



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 Release
Unit Letter P, Section 17, Township 26 South, Range 32 East
Lea County, New Mexico
1RP-4262
Incident ID nJXK1611836857**

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 April 23, 2016, and released approximately 16 barrels of produced water due to a tank overflow. The release was contained within the earthen berm of the tank battery. Immediate action was to shut down all pumps feeding the tank battery. Vacuum trucks were dispatched to remove the freestanding fluids, recovering approximately 15 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-4262 and the Incident ID nJXK1611836857. The 1RP-4262 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.

Tetra Tech

901 West Wall St., Suite 100, Midland, TX 79701

Tel 432.682.4559 Fax 432.682.3946 www.tetrattech.com

Deferral Request
November 8, 2021

ConocoPhillips

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 the initial 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 the release (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.

The approximate release extent is indicated in Figure 3. The proposed remediation activities were described within the CAP 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-

Deferral Request
November 8, 2021

ConocoPhillips

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.

REMEDATION 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 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

Deferral Request
November 8, 2021

ConocoPhillips

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-4262 release, the January 2020 report requested deferral for two other releases (1RP-4275 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 is located in areas immediately under and around production equipment and 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 1RP-4262 (nJXK1611836857) release until site abandonment. The completed C-141 forms are enclosed in Appendix A.

Deferral Request
November 8, 2021

ConocoPhillips

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.

A handwritten signature in blue ink, appearing to read 'CLlull', is positioned above the printed name of the sender.

Christian M. Llull, P.G.
Program Manager

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

Deferral Request
November 8, 2021

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

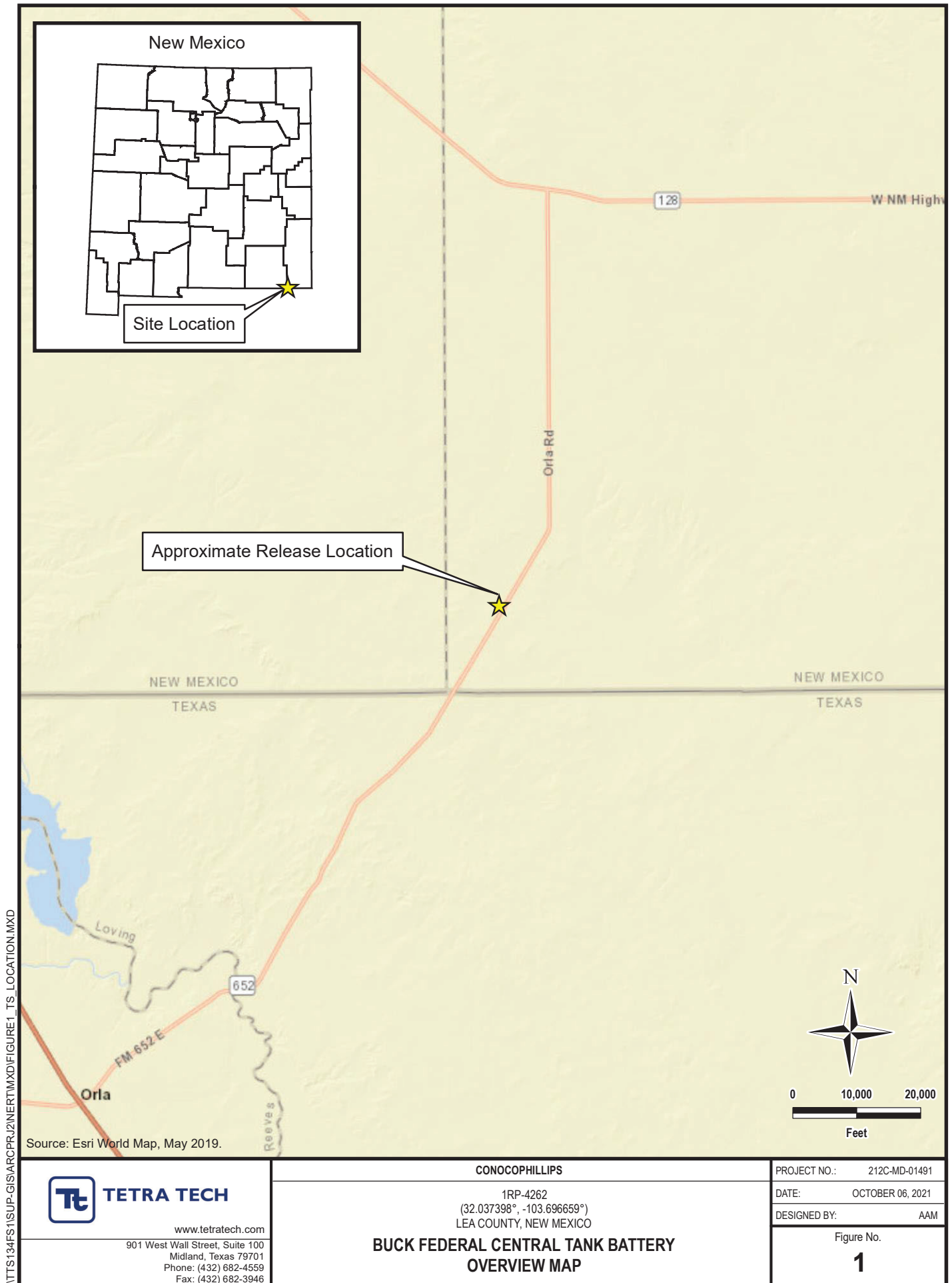
Tables:

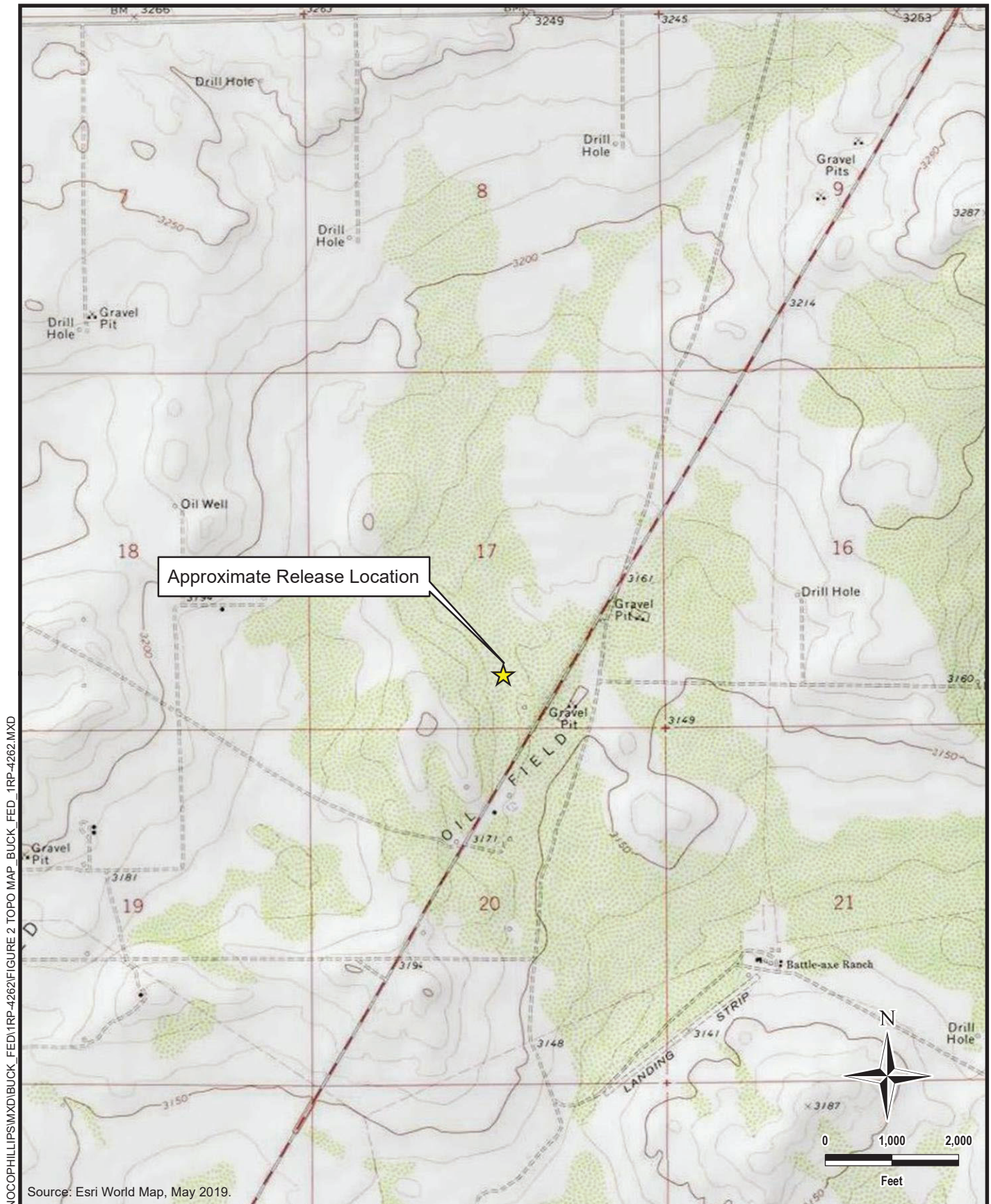
- Table 1 – Summary of Analytical Results – Initial Soil Assessment
- Table 2 – Summary of Analytical Results – Confirmation Soil Sampling
- Table 3 – Summary of Analytical Results – Horizontal Delineation

Appendices:

- Appendix A – C-141 Form
- Appendix B – Site Characterization Data
- Appendix C – Laboratory Analytical Reports
- Appendix D – Waste Manifests
- Appendix E – Photographic Documentation

FIGURES





DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\BUCK_FED\1RP-4262\FIGURE 2 TOPO MAP_BUCK_FED_1RP-4262.MXD


TETRA TECH
www.tetrattech.com

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

CONOCOPHILLIPS

 1RP-4262
 (32.037398°, -103.696659°)
 LEA COUNTY, NEW MEXICO

**BUCK FEDERAL CENTRAL TANK BATTERY
 TOPOGRAPHIC MAP**

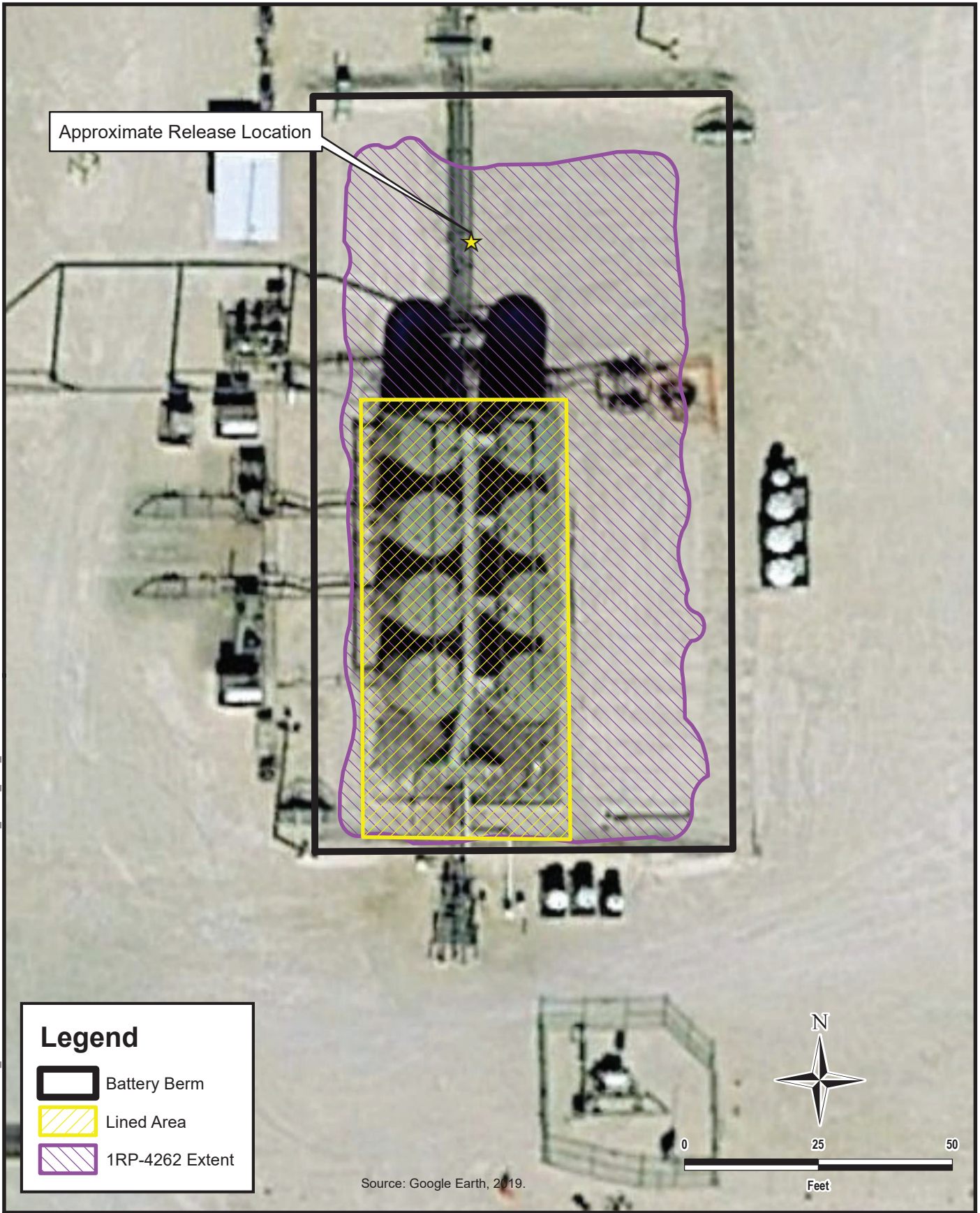
PROJECT NO.: 212C-MD-01491

DATE: OCTOBER 06, 2021

DESIGNED BY: AAM




Figure No.

2



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\BUCK_FED\1RP-4262\FIGURE 3 RELEASE EXTENT_BUCK_FED_1RP-4262.MXD

Legend

-  Battery Berm
-  Lined Area
-  1RP-4262 Extent

Source: Google Earth, 2019.



