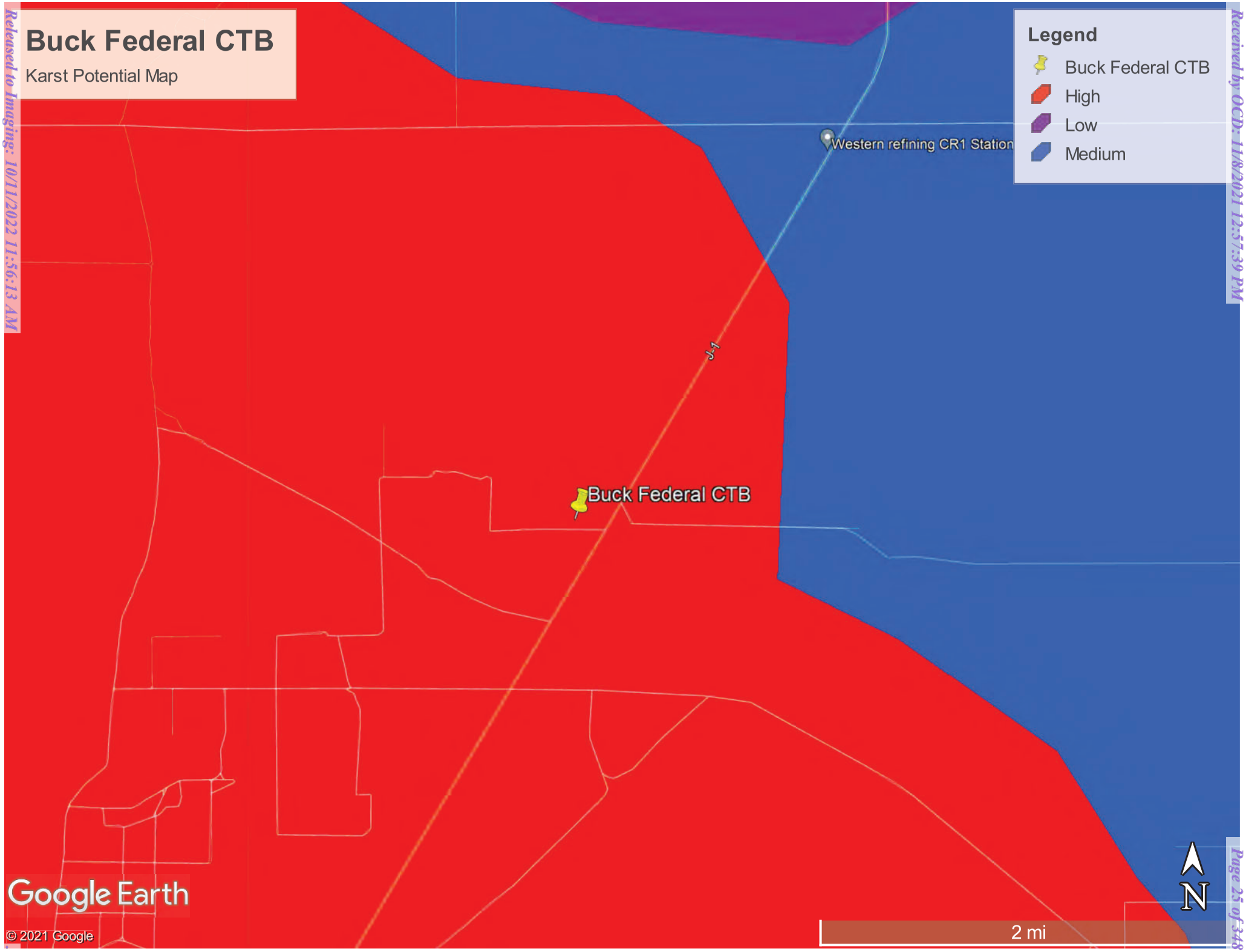
☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☑ Deferral Approved

Signature: Brittany Hall Date: 10/11/2022

APPENDIX B
NMOSE Groundwater Data
Karst Potential Map

Buck Federal CTB

Karst Potential Map



NMOCD Waterbodies Map

10/5/2021, 12:10:29 PM

- OSE Water-bodies
- PLJV Probable Playas
- OSE Streams

1:36,112

0 0.38 0.75 1.5 mi

0 0.5 1 2 km

Esri, HERE, Garmin, Maxar

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
C 03537 POD1		CUB	LE	3	2	3	21	26S	32E	624250	3543985	1801	850		
C 02271 POD2		CUB	LE	3	2	3	21	26S	32E	624348	3544010*	1848	270	250	20
C 02323		C	LE	3	2	3	21	26S	32E	624348	3544010*	1848	405	405	0
C 02271	R	CUB	LE		2	3	21	26S	32E	624449	3544111*	1848	150	125	25
C 03595 POD1		CUB	LE	4	2	3	21	26S	32E	624423	3544045	1874	280	180	100

Average Depth to Water: **240 feet**
Minimum Depth: **125 feet**
Maximum Depth: **405 feet**

Record Count: 5

UTMNAD83 Radius Search (in meters):

Easting (X): 623092.15 **Northing (Y):** 3545365.88 **Radius:** 2000

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

APPENDIX C
Laboratory Analytical Reports

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Von Norman
Stingray Environmental & Construction
11420 W County Rd 33
Midland, TEXAS 79707

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Location:

Lab Order Number: 7J26001

NELAP/TCEQ # T104704516-16-7

Report Date: 11/03/17

Stingray Environmental & Construction	Project: Concho Phillips Buck Federal	Fax:
11420 W County Rd 33	Project Number: Concho Phillips Buck Federal	
Midland TEXAS, 79707	Project Manager: Von Norman	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP1 7'	7J26001-01	Soil	10/19/17 12:12	10-26-2017 09:00
SP2 7'	7J26001-02	Soil	10/19/17 12:41	10-26-2017 09:00
SP3 7'	7J26001-03	Soil	10/19/17 13:17	10-26-2017 09:00
SP4 7'	7J26001-04	Soil	10/19/17 13:52	10-26-2017 09:00
SP5 7'	7J26001-05	Soil	10/19/17 15:17	10-26-2017 09:00

Stingray Environmental & Construction	Project: Concho Phillips Buck Federal	Fax:
11420 W County Rd 33	Project Number: Concho Phillips Buck Federal	
Midland TEXAS, 79707	Project Manager: Von Norman	

SP1 7'

7J26001-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00114	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Toluene	ND	0.00227	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*96.8 %*	*75-125*		*P7J2703*	*10/27/17*	*10/27/17*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*95.8 %*	*75-125*		*P7J2703*	*10/27/17*	*10/27/17*	*EPA 8021B*	
C6-C12	ND	28.4	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
>C12-C28	**125**	28.4	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
>C28-C35	**186**	28.4	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
Surrogate: 1-Chlorooctane		*98.3 %*	*70-130*		*P7J2713*	*10/27/17*	*10/31/17*	*TX 1005*	
Surrogate: o-Terphenyl		*110 %*	*70-130*		*P7J2713*	*10/27/17*	*10/31/17*	*TX 1005*	
Total Hydrocarbon nC6-nC35	**311**	28.4	mg/kg dry	1	[CALC]	10/27/17	10/31/17	[CALC]	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**277**	1.14	mg/kg dry	1	P7J3001	10/30/17	10/30/17	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P7J2701	10/27/17	10/27/17	ASTM D2216	

Stingray Environmental & Construction	Project: Concho Phillips Buck Federal	Fax:
11420 W County Rd 33	Project Number: Concho Phillips Buck Federal	
Midland TEXAS, 79707	Project Manager: Von Norman	

SP2 7'

7J26001-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00109	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Toluene	ND	0.00217	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*98.3 %*	*75-125*		*P7J2703*	*10/27/17*	*10/27/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*96.2 %*	*75-125*		*P7J2703*	*10/27/17*	*10/27/17*	*EPA 8021B*	
C6-C12	ND	27.2	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
>C12-C28	**77.1**	27.2	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
>C28-C35	**83.3**	27.2	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
Surrogate: 1-Chlorooctane		*100 %*	*70-130*		*P7J2713*	*10/27/17*	*10/31/17*	*TX 1005*	
Surrogate: o-Terphenyl		*113 %*	*70-130*		*P7J2713*	*10/27/17*	*10/31/17*	*TX 1005*	
Total Hydrocarbon nC6-nC35	**160**	27.2	mg/kg dry	1	[CALC]	10/27/17	10/31/17	[CALC]	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**199**	1.09	mg/kg dry	1	P7J3001	10/30/17	10/30/17	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P7J2701	10/27/17	10/27/17	ASTM D2216	

Stingray Environmental & Construction	Project: Concho Phillips Buck Federal	Fax:
11420 W County Rd 33	Project Number: Concho Phillips Buck Federal	
Midland TEXAS, 79707	Project Manager: Von Norman	

SP3 7'

7J26001-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00111	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Toluene	ND	0.00222	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*84.4 %*	*75-125*		*P7J2703*	*10/27/17*	*10/27/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*93.8 %*	*75-125*		*P7J2703*	*10/27/17*	*10/27/17*	*EPA 8021B*	
C6-C12	ND	27.8	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
>C12-C28	ND	27.8	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
>C28-C35	ND	27.8	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
Surrogate: 1-Chlorooctane		*100 %*	*70-130*		*P7J2713*	*10/27/17*	*10/31/17*	*TX 1005*	
Surrogate: o-Terphenyl		*113 %*	*70-130*		*P7J2713*	*10/27/17*	*10/31/17*	*TX 1005*	
Total Hydrocarbon nC6-nC35	ND	27.8	mg/kg dry	1	[CALC]	10/27/17	10/31/17	[CALC]	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**241**	1.11	mg/kg dry	1	P7J3001	10/30/17	10/30/17	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P7J2701	10/27/17	10/27/17	ASTM D2216	

Stingray Environmental & Construction	Project: Concho Phillips Buck Federal	Fax:
11420 W County Rd 33	Project Number: Concho Phillips Buck Federal	
Midland TEXAS, 79707	Project Manager: Von Norman	

SP4 7'

7J26001-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab. L.P.									
Organics by GC									
Benzene	ND	0.00111	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Toluene	ND	0.00222	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*92.2 %*	*75-125*		*P7J2703*	*10/27/17*	*10/27/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*98.3 %*	*75-125*		*P7J2703*	*10/27/17*	*10/27/17*	*EPA 8021B*	
C6-C12	ND	27.8	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
>C12-C28	ND	27.8	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
>C28-C35	ND	27.8	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P7J2713*	*10/27/17*	*10/31/17*	*TX 1005*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P7J2713*	*10/27/17*	*10/31/17*	*TX 1005*	
Total Hydrocarbon nC6-nC35	ND	27.8	mg/kg dry	1	[CALC]	10/27/17	10/31/17	[CALC]	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**32.7**	1.11	mg/kg dry	1	P7J3004	10/30/17	10/30/17	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P7J2701	10/27/17	10/27/17	ASTM D2216	

Stingray Environmental & Construction	Project: Concho Phillips Buck Federal	Fax:
11420 W County Rd 33	Project Number: Concho Phillips Buck Federal	
Midland TEXAS, 79707	Project Manager: Von Norman	

SP5 7'

7J26001-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00115	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Toluene	ND	0.00230	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P7J2703	10/27/17	10/27/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*85.4 %*	*75-125*		*P7J2703*	*10/27/17*	*10/27/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*86.5 %*	*75-125*		*P7J2703*	*10/27/17*	*10/27/17*	*EPA 8021B*	
C6-C12	ND	28.7	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
>C12-C28	**37.6**	28.7	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
>C28-C35	**33.3**	28.7	mg/kg dry	1	P7J2713	10/27/17	10/31/17	TX 1005	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P7J2713*	*10/27/17*	*10/31/17*	*TX 1005*	
Surrogate: o-Terphenyl		*111 %*	*70-130*		*P7J2713*	*10/27/17*	*10/31/17*	*TX 1005*	
Total Hydrocarbon nC6-nC35	**70.8**	28.7	mg/kg dry	1	[CALC]	10/27/17	10/31/17	[CALC]	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**338**	5.75	mg/kg dry	5	P7J3004	10/30/17	10/30/17	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P7J2701	10/27/17	10/27/17	ASTM D2216	

Stingray Environmental & Construction	Project: Concho Phillips Buck Federal	Fax:
11420 W County Rd 33	Project Number: Concho Phillips Buck Federal	
Midland TEXAS, 79707	Project Manager: Von Norman	

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7J2703 - General Preparation (GC)										
Blank (P7J2703-BLK1)				Prepared & Analyzed: 10/27/17						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.0566*		"	*0.0600*		*94.4*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0544*		"	*0.0600*		*90.6*	*75-125*			
LCS (P7J2703-BS1)				Prepared & Analyzed: 10/27/17						
Benzene	0.115	0.00100	mg/kg wet	0.100		115	70-130			
Toluene	0.112	0.00200	"	0.100		112	70-130			
Ethylbenzene	0.119	0.00100	"	0.100		119	70-130			
Xylene (p/m)	0.225	0.00200	"				70-130			
Xylene (o)	0.120	0.00100	"				70-130			
Surrogate: 1,4-Difluorobenzene	*0.0641*		"	*0.0600*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0641*		"	*0.0600*		*107*	*75-125*			
LCS Dup (P7J2703-BSD1)				Prepared & Analyzed: 10/27/17						
Benzene	0.103	0.00100	mg/kg wet	0.100		103	70-130	11.0	20	
Toluene	0.103	0.00200	"	0.100		103	70-130	8.40	20	
Ethylbenzene	0.112	0.00100	"	0.100		112	70-130	5.72	20	
Xylene (p/m)	0.223	0.00200	"				70-130		20	
Xylene (o)	0.116	0.00100	"				70-130		20	
Surrogate: 4-Bromofluorobenzene	*0.0579*		"	*0.0600*		*96.5*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0533*		"	*0.0600*		*88.9*	*75-125*			
Calibration Blank (P7J2703-CCB1)				Prepared & Analyzed: 10/27/17						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.0519*		"	*0.0600*		*86.5*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0520*		"	*0.0600*		*86.7*	*75-125*			

Stingray Environmental & Construction	Project: Concho Phillips Buck Federal	Fax:
11420 W County Rd 33	Project Number: Concho Phillips Buck Federal	
Midland TEXAS, 79707	Project Manager: Von Norman	

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7J2703 - General Preparation (GC)										
Calibration Check (P7J2703-CCV1)				Prepared & Analyzed: 10/27/17						
Benzene	0.106	0.00100	mg/kg wet	0.100		106	80-120			
Toluene	0.101	0.00200	"	0.100		101	80-120			
Ethylbenzene	0.107	0.00100	"	0.100		107	80-120			
Xylene (p/m)	0.236	0.00200	"	0.200		118	80-120			
Xylene (o)	0.118	0.00100	"	0.100		118	80-120			
Surrogate: 1,4-Difluorobenzene	*0.0594*		"	*0.0600*		*99.0*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0565*		"	*0.0600*		*94.2*	*75-125*			
Calibration Check (P7J2703-CCV2)				Prepared & Analyzed: 10/27/17						
Benzene	0.114	0.00100	mg/kg wet	0.100		114	80-120			
Toluene	0.106	0.00200	"	0.100		106	80-120			
Ethylbenzene	0.107	0.00100	"	0.100		107	80-120			
Xylene (p/m)	0.227	0.00200	"	0.200		113	80-120			
Xylene (o)	0.111	0.00100	"	0.100		111	80-120			
Surrogate: 1,4-Difluorobenzene	*0.0590*		"	*0.0600*		*98.3*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0574*		"	*0.0600*		*95.7*	*75-125*			
Matrix Spike (P7J2703-MS1)		**Source: 7J26001-05**		Prepared & Analyzed: 10/27/17						
Benzene	0.0983	0.00115	mg/kg dry	0.115	ND	85.5	80-120			
Toluene	0.0996	0.00230	"	0.115	ND	86.7	80-120			
Ethylbenzene	0.114	0.00115	"	0.115	ND	99.1	80-120			
Xylene (p/m)	0.200	0.00230	"		ND		80-120			
Xylene (o)	0.0892	0.00115	"		ND		80-120			
Surrogate: 4-Bromofluorobenzene	*0.0831*		"	*0.0690*		*121*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0848*		"	*0.0690*		*123*	*75-125*			
Matrix Spike Dup (P7J2703-MSD1)		**Source: 7J26001-05**		Prepared & Analyzed: 10/27/17						
Benzene	0.0900	0.00115	mg/kg dry	0.115	ND	78.3	80-120	8.83	20	QM-07
Toluene	0.0835	0.00230	"	0.115	ND	72.7	80-120	17.6	20	QM-07
Ethylbenzene	0.103	0.00115	"	0.115	ND	89.5	80-120	10.2	20	
Xylene (p/m)	0.183	0.00230	"		ND		80-120		20	
Xylene (o)	0.0883	0.00115	"		ND		80-120		20	
Surrogate: 1,4-Difluorobenzene	*0.0700*		"	*0.0690*		*101*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0775*		"	*0.0690*		*112*	*75-125*			

Stingray Environmental & Construction	Project: Concho Phillips Buck Federal	Fax:
11420 W County Rd 33	Project Number: Concho Phillips Buck Federal	
Midland TEXAS, 79707	Project Manager: Von Norman	

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7J2713 - General Preparation (GC)										
Blank (P7J2713-BLK1)				Prepared: 10/27/17 Analyzed: 10/31/17						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*103*		"	*100*		*103*	*70-130*			
Surrogate: o-Terphenyl	*59.2*		"	*50.0*		*118*	*70-130*			
LCS (P7J2713-BS1)				Prepared: 10/27/17 Analyzed: 10/31/17						
C6-C12	869	25.0	mg/kg wet	1000		86.9	75-125			
>C12-C28	902	25.0	"	1000		90.2	75-125			
Surrogate: 1-Chlorooctane	*112*		"	*100*		*112*	*70-130*			
Surrogate: o-Terphenyl	*54.9*		"	*50.0*		*110*	*70-130*			
LCS Dup (P7J2713-BSD1)				Prepared: 10/27/17 Analyzed: 10/31/17						
C6-C12	872	25.0	mg/kg wet	1000		87.2	75-125	0.425	20	
>C12-C28	930	25.0	"	1000		93.0	75-125	3.04	20	
Surrogate: 1-Chlorooctane	*114*		"	*100*		*114*	*70-130*			
Surrogate: o-Terphenyl	*55.4*		"	*50.0*		*111*	*70-130*			
Calibration Blank (P7J2713-CCB1)				Prepared: 10/27/17 Analyzed: 10/31/17						
C6-C12	24.3		mg/kg wet							
>C12-C28	14.8		"							
Surrogate: 1-Chlorooctane	*97.3*		"	*100*		*97.3*	*70-130*			
Surrogate: o-Terphenyl	*58.0*		"	*50.0*		*116*	*70-130*			
Calibration Blank (P7J2713-CCB2)				Prepared: 10/27/17 Analyzed: 10/31/17						
C6-C12	22.0		mg/kg wet							
>C12-C28	20.5		"							
Surrogate: 1-Chlorooctane	*103*		"	*100*		*103*	*70-130*			
Surrogate: o-Terphenyl	*56.9*		"	*50.0*		*114*	*70-130*			

Stingray Environmental & Construction	Project: Concho Phillips Buck Federal	Fax:
11420 W County Rd 33	Project Number: Concho Phillips Buck Federal	
Midland TEXAS, 79707	Project Manager: Von Norman	

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7J2713 - General Preparation (GC)										
Calibration Check (P7J2713-CCV1)				Prepared: 10/27/17 Analyzed: 10/31/17						
C6-C12	492	25.0	mg/kg wet	500		98.5	85-115			
>C12-C28	496	25.0	"	500		99.2	85-115			
Surrogate: 1-Chlorooctane	*110*		"	*100*		*110*	*70-130*			
Surrogate: o-Terphenyl	*57.6*		"	*50.0*		*115*	*70-130*			
Calibration Check (P7J2713-CCV2)				Prepared: 10/27/17 Analyzed: 10/31/17						
C6-C12	477	25.0	mg/kg wet	500		95.4	85-115			
>C12-C28	490	25.0	"	500		98.0	85-115			
Surrogate: 1-Chlorooctane	*115*		"	*100*		*115*	*70-130*			
Surrogate: o-Terphenyl	*56.4*		"	*50.0*		*113*	*70-130*			
Calibration Check (P7J2713-CCV3)				Prepared: 10/27/17 Analyzed: 10/31/17						
C6-C12	479	25.0	mg/kg wet	500		95.8	85-115			
>C12-C28	510	25.0	"	500		102	85-115			
Surrogate: 1-Chlorooctane	*116*		"	*100*		*116*	*70-130*			
Surrogate: o-Terphenyl	*56.9*		"	*50.0*		*114*	*70-130*			
Matrix Spike (P7J2713-MS1)	**Source: 7J26001-04**			Prepared: 10/27/17 Analyzed: 10/31/17						
C6-C12	927	27.8	mg/kg dry	1110	25.7	81.1	75-125			
>C12-C28	1110	27.8	"	1110	25.9	97.9	75-125			
Surrogate: 1-Chlorooctane	*114*		"	*111*		*102*	*70-130*			
Surrogate: o-Terphenyl	*58.6*		"	*55.6*		*105*	*70-130*			
Matrix Spike Dup (P7J2713-MSD1)	**Source: 7J26001-04**			Prepared: 10/27/17 Analyzed: 10/31/17						
C6-C12	959	27.8	mg/kg dry	1110	25.7	84.0	75-125	3.54	20	
>C12-C28	1150	27.8	"	1110	25.9	102	75-125	3.67	20	
Surrogate: 1-Chlorooctane	*117*		"	*111*		*106*	*70-130*			
Surrogate: o-Terphenyl	*60.1*		"	*55.6*		*108*	*70-130*			

Stingray Environmental & Construction	Project: Concho Phillips Buck Federal	Fax:
11420 W County Rd 33	Project Number: Concho Phillips Buck Federal	
Midland TEXAS, 79707	Project Manager: Von Norman	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7J2701 - * DEFAULT PREP *** **										
Blank (P7J2701-BLK1)				Prepared & Analyzed: 10/27/17						
% Moisture	ND	0.1	%							
Duplicate (P7J2701-DUP1)	Source: 7J25003-08			Prepared & Analyzed: 10/27/17						
% Moisture	10.0	0.1	%		8.0			22.2	20	
Duplicate (P7J2701-DUP2)	Source: 7J26001-05			Prepared & Analyzed: 10/27/17						
% Moisture	13.0	0.1	%		13.0			0.00	20	
Batch P7J3001 - * DEFAULT PREP *** **										
Blank (P7J3001-BLK1)				Prepared & Analyzed: 10/30/17						
Chloride	ND	1.00	mg/kg wet							
LCS (P7J3001-BS1)				Prepared & Analyzed: 10/30/17						
Chloride	426	1.00	mg/kg wet	400		106	80-120			
LCS Dup (P7J3001-BSD1)				Prepared & Analyzed: 10/30/17						
Chloride	426	1.00	mg/kg wet	400		107	80-120	0.141	20	
Duplicate (P7J3001-DUP1)	Source: 7J24003-11			Prepared & Analyzed: 10/30/17						
Chloride	2980	11.6	mg/kg dry		3010			0.765	20	
Duplicate (P7J3001-DUP2)	Source: 7J24006-03			Prepared & Analyzed: 10/30/17						
Chloride	3490	27.2	mg/kg dry		3460			0.900	20	
Matrix Spike (P7J3001-MS1)	Source: 7J24003-11			Prepared & Analyzed: 10/30/17						
Chloride	4240	11.6	mg/kg dry	1160	3010	107	80-120			

Stingray Environmental & Construction	Project: Concho Phillips Buck Federal	Fax:
11420 W County Rd 33	Project Number: Concho Phillips Buck Federal	
Midland TEXAS, 79707	Project Manager: Von Norman	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7J3004 - * DEFAULT PREP *** **										
Blank (P7J3004-BLK1)				Prepared & Analyzed: 10/30/17						
Chloride	ND	1.00	mg/kg wet							
LCS (P7J3004-BS1)				Prepared & Analyzed: 10/30/17						
Chloride	426	1.00	mg/kg wet	400		106	80-120			
LCS Dup (P7J3004-BSD1)				Prepared & Analyzed: 10/30/17						
Chloride	421	1.00	mg/kg wet	400		105	80-120	1.21	20	
Duplicate (P7J3004-DUP1)		**Source: 7J26001-04**		Prepared & Analyzed: 10/30/17						
Chloride	26.3	1.11	mg/kg dry		32.7			21.7	20	R2
Matrix Spike (P7J3004-MS1)		**Source: 7J26001-04**		Prepared & Analyzed: 10/30/17						
Chloride	1220	1.11	mg/kg dry	1110	32.7	107	80-120			

Stingray Environmental & Construction	Project: Concho Phillips Buck Federal	Fax:
11420 W County Rd 33	Project Number: Concho Phillips Buck Federal	
Midland TEXAS, 79707	Project Manager: Von Norman	

Notes and Definitions

R2	The RPD exceeded the acceptance limit.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BULK	Samples received in Bulk soil containers
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: _____ Date: 11/3/2017

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
1400 Rankin Hwy
Midland, Texas 79701

Phone: 432-686-7235

Project Manager: Von Norman

Company Name: Stingray E&C

Company Address:

City/State/Zip:

Telephone No: Fax No:

Sampler Signature: Von Norman e-mail:

Project Name: Conoco Phillips Buck Federal

Project #: " " " "

Project Loc:

PO #:

Report Format: X Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 712400

Lab ID (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3 250 ml Poly	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None 1L Poly	NaOH/ZnAc	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TPH by TX 1005 8015B 8015M	Chloride	BTEX by 8021B	Rush 24 48 72 (Please call)	Standard
1	SP1		7'	10-19-17	1212 hrs	/	1	/								5			/	/	/		
2	SP2		7'	"	1241 hrs	/	1	/								5			/	/	/		
3	SP3		7'	"	1317 hrs	/	1	/								5			/	/	/		
4	SP4		7'	"	1352 hrs	/	1	/								5			/	/	/		
5	SP5		7'	"	1517 hrs	/	1	/								5			/	/	/		

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Von Norman	10-26-17	9:00 AM			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
				10-26-17	900

Laboratory Comments:

Sample Containers Intact?	(Y)	N
VOCs Free of Headspace?	(Y)	N
Labels on container(s)	(Y)	N
Custody seals on container(s)	(Y)	N
Custody seals on cooler(s)	(Y)	N
Sample Hand Delivered	(Y)	N
by Sampler/Client Rep.?	(Y)	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: 1.0 °C
Adjusted: °C Factor: NCF 4

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 27, 2018

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1026990
Samples Received:	09/19/2018
Project Number:	212C-MD-0724
Description:	Buck Fed
Site:	BUCK FED
Report To:	Kayla Taylor 4001 N. Big Spring St., Ste. 401 Midland, TX 79705

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 National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

BH-1 (2-3) L1026990-01 Solid

Collected by: Clint Merritt | Collected date/time: 09/17/18 10:40 | Received date/time: 09/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1169499	1	09/21/18 11:40	09/21/18 11:53	KDW
Wet Chemistry by Method 300.0	WG1168638	1	09/20/18 01:07	09/24/18 17:35	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1169146	1	09/20/18 14:50	09/22/18 06:04	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1170148	1	09/20/18 14:50	09/23/18 06:59	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1170732	1	09/20/18 14:50	09/26/18 01:12	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1169304	1	09/25/18 09:52	09/26/18 09:35	AAT

BH-1 (3-4) L1026990-02 Solid

Collected by: Clint Merritt | Collected date/time: 09/17/18 10:45 | Received date/time: 09/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1169499	1	09/21/18 11:40	09/21/18 11:53	KDW
Wet Chemistry by Method 300.0	WG1168638	1	09/20/18 01:07	09/24/18 17:52	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1169146	1	09/20/18 14:50	09/22/18 06:25	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1170148	1	09/20/18 14:50	09/23/18 07:23	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1170732	1	09/20/18 14:50	09/26/18 01:32	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1169304	1	09/25/18 09:52	09/26/18 10:13	AAT

BH-2 (2-3) L1026990-03 Solid

Collected by: Clint Merritt | Collected date/time: 09/17/18 11:30 | Received date/time: 09/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1169501	1	09/22/18 11:33	09/22/18 11:41	KDW
Wet Chemistry by Method 300.0	WG1168638	1	09/20/18 01:07	09/24/18 18:01	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1169146	1	09/20/18 14:50	09/22/18 06:46	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1170228	1	09/20/18 14:50	09/22/18 20:19	JHH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1169304	1	09/25/18 09:52	09/26/18 10:26	AAT

BH-2 (3-4) L1026990-04 Solid

Collected by: Clint Merritt | Collected date/time: 09/17/18 11:35 | Received date/time: 09/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1169089	1	09/20/18 15:18	09/20/18 15:28	JD
Wet Chemistry by Method 300.0	WG1168638	1	09/20/18 01:07	09/24/18 18:10	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1169146	1	09/20/18 14:50	09/22/18 07:07	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1170228	1	09/20/18 14:50	09/22/18 20:38	JHH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1169304	1	09/25/18 09:52	09/26/18 10:38	AAT

BH-3 (3-4) L1026990-05 Solid

Collected by: Clint Merritt | Collected date/time: 09/17/18 12:25 | Received date/time: 09/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1169089	1	09/20/18 15:18	09/20/18 15:28	JD
Wet Chemistry by Method 300.0	WG1168638	10	09/20/18 01:07	09/24/18 18:19	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1169146	1	09/20/18 14:50	09/22/18 07:28	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1170228	1	09/20/18 14:50	09/22/18 20:58	JHH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1169304	1	09/25/18 09:52	09/26/18 10:51	AAT

BH-3 (4-5) L1026990-06 Solid

Collected by: Clint Merritt
Collected date/time: 09/17/18 12:30
Received date/time: 09/19/18 08:45

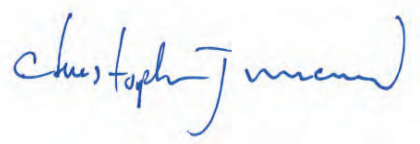
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1169089	1	09/20/18 15:18	09/20/18 15:28	JD
Wet Chemistry by Method 300.0	WG1168638	1	09/20/18 01:07	09/24/18 18:45	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1169146	1	09/20/18 14:50	09/22/18 07:49	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1170228	1	09/20/18 14:50	09/22/18 21:17	JHH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1169304	1	09/25/18 09:52	09/26/18 11:03	AAT

BH-4 (2-3) L1026990-07 Solid

Collected by: Clint Merritt
Collected date/time: 09/17/18 13:30
Received date/time: 09/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1169089	1	09/20/18 15:18	09/20/18 15:28	JD
Wet Chemistry by Method 300.0	WG1168638	5	09/20/18 01:07	09/24/18 18:54	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1169146	1	09/20/18 14:50	09/22/18 08:10	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1170228	1	09/20/18 14:50	09/22/18 21:37	JHH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1169304	1	09/25/18 09:52	09/26/18 11:16	AAT

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	88.0		1	09/21/2018 11:53	WG1169499

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	307		0.903	10.0	11.4	1	09/24/2018 17:35	WG1168638

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0696	J	0.0247	0.100	0.114	1	09/22/2018 06:04	WG1169146
(S) a,a,a-Trifluorotoluene(FID)	*96.3*				*77.0-120*		*09/22/2018 06:04*	WG1169146

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000454	0.00100	0.00114	1	09/23/2018 06:59	WG1170148
Toluene	U		0.00142	0.00500	0.00568	1	09/23/2018 06:59	WG1170148
Ethylbenzene	U		0.000602	0.00250	0.00284	1	09/26/2018 01:12	WG1170732
Total Xylenes	U		0.00543	0.00650	0.00738	1	09/26/2018 01:12	WG1170732
(S) Toluene-d8	*113*				*75.0-131*		*09/23/2018 06:59*	WG1170148
(S) Toluene-d8	*117*				*75.0-131*		*09/26/2018 01:12*	WG1170732
(S) Dibromofluoromethane	*91.3*				*65.0-129*		*09/23/2018 06:59*	WG1170148
(S) Dibromofluoromethane	*86.9*				*65.0-129*		*09/26/2018 01:12*	WG1170732
(S) a,a,a-Trifluorotoluene	*104*				*80.0-120*		*09/23/2018 06:59*	WG1170148
(S) a,a,a-Trifluorotoluene	*107*				*80.0-120*		*09/26/2018 01:12*	WG1170732
(S) 4-Bromofluorobenzene	*101*				*67.0-138*		*09/23/2018 06:59*	WG1170148
(S) 4-Bromofluorobenzene	*87.4*				*67.0-138*		*09/26/2018 01:12*	WG1170732

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	32.6	J5	1.83	4.00	4.54	1	09/26/2018 09:35	WG1169304
C28-C40 Oil Range	9.86		0.311	4.00	4.54	1	09/26/2018 09:35	WG1169304
(S) o-Terphenyl	*50.0*				*18.0-148*		*09/26/2018 09:35*	WG1169304

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.9		1	09/21/2018 11:53	WG1169499

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	264		0.905	10.0	11.4	1	09/24/2018 17:52	WG1168638

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0567	J	0.0247	0.100	0.114	1	09/22/2018 06:25	WG1169146
(S) a,a,a-Trifluorotoluene(FID)	*96.5*				*77.0-120*		*09/22/2018 06:25*	WG1169146

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000455	0.00100	0.00114	1	09/23/2018 07:23	WG1170148
Toluene	U		0.00142	0.00500	0.00569	1	09/23/2018 07:23	WG1170148
Ethylbenzene	U		0.000603	0.00250	0.00284	1	09/26/2018 01:32	WG1170732
Total Xylenes	U		0.00544	0.00650	0.00739	1	09/26/2018 01:32	WG1170732
(S) Toluene-d8	*113*				*75.0-131*		*09/23/2018 07:23*	WG1170148
(S) Toluene-d8	*117*				*75.0-131*		*09/26/2018 01:32*	WG1170732
(S) Dibromofluoromethane	*90.9*				*65.0-129*		*09/23/2018 07:23*	WG1170148
(S) Dibromofluoromethane	*90.4*				*65.0-129*		*09/26/2018 01:32*	WG1170732
(S) a,a,a-Trifluorotoluene	*105*				*80.0-120*		*09/23/2018 07:23*	WG1170148
(S) a,a,a-Trifluorotoluene	*105*				*80.0-120*		*09/26/2018 01:32*	WG1170732
(S) 4-Bromofluorobenzene	*100*				*67.0-138*		*09/23/2018 07:23*	WG1170148
(S) 4-Bromofluorobenzene	*83.1*				*67.0-138*		*09/26/2018 01:32*	WG1170732

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	30.1		1.83	4.00	4.55	1	09/26/2018 10:13	WG1169304
C28-C40 Oil Range	10.9		0.312	4.00	4.55	1	09/26/2018 10:13	WG1169304
(S) o-Terphenyl	*61.2*				*18.0-148*		*09/26/2018 10:13*	WG1169304

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.2		1	09/22/2018 11:41	WG1169501

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	723		0.922	10.0	11.6	1	09/24/2018 18:01	WG1168638

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0268	J	0.0252	0.100	0.116	1	09/22/2018 06:46	WG1169146
(S) a,a,a-Trifluorotoluene(FID)	*96.1*				*77.0-120*		*09/22/2018 06:46*	WG1169146

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000464	0.00100	0.00116	1	09/22/2018 20:19	WG1170228
Toluene	U		0.00145	0.00500	0.00580	1	09/22/2018 20:19	WG1170228
Ethylbenzene	U		0.000615	0.00250	0.00290	1	09/22/2018 20:19	WG1170228
Total Xylenes	U		0.00554	0.00650	0.00754	1	09/22/2018 20:19	WG1170228
(S) Toluene-d8	*118*				*75.0-131*		*09/22/2018 20:19*	WG1170228
(S) Dibromofluoromethane	*94.0*				*65.0-129*		*09/22/2018 20:19*	WG1170228
(S) a,a,a-Trifluorotoluene	*99.3*				*80.0-120*		*09/22/2018 20:19*	WG1170228
(S) 4-Bromofluorobenzene	*97.5*				*67.0-138*		*09/22/2018 20:19*	WG1170228

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.95	J	1.87	4.00	4.64	1	09/26/2018 10:26	WG1169304
C28-C40 Oil Range	0.785	J	0.318	4.00	4.64	1	09/26/2018 10:26	WG1169304
(S) o-Terphenyl	*72.7*				*18.0-148*		*09/26/2018 10:26*	WG1169304

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.2		1	09/20/2018 15:28	WG1169089

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	567		0.891	10.0	11.2	1	09/24/2018 18:10	WG1168638

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0510	J	0.0243	0.100	0.112	1	09/22/2018 07:07	WG1169146
(S) a,a,a-Trifluorotoluene(FID)	*96.1*				*77.0-120*		*09/22/2018 07:07*	WG1169146

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000448	0.00100	0.00112	1	09/22/2018 20:38	WG1170228
Toluene	U		0.00140	0.00500	0.00560	1	09/22/2018 20:38	WG1170228
Ethylbenzene	U		0.000594	0.00250	0.00280	1	09/22/2018 20:38	WG1170228
Total Xylenes	U		0.00536	0.00650	0.00729	1	09/22/2018 20:38	WG1170228
(S) Toluene-d8	*118*				*75.0-131*		*09/22/2018 20:38*	WG1170228
(S) Dibromofluoromethane	*89.0*				*65.0-129*		*09/22/2018 20:38*	WG1170228
(S) a,a,a-Trifluorotoluene	*103*				*80.0-120*		*09/22/2018 20:38*	WG1170228
(S) 4-Bromofluorobenzene	*83.6*				*67.0-138*		*09/22/2018 20:38*	WG1170228

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	73.1		1.80	4.00	4.48	1	09/26/2018 10:38	WG1169304
C28-C40 Oil Range	26.7		0.307	4.00	4.48	1	09/26/2018 10:38	WG1169304
(S) o-Terphenyl	*73.9*				*18.0-148*		*09/26/2018 10:38*	WG1169304

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.9		1	09/20/2018 15:28	WG1169089

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	3850		8.38	10.0	105	10	09/24/2018 18:19	WG1168638

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.101	J	0.0229	0.100	0.105	1	09/22/2018 07:28	WG1169146
(S) a,a,a-Trifluorotoluene(FID)	*95.8*				*77.0-120*		*09/22/2018 07:28*	WG1169146

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000421	0.00100	0.00105	1	09/22/2018 20:58	WG1170228
Toluene	U		0.00132	0.00500	0.00527	1	09/22/2018 20:58	WG1170228
Ethylbenzene	U		0.000558	0.00250	0.00263	1	09/22/2018 20:58	WG1170228
Total Xylenes	U		0.00504	0.00650	0.00685	1	09/22/2018 20:58	WG1170228
(S) Toluene-d8	*119*				*75.0-131*		*09/22/2018 20:58*	WG1170228
(S) Dibromofluoromethane	*89.0*				*65.0-129*		*09/22/2018 20:58*	WG1170228
(S) a,a,a-Trifluorotoluene	*100*				*80.0-120*		*09/22/2018 20:58*	WG1170228
(S) 4-Bromofluorobenzene	*95.2*				*67.0-138*		*09/22/2018 20:58*	WG1170228

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	95.6		1.70	4.00	4.21	1	09/26/2018 10:51	WG1169304
C28-C40 Oil Range	57.3		0.289	4.00	4.21	1	09/26/2018 10:51	WG1169304
(S) o-Terphenyl	*57.7*				*18.0-148*		*09/26/2018 10:51*	WG1169304

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.5		1	09/20/2018 15:28	WG1169089

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	754		0.930	10.0	11.7	1	09/24/2018 18:45	WG1168638

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0488	J	0.0254	0.100	0.117	1	09/22/2018 07:49	WG1169146
(S) a,a,a-Trifluorotoluene(FID)	*95.3*				*77.0-120*		*09/22/2018 07:49*	WG1169146

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000468	0.00100	0.00117	1	09/22/2018 21:17	WG1170228
Toluene	U		0.00146	0.00500	0.00585	1	09/22/2018 21:17	WG1170228
Ethylbenzene	U		0.000620	0.00250	0.00292	1	09/22/2018 21:17	WG1170228
Total Xylenes	U		0.00559	0.00650	0.00760	1	09/22/2018 21:17	WG1170228
(S) Toluene-d8	*119*				*75.0-131*		*09/22/2018 21:17*	WG1170228
(S) Dibromofluoromethane	*89.5*				*65.0-129*		*09/22/2018 21:17*	WG1170228
(S) a,a,a-Trifluorotoluene	*99.0*				*80.0-120*		*09/22/2018 21:17*	WG1170228
(S) 4-Bromofluorobenzene	*101*				*67.0-138*		*09/22/2018 21:17*	WG1170228

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.76	J	1.88	4.00	4.68	1	09/26/2018 11:03	WG1169304
C28-C40 Oil Range	1.80	J	0.320	4.00	4.68	1	09/26/2018 11:03	WG1169304
(S) o-Terphenyl	*79.6*				*18.0-148*		*09/26/2018 11:03*	WG1169304

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.5		1	09/20/2018 15:28	WG1169089

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1640		4.94	10.0	62.1	5	09/24/2018 18:54	WG1168638

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0404	J	0.0270	0.100	0.124	1	09/22/2018 08:10	WG1169146
(S) a,a,a-Trifluorotoluene(FID)	*96.0*				*77.0-120*		*09/22/2018 08:10*	WG1169146

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000497	0.00100	0.00124	1	09/22/2018 21:37	WG1170228
Toluene	U		0.00155	0.00500	0.00621	1	09/22/2018 21:37	WG1170228
Ethylbenzene	U		0.000659	0.00250	0.00311	1	09/22/2018 21:37	WG1170228
Total Xylenes	U		0.00594	0.00650	0.00808	1	09/22/2018 21:37	WG1170228
(S) Toluene-d8	*119*				*75.0-131*		*09/22/2018 21:37*	WG1170228
(S) Dibromofluoromethane	*91.1*				*65.0-129*		*09/22/2018 21:37*	WG1170228
(S) a,a,a-Trifluorotoluene	*99.6*				*80.0-120*		*09/22/2018 21:37*	WG1170228
(S) 4-Bromofluorobenzene	*86.4*				*67.0-138*		*09/22/2018 21:37*	WG1170228