TETRA TECH

www.tetrattech.com

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

CONOCOPHILLIPS

1RP-4262
(32.037398°, -103.696659°)
LEA COUNTY, NEW MEXICO

**BUCK FEDERAL CENTRAL TANK BATTERY
APPROXIMATE RELEASE EXTENT**

PROJECT NO.: 212C-MD-02589

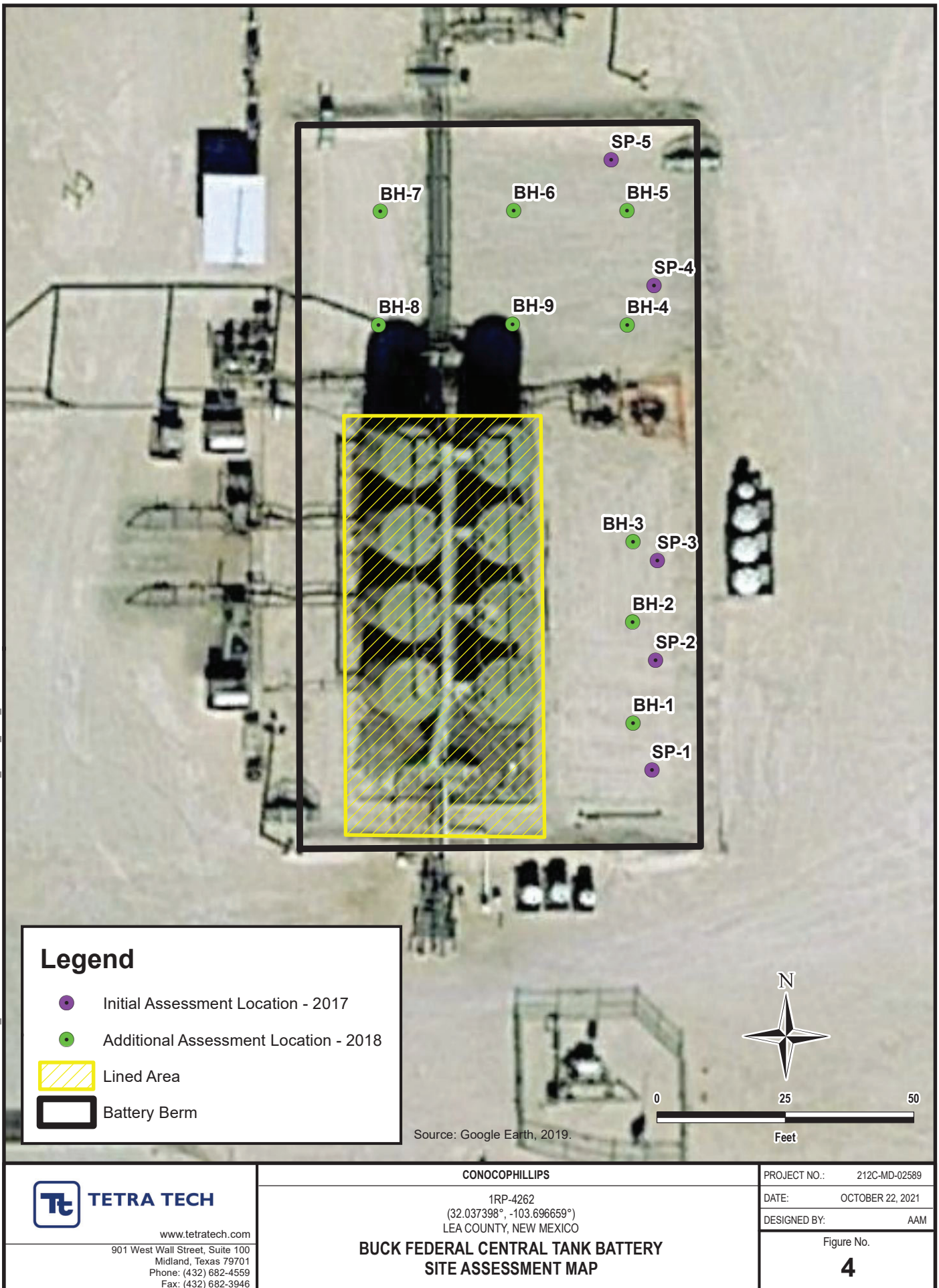
DATE: OCTOBER 05, 2021

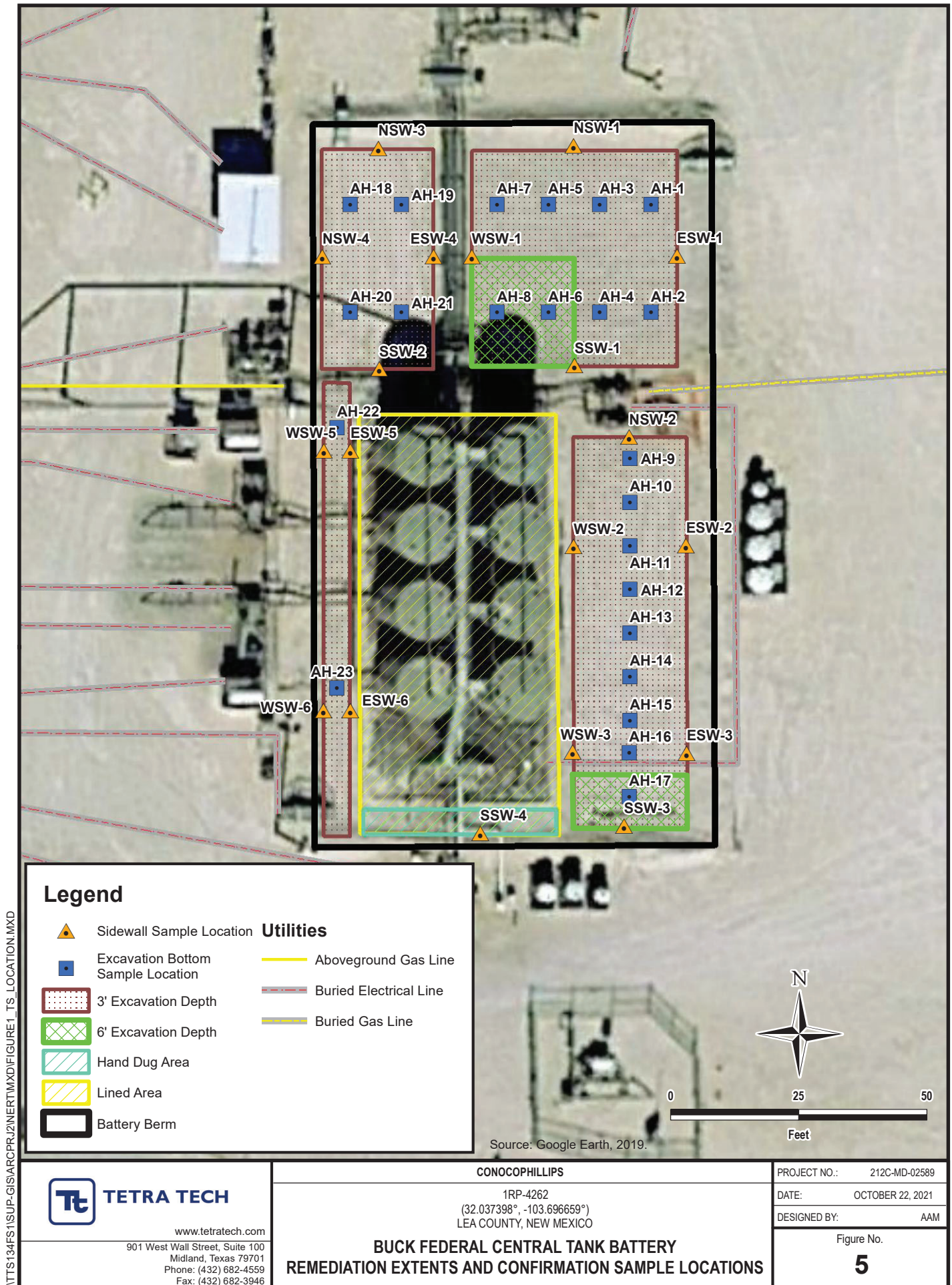
DESIGNED BY: AAM

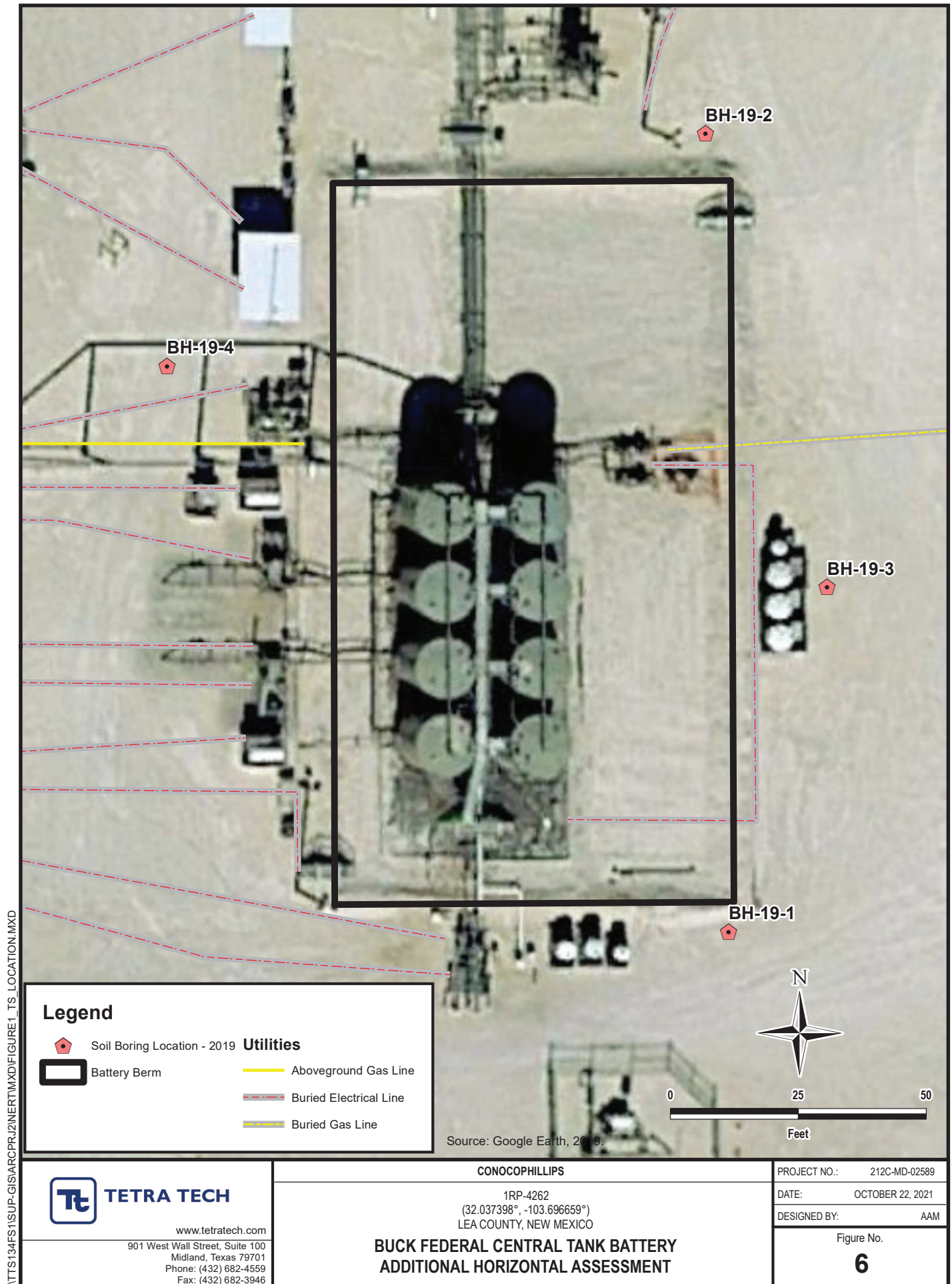
Figure No.

3

DOCUMENT PATH: D:\CONOCOPHILLIPS\Buck_FED\1RP-4262\FIGURE 4 EXCAVATION EXTENT_BUCK_FED_1RP-4262.MXD







TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESSMENT
BUCK FEDERAL CTB
1RP-4262
LEA COUNTY, NM

Sample ID	Sample Date	Sample Interval	FIELD SCREENING		Chloride ¹ mg/kg	BTEX ²				TPH ³					
			PID*	ppm		Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylene mg/kg	Total BTEX mg/kg	C ₆ -C ₁₂ mg/kg	C ₁₃ -C ₂₈ mg/kg	C ₂₉ -C ₃₅ mg/kg	Total TPH (C ₆ -C ₃₅) mg/kg	
		ft. bgs													
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	42.5
BH-2	9/17/2018	3-4	60.2		264	<0.000455	<0.00142	<0.000603	<0.00544	-	0.0567	J	30.1		41.1
	10/4/2018***	0-1	-		717	<0.00047	0.00293	<0.000623	0.00644	J	0.009	2.57	484	137	624
	10/4/2018***	1-2	-		581	<0.000466	0.00452	<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	3.8
	9/17/2018	3-4	20.2		567	<0.000448	<0.00140	<0.000594	<0.00536	-	0.051	J	73.1		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		-	-	-	-	-	-	-	-	-	-	-
BH-4	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	4.6
	10/4/2018***	0-1	-		3,780	<0.000477	0.00865	0.0156	0.199	0.22	116	5,060	1,620		6,796
BH-5	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		0.0404
	10/4/2018***	0-1	68.9		2,660	0.000833	J	0.00294	<0.00062	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	<0.00589	-	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.

Below ground surface

Milligrams per kilogram

Parts per million

Total Petroleum Hydrocarbons

Field screening measurement

Method 300.0

Method 8260B

TCEQ Method 1005

Feet

bgs

mg/kg

ppm

TPH

*

1

2

3

Shaded intervals indicate areas initially proposed for soil blending.

Bold and italicized values indicate exceedance of 100 mg/kg limit for TPH.

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-4262
LEA COUNTY, NM

Type	Sample ID	Sample Date	Sample Interval ft. bgs	PID*	Chloride ¹ mg/kg	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)	
						mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q
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		<0.00440		-		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		1,380		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-4262
LEA COUNTY, NM

Type	Sample ID	Sample Date	Sample Interval ft. bgs	PID*	Chloride ¹ mg/kg	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) 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	
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	BJ	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 ().

Bold and italicized values indicate exceedance of proposed RRAIs.

- 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
- 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).

TABLE 3
SUMMARY OF ANALYTICAL RESULTS
HORIZONTAL DELINEATION
BUCK FEDERAL CTB
1RP-4262
LEA COUNTY, NM

Sample ID	Sample Date	Sample Interval ft bgs	Field Screening Results		Chloride ¹ mg/kg	BTEX ²				TPH ³											
			Chloride	PID		Benzene		Toluene	Ethylbenzene	Xylene	Total BTEX mg/kg	GRO (C ₃ - C ₁₀) ⁴ mg/kg	DRO (C ₁₀ - C ₂₈) mg/kg	ORO (C ₂₈ - C ₄₀) mg/kg	TPH (C ₃ - C ₄₀) mg/kg						
						mg/kg	Q	mg/kg	Q	mg/kg						Q	mg/kg	Q	mg/kg	Q	
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	<0.00108	B	<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	<0.00103	B	<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	<0.00110	B	<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

B The same analyte is found in the associated blank.

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

Bold and italicized values indicate exceedance of RRLs.