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		2.00	4.00	4.97	1	09/26/2018 11:16	WG1169304
C28-C40 Oil Range	U		0.341	4.00	4.97	1	09/26/2018 11:16	WG1169304
(S) o-Terphenyl	*70.9*				*18.0-148*		*09/26/2018 11:16*	WG1169304

Method Blank (MB)

(MB) R3343796-1 09/20/18 15:28

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

L1027078-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1027078-01 09/20/18 15:28 • (DUP) R3343796-3 09/20/18 15:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	83.3	87.4	1	4.82		10

Laboratory Control Sample (LCS)

(LCS) R3343796-2 09/20/18 15:28

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) R3344100-1 09/21/18 11:53

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

L1026982-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1026982-03 09/21/18 11:53 • (DUP) R3344100-3 09/21/18 11:53

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	92.9	92.8	1	0.102		10

Laboratory Control Sample (LCS)

(LCS) R3344100-2 09/21/18 11:53

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

Method Blank (MB)

(MB) R3344382-1 09/22/18 11:41

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

L1026991-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1026991-01 09/22/18 11:41 • (DUP) R3344382-3 09/22/18 11:41

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	81.2	81.4	1	0.292		10

Laboratory Control Sample (LCS)

(LCS) R3344382-2 09/22/18 11:41

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) R3344717-1 09/24/18 16:45

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	2.73	J	0.795	10.0

L1026990-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1026990-01 09/24/18 17:35 • (DUP) R3344717-4 09/24/18 17:44

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	307	256	1	18.2		20

L1027074-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1027074-23 09/24/18 21:32 • (DUP) R3344717-7 09/24/18 21:40

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	99.7	78.5	1	23.7	J3	20

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

(LCS) R3344717-2 09/24/18 16:54 • (LCSD) R3344717-3 09/24/18 17:03

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Chloride	200	217	217	108	108	90.0-110			0.0549	20

L1026992-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1026992-03 09/24/18 19:20 • (MS) R3344717-5 09/24/18 19:29 • (MSD) R3344717-6 09/24/18 19:38

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	613	7080	6160	9400	0.000	378	1	80.0-120	E V	E J3 V	41.7	20

Method Blank (MB)

(MB) R3344624-3 09/22/18 02:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*97.3*			*77.0-120*

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

(LCS) R3344624-1 09/22/18 01:52 • (LCSD) R3344624-2 09/22/18 02:13

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	5.91	5.85	107	106	72.0-127			1.10	20
(S) a,a,a-Trifluorotoluene(FID)				*111*	*110*	*77.0-120*				

L1026920-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1026920-03 09/22/18 03:37 • (MS) R3344624-4 09/22/18 10:15 • (MSD) R3344624-5 09/22/18 10:36

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	6.95	0.373	4.81	5.09	63.9	67.9	1	10.0-151			5.60	28
(S) a,a,a-Trifluorotoluene(FID)					*101*	*102*		*77.0-120*				

Method Blank (MB)

(MB) R3344568-1 09/22/18 23:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Toluene	U		0.00125	0.00500
(S) Toluene-d8	*109*			*75.0-131*
(S) Dibromofluoromethane	*97.1*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*109*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.8*			*67.0-138*

Laboratory Control Sample (LCS)

(LCS) R3344568-4 09/23/18 09:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.0990	79.2	70.0-123	
Toluene	0.125	0.108	86.2	75.0-121	
(S) Toluene-d8			*103*	*75.0-131*	
(S) Dibromofluoromethane			*89.7*	*65.0-129*	
(S) a,a,a-Trifluorotoluene			*104*	*80.0-120*	
(S) 4-Bromofluorobenzene			*102*	*67.0-138*	

L1026878-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1026878-04 09/23/18 04:38 • (MS) R3344568-2 09/23/18 07:47 • (MSD) R3344568-3 09/23/18 08:10

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.149	0.312	0.856	0.745	45.8	36.5	8	10.0-149			13.9	37
Toluene	0.149	13.3	13.3	12.4	0.000	0.000	8	10.0-156	E V	E V	6.99	38
(S) Toluene-d8					*107*	*102*		*75.0-131*				
(S) Dibromofluoromethane					*91.1*	*90.9*		*65.0-129*				
(S) a,a,a-Trifluorotoluene					*102*	*103*		*80.0-120*				
(S) 4-Bromofluorobenzene					*102*	*105*		*67.0-138*				

Method Blank (MB)

(MB) R3344766-2 09/22/18 19:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*115*			*75.0-131*
(S) Dibromofluoromethane	*91.7*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*101*			*80.0-120*
(S) 4-Bromofluorobenzene	*103*			*67.0-138*

Laboratory Control Sample (LCS)

(LCS) R3344766-1 09/22/18 18:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.118	94.4	70.0-123	
Ethylbenzene	0.125	0.104	83.4	74.0-126	
Toluene	0.125	0.120	96.0	75.0-121	
Xylenes, Total	0.375	0.368	98.1	72.0-127	
(S) Toluene-d8			*104*	*75.0-131*	
(S) Dibromofluoromethane			*110*	*65.0-129*	
(S) a,a,a-Trifluorotoluene			*99.1*	*80.0-120*	
(S) 4-Bromofluorobenzene			*89.6*	*67.0-138*	

L1027016-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1027016-06 09/22/18 23:34 • (MS) R3344766-3 09/23/18 02:50 • (MSD) R3344766-4 09/23/18 03:09

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	0.144	ND	0.0733	0.112	50.9	77.7	1	10.0-149		J3	41.7	37
Ethylbenzene	0.144	ND	0.0927	0.148	64.3	102	1	10.0-160		J3	45.8	38
Toluene	0.144	ND	0.0884	0.134	61.3	92.7	1	10.0-156		J3	40.8	38
Xylenes, Total	0.432	ND	0.306	0.479	70.7	111	1	10.0-160		J3	44.1	38
(S) Toluene-d8					*120*	*119*		*75.0-131*				
(S) Dibromofluoromethane					*92.1*	*93.1*		*65.0-129*				
(S) a,a,a-Trifluorotoluene					*94.2*	*95.1*		*80.0-120*				
(S) 4-Bromofluorobenzene					*94.7*	*97.4*		*67.0-138*				

Method Blank (MB)

(MB) R3345262-3 09/26/18 00:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Ethylbenzene	U		0.000530	0.00250
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*116*			*75.0-131*
(S) Dibromofluoromethane	*91.9*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*105*			*80.0-120*
(S) 4-Bromofluorobenzene	*96.6*			*67.0-138*

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

(LCS) R3345262-1 09/25/18 23:14 • (LCSD) R3345262-2 09/25/18 23:34

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 %
Ethylbenzene	0.125	0.108	0.0999	86.4	79.9	74.0-126			7.72	20
Xylenes, Total	0.375	0.381	0.355	102	94.7	72.0-127			7.07	20
(S) Toluene-d8				*104*	*104*	*75.0-131*				
(S) Dibromofluoromethane				*110*	*110*	*65.0-129*				
(S) a,a,a-Trifluorotoluene				*102*	*103*	*80.0-120*				
(S) 4-Bromofluorobenzene				*86.4*	*87.6*	*67.0-138*				

Method Blank (MB)

(MB) R3345188-1 09/26/18 08:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*89.3*			*18.0-148*

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

(LCS) R3345188-2 09/26/18 09:10 • (LCSD) R3345188-3 09/26/18 09:23

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 %
C10-C28 Diesel Range	50.0	43.7	37.3	87.4	74.6	50.0-150			15.8	20
(S) o-Terphenyl				*95.0*	*87.4*	*18.0-148*				

L1026990-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1026990-01 09/26/18 09:35 • (MS) R3345188-4 09/26/18 09:48 • (MSD) R3345188-5 09/26/18 10:00

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	56.8	32.6	119	101	153	121	1	50.0-150	J5		16.4	20
(S) o-Terphenyl					*75.7*	*83.5*		*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.

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.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(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 Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
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.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

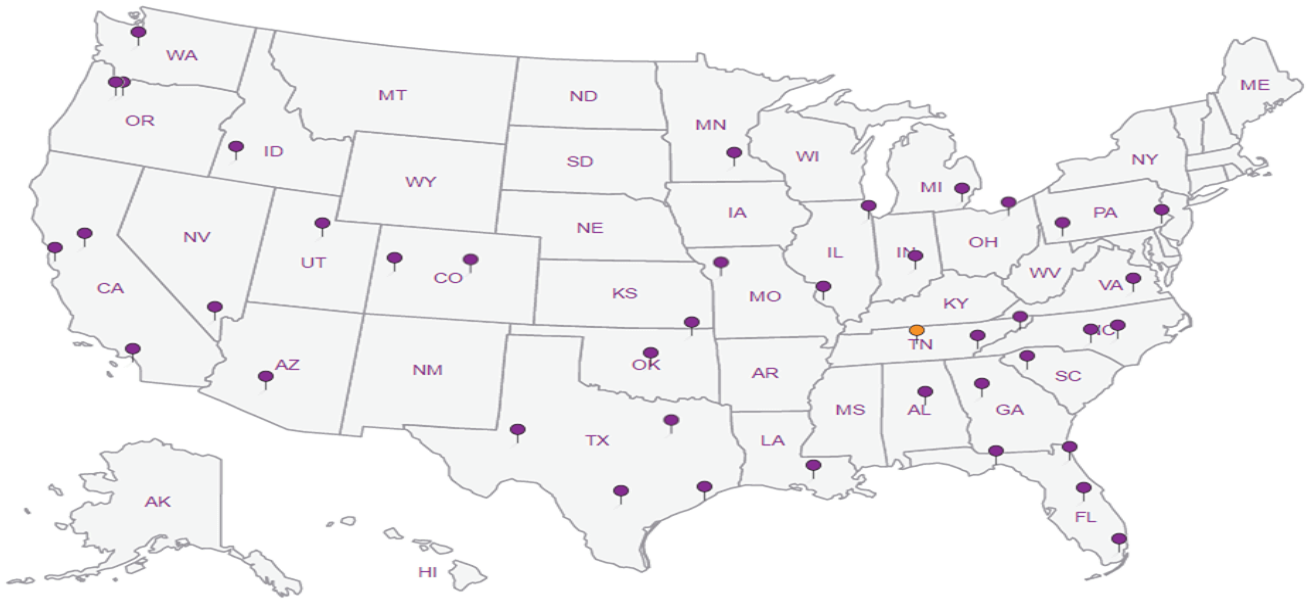
Third Party Federal Accreditations

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

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

Our Locations

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



ConocoPhillips - Tetra Tech

4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Billing Information:
Accounts Payable
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Report to: Kayla Taylor

Email To: Kayla Taylor

Project Description: Buck Fed

City/State Collected: Lea Co NM

Phone: 432-687-8137
Fax:

Client Project # 212C-MD-0724

Lab Project #

Collected by (print): Chet Smith

Site/Facility ID # Buck Fed

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

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

Quote #

Date Results Needed

Chain of Custody Page 1 of 5

ESC LABORATORIES
a subsidiary of Pace Analytical

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

L# 1076990
A179

Acctnum: COPTETRA
Template:
Prelogin:
TSR: 526 - Chris McCord
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX	TPH	Cl-	Hold	Remarks	Sample # (lab only)
BH-1 (2-3)	Grab	SS		9/17	10:40	1	X	X	X			01
BH-1 (3-4)					10:45	1	X	X	X			02
(4-5)					10:50	1				X		
(5-6)					10:55	1				X		
(6-7)					11:00	1				X		
(7-8)					11:05	1				X		
(8-9)					11:10	1				X		
(9-10)					11:15	1				X		
BH-2 (2-3)					11:30	1	X	X	X			03
(3-4)					11:35	1	X	X	X			04

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

Remarks:
** Run deeper samples if top samples exceed threshold.
Kayla will email threshold 9/18

pH _____ Temp _____
RAD SCREEN: <0.5 mR/hr Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 4430 2429 2189 / 2190

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: X N
Bottles arrive intact: X N
Correct bottles used: X N
Sufficient volume sent: X N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	9/18	15:30	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
			2.1
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 2.3 °C Bottles Received: 39

Date: 9/19/18 Time: 0845

If preservation required by Login: Date/Time

09-0081

Condition: NCF / OK

ConocoPhillips - Tetra Tech

4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Billing Information:
Accounts Payable
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Report to: Kayla Taylor
Email To: Kayla Taylor

Project Description: Buck Fed
City/State Collected: La Co NM

Phone: 432-687-8137
Fax:

Client Project # 212C-MD-00724
Lab Project #

Collected by (print): Clint Meridith
Site/Facility ID # Buck Fed
P.O. #

Collected by (signature):
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Quote #
Date Results Needed

Chain of Custody Page 3 of 5

ESC LABORATORIES
a subsidiary of Pace Analytical
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1026990
Table #
Acctnum: COPTETRA
Template:
Prelogin:
TSR: 526 - Chris McCord
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX	TPH	Cl-	Hold	Remarks	Sample # (lab only)
BH-2(4-5)	Grab	SS		9/17	11:40	1				X		
(5-6)					11:45	1				X		
(6-7)					11:50	1				X		
(7-8)					11:55	1				X		
(8-9)					12:00	1				X		
(9-10)					12:05	1				X		
BH-3(3-4)					12:25	1	X	X	X			05
(4-5)					12:30	1	X	X	X			06
(5-6)					12:35	1				X		
(7-8)					12:40	1				X		

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

Remarks: RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS X FedEx __ Courier _____
Tracking # 4430 3429 2184/ 2190

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	9/18	15:30	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 23 °C Bottles Received: 39

Date: 9/19/18 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Chain of Custody Page 3 of 5

ESC LABORATORY SCIENCES — a subsidiary of Pace Analytical
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1026990

Table #

Acctnum: COPTETRA

Template:

Prelogin:

TSR: 526 - Chris McCord

PB:

Shipped Via:

ConocoPhillips - Tetra Tech
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Billing Information:
Accounts Payable
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Pres Chk

Report to: Kayla Taylor

Email To: Kayla Taylor

Project Description: Buck Fed

City/State Collected: Lea Co NM

Phone: 432-687-8137
Fax:

Client Project # 212C-MD-00724

Lab Project #

Collected by (print): Clint Smith

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX	TPH	Cl-							Hold	Remarks	Sample # (lab only)
BH-3 (8-9)	Grab	SS		9/17	12:50	1									-	X		
(9-10)					12:55	1									-	X		
(10-11)					13:00	1									-	X		
(11-12)					13:05	1									-	X		
(12-13)					13:10	1									-	X		
(13-14)					13:15	1									-	X		
BH-4 (1-2)					13:25	4C	X	X	X									
(2-3)					13:30	1	X	X	X									07
(3-4)					13:35	1									-	X		
(4-5)					13:40	1									-	X		

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

RAD SCREEN: <0.5 mR/hr

Samples returned via:
__ UPS X FedEx __ Courier

Tracking # 4430 3429 2189 2190

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	9/18	15:30	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

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

Temp: 2.3 2.2 °C Bottles Received: 39

Date: 9/19/18 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ConocoPhillips - Tetra Tech

4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Billing Information:
Accounts Payable
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Pres Chk

Report to: Kayla Taylor
Email To: Kayla Taylor

Project Description: Buck Fed
City/State Collected: Lea Co NM

Phone: 432-687-8137
Fax:

Client Project # 212C-MD-00724
Lab Project #

Collected by (print): Clint Moritz
Site/Facility ID # Buck Fed
P.O. #

Collected by (signature):
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed

Quote #

No. of Cntrs

Analysis / Container / Preservative

Hold

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Hold	Remarks	Sample # (lab only)
BH-4 (5-6)	Grab	SS		9/17	13:45	1	X		
(6-7)					13:50	1	X		
(7-8)					13:55	1	X		
(8-9)					14:00	1	X		
(9-10)					14:05	1	X		
(10-11)					14:10	1	X		
(11-12)					14:15	1	X		
(12-13)					14:20	1	X		
(13-14)					14:25	1	X		
(14-15)					14:30	1	X		

Chain of Custody Page 4 of 5

ESC LABORATORY SCIENCES
a subsidiary of Accutest
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1020990
Table #
Acctnum: COPTETRA
Template:
Prelogin:
TSR: 526 - Chris McCord
PB:
Shipped Via:

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

Remarks:
PAD SCREEN: <0.5 mR/hr

pH ____ Temp ____
Flow ____ Other ____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 4430 3429 2189 2190

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	9/18	15:30	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 2.3 °C Bottles Received: 39

Date: 9/19/18 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Chain of Custody Page 5 of 5

ESC LABORATORY SCIENCES
a subsidiary of Pace Analytical
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1020990

Table #

Acctnum: COPTETRA

Template:

Prelogin:

TSR: 526 - Chris McCord

PB:

Shipped Via:

ConocoPhillips - Tetra Tech

4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Billing Information:
Accounts Payable
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Report to: Kayla Taylor

Email To: Kayla Taylor

Project Description: Buck Fed

City/State Collected: Lea Co NM

Phone: 432-687-8137
Fax:

Client Project #

Lab Project #

Collected by (print): Chris Smith

Site/Facility ID # Buck Fed

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

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

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative	Remarks	Sample # (lab only)
BH-4 (15-16)	Grab	SS	—	9/17	14:35	1	X		

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

Remarks:

RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 4430 3429 2189 / 2190

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	9/18	15:30		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.3/2.2 °C Bottles Received: 39
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9/19/18 Time: 0845
				Hold: Condition: NCF / OK

Kathryn L. Cason

Pace Analytical®
National Center for Testing & Innovation

Login #:1026990	Client:COPTETRA	Date:9/19/18	Evaluated by:K Cameron

Non-Conformance (check applicable items)

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

Login Comments: Did not receive BH-4 (1-2) or BH-4 (8-9). Received additional sample not listed on COC: BH-3 (6-7) 9/17/18 1240 (1 container).

Client informed by:		Call	x	Email		Voice Mail		Date:9/21/18	Time:09:29
TSR Initials:CM	Client Contact:								

Login Instructions:

Notified client about the missing samples. Place BH-3 (6-7) on hold with the others.

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

October 18, 2018

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1033537
Samples Received:	10/09/2018
Project Number:	212C-MD-01358
Description:	Buck Fed
Site:	BUCK FED
Report To:	Kayla Taylor
	4001 N. Big Spring St., Ste. 401
	Midland, TX 79705

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 National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

BH-1(0-1) L1033537-01 Solid

Collected by: Clint Merritt
Collected date/time: 10/04/18 10:00
Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179980	1	10/12/18 10:56	10/12/18 11:06	KDW
Wet Chemistry by Method 300.0	WG1179230	10	10/12/18 14:21	10/16/18 04:04	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180150	25	10/11/18 08:56	10/12/18 17:20	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180868	1	10/11/18 08:56	10/14/18 21:37	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181245	20	10/11/18 08:56	10/15/18 17:52	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1180710	1	10/14/18 07:45	10/15/18 05:42	SHG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1180710	10	10/14/18 07:45	10/15/18 14:09	DMW

BH-1(1-2) L1033537-02 Solid

Collected by: Clint Merritt
Collected date/time: 10/04/18 10:05
Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179980	1	10/12/18 10:56	10/12/18 11:06	KDW
Wet Chemistry by Method 300.0	WG1179230	1	10/12/18 14:21	10/16/18 04:13	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180150	200	10/11/18 08:56	10/12/18 17:41	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180868	20	10/11/18 08:56	10/15/18 02:14	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181245	200	10/11/18 08:56	10/15/18 18:12	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1180710	20	10/14/18 07:45	10/15/18 14:22	DMW

BH-2(0-1) L1033537-03 Solid

Collected by: Clint Merritt
Collected date/time: 10/04/18 10:10
Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179980	1	10/12/18 10:56	10/12/18 11:06	KDW
Wet Chemistry by Method 300.0	WG1179230	1	10/12/18 14:21	10/16/18 04:21	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180849	1	10/11/18 08:56	10/15/18 16:02	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180868	1	10/11/18 08:56	10/14/18 21:57	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181245	1	10/11/18 08:56	10/15/18 16:51	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1180710	5	10/14/18 07:45	10/15/18 13:56	DMW

BH-2(1-2) L1033537-04 Solid

Collected by: Clint Merritt
Collected date/time: 10/04/18 10:15
Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179980	1	10/12/18 10:56	10/12/18 11:06	KDW
Wet Chemistry by Method 300.0	WG1179230	1	10/12/18 14:21	10/16/18 04:48	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180849	1	10/11/18 08:56	10/15/18 16:26	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180868	1	10/11/18 08:56	10/14/18 22:17	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1181245	1	10/11/18 08:56	10/15/18 17:11	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1180710	1	10/14/18 07:45	10/15/18 12:16	DMW

BH-3(0-1) L1033537-05 Solid

Collected by: Clint Merritt
Collected date/time: 10/04/18 10:20
Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179980	1	10/12/18 10:56	10/12/18 11:06	KDW
Wet Chemistry by Method 300.0	WG1179230	1	10/12/18 14:21	10/16/18 04:56	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180150	1	10/11/18 08:56	10/12/18 18:43	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180868	1	10/11/18 08:56	10/14/18 22:37	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1182012	1	10/17/18 08:50	10/17/18 19:27	TJD

BH-3(1-2) L1033537-06 Solid

Collected by: Clint Merritt | Collected date/time: 10/04/18 10:25 | Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179980	1	10/12/18 10:56	10/12/18 11:06	KDW
Wet Chemistry by Method 300.0	WG1179230	10	10/12/18 14:21	10/16/18 05:05	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180150	1	10/11/18 08:56	10/12/18 19:04	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180868	1	10/11/18 08:56	10/14/18 22:56	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1182012	10	10/17/18 08:50	10/17/18 20:35	TJD

BH-4(0-1) L1033537-07 Solid

Collected by: Clint Merritt | Collected date/time: 10/04/18 10:30 | Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179980	1	10/12/18 10:56	10/12/18 11:06	KDW
Wet Chemistry by Method 300.0	WG1179230	5	10/12/18 14:21	10/16/18 05:23	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180150	25	10/11/18 08:56	10/12/18 19:25	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180868	1	10/11/18 08:56	10/14/18 23:16	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1182012	20	10/17/18 08:50	10/17/18 21:29	TJD

BH-4(1-2) L1033537-08 Solid

Collected by: Clint Merritt | Collected date/time: 10/04/18 10:35 | Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179980	1	10/12/18 10:56	10/12/18 11:06	KDW
Wet Chemistry by Method 300.0	WG1179230	5	10/12/18 14:21	10/16/18 05:32	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180849	1	10/11/18 08:56	10/15/18 16:50	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180868	1	10/11/18 08:56	10/14/18 23:36	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1182012	5	10/17/18 08:50	10/17/18 20:08	TJD

BH-5(0-1) L1033537-09 Solid

Collected by: Clint Merritt | Collected date/time: 10/04/18 11:00 | Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179980	1	10/12/18 10:56	10/12/18 11:06	KDW
Wet Chemistry by Method 300.0	WG1179230	5	10/12/18 14:21	10/16/18 05:40	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180150	25	10/11/18 08:56	10/12/18 20:07	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180868	1	10/11/18 08:56	10/14/18 23:55	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1182012	20	10/17/18 08:50	10/17/18 21:43	TJD

BH-6(0-1) L1033537-10 Solid

Collected by: Clint Merritt | Collected date/time: 10/04/18 11:20 | Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179980	1	10/12/18 10:56	10/12/18 11:06	KDW
Wet Chemistry by Method 300.0	WG1179230	1	10/12/18 14:21	10/16/18 05:49	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180849	1	10/11/18 08:56	10/15/18 17:14	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180868	1	10/11/18 08:56	10/15/18 00:15	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1182012	10	10/17/18 08:50	10/17/18 20:49	TJD

BH-6(1-2) L1033537-11 Solid

Collected by: Clint Merritt | Collected date/time: 10/04/18 11:25 | Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179982	1	10/12/18 10:43	10/12/18 10:53	KDW
Wet Chemistry by Method 300.0	WG1179230	1	10/12/18 14:21	10/16/18 05:58	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180849	25	10/11/18 08:56	10/15/18 17:39	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180868	1	10/11/18 08:56	10/15/18 00:35	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1182012	20	10/17/18 08:50	10/17/18 21:56	TJD

BH-7(0-1) L1033537-12 Solid

Collected by: Clint Merritt | Collected date/time: 10/04/18 11:35 | Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179982	1	10/12/18 10:43	10/12/18 10:53	KDW
Wet Chemistry by Method 300.0	WG1179230	1	10/12/18 14:21	10/16/18 06:07	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180849	1	10/11/18 08:56	10/15/18 18:03	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180868	1	10/11/18 08:56	10/15/18 00:54	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1182012	5	10/17/18 08:50	10/17/18 20:22	TJD

BH-8(0-1) L1033537-13 Solid

Collected by: Clint Merritt | Collected date/time: 10/04/18 11:50 | Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179982	1	10/12/18 10:43	10/12/18 10:53	KDW
Wet Chemistry by Method 300.0	WG1179230	5	10/12/18 14:21	10/16/18 06:33	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180849	1	10/11/18 08:56	10/15/18 18:27	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180941	1	10/11/18 08:56	10/15/18 05:50	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1182012	10	10/17/18 08:50	10/17/18 21:02	TJD
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1182012	20	10/17/18 08:50	10/17/18 22:23	TJD

BH-9(0-1) L1033537-14 Solid

Collected by: Clint Merritt | Collected date/time: 10/04/18 12:05 | Received date/time: 10/09/18 08:45

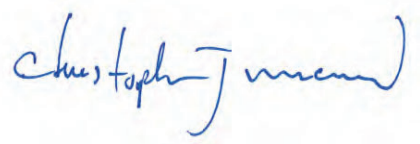
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179982	1	10/12/18 10:43	10/12/18 10:53	KDW
Wet Chemistry by Method 300.0	WG1179230	1	10/12/18 14:21	10/16/18 06:50	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180150	25	10/11/18 08:56	10/12/18 21:50	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180941	1	10/11/18 08:56	10/15/18 10:08	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1182012	20	10/17/18 08:50	10/17/18 22:10	TJD

BH-9(1-2) L1033537-15 Solid

Collected by: Clint Merritt | Collected date/time: 10/04/18 12:10 | Received date/time: 10/09/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1179982	1	10/12/18 10:43	10/12/18 10:53	KDW
Wet Chemistry by Method 300.0	WG1179230	5	10/12/18 14:21	10/16/18 07:26	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1180849	1	10/11/18 08:56	10/15/18 18:51	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180941	1	10/11/18 08:56	10/15/18 06:10	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1182012	10	10/17/18 08:50	10/17/18 21:16	TJD

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	81.7		1	10/12/2018 11:06	WG1179980

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	5850		9.74	10.0	122	10	10/16/2018 04:04	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	332		0.664	0.100	3.06	25	10/12/2018 17:20	WG1180150
(S) a,a,a-Trifluorotoluene(FID)	*82.1*				*77.0-120*		*10/12/2018 17:20*	WG1180150

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.240		0.000490	0.00100	0.00122	1	10/14/2018 21:37	WG1180868
Toluene	7.97		0.0306	0.00500	0.122	20	10/15/2018 17:52	WG1181245
Ethylbenzene	0.924		0.000649	0.00250	0.00306	1	10/14/2018 21:37	WG1180868
Total Xylenes	17.3		0.117	0.00650	0.159	20	10/15/2018 17:52	WG1181245
(S) Toluene-d8	*128*				*75.0-131*		*10/14/2018 21:37*	WG1180868
(S) Toluene-d8	*110*				*75.0-131*		*10/15/2018 17:52*	WG1181245
(S) Dibromofluoromethane	*80.5*				*65.0-129*		*10/14/2018 21:37*	WG1180868
(S) Dibromofluoromethane	*103*				*65.0-129*		*10/15/2018 17:52*	WG1181245
(S) a,a,a-Trifluorotoluene	*83.7*				*80.0-120*		*10/14/2018 21:37*	WG1180868
(S) a,a,a-Trifluorotoluene	*101*				*80.0-120*		*10/15/2018 17:52*	WG1181245
(S) 4-Bromofluorobenzene	*88.7*				*67.0-138*		*10/14/2018 21:37*	WG1180868
(S) 4-Bromofluorobenzene	*106*				*67.0-138*		*10/15/2018 17:52*	WG1181245

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1640		19.7	4.00	49.0	10	10/15/2018 14:09	WG1180710
C28-C40 Oil Range	294		0.335	4.00	4.90	1	10/15/2018 05:42	WG1180710
(S) o-Terphenyl	*120*				*18.0-148*		*10/15/2018 05:42*	WG1180710
(S) o-Terphenyl	*128*				*18.0-148*		*10/15/2018 14:09*	WG1180710

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.7		1	10/12/2018 11:06	WG1179980

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1060		0.985	10.0	12.4	1	10/16/2018 04:13	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	2150		5.38	0.100	24.8	200	10/12/2018 17:41	WG1180150
(S) a,a,a-Trifluorotoluene(FID)	*84.7*				*77.0-120*		*10/12/2018 17:41*	WG1180150

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	3.24		0.00991	0.00100	0.0248	20	10/15/2018 02:14	WG1180868
Toluene	36.0		0.0310	0.00500	0.124	20	10/15/2018 02:14	WG1180868
Ethylbenzene	7.66		0.0131	0.00250	0.0619	20	10/15/2018 02:14	WG1180868
Total Xylenes	103		1.18	0.00650	1.61	200	10/15/2018 18:12	WG1181245
(S) Toluene-d8	*121*				*75.0-131*		*10/15/2018 02:14*	WG1180868
(S) Toluene-d8	*122*				*75.0-131*		*10/15/2018 18:12*	WG1181245
(S) Dibromofluoromethane	*87.2*				*65.0-129*		*10/15/2018 02:14*	WG1180868
(S) Dibromofluoromethane	*104*				*65.0-129*		*10/15/2018 18:12*	WG1181245
(S) a,a,a-Trifluorotoluene	*82.4*				*80.0-120*		*10/15/2018 02:14*	WG1180868
(S) a,a,a-Trifluorotoluene	*101*				*80.0-120*		*10/15/2018 18:12*	WG1181245
(S) 4-Bromofluorobenzene	*103*				*67.0-138*		*10/15/2018 02:14*	WG1180868
(S) 4-Bromofluorobenzene	*107*				*67.0-138*		*10/15/2018 18:12*	WG1181245

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5030		39.9	4.00	99.1	20	10/15/2018 14:22	WG1180710
C28-C40 Oil Range	1420		6.79	4.00	99.1	20	10/15/2018 14:22	WG1180710
(S) o-Terphenyl	*0.000*	J7			*18.0-148*		*10/15/2018 14:22*	WG1180710

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.1		1	10/12/2018 11:06	WG1179980

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	717		0.934	10.0	11.7	1	10/16/2018 04:21	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	2.57		0.0255	0.100	0.117	1	10/15/2018 16:02	WG1180849
(S) a,a,a-Trifluorotoluene(FID)	*87.5*				*77.0-120*		*10/15/2018 16:02*	WG1180849

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000470	0.00100	0.00117	1	10/14/2018 21:57	WG1180868
Toluene	0.00293	J	0.00147	0.00500	0.00587	1	10/15/2018 16:51	WG1181245
Ethylbenzene	U		0.000623	0.00250	0.00294	1	10/14/2018 21:57	WG1180868
Total Xylenes	0.00644	J	0.00561	0.00650	0.00764	1	10/15/2018 16:51	WG1181245
(S) Toluene-d8	*112*				*75.0-131*		*10/14/2018 21:57*	WG1180868
(S) Toluene-d8	*119*				*75.0-131*		*10/15/2018 16:51*	WG1181245
(S) Dibromofluoromethane	*79.4*				*65.0-129*		*10/14/2018 21:57*	WG1180868
(S) Dibromofluoromethane	*98.4*				*65.0-129*		*10/15/2018 16:51*	WG1181245
(S) a,a,a-Trifluorotoluene	*82.3*				*80.0-120*		*10/14/2018 21:57*	WG1180868
(S) a,a,a-Trifluorotoluene	*96.9*				*80.0-120*		*10/15/2018 16:51*	WG1181245
(S) 4-Bromofluorobenzene	*89.3*				*67.0-138*		*10/14/2018 21:57*	WG1180868
(S) 4-Bromofluorobenzene	*97.2*				*67.0-138*		*10/15/2018 16:51*	WG1181245

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	484		9.46	4.00	23.5	5	10/15/2018 13:56	WG1180710
C28-C40 Oil Range	137		1.61	4.00	23.5	5	10/15/2018 13:56	WG1180710
(S) o-Terphenyl	*119*				*18.0-148*		*10/15/2018 13:56*	WG1180710

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.9		1	10/12/2018 11:06	WG1179980

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	581		0.926	10.0	11.6	1	10/16/2018 04:48	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.581		0.0253	0.100	0.116	1	10/15/2018 16:26	WG1180849
(S) a,a,a-Trifluorotoluene(FID)	*93.2*				*77.0-120*		*10/15/2018 16:26*	WG1180849

Sample Narrative:

L1033537-04 WG1180849: Previous run also had low IS/SURR recovery. Matrix effect.

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000466	0.00100	0.00116	1	10/14/2018 22:17	WG1180868
Toluene	0.00452	J	0.00146	0.00500	0.00582	1	10/15/2018 17:11	WG1181245
Ethylbenzene	U		0.000617	0.00250	0.00291	1	10/14/2018 22:17	WG1180868
Total Xylenes	0.0112		0.00557	0.00650	0.00757	1	10/15/2018 17:11	WG1181245
(S) Toluene-d8	*116*				*75.0-131*		*10/14/2018 22:17*	WG1180868
(S) Toluene-d8	*118*				*75.0-131*		*10/15/2018 17:11*	WG1181245
(S) Dibromofluoromethane	*79.1*				*65.0-129*		*10/14/2018 22:17*	WG1180868
(S) Dibromofluoromethane	*94.5*				*65.0-129*		*10/15/2018 17:11*	WG1181245
(S) a,a,a-Trifluorotoluene	*79.8*	J2			*80.0-120*		*10/14/2018 22:17*	WG1180868
(S) a,a,a-Trifluorotoluene	*97.7*				*80.0-120*		*10/15/2018 17:11*	WG1181245
(S) 4-Bromofluorobenzene	*90.7*				*67.0-138*		*10/14/2018 22:17*	WG1180868
(S) 4-Bromofluorobenzene	*102*				*67.0-138*		*10/15/2018 17:11*	WG1181245

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	170		1.87	4.00	4.66	1	10/15/2018 12:16	WG1180710
C28-C40 Oil Range	48.6		0.319	4.00	4.66	1	10/15/2018 12:16	WG1180710
(S) o-Terphenyl	*71.6*				*18.0-148*		*10/15/2018 12:16*	WG1180710

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.3		1	10/12/2018 11:06	WG1179980

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	456		0.967	10.0	12.2	1	10/16/2018 04:56	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0346	J	0.0264	0.100	0.122	1	10/12/2018 18:43	WG1180150
(S) a,a,a-Trifluorotoluene(FID)	*105*				*77.0-120*		*10/12/2018 18:43*	WG1180150

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000486	0.00100	0.00122	1	10/14/2018 22:37	WG1180868
Toluene	U		0.00152	0.00500	0.00608	1	10/14/2018 22:37	WG1180868
Ethylbenzene	U		0.000644	0.00250	0.00304	1	10/14/2018 22:37	WG1180868
Total Xylenes	U		0.00581	0.00650	0.00790	1	10/14/2018 22:37	WG1180868
(S) Toluene-d8	*114*				*75.0-131*		*10/14/2018 22:37*	WG1180868
(S) Dibromofluoromethane	*78.6*				*65.0-129*		*10/14/2018 22:37*	WG1180868
(S) a,a,a-Trifluorotoluene	*79.6*	J2			*80.0-120*		*10/14/2018 22:37*	WG1180868
(S) 4-Bromofluorobenzene	*101*				*67.0-138*		*10/14/2018 22:37*	WG1180868

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	51.2		1.96	4.00	4.86	1	10/17/2018 19:27	WG1182012
C28-C40 Oil Range	19.9		0.333	4.00	4.86	1	10/17/2018 19:27	WG1182012
(S) o-Terphenyl	*49.7*				*18.0-148*		*10/17/2018 19:27*	WG1182012

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.9		1	10/12/2018 11:06	WG1179980

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	3950		8.75	10.0	110	10	10/16/2018 05:05	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.121		0.0239	0.100	0.110	1	10/12/2018 19:04	WG1180150
(S) a,a,a-Trifluorotoluene(FID)	*103*				*77.0-120*		*10/12/2018 19:04*	WG1180150

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000440	0.00100	0.00110	1	10/14/2018 22:56	WG1180868
Toluene	U		0.00138	0.00500	0.00550	1	10/14/2018 22:56	WG1180868
Ethylbenzene	U		0.000583	0.00250	0.00275	1	10/14/2018 22:56	WG1180868
Total Xylenes	U		0.00526	0.00650	0.00715	1	10/14/2018 22:56	WG1180868
(S) Toluene-d8	*116*				*75.0-131*		*10/14/2018 22:56*	WG1180868
(S) Dibromofluoromethane	*82.0*				*65.0-129*		*10/14/2018 22:56*	WG1180868
(S) a,a,a-Trifluorotoluene	*79.5*	J2			*80.0-120*		*10/14/2018 22:56*	WG1180868
(S) 4-Bromofluorobenzene	*89.6*				*67.0-138*		*10/14/2018 22:56*	WG1180868

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1610		17.7	4.00	44.0	10	10/17/2018 20:35	WG1182012
C28-C40 Oil Range	786		3.02	4.00	44.0	10	10/17/2018 20:35	WG1182012
(S) o-Terphenyl	*30.6*				*18.0-148*		*10/17/2018 20:35*	WG1182012

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.9		1	10/12/2018 11:06	WG1179980

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	3780		4.74	10.0	59.6	5	10/16/2018 05:23	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	116		0.647	0.100	2.98	25	10/12/2018 19:25	WG1180150
(S) a,a,a-Trifluorotoluene(FID)	*103*				*77.0-120*		*10/12/2018 19:25*	WG1180150

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000477	0.00100	0.00119	1	10/14/2018 23:16	WG1180868
Toluene	0.00865		0.00149	0.00500	0.00596	1	10/14/2018 23:16	WG1180868
Ethylbenzene	0.0156		0.000632	0.00250	0.00298	1	10/14/2018 23:16	WG1180868
Total Xylenes	0.199		0.00570	0.00650	0.00775	1	10/14/2018 23:16	WG1180868
(S) Toluene-d8	*117*				*75.0-131*		*10/14/2018 23:16*	WG1180868
(S) Dibromofluoromethane	*81.0*				*65.0-129*		*10/14/2018 23:16*	WG1180868
(S) a,a,a-Trifluorotoluene	*79.1*	J2			*80.0-120*		*10/14/2018 23:16*	WG1180868
(S) 4-Bromofluorobenzene	*91.4*				*67.0-138*		*10/14/2018 23:16*	WG1180868

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5060		38.4	4.00	95.4	20	10/17/2018 21:29	WG1182012
C28-C40 Oil Range	1620		6.54	4.00	95.4	20	10/17/2018 21:29	WG1182012
(S) o-Terphenyl	*0.000*	J7			*18.0-148*		*10/17/2018 21:29*	WG1182012

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.1		1	10/12/2018 11:06	WG1179980

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	2540		4.46	10.0	56.1	5	10/16/2018 05:32	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	2.51		0.0244	0.100	0.112	1	10/15/2018 16:50	WG1180849
(S) a,a,a-Trifluorotoluene(FID)	*84.4*				*77.0-120*		*10/15/2018 16:50*	WG1180849

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000449	0.00100	0.00112	1	10/14/2018 23:36	WG1180868
Toluene	U		0.00140	0.00500	0.00561	1	10/14/2018 23:36	WG1180868
Ethylbenzene	U		0.000595	0.00250	0.00281	1	10/14/2018 23:36	WG1180868
Total Xylenes	U		0.00537	0.00650	0.00730	1	10/14/2018 23:36	WG1180868
(S) Toluene-d8	*115*				*75.0-131*		*10/14/2018 23:36*	WG1180868
(S) Dibromofluoromethane	*78.6*				*65.0-129*		*10/14/2018 23:36*	WG1180868
(S) a,a,a-Trifluorotoluene	*79.2*	J2			*80.0-120*		*10/14/2018 23:36*	WG1180868
(S) 4-Bromofluorobenzene	*88.9*				*67.0-138*		*10/14/2018 23:36*	WG1180868

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1110		9.04	4.00	22.5	5	10/17/2018 20:08	WG1182012
C28-C40 Oil Range	466		1.54	4.00	22.5	5	10/17/2018 20:08	WG1182012
(S) o-Terphenyl	*30.8*				*18.0-148*		*10/17/2018 20:08*	WG1182012

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.5		1	10/12/2018 11:06	WG1179980

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	2660		4.65	10.0	58.5	5	10/16/2018 05:40	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	183		0.635	0.100	2.92	25	10/12/2018 20:07	WG1180150
(S) a,a,a-Trifluorotoluene(FID)	*105*				*77.0-120*		*10/12/2018 20:07*	WG1180150

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.000833	J	0.000468	0.00100	0.00117	1	10/14/2018 23:55	WG1180868
Toluene	0.00294	J	0.00146	0.00500	0.00585	1	10/14/2018 23:55	WG1180868
Ethylbenzene	U		0.000620	0.00250	0.00292	1	10/14/2018 23:55	WG1180868
Total Xylenes	0.152		0.00559	0.00650	0.00760	1	10/14/2018 23:55	WG1180868
(S) Toluene-d8	*114*				*75.0-131*		*10/14/2018 23:55*	WG1180868
(S) Dibromofluoromethane	*80.7*				*65.0-129*		*10/14/2018 23:55*	WG1180868
(S) a,a,a-Trifluorotoluene	*78.9*	J2			*80.0-120*		*10/14/2018 23:55*	WG1180868
(S) 4-Bromofluorobenzene	*86.7*				*67.0-138*		*10/14/2018 23:55*	WG1180868

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	6240		37.7	4.00	93.6	20	10/17/2018 21:43	WG1182012
C28-C40 Oil Range	1770		6.41	4.00	93.6	20	10/17/2018 21:43	WG1182012
(S) o-Terphenyl	*0.000*	J7			*18.0-148*		*10/17/2018 21:43*	WG1182012

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.6		1	10/12/2018 11:06	WG1179980