1 Method 300.0

2 Method 8260B

3 Method 8015

4 Method 8015D/GRO

APPENDIX A C-141 Forms

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

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

RECEIVED

By JKeyes at 10:18 am, Apr 27, 2016

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: 16 BBLS	Volume Recovered: 15 BBLS
Source of Release: Produced Water tank over flow (see Lat/Long above).	Date and Hour of Occurrence 04/23/2016 04:00 am	Date and Hour of Discovery 04/23/2016 04:40 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jamie Keyes, NMOCD Jim, BLM	
By Whom? Joseph McLaughlin	Date and Hour: 04/25/2016 07:10 am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 16 BBL Produced Water release occurred on the ConocoPhillips Buck Federal CTB located in Lea County, New Mexico: Upon arrival to location MSO noticed fluids inside the containment area. During closer inspection noticed that water was over flowing from the top of the tank. MSO shut down the pumps and contacted vacuum trucks for liquid recovery. Once the pumps were off and the area deemed safe, the water hauler on location recovered the produced water in containment. The leak resulted in approximately 16 BBLS of produced water spilled to containment (with 15 BBLS 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		OIL CONSERVATION DIVISION	
Signature:		Approved by Environmental Specialist: 	
Printed Name: Joseph McLaughlin			
Title: HSE	Approval Date: 04/27/2016	Expiration Date: 06/27/2016	
E-mail Address: Joe.P.McLaughlin@conocophillips.com	Conditions of Approval: Discrete samples only. Delineate and remediate per NMOCD guidelines.		Attached <input type="checkbox"/> IRP 4262
Date: 04/26/2016	Phone: 806-567-2790		

* Attach Additional Sheets If Necessary

nJXK1611836857

pJXK1611837010

Incident ID	nJXK1611836857
District RP	1RP-4262
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?	<u>125</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.

Incident ID	nJXK1611836857
District RP	1RP-4262
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.comTitle: Program Manager, Risk Management & RemediationSignature: Date: 11.8.2021email: Jenni.Fortunato@cop.comTelephone: 832-486-2477**OCD Only**

Received by: _____

Date: _____

Incident ID	nJXK1611836857
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

Signature: 

Date: 11.8.21

email: jenni.fortunato@cop.com

Telephone: 832-486-2477

OCD Only

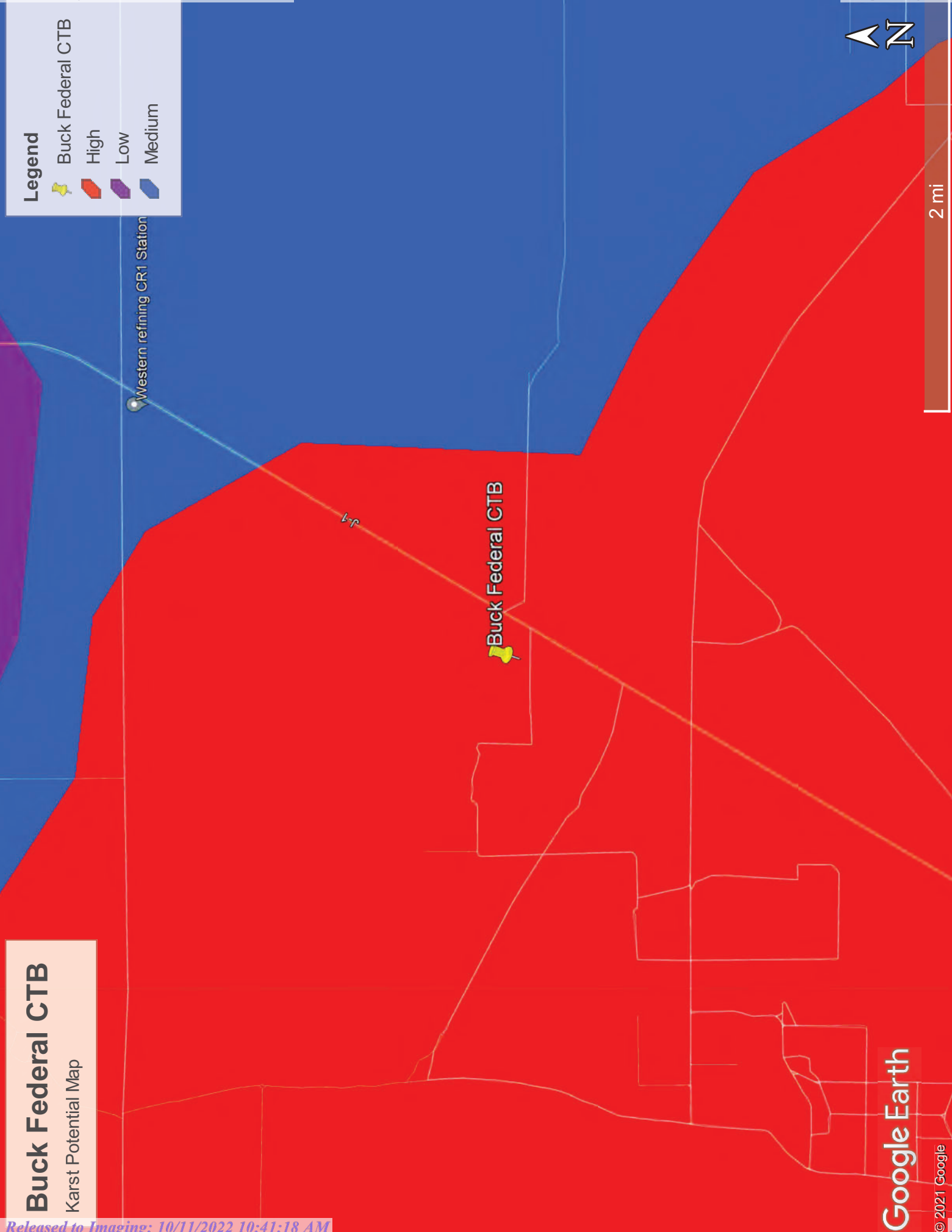
Received by: _____ Date: _____

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

Date: 10/11/2022

APPENDIX B

Site Characterization Data



NMOCD Waterbodies Map



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

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

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-Code	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
C 02323	C	LE		3	2	3	21	26S	32E	624348	3544010*		1848	405	405
C 02271	R CUB	LE			2	3	21	26S	32E	624449	3544111*		1848	150	125
C 03595 POD1	CUB	LE		4	2	3	21	26S	32E	624423	3544045		1874	280	180

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

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

10/5/21 11:07 AM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

APPENDIX C

Laboratory Analytical Reports

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



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
11420 W County Rd 33
Midland TEXAS, 79707

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Project Manager: Von Norman

Fax:

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
11420 W County Rd 33
Midland TEXAS, 79707

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Project Manager: Von Norman

Fax:

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	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the sample received in the laboratory. This analytical report must be reproduced in its entirety with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Page 3 of 15

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

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Project Manager: Von Norman

Fax:

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	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Page 4 of 15

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

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Project Manager: Von Norman

Fax:

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	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the sample received in the laboratory. This analytical report must be reproduced in its entirety with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

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

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Project Manager: Von Norman

Fax:

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	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Page 6 of 15

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

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Project Manager: Von Norman

Fax:

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	

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Page 7 of 15

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

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Project Manager: Von Norman

Fax:

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-BS1)										
					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			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Page 8 of 15

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

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Project Manager: Von Norman

Fax:

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			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Page 9 of 15

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

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Project Manager: Von Norman

Fax:

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-BS1) 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			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Page 10 of 15

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

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Project Manager: Von Norman

Fax:

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			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Page 11 of 15

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

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Project Manager: Von Norman

Fax:

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			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Page 12 of 15

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

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Project Manager: Von Norman

Fax:

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			

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Page 13 of 15

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

Project: Concho Phillips Buck Federal
Project Number: Concho Phillips Buck Federal
Project Manager: Von Norman

Fax:

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

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab. L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

1400 Rankin HWY Midland, TX 79701 432-686-7235

Page 14 of 15



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.

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	5
Sr: Sample Results	6
BH-1 (2-3) L1026990-01	6
BH-1 (3-4) L1026990-02	7
BH-2 (2-3) L1026990-03	8
BH-2 (3-4) L1026990-04	9
BH-3 (3-4) L1026990-05	10
BH-3 (4-5) L1026990-06	11
BH-4 (2-3) L1026990-07	12
Qc: Quality Control Summary	13
Total Solids by Method 2540 G-2011	13
Wet Chemistry by Method 300.0	16
Volatile Organic Compounds (GC) by Method 8015D/GRO	17
Volatile Organic Compounds (GC/MS) by Method 8260B	18
Semi-Volatile Organic Compounds (GC) by Method 8015	21
Gl: Glossary of Terms	22
Al: Accreditations & Locations	23
Sc: Sample Chain of Custody	24



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

			Collected by	Collected date/time	Received date/time
			Clint Merritt	09/17/18 10:40	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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

			Collected by	Collected date/time	Received date/time
			Clint Merritt	09/17/18 10:45	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	Collected date/time	Received date/time
			Clint Merritt	09/17/18 11:30	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	Collected date/time	Received date/time
			Clint Merritt	09/17/18 11:35	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	Collected date/time	Received date/time
			Clint Merritt	09/17/18 12:25	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

¹ Cp² Tc³ Ss⁴ Cn

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

Collected by
Clint Merritt

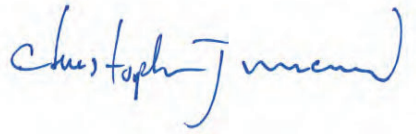
Collected date/time
09/17/18 13:30

Received date/time
09/19/18 08:45

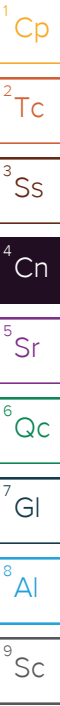
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1169089	1	09/20/18 15:18	09/20/18 15:28	JD
Wet Chemistry by Method 300.0	WG1168638	5	09/20/18 01:07	09/24/18 18:54	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1169146	1	09/20/18 14:50	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

⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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



Chris McCord
Project Manager



Collected date/time: 09/17/18 10:40

L1026990

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

Collected date/time: 09/17/18 10:45

L1026990

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

Collected date/time: 09/17/18 11:30

L1026990

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 09/17/18 11:35

L1026990

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 09/17/18 12:25

L1026990

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 09/17/18 12:30

L1026990

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 09/17/18 13:30

L1026990

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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					
	Original Result	DUP Result	Dilution	DUP RPD	DUP RPD Limits
Analyte	%	%	%	%	%
Total Solids	83.3	87.4	1	4.82	10

Laboratory Control Sample (LCS)

(LCS) R3343796-2 09/20/18 15:28					
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
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					
Original Result		DUP Result	Dilution	DUP RPD	DUP RPD Limits
Analyte	%	%		%	%
Total Solids	92.9	92.8	1	0.102	10

Laboratory Control Sample (LCS)

(LCS) R3344100-2 09/21/18 11:53					
Spike Amount		LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

Received by OCD: 11/8/2021 9:36:04 PM

1C

2T

3S

4C

5S

6Qc

7GI

8AI

9Sc

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) R3344624-3 09/22/18 02:55					
Analyte	MB Result	MB Qualifier	MB MDL	MB RDL	
	mg/kg	mg/kg	mg/kg	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	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%	%	%	%
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	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	RPD Limits
	(dry) mg/kg	(dry) mg/kg	mg/kg	mg/kg	%	%		%	%
TPH (GC/FID) Low Fraction	6.95	0.373	4.81	5.09	63.9	67.9	1	10.0-151	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	MS Rec. %	MSD Result (dry) mg/kg	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD	RPD Limits %
Benzene	0.149	0.312	0.856	45.8	0.745	36.5	8	10.0-149			13.9	37
Toluene	0.149	13.3	13.3	0.000	12.4	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	MS Rec. %	MSD Result (dry) mg/kg	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD	RPD Limits %
Benzene	0.144	ND	0.0733	50.9	0.112	77.7	1	10.0-149		J3	41.7	37
Ethylbenzene	0.144	ND	0.0927	64.3	0.148	102	1	10.0-160		J3	45.8	38
Toluene	0.144	ND	0.0884	61.3	0.134	92.7	1	10.0-156		J3	40.8	38
Xylenes, Total	0.432	ND	0.306	70.7	0.479	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		LCSD Result		LCS Rec.		LCSD Rec.		Rec. Limits		LCS Qualifier		LCSD Qualifier		RPD		RPD Limits	
		mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Ethylbenzene	0.125	0.108	0.108	0.0999	0.0999	86.4	79.9	74.0-126	79.9	74.0-126	79.9	7.72	7.72	7.07	7.07	20	20	20	20
Xylenes, Total	0.375	0.381	0.381	0.355	0.355	102	94.7	72.0-127	94.7	72.0-127	94.7	7.07	7.07	7.07	7.07	20	20	20	20
(S) Toluene-d8						104	104	75.0-131	104	75.0-131	104								
(S) Dibromofluoromethane						110	110	65.0-129	110	65.0-129	110								
(S) a,a,a-Trifluorotoluene						102	103	80.0-120	103	80.0-120	103								
(S) 4-Bromofluorobenzene						86.4	87.6	67.0-138	87.6	67.0-138	87.6								

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	4.00	
C28-C40 Oil Range	U	0.274	4.00	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									
Spike Amount mg/kg		LCSD Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %	
Analyte									
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				

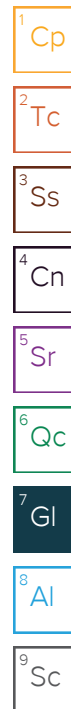
Guide to Reading and Understanding Your Laboratory Report

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	LA000356
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

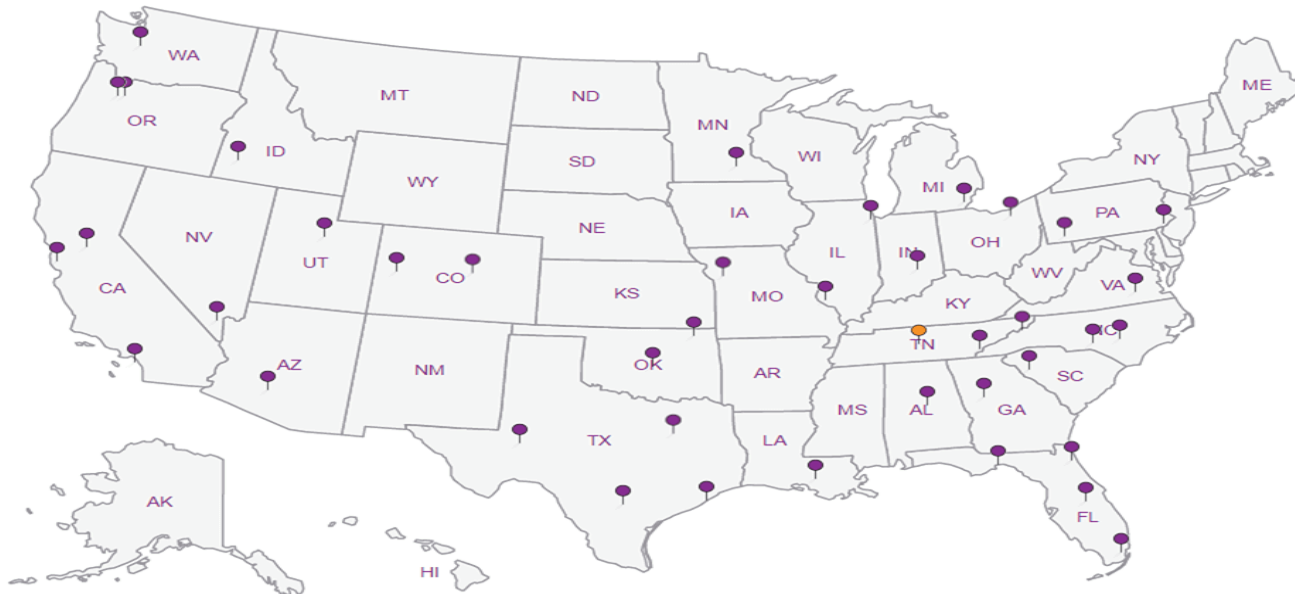
Third Party Federal Accreditations

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.




Chain of Custody				Analysis / Container / Preservative				Pres Chk																																																																																																																																																																																																																																																																																																																																																											
ConocoPhillips - Tetra Tech 4001 N. Big Spring St., Ste. 401 Midland, TX 79705				Accounts Payable 4001 N. Big Spring St., Ste. 401 Midland, TX 79705				ESC 12055 Lebanon Rd. Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-8859 Fax: 615-758-5859																																																																																																																																																																																																																																																																																																																																																											
Report to: <u>Kayla Taylor</u> Project: <u>Buck Fed</u> Description: <u>Buck Fed</u> Phone: <u>432-687-8137</u> Fax: _____				Email To: <u>Kayla Taylor</u> City/State Collected: <u>Len Co NM</u> Lab Project #: _____ P.O. #: _____				L# <u>1020990</u> A179																																																																																																																																																																																																																																																																																																																																																											
Collected by (print): <u>Chad Smith</u> Collected by (signature): <u>[Signature]</u> Immediately Packed on Ice <u>N</u> <u>Y</u> <u>✓</u>				Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day				Accnum: <u>COPTETRA</u> Template: Prelogin: <u>TSR: 526 - Chris McCord</u> PB: Shipped Via: Remarks:																																																																																																																																																																																																																																																																																																																																																											
Sample ID <u>BH-1 (2-3)</u> <u>BH-1 (3-4)</u> <u>(4-5)</u> <u>(5-6)</u> <u>(6-7)</u> <u>(7-8)</u> <u>(8-9)</u> <u>(9-10)</u> <u>BH-2 (2-3)</u> <u>(3-4)</u>				Comp/Grab <u>Grade SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u>				Matrix * <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Depth <u>10:40</u> <u>10:45</u> <u>10:50</u> <u>10:55</u> <u>11:00</u> <u>11:05</u> <u>11:10</u> <u>11:15</u> <u>11:30</u> <u>11:35</u>				No. of Cntrs <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u>				Time <u>10:40</u> <u>10:45</u> <u>10:50</u> <u>10:55</u> <u>11:00</u> <u>11:05</u> <u>11:10</u> <u>11:15</u> <u>11:30</u> <u>11:35</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Quote # <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u> <u>101</u>				Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>				Date Results Needed <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/1</u>			

Chain of Custody		Analysis / Container / Preservative		Billing Information:		Pres Chk	
ConocoPhillips - Tetra Tech 4001 N. Big Spring St., Ste. 401 Midland, TX 79705		Accounts Payable 4001 N. Big Spring St., Ste. 401 Midland, TX 79705		Email To: <u>Kayla Taylor</u> City/State Collected: <u>La Com</u>		Pres Chk	
Report to: <u>Kayla Taylor</u> Project: <u>Buck Fed</u> Phone: <u>432-687-8137</u> Fax:		Client Project # <u>212C-MD-00724</u> Site/Facility ID # <u>Buck Fed</u> P.O. #		Quote #		No. of Cntrs	
Collected by (print): <u>Clinic Moritt</u> Collected by (signature): <u>[Signature]</u> Immediately Packed on Ice <u>N</u> <u>Y</u> <u>✓</u>		Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day		Date Results Needed		Date	
Sample ID		Comp/Grab		Matrix *		Depth	
BH-2(4-5) (5-6) (6-7) (7-8) (8-9) (9-10)		Grab SS		9/17		11:40 11:45 11:50 11:55 12:00 12:05 12:25 12:30 12:35 12:40	
Remarks:		pH _____ Temp _____ Flow _____ Other _____		RAD SCREEN: <0.5 mR/hr		Tracking # <u>4430 3429 2189 / 2190</u> Received by: (Signature) <u>[Signature]</u> Received by: (Signature) <u>[Signature]</u> Received for lab by: (Signature) <u>[Signature]</u>	
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Blossay WW - Waste Water DW - Drinking Water OT - Other		Samples returned via: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier		Date: <u>9/18</u> Time: <u>15:30</u>		Date: <u>9/18</u> Time: <u>15:30</u>	
Relinquished by: (Signature) <u>[Signature]</u>		Relinquished by: (Signature) <u>[Signature]</u>		Relinquished by: (Signature) <u>[Signature]</u>		Relinquished by: (Signature) <u>[Signature]</u>	
Chain of Custody Page 3 of 3 ESC 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-798-5858 Phone: 800-767-5859 Fax: 615-798-5859		L # <u>1026940</u> Table # Account: <u>COPTETRA</u> Template: Prelogin: TSR: <u>526 - Chris McCord</u> PB: Shipped Via: Remarks: Sample # (lab only)		Sample Receipt Checklist COC Seal Present/Intact: <u>Y</u> COC Signed/Accurate: <u>Y</u> Bottles arrive intact: <u>Y</u> Correct bottles used: <u>Y</u> Sufficient volume sent: <u>Y</u> If Applicable VOA Zero Headpace: <u>Y</u> Preservation Correct/Checked: <u>Y</u>		If preservation required by Login: Date/Time Hold: Condition: <u>NCF</u> / <u>OK</u>	

Chain of Custody				Analysis / Container / Preservative				Pres Chk			
ConocoPhillips - Tetra Tech 4001 N. Big Spring St., Ste. 401 Midland, TX 79705 Report to: <u>Kayla Taylor</u> Project Description: <u>Buck Field</u> Phone: <u>432-687-8137</u> Fax: _____ Collected by (print): <u>Chris Hovitt</u> Collected by (signature): <u>[Signature]</u> Immediately Packed on Ice N <u>Y</u> Z _____				Billing Information: Accounts Payable 4001 N. Big Spring St., Ste. 401 Midland, TX 79705 Email To: <u>Kayla Taylor</u> City/State Collected: <u>San Antonio</u> Lab Project # <u>00724</u> P.O. # <u>212C-MD-00724</u> Site/Facility ID # _____ Quote # _____ Rush? (Lab MUST Be Notified) Same Day _____ Five Day _____ Next Day _____ 5 Day (Rad Only) _____ Two Day _____ 10 Day (Rad Only) _____ Three Day _____				No. of Containers <u>1</u> Date Results Needed _____ Date _____ Time _____ Date _____ Time _____ Date _____ Time _____ Date _____ Time _____ Date _____ Time _____ Date _____ Time _____ Date _____ Time _____ Date _____ Time _____			
Sample ID _____ Sample # (lab only) _____ Remarks _____ Shipped Via: _____ L # <u>1020990</u> Table # _____ Actnum: <u>COPTETRA</u> Template: _____ Prelogin: _____ TSR: <u>526 - Chris McCord</u> PB: _____				pH _____ Temp _____ Flow _____ Other _____ Trip Blank Received: Yes <u>(No)</u> HCL / MeOH TBR Temp: <u>23.2</u> °C Bottles Received: <u>31</u> Date: <u>9/19/18</u> Time: <u>0845</u> Received for lab by: (Signature) <u>[Signature]</u> Received by: (Signature) <u>[Signature]</u> Received for lab by: (Signature) <u>[Signature]</u> Received by: (Signature) <u>[Signature]</u>							
Sample Receipt Checklist: COC Seal Present/Intact: <u>Y</u> N COC Signed/Accurate: <u>Y</u> N Bottles arrive intact: <u>Y</u> N Correct bottles used: <u>Y</u> N Sufficient volume sent: <u>Y</u> N If Applicable VOA Zero Headpace: <u>Y</u> N Preservation Correct/Checked: <u>Y</u> N				RAD SCREEN: <u>0.5 mpr/hr</u> Tracking # <u>4430 3429 2189</u> 2190 Received by (Signature) <u>[Signature]</u> Received by (Signature) <u>[Signature]</u> Received for lab by (Signature) <u>[Signature]</u> Received by (Signature) <u>[Signature]</u>							
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - Waste Water DW - Drinking Water OT - Other _____				Samples returned via: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier							
Re Inquired by: (Signature) <u>[Signature]</u> Date: <u>9/18</u> Time: <u>15:30</u> Re Inquired by: (Signature) <u>[Signature]</u> Date: _____ Time: _____ Re Inquired by: (Signature) <u>[Signature]</u> Date: _____ Time: _____				Re Inquired by: (Signature) <u>[Signature]</u> Date: _____ Time: _____ Re Inquired by: (Signature) <u>[Signature]</u> Date: _____ Time: _____							

5

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		Chain of Custody Page <u>4</u> of <u>5</u>  12065 Latham Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Fax: 615-758-5859	
Report to: <u>Kayla Taylor</u> Project: <u>Buck Fed</u> Description: <u>Buck Fed</u> Phone: <u>432-687-8137</u> Fax: _____	Email To: <u>Kayla Taylor</u> City/State: <u>Midland, TX</u> Collected: <u>Lulu Nkh</u> Lab Project #: _____	Pres Chk _____		Analysis / Container / Preservative _____	
Client Project #: <u>212C-MD-00724</u> Site/Facility ID #: <u>Buck Fed</u> Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day _____	P.O. # _____ Quote # _____ Date Results Needed _____ No. of Cnts <u>6</u>	Date _____ Time _____		Date _____ Time _____	
Sample ID <u>SBH-4 (5-6)</u> <u>(6-7)</u> <u>(7-8)</u> <u>(8-9)</u> <u>(9-10)</u> <u>(10-11)</u> <u>(11-12)</u> <u>(12-13)</u> <u>(13-14)</u> <u>(14-15)</u>	Comp/Grab <u>Grab</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u>	Matrix * <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u>	Depth <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u>	Date <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u> <u>9/17</u>	Time <u>13:45</u> <u>13:50</u> <u>13:55</u> <u>14:00</u> <u>14:05</u> <u>14:10</u> <u>14:15</u> <u>14:20</u> <u>14:25</u> <u>14:30</u>
Remarks: * Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - Waste Water DW - Drinking Water OT - Other _____		Samples returned via: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier		Tracking # <u>4430 3429 2189 2190</u> Received by: (Signature) <u>[Signature]</u> Received by: (Signature) <u>[Signature]</u> Received for lab by: (Signature) <u>[Signature]</u>	
Relinquished by: (Signature) <u>[Signature]</u> Relinquished by: (Signature) <u>[Signature]</u> Relinquished by: (Signature) <u>[Signature]</u>		Date: <u>9/18</u> Date: <u>9/18</u> Date: <u>9/18</u>		Time: <u>15:30</u> Time: <u>15:30</u> Time: <u>15:30</u>	
pH _____ Temp _____ Flow _____ Other _____		Trip Blank Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> HCL / MeOH TBR		Temp: <u>23.5</u> °C Bottles Received: <u>39</u> Date: <u>9/19/18</u> Time: <u>0845</u>	
Sample Receipt Check: <input checked="" type="checkbox"/> CQC Seal Present/Intact: <input checked="" type="checkbox"/> CQC Signed/Accurate: <input checked="" type="checkbox"/> Bottles arrive intact: <input checked="" type="checkbox"/> Correct bottles used: <input checked="" type="checkbox"/> Sufficient volume sent: <input checked="" type="checkbox"/> If Applicable: VOA zero Headspace: <input checked="" type="checkbox"/> Preservation Correct/Checked: <input checked="" type="checkbox"/>		If preservation required by Login: Date/Time: _____ Hold: _____ Condition: <u>NCP / OK</u>		Sample # (lab only) _____	

Released to Imaging: 10/11/2022 10:41:18 AM

Kathryn L. Cason



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 / Courier)
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.

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.



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.

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	6
Sr: Sample Results	7
BH-1(0-1) L1033537-01	7
BH-1(1-2) L1033537-02	8
BH-2(0-1) L1033537-03	9
BH-2(1-2) L1033537-04	10
BH-3(0-1) L1033537-05	11
BH-3(1-2) L1033537-06	12
BH-4(0-1) L1033537-07	13
BH-4(1-2) L1033537-08	14
BH-5(0-1) L1033537-09	15
BH-6(0-1) L1033537-10	16
BH-6(1-2) L1033537-11	17
BH-7(0-1) L1033537-12	18
BH-8(0-1) L1033537-13	19
BH-9(0-1) L1033537-14	20
BH-9(1-2) L1033537-15	21
Qc: Quality Control Summary	22
Total Solids by Method 2540 G-2011	22
Wet Chemistry by Method 300.0	24
Volatile Organic Compounds (GC) by Method 8015D/GRO	25
Volatile Organic Compounds (GC/MS) by Method 8260B	27
Semi-Volatile Organic Compounds (GC) by Method 8015	30
Gl: Glossary of Terms	32
Al: Accreditations & Locations	33
Sc: Sample Chain of Custody	34



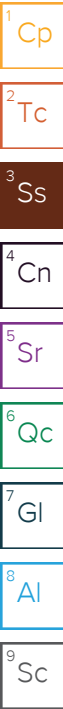
BH-1(0-1) L1033537-01 Solid

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

¹ Cp² Tc³ Ss⁴ Cn

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

⁵ Sr⁶ Qc⁷ Gl⁸ Al

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

⁹ Sc

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

¹ Cp² Tc³ Ss⁴ Cn

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

⁵ Sr⁶ Qc⁷ Gl⁸ Al

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

⁹ Sc

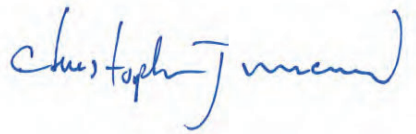
BH-9(0-1) L1033537-14 Solid

			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

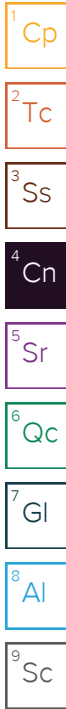
BH-9(1-2) L1033537-15 Solid

			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



Collected date/time: 10/04/18 10:00

L1033537

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

Collected date/time: 10/04/18 10:05

L1033537

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

Collected date/time: 10/04/18 10:10

L1033537

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

Collected date/time: 10/04/18 10:15

L1033537

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/04/18 10:20

L1033537

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/04/18 10:25

L1033537

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/04/18 10:30

L1033537

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/04/18 10:35

L1033537

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/04/18 11:00

L1033537

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/04/18 11:20

L1033537

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

Collected date/time: 10/04/18 11:25

L1033537

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/04/18 11:35

L1033537

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/04/18 11:50

L1033537

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/04/18 12:05

L1033537

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/04/18 12:10

L1033537

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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	

Received by OCD: 11/8/2021 9:36:04 PM

1

2

3

4

5

6

7

8

9

C

T

S

C

S

Qc

GI

AI

Sc

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									
Spike Amount mg/kg		LCSD Result mg/kg	LCS Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD Limits %
Analyte									
TPH (GC/FID) Low Fraction		5.50	6.37	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									
Spike Amount (dry) mg/kg		MS Result mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	RPD Limits %
Analyte									
TPH (GC/FID) Low Fraction		6.73	332	392	38.4	25	10.0-151	E	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	0.0217	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
	5.50		6.06	6.05	110	110	72.0-127	%	%
TPH (GC/FID) Low Fraction									
(S) a,a,a-Trifluorotoluene(FID)	105				105	105	77.0-120	0.0541	20

1 C

2 T

3 S

4 C

5 S

6 Qc

7 GI

8 AI

9 Sc

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 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	4.00
C28-C40 Oil Range	U	0.274	4.00	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				

1C

2T

3S

4C

5S

6Qc

7GI

8AI

9Sc

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	4.00	
C28-C40 Oil Range	U	0.274	4.00	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									
Spike Amount mg/kg		LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %
Analyte									
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			

1C

2T

3S

4C

5S

6Qc

7GI

8AI

9Sc

Guide to Reading and Understanding Your Laboratory Report

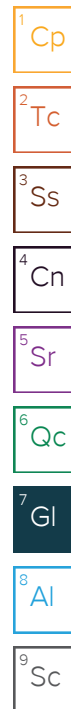
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.