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	248		0.940	10.0	11.8	1	10/16/2018 05:49	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0463	J	0.0256	0.100	0.118	1	10/15/2018 17:14	WG1180849
(S) a,a,a-Trifluorotoluene(FID)	*92.4*				*77.0-120*		*10/15/2018 17:14*	WG1180849

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000473	0.00100	0.00118	1	10/15/2018 00:15	WG1180868
Toluene	U		0.00148	0.00500	0.00591	1	10/15/2018 00:15	WG1180868
Ethylbenzene	U		0.000626	0.00250	0.00295	1	10/15/2018 00:15	WG1180868
Total Xylenes	U		0.00565	0.00650	0.00768	1	10/15/2018 00:15	WG1180868
(S) Toluene-d8	*114*				*75.0-131*		*10/15/2018 00:15*	WG1180868
(S) Dibromofluoromethane	*77.2*				*65.0-129*		*10/15/2018 00:15*	WG1180868
(S) a,a,a-Trifluorotoluene	*81.8*				*80.0-120*		*10/15/2018 00:15*	WG1180868
(S) 4-Bromofluorobenzene	*95.8*				*67.0-138*		*10/15/2018 00:15*	WG1180868

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1040		19.0	4.00	47.3	10	10/17/2018 20:49	WG1182012
C28-C40 Oil Range	442		3.24	4.00	47.3	10	10/17/2018 20:49	WG1182012
(S) o-Terphenyl	*35.7*				*18.0-148*		*10/17/2018 20:49*	WG1182012

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.4		1	10/12/2018 10:53	WG1179982

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	586		0.921	10.0	11.6	1	10/16/2018 05:58	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	150		0.628	0.100	2.89	25	10/15/2018 17:39	WG1180849
(S) a,a,a-Trifluorotoluene(FID)	*90.8*				*77.0-120*		*10/15/2018 17:39*	WG1180849

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.00336		0.000463	0.00100	0.00116	1	10/15/2018 00:35	WG1180868
Toluene	0.313		0.00145	0.00500	0.00579	1	10/15/2018 00:35	WG1180868
Ethylbenzene	0.0505		0.000614	0.00250	0.00289	1	10/15/2018 00:35	WG1180868
Total Xylenes	2.26		0.00553	0.00650	0.00753	1	10/15/2018 00:35	WG1180868
(S) Toluene-d8	*114*				*75.0-131*		*10/15/2018 00:35*	WG1180868
(S) Dibromofluoromethane	*75.6*				*65.0-129*		*10/15/2018 00:35*	WG1180868
(S) a,a,a-Trifluorotoluene	*78.7*	J2			*80.0-120*		*10/15/2018 00:35*	WG1180868
(S) 4-Bromofluorobenzene	*89.0*				*67.0-138*		*10/15/2018 00:35*	WG1180868

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3080		37.3	4.00	92.6	20	10/17/2018 21:56	WG1182012
C28-C40 Oil Range	1070		6.35	4.00	92.6	20	10/17/2018 21:56	WG1182012
(S) o-Terphenyl	*0.000*	J7			*18.0-148*		*10/17/2018 21:56*	WG1182012

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.2		1	10/12/2018 10:53	WG1179982

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	64.9		0.980	10.0	12.3	1	10/16/2018 06:07	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0507	J	0.0267	0.100	0.123	1	10/15/2018 18:03	WG1180849
(S) a,a,a-Trifluorotoluene(FID)	*86.0*				*77.0-120*		*10/15/2018 18:03*	WG1180849

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.000495	J	0.000493	0.00100	0.00123	1	10/15/2018 00:54	WG1180868
Toluene	U		0.00154	0.00500	0.00616	1	10/15/2018 00:54	WG1180868
Ethylbenzene	U		0.000653	0.00250	0.00308	1	10/15/2018 00:54	WG1180868
Total Xylenes	U		0.00589	0.00650	0.00801	1	10/15/2018 00:54	WG1180868
(S) Toluene-d8	*115*				*75.0-131*		*10/15/2018 00:54*	WG1180868
(S) Dibromofluoromethane	*70.5*				*65.0-129*		*10/15/2018 00:54*	WG1180868
(S) a,a,a-Trifluorotoluene	*78.5*	J2			*80.0-120*		*10/15/2018 00:54*	WG1180868
(S) 4-Bromofluorobenzene	*89.9*				*67.0-138*		*10/15/2018 00:54*	WG1180868

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1080		9.92	4.00	24.6	5	10/17/2018 20:22	WG1182012
C28-C40 Oil Range	557		1.69	4.00	24.6	5	10/17/2018 20:22	WG1182012
(S) o-Terphenyl	*44.0*				*18.0-148*		*10/17/2018 20:22*	WG1182012

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.6		1	10/12/2018 10:53	WG1179982

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1420		4.30	10.0	54.0	5	10/16/2018 06:33	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.731		0.0234	0.100	0.108	1	10/15/2018 18:27	WG1180849
(S) a,a,a-Trifluorotoluene(FID)	*83.3*				*77.0-120*		*10/15/2018 18:27*	WG1180849

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000432	0.00100	0.00108	1	10/15/2018 05:50	WG1180941
Toluene	U		0.00135	0.00500	0.00540	1	10/15/2018 05:50	WG1180941
Ethylbenzene	U		0.000573	0.00250	0.00270	1	10/15/2018 05:50	WG1180941
Total Xylenes	U		0.00516	0.00650	0.00702	1	10/15/2018 05:50	WG1180941
(S) Toluene-d8	*119*				*75.0-131*		*10/15/2018 05:50*	WG1180941
(S) Dibromofluoromethane	*79.0*				*65.0-129*		*10/15/2018 05:50*	WG1180941
(S) a,a,a-Trifluorotoluene	*79.0*	J2			*80.0-120*		*10/15/2018 05:50*	WG1180941
(S) 4-Bromofluorobenzene	*89.8*				*67.0-138*		*10/15/2018 05:50*	WG1180941

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3550		34.8	4.00	86.4	20	10/17/2018 22:23	WG1182012
C28-C40 Oil Range	1340		2.96	4.00	43.2	10	10/17/2018 21:02	WG1182012
(S) o-Terphenyl	*23.9*				*18.0-148*		*10/17/2018 21:02*	WG1182012
(S) o-Terphenyl	*0.000*	J7			*18.0-148*		*10/17/2018 22:23*	WG1182012

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.4		1	10/12/2018 10:53	WG1179982

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	289		0.920	10.0	11.6	1	10/16/2018 06:50	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	147		0.628	0.100	2.89	25	10/12/2018 21:50	WG1180150
(S) a,a,a-Trifluorotoluene(FID)	*106*				*77.0-120*		*10/12/2018 21:50*	WG1180150

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000463	0.00100	0.00116	1	10/15/2018 10:08	WG1180941
Toluene	U		0.00145	0.00500	0.00579	1	10/15/2018 10:08	WG1180941
Ethylbenzene	U		0.000613	0.00250	0.00289	1	10/15/2018 10:08	WG1180941
Total Xylenes	U		0.00553	0.00650	0.00752	1	10/15/2018 10:08	WG1180941
(S) Toluene-d8	*120*				*75.0-131*		*10/15/2018 10:08*	WG1180941
(S) Dibromofluoromethane	*79.1*				*65.0-129*		*10/15/2018 10:08*	WG1180941
(S) a,a,a-Trifluorotoluene	*76.3*	J2			*80.0-120*		*10/15/2018 10:08*	WG1180941
(S) 4-Bromofluorobenzene	*89.3*				*67.0-138*		*10/15/2018 10:08*	WG1180941

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5110		37.3	4.00	92.6	20	10/17/2018 22:10	WG1182012
C28-C40 Oil Range	1420		6.34	4.00	92.6	20	10/17/2018 22:10	WG1182012
(S) o-Terphenyl	*0.000*	J7			*18.0-148*		*10/17/2018 22:10*	WG1182012

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.9		1	10/12/2018 10:53	WG1179982

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1790		4.42	10.0	55.6	5	10/16/2018 07:26	WG1179230

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	3.28		0.0241	0.100	0.111	1	10/15/2018 18:51	WG1180849
(S) a,a,a-Trifluorotoluene(FID)	*95.3*				*77.0-120*		*10/15/2018 18:51*	WG1180849

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000445	0.00100	0.00111	1	10/15/2018 06:10	WG1180941
Toluene	U		0.00139	0.00500	0.00556	1	10/15/2018 06:10	WG1180941
Ethylbenzene	U		0.000590	0.00250	0.00278	1	10/15/2018 06:10	WG1180941
Total Xylenes	U		0.00532	0.00650	0.00723	1	10/15/2018 06:10	WG1180941
(S) Toluene-d8	*115*				*75.0-131*		*10/15/2018 06:10*	WG1180941
(S) Dibromofluoromethane	*80.7*				*65.0-129*		*10/15/2018 06:10*	WG1180941
(S) a,a,a-Trifluorotoluene	*78.9*	J2			*80.0-120*		*10/15/2018 06:10*	WG1180941
(S) 4-Bromofluorobenzene	*90.9*				*67.0-138*		*10/15/2018 06:10*	WG1180941

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1030		17.9	4.00	44.5	10	10/17/2018 21:16	WG1182012
C28-C40 Oil Range	362		3.05	4.00	44.5	10	10/17/2018 21:16	WG1182012
(S) o-Terphenyl	*53.9*				*18.0-148*		*10/17/2018 21:16*	WG1182012

Method Blank (MB)

(MB) R3350560-1 10/12/18 11:06

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

L1033537-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1033537-03 10/12/18 11:06 • (DUP) R3350560-3 10/12/18 11:06

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	85.1	85.5	1	0.455		10

Laboratory Control Sample (LCS)

(LCS) R3350560-2 10/12/18 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) R3350558-1 10/12/18 10:53

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

L1033537-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1033537-13 10/12/18 10:53 • (DUP) R3350558-3 10/12/18 10:53

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	92.6	92.2	1	0.377		10

Laboratory Control Sample (LCS)

(LCS) R3350558-2 10/12/18 10:53

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

Method Blank (MB)

(MB) R3350925-1 10/16/18 03:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		0.795	10.0

L1033537-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1033537-06 10/16/18 05:05 • (DUP) R3350925-4 10/16/18 05:14

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3950	4280	10	8.13		20

L1033537-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1033537-13 10/16/18 06:33 • (DUP) R3350925-5 10/16/18 06:42

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1420	1260	5	11.6		20

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

(LCS) R3350925-2 10/16/18 03:11 • (LCSD) R3350925-3 10/16/18 03:20

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 %
Chloride	200	198	200	99.0	99.8	90.0-110			0.755	20

L1033537-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033537-15 10/16/18 06:59 • (MS) R3350925-6 10/16/18 07:08 • (MSD) R3350925-7 10/16/18 07:17

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	556	1840	2420	2400	104	99.4	1	80.0-120	E	E	1.11	20

Method Blank (MB)

(MB) R3350493-3 10/12/18 14:45

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)	*107*			*77.0-120*

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

(LCS) R3350493-1 10/12/18 13:42 • (LCSD) R3350493-2 10/12/18 14:03

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	6.37	6.35	116	115	72.0-127			0.384	20
(S) a,a,a-Trifluorotoluene(FID)				*108*	*107*	*77.0-120*				

L1033537-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033537-01 10/12/18 17:20 • (MS) R3350493-4 10/12/18 23:14 • (MSD) R3350493-5 10/12/18 23:34

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	6.73	332	397	392	38.4	35.7	25	10.0-151	E	E	1.14	28
(S) a,a,a-Trifluorotoluene(FID)					*84.7*	*84.4*		*77.0-120*				

Method Blank (MB)

(MB) R3350929-3 10/15/18 14:57

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

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

(LCS) R3350929-1 10/15/18 13:44 • (LCSD) R3350929-2 10/15/18 14:09

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	6.06	6.05	110	110	72.0-127			0.0541	20
(S) a,a,a-Trifluorotoluene(FID)				*105*	*105*	*77.0-120*				

Method Blank (MB)

(MB) R3350782-2 10/14/18 18:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*113*			*75.0-131*
(S) Dibromofluoromethane	*80.5*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*82.1*			*80.0-120*
(S) 4-Bromofluorobenzene	*99.0*			*67.0-138*

Laboratory Control Sample (LCS)

(LCS) R3350782-1 10/14/18 17:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.120	95.8	70.0-123	
Ethylbenzene	0.125	0.106	84.5	74.0-126	
Toluene	0.125	0.115	91.9	75.0-121	
Xylenes, Total	0.375	0.311	82.9	72.0-127	
(S) Toluene-d8			*107*	*75.0-131*	
(S) Dibromofluoromethane			*91.1*	*65.0-129*	
(S) a,a,a-Trifluorotoluene			*87.4*	*80.0-120*	
(S) 4-Bromofluorobenzene			*103*	*67.0-138*	

L1033103-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033103-01 10/14/18 20:20 • (MS) R3350782-3 10/15/18 02:34 • (MSD) R3350782-4 10/15/18 02:53

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.137	ND	0.110	0.0573	79.9	41.8	1	10.0-149		J3	62.5	37
Ethylbenzene	0.137	ND	0.126	0.0625	91.9	45.6	1	10.0-160		J3	67.3	38
Toluene	0.137	ND	0.123	0.0636	89.9	46.5	1	10.0-156		J3	63.8	38
Xylenes, Total	0.411	ND	0.364	0.190	88.5	46.1	1	10.0-160		J3	63.0	38
(S) Toluene-d8					*113*	*112*		*75.0-131*				
(S) Dibromofluoromethane					*77.6*	*78.3*		*65.0-129*				
(S) a,a,a-Trifluorotoluene					*84.0*	*82.4*		*80.0-120*				
(S) 4-Bromofluorobenzene					*91.1*	*98.2*		*67.0-138*				

Method Blank (MB)

(MB) R3350783-3 10/15/18 05:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*116*			*75.0-131*
(S) Dibromofluoromethane	*78.8*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*80.7*			*80.0-120*
(S) 4-Bromofluorobenzene	*103*			*67.0-138*

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

(LCS) R3350783-1 10/15/18 03:52 • (LCSD) R3350783-2 10/15/18 04:11

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	0.121	0.118	96.6	94.3	70.0-123			2.43	20
Ethylbenzene	0.125	0.104	0.103	83.3	82.4	74.0-126			0.997	20
Toluene	0.125	0.113	0.112	90.4	89.8	75.0-121			0.629	20
Xylenes, Total	0.375	0.308	0.304	82.1	81.1	72.0-127			1.31	20
(S) Toluene-d8				*107*	*108*	*75.0-131*				
(S) Dibromofluoromethane				*91.5*	*89.6*	*65.0-129*				
(S) a,a,a-Trifluorotoluene				*87.0*	*87.0*	*80.0-120*				
(S) 4-Bromofluorobenzene				*92.3*	*90.7*	*67.0-138*				

L1033537-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033537-13 10/15/18 05:50 • (MS) R3350783-4 10/15/18 12:06 • (MSD) R3350783-5 10/15/18 12:26

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	0.135	U	0.151	0.149	112	111	1	10.0-149			1.38	37
Ethylbenzene	0.135	U	0.143	0.140	106	104	1	10.0-160			1.74	38
Toluene	0.135	U	0.151	0.143	112	106	1	10.0-156			5.78	38
Xylenes, Total	0.405	U	0.416	0.399	103	98.4	1	10.0-160			4.24	38
(S) Toluene-d8					*110*	*106*		*75.0-131*				
(S) Dibromofluoromethane					*84.0*	*87.6*		*65.0-129*				
(S) a,a,a-Trifluorotoluene					*80.6*	*82.0*		*80.0-120*				
(S) 4-Bromofluorobenzene					*103*	*86.6*		*67.0-138*				

Method Blank (MB)

(MB) R3350872-2 10/15/18 10:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*121*			*75.0-131*
(S) Dibromofluoromethane	*94.8*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*98.7*			*80.0-120*
(S) 4-Bromofluorobenzene	*110*			*67.0-138*

Laboratory Control Sample (LCS)

(LCS) R3350872-1 10/15/18 09:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Toluene	0.125	0.138	110	75.0-121	
Xylenes, Total	0.375	0.377	101	72.0-127	
(S) Toluene-d8			*108*	*75.0-131*	
(S) Dibromofluoromethane			*108*	*65.0-129*	
(S) a,a,a-Trifluorotoluene			*102*	*80.0-120*	
(S) 4-Bromofluorobenzene			*103*	*67.0-138*	

Method Blank (MB)

(MB) R3350595-1 10/15/18 04:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*83.3*			*18.0-148*

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

(LCS) R3350595-2 10/15/18 04:39 • (LCSD) R3350595-3 10/15/18 04:52

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 %
C10-C28 Diesel Range	50.0	32.8	34.0	65.6	68.0	50.0-150			3.59	20
(S) o-Terphenyl				*77.3*	*85.9*	*18.0-148*				

Method Blank (MB)

(MB) R3351654-1 10/17/18 18:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*91.0*			*18.0-148*

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

(LCS) R3351654-2 10/17/18 19:01 • (LCSD) R3351654-3 10/17/18 19:14

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 %
C10-C28 Diesel Range	50.0	41.8	41.7	83.6	83.4	50.0-150			0.240	20
(S) o-Terphenyl				*102*	*106*	*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.

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.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(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 Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
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.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

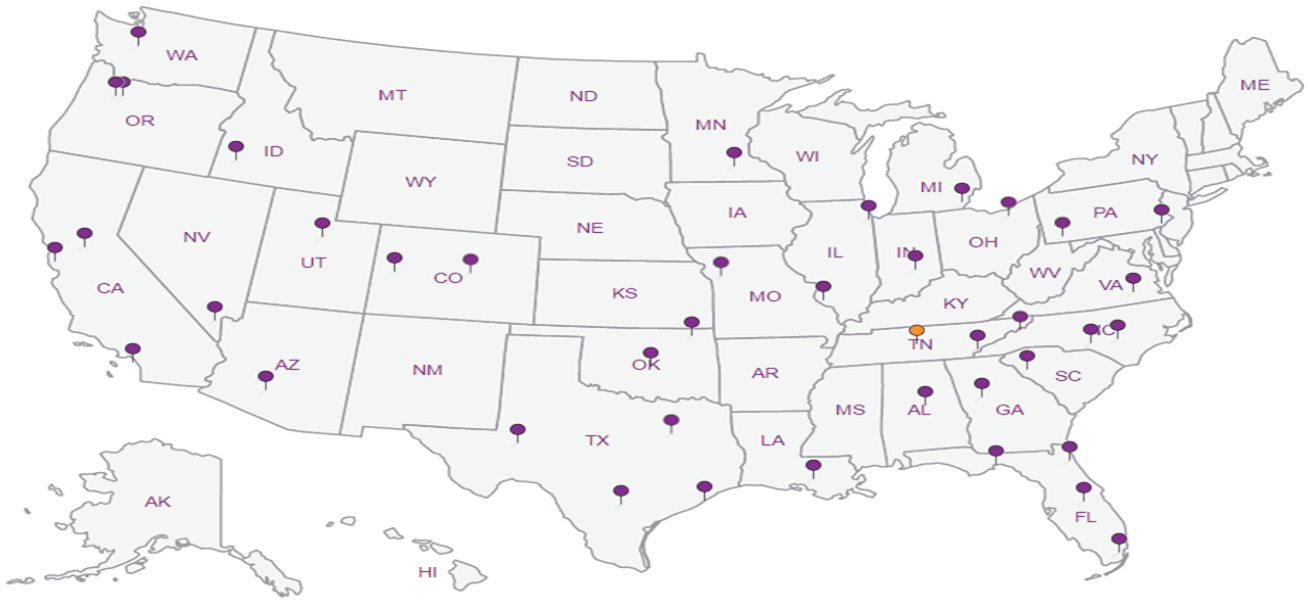
Third Party Federal Accreditations

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

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

Our Locations

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



ConocoPhillips - Tetra Tech

4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Billing Information:
Accounts Payable
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Pres Chk

Report to: Kayla Taylor

Email To: Kayla Taylor

Project Description: Buck Fed

City/State Collected:

Phone: 432-687-8137
Fax:

Client Project # 212C-MD-01358

Lab Project #

Collected by (print):

Site/Facility ID # Buck Fed

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

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

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX	TPH	Cl-	Remarks	Sample # (lab only)
BH-1 (0-1)	—	SS	—	10/4	10:00	1	X	X	X		-01
BH-1 (1-2)	—		—		10:05	1	X	X	X		-02
BH-2 (0-1)	—		—		10:10	1	X	X	X		-03
BH-2 (1-2)	—		—		10:15	1	X	X	X		-04
BH-3 (0-1)	—		—		10:20	1	X	X	X		-05
BH-3 (1-2)	—		—		10:25	1	X	X	X		-06
BH-4 (0-1)	—		—		10:30	1	X	X	X		-07
BH-4 (1-2)	—		—	"	10:35	1	X	X	X		-08
BH-5 (0-1)	—		—	10/4	11:00	1	X	X	X		-09
BH-6 (0-1)	—	↓	—	↓	11:20	1	X	X	X		-10

Chain of Custody Page 1 of 2

ESC LABORATORIES
a subsidiary of Xenco

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

L# L1033537

D195

Acctnum: COPTETRA

Template:

Prelogin:

TSR: 526 - Chris McCord

PB:

Shipped Via:

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

Remarks:

RAD SCREEN: [illegible] CK 10/9/18

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # 4430 3429 3461

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

	Date:	Time:		
Relinquished by: (Signature)	10/5	15:00	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by: (Signature)			Received by: (Signature)	Temp: -0.2 °C 14.9 14.7 Bottles Received: 15-4oz
Relinquished by: (Signature)			Received for lab by: (Signature)	Date: 10/9/18 Time: 8.45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ConocoPhillips - Tetra Tech

4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Billing Information:
Accounts Payable
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

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

Report to: Kayla Taylor

Email To: —

Project Description: —

City/State Collected:

Phone: 432-687-8137
Fax: —

Client Project #: —

Lab Project #: —

L# L1033537

Collected by (print):

Site/Facility ID #

P.O. #

Table #

Acctnum: COPTETRA

Collected by (signature):

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

Quote #

Date Results Needed

Template:

Prelogin:

TSR: 526 - Chris McCord

PB:

Immediately Packed on Ice N ___ Y ✓

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX	TPH	Cl-	Remarks	Sample # (lab only)
BH-6(1-2)	—	SS	—	10/4	11:25	1	X	X	X		-11
BH-7(0-1)	—		—		11:35	1	X	X	X		-12
BH-8(0-1)	—		—		11:50	1	X	X	X		-13
BH-7(0-1)	—		—		12:05	1	X	X	X		-14
BH-9(1-2)	—	↓	—	↓	12:10	1	X	X	X		-15

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

Remarks: RAD ... mR/hr

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/5	15:00	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

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

Temp: 0.2 °C Bottles Received: 15-402
14.9 14.7

If preservation required by Login: Date/Time

Date: 10/9/18 Time: 8:45

Hold:

Condition: (NCF) / OK

Katie Ingram

Pace Analytical®
National Center for Testing & Innovation

Login #: L1033531	Client:COPTETRA	Date:10/09/18	Evaluated by:Myra "Katie" Ingram

Non-Conformance (check applicable items)

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

Login Comments:

Temp: 14.7 All ice melted Saturday Delivery

Client informed by:	Call	Email	Voice Mail	Date: 10/10/18	Time: 1105
TSR Initials: MB	Client Contact: Kayla Taylor				

Login Instructions:

Run as rec'd

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 29, 2018

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1045249
Samples Received:	11/16/2018
Project Number:	212C-MD-01491
Description:	Buck Fed CTB
Site:	LEA COUNTY, NEW MEXICO
Report To:	Kayla Taylor
	4001 N. Big Spring St., Ste. 401
	Midland, TX 79705

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 National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

AH-1 (3') L1045249-01 Solid

Collected by: Devin Dominguez | Collected date/time: 11/14/18 09:30 | Received date/time: 11/16/18 07:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199499	1	11/24/18 09:08	11/24/18 10:10	JD
Wet Chemistry by Method 300.0	WG1198190	1	11/17/18 15:00	11/20/18 04:29	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1201380	1	11/25/18 21:39	11/26/18 13:34	JAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 12:35	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1199763	1	11/20/18 12:40	11/21/18 15:41	KME
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1199763	5	11/20/18 12:40	11/21/18 22:07	KME

AH-2 (3') L1045249-02 Solid

Collected by: Devin Dominguez | Collected date/time: 11/14/18 09:40 | Received date/time: 11/16/18 07:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199499	1	11/24/18 09:08	11/24/18 10:10	JD
Wet Chemistry by Method 300.0	WG1198190	5	11/17/18 15:00	11/20/18 04:38	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	1	11/19/18 10:30	11/20/18 19:29	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 12:54	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	2	11/25/18 00:51	11/27/18 00:04	KME

AH-3 (3') L1045249-03 Solid

Collected by: Devin Dominguez | Collected date/time: 11/14/18 09:46 | Received date/time: 11/16/18 07:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199499	1	11/24/18 09:08	11/24/18 10:10	JD
Wet Chemistry by Method 300.0	WG1198190	1	11/17/18 15:00	11/20/18 04:47	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	1	11/19/18 10:30	11/20/18 19:54	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 13:13	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	1	11/25/18 00:51	11/26/18 21:49	KME

AH-4 (3') L1045249-04 Solid

Collected by: Devin Dominguez | Collected date/time: 11/14/18 09:58 | Received date/time: 11/16/18 07:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199499	1	11/24/18 09:08	11/24/18 10:10	JD
Wet Chemistry by Method 300.0	WG1198190	1	11/17/18 15:00	11/20/18 05:13	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	1	11/19/18 10:30	11/20/18 20:18	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 13:32	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	1	11/25/18 00:51	11/26/18 22:09	KME
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	5	11/25/18 00:51	11/27/18 23:09	AAT

AH-5 (3') L1045249-05 Solid

Collected by: Devin Dominguez | Collected date/time: 11/14/18 10:00 | Received date/time: 11/16/18 07:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199499	1	11/24/18 09:08	11/24/18 10:10	JD
Wet Chemistry by Method 300.0	WG1198190	5	11/17/18 15:00	11/20/18 05:22	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	1	11/19/18 10:30	11/20/18 20:42	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 13:51	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	5	11/25/18 00:51	11/27/18 01:22	KME

AH-6 (3') L1045249-06 Solid

Collected by: Devin Dominguez | Collected date/time: 11/14/18 10:15 | Received date/time: 11/16/18 07:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199499	1	11/24/18 09:08	11/24/18 10:10	JD
Wet Chemistry by Method 300.0	WG1198190	1	11/17/18 15:00	11/20/18 05:31	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	100	11/19/18 10:30	11/20/18 21:06	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	8	11/19/18 10:30	11/19/18 15:26	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	20	11/25/18 00:51	11/27/18 01:42	KME

AH-7 (3') L1045249-07 Solid

Collected by: Devin Dominguez | Collected date/time: 11/14/18 10:35 | Received date/time: 11/16/18 07:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199499	1	11/24/18 09:08	11/24/18 10:10	JD
Wet Chemistry by Method 300.0	WG1198190	5	11/17/18 15:00	11/20/18 05:39	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	1	11/19/18 10:30	11/20/18 21:30	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 14:10	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	2	11/25/18 00:51	11/27/18 00:24	KME
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1202380	1	11/28/18 14:13	11/29/18 00:40	AAT

AH-8 (3') L1045249-08 Solid

Collected by: Devin Dominguez | Collected date/time: 11/14/18 10:50 | Received date/time: 11/16/18 07:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199502	1	11/20/18 15:11	11/20/18 15:24	KBC
Wet Chemistry by Method 300.0	WG1198190	1	11/17/18 15:00	11/20/18 05:48	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	250	11/19/18 10:30	11/20/18 21:55	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	20	11/19/18 10:30	11/19/18 15:45	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	20	11/25/18 00:51	11/27/18 02:02	KME

NSW-1 L1045249-09 Solid

Collected by: Devin Dominguez | Collected date/time: 11/14/18 11:05 | Received date/time: 11/16/18 07:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199502	1	11/20/18 15:11	11/20/18 15:24	KBC
Wet Chemistry by Method 300.0	WG1198190	1	11/17/18 15:00	11/20/18 05:57	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	1	11/19/18 10:30	11/20/18 22:19	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 14:29	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	2	11/25/18 00:51	11/26/18 23:06	KME

SSW-1 L1045249-10 Solid

Collected by: Devin Dominguez | Collected date/time: 11/14/18 11:20 | Received date/time: 11/16/18 07:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199502	1	11/20/18 15:11	11/20/18 15:24	KBC
Wet Chemistry by Method 300.0	WG1198190	5	11/17/18 15:00	11/20/18 06:06	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	1	11/19/18 10:30	11/20/18 22:43	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 14:48	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	2	11/25/18 00:51	11/26/18 23:25	KME

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

ESW-1 L1045249-11 Solid

Collected by: Devin Dominguez
Collected date/time: 11/14/18 11:25
Received date/time: 11/16/18 07:30

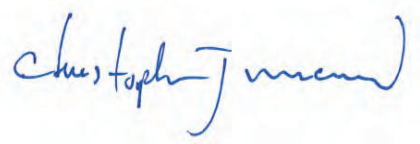
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199502	1	11/20/18 15:11	11/20/18 15:24	KBC
Wet Chemistry by Method 300.0	WG1198191	5	11/17/18 15:15	11/19/18 20:05	MAJ
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	1	11/19/18 10:30	11/20/18 23:07	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 15:07	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	2	11/25/18 00:51	11/26/18 23:44	KME

WSW-1 L1045249-12 Solid

Collected by: Devin Dominguez
Collected date/time: 11/14/18 12:00
Received date/time: 11/16/18 07:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199502	1	11/20/18 15:11	11/20/18 15:24	KBC
Wet Chemistry by Method 300.0	WG1198191	1	11/17/18 15:15	11/19/18 20:22	MAJ
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	100	11/19/18 10:30	11/20/18 23:31	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	8	11/19/18 10:30	11/19/18 16:04	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	40	11/25/18 00:51	11/27/18 02:20	KME

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	91.5		1	11/24/2018 10:10	WG1199499

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1060		0.869	10.0	10.9	1	11/20/2018 04:29	WG1198190

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0503	J	0.0237	0.100	0.109	1	11/26/2018 13:34	WG1201380
(S) a,a,a-Trifluorotoluene(FID)	*96.6*				*77.0-120*		*11/26/2018 13:34*	WG1201380

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000437	0.00100	0.00109	1	11/19/2018 12:35	WG1198957
Toluene	U		0.00137	0.00500	0.00547	1	11/19/2018 12:35	WG1198957
Ethylbenzene	U		0.000579	0.00250	0.00273	1	11/19/2018 12:35	WG1198957
Total Xylenes	U		0.00523	0.00650	0.00711	1	11/19/2018 12:35	WG1198957
(S) Toluene-d8	*101*				*75.0-131*		*11/19/2018 12:35*	WG1198957
(S) Dibromofluoromethane	*115*				*65.0-129*		*11/19/2018 12:35*	WG1198957
(S) a,a,a-Trifluorotoluene	*97.4*				*80.0-120*		*11/19/2018 12:35*	WG1198957
(S) 4-Bromofluorobenzene	*114*				*67.0-138*		*11/19/2018 12:35*	WG1198957

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	328		8.80	4.00	21.9	5	11/21/2018 22:07	WG1199763
C28-C40 Oil Range	129		0.300	4.00	4.37	1	11/21/2018 15:41	WG1199763
(S) o-Terphenyl	*106*				*18.0-148*		*11/21/2018 15:41*	WG1199763
(S) o-Terphenyl	*88.6*				*18.0-148*		*11/21/2018 22:07*	WG1199763

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.0		1	11/24/2018 10:10	WG1199499

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1900		4.32	10.0	54.4	5	11/20/2018 04:38	WG1198190

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.538		0.0236	0.100	0.109	1	11/20/2018 19:29	WG1199157
(S) a,a,a-Trifluorotoluene(FID)	*95.7*				*77.0-120*		*11/20/2018 19:29*	WG1199157

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000435	0.00100	0.00109	1	11/19/2018 12:54	WG1198957
Toluene	U		0.00136	0.00500	0.00544	1	11/19/2018 12:54	WG1198957
Ethylbenzene	U		0.000576	0.00250	0.00272	1	11/19/2018 12:54	WG1198957
Total Xylenes	U		0.00520	0.00650	0.00707	1	11/19/2018 12:54	WG1198957
(S) Toluene-d8	*102*				*75.0-131*		*11/19/2018 12:54*	WG1198957
(S) Dibromofluoromethane	*119*				*65.0-129*		*11/19/2018 12:54*	WG1198957
(S) a,a,a-Trifluorotoluene	*93.9*				*80.0-120*		*11/19/2018 12:54*	WG1198957
(S) 4-Bromofluorobenzene	*112*				*67.0-138*		*11/19/2018 12:54*	WG1198957

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	476		3.50	4.00	8.70	2	11/27/2018 00:04	WG1198511
C28-C40 Oil Range	159		0.596	4.00	8.70	2	11/27/2018 00:04	WG1198511
(S) o-Terphenyl	*53.0*				*18.0-148*		*11/27/2018 00:04*	WG1198511

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.5		1	11/24/2018 10:10	WG1199499

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	945		0.879	10.0	11.1	1	11/20/2018 04:47	WG1198190

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0355	B J	0.0240	0.100	0.111	1	11/20/2018 19:54	WG1199157
(S) a,a,a-Trifluorotoluene(FID)	*98.3*				*77.0-120*		*11/20/2018 19:54*	WG1199157

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000442	0.00100	0.00111	1	11/19/2018 13:13	WG1198957
Toluene	U		0.00138	0.00500	0.00553	1	11/19/2018 13:13	WG1198957
Ethylbenzene	U		0.000586	0.00250	0.00276	1	11/19/2018 13:13	WG1198957
Total Xylenes	U		0.00528	0.00650	0.00718	1	11/19/2018 13:13	WG1198957
(S) Toluene-d8	*100*				*75.0-131*		*11/19/2018 13:13*	WG1198957
(S) Dibromofluoromethane	*111*				*65.0-129*		*11/19/2018 13:13*	WG1198957
(S) a,a,a-Trifluorotoluene	*97.8*				*80.0-120*		*11/19/2018 13:13*	WG1198957
(S) 4-Bromofluorobenzene	*116*				*67.0-138*		*11/19/2018 13:13*	WG1198957

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	75.4		1.78	4.00	4.42	1	11/26/2018 21:49	WG1198511
C28-C40 Oil Range	23.7		0.303	4.00	4.42	1	11/26/2018 21:49	WG1198511
(S) o-Terphenyl	*51.3*				*18.0-148*		*11/26/2018 21:49*	WG1198511

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.7		1	11/24/2018 10:10	WG1199499

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	819		0.877	10.0	11.0	1	11/20/2018 05:13	WG1198190

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	1.08		0.0239	0.100	0.110	1	11/20/2018 20:18	WG1199157
(S) a,a,a-Trifluorotoluene(FID)	*96.0*				*77.0-120*		*11/20/2018 20:18*	WG1199157

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000441	0.00100	0.00110	1	11/19/2018 13:32	WG1198957
Toluene	U		0.00138	0.00500	0.00551	1	11/19/2018 13:32	WG1198957
Ethylbenzene	U		0.000585	0.00250	0.00276	1	11/19/2018 13:32	WG1198957
Total Xylenes	U		0.00527	0.00650	0.00717	1	11/19/2018 13:32	WG1198957
(S) Toluene-d8	*103*				*75.0-131*		*11/19/2018 13:32*	WG1198957
(S) Dibromofluoromethane	*110*				*65.0-129*		*11/19/2018 13:32*	WG1198957
(S) a,a,a-Trifluorotoluene	*97.1*				*80.0-120*		*11/19/2018 13:32*	WG1198957
(S) 4-Bromofluorobenzene	*121*				*67.0-138*		*11/19/2018 13:32*	WG1198957

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	405		8.88	4.00	22.1	5	11/27/2018 23:09	WG1198511
C28-C40 Oil Range	127		0.302	4.00	4.41	1	11/26/2018 22:09	WG1198511
(S) o-Terphenyl	*139*				*18.0-148*		*11/27/2018 23:09*	WG1198511
(S) o-Terphenyl	*43.9*				*18.0-148*		*11/26/2018 22:09*	WG1198511

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.4		1	11/24/2018 10:10	WG1199499

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1210		4.35	10.0	54.7	5	11/20/2018 05:22	WG1198190

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.573		0.0237	0.100	0.109	1	11/20/2018 20:42	WG1199157
(S) a,a,a-Trifluorotoluene(FID)	*94.0*				*77.0-120*		*11/20/2018 20:42*	WG1199157

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000438	0.00100	0.00109	1	11/19/2018 13:51	WG1198957
Toluene	U		0.00137	0.00500	0.00547	1	11/19/2018 13:51	WG1198957
Ethylbenzene	U		0.000580	0.00250	0.00274	1	11/19/2018 13:51	WG1198957
Total Xylenes	U		0.00523	0.00650	0.00711	1	11/19/2018 13:51	WG1198957
(S) Toluene-d8	*104*				*75.0-131*		*11/19/2018 13:51*	WG1198957
(S) Dibromofluoromethane	*110*				*65.0-129*		*11/19/2018 13:51*	WG1198957
(S) a,a,a-Trifluorotoluene	*95.9*				*80.0-120*		*11/19/2018 13:51*	WG1198957
(S) 4-Bromofluorobenzene	*121*				*67.0-138*		*11/19/2018 13:51*	WG1198957

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1000		8.81	4.00	21.9	5	11/27/2018 01:22	WG1198511
C28-C40 Oil Range	325		1.50	4.00	21.9	5	11/27/2018 01:22	WG1198511
(S) o-Terphenyl	*6.72*	J2			*18.0-148*		*11/27/2018 01:22*	WG1198511

Sample Narrative:

L1045249-05 WG1198511: Surrogate failure due to matrix interference

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.8		1	11/24/2018 10:10	WG1199499

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	912		0.916	10.0	11.5	1	11/20/2018 05:31	WG1198190

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	134		2.50	0.100	11.5	100	11/20/2018 21:06	WG1199157
(S) a,a,a-Trifluorotoluene(FID)	*100*				*77.0-120*		*11/20/2018 21:06*	WG1199157

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.00369	0.00100	0.00921	8	11/19/2018 15:26	WG1198957
Toluene	U		0.0115	0.00500	0.0461	8	11/19/2018 15:26	WG1198957
Ethylbenzene	U		0.00488	0.00250	0.0230	8	11/19/2018 15:26	WG1198957
Total Xylenes	0.261		0.0440	0.00650	0.0599	8	11/19/2018 15:26	WG1198957
(S) Toluene-d8	*99.6*				*75.0-131*		*11/19/2018 15:26*	WG1198957
(S) Dibromofluoromethane	*115*				*65.0-129*		*11/19/2018 15:26*	WG1198957
(S) a,a,a-Trifluorotoluene	*98.7*				*80.0-120*		*11/19/2018 15:26*	WG1198957
(S) 4-Bromofluorobenzene	*127*				*67.0-138*		*11/19/2018 15:26*	WG1198957

Sample Narrative:

L1045249-06 WG1198957: Non-target compounds too high to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	4260		37.1	4.00	92.1	20	11/27/2018 01:42	WG1198511
C28-C40 Oil Range	1270		6.31	4.00	92.1	20	11/27/2018 01:42	WG1198511
(S) o-Terphenyl	*4.33*	J7			*18.0-148*		*11/27/2018 01:42*	WG1198511

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.5		1	11/24/2018 10:10	WG1199499

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1310		4.40	10.0	55.3	5	11/20/2018 05:39	WG1198190

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	2.53		0.0240	0.100	0.111	1	11/20/2018 21:30	WG1199157
(S) a,a,a-Trifluorotoluene(FID)	*94.0*				*77.0-120*		*11/20/2018 21:30*	WG1199157

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000442	0.00100	0.00111	1	11/19/2018 14:10	WG1198957
Toluene	U		0.00138	0.00500	0.00553	1	11/19/2018 14:10	WG1198957
Ethylbenzene	U		0.000586	0.00250	0.00276	1	11/19/2018 14:10	WG1198957
Total Xylenes	U		0.00528	0.00650	0.00718	1	11/19/2018 14:10	WG1198957
(S) Toluene-d8	*99.1*				*75.0-131*		*11/19/2018 14:10*	WG1198957
(S) Dibromofluoromethane	*115*				*65.0-129*		*11/19/2018 14:10*	WG1198957
(S) a,a,a-Trifluorotoluene	*96.5*				*80.0-120*		*11/19/2018 14:10*	WG1198957
(S) 4-Bromofluorobenzene	*125*				*67.0-138*		*11/19/2018 14:10*	WG1198957

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	83.1		1.78	4.00	4.42	1	11/29/2018 00:40	WG1202380
C28-C40 Oil Range	224		0.606	4.00	8.84	2	11/27/2018 00:24	WG1198511
(S) o-Terphenyl	*4.90*	J2			*18.0-148*		*11/27/2018 00:24*	WG1198511
(S) o-Terphenyl	*15.2*	J2			*18.0-148*		*11/29/2018 00:40*	WG1202380

Sample Narrative:

L1045249-07 WG1202380, WG1198511: Low surrogate due to matrix

L1045249-07 WG1202380, WG1198511: Surrogate failure due to matrix interference

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.8		1	11/20/2018 15:24	WG1199502

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	686		0.927	10.0	11.7	1	11/20/2018 05:48	WG1198190

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	582		6.33	0.100	29.2	250	11/20/2018 21:55	WG1199157
(S) a,a,a-Trifluorotoluene(FID)	*99.4*				*77.0-120*		*11/20/2018 21:55*	WG1199157

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.0297		0.00933	0.00100	0.0233	20	11/19/2018 15:45	WG1198957
Toluene	0.996		0.0292	0.00500	0.117	20	11/19/2018 15:45	WG1198957
Ethylbenzene	0.805		0.0124	0.00250	0.0583	20	11/19/2018 15:45	WG1198957
Total Xylenes	11.7		0.111	0.00650	0.152	20	11/19/2018 15:45	WG1198957
(S) Toluene-d8	*98.3*				*75.0-131*		*11/19/2018 15:45*	WG1198957
(S) Dibromofluoromethane	*116*				*65.0-129*		*11/19/2018 15:45*	WG1198957
(S) a,a,a-Trifluorotoluene	*98.2*				*80.0-120*		*11/19/2018 15:45*	WG1198957
(S) 4-Bromofluorobenzene	*117*				*67.0-138*		*11/19/2018 15:45*	WG1198957