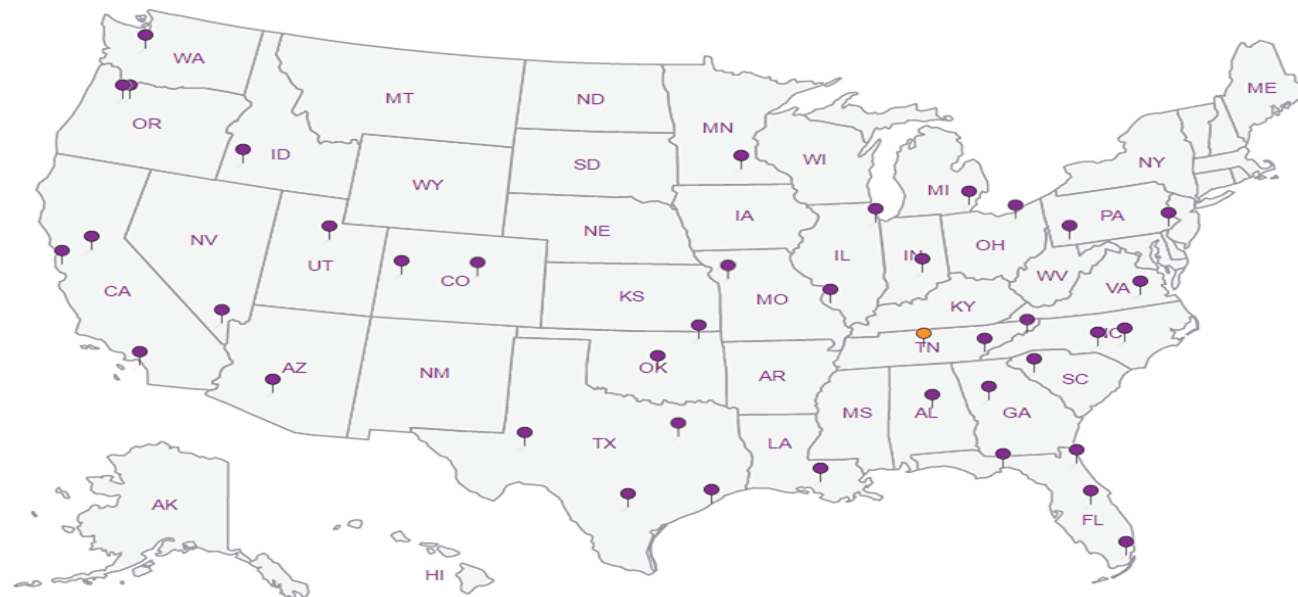
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

Alabama	40660	Nebraska	NE-05-15-05
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	LA000356
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

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		

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.



Released to Imaging: 10/11/2022 10:41:18 AM

Chain of Custody		Analysis / Container / Preservative		Pres Chk	
ConocoPhillips - Tetra Tech 4001 N. Big Spring St., Ste. 401 Midland, TX 79705 Report to: <u>Kyle Taylor</u>		Billing Information: Accounts Payable 4001 N. Big Spring St., Ste. 401 Midland, TX 79705 Email To: _____		ESC a subsidiary of	
Project Description: Phone: 432-687-8137 Fax: _____ Collected by (print): _____ Collected by (signature): _____ Immediately Packed on Ice N <u>Y</u>		City/State Collected: Lab Project # _____ P.O. # _____ Quote # _____ Date Results Needed Same Day <u>Five Day</u> Next Day <u>5 Day (Rad Only)</u> Two Day <u>10 Day (Rad Only)</u> Three Day		L# <u>L1033537</u> Table # _____ Actnum: COPETRA Template: Prelogin: TSR: 526 - Chris McCord PB: _____ Shipped Via: _____	
Sample ID <u>BH-6(1-2)</u> <u>BH-7(0-1)</u> <u>BH-8(0-1)</u> <u>BH-9(0-1)</u>		Comp/Grab <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u>		Depth <u>10/4</u> <u>11:35</u> <u>11:50</u> <u>12:05</u> <u>12:10</u>	
Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Blossay WW - Waste Water DW - Drinking Water OT - Other		Matrix * <u>SS</u> <u>SS</u> <u>SS</u> <u>SS</u>		No. of Cntrs <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u>	
Date <u>10/5</u> <u>15:20</u>		Date <u>10/5</u> <u>15:20</u>		Date <u>10/5</u> <u>15:20</u>	
Relinquished by: (Signature) <u>[Signature]</u>		Relinquished by: (Signature) <u>[Signature]</u>		Relinquished by: (Signature) <u>[Signature]</u>	
Samples returned via: UPS FedEx Courier		Tracking # <u>10/5</u> <u>15:20</u>		Received by: (Signature) <u>[Signature]</u> Received by: (Signature) <u>[Signature]</u> Received for lab by: (Signature) <u>[Signature]</u>	
Remarks: * Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Blossay WW - Waste Water DW - Drinking Water OT - Other		pH _____ Temp _____ Flow _____ Other _____ RAU ~ 1 TBR ~ 17/hr		Sample Receipt Checklist: COC Seal Present/Intact: <u>Y</u> COC Signed/Accurate: <u>Y</u> Bottles arrive intact: <u>Y</u> Correct bottles used: <u>Y</u> Sufficient volume sent: <u>Y</u> VOA Zero Headspace: <u>Y</u> Preservation Correct/Checked: <u>Y</u>	
If preservation required by Login: Date/Time Hold: _____ Condition: <u>NCF / OK</u>		If preservation required by Login: Date/Time Hold: _____ Condition: <u>NCF / OK</u>		If preservation required by Login: Date/Time Hold: _____ Condition: <u>NCF / OK</u>	

Katie Ingram



Login #: L1033537	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 / Courier)
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

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.



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.

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	6
Sr: Sample Results	7
AH-1 (3') L1045249-01	7
AH-2 (3') L1045249-02	8
AH-3 (3') L1045249-03	9
AH-4 (3') L1045249-04	10
AH-5 (3') L1045249-05	11
AH-6 (3') L1045249-06	12
AH-7 (3') L1045249-07	13
AH-8 (3') L1045249-08	14
NSW-1 L1045249-09	15
SSW-1 L1045249-10	16
ESW-1 L1045249-11	17
WSW-1 L1045249-12	18
Qc: Quality Control Summary	19
Total Solids by Method 2540 G-2011	19
Wet Chemistry by Method 300.0	21
Volatile Organic Compounds (GC) by Method 8015D/GRO	23
Volatile Organic Compounds (GC/MS) by Method 8260B	25
Semi-Volatile Organic Compounds (GC) by Method 8015	26
Gl: Glossary of Terms	29
Al: Accreditations & Locations	30
Sc: Sample Chain of Custody	31

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

AH-1 (3') L1045249-01 Solid

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

AH-2 (3') L1045249-02 Solid

			Collected by	Collected date/time	Received date/time
			Devin Dominguez	11/14/18 09:40	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	Collected date/time	Received date/time
			Devin Dominguez	11/14/18 09:46	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	Collected date/time	Received date/time
			Devin Dominguez	11/14/18 09:58	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	Collected date/time	Received date/time
			Devin Dominguez	11/14/18 10:00	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	Collected date/time	Received date/time
			Devin Dominguez	11/14/18 10:15	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

1 Cp

2 Tc

3 Ss

4 Cn

AH-7 (3') L1045249-07 Solid

			Collected by	Collected date/time	Received date/time
			Devin Dominguez	11/14/18 10:35	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

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

AH-8 (3') L1045249-08 Solid

			Collected by	Collected date/time	Received date/time
			Devin Dominguez	11/14/18 10:50	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	Collected date/time	Received date/time
			Devin Dominguez	11/14/18 11:05	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	Collected date/time	Received date/time
			Devin Dominguez	11/14/18 11:20	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

ESW-1 L1045249-11 Solid

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

1Cp

2Tc

3Ss

4Cn

WSW-1 L1045249-12 Solid

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

5Sr

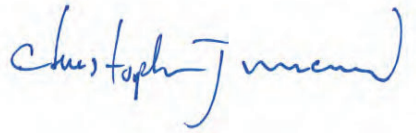
6Qc

7Gl

8Al

9Sc

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

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

Collected date/time: 11/14/18 09:30

L1045249

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

Collected date/time: 11/14/18 09:40

L1045249

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/14/18 09:46

L1045249

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

Collected date/time: 11/14/18 09:58

L1045249

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

Collected date/time: 11/14/18 10:00

L1045249

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/14/18 10:15

L1045249

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/14/18 10:35

L1045249

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

Collected date/time: 11/14/18 10:50

L1045249

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/14/18 11:05

L1045249

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/14/18 11:20

L1045249

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/14/18 11:25

L1045249

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/14/18 12:00

L1045249

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 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

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL 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

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
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

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

Laboratory Control Sample (LCS)

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

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
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

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
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	<u>MB Qualifier</u>	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 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 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 %	<u>LCS Qualifier</u>
Chloride	200	199	99.3	90.0-110	

Received by OCD: 11/8/2021 9:36:04 PM

1 C

2 T

3 S

4 C

5 S

6 Qc

7 GI

8 AI

9 Sc



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 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	106	77.0-120			

Method Blank (MB)

(MB) R3362956-3 11/26/18 12:08					
Analyte	MB Result	MB Qualifier	MB MDL	MB RDL	
	mg/kg	mg/kg	mg/kg	mg/kg	
TPH (GC/FID) Low Fraction	U	0.0217		0.100	
(S) 2,2,4-Trimethylpentane(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	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.
	mg/kg	mg/kg	mg/kg	%	%
TPH (GC/FID) Low Fraction	5.50	6.10	5.99	111	109
(S) 2,2,4-Trimethylpentane(FID)				72.0-127	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									
Spike Amount mg/kg		LCSD Result mg/kg		LCS Rec. %		Rec. Limits %			
50.0		50.8		106		50.0-150			
(S) o-Terphenyl				117		113			

Analyte	LCS Amount mg/kg	LCS Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	53.1	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									
Spike Amount (dry) mg/kg		Original Result (dry) mg/kg		MS Result (dry) mg/kg		MSD Result (dry) mg/kg			
54.9		758		783		835			
C10-C28 Diesel Range									
(S) o-Terphenyl									

Analyte	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	2	50.0-150	E.V	E	6.43	20
(S) o-Terphenyl		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	<u>MB Qualifier</u>	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U	1.61	4.00	4.00
C28-C40 Oil Range	U	0.274	4.00	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 %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	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				

1C

2T

3S

4C

5S

6Qc

7GI

8AI

9Sc

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 Limits %
Extractable Petroleum Hydrocarbon	50.0	33.6	35.9	67.2	71.8	50.0-150			20
C10-C28 Diesel Range	50.0	36.2	38.5	72.4	77.0	50.0-150			20
(S) o-Terphenyl				81.4	80.5	18.0-148			

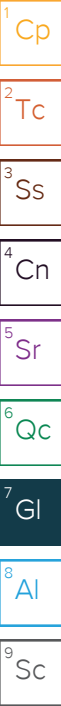
Guide to Reading and Understanding Your Laboratory Report

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	LA000356
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

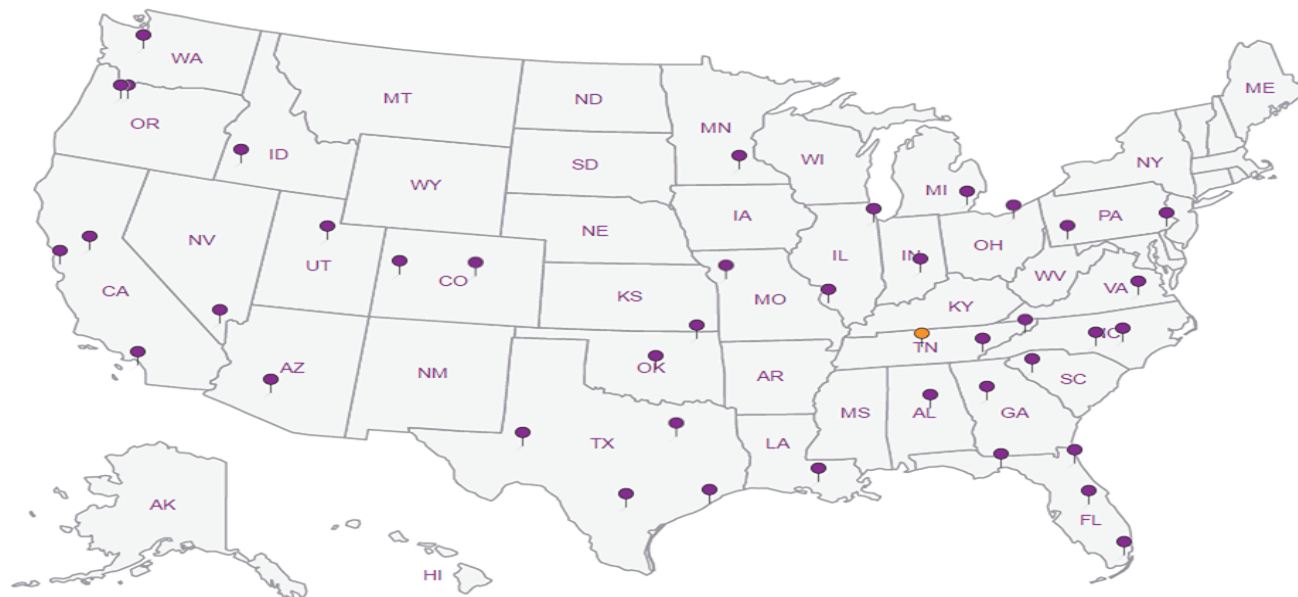
Third Party Federal Accreditations

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.