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	6590		37.5	4.00	93.3	20	11/27/2018 02:02	WG1198511
C28-C40 Oil Range	1380		6.39	4.00	93.3	20	11/27/2018 02:02	WG1198511
(S) o-Terphenyl	*14.5*	J7			*18.0-148*		*11/27/2018 02:02*	WG1198511

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.1		1	11/20/2018 15:24	WG1199502

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	441		0.863	10.0	10.9	1	11/20/2018 05:57	WG1198190

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0574	B J	0.0236	0.100	0.109	1	11/20/2018 22:19	WG1199157
(S) a,a,a-Trifluorotoluene(FID)	*97.9*				*77.0-120*		*11/20/2018 22:19*	WG1199157

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000434	0.00100	0.00109	1	11/19/2018 14:29	WG1198957
Toluene	U		0.00136	0.00500	0.00543	1	11/19/2018 14:29	WG1198957
Ethylbenzene	U		0.000575	0.00250	0.00271	1	11/19/2018 14:29	WG1198957
Total Xylenes	U		0.00519	0.00650	0.00705	1	11/19/2018 14:29	WG1198957
(S) Toluene-d8	*102*				*75.0-131*		*11/19/2018 14:29*	WG1198957
(S) Dibromofluoromethane	*114*				*65.0-129*		*11/19/2018 14:29*	WG1198957
(S) a,a,a-Trifluorotoluene	*98.6*				*80.0-120*		*11/19/2018 14:29*	WG1198957
(S) 4-Bromofluorobenzene	*116*				*67.0-138*		*11/19/2018 14:29*	WG1198957

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	330		3.49	4.00	8.68	2	11/26/2018 23:06	WG1198511
C28-C40 Oil Range	142		0.595	4.00	8.68	2	11/26/2018 23:06	WG1198511
(S) o-Terphenyl	*35.5*				*18.0-148*		*11/26/2018 23:06*	WG1198511

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.8		1	11/20/2018 15:24	WG1199502

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1520		4.38	10.0	55.1	5	11/20/2018 06:06	WG1198190

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.916		0.0239	0.100	0.110	1	11/20/2018 22:43	WG1199157
(S) a,a,a-Trifluorotoluene(FID)	*93.7*				*77.0-120*		*11/20/2018 22:43*	WG1199157

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000441	0.00100	0.00110	1	11/19/2018 14:48	WG1198957
Toluene	U		0.00138	0.00500	0.00551	1	11/19/2018 14:48	WG1198957
Ethylbenzene	U		0.000584	0.00250	0.00275	1	11/19/2018 14:48	WG1198957
Total Xylenes	0.00614	J	0.00527	0.00650	0.00716	1	11/19/2018 14:48	WG1198957
(S) Toluene-d8	*101*				*75.0-131*		*11/19/2018 14:48*	WG1198957
(S) Dibromofluoromethane	*117*				*65.0-129*		*11/19/2018 14:48*	WG1198957
(S) a,a,a-Trifluorotoluene	*97.8*				*80.0-120*		*11/19/2018 14:48*	WG1198957
(S) 4-Bromofluorobenzene	*114*				*67.0-138*		*11/19/2018 14:48*	WG1198957

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	552		3.55	4.00	8.81	2	11/26/2018 23:25	WG1198511
C28-C40 Oil Range	194		0.604	4.00	8.81	2	11/26/2018 23:25	WG1198511
(S) o-Terphenyl	*53.3*				*18.0-148*		*11/26/2018 23:25*	WG1198511

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.5		1	11/20/2018 15:24	WG1199502

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1990		4.39	10.0	55.2	5	11/19/2018 20:05	WG1198191

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0623	B J	0.0240	0.100	0.110	1	11/20/2018 23:07	WG1199157
(S) a,a,a-Trifluorotoluene(FID)	*97.0*				*77.0-120*		*11/20/2018 23:07*	WG1199157

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000442	0.00100	0.00110	1	11/19/2018 15:07	WG1198957
Toluene	U		0.00138	0.00500	0.00552	1	11/19/2018 15:07	WG1198957
Ethylbenzene	U		0.000585	0.00250	0.00276	1	11/19/2018 15:07	WG1198957
Total Xylenes	U		0.00528	0.00650	0.00718	1	11/19/2018 15:07	WG1198957
(S) Toluene-d8	*106*				*75.0-131*		*11/19/2018 15:07*	WG1198957
(S) Dibromofluoromethane	*107*				*65.0-129*		*11/19/2018 15:07*	WG1198957
(S) a,a,a-Trifluorotoluene	*97.8*				*80.0-120*		*11/19/2018 15:07*	WG1198957
(S) 4-Bromofluorobenzene	*118*				*67.0-138*		*11/19/2018 15:07*	WG1198957

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	329		3.56	4.00	8.84	2	11/26/2018 23:44	WG1198511
C28-C40 Oil Range	159		0.605	4.00	8.84	2	11/26/2018 23:44	WG1198511
(S) o-Terphenyl	*57.7*				*18.0-148*		*11/26/2018 23:44*	WG1198511

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.7		1	11/20/2018 15:24	WG1199502

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	354		0.877	10.0	11.0	1	11/19/2018 20:22	WG1198191

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	553		2.39	0.100	11.0	100	11/20/2018 23:31	WG1199157
(S) a,a,a-Trifluorotoluene(FID)	*94.1*				*77.0-120*		*11/20/2018 23:31*	WG1199157

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.00353	0.00100	0.00882	8	11/19/2018 16:04	WG1198957
Toluene	0.134		0.0110	0.00500	0.0441	8	11/19/2018 16:04	WG1198957
Ethylbenzene	0.00654	J	0.00468	0.00250	0.0221	8	11/19/2018 16:04	WG1198957
Total Xylenes	7.53		0.0422	0.00650	0.0573	8	11/19/2018 16:04	WG1198957
(S) Toluene-d8	*106*				*75.0-131*		*11/19/2018 16:04*	WG1198957
(S) Dibromofluoromethane	*117*				*65.0-129*		*11/19/2018 16:04*	WG1198957
(S) a,a,a-Trifluorotoluene	*95.2*				*80.0-120*		*11/19/2018 16:04*	WG1198957
(S) 4-Bromofluorobenzene	*133*				*67.0-138*		*11/19/2018 16:04*	WG1198957

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	8780		71.0	4.00	176	40	11/27/2018 02:20	WG1198511
C28-C40 Oil Range	2170		12.1	4.00	176	40	11/27/2018 02:20	WG1198511
(S) o-Terphenyl	*41.5*	J7			*18.0-148*		*11/27/2018 02:20*	WG1198511

Method Blank (MB)

(MB) R3362901-1 11/24/18 10:10

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

L1045249-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1045249-01 11/24/18 10:10 • (DUP) R3362901-3 11/24/18 10:10

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	91.5	91.3	1	0.221		10

Laboratory Control Sample (LCS)

(LCS) R3362901-2 11/24/18 10:10

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) R3361871-1 11/20/18 15:24

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

L1045264-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1045264-21 11/20/18 15:24 • (DUP) R3361871-3 11/20/18 15:24

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	86.0	86.1	1	0.0589		10

Laboratory Control Sample (LCS)

(LCS) R3361871-2 11/20/18 15:24

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) R3361486-1 11/20/18 01:28

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	U		0.795	10.0

L1045236-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1045236-01 11/20/18 02:18 • (DUP) R3361486-3 11/20/18 02:26

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	104	113	1	8.65		20

L1045249-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1045249-10 11/20/18 06:06 • (DUP) R3361486-6 11/20/18 06:15

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	1520	1720	5	12.4		20

Laboratory Control Sample (LCS)

(LCS) R3361486-2 11/20/18 01:37

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

L1045236-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1045236-10 11/20/18 04:03 • (MS) R3361486-4 11/20/18 04:12 • (MSD) R3361486-5 11/20/18 04:21

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	532	84.3	614	601	99.6	97.0	1	80.0-120			2.27	20

Method Blank (MB)

(MB) R3361408-1 11/19/18 18:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		0.795	10.0

L1045249-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1045249-11 11/19/18 20:05 • (DUP) R3361408-3 11/19/18 20:13

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1990	1810	5	9.73		20

L1045264-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1045264-18 11/20/18 00:01 • (DUP) R3361408-6 11/20/18 00:10

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	429	436	1	1.74		20

Laboratory Control Sample (LCS)

(LCS) R3361408-2 11/19/18 18:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	199	99.3	90.0-110	

Method Blank (MB)

(MB) R3362662-3 11/20/18 16:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0266	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) R3362662-1 11/20/18 14:56 • (LCSD) R3362662-2 11/20/18 15:20

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	6.53	6.50	119	118	72.0-127			0.494	20
(S) a,a,a-Trifluorotoluene(FID)				*106*	*106*	*77.0-120*				

Method Blank (MB)

(MB) R3362956-3 11/26/18 12:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.5*			*77.0-120*

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

(LCS) R3362956-1 11/26/18 10:56 • (LCSD) R3362956-2 11/26/18 11:20

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	6.10	5.99	111	109	72.0-127			1.76	20
(S) a,a,a-Trifluorotoluene(FID)				*105*	*104*	*77.0-120*				

Method Blank (MB)

(MB) R3362214-3 11/19/18 10:46

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*99.1*			*75.0-131*
(S) Dibromofluoromethane	*115*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*94.6*			*80.0-120*
(S) 4-Bromofluorobenzene	*115*			*67.0-138*

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

(LCS) R3362214-1 11/19/18 09:30 • (LCSD) R3362214-2 11/19/18 09:49

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	0.144	0.151	115	121	70.0-123			4.87	20
Ethylbenzene	0.125	0.107	0.114	85.8	90.8	74.0-126			5.64	20
Toluene	0.125	0.113	0.116	90.3	93.1	75.0-121			3.08	20
Xylenes, Total	0.375	0.341	0.351	90.9	93.6	72.0-127			2.89	20
(S) Toluene-d8				*96.3*	*94.6*	*75.0-131*				
(S) Dibromofluoromethane				*121*	*117*	*65.0-129*				
(S) a,a,a-Trifluorotoluene				*96.3*	*96.8*	*80.0-120*				
(S) 4-Bromofluorobenzene				*113*	*118*	*67.0-138*				

L1045249-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1045249-12 11/19/18 16:04 • (MS) R3362214-4 11/19/18 16:23 • (MSD) R3362214-5 11/19/18 16:42

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 %
Benzene	0.138	U	0.362	0.331	32.9	30.0	8	10.0-149			9.07	37
Ethylbenzene	0.138	0.00654	0.411	0.388	36.6	34.6	8	10.0-160			5.56	38
Toluene	0.138	0.134	0.473	0.444	30.7	28.0	8	10.0-156			6.46	38
Xylenes, Total	0.413	7.53	8.40	8.15	26.3	18.7	8	10.0-160			3.06	38
(S) Toluene-d8					*103*	*108*		*75.0-131*				
(S) Dibromofluoromethane					*113*	*110*		*65.0-129*				
(S) a,a,a-Trifluorotoluene					*98.4*	*99.8*		*80.0-120*				
(S) 4-Bromofluorobenzene					*141*	*135*		*67.0-138*	J1			

Method Blank (MB)

(MB) R3363241-1 11/26/18 20:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*111*			*18.0-148*

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

(LCS) R3363241-2 11/26/18 21:09 • (LCSD) R3363241-3 11/26/18 21:29

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 %
C10-C28 Diesel Range	50.0	53.1	50.8	106	102	50.0-150			4.43	20
(S) o-Terphenyl				*117*	*113*	*18.0-148*				

L1045249-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1045249-07 11/27/18 00:24 • (MS) R3363241-4 11/27/18 00:43 • (MSD) R3363241-5 11/27/18 01:03

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	54.9	758	783	835	44.3	143	2	50.0-150	E V	E	6.43	20
(S) o-Terphenyl					*3.53*	*5.20*		*18.0-148*	J2	J2		

Sample Narrative:

OS: Surrogate failure due to matrix interference

Method Blank (MB)

(MB) R3362121-1 11/21/18 13:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*103*			*18.0-148*

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

(LCS) R3362121-2 11/21/18 13:33 • (LCSD) R3362121-3 11/21/18 13:48

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 %
C10-C28 Diesel Range	50.0	42.0	44.0	84.0	88.0	50.0-150			4.65	20
(S) o-Terphenyl				*140*	*143*	*18.0-148*				

Method Blank (MB)

(MB) R3363865-1 11/28/18 23:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
(S) o-Terphenyl	*80.3*			*18.0-148*

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

(LCS) R3363865-2 11/28/18 23:40 • (LCSD) R3363865-3 11/28/18 23:55

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 %
Extractable Petroleum Hydrocarbon	50.0	33.6	35.9	67.2	71.8	50.0-150			6.62	20
C10-C28 Diesel Range	50.0	36.2	38.5	72.4	77.0	50.0-150			6.16	20
(S) o-Terphenyl				*81.4*	*80.5*	*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.

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.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(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 Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
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.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

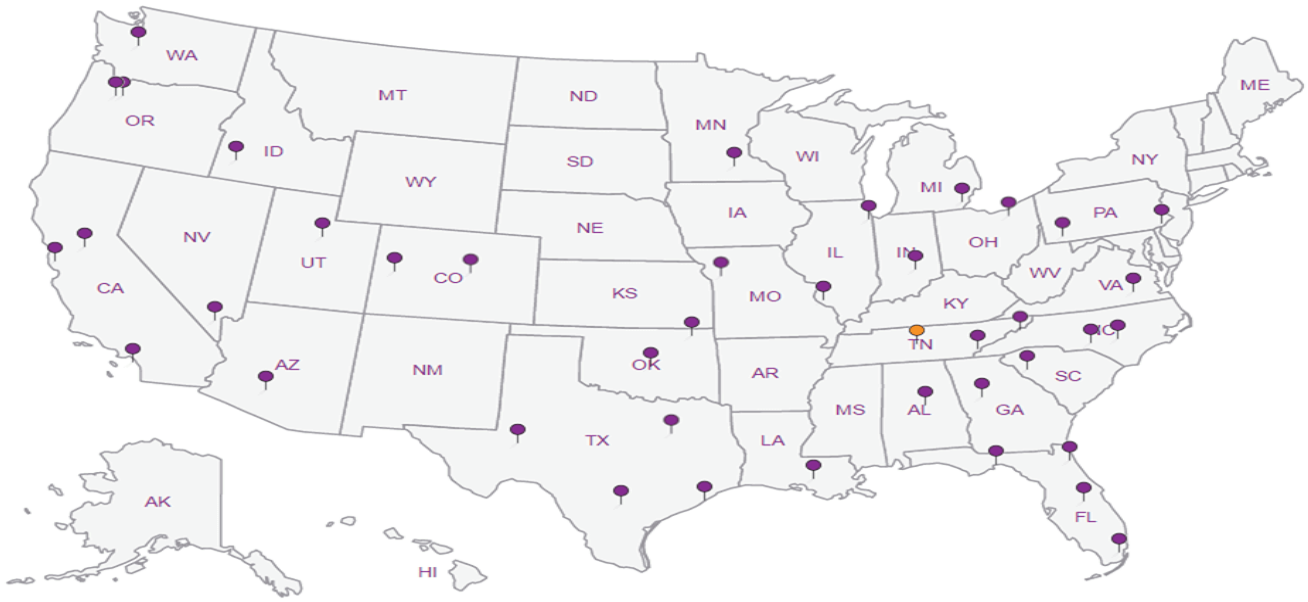
Third Party Federal Accreditations

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

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

Our Locations

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



F093

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name:	ConocoPhillips	Site Manager:	Kayla Taylor
Project Name:	Buck Fed CTB		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-01491
Invoice to:	Accounts Payable 900 West Wall Street Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	Devin Dominguez
Comments:	COPTETRA		

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2018 DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: None	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)
L1045249-01	AH-1 (3')	11/14/2018	930		X				X			1	N
02	AH-2 (3')	11/14/2018	940		X				X			1	N
03	AH-3 (3')	11/14/2018	946		X				X			1	N
04	AH-4 (3')	11/14/2018	958		X				X			1	N
05	AH-5 (3')	11/14/2018	1000		X				X			1	N
06	AH-6 (3')	11/14/2018	1015		X				X			1	N
07	AH-7 (3')	11/14/2018	1035		X				X			1	N
08	AH-8 (3')	11/14/2018	1050		X				X			1	N
09	NSW-1	11/14/2018	1105		X				X			1	N
10	SSW-1	11/14/2018	1120		X				X			1	N

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B (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
X		X												X							
X		X												X							
X		X												X							
X		X												X							
X		X												X							
X		X												X							
X		X												X							
X		X												X							
X		X												X							
X		X												X							

Relinquished by: Kayla Taylor	Date: 11/15/18	Time: 1330	Received by: [signature] Date: 11/15/18 Time: 1330
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: [signature] Date: 11/16/18 Time: 730

ORIGINAL COPY

LAB USE ONLY

Sample Temperature

REMARKS:

- STANDARD 5 Day TAT
- RUSH: Same Day 24 hr 48 hr 72 hr
- Rush Charges Authorized
- Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

T-C = 12 = 402 0.3 to 1 = 0.4 ok

RAD SCREEN: <0.5 mR/hr

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name: ConocoPhillips	Site Manager: Kayla Taylor
Project Name: Buck Fed CTB	
Project Location: (county, state) Lea County, New Mexico	Project #: 212C-MD-01491
Invoice to: Accounts Payable 900 West Wall Street Suite 100 Midland, Texas 79701	
Receiving Laboratory: Pace Analytical	Sampler Signature: Devin Dominguez
Comments: COPTETRA	

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	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
L1045249													BTEX 8260B																							
-11	ESW-1	11/14/2018	1125		X				X		1	N	X		X												X									
12	WSW-1	11/14/2018	1200		X				X		1	N	X		X												X									

Relinquished by: Kayla Taylor Date: 11/15/18 Time: 1330
Received by: Date: 11/15/18 Time: 8:30

Relinquished by: Date: Time:
Received by: Date: Time:

Relinquished by: Date: Time:
Received by: Date: 11/16/18 Time: 730

ORIGINAL COPY

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB USE ONLY
Sample Temperature

REMARKS:
☒ STANDARD 5 Day TAT
☐ RUSH: Same Day 24 hr 48 hr 72 hr
☐ Rush Charges Authorized
☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

0.3 + 0.1 = 0.4 ✓

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	COPTETRA	SDG#	L1045249
Cooler Received/Opened On: 11/16/18		Temperature:	0-4
Received By: Patrick Nshizirungu			
Signature:			

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 30, 2018

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1046071
Samples Received:	11/20/2018
Project Number:	212C-MD-01491
Description:	Buck Fed CTB

Report To: Kayla Taylor
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

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 National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

AH-9 L1046071-01 Solid

			Collected by	Collected date/time	Received date/time
				11/15/18 10:05	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201430	1	11/26/18 14:07	11/26/18 14:18	JD
Wet Chemistry by Method 300.0	WG1199854	5	11/21/18 17:30	11/27/18 10:22	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	1	11/21/18 08:32	11/21/18 21:21	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200088	1	11/21/18 08:32	11/21/18 17:43	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1200994	1	11/24/18 11:40	11/24/18 20:26	KME

AH-10 L1046071-02 Solid

			Collected by	Collected date/time	Received date/time
				11/15/18 10:10	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201430	1	11/26/18 14:07	11/26/18 14:18	JD
Wet Chemistry by Method 300.0	WG1199854	1	11/21/18 17:30	11/27/18 10:31	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	1	11/21/18 08:32	11/21/18 21:45	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200088	1	11/21/18 08:32	11/21/18 18:03	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1200994	1	11/24/18 11:40	11/24/18 18:41	KME

AH-11 L1046071-03 Solid

			Collected by	Collected date/time	Received date/time
				11/15/18 10:20	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201430	1	11/26/18 14:07	11/26/18 14:18	JD
Wet Chemistry by Method 300.0	WG1199854	1	11/21/18 17:30	11/27/18 10:40	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	1	11/21/18 08:32	11/21/18 22:09	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200088	1	11/21/18 08:32	11/21/18 18:21	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1200994	1	11/24/18 11:40	11/24/18 20:10	KME

AH-12 L1046071-04 Solid

			Collected by	Collected date/time	Received date/time
				11/15/18 10:30	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201431	1	11/26/18 13:55	11/26/18 14:06	JD
Wet Chemistry by Method 300.0	WG1199854	1	11/21/18 17:30	11/27/18 11:06	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	1	11/21/18 08:32	11/21/18 22:33	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200088	1	11/21/18 08:32	11/21/18 18:41	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1200994	1	11/24/18 11:40	11/24/18 18:55	KME

AH-13 L1046071-05 Solid

			Collected by	Collected date/time	Received date/time
				11/15/18 10:51	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201431	1	11/26/18 13:55	11/26/18 14:06	JD
Wet Chemistry by Method 300.0	WG1199854	1	11/21/18 17:30	11/27/18 11:15	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	1	11/21/18 08:32	11/21/18 22:58	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	1	11/21/18 08:32	11/21/18 21:40	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1200994	1	11/24/18 11:40	11/24/18 19:11	KME

AH-14 L1046071-06 Solid

Collected by	Collected date/time	Received date/time
	11/15/18 11:05	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201431	1	11/26/18 13:55	11/26/18 14:06	JD
Wet Chemistry by Method 300.0	WG1199854	1	11/21/18 17:30	11/27/18 11:24	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	1	11/21/18 08:32	11/21/18 23:22	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	1	11/21/18 08:32	11/21/18 22:00	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1200994	1	11/24/18 11:40	11/24/18 19:27	KME

AH-15 L1046071-07 Solid

Collected by	Collected date/time	Received date/time
	11/15/18 11:32	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201431	1	11/26/18 13:55	11/26/18 14:06	JD
Wet Chemistry by Method 300.0	WG1199854	1	11/21/18 17:30	11/27/18 11:33	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	1	11/21/18 08:32	11/21/18 23:46	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	1	11/21/18 08:32	11/21/18 22:20	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1200994	1	11/24/18 11:40	11/24/18 19:41	KME

AH-16 L1046071-08 Solid

Collected by	Collected date/time	Received date/time
	11/15/18 11:50	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201431	1	11/26/18 13:55	11/26/18 14:06	JD
Wet Chemistry by Method 300.0	WG1199854	5	11/21/18 17:30	11/27/18 11:59	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	1	11/21/18 08:32	11/22/18 00:10	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	1	11/21/18 08:32	11/21/18 22:40	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1200994	1	11/24/18 11:40	11/24/18 19:58	KME

AH-17 L1046071-09 Solid

Collected by	Collected date/time	Received date/time
	11/15/18 12:00	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201431	1	11/26/18 13:55	11/26/18 14:06	JD
Wet Chemistry by Method 300.0	WG1199854	1	11/21/18 17:30	11/27/18 12:08	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	100	11/21/18 08:32	11/22/18 00:34	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	8	11/21/18 08:32	11/22/18 00:42	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1200994	20	11/24/18 11:40	11/26/18 02:11	MTJ

NSW-2 L1046071-10 Solid

Collected by	Collected date/time	Received date/time
	11/15/18 10:00	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201431	1	11/26/18 13:55	11/26/18 14:06	JD
Wet Chemistry by Method 300.0	WG1199854	5	11/21/18 17:30	11/27/18 12:16	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	1	11/21/18 08:32	11/22/18 00:58	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	1	11/21/18 08:32	11/21/18 23:00	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1200994	5	11/24/18 11:40	11/26/18 01:58	MTJ

SSW-2 L1046071-11 Solid

Collected by	Collected date/time	Received date/time
	11/15/18 10:30	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201431	1	11/26/18 13:55	11/26/18 14:06	JD
Wet Chemistry by Method 300.0	WG1199854	5	11/21/18 17:30	11/27/18 12:25	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	200	11/21/18 08:32	11/22/18 01:22	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	20	11/21/18 08:32	11/22/18 01:01	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1200994	100	11/24/18 11:40	11/26/18 02:25	MTJ

ESW-2 L1046071-12 Solid

Collected by	Collected date/time	Received date/time
	11/16/18 11:15	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201431	1	11/26/18 13:55	11/26/18 14:06	JD
Wet Chemistry by Method 300.0	WG1199854	5	11/21/18 17:30	11/27/18 12:51	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	1	11/21/18 08:32	11/22/18 01:45	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	1	11/21/18 08:32	11/21/18 23:20	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1201271	1	11/27/18 07:59	11/29/18 05:40	KME
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1201271	5	11/27/18 07:59	11/29/18 16:45	MTJ

ESW-3 L1046071-13 Solid

Collected by	Collected date/time	Received date/time
	11/16/18 12:00	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201431	1	11/26/18 13:55	11/26/18 14:06	JD
Wet Chemistry by Method 300.0	WG1199854	1	11/21/18 17:30	11/27/18 13:00	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	1	11/21/18 08:32	11/22/18 02:09	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	1	11/21/18 08:32	11/21/18 23:41	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1201271	1	11/27/18 07:59	11/30/18 00:19	AAT

WSW-2 L1046071-14 Solid

Collected by	Collected date/time	Received date/time
	11/16/18 13:00	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201432	1	11/26/18 13:41	11/26/18 13:52	JD
Wet Chemistry by Method 300.0	WG1199854	1	11/21/18 17:30	11/27/18 13:09	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	1	11/21/18 08:32	11/22/18 02:33	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	1	11/21/18 08:32	11/22/18 00:01	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1201271	1	11/27/18 07:59	11/29/18 06:12	KME

WSW-3 L1046071-15 Solid

Collected by	Collected date/time	Received date/time
	11/16/18 13:30	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201432	1	11/26/18 13:41	11/26/18 13:52	JD
Wet Chemistry by Method 300.0	WG1199854	1	11/21/18 17:30	11/27/18 13:18	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	1	11/21/18 08:32	11/22/18 02:57	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	1	11/21/18 08:32	11/22/18 00:21	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1201271	1	11/27/18 07:59	11/29/18 06:27	KME

AH-17 L1046071-16 Solid

			Collected by	Collected date/time	Received date/time
				11/16/18 13:55	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201432	1	11/26/18 13:41	11/26/18 13:52	JD
Wet Chemistry by Method 300.0	WG1199854	1	11/21/18 17:30	11/27/18 13:27	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	100	11/21/18 08:32	11/22/18 03:21	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	8	11/21/18 08:32	11/22/18 01:21	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1201271	1	11/27/18 07:59	11/29/18 06:43	KME
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1201271	20	11/27/18 07:59	11/29/18 17:16	MTJ

WSW-4 L1046071-17 Solid

			Collected by	Collected date/time	Received date/time
				11/16/18 15:05	11/20/18 07:45

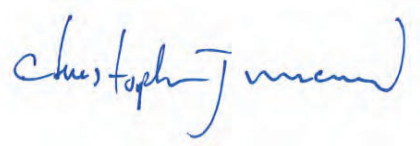
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201432	1	11/26/18 13:41	11/26/18 13:52	JD
Wet Chemistry by Method 300.0	WG1199854	5	11/21/18 17:30	11/27/18 13:35	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	100	11/21/18 08:32	11/22/18 03:44	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	8	11/21/18 08:32	11/22/18 01:41	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1201271	10	11/27/18 07:59	11/29/18 08:47	KME
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1201271	100	11/27/18 07:59	11/29/18 10:09	KME

ESW-4 L1046071-18 Solid

			Collected by	Collected date/time	Received date/time
				11/16/18 15:40	11/20/18 07:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1201432	1	11/26/18 13:41	11/26/18 13:52	JD
Wet Chemistry by Method 300.0	WG1200542	5	11/23/18 10:33	11/27/18 18:00	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1200320	100	11/21/18 08:32	11/22/18 04:08	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1200331	8	11/21/18 08:32	11/22/18 02:01	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1201271	25	11/27/18 07:59	11/29/18 17:32	MTJ
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1201271	5	11/27/18 07:59	11/29/18 17:00	MTJ

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	89.8		1	11/26/2018 14:18	WG1201430

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1850		4.43	10.0	55.7	5	11/27/2018 10:22	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0660	J	0.0242	0.100	0.111	1	11/21/2018 21:21	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*97.7*				*77.0-120*		*11/21/2018 21:21*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000445	0.00100	0.00111	1	11/21/2018 17:43	WG1200088
Toluene	U		0.00139	0.00500	0.00557	1	11/21/2018 17:43	WG1200088
Ethylbenzene	U		0.000590	0.00250	0.00278	1	11/21/2018 17:43	WG1200088
Total Xylenes	U		0.00532	0.00650	0.00724	1	11/21/2018 17:43	WG1200088
(S) Toluene-d8	*99.7*				*75.0-131*		*11/21/2018 17:43*	WG1200088
(S) Dibromofluoromethane	*90.9*				*65.0-129*		*11/21/2018 17:43*	WG1200088
(S) a,a,a-Trifluorotoluene	*108*				*80.0-120*		*11/21/2018 17:43*	WG1200088
(S) 4-Bromofluorobenzene	*101*				*67.0-138*		*11/21/2018 17:43*	WG1200088

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	112		1.79	4.00	4.45	1	11/24/2018 20:26	WG1200994
C28-C40 Oil Range	44.0		0.305	4.00	4.45	1	11/24/2018 20:26	WG1200994
(S) o-Terphenyl	*62.0*				*18.0-148*		*11/24/2018 20:26*	WG1200994

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.9		1	11/26/2018 14:18	WG1201430

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	719		0.895	10.0	11.2	1	11/27/2018 10:31	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0261	J	0.0244	0.100	0.112	1	11/21/2018 21:45	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*97.7*				*77.0-120*		*11/21/2018 21:45*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000450	0.00100	0.00112	1	11/21/2018 18:03	WG1200088
Toluene	U		0.00141	0.00500	0.00562	1	11/21/2018 18:03	WG1200088
Ethylbenzene	U		0.000596	0.00250	0.00281	1	11/21/2018 18:03	WG1200088
Total Xylenes	U		0.00538	0.00650	0.00731	1	11/21/2018 18:03	WG1200088
(S) Toluene-d8	*99.0*				*75.0-131*		*11/21/2018 18:03*	WG1200088
(S) Dibromofluoromethane	*96.4*				*65.0-129*		*11/21/2018 18:03*	WG1200088
(S) a,a,a-Trifluorotoluene	*113*				*80.0-120*		*11/21/2018 18:03*	WG1200088
(S) 4-Bromofluorobenzene	*96.8*				*67.0-138*		*11/21/2018 18:03*	WG1200088

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	15.4		1.81	4.00	4.50	1	11/24/2018 18:41	WG1200994
C28-C40 Oil Range	14.1		0.308	4.00	4.50	1	11/24/2018 18:41	WG1200994
(S) o-Terphenyl	*54.6*				*18.0-148*		*11/24/2018 18:41*	WG1200994

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.8		1	11/26/2018 14:18	WG1201430

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	541		0.896	10.0	11.3	1	11/27/2018 10:40	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0245	0.100	0.113	1	11/21/2018 22:09	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*98.1*				*77.0-120*		*11/21/2018 22:09*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000451	0.00100	0.00113	1	11/21/2018 18:21	WG1200088
Toluene	U		0.00141	0.00500	0.00563	1	11/21/2018 18:21	WG1200088
Ethylbenzene	U		0.000597	0.00250	0.00282	1	11/21/2018 18:21	WG1200088
Total Xylenes	U		0.00539	0.00650	0.00732	1	11/21/2018 18:21	WG1200088
(S) Toluene-d8	*99.1*				*75.0-131*		*11/21/2018 18:21*	WG1200088
(S) Dibromofluoromethane	*91.2*				*65.0-129*		*11/21/2018 18:21*	WG1200088
(S) a,a,a-Trifluorotoluene	*110*				*80.0-120*		*11/21/2018 18:21*	WG1200088
(S) 4-Bromofluorobenzene	*96.8*				*67.0-138*		*11/21/2018 18:21*	WG1200088

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	7.13		1.81	4.00	4.51	1	11/24/2018 20:10	WG1200994
C28-C40 Oil Range	2.83	J	0.309	4.00	4.51	1	11/24/2018 20:10	WG1200994
(S) o-Terphenyl	*73.9*				*18.0-148*		*11/24/2018 20:10*	WG1200994

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.3		1	11/26/2018 14:06	WG1201431

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	947		0.862	10.0	10.8	1	11/27/2018 11:06	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0235	0.100	0.108	1	11/21/2018 22:33	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*98.6*				*77.0-120*		*11/21/2018 22:33*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000434	0.00100	0.00108	1	11/21/2018 18:41	WG1200088
Toluene	U		0.00135	0.00500	0.00542	1	11/21/2018 18:41	WG1200088
Ethylbenzene	U		0.000575	0.00250	0.00271	1	11/21/2018 18:41	WG1200088
Total Xylenes	U		0.00518	0.00650	0.00705	1	11/21/2018 18:41	WG1200088
(S) Toluene-d8	*99.6*				*75.0-131*		*11/21/2018 18:41*	WG1200088
(S) Dibromofluoromethane	*98.1*				*65.0-129*		*11/21/2018 18:41*	WG1200088
(S) a,a,a-Trifluorotoluene	*108*				*80.0-120*		*11/21/2018 18:41*	WG1200088
(S) 4-Bromofluorobenzene	*99.1*				*67.0-138*		*11/21/2018 18:41*	WG1200088

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	29.4		1.75	4.00	4.34	1	11/24/2018 18:55	WG1200994
C28-C40 Oil Range	10.9		0.297	4.00	4.34	1	11/24/2018 18:55	WG1200994
(S) o-Terphenyl	*60.3*				*18.0-148*		*11/24/2018 18:55*	WG1200994

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.8		1	11/26/2018 14:06	WG1201431

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	84.8		0.916	10.0	11.5	1	11/27/2018 11:15	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0296	J	0.0250	0.100	0.115	1	11/21/2018 22:58	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*97.4*				*77.0-120*		*11/21/2018 22:58*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000461	0.00100	0.00115	1	11/21/2018 21:40	WG1200331
Toluene	U		0.00144	0.00500	0.00576	1	11/21/2018 21:40	WG1200331
Ethylbenzene	U		0.000610	0.00250	0.00288	1	11/21/2018 21:40	WG1200331
Total Xylenes	U		0.00551	0.00650	0.00749	1	11/21/2018 21:40	WG1200331
(S) Toluene-d8	*114*				*75.0-131*		*11/21/2018 21:40*	WG1200331
(S) Dibromofluoromethane	*86.6*				*65.0-129*		*11/21/2018 21:40*	WG1200331
(S) a,a,a-Trifluorotoluene	*113*				*80.0-120*		*11/21/2018 21:40*	WG1200331
(S) 4-Bromofluorobenzene	*108*				*67.0-138*		*11/21/2018 21:40*	WG1200331

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	45.5		1.85	4.00	4.61	1	11/24/2018 19:11	WG1200994
C28-C40 Oil Range	21.4		0.316	4.00	4.61	1	11/24/2018 19:11	WG1200994
(S) o-Terphenyl	*49.1*				*18.0-148*		*11/24/2018 19:11*	WG1200994

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.4		1	11/26/2018 14:06	WG1201431

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	424		0.860	10.0	10.8	1	11/27/2018 11:24	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0243	J	0.0235	0.100	0.108	1	11/21/2018 23:22	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*97.4*				*77.0-120*		*11/21/2018 23:22*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000433	0.00100	0.00108	1	11/21/2018 22:00	WG1200331
Toluene	U		0.00135	0.00500	0.00541	1	11/21/2018 22:00	WG1200331
Ethylbenzene	U		0.000573	0.00250	0.00271	1	11/21/2018 22:00	WG1200331
Total Xylenes	U		0.00517	0.00650	0.00703	1	11/21/2018 22:00	WG1200331
(S) Toluene-d8	*113*				*75.0-131*		*11/21/2018 22:00*	WG1200331
(S) Dibromofluoromethane	*90.5*				*65.0-129*		*11/21/2018 22:00*	WG1200331
(S) a,a,a-Trifluorotoluene	*112*				*80.0-120*		*11/21/2018 22:00*	WG1200331
(S) 4-Bromofluorobenzene	*107*				*67.0-138*		*11/21/2018 22:00*	WG1200331

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3.38	J	1.74	4.00	4.33	1	11/24/2018 19:27	WG1200994
C28-C40 Oil Range	0.999	J	0.296	4.00	4.33	1	11/24/2018 19:27	WG1200994
(S) o-Terphenyl	*67.8*				*18.0-148*		*11/24/2018 19:27*	WG1200994

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.0		1	11/26/2018 14:06	WG1201431

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	377		0.914	10.0	11.5	1	11/27/2018 11:33	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0249	0.100	0.115	1	11/21/2018 23:46	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*98.2*				*77.0-120*		*11/21/2018 23:46*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000460	0.00100	0.00115	1	11/21/2018 22:20	WG1200331
Toluene	U		0.00144	0.00500	0.00574	1	11/21/2018 22:20	WG1200331
Ethylbenzene	U		0.000609	0.00250	0.00287	1	11/21/2018 22:20	WG1200331
Total Xylenes	U		0.00549	0.00650	0.00747	1	11/21/2018 22:20	WG1200331
(S) Toluene-d8	*112*				*75.0-131*		*11/21/2018 22:20*	WG1200331
(S) Dibromofluoromethane	*87.5*				*65.0-129*		*11/21/2018 22:20*	WG1200331
(S) a,a,a-Trifluorotoluene	*112*				*80.0-120*		*11/21/2018 22:20*	WG1200331
(S) 4-Bromofluorobenzene	*104*				*67.0-138*		*11/21/2018 22:20*	WG1200331

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3.53	J	1.85	4.00	4.60	1	11/24/2018 19:41	WG1200994
C28-C40 Oil Range	1.09	J	0.315	4.00	4.60	1	11/24/2018 19:41	WG1200994
(S) o-Terphenyl	*69.8*				*18.0-148*		*11/24/2018 19:41*	WG1200994

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.8		1	11/26/2018 14:06	WG1201431

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1160		4.86	10.0	61.1	5	11/27/2018 11:59	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0324	J	0.0265	0.100	0.122	1	11/22/2018 00:10	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*97.7*				*77.0-120*		*11/22/2018 00:10*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000489	0.00100	0.00122	1	11/21/2018 22:40	WG1200331
Toluene	U		0.00153	0.00500	0.00611	1	11/21/2018 22:40	WG1200331
Ethylbenzene	U		0.000648	0.00250	0.00306	1	11/21/2018 22:40	WG1200331
Total Xylenes	U		0.00585	0.00650	0.00795	1	11/21/2018 22:40	WG1200331
(S) Toluene-d8	*110*				*75.0-131*		*11/21/2018 22:40*	WG1200331
(S) Dibromofluoromethane	*88.5*				*65.0-129*		*11/21/2018 22:40*	WG1200331
(S) a,a,a-Trifluorotoluene	*108*				*80.0-120*		*11/21/2018 22:40*	WG1200331
(S) 4-Bromofluorobenzene	*105*				*67.0-138*		*11/21/2018 22:40*	WG1200331

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.97	4.00	4.89	1	11/24/2018 19:58	WG1200994
C28-C40 Oil Range	U		0.335	4.00	4.89	1	11/24/2018 19:58	WG1200994
(S) o-Terphenyl	*59.2*				*18.0-148*		*11/24/2018 19:58*	WG1200994

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.3		1	11/26/2018 14:06	WG1201431

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	638		0.890	10.0	11.2	1	11/27/2018 12:08	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	381		2.43	0.100	11.2	100	11/22/2018 00:34	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*94.8*				*77.0-120*		*11/22/2018 00:34*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.00358	0.00100	0.00895	8	11/22/2018 00:42	WG1200331
Toluene	1.08		0.0112	0.00500	0.0448	8	11/22/2018 00:42	WG1200331
Ethylbenzene	0.852		0.00475	0.00250	0.0224	8	11/22/2018 00:42	WG1200331
Total Xylenes	9.09		0.0428	0.00650	0.0582	8	11/22/2018 00:42	WG1200331
(S) Toluene-d8	*108*				*75.0-131*		*11/22/2018 00:42*	WG1200331
(S) Dibromofluoromethane	*100*				*65.0-129*		*11/22/2018 00:42*	WG1200331
(S) a,a,a-Trifluorotoluene	*105*				*80.0-120*		*11/22/2018 00:42*	WG1200331
(S) 4-Bromofluorobenzene	*131*				*67.0-138*		*11/22/2018 00:42*	WG1200331

Sample Narrative:

L1046071-09 WG1200331: Non-target compounds too high to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2500		36.0	4.00	89.5	20	11/26/2018 02:11	WG1200994
C28-C40 Oil Range	768		6.13	4.00	89.5	20	11/26/2018 02:11	WG1200994
(S) o-Terphenyl	*331*	J7			*18.0-148*		*11/26/2018 02:11*	WG1200994

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.2		1	11/26/2018 14:06	WG1201431

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	2670		4.18	10.0	52.5	5	11/27/2018 12:16	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.206		0.0228	0.100	0.105	1	11/22/2018 00:58	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*83.6*				*77.0-120*		*11/22/2018 00:58*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000420	0.00100	0.00105	1	11/21/2018 23:00	WG1200331
Toluene	0.00166	J	0.00131	0.00500	0.00525	1	11/21/2018 23:00	WG1200331
Ethylbenzene	U		0.000557	0.00250	0.00263	1	11/21/2018 23:00	WG1200331
Total Xylenes	U		0.00502	0.00650	0.00683	1	11/21/2018 23:00	WG1200331
(S) Toluene-d8	*111*				*75.0-131*		*11/21/2018 23:00*	WG1200331
(S) Dibromofluoromethane	*90.4*				*65.0-129*		*11/21/2018 23:00*	WG1200331
(S) a,a,a-Trifluorotoluene	*110*				*80.0-120*		*11/21/2018 23:00*	WG1200331
(S) 4-Bromofluorobenzene	*105*				*67.0-138*		*11/21/2018 23:00*	WG1200331

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	808		8.45	4.00	21.0	5	11/26/2018 01:58	WG1200994
C28-C40 Oil Range	349		1.44	4.00	21.0	5	11/26/2018 01:58	WG1200994
(S) o-Terphenyl	*91.9*				*18.0-148*		*11/26/2018 01:58*	WG1200994

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.2		1	11/26/2018 14:06	WG1201431