Page 1 of 1



100 West Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3945

Site Manager:

Kavla Taylor

Buck Fed CTR

Project #:

Accounts Payable

Does Affect All

Sample Signature:

Devin Dominguez

COP TETRA

SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)
		WATER	SOIL	HCL	HNO ₃	ICE	None		
YEAR: 2018	DATE	TIME							
	11/14/2018	930	X	X		X		1	N
	11/14/2018	940	X	X		X		1	N
	11/14/2018	946	X	X		X		1	N
	11/14/2018	958	X	X		X		1	N
	11/14/2018	1000	X	X		X		1	N
	11/14/2018	1015	X	X		X		2	N
	11/14/2018	1035	X	X		X		8	N
	11/14/2018	1050	X	X		X		1	N
	11/14/2018	1105	X	X		X		6	N

Date: _____ Time: _____

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

81/01/11 0551

8/29

For more information, contact the publisher at 1-800-354-9700 or visit our website at www.mhprofessional.com.

Date: _____ Time: _____

Date: _____ Time: _____

100

11/19

2014

ORIGINAL COPY

$$T-C = 12 = 4n$$
 $0.3 \text{ to } 1 = 0.4 \alpha_{\lambda}$ RAD SCREEN: $<0.5 \text{ mR/hr}$

Released to Imaging: 10/11/2022 10:41:18 AM

Tetra Tech, Inc.

900 West Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3546

ANALYSIS REQUEST

(Circle or Specify Method No.)

[illegible]

LAB USE ONLY

REMARKS: ☒ STANDARD *45 Day TAT*

☐ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized


☐ Special Report Limits or TRRP Report

Relinquished by: <i>Kayla Sawyer</i>	Date: <i>11/15</i>	Time: <i>1330</i>	Received by: <i>[Signature]</i>	Date: <i>11/15/18</i>	Time: <i>0:30</i>
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by: <i>[Signature]</i>	Date: <i>11/16/18</i>	Time: <i>730</i>

ORIGINAL COPY

 $0.3 + 0.1 = 0.4 \text{ g}$

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form			
Client:	CORTEPA	SDG#	L1045249
Cooler Received/Opened On: 11/16/18		Temperature:	0-4
Received By: Patrick Nshizirungu			
Signature:			
Receipt Check List			
COC Seal Present / Intact?	NP	Yes	No
COC Signed / Accurate?	/	/	
Bottles arrive intact?		/	
Correct bottles used?		/	
Sufficient volume sent?		/	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			



ANALYTICAL REPORT

November 30, 2018

ConocoPhillips - Tetra Tech

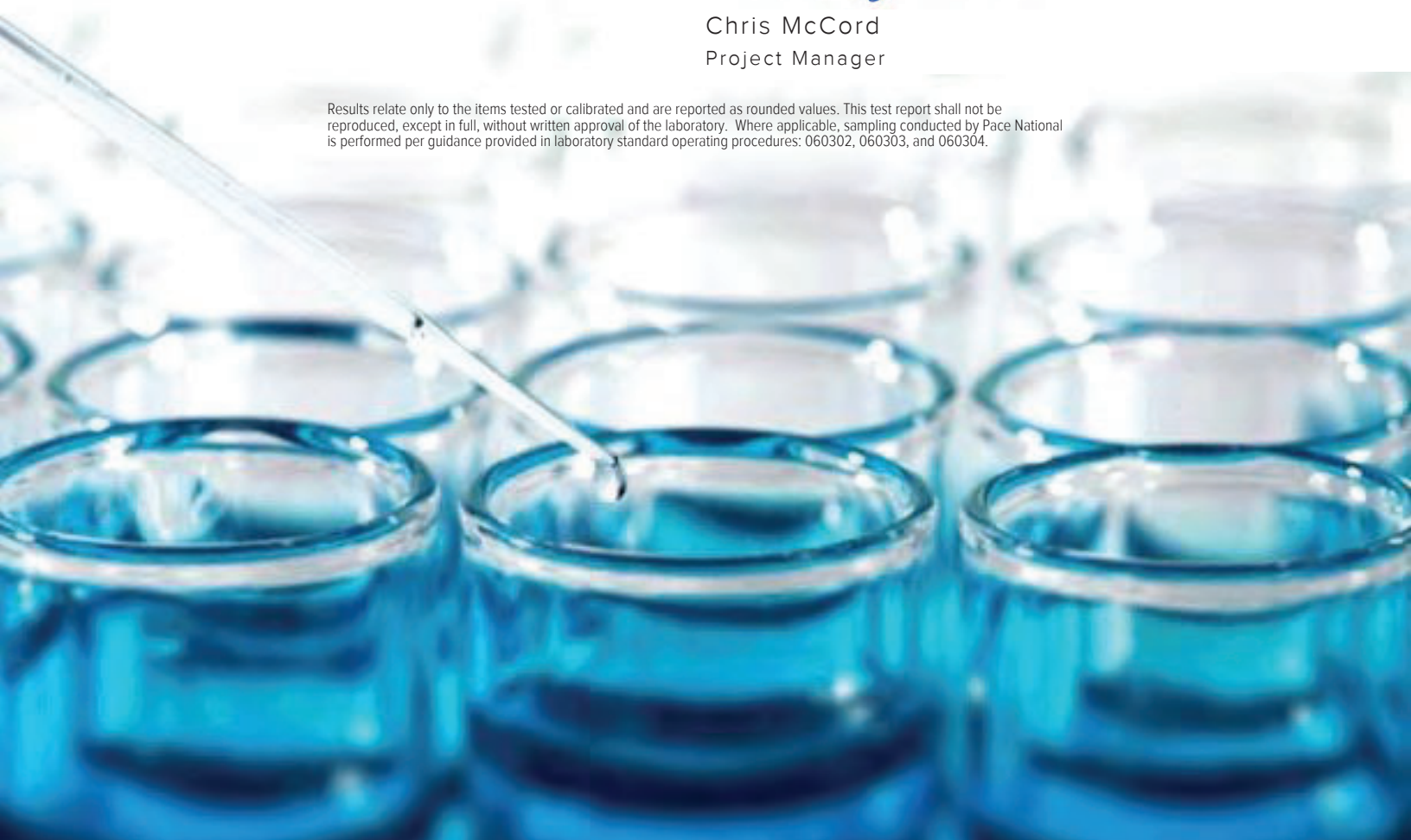
Sample Delivery Group: L1046071
Samples Received: 11/20/2018
Project Number: 212C-MD-01491
Description: Buck Fed CTB

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.



Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	7
Sr: Sample Results	8
AH-9 L1046071-01	8
AH-10 L1046071-02	9
AH-11 L1046071-03	10
AH-12 L1046071-04	11
AH-13 L1046071-05	12
AH-14 L1046071-06	13
AH-15 L1046071-07	14
AH-16 L1046071-08	15
AH-17 L1046071-09	16
NSW-2 L1046071-10	17
SSW-2 L1046071-11	18
ESW-2 L1046071-12	19
ESW-3 L1046071-13	20
WSW-2 L1046071-14	21
WSW-3 L1046071-15	22
AH-17 L1046071-16	23
WSW-4 L1046071-17	24
ESW-4 L1046071-18	25
Qc: Quality Control Summary	26
Total Solids by Method 2540 G-2011	26
Wet Chemistry by Method 300.0	29
Volatile Organic Compounds (GC) by Method 8015D/GRO	31
Volatile Organic Compounds (GC/MS) by Method 8260B	32
Semi-Volatile Organic Compounds (GC) by Method 8015	34
Gl: Glossary of Terms	36
Al: Accreditations & Locations	37
Sc: Sample Chain of Custody	38

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

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	

1 Cp

2 Tc

3 Ss

4 Cn

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	

5 Sr

6 Qc

7 Gl

8 Al

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	

9 Sc

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

1 Cp

2 Tc

3 Ss

4 Cn

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

5 Sr

6 Qc

7 Gl

8 Al

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

9 Sc

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	

1 Cp

2 Tc

3 Ss

4 Cn

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	

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

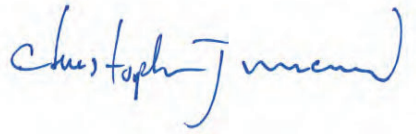
WSW-4 L1046071-17 Solid

			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

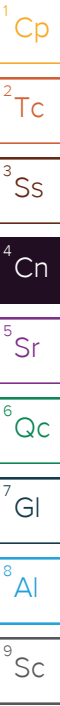
ESW-4 L1046071-18 Solid

			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



Collected date/time: 11/15/18 10:05

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/15/18 10:10

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/15/18 10:20

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/15/18 10:30

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/15/18 10:51

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/15/18 11:05

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/15/18 11:32

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/15/18 11:50

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/15/18 12:00

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.3		1	11/26/2018 14:06	WG1201431

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/15/18 10:00

L1046071

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

Collected date/time: 11/15/18 10:30

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/16/18 11:15

L1046071

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

Collected date/time: 11/16/18 12:00

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/16/18 13:00

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/16/18 13:30

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/16/18 13:55

L1046071

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

Collected date/time: 11/16/18 15:05

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/16/18 15:40

L1046071

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 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	

1 C
2 T
3 S
4 C
5 S
6 Qc
7 GI
8 AI
9 Sc

Method Blank (MB)

(MB) R3363173-1 11/26/18 13:52					
Analyte	MB Result	<u>MB Qualifier</u>	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					
	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>
Analyte	%	%		%	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					
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
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	<u>MB Qualifier</u>	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 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 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 %	<u>LCS Qualifier</u>
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 %	RPD Limits %
Chloride	574	377	996	1050	108	118	1	80.0-120	20

Method Blank (MB)

(MB) R3363485-1 11/27/18 17:15

Analyte	MB Result mg/kg	<u>MB Qualifier</u> mg/kg	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 %	<u>DUP Qualifier</u> %	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 %	<u>DUP Qualifier</u> %	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 %	<u>LCS Qualifier</u> %
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 %	<u>MS Qualifier</u> %	<u>MSD Qualifier</u> %	RPD %	RPD Limits %
Chloride	610	4320	5170	5020	139	115	1	80.0-120	<u>E.V</u>	<u>E</u>	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	0.0217	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									
Spike Amount mg/kg		LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD Limits %
Analyte									
TPH (GC/FID) Low Fraction		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									
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 %	RPD Limits %
Analyte									
TPH (GC/FID) Low Fraction		439	829	799	64.2	59.1	100	10.0-151	28
(S) a,a,a-Trifluorotoluene(FID)					102	101		77.0-120	

WG12000088

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

QUALITY CONTROL SUMMARY

L1046071-01.02.03.04

ONE LAB. NATIONWIDE.

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,-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,-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	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,-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	MS Rec. %	MSD Result (dry) mg/kg	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD Limits %
Benzene	0.139	U	0.0481	34.7	0.113	81.5	1	10.0-149		J3 80.5	37
Ethylbenzene	0.139	U	0.0714	51.5	0.168	121	1	10.0-160		J3 80.6	38
Toluene	0.139	U	0.0584	42.1	0.139	99.9	1	10.0-156		J3 81.4	38
Xylenes, Total	0.416	U	0.226	54.3	0.496	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	4.00
C28-C40 Oil Range	U	0.274	4.00	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. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Extractable Petroleum Hydrocarbon	50.0	31.8	36.0	63.6	50.0-150			12.4	20
C10-C28 Diesel Range	50.0	37.0	40.9	74.0	50.0-150			10.0	20
(S) o-Terphenyl				87.4	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 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	50.0	29.2	31.5	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	4.00	
C28-C40 Oil Range	U	0.274	4.00	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									
Spike Amount mg/kg		LCSD Result mg/kg	LCS Result mg/kg	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Analyte									
C10-C28 Diesel Range		50.0	38.0	76.0	50.0-150			7.11	20
(S) o-Terphenyl				85.9	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											
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 Limits %
Analyte											
C10-C28 Diesel Range		55.0	13000	12300	13100	0.000	200	50.0-150	E V	E V	20
(S) o-Terphenyl						0.000	0.000	18.0-148	J2	J2	

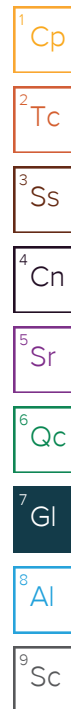
Guide to Reading and Understanding Your Laboratory Report

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.



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	LA000356
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

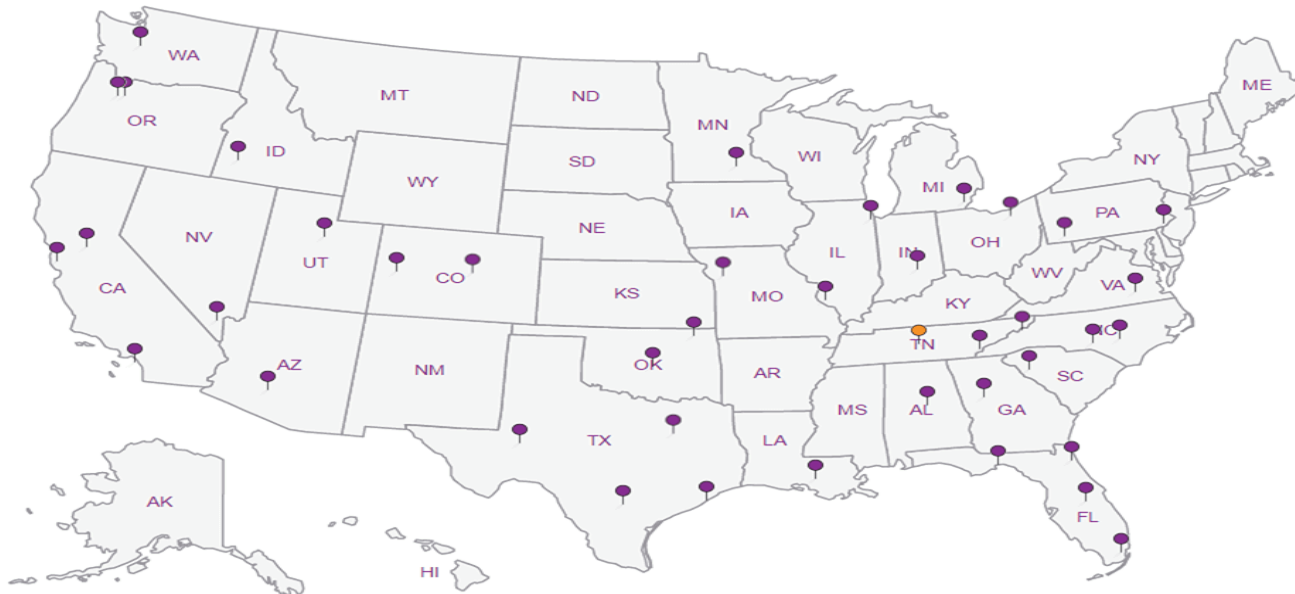
Third Party Federal Accreditations

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

900 West Wall Street, Site 100
Midland, Texas 79701
Tel (432) 682-4659
Fax (432) 682-3046

Tetra Tech, Inc.