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	3450		4.51	10.0	56.7	5	11/27/2018 12:25	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	669		4.92	0.100	22.7	200	11/22/2018 01:22	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*96.4*				*77.0-120*		*11/22/2018 01:22*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.323		0.00907	0.00100	0.0227	20	11/22/2018 01:01	WG1200331
Toluene	5.10		0.0284	0.00500	0.113	20	11/22/2018 01:01	WG1200331
Ethylbenzene	1.50		0.0120	0.00250	0.0567	20	11/22/2018 01:01	WG1200331
Total Xylenes	15.5		0.108	0.00650	0.147	20	11/22/2018 01:01	WG1200331
(S) Toluene-d8	*105*				*75.0-131*		*11/22/2018 01:01*	WG1200331
(S) Dibromofluoromethane	*105*				*65.0-129*		*11/22/2018 01:01*	WG1200331
(S) a,a,a-Trifluorotoluene	*104*				*80.0-120*		*11/22/2018 01:01*	WG1200331
(S) 4-Bromofluorobenzene	*120*				*67.0-138*		*11/22/2018 01:01*	WG1200331

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	8440		183	4.00	454	100	11/26/2018 02:25	WG1200994
C28-C40 Oil Range	2760		31.1	4.00	454	100	11/26/2018 02:25	WG1200994
(S) o-Terphenyl	*1090*	J7			*18.0-148*		*11/26/2018 02:25*	WG1200994

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.5		1	11/26/2018 14:06	WG1201431

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1300		4.21	10.0	52.9	5	11/27/2018 12:51	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0522	J	0.0230	0.100	0.106	1	11/22/2018 01:45	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*97.4*				*77.0-120*		*11/22/2018 01:45*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000423	0.00100	0.00106	1	11/21/2018 23:20	WG1200331
Toluene	U		0.00132	0.00500	0.00529	1	11/21/2018 23:20	WG1200331
Ethylbenzene	0.000771	J	0.000561	0.00250	0.00264	1	11/21/2018 23:20	WG1200331
Total Xylenes	U		0.00506	0.00650	0.00687	1	11/21/2018 23:20	WG1200331
(S) Toluene-d8	*113*				*75.0-131*		*11/21/2018 23:20*	WG1200331
(S) Dibromofluoromethane	*91.1*				*65.0-129*		*11/21/2018 23:20*	WG1200331
(S) a,a,a-Trifluorotoluene	*106*				*80.0-120*		*11/21/2018 23:20*	WG1200331
(S) 4-Bromofluorobenzene	*107*				*67.0-138*		*11/21/2018 23:20*	WG1200331

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	317		8.51	4.00	21.2	5	11/29/2018 16:45	WG1201271
C28-C40 Oil Range	123		0.290	4.00	4.23	1	11/29/2018 05:40	WG1201271
(S) o-Terphenyl	*93.6*				*18.0-148*		*11/29/2018 05:40*	WG1201271
(S) o-Terphenyl	*100*				*18.0-148*		*11/29/2018 16:45*	WG1201271

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.3		1	11/26/2018 14:06	WG1201431

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	252		0.861	10.0	10.8	1	11/27/2018 13:00	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0298	J	0.0235	0.100	0.108	1	11/22/2018 02:09	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*97.8*				*77.0-120*		*11/22/2018 02:09*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000433	0.00100	0.00108	1	11/21/2018 23:41	WG1200331
Toluene	U		0.00135	0.00500	0.00542	1	11/21/2018 23:41	WG1200331
Ethylbenzene	U		0.000574	0.00250	0.00271	1	11/21/2018 23:41	WG1200331
Total Xylenes	U		0.00518	0.00650	0.00704	1	11/21/2018 23:41	WG1200331
(S) Toluene-d8	*113*				*75.0-131*		*11/21/2018 23:41*	WG1200331
(S) Dibromofluoromethane	*92.9*				*65.0-129*		*11/21/2018 23:41*	WG1200331
(S) a,a,a-Trifluorotoluene	*107*				*80.0-120*		*11/21/2018 23:41*	WG1200331
(S) 4-Bromofluorobenzene	*109*				*67.0-138*		*11/21/2018 23:41*	WG1200331

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3.70	J	1.74	4.00	4.33	1	11/30/2018 00:19	WG1201271
C28-C40 Oil Range	5.28		0.297	4.00	4.33	1	11/30/2018 00:19	WG1201271
(S) o-Terphenyl	*73.6*				*18.0-148*		*11/30/2018 00:19*	WG1201271

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.7		1	11/26/2018 13:52	WG1201432

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	343		0.840	10.0	10.6	1	11/27/2018 13:09	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0229	0.100	0.106	1	11/22/2018 02:33	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*98.2*				*77.0-120*		*11/22/2018 02:33*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000422	0.00100	0.00106	1	11/22/2018 00:01	WG1200331
Toluene	U		0.00132	0.00500	0.00528	1	11/22/2018 00:01	WG1200331
Ethylbenzene	U		0.000560	0.00250	0.00264	1	11/22/2018 00:01	WG1200331
Total Xylenes	U		0.00505	0.00650	0.00687	1	11/22/2018 00:01	WG1200331
(S) Toluene-d8	*115*				*75.0-131*		*11/22/2018 00:01*	WG1200331
(S) Dibromofluoromethane	*89.9*				*65.0-129*		*11/22/2018 00:01*	WG1200331
(S) a,a,a-Trifluorotoluene	*107*				*80.0-120*		*11/22/2018 00:01*	WG1200331
(S) 4-Bromofluorobenzene	*110*				*67.0-138*		*11/22/2018 00:01*	WG1200331

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.25	J	1.70	4.00	4.22	1	11/29/2018 06:12	WG1201271
C28-C40 Oil Range	2.61	J	0.289	4.00	4.22	1	11/29/2018 06:12	WG1201271
(S) o-Terphenyl	*80.3*				*18.0-148*		*11/29/2018 06:12*	WG1201271

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.1		1	11/26/2018 13:52	WG1201432

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	553		0.883	10.0	11.1	1	11/27/2018 13:18	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0362	J	0.0241	0.100	0.111	1	11/22/2018 02:57	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*97.8*				*77.0-120*		*11/22/2018 02:57*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U	J3	0.000444	0.00100	0.00111	1	11/22/2018 00:21	WG1200331
Toluene	U	J3	0.00139	0.00500	0.00555	1	11/22/2018 00:21	WG1200331
Ethylbenzene	U	J3	0.000588	0.00250	0.00277	1	11/22/2018 00:21	WG1200331
Total Xylenes	U	J3	0.00531	0.00650	0.00721	1	11/22/2018 00:21	WG1200331
(S) Toluene-d8	*117*				*75.0-131*		*11/22/2018 00:21*	WG1200331
(S) Dibromofluoromethane	*88.5*				*65.0-129*		*11/22/2018 00:21*	WG1200331
(S) a,a,a-Trifluorotoluene	*106*				*80.0-120*		*11/22/2018 00:21*	WG1200331
(S) 4-Bromofluorobenzene	*111*				*67.0-138*		*11/22/2018 00:21*	WG1200331

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	17.1		1.79	4.00	4.44	1	11/29/2018 06:27	WG1201271
C28-C40 Oil Range	10.9		0.304	4.00	4.44	1	11/29/2018 06:27	WG1201271
(S) o-Terphenyl	*69.2*				*18.0-148*		*11/29/2018 06:27*	WG1201271

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.2		1	11/26/2018 13:52	WG1201432

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	409		0.902	10.0	11.3	1	11/27/2018 13:27	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	345		2.46	0.100	11.3	100	11/22/2018 03:21	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*97.0*				*77.0-120*		*11/22/2018 03:21*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.00363	0.00100	0.00907	8	11/22/2018 01:21	WG1200331
Toluene	0.510		0.0113	0.00500	0.0453	8	11/22/2018 01:21	WG1200331
Ethylbenzene	0.100		0.00481	0.00250	0.0227	8	11/22/2018 01:21	WG1200331
Total Xylenes	7.65		0.0434	0.00650	0.0590	8	11/22/2018 01:21	WG1200331
(S) Toluene-d8	*106*				*75.0-131*		*11/22/2018 01:21*	WG1200331
(S) Dibromofluoromethane	*103*				*65.0-129*		*11/22/2018 01:21*	WG1200331
(S) a,a,a-Trifluorotoluene	*106*				*80.0-120*		*11/22/2018 01:21*	WG1200331
(S) 4-Bromofluorobenzene	*121*				*67.0-138*		*11/22/2018 01:21*	WG1200331

Sample Narrative:

L1046071-16 WG1200331: Non-target compounds too high to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1950		36.5	4.00	90.7	20	11/29/2018 17:16	WG1201271
C28-C40 Oil Range	366		0.311	4.00	4.53	1	11/29/2018 06:43	WG1201271
(S) o-Terphenyl	*240*	J7			*18.0-148*		*11/29/2018 17:16*	WG1201271
(S) o-Terphenyl	*0.000*	J2			*18.0-148*		*11/29/2018 06:43*	WG1201271

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.9		1	11/26/2018 13:52	WG1201432

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1440		4.37	10.0	55.0	5	11/27/2018 13:35	WG1199854

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	487		2.39	0.100	11.0	100	11/22/2018 03:44	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*93.1*				*77.0-120*		*11/22/2018 03:44*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.00352	0.00100	0.00880	8	11/22/2018 01:41	WG1200331
Toluene	2.13		0.0110	0.00500	0.0440	8	11/22/2018 01:41	WG1200331
Ethylbenzene	0.920		0.00466	0.00250	0.0220	8	11/22/2018 01:41	WG1200331
Total Xylenes	12.4		0.0421	0.00650	0.0572	8	11/22/2018 01:41	WG1200331
(S) Toluene-d8	*106*				*75.0-131*		*11/22/2018 01:41*	WG1200331
(S) Dibromofluoromethane	*102*				*65.0-129*		*11/22/2018 01:41*	WG1200331
(S) a,a,a-Trifluorotoluene	*103*				*80.0-120*		*11/22/2018 01:41*	WG1200331
(S) 4-Bromofluorobenzene	*143*	J1			*67.0-138*		*11/22/2018 01:41*	WG1200331

Sample Narrative:

L1046071-17 WG1200331: Non-target compounds too high to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	13300	V	177	4.00	440	100	11/29/2018 10:09	WG1201271
C28-C40 Oil Range	2800		3.01	4.00	44.0	10	11/29/2018 08:47	WG1201271
(S) o-Terphenyl	*0.000*	J2			*18.0-148*		*11/29/2018 08:47*	WG1201271
(S) o-Terphenyl	*0.000*	J7			*18.0-148*		*11/29/2018 10:09*	WG1201271

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.4		1	11/26/2018 13:52	WG1201432

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1360		4.40	10.0	55.3	5	11/27/2018 18:00	WG1200542

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	439		2.40	0.100	11.1	100	11/22/2018 04:08	WG1200320
(S) a,a,a-Trifluorotoluene(FID)	*96.4*				*77.0-120*		*11/22/2018 04:08*	WG1200320

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.00354	0.00100	0.00885	8	11/22/2018 02:01	WG1200331
Toluene	1.31		0.0111	0.00500	0.0443	8	11/22/2018 02:01	WG1200331
Ethylbenzene	1.25		0.00469	0.00250	0.0221	8	11/22/2018 02:01	WG1200331
Total Xylenes	12.9		0.0423	0.00650	0.0575	8	11/22/2018 02:01	WG1200331
(S) Toluene-d8	*105*				*75.0-131*		*11/22/2018 02:01*	WG1200331
(S) Dibromofluoromethane	*106*				*65.0-129*		*11/22/2018 02:01*	WG1200331
(S) a,a,a-Trifluorotoluene	*103*				*80.0-120*		*11/22/2018 02:01*	WG1200331
(S) 4-Bromofluorobenzene	*144*	J1			*67.0-138*		*11/22/2018 02:01*	WG1200331

Sample Narrative:

L1046071-18 WG1200331: Non-target compounds too high to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2830		44.5	4.00	111	25	11/29/2018 17:32	WG1201271
C28-C40 Oil Range	1130		1.52	4.00	22.1	5	11/29/2018 17:00	WG1201271
(S) o-Terphenyl	*348*	J1			*18.0-148*		*11/29/2018 17:00*	WG1201271
(S) o-Terphenyl	*265*	J7			*18.0-148*		*11/29/2018 17:32*	WG1201271

Sample Narrative:

L1046071-18 WG1201271: Surrogate failure due to matrix interference

Method Blank (MB)

(MB) R3363176-1 11/26/18 14:18

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

L1046071-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1046071-03 11/26/18 14:18 • (DUP) R3363176-3 11/26/18 14:18

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	88.8	89.5	1	0.823		10

Laboratory Control Sample (LCS)

(LCS) R3363176-2 11/26/18 14:18

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) R3363174-1 11/26/18 14:06

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

L1046071-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1046071-12 11/26/18 14:06 • (DUP) R3363174-3 11/26/18 14:06

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	94.5	94.3	1	0.310		10

Laboratory Control Sample (LCS)

(LCS) R3363174-2 11/26/18 14:06

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) R3363173-1 11/26/18 13:52

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

L1046071-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1046071-17 11/26/18 13:52 • (DUP) R3363173-3 11/26/18 13:52

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	90.9	89.9	1	1.18		10

Laboratory Control Sample (LCS)

(LCS) R3363173-2 11/26/18 13:52

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) R3363335-1 11/27/18 08:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		0.795	10.0

L1045558-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1045558-04 11/27/18 10:05 • (DUP) R3363335-3 11/27/18 10:14

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	121	133	1	9.04		20

L1046071-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1046071-17 11/27/18 13:35 • (DUP) R3363335-6 11/27/18 13:44

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1440	1440	5	0.491		20

Laboratory Control Sample (LCS)

(LCS) R3363335-2 11/27/18 08:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	217	108	90.0-110	

L1046071-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046071-07 11/27/18 11:33 • (MS) R3363335-4 11/27/18 11:41 • (MSD) R3363335-5 11/27/18 11:50

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	574	377	996	1050	108	118	1	80.0-120			5.69	20

Method Blank (MB)

(MB) R3363485-1 11/27/18 17:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		0.795	10.0

L1046071-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1046071-18 11/27/18 18:00 • (DUP) R3363485-4 11/27/18 18:08

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1360	1530	5	12.2		20

L1046466-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1046466-05 11/28/18 01:34 • (DUP) R3363485-8 11/28/18 01:43

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3090	3510	5	12.8		20

Laboratory Control Sample (LCS)

(LCS) R3363485-3 11/27/18 17:42

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

L1046455-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046455-01 11/27/18 18:17 • (MS) R3363485-5 11/27/18 18:26 • (MSD) R3363485-6 11/27/18 18:35

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	610	4320	5170	5020	139	115	1	80.0-120	E V	E	2.84	20

Method Blank (MB)

(MB) R3363238-3 11/21/18 20:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.4*			*77.0-120*

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

(LCS) R3363238-1 11/21/18 19:03 • (LCSD) R3363238-2 11/21/18 19:27

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	5.53	5.58	101	102	72.0-127			0.928	20
(S) a,a,a-Trifluorotoluene(FID)				*104*	*104*	*77.0-120*				

L1046071-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046071-18 11/22/18 04:08 • (MS) R3363238-4 11/22/18 04:32 • (MSD) R3363238-5 11/22/18 04:56

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	6.09	439	829	799	64.2	59.1	100	10.0-151			3.79	28
(S) a,a,a-Trifluorotoluene(FID)					*102*	*101*		*77.0-120*				

Method Blank (MB)

(MB) R3362689-2 11/21/18 13:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*100*			*75.0-131*
(S) Dibromofluoromethane	*91.5*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*110*			*80.0-120*
(S) 4-Bromofluorobenzene	*100*			*67.0-138*

Laboratory Control Sample (LCS)

(LCS) R3362689-1 11/21/18 11:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.106	84.9	70.0-123	
Ethylbenzene	0.125	0.114	91.1	74.0-126	
Toluene	0.125	0.115	92.1	75.0-121	
Xylenes, Total	0.375	0.349	93.1	72.0-127	
(S) Toluene-d8			*95.2*	*75.0-131*	
(S) Dibromofluoromethane			*94.9*	*65.0-129*	
(S) a,a,a-Trifluorotoluene			*112*	*80.0-120*	
(S) 4-Bromofluorobenzene			*96.2*	*67.0-138*	

L1045482-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1045482-19 11/21/18 19:00 • (MS) R3362689-3 11/21/18 19:56 • (MSD) R3362689-4 11/21/18 20:15

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	1.94	7.35	9.57	54.1	76.3	80	10.0-149			26.3	37
Ethylbenzene	0.125	23.4	30.4	34.6	70.1	112	80	10.0-160			12.9	38
Toluene	0.125	25.9	32.1	35.7	62.1	98.2	80	10.0-156			10.6	38
Xylenes, Total	0.375	141	166	181	83.7	131	80	10.0-160			8.13	38
(S) Toluene-d8					*101*	*99.7*		*75.0-131*				
(S) Dibromofluoromethane					*96.7*	*93.8*		*65.0-129*				
(S) a,a,a-Trifluorotoluene					*111*	*112*		*80.0-120*				
(S) 4-Bromofluorobenzene					*98.3*	*95.8*		*67.0-138*				

Method Blank (MB)

(MB) R3363004-2 11/21/18 19:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*115*			*75.0-131*
(S) Dibromofluoromethane	*85.4*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*107*			*80.0-120*
(S) 4-Bromofluorobenzene	*106*			*67.0-138*

Laboratory Control Sample (LCS)

(LCS) R3363004-1 11/21/18 18:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.0924	74.0	70.0-123	
Ethylbenzene	0.125	0.129	103	74.0-126	
Toluene	0.125	0.101	80.9	75.0-121	
Xylenes, Total	0.375	0.383	102	72.0-127	
(S) Toluene-d8			*105*	*75.0-131*	
(S) Dibromofluoromethane			*99.5*	*65.0-129*	
(S) a,a,a-Trifluorotoluene			*107*	*80.0-120*	
(S) 4-Bromofluorobenzene			*104*	*67.0-138*	

L1046071-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046071-15 11/22/18 00:21 • (MS) R3363004-3 11/22/18 02:22 • (MSD) R3363004-4 11/22/18 02:42

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 %
Benzene	0.139	U	0.0481	0.113	34.7	81.5	1	10.0-149		J3	80.5	37
Ethylbenzene	0.139	U	0.0714	0.168	51.5	121	1	10.0-160		J3	80.6	38
Toluene	0.139	U	0.0584	0.139	42.1	99.9	1	10.0-156		J3	81.4	38
Xylenes, Total	0.416	U	0.226	0.496	54.3	119	1	10.0-160		J3	74.7	38
(S) Toluene-d8					*110*	*111*		*75.0-131*				
(S) Dibromofluoromethane					*94.5*	*90.7*		*65.0-129*				
(S) a,a,a-Trifluorotoluene					*107*	*107*		*80.0-120*				
(S) 4-Bromofluorobenzene					*111*	*110*		*67.0-138*				

Method Blank (MB)

(MB) R3362656-1 11/24/18 16:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*84.4*			*18.0-148*

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

(LCS) R3362656-2 11/24/18 17:25 • (LCSD) R3362656-3 11/24/18 17:37

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 %
Extractable Petroleum Hydrocarbon	50.0	31.8	36.0	63.6	72.0	50.0-150			12.4	20
C10-C28 Diesel Range	50.0	37.0	40.9	74.0	81.8	50.0-150			10.0	20
(S) o-Terphenyl				*87.4*	*83.5*	*18.0-148*				

L1046080-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046080-01 11/24/18 21:27 • (MS) R3362656-4 11/24/18 21:44 • (MSD) R3362656-5 11/24/18 21:58

Analyte	Spike Amount mg/kg	Original Result	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Extractable Petroleum Hydrocarbon	50.0		29.2	35.8	53.0	66.2	1	50.0-150		J3	20.3	20
C10-C28 Diesel Range	50.0	ND	31.5	38.4	63.0	76.8	1	50.0-150			19.7	20
(S) o-Terphenyl					*70.0*	*64.7*		*18.0-148*				

Method Blank (MB)

(MB) R3363864-1 11/29/18 04:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*86.8*			*18.0-148*

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

(LCS) R3363864-2 11/29/18 05:09 • (LCSD) R3363864-3 11/29/18 05:24

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 %
C10-C28 Diesel Range	50.0	38.0	40.8	76.0	81.6	50.0-150			7.11	20
(S) o-Terphenyl				*85.9*	*90.5*	*18.0-148*				

L1046071-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046071-17 11/29/18 08:47 • (MS) R3363864-4 11/29/18 09:23 • (MSD) R3363864-5 11/29/18 09:37

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	55.0	13000	12300	13100	0.000	200	10	50.0-150	E V	E V	6.06	20
(S) o-Terphenyl					*0.000*	*0.000*		*18.0-148*	J2	J2		

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.

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.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(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 Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
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.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

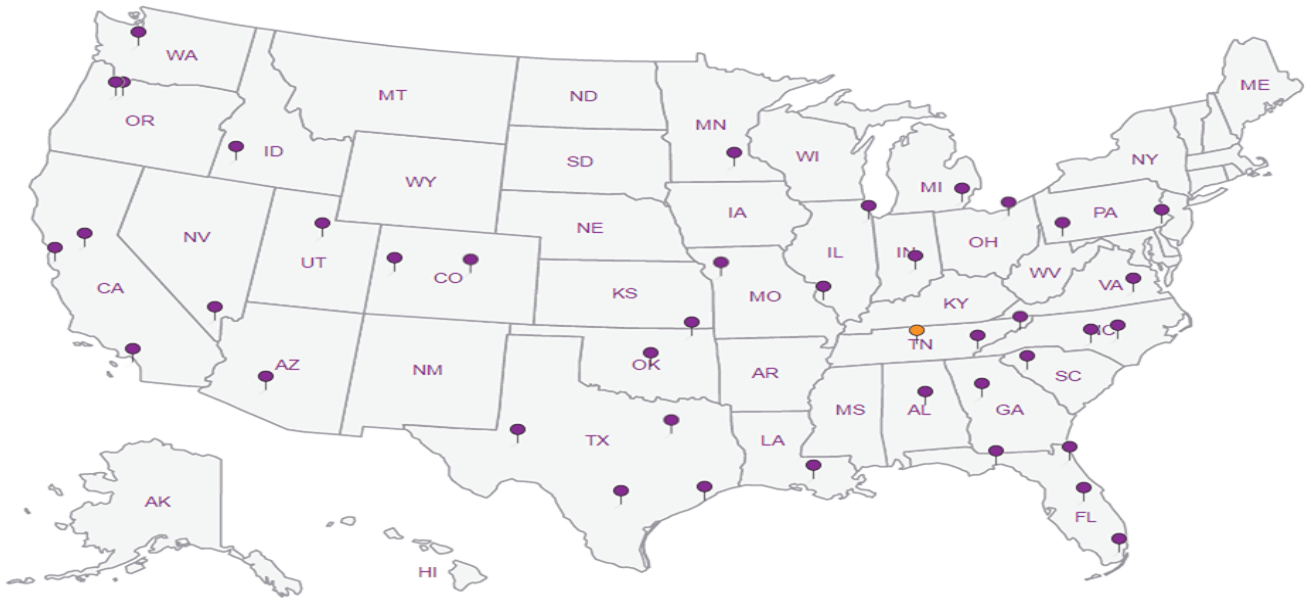
Third Party Federal Accreditations

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

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

Our Locations

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



Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

F164

Client Name:	Conoco Phillips	Site Manager:	Kayla Taylor
Project Name:	Buck Fed		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-01491
Invoice to:	Accounts Payable 900 West Wall Street Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	
Comments:	COPTETRA Acctnum		

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)
L164607		YEAR: 2018										
-01	AH-9	11/15/18	1005		X				X		1	N
02	AH-10	11/15/18	1010		X				X		1	N
03	AH-11	11/15/18	1020		X				X		1	N
04	AH-12	11/15/18	1030		X				X		1	N
05	AH-13	11/15/18	1051		X				X		1	N
06	AH-14	11/15/18	1105		X				X		1	N
07	AH-15	11/15/18	1132		X				X		1	N
08	AH-16	11/15/18	1150		X				X		1	N
09	AH-17	11/15/18	1200		X				X		1	N
10	NSW-2	11/16/18	1000		X				X		1	N

ANALYSIS REQUEST
(Circle or Specify Method No.)

Hold	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
	X		X												X	X					
	X		X												X						
	X		X												X						
	X		X												X						
	X		X												X						
	X		X												X						
	X		X												X						
	X		X												X						
	X		X												X						
	X		X												X						

Relinquished by: Date: 11-19-18 Time: 0900
Received by: Date: 11/19 Time: 09:01

Relinquished by: Kayla Taylor Date: 11-19-18 Time: 1500
Received by: Date: 11-19-18 Time: 15:00

Relinquished by: Date: Time:
Received by: Date: 11/20/18 Time: 745

ORIGINAL COPY

T-C = 18 x 402

RAD SCREEN: <0.5 mR/hr

1.3-3 = 1.0 ppm Ag

LAB USE ONLY
Sample Temperature

REMARKS:
- [X] ~~STANDARD~~ 5 day TAT
- [ ] 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

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	Site Manager:	Kayla Taylor
Project Name:	Buck Fed		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-01491
Invoice to:	Accounts Payable 900 West Wall Street Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	
Comments:	COPTETRA Acctnum		

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2018 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
L1046071																																			
11	SSW-2	11/16/18	1030		X			X		1	N	X			X												X								
12	ESW-2	11/16/18	1115		X			X		1	N	X			X												X								
13	ESW-3	11/16/18	1200		X			X		1	N	X			X												X								
14	WSW-2	11/16/18	1300		X			X		1	N	X			X												X								
15	WSW-3	11/16/18	1330		X			X		1	N	X			X												X								
16	AH-17	11/16/18	1355		X			X		1	N	X			X												X								
17	WSW-4	11/16/18	1505		X			X		1	N	X			X												X								
18	ESW-4	11/16/18	1540		X			X		1	N	X			X												X								
TSW												X			X												X								

Relinquished by: Date: Time:
11-19-18 0900

Received by: Date: Time:
11/19 09:01

Relinquished by: Date: Time:
Kayla Taylor 11-19-18 1500

Received by: Date: Time:
11-19 15:00

Relinquished by: Date: Time:

Received by: Date: Time:
11/20/18 745

ORIGINAL COPY

ANALYSIS REQUEST
(Circle or Specify Method No.)

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 #:

T-C = 18 x 402

RAD Screen: <0.5 mR/hr

1.3 ÷ 3 = 1.0 KM

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: COPTETRA	SDG#	L1646071
Cooler Received/Opened On: 11/20/18	Temperature:	1.0
Received By: Patrick Nshizirungu		
Signature:		

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 04, 2018

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1047275
Samples Received:	11/27/2018
Project Number:	212C-MD-01491
Description:	COP BUCK Federal

Report To: Kayla Taylor
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

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 National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

NSW-3 L1047275-01 Solid

Collected by: Joe Tyler
Collected date/time: 11/19/18 14:10
Received date/time: 11/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1202265	1	11/28/18 11:06	11/28/18 11:15	JD
Wet Chemistry by Method 300.0	WG1202061	1	11/28/18 10:53	11/29/18 12:18	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1202378	1	11/27/18 16:56	11/28/18 17:57	JAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1202609	1	11/27/18 16:56	11/28/18 20:36	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1202659	1	11/28/18 15:38	11/30/18 20:18	MTJ

SSW-3 L1047275-02 Solid

Collected by: Joe Tyler
Collected date/time: 11/20/18 11:00
Received date/time: 11/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1202265	1	11/28/18 11:06	11/28/18 11:15	JD
Wet Chemistry by Method 300.0	WG1202061	1	11/28/18 10:53	11/29/18 12:27	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1202378	1	11/27/18 16:56	11/28/18 18:21	JAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1202609	1	11/27/18 16:56	11/28/18 20:55	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1202659	1	11/28/18 15:38	11/30/18 19:33	MTJ

ESW-6 L1047275-03 Solid

Collected by: Joe Tyler
Collected date/time: 11/21/18 11:35
Received date/time: 11/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1202265	1	11/28/18 11:06	11/28/18 11:15	JD
Wet Chemistry by Method 300.0	WG1202061	1	11/28/18 10:53	11/29/18 09:40	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1202378	1	11/27/18 16:56	11/28/18 18:45	JAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1202609	1	11/27/18 16:56	11/28/18 21:15	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1202659	1	11/28/18 15:38	11/30/18 20:33	MTJ

WSW-6 L1047275-04 Solid

Collected by: Joe Tyler
Collected date/time: 11/21/18 11:00
Received date/time: 11/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1202265	1	11/28/18 11:06	11/28/18 11:15	JD
Wet Chemistry by Method 300.0	WG1202061	1	11/28/18 10:53	11/29/18 12:35	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1202378	1	11/27/18 16:56	11/28/18 19:09	JAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1202609	1	11/27/18 16:56	11/28/18 21:34	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1202659	1	11/28/18 15:38	11/30/18 20:46	MTJ

AH-18 L1047275-05 Solid

Collected by: Joe Tyler
Collected date/time: 11/21/18 12:00
Received date/time: 11/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1202265	1	11/28/18 11:06	11/28/18 11:15	JD
Wet Chemistry by Method 300.0	WG1202061	5	11/28/18 10:53	11/29/18 12:44	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1202378	1	11/27/18 16:56	11/28/18 19:33	JAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1202609	1	11/27/18 16:56	11/28/18 21:53	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1202659	1	11/28/18 15:38	11/30/18 21:02	MTJ

AH-19 L1047275-06 Solid

Collected by: Joe Tyler
Collected date/time: 11/19/18 12:30
Received date/time: 11/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1202265	1	11/28/18 11:06	11/28/18 11:15	JD
Wet Chemistry by Method 300.0	WG1202061	1	11/28/18 10:53	11/29/18 12:53	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1202378	1	11/27/18 16:56	11/28/18 19:57	JAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1202609	1	11/27/18 16:56	11/28/18 22:13	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1202659	1	11/28/18 15:38	11/30/18 21:18	MTJ

AH-20 L1047275-07 Solid

Collected by: Joe Tyler
Collected date/time: 11/19/18 13:05
Received date/time: 11/27/18 08:45

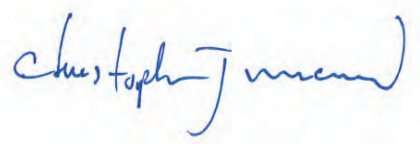
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1202265	1	11/28/18 11:06	11/28/18 11:15	JD
Wet Chemistry by Method 300.0	WG1202061	5	11/28/18 10:53	11/29/18 13:28	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1202378	1	11/27/18 16:56	11/28/18 20:22	JAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1202609	1	11/27/18 16:56	11/28/18 22:32	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1202659	1	11/28/18 15:38	11/30/18 21:33	MTJ
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1202659	10	11/28/18 15:38	11/30/18 22:01	MTJ

AH-21 L1047275-08 Solid

Collected by: Joe Tyler
Collected date/time: 11/19/18 13:30
Received date/time: 11/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1202265	1	11/28/18 11:06	11/28/18 11:15	JD
Wet Chemistry by Method 300.0	WG1202061	5	11/28/18 10:53	11/29/18 13:37	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1202945	1	11/27/18 16:56	11/29/18 09:44	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1202609	1	11/27/18 16:56	11/28/18 22:52	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1202659	1	11/28/18 15:38	11/30/18 21:46	MTJ

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	91.5		1	11/28/2018 11:15	WG1202265

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	202		0.870	10.0	10.9	1	11/29/2018 12:18	WG1202061

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0237	0.100	0.109	1	11/28/2018 17:57	WG1202378
(S) a,a,a-Trifluorotoluene(FID)	*98.3*				*77.0-120*		*11/28/2018 17:57*	WG1202378

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.000438	J	0.000437	0.00100	0.00109	1	11/28/2018 20:36	WG1202609
Toluene	U		0.00137	0.00500	0.00547	1	11/28/2018 20:36	WG1202609
Ethylbenzene	U		0.000580	0.00250	0.00273	1	11/28/2018 20:36	WG1202609
Total Xylenes	U		0.00523	0.00650	0.00711	1	11/28/2018 20:36	WG1202609
(S) Toluene-d8	*114*				*75.0-131*		*11/28/2018 20:36*	WG1202609
(S) Dibromofluoromethane	*101*				*65.0-129*		*11/28/2018 20:36*	WG1202609
(S) a,a,a-Trifluorotoluene	*97.1*				*80.0-120*		*11/28/2018 20:36*	WG1202609
(S) 4-Bromofluorobenzene	*97.8*				*67.0-138*		*11/28/2018 20:36*	WG1202609

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	10.8		1.76	4.00	4.37	1	11/30/2018 20:18	WG1202659
C28-C40 Oil Range	8.74		0.300	4.00	4.37	1	11/30/2018 20:18	WG1202659
(S) o-Terphenyl	*88.6*				*18.0-148*		*11/30/2018 20:18*	WG1202659

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.4		1	11/28/2018 11:15	WG1202265

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	467		0.870	10.0	10.9	1	11/29/2018 12:27	WG1202061

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0907	J	0.0237	0.100	0.109	1	11/28/2018 18:21	WG1202378
(S) a,a,a-Trifluorotoluene(FID)	*98.2*				*77.0-120*		*11/28/2018 18:21*	WG1202378

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000438	0.00100	0.00109	1	11/28/2018 20:55	WG1202609
Toluene	U		0.00137	0.00500	0.00547	1	11/28/2018 20:55	WG1202609
Ethylbenzene	U		0.000580	0.00250	0.00274	1	11/28/2018 20:55	WG1202609
Total Xylenes	U		0.00523	0.00650	0.00711	1	11/28/2018 20:55	WG1202609
(S) Toluene-d8	*119*				*75.0-131*		*11/28/2018 20:55*	WG1202609
(S) Dibromofluoromethane	*95.3*				*65.0-129*		*11/28/2018 20:55*	WG1202609
(S) a,a,a-Trifluorotoluene	*99.7*				*80.0-120*		*11/28/2018 20:55*	WG1202609
(S) 4-Bromofluorobenzene	*93.0*				*67.0-138*		*11/28/2018 20:55*	WG1202609

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	104	J3 J5	1.76	4.00	4.38	1	11/30/2018 19:33	WG1202659
C28-C40 Oil Range	55.5		0.300	4.00	4.38	1	11/30/2018 19:33	WG1202659
(S) o-Terphenyl	*100*				*18.0-148*		*11/30/2018 19:33*	WG1202659

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.9		1	11/28/2018 11:15	WG1202265

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	610		0.820	10.0	10.3	1	11/29/2018 09:40	WG1202061

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0342	J	0.0224	0.100	0.103	1	11/28/2018 18:45	WG1202378
(S) a,a,a-Trifluorotoluene(FID)	*96.8*				*77.0-120*		*11/28/2018 18:45*	WG1202378

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000413	0.00100	0.00103	1	11/28/2018 21:15	WG1202609
Toluene	U		0.00129	0.00500	0.00516	1	11/28/2018 21:15	WG1202609
Ethylbenzene	U		0.000547	0.00250	0.00258	1	11/28/2018 21:15	WG1202609
Total Xylenes	U		0.00493	0.00650	0.00671	1	11/28/2018 21:15	WG1202609
(S) Toluene-d8	*118*				*75.0-131*		*11/28/2018 21:15*	WG1202609
(S) Dibromofluoromethane	*93.8*				*65.0-129*		*11/28/2018 21:15*	WG1202609
(S) a,a,a-Trifluorotoluene	*101*				*80.0-120*		*11/28/2018 21:15*	WG1202609
(S) 4-Bromofluorobenzene	*95.1*				*67.0-138*		*11/28/2018 21:15*	WG1202609

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	105		1.66	4.00	4.13	1	11/30/2018 20:33	WG1202659
C28-C40 Oil Range	54.8		0.283	4.00	4.13	1	11/30/2018 20:33	WG1202659
(S) o-Terphenyl	*92.1*				*18.0-148*		*11/30/2018 20:33*	WG1202659

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.1		1	11/28/2018 11:15	WG1202265

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	114		0.819	10.0	10.3	1	11/29/2018 12:35	WG1202061

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0224	0.100	0.103	1	11/28/2018 19:09	WG1202378
(S) a,a,a-Trifluorotoluene(FID)	*97.6*				*77.0-120*		*11/28/2018 19:09*	WG1202378

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000412	0.00100	0.00103	1	11/28/2018 21:34	WG1202609
Toluene	U		0.00129	0.00500	0.00515	1	11/28/2018 21:34	WG1202609
Ethylbenzene	U		0.000546	0.00250	0.00258	1	11/28/2018 21:34	WG1202609
Total Xylenes	U		0.00492	0.00650	0.00670	1	11/28/2018 21:34	WG1202609
(S) Toluene-d8	*118*				*75.0-131*		*11/28/2018 21:34*	WG1202609
(S) Dibromofluoromethane	*95.5*				*65.0-129*		*11/28/2018 21:34*	WG1202609
(S) a,a,a-Trifluorotoluene	*97.4*				*80.0-120*		*11/28/2018 21:34*	WG1202609
(S) 4-Bromofluorobenzene	*100*				*67.0-138*		*11/28/2018 21:34*	WG1202609

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	9.48		1.66	4.00	4.12	1	11/30/2018 20:46	WG1202659
C28-C40 Oil Range	8.87		0.282	4.00	4.12	1	11/30/2018 20:46	WG1202659
(S) o-Terphenyl	*90.5*				*18.0-148*		*11/30/2018 20:46*	WG1202659

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.7		1	11/28/2018 11:15	WG1202265

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1060		4.64	10.0	58.3	5	11/29/2018 12:44	WG1202061

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0253	0.100	0.117	1	11/28/2018 19:33	WG1202378
(S) a,a,a-Trifluorotoluene(FID)	*98.1*				*77.0-120*		*11/28/2018 19:33*	WG1202378

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000467	0.00100	0.00117	1	11/28/2018 21:53	WG1202609
Toluene	U		0.00146	0.00500	0.00583	1	11/28/2018 21:53	WG1202609
Ethylbenzene	U		0.000618	0.00250	0.00292	1	11/28/2018 21:53	WG1202609
Total Xylenes	U		0.00558	0.00650	0.00758	1	11/28/2018 21:53	WG1202609
(S) Toluene-d8	*115*				*75.0-131*		*11/28/2018 21:53*	WG1202609
(S) Dibromofluoromethane	*95.1*				*65.0-129*		*11/28/2018 21:53*	WG1202609
(S) a,a,a-Trifluorotoluene	*98.0*				*80.0-120*		*11/28/2018 21:53*	WG1202609
(S) 4-Bromofluorobenzene	*95.2*				*67.0-138*		*11/28/2018 21:53*	WG1202609

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2.88	J	1.88	4.00	4.67	1	11/30/2018 21:02	WG1202659
C28-C40 Oil Range	2.30	J	0.320	4.00	4.67	1	11/30/2018 21:02	WG1202659
(S) o-Terphenyl	*72.7*				*18.0-148*		*11/30/2018 21:02*	WG1202659

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.5		1	11/28/2018 11:15	WG1202265

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	788		0.952	10.0	12.0	1	11/29/2018 12:53	WG1202061

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0260	0.100	0.120	1	11/28/2018 19:57	WG1202378
(S) a,a,a-Trifluorotoluene(FID)	*98.1*				*77.0-120*		*11/28/2018 19:57*	WG1202378

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000479	0.00100	0.00120	1	11/28/2018 22:13	WG1202609
Toluene	U		0.00150	0.00500	0.00599	1	11/28/2018 22:13	WG1202609
Ethylbenzene	U		0.000634	0.00250	0.00299	1	11/28/2018 22:13	WG1202609
Total Xylenes	U		0.00572	0.00650	0.00778	1	11/28/2018 22:13	WG1202609
(S) Toluene-d8	*119*				*75.0-131*		*11/28/2018 22:13*	WG1202609
(S) Dibromofluoromethane	*96.7*				*65.0-129*		*11/28/2018 22:13*	WG1202609
(S) a,a,a-Trifluorotoluene	*98.6*				*80.0-120*		*11/28/2018 22:13*	WG1202609
(S) 4-Bromofluorobenzene	*113*				*67.0-138*		*11/28/2018 22:13*	WG1202609

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	44.7		1.93	4.00	4.79	1	11/30/2018 21:18	WG1202659
C28-C40 Oil Range	23.0		0.328	4.00	4.79	1	11/30/2018 21:18	WG1202659
(S) o-Terphenyl	*152*	J1			*18.0-148*		*11/30/2018 21:18*	WG1202659

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.1		1	11/28/2018 11:15	WG1202265

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1650		4.67	10.0	58.8	5	11/29/2018 13:28	WG1202061

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	12.2		0.0255	0.100	0.118	1	11/28/2018 20:22	WG1202378
(S) a,a,a-Trifluorotoluene(FID)	*97.4*				*77.0-120*		*11/28/2018 20:22*	WG1202378

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000470	0.00100	0.00118	1	11/28/2018 22:32	WG1202609
Toluene	U		0.00147	0.00500	0.00588	1	11/28/2018 22:32	WG1202609
Ethylbenzene	0.00111	J	0.000623	0.00250	0.00294	1	11/28/2018 22:32	WG1202609
Total Xylenes	0.0143		0.00562	0.00650	0.00764	1	11/28/2018 22:32	WG1202609
(S) Toluene-d8	*119*				*75.0-131*		*11/28/2018 22:32*	WG1202609
(S) Dibromofluoromethane	*101*				*65.0-129*		*11/28/2018 22:32*	WG1202609
(S) a,a,a-Trifluorotoluene	*96.5*				*80.0-120*		*11/28/2018 22:32*	WG1202609
(S) 4-Bromofluorobenzene	*117*				*67.0-138*		*11/28/2018 22:32*	WG1202609

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1100		18.9	4.00	47.0	10	11/30/2018 22:01	WG1202659
C28-C40 Oil Range	262		0.322	4.00	4.70	1	11/30/2018 21:33	WG1202659
(S) o-Terphenyl	*155*	J1			*18.0-148*		*11/30/2018 21:33*	WG1202659
(S) o-Terphenyl	*225*	J1			*18.0-148*		*11/30/2018 22:01*	WG1202659

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.4		1	11/28/2018 11:15	WG1202265

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1510		4.77	10.0	59.9	5	11/29/2018 13:37	WG1202061

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	1.29		0.0260	0.100	0.120	1	11/29/2018 09:44	WG1202945
(S) a,a,a-Trifluorotoluene(FID)	*95.3*				*77.0-120*		*11/29/2018 09:44*	WG1202945

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U	J3	0.000479	0.00100	0.00120	1	11/28/2018 22:52	WG1202609
Toluene	U	J3	0.00150	0.00500	0.00599	1	11/28/2018 22:52	WG1202609
Ethylbenzene	U	J3	0.000635	0.00250	0.00300	1	11/28/2018 22:52	WG1202609
Total Xylenes	U	J3	0.00573	0.00650	0.00779	1	11/28/2018 22:52	WG1202609
(S) Toluene-d8	*115*				*75.0-131*		*11/28/2018 22:52*	WG1202609
(S) Dibromofluoromethane	*95.5*				*65.0-129*		*11/28/2018 22:52*	WG1202609
(S) a,a,a-Trifluorotoluene	*97.5*				*80.0-120*		*11/28/2018 22:52*	WG1202609
(S) 4-Bromofluorobenzene	*110*				*67.0-138*		*11/28/2018 22:52*	WG1202609

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	119		1.93	4.00	4.79	1	11/30/2018 21:46	WG1202659
C28-C40 Oil Range	47.8		0.328	4.00	4.79	1	11/30/2018 21:46	WG1202659
(S) o-Terphenyl	*83.3*				*18.0-148*		*11/30/2018 21:46*	WG1202659

Method Blank (MB)

(MB) R3363884-1 11/28/18 11:15

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

L1047275-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1047275-07 11/28/18 11:15 • (DUP) R3363884-3 11/28/18 11:15

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	85.1	86.8	1	1.97		10

Laboratory Control Sample (LCS)

(LCS) R3363884-2 11/28/18 11:15

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) R3364019-1 11/29/18 09:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		0.795	10.0

L1047275-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1047275-03 11/29/18 09:40 • (DUP) R3364019-3 11/29/18 09:48

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	610	546	1	11.1		20

L1047275-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1047275-06 11/29/18 12:53 • (DUP) R3364019-6 11/29/18 13:19

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	788	751	1	4.78		20

Laboratory Control Sample (LCS)

(LCS) R3364019-2 11/29/18 09:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	206	103	90.0-110	

L1047221-24 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1047221-24 11/29/18 10:32 • (MS) R3364019-4 11/29/18 11:34 • (MSD) R3364019-5 11/29/18 11:43

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	604	51200	44700	43800	0.000	0.000	1	80.0-120	E V	E V	1.97	20

Method Blank (MB)

(MB) R3363879-3 11/28/18 11:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.8*			*77.0-120*

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

(LCS) R3363879-1 11/28/18 10:23 • (LCSD) R3363879-2 11/28/18 10:46

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	6.13	6.32	111	115	72.0-127			3.18	20
(S) a,a,a-Trifluorotoluene(FID)				*105*	*107*	*77.0-120*				

L1046908-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046908-05 11/28/18 17:09 • (MS) R3363879-4 11/29/18 00:59 • (MSD) R3363879-5 11/29/18 01:22

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	ND	81.6	84.4	58.9	61.0	25	10.0-151			3.36	28
(S) a,a,a-Trifluorotoluene(FID)					*102*	*102*		*77.0-120*				

Method Blank (MB)

(MB) R3364106-3 11/29/18 04:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.4*			*77.0-120*

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

(LCS) R3364106-1 11/29/18 02:58 • (LCSD) R3364106-2 11/29/18 03:22

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	5.60	5.53	102	101	72.0-127			1.33	20
(S) a,a,a-Trifluorotoluene(FID)				*104*	*105*	*77.0-120*				

Method Blank (MB)

(MB) R3363876-2 11/28/18 15:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*114*			*75.0-131*
(S) Dibromofluoromethane	*95.6*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*97.5*			*80.0-120*
(S) 4-Bromofluorobenzene	*94.1*			*67.0-138*

Laboratory Control Sample (LCS)

(LCS) R3363876-1 11/28/18 14:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.128	102	70.0-123	
Ethylbenzene	0.125	0.101	80.9	74.0-126	
Toluene	0.125	0.118	94.0	75.0-121	
Xylenes, Total	0.375	0.327	87.2	72.0-127	
(S) Toluene-d8			*103*	*75.0-131*	
(S) Dibromofluoromethane			*105*	*65.0-129*	
(S) a,a,a-Trifluorotoluene			*93.7*	*80.0-120*	
(S) 4-Bromofluorobenzene			*95.0*	*67.0-138*	

L1047275-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1047275-08 11/28/18 22:52 • (MS) R3363876-3 11/28/18 23:50 • (MSD) R3363876-4 11/29/18 00:09

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	0.150	U	0.129	0.0683	86.4	45.6	1	10.0-149		J3	61.8	37
Ethylbenzene	0.150	U	0.149	0.0729	99.4	48.7	1	10.0-160		J3	68.5	38
Toluene	0.150	U	0.143	0.0740	95.5	49.4	1	10.0-156		J3	63.7	38
Xylenes, Total	0.450	U	0.430	0.223	95.7	49.5	1	10.0-160		J3	63.6	38
(S) Toluene-d8					*112*	*112*		*75.0-131*				
(S) Dibromofluoromethane					*90.7*	*96.0*		*65.0-129*				
(S) a,a,a-Trifluorotoluene					*92.0*	*93.7*		*80.0-120*				
(S) 4-Bromofluorobenzene					*117*	*106*		*67.0-138*				

Method Blank (MB)

(MB) R3364371-1 11/30/18 17:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*100*			*18.0-148*

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

(LCS) R3364371-2 11/30/18 17:19 • (LCSD) R3364371-3 11/30/18 17:35

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 %
C10-C28 Diesel Range	50.0	39.7	42.3	79.4	84.6	50.0-150			6.34	20
(S) o-Terphenyl				*84.2*	*94.0*	*18.0-148*				

L1047275-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1047275-02 11/30/18 19:33 • (MS) R3364371-4 11/30/18 19:47 • (MSD) R3364371-5 11/30/18 20:03

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	53.5	104	201	143	182	73.9	1	50.0-150	J5	J3	33.7	20
(S) o-Terphenyl					*108*	*104*		*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.

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.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(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 Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
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.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
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.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

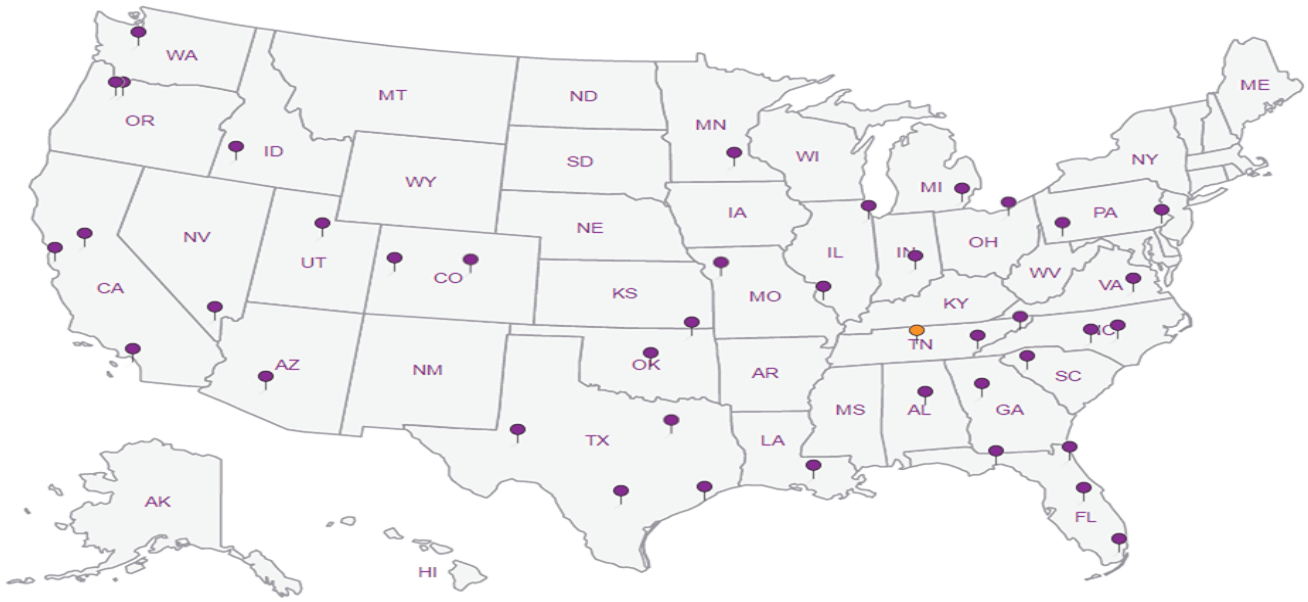
Third Party Federal Accreditations

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

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

Our Locations

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



Tetra Tech

Billing Information: COPTETRA

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace Analytical® National Center for Testing & Innovation

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

L# L1047275

E137

Report to: Kayla Faylor

Email To: Kayla.lovelytaylor@tetratech.com

Project Description: COP Buck Federal

City/State Collected: Lea Co., NM

Phone: Fax: 432-210-5443

Client Project # 212C-MD-01491

Lab Project #

Collected by (print): Joe Tyler

Site/Facility ID #

P.O. #

Collected by (signature): Joe Tyler

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

Acctnum: COPTETRA
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 8260	TPH 8015	Chlorides 300.0	Remarks	Sample # (lab only)
NSW-3		SS	—	11/19	14:10	1	X	X	X		-01
SSW-3			—	11/20	11:00	1	X	X	X		02
ESW-6			—	11/21	11:35	1	X	X	X		03
WSW-6			—	11/21	11:00	1	X	X	X		04
AH-18			—	~~11/21~~ 11/21	12:00	1	X	X	X		05
AH-19			11/19	~~11/19~~	12:30	1	X	X	X		06
AH-20			—	11/19	13:05	1	X	X	X		07
AH-21			—	11/19	13:30	1	X	X	X		08

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier SW

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Joe Tyler	11/26	09:00	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	11/26	13:45	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No HCL / MeoH TBR

Temp: +0.1°C 2.0 2.1 Bottles Received: 9

Date: 11/27/18 Time: 345

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 07, 2018

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1048605
Samples Received:	11/30/2018
Project Number:	212C-MD-01491
Description:	Buck Fed CTB

Report To: Kayla Taylor
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

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 National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

ESW-5 L1048605-01 Solid

Collected by	Collected date/time	Received date/time
	11/27/18 10:00	11/30/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1204080	1	12/01/18 10:49	12/01/18 11:02	KDW
Wet Chemistry by Method 300.0	WG1203989	5	12/01/18 15:00	12/04/18 02:12	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1205563	200	12/01/18 13:52	12/05/18 02:33	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206061	4	12/01/18 13:52	12/05/18 23:24	JHH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1204169	5	12/01/18 10:12	12/02/18 13:56	KME
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1204169	50	12/01/18 10:12	12/03/18 03:31	KME

WSW-5 L1048605-02 Solid

Collected by	Collected date/time	Received date/time
	11/27/18 10:30	11/30/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1204080	1	12/01/18 10:49	12/01/18 11:02	KDW
Wet Chemistry by Method 300.0	WG1203989	1	12/01/18 15:00	12/04/18 02:20	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1205847	25	12/01/18 13:52	12/05/18 14:39	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206061	1	12/01/18 13:52	12/05/18 23:44	JHH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1204169	1	12/01/18 10:12	12/02/18 10:33	KME

AH-22 L1048605-03 Solid

Collected by	Collected date/time	Received date/time
	11/27/18 11:05	11/30/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1204080	1	12/01/18 10:49	12/01/18 11:02	KDW
Wet Chemistry by Method 300.0	WG1203989	5	12/01/18 15:00	12/04/18 02:29	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1205563	100	12/01/18 13:52	12/05/18 03:15	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206061	8	12/01/18 13:52	12/06/18 00:04	JHH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1204169	50	12/01/18 10:12	12/03/18 03:43	KME

AH-23 L1048605-04 Solid

Collected by	Collected date/time	Received date/time
	11/27/18 11:30	11/30/18 09:00

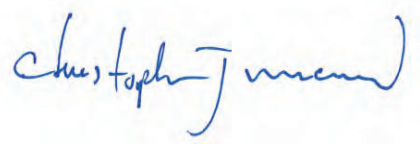
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1204080	1	12/01/18 10:49	12/01/18 11:02	KDW
Wet Chemistry by Method 300.0	WG1203989	5	12/02/18 07:26	12/04/18 02:38	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1205563	100	12/01/18 13:52	12/05/18 03:36	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206061	1	12/01/18 13:52	12/06/18 00:24	JHH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1204169	20	12/01/18 10:12	12/07/18 14:10	AAT

SSW-4 L1048605-05 Solid

Collected by	Collected date/time	Received date/time
	11/27/18 12:10	11/30/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1204712	1	12/04/18 14:26	12/04/18 14:38	KBC
Wet Chemistry by Method 300.0	WG1203989	5	12/02/18 07:26	12/04/18 02:47	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1205563	100	12/01/18 13:52	12/05/18 03:58	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206061	1	12/01/18 13:52	12/06/18 00:43	JHH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1204169	10	12/01/18 10:12	12/03/18 03:07	KME

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	93.1		1	12/01/2018 11:02	WG1204080

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1700		4.27	10.0	53.7	5	12/04/2018 02:12	WG1203989

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	170		4.66	0.100	21.5	200	12/05/2018 02:33	WG1205563
(S) a,a,a-Trifluorotoluene(FID)	*91.4*				*77.0-120*		*12/05/2018 02:33*	WG1205563

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.00565		0.00172	0.00100	0.00429	4	12/05/2018 23:24	WG1206061
Toluene	0.441		0.00537	0.00500	0.0215	4	12/05/2018 23:24	WG1206061
Ethylbenzene	0.353		0.00228	0.00250	0.0107	4	12/05/2018 23:24	WG1206061
Total Xylenes	5.78		0.0205	0.00650	0.0279	4	12/05/2018 23:24	WG1206061
(S) Toluene-d8	*116*				*75.0-131*		*12/05/2018 23:24*	WG1206061
(S) Dibromofluoromethane	*91.4*				*65.0-129*		*12/05/2018 23:24*	WG1206061
(S) a,a,a-Trifluorotoluene	*97.0*				*80.0-120*		*12/05/2018 23:24*	WG1206061
(S) 4-Bromofluorobenzene	*111*				*67.0-138*		*12/05/2018 23:24*	WG1206061

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	4050		86.4	4.00	215	50	12/03/2018 03:31	WG1204169
C28-C40 Oil Range	1550		1.47	4.00	21.5	5	12/02/2018 13:56	WG1204169
(S) o-Terphenyl	*20.8*				*18.0-148*		*12/02/2018 13:56*	WG1204169
(S) o-Terphenyl	*0.000*	J7			*18.0-148*		*12/03/2018 03:31*	WG1204169

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.0		1	12/01/2018 11:02	WG1204080

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	723		0.864	10.0	10.9	1	12/04/2018 02:20	WG1203989

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	2.97		0.589	0.100	2.72	25	12/05/2018 14:39	WG1205847
(S) a,a,a-Trifluorotoluene(FID)	*96.1*				*77.0-120*		*12/05/2018 14:39*	WG1205847

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000435	0.00100	0.00109	1	12/05/2018 23:44	WG1206061
Toluene	0.00179	J	0.00136	0.00500	0.00543	1	12/05/2018 23:44	WG1206061
Ethylbenzene	0.00204	J	0.000576	0.00250	0.00272	1	12/05/2018 23:44	WG1206061
Total Xylenes	0.0174		0.00519	0.00650	0.00706	1	12/05/2018 23:44	WG1206061
(S) Toluene-d8	*118*				*75.0-131*		*12/05/2018 23:44*	WG1206061
(S) Dibromofluoromethane	*85.1*				*65.0-129*		*12/05/2018 23:44*	WG1206061
(S) a,a,a-Trifluorotoluene	*98.6*				*80.0-120*		*12/05/2018 23:44*	WG1206061
(S) 4-Bromofluorobenzene	*97.8*				*67.0-138*		*12/05/2018 23:44*	WG1206061

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	142		1.75	4.00	4.35	1	12/02/2018 10:33	WG1204169
C28-C40 Oil Range	59.3		0.298	4.00	4.35	1	12/02/2018 10:33	WG1204169
(S) o-Terphenyl	*66.2*				*18.0-148*		*12/02/2018 10:33*	WG1204169

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.0		1	12/01/2018 11:02	WG1204080

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	2340		4.52	10.0	56.8	5	12/04/2018 02:29	WG1203989

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	443		2.47	0.100	11.4	100	12/05/2018 03:15	WG1205563
(S) a,a,a-Trifluorotoluene(FID)	*87.5*				*77.0-120*		*12/05/2018 03:15*	WG1205563

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.0810		0.00364	0.00100	0.00909	8	12/06/2018 00:04	WG1206061
Toluene	3.26		0.0114	0.00500	0.0455	8	12/06/2018 00:04	WG1206061
Ethylbenzene	1.85		0.00482	0.00250	0.0227	8	12/06/2018 00:04	WG1206061
Total Xylenes	21.8		0.0435	0.00650	0.0591	8	12/06/2018 00:04	WG1206061
(S) Toluene-d8	*115*				*75.0-131*		*12/06/2018 00:04*	WG1206061
(S) Dibromofluoromethane	*95.8*				*65.0-129*		*12/06/2018 00:04*	WG1206061
(S) a,a,a-Trifluorotoluene	*97.9*				*80.0-120*		*12/06/2018 00:04*	WG1206061
(S) 4-Bromofluorobenzene	*94.6*				*67.0-138*		*12/06/2018 00:04*	WG1206061

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	6710		91.5	4.00	227	50	12/03/2018 03:43	WG1204169
C28-C40 Oil Range	2660		15.6	4.00	227	50	12/03/2018 03:43	WG1204169
(S) o-Terphenyl	*0.000*	J7			*18.0-148*		*12/03/2018 03:43*	WG1204169

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.8		1	12/01/2018 11:02	WG1204080

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1730		4.29	10.0	53.9	5	12/04/2018 02:38	WG1203989

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	126		2.34	0.100	10.8	100	12/05/2018 03:36	WG1205563
(S) a,a,a-Trifluorotoluene(FID)	*93.0*				*77.0-120*		*12/05/2018 03:36*	WG1205563

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.00154		0.000431	0.00100	0.00108	1	12/06/2018 00:24	WG1206061
Toluene	0.235		0.00135	0.00500	0.00539	1	12/06/2018 00:24	WG1206061
Ethylbenzene	0.231		0.000571	0.00250	0.00269	1	12/06/2018 00:24	WG1206061
Total Xylenes	2.45		0.00515	0.00650	0.00701	1	12/06/2018 00:24	WG1206061
(S) Toluene-d8	*118*				*75.0-131*		*12/06/2018 00:24*	WG1206061
(S) Dibromofluoromethane	*87.7*				*65.0-129*		*12/06/2018 00:24*	WG1206061
(S) a,a,a-Trifluorotoluene	*97.6*				*80.0-120*		*12/06/2018 00:24*	WG1206061
(S) 4-Bromofluorobenzene	*115*				*67.0-138*		*12/06/2018 00:24*	WG1206061

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3500		34.7	4.00	86.2	20	12/07/2018 14:10	WG1204169
C28-C40 Oil Range	1040		5.91	4.00	86.2	20	12/07/2018 14:10	WG1204169
(S) o-Terphenyl	*0.000*	J7			*18.0-148*		*12/07/2018 14:10*	WG1204169

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.9		1	12/04/2018 14:38	WG1204712

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1320		4.23	10.0	53.2	5	12/04/2018 02:47	WG1203989

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	354		2.31	0.100	10.6	100	12/05/2018 03:58	WG1205563
(S) a,a,a-Trifluorotoluene(FID)	*94.8*				*77.0-120*		*12/05/2018 03:58*	WG1205563

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000426	0.00100	0.00106	1	12/06/2018 00:43	WG1206061
Toluene	0.00172	J	0.00133	0.00500	0.00532	1	12/06/2018 00:43	WG1206061
Ethylbenzene	0.000992	J	0.000564	0.00250	0.00266	1	12/06/2018 00:43	WG1206061
Total Xylenes	0.611		0.00509	0.00650	0.00692	1	12/06/2018 00:43	WG1206061
(S) Toluene-d8	*123*				*75.0-131*		*12/06/2018 00:43*	WG1206061
(S) Dibromofluoromethane	*87.2*				*65.0-129*		*12/06/2018 00:43*	WG1206061
(S) a,a,a-Trifluorotoluene	*98.5*				*80.0-120*		*12/06/2018 00:43*	WG1206061
(S) 4-Bromofluorobenzene	*99.8*				*67.0-138*		*12/06/2018 00:43*	WG1206061

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1320		17.1	4.00	42.6	10	12/03/2018 03:07	WG1204169
C28-C40 Oil Range	554		2.92	4.00	42.6	10	12/03/2018 03:07	WG1204169
(S) o-Terphenyl	*0.000*	J2			*18.0-148*		*12/03/2018 03:07*	WG1204169

Method Blank (MB)

(MB) R3364657-1 12/01/18 11:02

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00400			

L1048605-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1048605-04 12/01/18 11:02 • (DUP) R3364657-3 12/01/18 11:02

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	92.8	92.9	1	0.118		10

Laboratory Control Sample (LCS)

(LCS) R3364657-2 12/01/18 11:02

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

Method Blank (MB)

(MB) R3365353-1 12/04/18 14:38

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

L1048609-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1048609-06 12/04/18 14:38 • (DUP) R3365353-3 12/04/18 14:38

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	83.2	83.1	1	0.134		10

Laboratory Control Sample (LCS)

(LCS) R3365353-2 12/04/18 14:38

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) R3364927-1 12/03/18 22:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		0.795	10.0

L1047821-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1047821-04 12/03/18 22:59 • (DUP) R3364927-3 12/03/18 23:07

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	403	413	1	2.60		20

L1048605-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1048605-05 12/04/18 02:47 • (DUP) R3364927-6 12/04/18 02:55

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1320	1280	5	2.87		20

Laboratory Control Sample (LCS)

(LCS) R3364927-2 12/03/18 22:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	198	99.1	90.0-110	

L1048467-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1048467-11 12/04/18 01:10 • (MS) R3364927-4 12/04/18 01:19 • (MSD) R3364927-5 12/04/18 01:28

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	533	3240	3860	3690	117	83.6	1	80.0-120	E	E	4.70	20

Method Blank (MB)

(MB) R3365357-3 12/04/18 22:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*94.6*			*77.0-120*

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

(LCS) R3365357-1 12/04/18 21:34 • (LCSD) R3365357-2 12/04/18 21:55

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	5.17	5.55	93.9	101	72.0-127			7.14	20
(S) a,a,a-Trifluorotoluene(FID)				*107*	*108*	*77.0-120*				

L1049339-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1049339-03 12/05/18 05:23 • (MS) R3365357-4 12/05/18 05:44 • (MSD) R3365357-5 12/05/18 06:05

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	6.06	263	651	684	32.0	34.7	200	10.0-151			4.92	28
(S) a,a,a-Trifluorotoluene(FID)					*95.9*	*95.9*		*77.0-120*				

Method Blank (MB)

(MB) R3365710-3 12/05/18 11:03

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)	*93.7*			*77.0-120*

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

(LCS) R3365710-1 12/05/18 10:00 • (LCSD) R3365710-2 12/05/18 10:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.98	5.54	109	101	72.0-127			7.56	20
(S) a,a,a-Trifluorotoluene(FID)				*109*	*108*	*77.0-120*				

Method Blank (MB)

(MB) R3365742-2 12/05/18 22:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*112*			*75.0-131*
(S) Dibromofluoromethane	*91.2*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*98.2*			*80.0-120*
(S) 4-Bromofluorobenzene	*108*			*67.0-138*

Laboratory Control Sample (LCS)

(LCS) R3365742-1 12/05/18 21:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.0994	79.5	70.0-123	
Ethylbenzene	0.125	0.153	123	74.0-126	
Toluene	0.125	0.0991	79.3	75.0-121	
Xylenes, Total	0.375	0.424	113	72.0-127	
(S) Toluene-d8			*106*	*75.0-131*	
(S) Dibromofluoromethane			*96.0*	*65.0-129*	
(S) a,a,a-Trifluorotoluene			*98.5*	*80.0-120*	
(S) 4-Bromofluorobenzene			*107*	*67.0-138*	

Method Blank (MB)

(MB) R3364516-1 12/02/18 09:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*99.8*			*18.0-148*

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

(LCS) R3364516-2 12/02/18 09:33 • (LCSD) R3364516-3 12/02/18 09:45

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 %
Extractable Petroleum Hydrocarbon	50.0	33.8	39.9	67.6	79.8	50.0-150			16.6	20
C10-C28 Diesel Range	50.0	35.5	41.6	71.0	83.2	50.0-150			15.8	20
(S) o-Terphenyl				*122*	*133*	*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.

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.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(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 Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
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.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

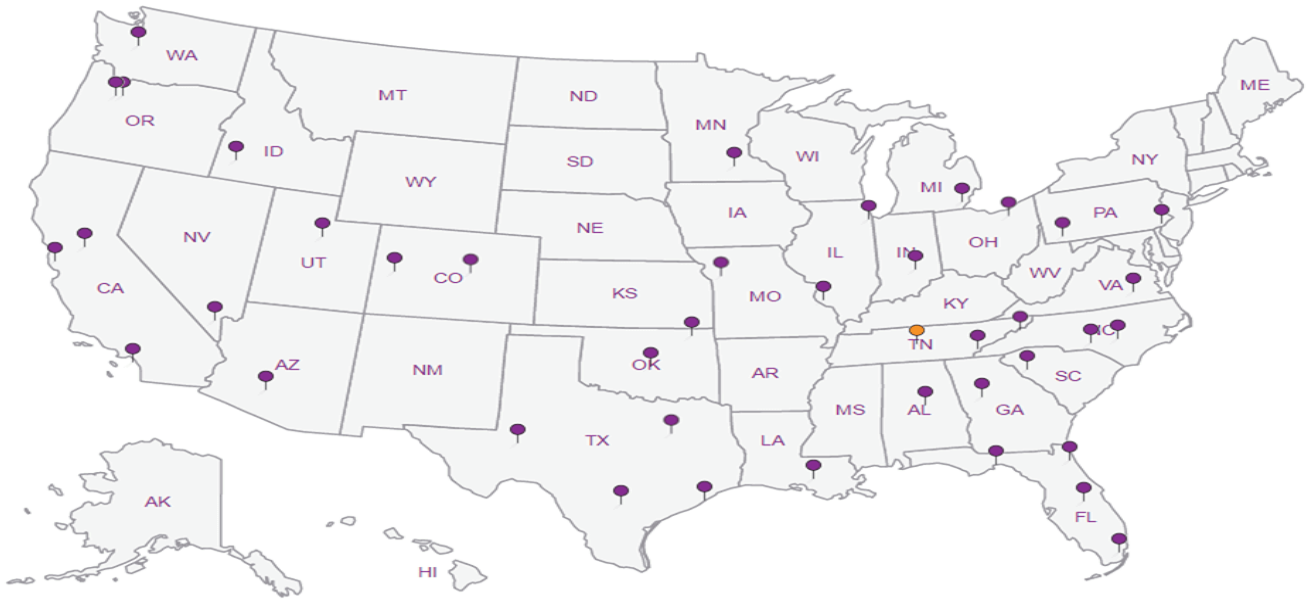
Third Party Federal Accreditations

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

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

Our Locations

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



E026

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	Site Manager:	Kayla Taylor
Project Name:	Buck Fed		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-01491
Invoice to:	Accounts Payable 900 West Wall Street Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

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 list)	Anion/Cation Balance	TPH 8015R	HOLD
L1648605		YEAR: 2018																													
-01	ESW-5	11/27/18	1000		X			X		1	N	X		X												X					
02	WSW-5	11/27/18	1030		X			X		1	N	X		X												X					
03	AH-22	11/27/18	1105		X			X		1	N	X		X												X					
04	AH-23	11/27/18	1130		X			X		1	N	X		X												X					
05	SSW-4	11/27/18	1210		X			X		1	N	X		X												X					

Relinquished by:	Date: 11-28-18 11-29-18	Time: 1530	Received by: Date: 11/29/18 Time: 1535
Relinquished by:	Date:	Time:	Received by: Date: 11/30/18 Time: 900
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY

Sample Temperature 1.0+4=14 °C

REMARKS:

- [x] STANDARD (5 Day)
- [ ] 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

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	COPTETRA	SDG#	L1048605
Cooler Received/Opened On: 11/ 30 /18		Temperature:	1.4
Received By: Alexandra Murtaugh			
Signature:			

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 06, 2018

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1049339
Samples Received:	12/04/2018
Project Number:	212C-MD-01491
Description:	Buck Fed CTB

Report To: Kayla Taylor
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

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 National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

AH-17 (6') L1049339-01 Solid

			Collected by	Collected date/time	Received date/time
				11/30/18 10:35	12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1205617	1	12/05/18 09:26	12/05/18 09:35	KDW
Wet Chemistry by Method 300.0	WG1205791	1	12/05/18 12:41	12/06/18 11:45	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1205563	1	12/04/18 16:44	12/05/18 04:40	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1205525	1	12/04/18 16:44	12/04/18 22:06	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1205367	1	12/04/18 21:33	12/06/18 12:09	KME

AH-6 (6') L1049339-02 Solid

			Collected by	Collected date/time	Received date/time
				11/30/18 13:00	12/04/18 08:00

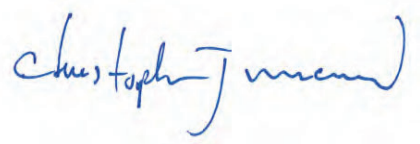
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1205617	1	12/05/18 09:26	12/05/18 09:35	KDW
Wet Chemistry by Method 300.0	WG1205791	1	12/05/18 12:41	12/06/18 11:54	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1205563	100	12/04/18 16:44	12/05/18 05:01	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1205525	8	12/04/18 16:44	12/04/18 22:27	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1205367	25	12/04/18 21:33	12/06/18 13:14	KME
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1205367	5	12/04/18 21:33	12/06/18 12:25	KME

AH-8 (6') L1049339-03 Solid

			Collected by	Collected date/time	Received date/time
				11/30/18 13:15	12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1205617	1	12/05/18 09:26	12/05/18 09:35	KDW
Wet Chemistry by Method 300.0	WG1205791	1	12/05/18 12:41	12/06/18 12:03	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1205563	200	12/04/18 16:44	12/05/18 05:23	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1205525	20	12/04/18 16:44	12/04/18 22:47	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1205367	25	12/04/18 21:33	12/06/18 13:29	KME
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1205367	5	12/04/18 21:33	12/06/18 12:41	KME

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	85.3		1	12/05/2018 09:35	WG1205617

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	294		0.932	10.0	11.7	1	12/06/2018 11:45	WG1205791

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0318	J	0.0254	0.100	0.117	1	12/05/2018 04:40	WG1205563
(S) a,a,a-Trifluorotoluene(FID)	*92.1*				*77.0-120*		*12/05/2018 04:40*	WG1205563

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000469	0.00100	0.00117	1	12/04/2018 22:06	WG1205525
Toluene	U		0.00146	0.00500	0.00586	1	12/04/2018 22:06	WG1205525
Ethylbenzene	U		0.000621	0.00250	0.00293	1	12/04/2018 22:06	WG1205525
Total Xylenes	U		0.00560	0.00650	0.00762	1	12/04/2018 22:06	WG1205525
(S) Toluene-d8	*116*				*75.0-131*		*12/04/2018 22:06*	WG1205525
(S) Dibromofluoromethane	*92.9*				*65.0-129*		*12/04/2018 22:06*	WG1205525
(S) a,a,a-Trifluorotoluene	*107*				*80.0-120*		*12/04/2018 22:06*	WG1205525
(S) 4-Bromofluorobenzene	*108*				*67.0-138*		*12/04/2018 22:06*	WG1205525

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.89	4.00	4.69	1	12/06/2018 12:09	WG1205367
C28-C40 Oil Range	U		0.321	4.00	4.69	1	12/06/2018 12:09	WG1205367
(S) o-Terphenyl	*62.3*				*18.0-148*		*12/06/2018 12:09*	WG1205367

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.1		1	12/05/2018 09:35	WG1205617

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	637		0.893	10.0	11.2	1	12/06/2018 11:54	WG1205791

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	225		2.44	0.100	11.2	100	12/05/2018 05:01	WG1205563
(S) a,a,a-Trifluorotoluene(FID)	*91.9*				*77.0-120*		*12/05/2018 05:01*	WG1205563

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.00359	0.00100	0.00898	8	12/04/2018 22:27	WG1205525
Toluene	0.0775		0.0112	0.00500	0.0449	8	12/04/2018 22:27	WG1205525
Ethylbenzene	0.283		0.00476	0.00250	0.0225	8	12/04/2018 22:27	WG1205525
Total Xylenes	3.46		0.0429	0.00650	0.0584	8	12/04/2018 22:27	WG1205525
(S) Toluene-d8	*106*				*75.0-131*		*12/04/2018 22:27*	WG1205525
(S) Dibromofluoromethane	*106*				*65.0-129*		*12/04/2018 22:27*	WG1205525
(S) a,a,a-Trifluorotoluene	*104*				*80.0-120*		*12/04/2018 22:27*	WG1205525
(S) 4-Bromofluorobenzene	*123*				*67.0-138*		*12/04/2018 22:27*	WG1205525

Sample Narrative:

L1049339-02 WG1205525: Non-target compounds too high to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3050		45.2	4.00	112	25	12/06/2018 13:14	WG1205367
C28-C40 Oil Range	735		1.54	4.00	22.5	5	12/06/2018 12:25	WG1205367
(S) o-Terphenyl	*0.000*	J7			*18.0-148*		*12/06/2018 13:14*	WG1205367
(S) o-Terphenyl	*367*	J1			*18.0-148*		*12/06/2018 12:25*	WG1205367

Sample Narrative:

L1049339-02 WG1205367: Surrogate failure due to matrix interference

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.7		1	12/05/2018 09:35	WG1205617

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	343		0.877	10.0	11.0	1	12/06/2018 12:03	WG1205791

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	263		4.79	0.100	22.1	200	12/05/2018 05:23	WG1205563
(S) a,a,a-Trifluorotoluene(FID)	*91.5*				*77.0-120*		*12/05/2018 05:23*	WG1205563

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.00882	0.00100	0.0221	20	12/04/2018 22:47	WG1205525
Toluene	0.159		0.0276	0.00500	0.110	20	12/04/2018 22:47	WG1205525
Ethylbenzene	0.414		0.0117	0.00250	0.0551	20	12/04/2018 22:47	WG1205525
Total Xylenes	3.74		0.105	0.00650	0.143	20	12/04/2018 22:47	WG1205525
(S) Toluene-d8	*101*				*75.0-131*		*12/04/2018 22:47*	WG1205525
(S) Dibromofluoromethane	*109*				*65.0-129*		*12/04/2018 22:47*	WG1205525
(S) a,a,a-Trifluorotoluene	*105*				*80.0-120*		*12/04/2018 22:47*	WG1205525
(S) 4-Bromofluorobenzene	*111*				*67.0-138*		*12/04/2018 22:47*	WG1205525

Sample Narrative:

L1049339-03 WG1205525: Non-target compounds too high to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3680		44.4	4.00	110	25	12/06/2018 13:29	WG1205367
C28-C40 Oil Range	912		1.51	4.00	22.1	5	12/06/2018 12:41	WG1205367
(S) o-Terphenyl	*471*	J1			*18.0-148*		*12/06/2018 12:41*	WG1205367
(S) o-Terphenyl	*0.000*	J7			*18.0-148*		*12/06/2018 13:29*	WG1205367

Sample Narrative:

L1049339-03 WG1205367: Surrogate failure due to matrix interference

Method Blank (MB)

(MB) R3365705-1 12/05/18 09:35

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

L1049339-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1049339-02 12/05/18 09:35 • (DUP) R3365705-3 12/05/18 09:35

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	89.1	89.2	1	0.112		10

Laboratory Control Sample (LCS)

(LCS) R3365705-2 12/05/18 09:35

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) R3365887-1 12/06/18 10:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		0.795	10.0

L1048923-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1048923-02 12/06/18 11:28 • (DUP) R3365887-3 12/06/18 11:37

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	2020	1970	5	2.85		20

Laboratory Control Sample (LCS)

(LCS) R3365887-2 12/06/18 10:44

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

L1048923-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L1048923-08 12/06/18 12:12 • (MS) R3365887-4 12/06/18 12:21

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	599	16300	13300	0.000	1	80.0-120	E V

Method Blank (MB)

(MB) R3365357-3 12/04/18 22:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*94.6*			*77.0-120*

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

(LCS) R3365357-1 12/04/18 21:34 • (LCSD) R3365357-2 12/04/18 21:55

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	5.17	5.55	93.9	101	72.0-127			7.14	20
(S) a,a,a-Trifluorotoluene(FID)				*107*	*108*	*77.0-120*				

L1049339-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1049339-03 12/05/18 05:23 • (MS) R3365357-4 12/05/18 05:44 • (MSD) R3365357-5 12/05/18 06:05

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	6.06	263	651	684	32.0	34.7	200	10.0-151			4.92	28
(S) a,a,a-Trifluorotoluene(FID)					*95.9*	*95.9*		*77.0-120*				

Method Blank (MB)

(MB) R3365315-2 12/04/18 21:46

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*113*			*75.0-131*
(S) Dibromofluoromethane	*88.5*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*110*			*80.0-120*
(S) 4-Bromofluorobenzene	*106*			*67.0-138*

Laboratory Control Sample (LCS)

(LCS) R3365315-1 12/04/18 20:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.103	82.5	70.0-123	
Ethylbenzene	0.125	0.141	113	74.0-126	
Toluene	0.125	0.113	90.7	75.0-121	
Xylenes, Total	0.375	0.422	113	72.0-127	
(S) Toluene-d8			*107*	*75.0-131*	
(S) Dibromofluoromethane			*103*	*65.0-129*	
(S) a,a,a-Trifluorotoluene			*103*	*80.0-120*	
(S) 4-Bromofluorobenzene			*105*	*67.0-138*	

L1048899-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1048899-07 12/05/18 04:12 • (MS) R3365315-3 12/05/18 04:52 • (MSD) R3365315-4 12/05/18 05:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	12.5	16.4	19.6	79.4	143	40	10.0-149			17.7	37
Ethylbenzene	0.125	56.6	64.2	73.0	152	328	40	10.0-160		V	12.9	38
Toluene	0.125	160	180	202	389	823	40	10.0-156	E V	E V	11.4	38
Xylenes, Total	0.375	298	329	378	207	533	40	10.0-160	E V	E V	13.9	38
(S) Toluene-d8					*99.6*	*104*		*75.0-131*				
(S) Dibromofluoromethane					*99.8*	*105*		*65.0-129*				
(S) a,a,a-Trifluorotoluene					*100*	*99.1*		*80.0-120*				
(S) 4-Bromofluorobenzene					*105*	*106*		*67.0-138*				

Method Blank (MB)

(MB) R3365823-1 12/06/18 11:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*73.3*			*18.0-148*

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

(LCS) R3365823-2 12/06/18 11:40 • (LCSD) R3365823-3 12/06/18 11:54

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 %
Extractable Petroleum Hydrocarbon	50.0	31.8	32.7	63.6	65.4	50.0-150			2.79	20
C10-C28 Diesel Range	50.0	33.7	34.7	67.4	69.4	50.0-150			2.92	20
(S) o-Terphenyl				*67.7*	*68.0*	*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

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

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.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(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 Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
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.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

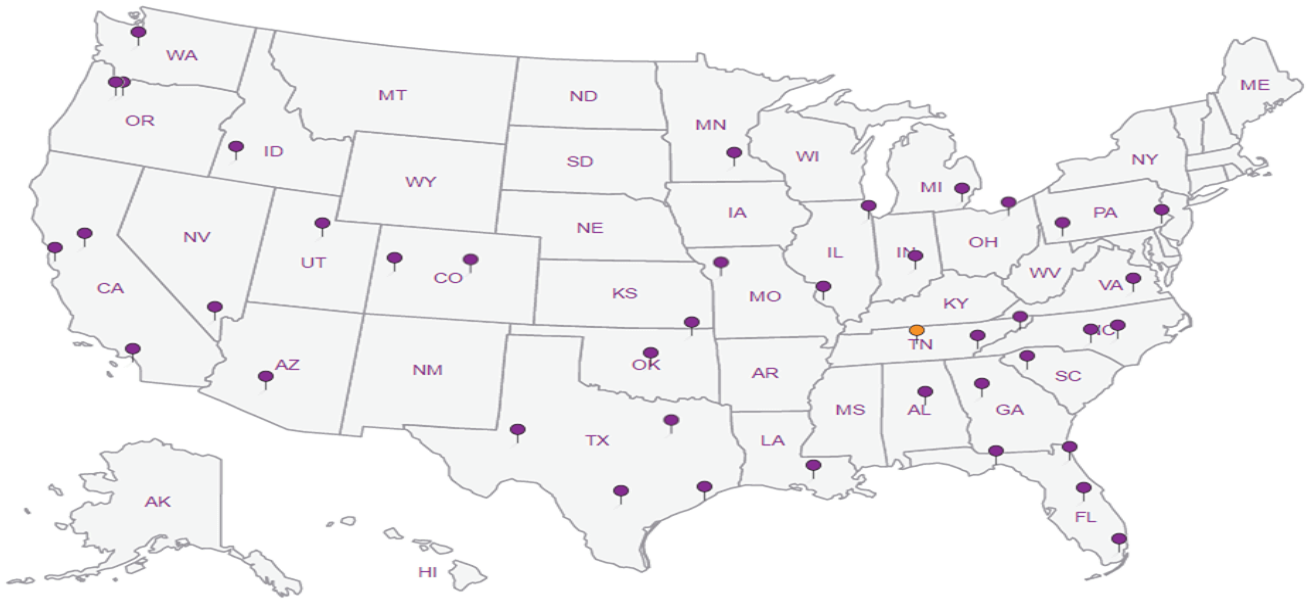
Third Party Federal Accreditations

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

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

Our Locations

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



Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	Site Manager:	Kayla Taylor
Project Name:	Buck Fed		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-01491
Invoice to:	Accounts Payable 900 West Wall Street Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	