Page 2 of 2

Client Name: Conoco Phillips
Site Manager: Kayla Taylor

Project Name: Buck Fed
Project #: 212C-MD-01491

Project Location: Lea County, New Mexico
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		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)
	DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE	None				
11	11/16/18	1030		X			X				1	N
12	11/16/18	1115		X			X				1	N
13	11/16/18	1200		X			X				1	N
14	11/16/18	1300		X			X				1	N
15	11/16/18	1330		X			X				1	N
16	11/16/18	1355		X			X				1	N
17	11/16/18	1505		X			X				1	N
18	11/16/18	1540		X			X				1	N
15W												

Relinquished by: *Mgs* **Date:** 11-19-18 **Time:** 0900

Relinquished by: *Kayla Taylor* **Date:** 11-19-18 **Time:** 1500

Relinquished by: *PCS* **Date:** 11/20/18 **Time:** 745

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

LAB USE ONLY
 Sample Temperature

Hold

ANALYSIS REQUEST
 (Circle or Specify Method No.)

TPH 8015R
 Anion/Cation Balance
 General Water Chemistry (see attached list)
 Chloride Sulfate TDS
 Chloride 300.0
 PLM (Asbestos)
 NORM
 PCB's 8082 / 608
 GC/MS Semi. Vol. 8270C/625
 GC/MS Vol. 8260B / 624
 ACl
 TCLP Semi Volatiles
 TCLP Volatiles
 TCLP Metals Ag As Ba Cd Cr Pb Se Hg
 Total Metals Ag As Ba Cd Cr Pb Se Hg
 PAH 8270C
 TPH 8015M (GRO - DRO - ORO - MRO)
 TPH TX1005 (Ext to C35)
 BTEX 8021B BTEX 8260B


(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

FC = 18 x 402

PAH 8015M <0.5 mg/L
 1.3-3 = 1.0 mg/L

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form

Client:	COTETRA	SDG#	L1646071
Cooler Received/Opened On: 11/20/18		Temperature:	10
Received By: Patrick Nshizirungu			
Signature:			
Receipt Check List			
COC Seal Present / Intact?	NP	Yes	No
COC Signed / Accurate?	/		
Bottles arrive intact?		/	
Correct bottles used?		/	
Sufficient volume sent?		/	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			



ANALYTICAL REPORT

December 04, 2018

ConocoPhillips - Tetra Tech

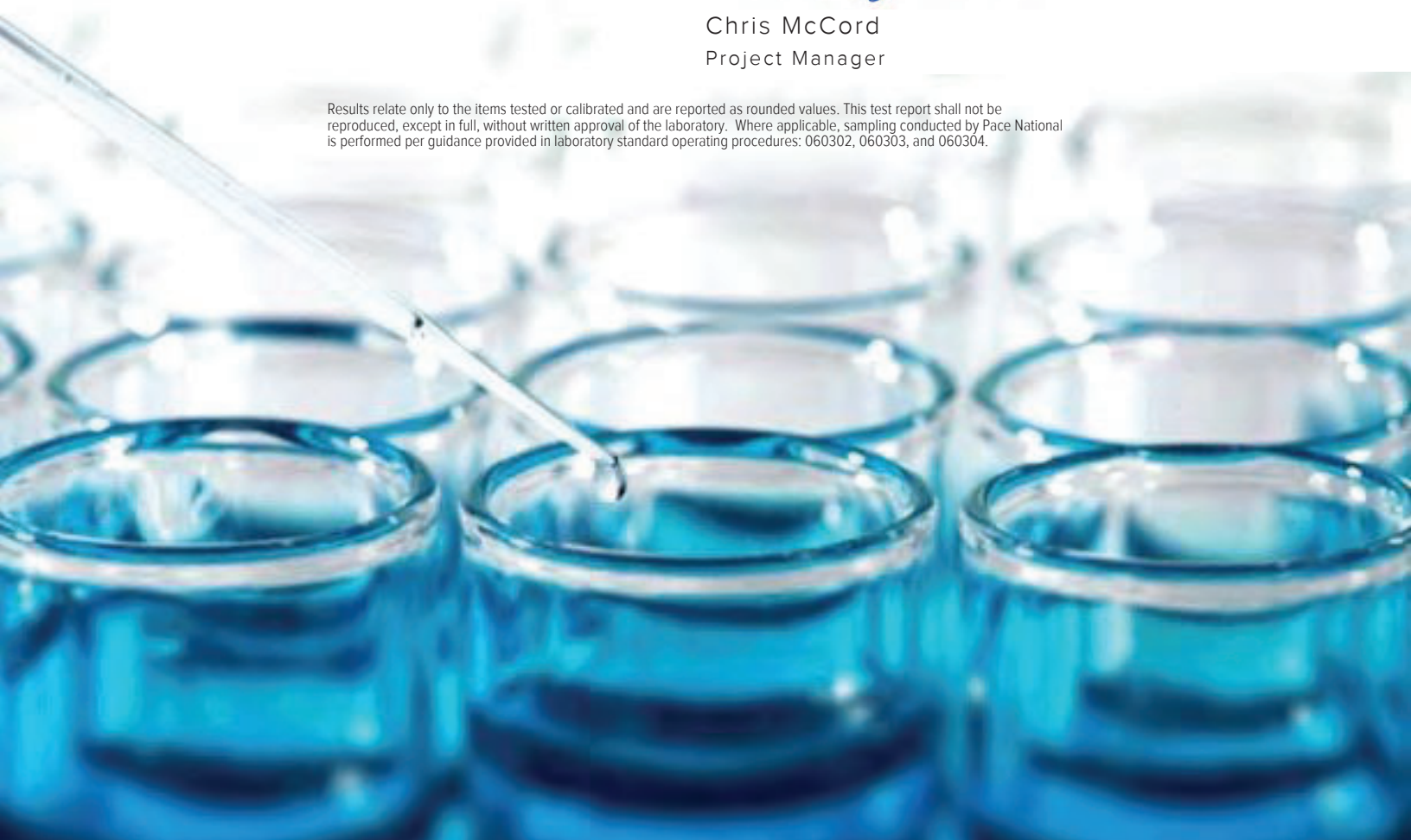
Sample Delivery Group: L1047275
Samples Received: 11/27/2018
Project Number: 212C-MD-01491
Description: COP BUCK Federal

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.



Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	5
Sr: Sample Results	6
NSW-3 L1047275-01	6
SSW-3 L1047275-02	7
ESW-6 L1047275-03	8
WSW-6 L1047275-04	9
AH-18 L1047275-05	10
AH-19 L1047275-06	11
AH-20 L1047275-07	12
AH-21 L1047275-08	13
Qc: Quality Control Summary	14
Total Solids by Method 2540 G-2011	14
Wet Chemistry by Method 300.0	15
Volatile Organic Compounds (GC) by Method 8015D/GRO	16
Volatile Organic Compounds (GC/MS) by Method 8260B	18
Semi-Volatile Organic Compounds (GC) by Method 8015	19
Gl: Glossary of Terms	20
Al: Accreditations & Locations	21
Sc: Sample Chain of Custody	22



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

¹ Cp² Tc³ Ss⁴ Cn

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

⁵ Sr⁶ Qc⁷ Gl⁸ Al

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

⁹ Sc

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	Collected date/time	Received date/time
			Joe Tyler	11/19/18 12:30	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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

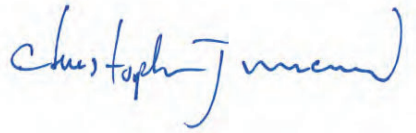
AH-20 L1047275-07 Solid

			Collected by	Collected date/time	Received date/time
			Joe Tyler	11/19/18 13:05	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	Collected date/time	Received date/time
			Joe Tyler	11/19/18 13:30	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

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

Collected date/time: 11/19/18 14:10

L1047275

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

Collected date/time: 11/20/18 11:00

L1047275

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/21/18 11:35

L1047275

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/21/18 11:00

L1047275

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

Collected date/time: 11/21/18 12:00

L1047275

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/19/18 12:30

L1047275

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/19/18 13:05

L1047275

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

Collected date/time: 11/19/18 13:30

L1047275

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		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					
MB Result		MB MDL		MB RDL	
mg/kg		mg/kg		mg/kg	
Analyte		MB Qualifier			
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									
Spike Amount		LCSD Result		LCS Rec.		LCSD Rec.		Rec. Limits	
mg/kg		mg/kg		%		%		%	
Analyte		LCS Result		LCS Rec.		LCSD Result		LCSD Rec.	
TPH (GC/FID) Low Fraction	5.50	6.13	6.32	111	115	6.32	72.0-127	72.0-127	
(S)									
a,a,a-Trifluorotoluene(FID)				105	107		77.0-120	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									
Spike Amount		Original Result		MS Result		MSD Result		MSD Rec.	
mg/kg		mg/kg		mg/kg		mg/kg		%	
Analyte		Dilution		Rec. Limits		MS Qualifier		MSD Qualifier	
TPH (GC/FID) Low Fraction	5.50	25	10.0-151	61.0	58.9	84.4	10.0-151	3.36	28
(S)									
a,a,a-Trifluorotoluene(FID)			77.0-120	102	102		77.0-120		

Method Blank (MB)

(MB) R3364106-3 11/29/18 04:09					
Analyte	MB Result	MB Qualifier	MB MDL	MB RDL	
	mg/kg	mg/kg	mg/kg	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	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.
	mg/kg	mg/kg	mg/kg	%	%
TPH (GC/FID) Low Fraction	5.50	5.60	5.53	102	101
(S) a,a,a-Trifluorotoluene(FID)				104	105

1 C
2 T
3 S
4 C
5 S
6 Qc
7 GI
8 AI
9 Sc

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 mg/kg	MS Rec. %	MSD Result (dry) mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD	RPD Limits %
Benzene	0.150	U	0.129	86.4	0.0683	45.6	1	10.0-149		J3	61.8	37
Ethylbenzene	0.150	U	0.149	99.4	0.0729	48.7	1	10.0-160		J3	68.5	38
Toluene	0.150	U	0.143	95.5	0.0740	49.4	1	10.0-156		J3	63.7	38
Xylenes, Total	0.450	U	0.430	95.7	0.223	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	4.00
C28-C40 Oil Range	U	0.274	4.00	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				LCSD Result			
		LCS Amount	LCS Result	mg/kg	%	LCSD Result	mg/kg	%	Rec. 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)		MS Result (dry)		MSD Result (dry)		Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
		mg/kg	104	201	143	mg/kg	%						
C10-C28 Diesel Range	53.5	104	201	143	182	73.9	104	1	50.0-150	J5	J3	33.7	20
(S) o-Terphenyl					108				18.0-148				

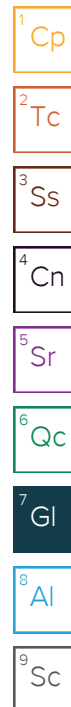
Guide to Reading and Understanding Your Laboratory Report

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	LA000356
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

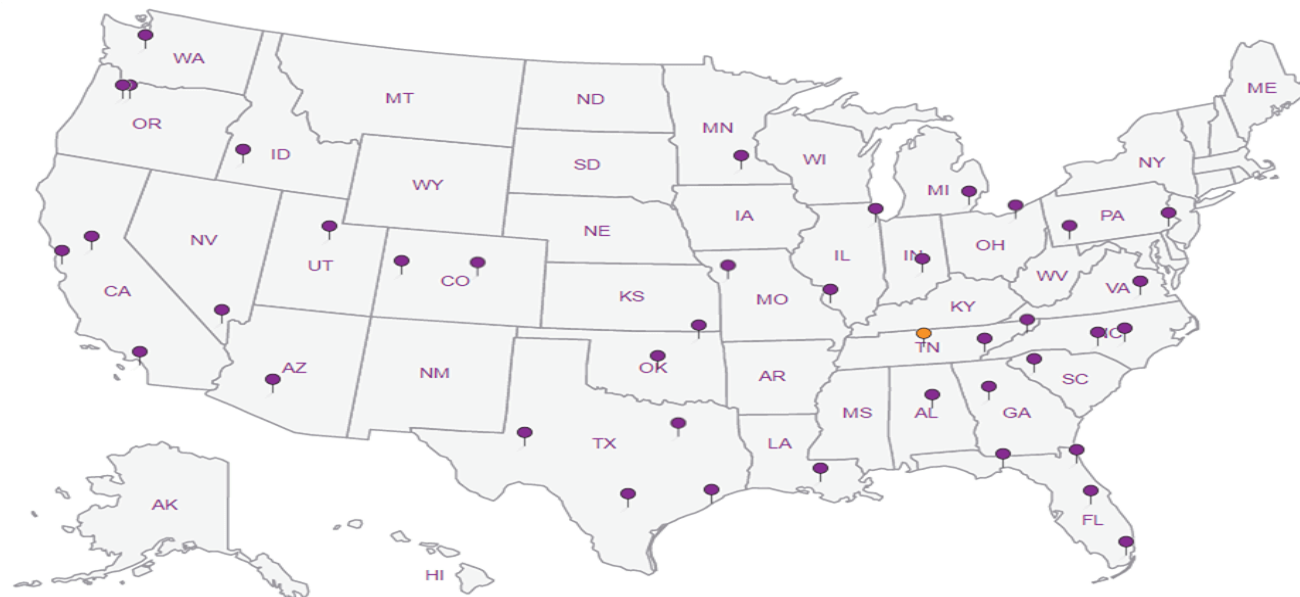
Third Party Federal Accreditations

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.