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
	AH-6 (4')	11/29/18	1200		X				X			1	N																						X
	AH-8 (4')	11/29/18	1220		X				X			1	N																						X
	AH-17 (4')	11/29/18	1305		X				X			1	N																						X
	AH-17 (5')	11/29/18	1400		X				X			1	N																						X
L1048539-01	AH-17 (6')	11/30/18	1035		X				X			1	N	X		X												X							
	AH-6 (5')	11/30/18	1120		X				X			1	N																						X
	AH-8 (5')	11/30/18	1200		X				X			1	N																						X
02	AH-6 (6')	11/30/18	1300		X				X			1	N	X		X												X							
03	AH-8 (6')	11/30/18	1315		X				X			1	N	X		X												X							

Relinquished by:	Date: 12/3/18 Time: 1500	Received by:	Date: 12/4/18 Time: 15:05
Relinquished by:	Date: Time:	Received by:	Date: Time:
Relinquished by:	Date: Time:	Received by:	Date: 12/4/18 Time: 800

ORIGINAL COPY

LAB USE ONLY
Sample Temperature
0.4-0.1-2.3°C

REMARKS:
- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

T-C=9x402

RAD ... 0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: COPTETRA	SDG#	L1049339
Cooler Received/Opened On: 12/ 2/18	Temperature:	6.3
Received By: Patrick Nshizirungu		
Signature:		

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 19, 2018

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1051879
Samples Received:	12/11/2018
Project Number:	212C-MD-01491
Description:	Buck Fed CTB

Report To: Kayla Taylor
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

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 National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

AH-22 (3') L1051879-01 Solid

			Collected by	Collected date/time	Received date/time
				12/06/18 12:00	12/11/18 09:00

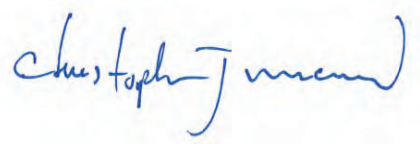
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1210272	1	12/13/18 13:55	12/13/18 14:05	KBC
Wet Chemistry by Method 300.0	WG1210216	2.09205	12/13/18 10:17	12/13/18 16:47	MAJ
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1211483	100	12/12/18 11:42	12/15/18 22:41	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1211544	8	12/12/18 11:42	12/16/18 04:01	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1210000	20	12/13/18 06:18	12/13/18 16:00	TJD
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1210000	5	12/13/18 06:18	12/13/18 14:52	TJD

AH-23 (3') L1051879-02 Solid

			Collected by	Collected date/time	Received date/time
				12/06/18 14:30	12/11/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1210272	1	12/13/18 13:55	12/13/18 14:05	KBC
Wet Chemistry by Method 300.0	WG1210216	1.519757	12/13/18 10:17	12/13/18 17:03	MAJ
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1211483	25	12/12/18 11:42	12/15/18 20:54	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1211544	1	12/12/18 11:42	12/16/18 00:57	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1210000	5	12/13/18 06:18	12/13/18 14:38	TJD

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	90.2		1	12/13/2018 14:05	WG1210272

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	920		1.85	10.0	23.2	2.09205	12/13/2018 16:47	WG1210216

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	122		2.41	0.100	11.1	100	12/15/2018 22:41	WG1211483
(S) a,a,a-Trifluorotoluene(FID)	*91.3*				*77.0-120*		*12/15/2018 22:41*	WG1211483

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.00355	0.00100	0.00887	8	12/16/2018 04:01	WG1211544
Toluene	0.0280	J	0.0111	0.00500	0.0444	8	12/16/2018 04:01	WG1211544
Ethylbenzene	0.0632		0.00470	0.00250	0.0222	8	12/16/2018 04:01	WG1211544
Total Xylenes	1.05		0.0424	0.00650	0.0577	8	12/16/2018 04:01	WG1211544
(S) Toluene-d8	*105*				*75.0-131*		*12/16/2018 04:01*	WG1211544
(S) Dibromofluoromethane	*104*				*65.0-129*		*12/16/2018 04:01*	WG1211544
(S) a,a,a-Trifluorotoluene	*104*				*80.0-120*		*12/16/2018 04:01*	WG1211544
(S) 4-Bromofluorobenzene	*117*				*67.0-138*		*12/16/2018 04:01*	WG1211544

Sample Narrative:

L1051879-01 WG1211544: Nontarget compounds are too large to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2240		35.7	4.00	88.7	20	12/13/2018 16:00	WG1210000
C28-C40 Oil Range	578		1.52	4.00	22.2	5	12/13/2018 14:52	WG1210000
(S) o-Terphenyl	*177*	J1			*18.0-148*		*12/13/2018 14:52*	WG1210000
(S) o-Terphenyl	*194*	J7			*18.0-148*		*12/13/2018 16:00*	WG1210000

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.9		1	12/13/2018 14:05	WG1210272

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	825		1.36	10.0	17.1	1.519757	12/13/2018 17:03	WG1210216

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	90.5		0.610	0.100	2.81	25	12/15/2018 20:54	WG1211483
(S) a,a,a-Trifluorotoluene(FID)	*91.4*				*77.0-120*		*12/15/2018 20:54*	WG1211483

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000450	0.00100	0.00112	1	12/16/2018 00:57	WG1211544
Toluene	U		0.00141	0.00500	0.00562	1	12/16/2018 00:57	WG1211544
Ethylbenzene	0.000731	J	0.000596	0.00250	0.00281	1	12/16/2018 00:57	WG1211544
Total Xylenes	0.103		0.00537	0.00650	0.00731	1	12/16/2018 00:57	WG1211544
(S) Toluene-d8	*111*				*75.0-131*		*12/16/2018 00:57*	WG1211544
(S) Dibromofluoromethane	*92.4*				*65.0-129*		*12/16/2018 00:57*	WG1211544
(S) a,a,a-Trifluorotoluene	*107*				*80.0-120*		*12/16/2018 00:57*	WG1211544
(S) 4-Bromofluorobenzene	*135*				*67.0-138*		*12/16/2018 00:57*	WG1211544

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	939		9.05	4.00	22.5	5	12/13/2018 14:38	WG1210000
C28-C40 Oil Range	211		1.54	4.00	22.5	5	12/13/2018 14:38	WG1210000
(S) o-Terphenyl	*92.8*				*18.0-148*		*12/13/2018 14:38*	WG1210000

Method Blank (MB)

(MB) R3368174-1 12/13/18 14:05

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00300			

L1051893-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1051893-01 12/13/18 14:05 • (DUP) R3368174-3 12/13/18 14:05

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	83.4	81.7	1	2.03		10

Laboratory Control Sample (LCS)

(LCS) R3368174-2 12/13/18 14:05

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) R3368093-1 12/13/18 12:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		0.795	10.0

L1048960-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1048960-01 12/13/18 13:46 • (DUP) R3368093-3 12/13/18 14:03

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	401	449	1	11.4		20

L1052197-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1052197-01 12/13/18 17:20 • (DUP) R3368093-4 12/13/18 17:36

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	93.4	81.2	1	14.0		20

Laboratory Control Sample (LCS)

(LCS) R3368093-2 12/13/18 12:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	194	97.0	90.0-110	

L1052197-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1052197-02 12/13/18 17:53 • (MS) R3368093-5 12/13/18 18:09 • (MSD) R3368093-6 12/13/18 18:26

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	500	275	690	710	83.0	87.0	1	80.0-120			2.86	20

Method Blank (MB)

(MB) R3368594-3 12/15/18 14:54

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)	*91.3*			*77.0-120*

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

(LCS) R3368594-1 12/15/18 13:50 • (LCSD) R3368594-2 12/15/18 14:12

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	5.73	5.69	104	103	72.0-127			0.688	20
(S) a,a,a-Trifluorotoluene(FID)				*106*	*106*	*77.0-120*				

L1051879-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1051879-01 12/15/18 22:41 • (MS) R3368594-4 12/15/18 23:02 • (MSD) R3368594-5 12/15/18 23:23

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	6.10	122	711	652	96.6	86.9	100	10.0-151			8.72	28
(S) a,a,a-Trifluorotoluene(FID)					*102*	*104*		*77.0-120*				

Method Blank (MB)

(MB) R3368600-3 12/15/18 21:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*110*			*75.0-131*
(S) Dibromofluoromethane	*93.5*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*109*			*80.0-120*
(S) 4-Bromofluorobenzene	*104*			*67.0-138*

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

(LCS) R3368600-1 12/15/18 20:13 • (LCSD) R3368600-2 12/15/18 20:34

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	0.101	0.0996	80.5	79.7	70.0-123			0.993	20
Ethylbenzene	0.125	0.126	0.126	101	101	74.0-126			0.422	20
Toluene	0.125	0.109	0.109	87.0	87.3	75.0-121			0.400	20
Xylenes, Total	0.375	0.379	0.375	101	100	72.0-127			1.06	20
(S) Toluene-d8				*106*	*108*	*75.0-131*				
(S) Dibromofluoromethane				*105*	*104*	*65.0-129*				
(S) a,a,a-Trifluorotoluene				*105*	*103*	*80.0-120*				
(S) 4-Bromofluorobenzene				*103*	*106*	*67.0-138*				

L1051783-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1051783-02 12/15/18 23:16 • (MS) R3368600-4 12/16/18 04:41 • (MSD) R3368600-5 12/16/18 05:01

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	ND	0.0816	0.0646	65.3	51.7	1	10.0-149			23.3	37
Ethylbenzene	0.125	ND	0.123	0.0919	98.4	73.5	1	10.0-160			28.9	38
Toluene	0.125	ND	0.103	0.0819	82.6	65.5	1	10.0-156			23.0	38
Xylenes, Total	0.375	ND	0.358	0.285	95.5	76.0	1	10.0-160			22.7	38
(S) Toluene-d8					*116*	*116*		*75.0-131*				
(S) Dibromofluoromethane					*89.0*	*88.4*		*65.0-129*				
(S) a,a,a-Trifluorotoluene					*110*	*106*		*80.0-120*				
(S) 4-Bromofluorobenzene					*106*	*106*		*67.0-138*				

Method Blank (MB)

(MB) R3368012-1 12/13/18 11:28

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-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*89.6*			*18.0-148*

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

(LCS) R3368012-2 12/13/18 11:41 • (LCSD) R3368012-3 12/13/18 11:55

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 %
Extractable Petroleum Hydrocarbon	50.0	35.4	33.4	70.8	66.8	50.0-150			5.81	20
C10-C28 Diesel Range	50.0	39.2	37.0	78.4	74.0	50.0-150			5.77	20
(S) o-Terphenyl				*84.7*	*78.2*	*18.0-148*				

L1052100-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1052100-02 12/13/18 15:06 • (MS) R3368012-4 12/13/18 15:19 • (MSD) R3368012-5 12/13/18 15:33

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 %
Extractable Petroleum Hydrocarbon	48.5	63.3	35.7	29.5	0.000	0.000	10	50.0-150	J6	J6	19.0	20
C10-C28 Diesel Range	48.5	ND	33.8	33.9	69.7	67.8	10	50.0-150			0.295	20
(S) o-Terphenyl					*132*	*111*		*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.

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
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 National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

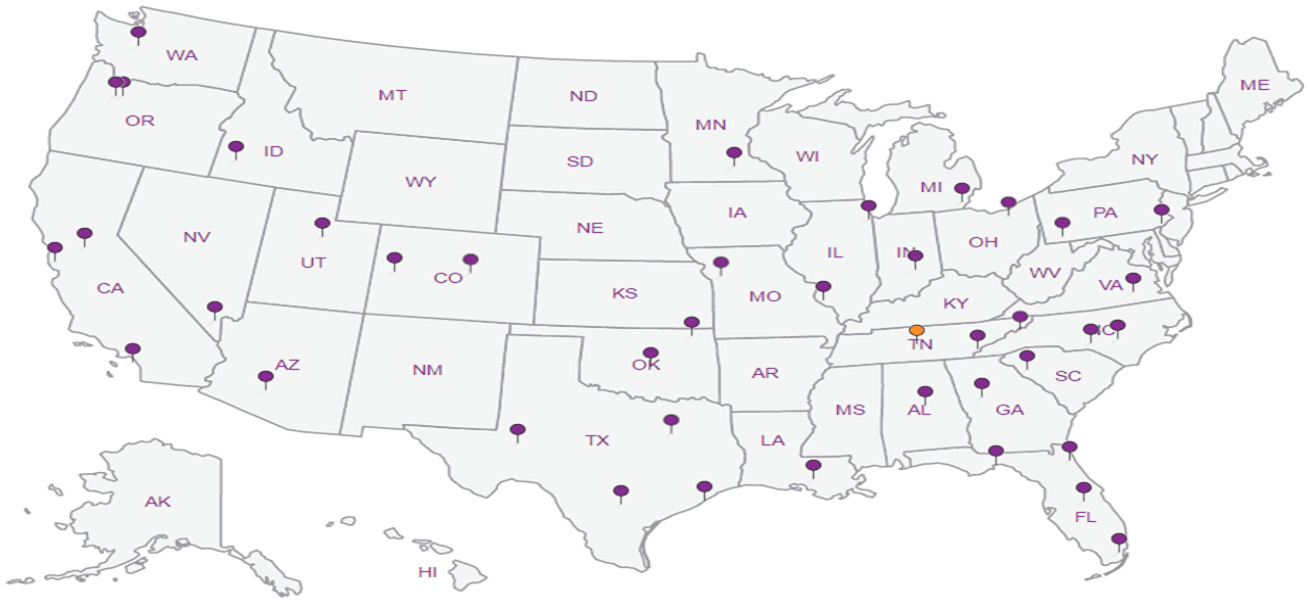
Third Party Federal Accreditations

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

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

Our Locations

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



L1051879

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Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name:	Conoco Phillips	Site Manager:	Kayla Taylor
Project Name:	Buck Fed		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-01491
Invoice to:	Accounts Payable 900 West Wall Street Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	

Comments: COPTETRA Acctnum

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2018 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	HNO3	ICE	None		# CONTAINERS	FILTERED (Y/N)
	AH-22(3')	12/6/18	1200		X				X			1	N
	AH-23(3')	12/6/18	1430		X				X			1	N

ANALYSIS REQUEST (Circle or Specify Method No.)

D233

BTEX 8021B (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 li	Anion/Cation Balance	TPH 8015R		Hold
X		X												X					-01	
X		X												X					-02	

Relinquished by:	Date: 12-10-18	Time: 1345	Received by:
Relinquished by:	Date:	Time:	Received by: Date: 12/4 Time: 9:00
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY

Sample Temperature 0.2 +0.3 = 0.5 42

REMARKS: 5Day TAT KT

- [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

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: COPTETRA	SDG#	L1051879
Cooler Received/Opened On: 12/11/18	Temperature:	0.2
Received By: malik Tisdale		
Signature: Malik T.		

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

October 24, 2019

ConocoPhillips - Tetra Tech

Sample Delivery Group:	L1150137
Samples Received:	10/15/2019
Project Number:	212C-MD-01491
Description:	COP Buck Fed CTB

Report To: Christian Llull
4001 N. Big Spring St., Ste. 401
Midland, TX 79705

Entire Report Reviewed By:

Chris McCord
Project Manager

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

TABLE OF CONTENTS

BH-19-1 (0'-1') L1150137-01 Solid

Collected by: JT | Collected date/time: 10/08/19 11:00 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367017	1	10/23/19 14:02	10/23/19 14:13	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1364664	1	10/17/19 19:10	10/17/19 23:03	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365550	1	10/16/19 10:24	10/20/19 18:32	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1366257	1	10/16/19 10:24	10/20/19 22:06	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365094	1	10/18/19 06:39	10/18/19 22:17	KME	Mt. Juliet, TN

BH-19-1 (2'-3') L1150137-02 Solid

Collected by: JT | Collected date/time: 10/08/19 11:10 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367017	1	10/23/19 14:02	10/23/19 14:13	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1364664	1	10/17/19 19:10	10/17/19 23:13	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365550	1	10/16/19 10:24	10/20/19 18:54	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1366257	1	10/16/19 10:24	10/20/19 22:25	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365094	1	10/18/19 06:39	10/18/19 22:30	KME	Mt. Juliet, TN

BH-19-1 (4'-5') L1150137-03 Solid

Collected by: JT | Collected date/time: 10/08/19 11:20 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367017	1	10/23/19 14:02	10/23/19 14:13	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1364664	1	10/17/19 19:10	10/17/19 23:22	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365550	1	10/16/19 10:24	10/20/19 19:17	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1366257	1	10/16/19 10:24	10/20/19 22:44	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365094	1	10/18/19 06:39	10/19/19 06:42	KME	Mt. Juliet, TN

BH-19-2 (0'-1') L1150137-04 Solid

Collected by: JT | Collected date/time: 10/08/19 11:50 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367017	1	10/23/19 14:02	10/23/19 14:13	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1364664	1	10/17/19 19:10	10/17/19 23:32	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365550	1	10/16/19 10:24	10/20/19 20:04	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1366698	1	10/16/19 10:24	10/21/19 14:40	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365094	1	10/18/19 06:39	10/18/19 22:56	KME	Mt. Juliet, TN

BH-19-2 (2'-3') L1150137-05 Solid

Collected by: JT | Collected date/time: 10/08/19 12:00 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367017	1	10/23/19 14:02	10/23/19 14:13	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1364664	1	10/17/19 19:10	10/17/19 23:41	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365550	1	10/16/19 10:24	10/20/19 20:27	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1366698	1	10/16/19 10:24	10/21/19 14:59	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365094	1	10/18/19 06:39	10/18/19 23:08	KME	Mt. Juliet, TN

BH-19-2 (4'-5') L1150137-06 Solid

Collected by: JT | Collected date/time: 10/08/19 12:10 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367017	1	10/23/19 14:02	10/23/19 14:13	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1364664	1	10/17/19 19:10	10/17/19 23:51	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365550	1	10/16/19 10:24	10/20/19 20:49	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1366783	1	10/16/19 10:24	10/21/19 23:31	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365515	1	10/19/19 04:32	10/19/19 11:50	FM	Mt. Juliet, TN

BH-19-3 (0'-1') L1150137-07 Solid

Collected by: JT | Collected date/time: 10/08/19 12:40 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367017	1	10/23/19 14:02	10/23/19 14:13	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1364664	1	10/17/19 19:10	10/18/19 00:00	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365550	1	10/16/19 10:24	10/20/19 21:11	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1366783	1	10/16/19 10:24	10/21/19 23:50	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365515	1	10/19/19 04:32	10/19/19 12:03	FM	Mt. Juliet, TN

BH-19-3 (2'-3') L1150137-08 Solid

Collected by: JT | Collected date/time: 10/08/19 12:50 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367017	1	10/23/19 14:02	10/23/19 14:13	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1364664	1	10/17/19 19:10	10/18/19 00:29	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365550	1	10/16/19 10:24	10/20/19 21:33	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1366783	1	10/16/19 10:24	10/22/19 00:08	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365515	1	10/19/19 04:32	10/19/19 12:15	FM	Mt. Juliet, TN

BH-19-3 (4'-5') L1150137-09 Solid

Collected by: JT | Collected date/time: 10/08/19 13:00 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367017	1	10/23/19 14:02	10/23/19 14:13	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1364664	1	10/17/19 19:10	10/18/19 00:57	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365550	1	10/16/19 10:24	10/20/19 21:55	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1366783	1	10/16/19 10:24	10/22/19 00:27	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365515	1	10/19/19 04:32	10/19/19 12:28	FM	Mt. Juliet, TN

BH-19-3 (6'-7') L1150137-10 Solid

Collected by: JT | Collected date/time: 10/08/19 13:10 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367017	1	10/23/19 14:02	10/23/19 14:13	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1364664	1	10/17/19 19:10	10/18/19 01:07	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365550	1	10/16/19 10:24	10/20/19 22:17	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1366783	1	10/16/19 10:24	10/22/19 00:46	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365515	1	10/19/19 04:32	10/19/19 12:41	FM	Mt. Juliet, TN

BH-19-3 (9'-10') L1150137-11 Solid

Collected by: JT | Collected date/time: 10/08/19 13:20 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367018	1	10/23/19 13:49	10/23/19 14:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1364664	1	10/17/19 19:10	10/18/19 01:16	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365550	1	10/16/19 10:24	10/20/19 22:39	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1366783	1	10/16/19 10:24	10/22/19 01:05	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365515	1	10/19/19 04:32	10/19/19 12:54	FM	Mt. Juliet, TN

BH-19-3 (14'-15') L1150137-12 Solid

Collected by: JT | Collected date/time: 10/08/19 13:30 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367018	1	10/23/19 13:49	10/23/19 14:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1364664	1	10/17/19 19:10	10/18/19 01:26	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365550	1	10/16/19 10:24	10/20/19 23:02	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1366783	1	10/16/19 10:24	10/22/19 01:23	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365515	1	10/19/19 04:32	10/19/19 13:06	FM	Mt. Juliet, TN

BH-19-4 (0'-1') L1150137-13 Solid

Collected by: JT | Collected date/time: 10/10/19 14:00 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367018	1	10/23/19 13:49	10/23/19 14:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1364664	1	10/17/19 19:10	10/18/19 01:35	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365589	1	10/16/19 10:24	10/20/19 04:09	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1368147	1	10/16/19 10:24	10/24/19 13:38	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365515	1	10/19/19 04:32	10/19/19 13:32	FM	Mt. Juliet, TN

BH-19-4 (2'-3') L1150137-14 Solid

Collected by: JT | Collected date/time: 10/10/19 14:10 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367018	1	10/23/19 13:49	10/23/19 14:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1365616	1	10/20/19 15:10	10/20/19 18:09	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365589	1	10/16/19 10:24	10/20/19 04:30	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1368147	1	10/16/19 10:24	10/24/19 13:57	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365515	1	10/19/19 04:32	10/19/19 13:19	FM	Mt. Juliet, TN

BH-19-4 (4'-5') L1150137-15 Solid

Collected by: JT | Collected date/time: 10/10/19 14:15 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367018	1	10/23/19 13:49	10/23/19 14:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1365616	1	10/20/19 15:10	10/20/19 18:18	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365589	1	10/16/19 10:24	10/20/19 04:52	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1368147	1	10/16/19 10:24	10/24/19 14:16	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365515	1	10/19/19 04:32	10/19/19 13:45	FM	Mt. Juliet, TN

BH-19-4 (6'-7') L1150137-16 Solid

Collected by: JT | Collected date/time: 10/10/19 14:20 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367018	1	10/23/19 13:49	10/23/19 14:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1365616	1	10/20/19 15:10	10/20/19 18:27	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365589	1	10/16/19 10:24	10/20/19 05:13	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1368147	1	10/16/19 10:24	10/24/19 14:35	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365703	1	10/19/19 07:36	10/19/19 16:53	KME	Mt. Juliet, TN

BH-19-4 (9'-10') L1150137-17 Solid

Collected by: JT | Collected date/time: 10/10/19 14:40 | Received date/time: 10/15/19 09:15

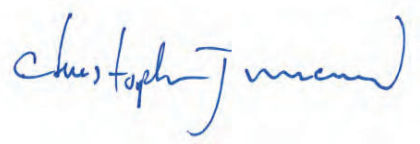
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367018	1	10/23/19 13:49	10/23/19 14:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1365616	1	10/20/19 15:10	10/20/19 18:37	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365978	1	10/16/19 10:24	10/20/19 13:47	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1368147	1	10/16/19 10:24	10/24/19 14:54	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365703	1	10/19/19 07:36	10/19/19 17:06	KME	Mt. Juliet, TN

BH-19-4 (14'-15') L1150137-18 Solid

Collected by: JT | Collected date/time: 10/10/19 15:00 | Received date/time: 10/15/19 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367018	1	10/23/19 13:49	10/23/19 14:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1365616	1	10/20/19 15:10	10/20/19 18:46	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1365978	1	10/16/19 10:24	10/20/19 14:07	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1368190	1	10/16/19 10:24	10/23/19 23:09	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1365703	1	10/19/19 07:36	10/19/19 17:19	KME	Mt. Juliet, TN

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



Chris McCord
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.8		1	10/23/2019 14:13	WG1367017

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	143		0.839	10.0	10.6	1	10/17/2019 23:03	WG1364664

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0763	B J	0.0229	0.100	0.106	1	10/20/2019 18:32	WG1365550
(S) a,a,a-Trifluorotoluene(FID)	*105*				*77.0-120*		*10/20/2019 18:32*	WG1365550

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000422	0.00100	0.00106	1	10/20/2019 22:06	WG1366257
Toluene	U		0.00132	0.00500	0.00528	1	10/20/2019 22:06	WG1366257
Ethylbenzene	U		0.000559	0.00250	0.00264	1	10/20/2019 22:06	WG1366257
Total Xylenes	U		0.00504	0.00650	0.00686	1	10/20/2019 22:06	WG1366257
(S) Toluene-d8	*112*				*75.0-131*		*10/20/2019 22:06*	WG1366257
(S) 4-Bromofluorobenzene	*103*				*67.0-138*		*10/20/2019 22:06*	WG1366257
(S) 1,2-Dichloroethane-d4	*84.6*				*70.0-130*		*10/20/2019 22:06*	WG1366257

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3.02	J	1.70	4.00	4.22	1	10/18/2019 22:17	WG1365094
C28-C40 Oil Range	6.14		0.289	4.00	4.22	1	10/18/2019 22:17	WG1365094
(S) o-Terphenyl	*83.1*				*18.0-148*		*10/18/2019 22:17*	WG1365094

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.2		1	10/23/2019 14:13	WG1367017

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	86.7		0.863	10.0	10.9	1	10/17/2019 23:13	WG1364664

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0766	B J	0.0235	0.100	0.109	1	10/20/2019 18:54	WG1365550
(S) a,a,a-Trifluorotoluene(FID)	*105*				*77.0-120*		*10/20/2019 18:54*	WG1365550

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000434	0.00100	0.00109	1	10/20/2019 22:25	WG1366257
Toluene	U		0.00136	0.00500	0.00543	1	10/20/2019 22:25	WG1366257
Ethylbenzene	U		0.000575	0.00250	0.00271	1	10/20/2019 22:25	WG1366257
Total Xylenes	U		0.00519	0.00650	0.00705	1	10/20/2019 22:25	WG1366257
(S) Toluene-d8	*108*				*75.0-131*		*10/20/2019 22:25*	WG1366257
(S) 4-Bromofluorobenzene	*98.3*				*67.0-138*		*10/20/2019 22:25*	WG1366257
(S) 1,2-Dichloroethane-d4	*90.7*				*70.0-130*		*10/20/2019 22:25*	WG1366257

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	7.07		1.75	4.00	4.34	1	10/18/2019 22:30	WG1365094
C28-C40 Oil Range	16.4		0.297	4.00	4.34	1	10/18/2019 22:30	WG1365094
(S) o-Terphenyl	*89.1*				*18.0-148*		*10/18/2019 22:30*	WG1365094

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.9		1	10/23/2019 14:13	WG1367017

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	126		0.856	10.0	10.8	1	10/17/2019 23:22	WG1364664

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0837	B J	0.0234	0.100	0.108	1	10/20/2019 19:17	WG1365550
(S) a,a,a-Trifluorotoluene(FID)	*105*				*77.0-120*		*10/20/2019 19:17*	WG1365550

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000431	0.00100	0.00108	1	10/20/2019 22:44	WG1366257
Toluene	U		0.00135	0.00500	0.00538	1	10/20/2019 22:44	WG1366257
Ethylbenzene	U		0.000571	0.00250	0.00269	1	10/20/2019 22:44	WG1366257
Total Xylenes	U		0.00515	0.00650	0.00700	1	10/20/2019 22:44	WG1366257
(S) Toluene-d8	*109*				*75.0-131*		*10/20/2019 22:44*	WG1366257
(S) 4-Bromofluorobenzene	*100*				*67.0-138*		*10/20/2019 22:44*	WG1366257
(S) 1,2-Dichloroethane-d4	*90.2*				*70.0-130*		*10/20/2019 22:44*	WG1366257

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.73	4.00	4.31	1	10/19/2019 06:42	WG1365094
C28-C40 Oil Range	0.362	J	0.295	4.00	4.31	1	10/19/2019 06:42	WG1365094
(S) o-Terphenyl	*79.9*				*18.0-148*		*10/19/2019 06:42*	WG1365094

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.6		1	10/23/2019 14:13	WG1367017

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	30.0	B	0.859	10.0	10.8	1	10/17/2019 23:32	WG1364664

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0691	B J	0.0234	0.100	0.108	1	10/20/2019 20:04	WG1365550
(S) a,a,a-Trifluorotoluene(FID)	*105*				*77.0-120*		*10/20/2019 20:04*	WG1365550

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000432	0.00100	0.00108	1	10/21/2019 14:40	WG1366698
Toluene	U		0.00135	0.00500	0.00540	1	10/21/2019 14:40	WG1366698
Ethylbenzene	U		0.000572	0.00250	0.00270	1	10/21/2019 14:40	WG1366698
Total Xylenes	U		0.00516	0.00650	0.00702	1	10/21/2019 14:40	WG1366698
(S) Toluene-d8	*107*				*75.0-131*		*10/21/2019 14:40*	WG1366698
(S) 4-Bromofluorobenzene	*107*				*67.0-138*		*10/21/2019 14:40*	WG1366698
(S) 1,2-Dichloroethane-d4	*94.3*				*70.0-130*		*10/21/2019 14:40*	WG1366698

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.74	4.00	4.32	1	10/18/2019 22:56	WG1365094
C28-C40 Oil Range	0.837	J	0.296	4.00	4.32	1	10/18/2019 22:56	WG1365094
(S) o-Terphenyl	*84.9*				*18.0-148*		*10/18/2019 22:56*	WG1365094

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.7		1	10/23/2019 14:13	WG1367017

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	77.7		0.858	10.0	10.8	1	10/17/2019 23:41	WG1364664

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0767	B J	0.0234	0.100	0.108	1	10/20/2019 20:27	WG1365550
(S) a,a,a-Trifluorotoluene(FID)	*106*				*77.0-120*		*10/20/2019 20:27*	WG1365550

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000432	0.00100	0.00108	1	10/21/2019 14:59	WG1366698
Toluene	U		0.00135	0.00500	0.00540	1	10/21/2019 14:59	WG1366698
Ethylbenzene	U		0.000572	0.00250	0.00270	1	10/21/2019 14:59	WG1366698
Total Xylenes	U		0.00516	0.00650	0.00702	1	10/21/2019 14:59	WG1366698
(S) Toluene-d8	*110*				*75.0-131*		*10/21/2019 14:59*	WG1366698
(S) 4-Bromofluorobenzene	*101*				*67.0-138*		*10/21/2019 14:59*	WG1366698
(S) 1,2-Dichloroethane-d4	*83.5*				*70.0-130*		*10/21/2019 14:59*	WG1366698

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.74	4.00	4.32	1	10/18/2019 23:08	WG1365094
C28-C40 Oil Range	0.488	J	0.296	4.00	4.32	1	10/18/2019 23:08	WG1365094
(S) o-Terphenyl	*71.1*				*18.0-148*		*10/18/2019 23:08*	WG1365094

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.8		1	10/23/2019 14:13	WG1367017

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	59.7		0.857	10.0	10.8	1	10/17/2019 23:51	WG1364664

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0718	B J	0.0234	0.100	0.108	1	10/20/2019 20:49	WG1365550
(S) a,a,a-Trifluorotoluene(FID)	*106*				*77.0-120*		*10/20/2019 20:49*	WG1365550

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000431	0.00100	0.00108	1	10/21/2019 23:31	WG1366783
Toluene	U		0.00135	0.00500	0.00539	1	10/21/2019 23:31	WG1366783
Ethylbenzene	U		0.000571	0.00250	0.00269	1	10/21/2019 23:31	WG1366783
Total Xylenes	U		0.00515	0.00650	0.00701	1	10/21/2019 23:31	WG1366783
(S) Toluene-d8	*109*				*75.0-131*		*10/21/2019 23:31*	WG1366783
(S) 4-Bromofluorobenzene	*110*				*67.0-138*		*10/21/2019 23:31*	WG1366783
(S) 1,2-Dichloroethane-d4	*83.9*				*70.0-130*		*10/21/2019 23:31*	WG1366783

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.74	4.00	4.31	1	10/19/2019 11:50	WG1365515
C28-C40 Oil Range	U		0.295	4.00	4.31	1	10/19/2019 11:50	WG1365515
(S) o-Terphenyl	*56.5*				*18.0-148*		*10/19/2019 11:50*	WG1365515

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.6		1	10/23/2019 14:13	WG1367017

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	80.7		0.849	10.0	10.7	1	10/18/2019 00:00	WG1364664

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0739	B J	0.0232	0.100	0.107	1	10/20/2019 21:11	WG1365550
(S) a,a,a-Trifluorotoluene(FID)	*106*				*77.0-120*		*10/20/2019 21:11*	WG1365550

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000427	0.00100	0.00107	1	10/21/2019 23:50	WG1366783
Toluene	U		0.00134	0.00500	0.00534	1	10/21/2019 23:50	WG1366783
Ethylbenzene	U		0.000566	0.00250	0.00267	1	10/21/2019 23:50	WG1366783
Total Xylenes	U		0.00511	0.00650	0.00694	1	10/21/2019 23:50	WG1366783
(S) Toluene-d8	*112*				*75.0-131*		*10/21/2019 23:50*	WG1366783
(S) 4-Bromofluorobenzene	*100*				*67.0-138*		*10/21/2019 23:50*	WG1366783
(S) 1,2-Dichloroethane-d4	*85.8*				*70.0-130*		*10/21/2019 23:50*	WG1366783

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.72	4.00	4.27	1	10/19/2019 12:03	WG1365515
C28-C40 Oil Range	0.903	J	0.293	4.00	4.27	1	10/19/2019 12:03	WG1365515
(S) o-Terphenyl	*68.7*				*18.0-148*		*10/19/2019 12:03*	WG1365515

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.7		1	10/23/2019 14:13	WG1367017

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	69.7		0.840	10.0	10.6	1	10/18/2019 00:29	WG1364664

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0690	B J	0.0229	0.100	0.106	1	10/20/2019 21:33	WG1365550
(S) a,a,a-Trifluorotoluene(FID)	*105*				*77.0-120*		*10/20/2019 21:33*	WG1365550

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000422	0.00100	0.00106	1	10/22/2019 00:08	WG1366783
Toluene	U		0.00132	0.00500	0.00528	1	10/22/2019 00:08	WG1366783
Ethylbenzene	U		0.000560	0.00250	0.00264	1	10/22/2019 00:08	WG1366783
Total Xylenes	U		0.00505	0.00650	0.00686	1	10/22/2019 00:08	WG1366783
(S) Toluene-d8	*97.5*				*75.0-131*		*10/22/2019 00:08*	WG1366783
(S) 4-Bromofluorobenzene	*91.8*				*67.0-138*		*10/22/2019 00:08*	WG1366783
(S) 1,2-Dichloroethane-d4	*81.0*				*70.0-130*		*10/22/2019 00:08*	WG1366783

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.70	4.00	4.22	1	10/19/2019 12:15	WG1365515
C28-C40 Oil Range	4.14	J	0.289	4.00	4.22	1	10/19/2019 12:15	WG1365515
(S) o-Terphenyl	*75.5*				*18.0-148*		*10/19/2019 12:15*	WG1365515

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.0		1	10/23/2019 14:13	WG1367017

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	74.4		0.846	10.0	10.6	1	10/18/2019 00:57	WG1364664

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0819	B J	0.0231	0.100	0.106	1	10/20/2019 21:55	WG1365550
(S) a,a,a-Trifluorotoluene(FID)	*105*				*77.0-120*		*10/20/2019 21:55*	WG1365550

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000426	0.00100	0.00106	1	10/22/2019 00:27	WG1366783
Toluene	U		0.00133	0.00500	0.00532	1	10/22/2019 00:27	WG1366783
Ethylbenzene	U		0.000564	0.00250	0.00266	1	10/22/2019 00:27	WG1366783
Total Xylenes	U		0.00509	0.00650	0.00692	1	10/22/2019 00:27	WG1366783
(S) Toluene-d8	*111*				*75.0-131*		*10/22/2019 00:27*	WG1366783
(S) 4-Bromofluorobenzene	*103*				*67.0-138*		*10/22/2019 00:27*	WG1366783
(S) 1,2-Dichloroethane-d4	*85.1*				*70.0-130*		*10/22/2019 00:27*	WG1366783

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.71	4.00	4.26	1	10/19/2019 12:28	WG1365515
C28-C40 Oil Range	0.786	J	0.292	4.00	4.26	1	10/19/2019 12:28	WG1365515
(S) o-Terphenyl	*68.3*				*18.0-148*		*10/19/2019 12:28*	WG1365515

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.5		1	10/23/2019 14:13	WG1367017

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	15.5	B	0.815	10.0	10.3	1	10/18/2019 01:07	WG1364664

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0698	B J	0.0223	0.100	0.103	1	10/20/2019 22:17	WG1365550
(S) a,a,a-Trifluorotoluene(FID)	*105*				*77.0-120*		*10/20/2019 22:17*	WG1365550

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000410	0.00100	0.00103	1	10/22/2019 00:46	WG1366783
Toluene	U		0.00128	0.00500	0.00513	1	10/22/2019 00:46	WG1366783
Ethylbenzene	U		0.000543	0.00250	0.00256	1	10/22/2019 00:46	WG1366783
Total Xylenes	U		0.00490	0.00650	0.00667	1	10/22/2019 00:46	WG1366783
(S) Toluene-d8	*102*				*75.0-131*		*10/22/2019 00:46*	WG1366783
(S) 4-Bromofluorobenzene	*103*				*67.0-138*		*10/22/2019 00:46*	WG1366783
(S) 1,2-Dichloroethane-d4	*88.3*				*70.0-130*		*10/22/2019 00:46*	WG1366783

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.65	4.00	4.10	1	10/19/2019 12:41	WG1365515
C28-C40 Oil Range	U		0.281	4.00	4.10	1	10/19/2019 12:41	WG1365515
(S) o-Terphenyl	*71.1*				*18.0-148*		*10/19/2019 12:41*	WG1365515

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.9		1	10/23/2019 14:00	WG1367018

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	129		0.829	10.0	10.4	1	10/18/2019 01:16	WG1364664

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0811	B J	0.0226	0.100	0.104	1	10/20/2019 22:39	WG1365550
(S) a,a,a-Trifluorotoluene(FID)	*105*				*77.0-120*		*10/20/2019 22:39*	WG1365550

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000417	0.00100	0.00104	1	10/22/2019 01:05	WG1366783
Toluene	U		0.00130	0.00500	0.00521	1	10/22/2019 01:05	WG1366783
Ethylbenzene	U		0.000553	0.00250	0.00261	1	10/22/2019 01:05	WG1366783
Total Xylenes	U		0.00498	0.00650	0.00678	1	10/22/2019 01:05	WG1366783
(S) Toluene-d8	*109*				*75.0-131*		*10/22/2019 01:05*	WG1366783
(S) 4-Bromofluorobenzene	*102*				*67.0-138*		*10/22/2019 01:05*	WG1366783
(S) 1,2-Dichloroethane-d4	*88.3*				*70.0-130*		*10/22/2019 01:05*	WG1366783

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.68	4.00	4.17	1	10/19/2019 12:54	WG1365515
C28-C40 Oil Range	U		0.286	4.00	4.17	1	10/19/2019 12:54	WG1365515
(S) o-Terphenyl	*73.5*				*18.0-148*		*10/19/2019 12:54*	WG1365515

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.0		1	10/23/2019 14:00	WG1367018

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	121		0.837	10.0	10.5	1	10/18/2019 01:26	WG1364664

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0780	B J	0.0228	0.100	0.105	1	10/20/2019 23:02	WG1365550
(S) a,a,a-Trifluorotoluene(FID)	*105*				*77.0-120*		*10/20/2019 23:02*	WG1365550

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U	J3	0.000421	0.00100	0.00105	1	10/22/2019 01:23	WG1366783
Toluene	U	J3	0.00132	0.00500	0.00526	1	10/22/2019 01:23	WG1366783
Ethylbenzene	U	J3	0.000558	0.00250	0.00263	1	10/22/2019 01:23	WG1366783
Total Xylenes	U	J3	0.00503	0.00650	0.00684	1	10/22/2019 01:23	WG1366783
(S) Toluene-d8	*107*				*75.0-131*		*10/22/2019 01:23*	WG1366783
(S) 4-Bromofluorobenzene	*99.4*				*67.0-138*		*10/22/2019 01:23*	WG1366783
(S) 1,2-Dichloroethane-d4	*88.5*				*70.0-130*		*10/22/2019 01:23*	WG1366783

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.70	4.00	4.21	1	10/19/2019 13:06	WG1365515
C28-C40 Oil Range	U		0.289	4.00	4.21	1	10/19/2019 13:06	WG1365515
(S) o-Terphenyl	*69.3*				*18.0-148*		*10/19/2019 13:06*	WG1365515

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.0		1	10/23/2019 14:00	WG1367018

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	42.9	B	0.874	10.0	11.0	1	10/18/2019 01:35	WG1364664

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0238	0.100	0.110	1	10/20/2019 04:09	WG1365589
(S) a,a,a-Trifluorotoluene(FID)	*99.0*				*77.0-120*		*10/20/2019 04:09*	WG1365589

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000439	0.00100	0.00110	1	10/24/2019 13:38	WG1368147
Toluene	U		0.00137	0.00500	0.00549	1	10/24/2019 13:38	WG1368147
Ethylbenzene	U		0.000582	0.00250	0.00275	1	10/24/2019 13:38	WG1368147
Total Xylenes	U		0.00525	0.00650	0.00714	1	10/24/2019 13:38	WG1368147
(S) Toluene-d8	*96.7*				*75.0-131*		*10/24/2019 13:38*	WG1368147
(S) 4-Bromofluorobenzene	*95.5*				*67.0-138*		*10/24/2019 13:38*	WG1368147
(S) 1,2-Dichloroethane-d4	*131*	J1			*70.0-130*		*10/24/2019 13:38*	WG1368147

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.77	4.00	4.39	1	10/19/2019 13:32	WG1365515
C28-C40 Oil Range	U		0.301	4.00	4.39	1	10/19/2019 13:32	WG1365515
(S) o-Terphenyl	*76.2*				*18.0-148*		*10/19/2019 13:32*	WG1365515

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.5		1	10/23/2019 14:00	WG1367018

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	47.7		0.860	10.0	10.8	1	10/20/2019 18:09	WG1365616

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0235	0.100	0.108	1	10/20/2019 04:30	WG1365589
(S) a,a,a-Trifluorotoluene(FID)	*99.3*				*77.0-120*		*10/20/2019 04:30*	WG1365589

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000432	0.00100	0.00108	1	10/24/2019 13:57	WG1368147
Toluene	U		0.00135	0.00500	0.00541	1	10/24/2019 13:57	WG1368147
Ethylbenzene	U		0.000573	0.00250	0.00270	1	10/24/2019 13:57	WG1368147
Total Xylenes	U		0.00517	0.00650	0.00703	1	10/24/2019 13:57	WG1368147
(S) Toluene-d8	*95.1*				*75.0-131*		*10/24/2019 13:57*	WG1368147
(S) 4-Bromofluorobenzene	*95.3*				*67.0-138*		*10/24/2019 13:57*	WG1368147
(S) 1,2-Dichloroethane-d4	*132*	J1			*70.0-130*		*10/24/2019 13:57*	WG1368147

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.74	4.00	4.32	1	10/19/2019 13:19	WG1365515
C28-C40 Oil Range	U		0.296	4.00	4.32	1	10/19/2019 13:19	WG1365515
(S) o-Terphenyl	*66.7*				*18.0-148*		*10/19/2019 13:19*	WG1365515

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.5		1	10/23/2019 14:00	WG1367018

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	53.2		0.889	10.0	11.2	1	10/20/2019 18:18	WG1365616

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0243	0.100	0.112	1	10/20/2019 04:52	WG1365589
(S) a,a,a-Trifluorotoluene(FID)	*98.9*				*77.0-120*		*10/20/2019 04:52*	WG1365589

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000447	0.00100	0.00112	1	10/24/2019 14:16	WG1368147
Toluene	U		0.00140	0.00500	0.00559	1	10/24/2019 14:16	WG1368147
Ethylbenzene	U		0.000592	0.00250	0.00279	1	10/24/2019 14:16	WG1368147
Total Xylenes	U		0.00534	0.00650	0.00726	1	10/24/2019 14:16	WG1368147
(S) Toluene-d8	*95.4*				*75.0-131*		*10/24/2019 14:16*	WG1368147
(S) 4-Bromofluorobenzene	*94.9*				*67.0-138*		*10/24/2019 14:16*	WG1368147
(S) 1,2-Dichloroethane-d4	*134*	J1			*70.0-130*		*10/24/2019 14:16*	WG1368147

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.80	4.00	4.47	1	10/19/2019 13:45	WG1365515
C28-C40 Oil Range	0.562	J	0.306	4.00	4.47	1	10/19/2019 13:45	WG1365515
(S) o-Terphenyl	*79.9*				*18.0-148*		*10/19/2019 13:45*	WG1365515

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.2		1	10/23/2019 14:00	WG1367018

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	66.4		0.835	10.0	10.5	1	10/20/2019 18:27	WG1365616

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0228	0.100	0.105	1	10/20/2019 05:13	WG1365589
(S) a,a,a-Trifluorotoluene(FID)	*99.7*				*77.0-120*		*10/20/2019 05:13*	WG1365589

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000420	0.00100	0.00105	1	10/24/2019 14:35	WG1368147
Toluene	U		0.00131	0.00500	0.00525	1	10/24/2019 14:35	WG1368147
Ethylbenzene	U		0.000557	0.00250	0.00263	1	10/24/2019 14:35	WG1368147
Total Xylenes	U		0.00502	0.00650	0.00683	1	10/24/2019 14:35	WG1368147
(S) Toluene-d8	*97.5*				*75.0-131*		*10/24/2019 14:35*	WG1368147
(S) 4-Bromofluorobenzene	*97.5*				*67.0-138*		*10/24/2019 14:35*	WG1368147
(S) 1,2-Dichloroethane-d4	*134*	J1			*70.0-130*		*10/24/2019 14:35*	WG1368147

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.69	4.00	4.20	1	10/19/2019 16:53	WG1365703
C28-C40 Oil Range	U		0.288	4.00	4.20	1	10/19/2019 16:53	WG1365703
(S) o-Terphenyl	*65.2*				*18.0-148*		*10/19/2019 16:53*	WG1365703

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.8		1	10/23/2019 14:00	WG1367018

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	200		0.839	10.0	10.6	1	10/20/2019 18:37	WG1365616

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0323	B J	0.0229	0.100	0.106	1	10/20/2019 13:47	WG1365978
(S) a,a,a-Trifluorotoluene(FID)	*94.5*				*77.0-120*		*10/20/2019 13:47*	WG1365978

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000422	0.00100	0.00106	1	10/24/2019 14:54	WG1368147
Toluene	U		0.00132	0.00500	0.00528	1	10/24/2019 14:54	WG1368147
Ethylbenzene	U		0.000559	0.00250	0.00264	1	10/24/2019 14:54	WG1368147
Total Xylenes	U		0.00504	0.00650	0.00686	1	10/24/2019 14:54	WG1368147
(S) Toluene-d8	*95.8*				*75.0-131*		*10/24/2019 14:54*	WG1368147
(S) 4-Bromofluorobenzene	*94.3*				*67.0-138*		*10/24/2019 14:54*	WG1368147
(S) 1,2-Dichloroethane-d4	*135*	J1			*70.0-130*		*10/24/2019 14:54*	WG1368147

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.70	4.00	4.22	1	10/19/2019 17:06	WG1365703
C28-C40 Oil Range	0.293	J	0.289	4.00	4.22	1	10/19/2019 17:06	WG1365703
(S) o-Terphenyl	*66.9*				*18.0-148*		*10/19/2019 17:06*	WG1365703

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.2		1	10/23/2019 14:00	WG1367018

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	76.0		0.810	10.0	10.2	1	10/20/2019 18:46	WG1365616

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0298	B J	0.0221	0.100	0.102	1	10/20/2019 14:07	WG1365978
(S) a,a,a-Trifluorotoluene(FID)	*94.0*				*77.0-120*		*10/20/2019 14:07*	WG1365978

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000407	0.00100	0.00102	1	10/23/2019 23:09	WG1368190
Toluene	U		0.00127	0.00500	0.00509	1	10/23/2019 23:09	WG1368190
Ethylbenzene	U		0.000540	0.00250	0.00255	1	10/23/2019 23:09	WG1368190
Total Xylenes	U		0.00487	0.00650	0.00662	1	10/23/2019 23:09	WG1368190
(S) Toluene-d8	*106*				*75.0-131*		*10/23/2019 23:09*	WG1368190
(S) 4-Bromofluorobenzene	*98.2*				*67.0-138*		*10/23/2019 23:09*	WG1368190
(S) 1,2-Dichloroethane-d4	*97.6*				*70.0-130*		*10/23/2019 23:09*	WG1368190

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.64	4.00	4.07	1	10/19/2019 17:19	WG1365703
C28-C40 Oil Range	U		0.279	4.00	4.07	1	10/19/2019 17:19	WG1365703
(S) o-Terphenyl	*64.8*				*18.0-148*		*10/19/2019 17:19*	WG1365703

Method Blank (MB)

(MB) R3464628-1 10/23/19 14:13

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

L1150137-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1150137-01 10/23/19 14:13 • (DUP) R3464628-3 10/23/19 14:13

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	94.8	94.7	1	0.126		10

Laboratory Control Sample (LCS)

(LCS) R3464628-2 10/23/19 14:13

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

Method Blank (MB)

(MB) R3464621-1 10/23/19 14:00

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

L1150137-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1150137-12 10/23/19 14:00 • (DUP) R3464621-3 10/23/19 14:00

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	95.0	94.6	1	0.349		10

Laboratory Control Sample (LCS)

(LCS) R3464621-2 10/23/19 14:00

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) R3462290-1 10/17/19 20:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	4.71	J	0.795	10.0

L1150129-40 Original Sample (OS) • Duplicate (DUP)

(OS) L1150129-40 10/17/19 21:56 • (DUP) R3462290-3 10/17/19 22:06

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	59.9	43.5	1	31.6	J3	20

L1150137-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1150137-13 10/18/19 01:35 • (DUP) R3462290-6 10/18/19 01:45

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	42.9	41.9	1	2.37		20

Laboratory Control Sample (LCS)

(LCS) R3462290-2 10/17/19 20:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	212	106	90.0-110	

L1150137-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150137-07 10/18/19 00:00 • (MS) R3462290-4 10/18/19 00:10 • (MSD) R3462290-5 10/18/19 00:19

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 %
Chloride	534	80.7	629	606	103	98.3	1	80.0-120			3.76	20

Method Blank (MB)

(MB) R3463039-1 10/20/19 16:50

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	3.42	J	0.795	10.0

L1150393-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1150393-01 10/20/19 19:44 • (DUP) R3463039-3 10/20/19 19:53

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	1140	1180	5	2.83		20

L1151537-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1151537-01 10/20/19 22:25 • (DUP) R3463039-6 10/20/19 22:35

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	824	913	1	10.2		20

Laboratory Control Sample (LCS)

(LCS) R3463039-2 10/20/19 17:00

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

L1150393-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150393-05 10/20/19 20:03 • (MS) R3463039-4 10/20/19 20:12 • (MSD) R3463039-5 10/20/19 20:22

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	587	6270	6260	6550	0.000	47.9	1	80.0-120	E V	E V	4.51	20

Method Blank (MB)

(MB) R3463029-2 10/20/19 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0731	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*106*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3463029-1 10/20/19 13:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.45	99.1	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*77.0-120*	

L1150129-29 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150129-29 10/20/19 17:25 • (MS) R3463029-3 10/20/19 23:24 • (MSD) R3463029-4 10/20/19 23:46

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	5.69	0.0784	1.22	2.19	20.1	37.2	1	10.0-151		J3	57.0	28
(S) a,a,a-Trifluorotoluene(FID)					*101*	*90.9*		*77.0-120*				

Method Blank (MB)

(MB) R3463765-2 10/19/19 20:48

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

Laboratory Control Sample (LCS)

(LCS) R3463765-1 10/19/19 19:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.14	93.5	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*102*	*77.0-120*	

L1150129-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150129-07 10/19/19 23:42 • (MS) R3463765-3 10/20/19 05:33 • (MSD) R3463765-4 10/20/19 05:54

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 %
TPH (GC/FID) Low Fraction	575	46.3	589	602	94.3	96.5	100	10.0-151			2.11	28
(S) a,a,a-Trifluorotoluene(FID)					*108*	*109*		*77.0-120*				

Method Blank (MB)

(MB) R3463260-3 10/20/19 10:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0244	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*95.2*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3463260-2 10/20/19 09:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.76	86.5	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*77.0-120*	

Method Blank (MB)

(MB) R3463366-3 10/20/19 21:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*108*			*75.0-131*
(S) 4-Bromofluorobenzene	*100*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*86.1*			*70.0-130*

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

(LCS) R3463366-1 10/20/19 20:14 • (LCSD) R3463366-2 10/20/19 20:32

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	0.00500	0.00431	0.00434	86.2	86.8	70.0-123			0.694	20
Ethylbenzene	0.00500	0.00511	0.00549	102	110	74.0-126			7.17	20
Toluene	0.00500	0.00477	0.00505	95.4	101	75.0-121			5.70	20
Xylenes, Total	0.0150	0.0167	0.0171	111	114	72.0-127			2.37	20
(S) Toluene-d8				*107*	*108*	*75.0-131*				
(S) 4-Bromofluorobenzene				*99.8*	*98.8*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*92.6*	*87.5*	*70.0-130*				

Method Blank (MB)

(MB) R3463541-2 10/21/19 10:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*109*			*75.0-131*
(S) 4-Bromofluorobenzene	*101*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*83.6*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3463541-1 10/21/19 09:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.114	91.2	70.0-123	
Ethylbenzene	0.125	0.131	105	74.0-126	
Toluene	0.125	0.127	102	75.0-121	
Xylenes, Total	0.375	0.435	116	72.0-127	
(S) Toluene-d8			*108*	*75.0-131*	
(S) 4-Bromofluorobenzene			*100*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*87.9*	*70.0-130*	

L1149584-67 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1149584-67 10/21/19 19:58 • (MS) R3463541-3 10/21/19 17:48 • (MSD) R3463541-4 10/21/19 18:07

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	25.0	ND	21.2	12.4	84.8	49.6	200	10.0-149		J3	52.4	37
Ethylbenzene	25.0	35.8	61.8	55.1	104	77.2	200	10.0-160			11.5	38
Toluene	25.0	ND	24.9	15.5	99.6	62.0	200	10.0-156		J3	46.5	38
Xylenes, Total	75.0	210	299	283	119	97.3	200	10.0-160			5.50	38
(S) Toluene-d8					*100*	*112*		*75.0-131*				
(S) 4-Bromofluorobenzene					*103*	*110*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*90.1*	*88.9*		*70.0-130*				

Sample Narrative:

OS: Target compounds too high to run at a lower dilution.

Method Blank (MB)

(MB) R3463542-3 10/21/19 22:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*108*			*75.0-131*
(S) 4-Bromofluorobenzene	*99.1*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*83.6*			*70.0-130*

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

(LCS) R3463542-1 10/21/19 20:54 • (LCSD) R3463542-2 10/21/19 21:12

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	0.104	0.106	83.2	84.8	70.0-123			1.90	20
Ethylbenzene	0.125	0.129	0.128	103	102	74.0-126			0.778	20
Toluene	0.125	0.121	0.122	96.8	97.6	75.0-121			0.823	20
Xylenes, Total	0.375	0.413	0.437	110	117	72.0-127			5.65	20
(S) Toluene-d8				*107*	*108*	*75.0-131*				
(S) 4-Bromofluorobenzene				*101*	*110*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*89.1*	*90.5*	*70.0-130*				

L1150137-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150137-12 10/22/19 01:23 • (MS) R3463542-4 10/22/19 06:23 • (MSD) R3463542-5 10/22/19 06:42

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 %
Benzene	0.132	U	0.0923	0.0566	70.2	43.0	1	10.0-149		J3	47.9	37
Ethylbenzene	0.132	U	0.111	0.0655	84.0	49.8	1	10.0-160		J3	51.2	38
Toluene	0.132	U	0.107	0.0645	81.6	49.0	1	10.0-156		J3	49.8	38
Xylenes, Total	0.395	U	0.362	0.231	91.7	58.4	1	10.0-160		J3	44.4	38
(S) Toluene-d8					*108*	*110*		*75.0-131*				
(S) 4-Bromofluorobenzene					*100*	*102*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*90.4*	*89.6*		*70.0-130*				

Method Blank (MB)

(MB) R3464753-3 10/24/19 08:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	0.00165	J	0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*95.3*			*75.0-131*
(S) 4-Bromofluorobenzene	*95.6*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*121*			*70.0-130*

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

(LCS) R3464753-1 10/24/19 06:45 • (LCSD) R3464753-2 10/24/19 07:03

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	0.107	0.108	85.6	86.4	70.0-123			0.930	20
Ethylbenzene	0.125	0.113	0.105	90.4	84.0	74.0-126			7.34	20
Toluene	0.125	0.108	0.106	86.4	84.8	75.0-121			1.87	20
Xylenes, Total	0.375	0.352	0.350	93.9	93.3	72.0-127			0.570	20
(S) Toluene-d8				*95.6*	*94.0*	*75.0-131*				
(S) 4-Bromofluorobenzene				*96.9*	*97.5*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*119*	*124*	*70.0-130*				

L1149492-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1149492-03 10/24/19 08:18 • (MS) R3464753-4 10/24/19 16:09 • (MSD) R3464753-5 10/24/19 16:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	ND	0.103	0.109	82.4	87.2	1	10.0-149			5.66	37
Ethylbenzene	0.125	ND	0.0963	0.108	77.0	86.4	1	10.0-160			11.5	38
Toluene	0.125	ND	0.104	0.109	83.2	87.2	1	10.0-156			4.69	38
Xylenes, Total	0.375	ND	0.327	0.354	87.2	94.4	1	10.0-160			7.93	38
(S) Toluene-d8					*94.4*	*95.3*		*75.0-131*				
(S) 4-Bromofluorobenzene					*93.9*	*96.6*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*126*	*128*		*70.0-130*				

Method Blank (MB)

(MB) R3464397-2 10/23/19 18:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*107*			*75.0-131*
(S) 4-Bromofluorobenzene	*97.6*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*91.6*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3464397-1 10/23/19 17:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.125	100	70.0-123	
Ethylbenzene	0.125	0.116	92.8	74.0-126	
Toluene	0.125	0.110	88.0	75.0-121	
Xylenes, Total	0.375	0.305	81.3	72.0-127	
(S) Toluene-d8			*103*	*75.0-131*	
(S) 4-Bromofluorobenzene			*99.2*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*110*	*70.0-130*	

L1150137-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150137-18 10/23/19 23:09 • (MS) R3464397-3 10/24/19 02:16 • (MSD) R3464397-4 10/24/19 02:36

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	0.127	U	0.112	0.120	88.0	94.4	1	10.0-149			7.02	37
Ethylbenzene	0.127	U	0.107	0.117	84.0	92.0	1	10.0-160			9.09	38
Toluene	0.127	U	0.102	0.111	79.9	87.2	1	10.0-156			8.71	38
Xylenes, Total	0.382	U	0.275	0.303	72.0	79.5	1	10.0-160			9.86	38
(S) Toluene-d8					*105*	*103*		*75.0-131*				
(S) 4-Bromofluorobenzene					*97.6*	*96.6*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*99.9*	*97.8*		*70.0-130*				

Method Blank (MB)

(MB) R3462663-1 10/18/19 13:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*84.5*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3462663-2 10/18/19 13:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	43.1	86.2	50.0-150	
(S) o-Terphenyl			*105*	*18.0-148*	

L1150103-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150103-20 10/18/19 21:39 • (MS) R3462663-3 10/18/19 21:52 • (MSD) R3462663-4 10/18/19 22:05

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.1	U	44.5	44.6	88.9	88.0	1	50.0-150			0.231	20
(S) o-Terphenyl					*108*	*105*		*18.0-148*				

Method Blank (MB)

(MB) R3462800-1 10/19/19 09:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*88.3*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3462800-2 10/19/19 09:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	43.1	86.2	50.0-150	
(S) o-Terphenyl			*107*	*18.0-148*	

L1150129-35 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150129-35 10/19/19 09:56 • (MS) R3462800-3 10/19/19 10:08 • (MSD) R3462800-4 10/19/19 10:21

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	53.2	U	46.9	44.2	88.1	83.2	1	50.0-150			5.87	20
(S) o-Terphenyl					*96.7*	*91.7*		*18.0-148*				

Method Blank (MB)

(MB) R3462886-1 10/19/19 16:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*64.9*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3462886-2 10/19/19 16:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	34.7	69.4	50.0-150	
(S) o-Terphenyl			*61.9*	*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.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(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 Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.

Qualifier	Description
V	The sample concentration is too high to evaluate accurate spike recoveries.

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

State Accreditations

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

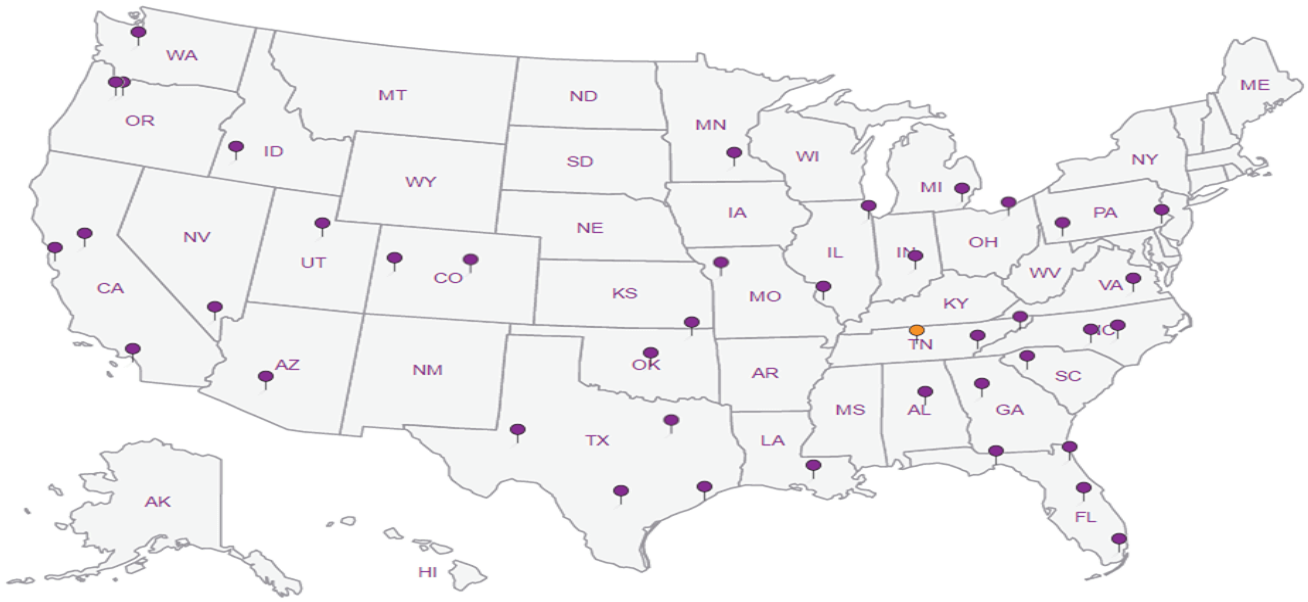
Third Party Federal Accreditations

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

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

Our Locations

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



1150137

F200

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 Buck Fed CTB		
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-01491
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	**Sampler Signature:**	

Comments: Run deeper samples if GRO+DRO exceeds 100 mg/kg or if benzene exceeds 10 mg/kg or if total BTEX exceeds 50 mg/kg or if chlorides exceed 600 mg/kg.

COPTETRA Acctnum

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD NONE	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B / BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
-01	BH-19-1 (0'- 1')	10/8/2019	1100		X				X			1	N	X		X												X						
02	BH-19-1 (2'- 3')	10/8/2019	1110		X				X			1	N	X		X												X						
03	BH-19-1 (4'- 5')	10/8/2019	1120		X				X			1	N	X		X												X						
04	BH-19-2 (0'- 1')	10/8/2019	1150		X				X			1	N	X		X												X						
05	BH-19-2 (2'- 3')	10/8/2019	1200		X				X			1	N	X		X												X						
06	BH-19-2 (4'- 5')	10/8/2019	1210		X				X			1	N	X		X												X						
07	BH-19-3 (0'- 1')	10/8/2019	1240		X				X			1	N	X		X												X						
08	BH-19-3 (2'- 3')	10/8/2019	1250		X				X			1	N	X		X												X						
09	BH-19-3 (4'- 5')	10/8/2019	1300		X				X			1	N	X		X												X						
10	BH-19-3 (6'- 7')	10/8/2019	1310		X				X			1	N	X		X												X						

Relinquished by:	Date: 10-14-19	Time: 14:00	Received by: Date: 10-14-19 Time: 14:00
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: 10/15/19 Time: 8:15

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 #: _____

RAD SCREEN: <0.5 mR/hr

0.2-0=0.2 ASM

1150137

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 Buck Fed CTB		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-01491
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	

Comments: Run deeper samples if GRO+DRO exceeds 100 mg/kg or if benzene exceeds 10 mg/kg or if total BTEX exceeds 50 mg/kg or if chlorides exceed 600 mg/kg.

COPTETRA Acctnum

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD NONE	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
11	BH-19-3 (9'- 10')	10/8/2019	1320		X				X			1	N	X		X												X						
12	BH-19-3 (14'- 15')	10/8/2019	1330		X				X			1	N	X		X												X						
13	BH-19-4 (0'- 1')	10/10/2019	1400		X				X			1	N	X		X												X						
14	BH-19-4 (2'- 3')	10/10/2019	1410		X				X			1	N	X		X												X						
15	BH-19-4 (4'- 5')	10/10/2019	1415		X				X			1	N	X		X												X						
16	BH-19-4 (6'- 7')	10/10/2019	1420		X				X			1	N	X		X												X						
17	BH-19-4 (9'- 10')	10/10/2019	1440		X				X			1	N	X		X												X						
18	BH-19-4 (14'- 15')	10/10/2019	1500		X				X			1	N	X		X												X						

Relinquished by:	Date: 10-4-19	Time: 14:00	Received by:	Date: 10-4-19 Time: 14:05
Relinquished by:	Date:	Time:	Received by:	Date: Time:
Relinquished by:	Date:	Time:	Received by:	Date: 10/5/19 Time: 9:15

ORIGINAL COPY

RAD SCREEN: <0.5 mR/hr 0.2-0=0.2 ASA

LAB USE ONLY

Sample Temperature

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: COPTETRA	150137	
Cooler Received/Opened On: 10/15/19 Temperature:	0.2	
Received By: Hailey Melson		
Signature: Hailey Mc		

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?			

APPENDIX D
Waste Manifests

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-951558
Customer #:	CRI2190	Bid #:	O6UJ9A0009Z1
Ordered by:	JOE TYLER	Date:	11/13/2018
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	1	Well Ser. #:	999908 Federal
Manif. Date:	11/13/2018	Well Name:	BUCK CENTRAL
Hauler:	MCNABB PARTNERS	Well #:	TANK BATTERY
Driver	GUMER	Field:	
Truck #	M32	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	18.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

_ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A013Q4I 11/13/2018 9:20:59AM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-951557
Customer #:	CRI2190	Bid #:	O6UJ9A0009Z1
Ordered by:	JENNI FORTUNATO	Date:	11/13/2018
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	2	Well Ser. #:	999908 Federal
Manif. Date:	11/13/2018	Well Name:	BUCK CENTRAL
Hauler:	MCNABB PARTNERS	Well #:	TANK BATTERY
Driver	JR	Field:	
Truck #	M82	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	3
Manif. Date:	11/13/2018
Hauler:	MCNABB PARTNERS
Driver	JR
Truck #	M82
Card #	
Job Ref #	

Ticket #:	700-951602
Bid #:	O6UJ9A0009Z1
Date:	11/13/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL T/ CTB
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	20.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis.	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TY,LER
AFE #:	
PO #:	
Manifest #:	4
Manif. Date:	11/13/2018
Hauler:	MCNABB PARTNERS
Driver	GUMBER
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-951601
Bid #:	O6UJ9A0009Z1
Date:	11/13/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL TA
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	18.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis.	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	5
Manif. Date:	11/13/2018
Hauler:	MCNABB PARTNERS
Driver	JR
Truck #	M82
Card #	
Job Ref #	

Ticket #:	700-951680
Bid #:	O6UJ9A0009Z1
Date:	11/13/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL TA
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A013QHR 11/13/2018 3:06:14PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	6
Manif. Date:	11/13/2018
Hauler:	MCNABB PARTNERS
Driver	GUMER
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-951681
Bid #:	O6UJ9A0009Z1
Date:	11/13/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL TA
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	18.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	7
Manif. Date:	11/14/2018
Hauler:	MCNABB PARTNERS
Driver	JR
Truck #	M82
Card #	
Job Ref #	

Ticket #:	700-951924
Bid #:	O6UJ9A0009Z1
Date:	11/14/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL T/
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A013QZT 11/14/2018 8:56:37 AM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	8
Manif. Date:	11/14/2018
Hauler:	MCNABB PARTNERS
Driver	JOSH
Truck #	M79
Card #	
Job Ref #	

Ticket #:	700-951926
Bid #:	O6UJ9A0009Z1
Date:	11/14/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL T/
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	22	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	11/14/2018
Hauler:	MCNABB PARTNERS
Driver	JOSH
Truck #	M79
Card #	
Job Ref #	

Ticket #:	700-952303
Bid #:	O6UJ9A0009Z1
Date:	11/14/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL TA
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	10
Manif. Date:	11/14/2018
Hauler:	MCNABB PARTNERS
Driver	JR
Truck #	M82
Card #	
Job Ref #	

Ticket #:	700-952308
Bid #:	O6UJ9A0009Z1
Date:	11/14/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL TA
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	11
Manif. Date:	11/15/2018
Hauler:	MCNABB PARTNERS
Driver	JOSH
Truck #	M79
Card #	
Job Ref #	

Ticket #:	700-952625
Bid #:	O6UJ9A0009Z1
Date:	11/15/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK CENTRAL
Well #:	TANK BATTERY
Field:	
Field #:	
Rig:	NON-DRILLING
County	

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A013SH1 11/15/2018 10:27:48

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JUSTIN WRIGHT
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	11/15/2018
Hauler:	MCNABB PARTNERS
Driver	JR
Truck #	M82
Card #	
Job Ref #	

Ticket #:	700-952627
Bid #:	O6UJ9A0009Z1
Date:	11/15/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL TA
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-952702
Customer #:	CRI2190	Bid #:	O6UJ9A0009Z1
Ordered by:	JOE TYLER	Date:	11/15/2018
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	13	Well Ser. #:	999908
Manif. Date:	11/15/2018	Well Name:	BUCK FEDERAL CENTRAL TA
Hauler:	MCNABB PARTNERS	Well #:	.
Driver	JR	Field:	
Truck #	M82	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

_ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-952698
Customer #:	CRI2190	Bid #:	O6UJ9A0009Z1
Ordered by:	JOE TAYLOR	Date:	11/15/2018
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	14	Well Ser. #:	999908
Manif. Date:	11/15/2018	Well Name:	BUCK CENTRAL
Hauler:	MCNABB PARTNERS	Well #:	TANK BATTERY
Driver	JOSH	Field:	
Truck #	M79	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TAYLOR
AFE #:	
PO #:	
Manifest #:	15
Manif. Date:	11/15/2018
Hauler:	MCNABB PARTNERS
Driver	JOSH
Truck #	M79
Card #	
Job Ref #	

Ticket #:	700-952775
Bid #:	O6UJ9A0009Z1
Date:	11/15/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK CENTRAL
Well #:	TANK BATTERY
Field:	
Field #:	
Rig:	NON-DRILLING
County	

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-952780
Customer #:	CRI2190	Bid #:	O6UJ9A0009Z1
Ordered by:	JOE TYLER	Date:	11/15/2018
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	16	Well Ser. #:	999908
Manif. Date:	11/15/2018	Well Name:	BUCK CENTRAL
Hauler:	MCNABB PARTNERS	Well #:	TANK BATTERY
Driver	JR	Field:	
Truck #	M82	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-953014
Customer #:	CRI2190	Bid #:	O6UJ9A0009Z1
Ordered by:	JOE TYLER	Date:	11/16/2018
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	17	Well Ser. #:	999908
Manif. Date:	11/16/2018	Well Name:	BUCK FEDERAL CENTRAL T/
Hauler:	MCNABB PARTNERS	Well #:	.
Driver	JR	Field:	
Truck #	M82	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-953015
Customer #:	CRI2190	Bid #:	O6UJ9A0009Z1
Ordered by:	JOE TYLER	Date:	11/16/2018
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	18	Well Ser. #:	999908
Manif. Date:	11/16/2018	Well Name:	BUCK FEDERAL CENTRAL T/
Hauler:	MCNABB PARTNERS	Well #:	.
Driver	GUMER	Field:	
Truck #	M32	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	18.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A013TEQ 11/16/2018 10:22 [illegible] AM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	19
Manif. Date:	11/16/2018
Hauler:	RT TRUCKING LLC
Driver	JR
Truck #	M82
Card #	
Job Ref #	

Ticket #:	700-953110
Bid #:	O6UJ9A0009Z1
Date:	11/16/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL T/
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A013TMU 11/16/2018 3:48:43PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	20
Manif. Date:	11/16/2018
Hauler:	MCNABB PARTNERS
Driver	GUMER
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-953111
Bid #:	O6UJ9A0009Z1
Date:	11/16/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL T/
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	18.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A013TMV

11/16/2018 3:50:40PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	21
Manif. Date:	11/19/2018
Hauler:	MCNABB PARTNERS
Driver	JOSH
Truck #	M79
Card #	
Job Ref #	

Ticket #:	700-953734
Bid #:	O6UJ9A0009Z1
Date:	11/19/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL T/
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis.	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	22
Manif. Date:	11/19/2018
Hauler:	MCNABB PARTNERS
Driver	GUMER
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-953741
Bid #:	O6UJ9A0009Z1
Date:	11/19/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL T/
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	18.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	23
Manif. Date:	11/19/2018
Hauler:	MCNABB PARTNERS
Driver	JR
Truck #	M82
Card #	
Job Ref #	

Ticket #:	700-953740
Bid #:	O6UJ9A0009Z1
Date:	11/19/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL T/
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A013VAL 11/19/2018 10:31:00

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TAYLOR
AFE #:	
PO #:	
Manifest #:	24
Manif. Date:	11/19/2018
Hauler:	MCNABB PARTNERS
Driver	JOSH
Truck #	M79
Card #	
Job Ref #	

Ticket #:	700-953869
Bid #:	O6UJ9A0009Z1
Date:	11/19/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK CENTRAL
Well #:	TANK BATTERY
Field:	
Field #:	
Rig:	NON-DRILLING
County	

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis.	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TAYLOR
AFE #:	
PO #:	
Manifest #:	25
Manif. Date:	11/19/2018
Hauler:	MCNABB PARTNERS
Driver	GUMER
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-953879
Bid #:	O6UJ9A0009Z1
Date:	11/19/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK CENTRAL
Well #:	TANK BATTERY
Field:	
Field #:	
Rig:	NON-DRILLING
County	

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	18.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TAYLOR
AFE #:	
PO #:	
Manifest #:	26
Manif. Date:	11/19/2018
Hauler:	MCNABB PARTNERS
Driver	JR
Truck #	M82
Card #	
Job Ref #	

Ticket #:	700-953875
Bid #:	O6UJ9A0009Z1
Date:	11/19/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL T/
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TAYLOR
AFE #:	
PO #:	
Manifest #:	27
Manif. Date:	11/20/2018
Hauler:	MCNABB PARTNERS
Driver	JOSH
Truck #	M79
Card #	
Job Ref #	

Ticket #:	700-954264
Bid #:	O6UJ9A0009Z1
Date:	11/20/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL T/
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

_ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer: CONOCOPHILLIPS
Customer #: CRI2190
Ordered by: ~~JUSTIN WRIGHT~~ Joe Tyler
AFE #:
PO #:
Manifest #: 28
Manif. Date: 11/27/2018
Hauler: MCNABB PARTNERS
Driver JOSH
Truck # M79
Card #
Job Ref #

Ticket #: 700-956341
Bid #: O6UJ9A0009Z1
Date: 11/27/2018
Generator: CONOCOPHILLIPS
Generator #:
Well Ser. #: 999908
Well Name: BUCK FEDERAL CENTRAL 1
Well #: .
Field:
Field #:
Rig: NON-DRILLING
County LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	~~JUSTIN WRIGHT~~ Joe Tyler
AFE #:	
PO #:	
Manifest #:	NA
Manif. Date:	11/27/2018
Hauler:	MCNABB PARTNERS
Driver	JR
Truck #	M82
Card #	
Job Ref #	

Ticket #:	700-956351
Bid #:	O6UJ9A0009Z1
Date:	11/27/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL 17
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-956467
Customer #:	CRI2190	Bid #:	O6UJ9A0009Z1
Ordered by:	~~JUSTIN WRIGHT~~ Joe Tyler	Date:	11/27/2018
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	NA	Well Ser. #:	999908
Manif. Date:	11/27/2018	Well Name:	BUCK CENTRAL
Hauler:	MCNABB PARTNERS	Well #:	TANK BATTERY
Driver	JOSH	Field:	
Truck #	M79	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	31
Manif. Date:	11/27/2018
Hauler:	MCNABB PARTNERS
Driver	JR
Truck #	M82
Card #	
Job Ref #	

Ticket #:	700-956487
Bid #:	O6UJ9A0009Z1
Date:	11/27/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK CENTRAL
Well #:	TANK BATTERY
Field:	
Field #:	
Rig:	NON-DRILLING
County	

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer: CONOCOPHILLIPS
Customer #: CRI2190
Ordered by: ~~JUSTIN WRIGHT~~ JOE TYLER
AFE #:
PO #:
Manifest #: 32
Manif. Date: 11/29/2018
Hauler: MCNABB PARTNERS
Driver HOWARD
Truck # M78
Card #
Job Ref #

Ticket #: 700-957186
Bid #: O6UJ9A0009Z1
Date: 11/29/2018
Generator: CONOCOPHILLIPS
Generator #:
Well Ser. #: 999908
Well Name: BUCK FEDERAL CENTRAL 1/
Well #: .
Field:
Field #:
Rig: NON-DRILLING
County LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A0143KM

11/29/2018 10:33

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	33
Manif. Date:	11/29/2018
Hauler:	MCNABB PARTNERS
Driver	HOWARD
Truck #	M78
Card #	
Job Ref #	

Ticket #:	700-957301
Bid #:	O6UJ9A0009Z1
Date:	11/29/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK CENTRAL
Well #:	TANK BATTERY
Field:	
Field #:	
Rig:	NON-DRILLING
County	

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	34
Manif. Date:	11/30/2018
Hauler:	MCNABB PARTNERS
Driver	HOWARD
Truck #	M78
Card #	
Job Ref #	

Ticket #:	700-957569
Bid #:	O6UJ9A0009Z1
Date:	11/30/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL T/
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis.	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A0144EZ 11/30/2018 9:42:51

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	35
Manif. Date:	11/30/2018
Hauler:	MCNABB PARTNERS
Driver	CLEO
Truck #	M~~32~~ M-31
Card #	
Job Ref #	

Ticket #:	700-957571
Bid #:	O6UJ9A0009Z1
Date:	11/30/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL 17
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	18.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TYLER
AFE #:	
PO #:	
Manifest #:	36
Manif. Date:	12/3/2018
Hauler:	MCNABB PARTNERS
Driver	HOWARD
Truck #	M78
Card #	
Job Ref #	

Ticket #:	700-958342
Bid #:	O6UJ9A0009Z1
Date:	12/3/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL TA
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	20.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01462B 12/3/2018 7:23:17 AM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS	Ticket #:	700-958343
Customer #:	CRI2190	Bid #:	O6UJ9A0009Z1
Ordered by:	JOE TYLER	Date:	12/3/2018
AFE #:		Generator:	CONOCOPHILLIPS
PO #:		Generator #:	
Manifest #:	37	Well Ser. #:	999908
Manif. Date:	11/30/2018	Well Name:	BUCK FEDERAL CENTRAL TA
Hauler:	MCNABB PARTNERS	Well #:	.
Driver	CLEO	Field:	
Truck #	M31	Field #:	
Card #		Rig:	NON-DRILLING
Job Ref #		County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	18.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	JOE TAYLOR
AFE #:	
PO #:	
Manifest #:	38
Manif. Date:	12/7/2018
Hauler:	MCNABB PARTNERS
Driver	HOWARD
Truck #	M78
Card #	
Job Ref #	

Ticket #:	700-960105
Bid #:	O6UJ9A0009Z1
Date:	12/7/2018
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	999908
Well Name:	BUCK FEDERAL CENTRAL T/
Well #:	.
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	20.00	yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	50/51	0.00	0.00	0.00	0						

Generator Certification Statement of Waste Status

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature

_____

R360 Representative Signature

_____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

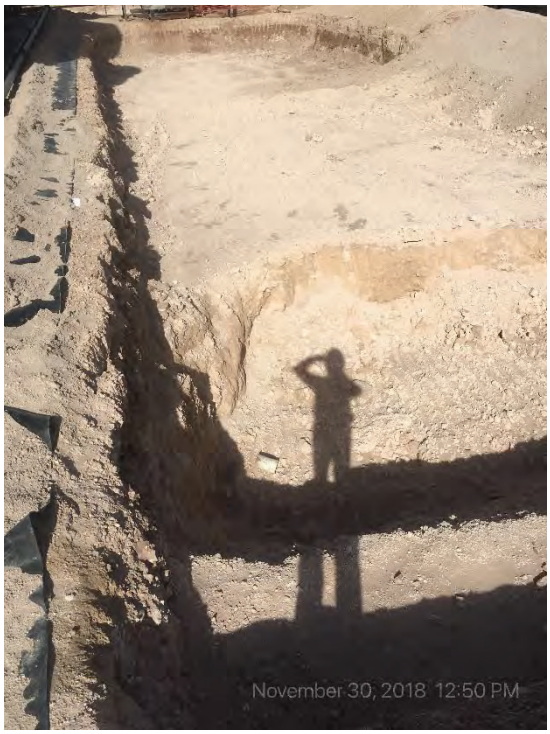
APPENDIX E
Photographic Documentation

TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View north. Assessment activities at southeastern corner of tank battery containment.	1
	SITE NAME	Buck Federal CTB (1RP-4275)	10/19/2017

TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View southeast. Assessment activities at northeastern corner of tank battery containment.	2
	SITE NAME	Buck Federal CTB (1RP-4275)	10/19/2017

TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View east. Lined area in southern portion of the containment.	3
	SITE NAME	Buck Federal CTB (1RP-4275)	11/27/2018

TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View northwest. Excavated area in the northern portion of the containment.	4
	SITE NAME	Buck Federal CTB (1RP-4275)	11/30/2018



TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View north. Excavated area in eastern portion the of containment.	5
	SITE NAME	Buck Federal CTB (1RP-4275)	11/30/2018

TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View northeast. Excavated area at the southeastern corner of the containment.	6
	SITE NAME	Buck Federal CTB (1RP-4275)	11/30/2018

TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View north. Excavated area in western portion of containment.	7
	SITE NAME	Buck Federal CTB (1RP-4275)	12/6/2018

TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View north. Excavated area in western portion of containment.	8
	SITE NAME	Buck Federal CTB (1RP-4275)	12/6/2018

TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View south. Backfilled area in the northwestern portion of the containment.	9
	SITE NAME	Buck Federal CTB (1RP-4275)	12/7/2018

TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View north. Backfilled area in the eastern portion of the containment.	10
	SITE NAME	Buck Federal CTB (1RP-4275)	12/7/2018

TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View north. Backfilled area in western portion of containment.	11
	SITE NAME	Buck Federal CTB (1RP-4275)	12/7/2018

TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View west. Backfilled area in the southern portion of the containment.	12
	SITE NAME	Buck Federal CTB (1RP-4275)	12/7/2018

TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View southeast. Excavated area in northeastern portion of containment.	13
	SITE NAME	Buck Federal CTB (1RP-4275)	1/7/2019

TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View southeast. Backfilled area in northeastern portion of containment.	14
	SITE NAME	Buck Federal CTB (1RP-4275)	1/7/2019

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 60811

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 60811
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	Deferral approved. Incident will remain open until remediation is completed when the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.	10/11/2022
bhall	1RP-4275 closed. Refer to incident #NJXK1613337497 for future correspondence.	10/11/2022