Billing Information:		Chain of Custody		Analysis / Container / Preservative		Pres Chk	
TetraTech		COPTETRA					
Report to:	Kayla Taylor	Email To:	Kayla.LovelyTaylor@tetratech.com				
Project Description:	COP Buck Federal	City/State Collected:	Lee Co., NM				
Phone:	432-210-5443	Lab Project #					
Fax:	432-210-5443	P.O. #					
Collected by (print):	Joe Tyler	Quote #					
Collected by (signature):	<i>Joe Tyler</i>						
Immediately Packed on Ice	N <input type="checkbox"/> Y <input checked="" type="checkbox"/>	Rush? (Lab MUST Be Notified)					
		<input type="checkbox"/> Same Day <input type="checkbox"/> Next Day <input type="checkbox"/> Two Day <input type="checkbox"/> Three Day					
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of	Entrs
ASW-3		SS		11/19	14:10	1	
SSW-3				11/20	11:00	1	
ESW-6				11/21	11:35	1	
WSW-6				11/21	11:00	1	
AH-18				11/21	12:00	1	
AH-19			11/19	12:30		1	
AH-20				11/19	13:05	1	
AH-21				11/19	13:30	1	
Remarks:				* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - Wastewater DW - Drinking Water OT - Other			
Samples returned via:				Tracking # Received by: (Signature) <i>Joe Tyler</i> Received by: (Signature) <i>Kayla Taylor</i> Received for lab by: (Signature) <i>MM</i>			
Date: 11/26 Date: 11/26 Date:				Time: 09:00 Time: 13:45 Time:			
Relinquished by: (Signature) <i>Joe Tyler</i>				Trip Blank Received: Yes/No HCL/MedH TBR Temp: 20.1°C 2.02.12 Date: 11/27/18 Time: 345			
Relinquished by: (Signature) <i>Joe Tyler</i>				Temp: 20.1°C 2.02.12 Date: 11/27/18 Time: 345			
Relinquished by: (Signature) <i>Joe Tyler</i>				Date: 11/27/18 Time: 345			



ANALYTICAL REPORT

December 07, 2018

ConocoPhillips - Tetra Tech

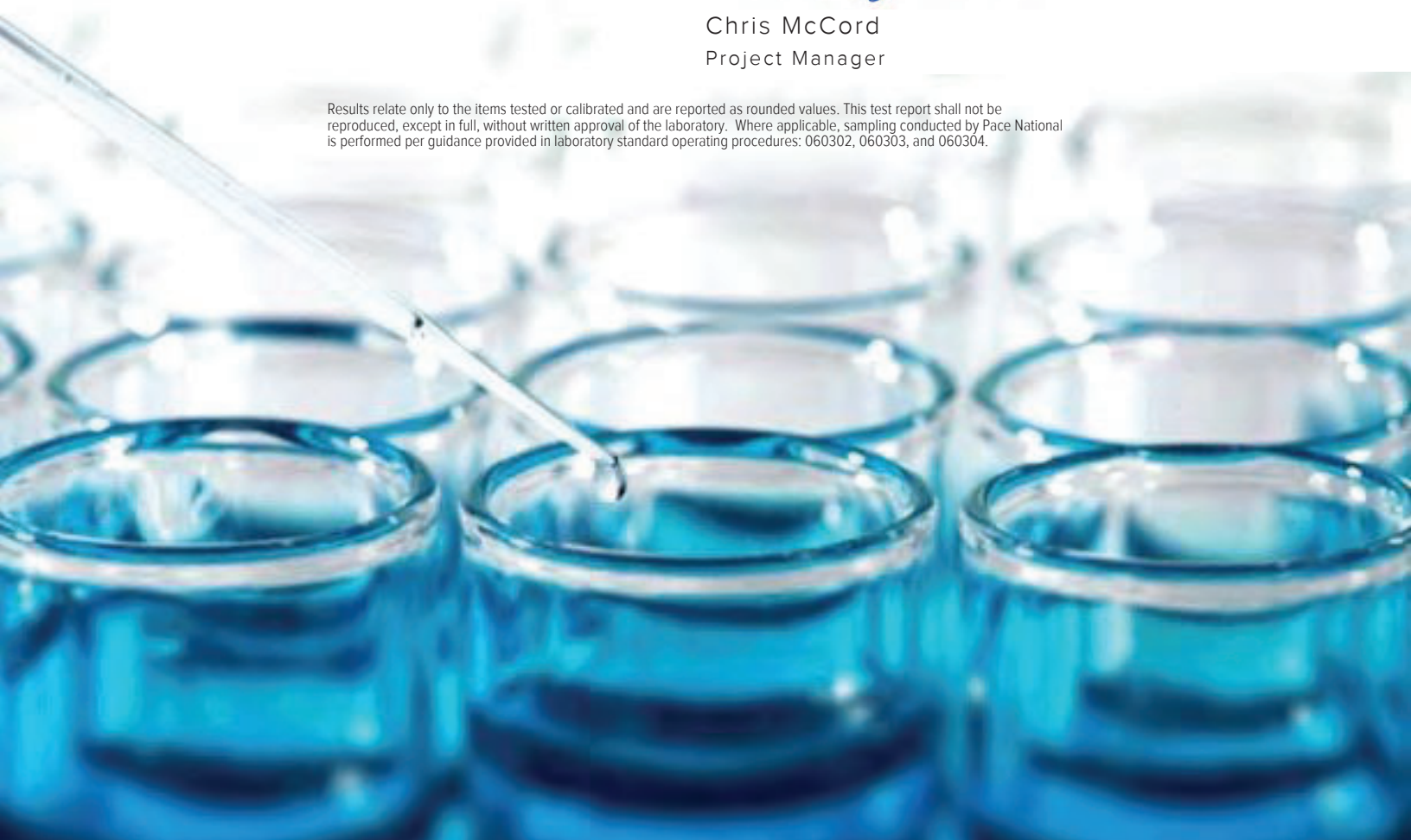
Sample Delivery Group: L1048605
Samples Received: 11/30/2018
Project Number: 212C-MD-01491
Description: Buck Fed CTB

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.



Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
ESW-5 L1048605-01	5
WSW-5 L1048605-02	6
AH-22 L1048605-03	7
AH-23 L1048605-04	8
SSW-4 L1048605-05	9
Qc: Quality Control Summary	10
Total Solids by Method 2540 G-2011	10
Wet Chemistry by Method 300.0	12
Volatile Organic Compounds (GC) by Method 8015D/GRO	13
Volatile Organic Compounds (GC/MS) by Method 8260B	15
Semi-Volatile Organic Compounds (GC) by Method 8015	16
Gl: Glossary of Terms	17
Al: Accreditations & Locations	18
Sc: Sample Chain of Custody	19



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	

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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	

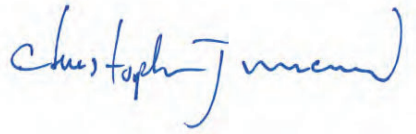
AH-23 L1048605-04 Solid

				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	

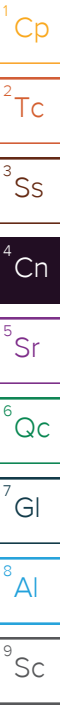
SSW-4 L1048605-05 Solid

				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



Collected date/time: 11/27/18 10:00

L1048605

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/27/18 10:30

L1048605

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/27/18 11:05

L1048605

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/27/18 11:30

L1048605

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/27/18 12:10

L1048605

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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		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									
Spike Amount mg/kg		LCSD Result mg/kg	LCS Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCSD Qualifier	LCSD Qualifier %	RPD Limits %
Analyte									
TPH (GC/FID) Low Fraction		5.50	5.17	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									
Spike Amount (dry) mg/kg		MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	RPD Limits %
Analyte									
TPH (GC/FID) Low Fraction		6.06	263	651	684	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	0.0217	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,-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,-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	4.00
C28-C40 Oil Range	U	0.274	4.00	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				

1 C
2 T
3 S
4 C
5 S
6 Qc
7 GI
8 AI
9 Sc

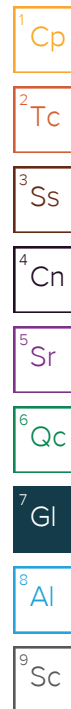
Guide to Reading and Understanding Your Laboratory Report

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	LA000356
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

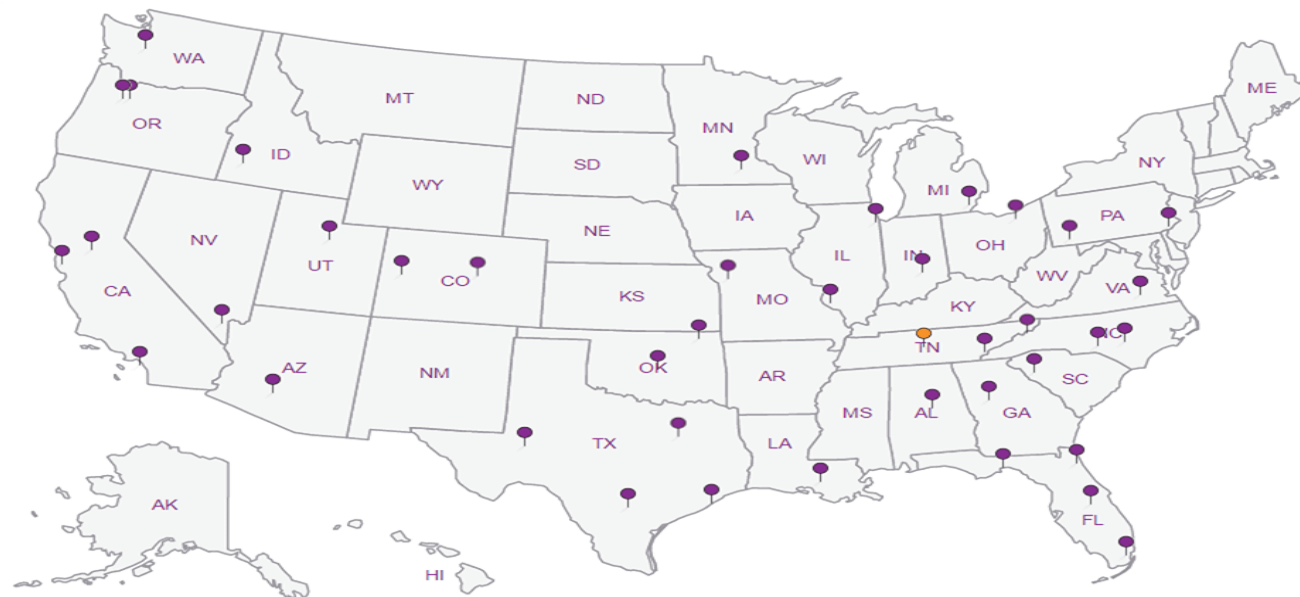
Third Party Federal Accreditations

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

Page 1 of

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) 682-3646

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

SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)
	DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE	None		
LAB # 2164865										
ESW-5	11/27/18	1000	X	X			X		1	N
WSW-5	11/27/18	1030	X	X			X		1	N
AH-22	11/27/18	1105	X	X			X		1	N
AH-23	11/27/18	1130	X	X			X		1	N
SSW-4	11/27/18	1210	X	X			X		1	N

RECEIVED BY:		Date:	Time:
[Signature]		11-28-18	1530
[Signature]		11-28-18	1530
[Signature]		11-30-18	900

RECEIVED BY:		Date:	Time:
[Signature]		11-28-18	1530
[Signature]		11-28-18	1530
[Signature]		11-30-18	900

RECEIVED BY:		Date:	Time:
[Signature]		11-28-18	1530
[Signature]		11-28-18	1530
[Signature]		11-30-18	900

RECEIVED BY:		Date:	Time:
[Signature]		11-28-18	1530
[Signature]		11-28-18	1530
[Signature]		11-30-18	900

ORIGINAL COPY

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form

Client:	COPTEKA	SDG#	L1048605
Cooler Received/Opened On:	11/ 30 /18	Temperature:	1.4
Received By: Alexandra Murtaugh			
Signature: <i>am</i>			
Receipt Check List			
	NP	Yes	No
COC Seal Present / Intact?	<input checked="" type="checkbox"/>		
COC Signed / Accurate?		<input checked="" type="checkbox"/>	
Bottles arrive intact?		<input checked="" type="checkbox"/>	
Correct bottles used?		<input checked="" type="checkbox"/>	
Sufficient volume sent?		<input checked="" type="checkbox"/>	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			



ANALYTICAL REPORT

December 06, 2018

ConocoPhillips - Tetra Tech

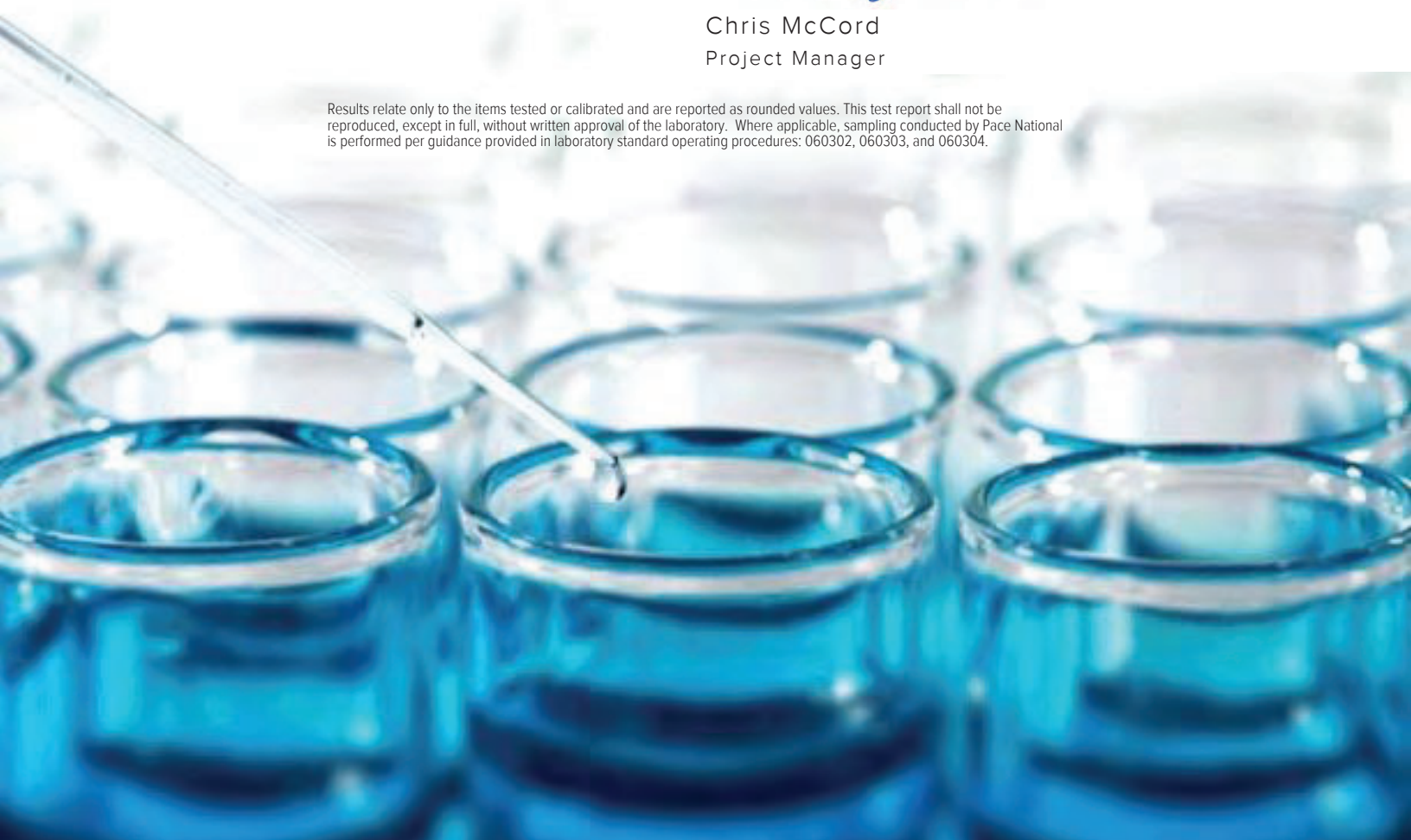
Sample Delivery Group: L1049339
Samples Received: 12/04/2018
Project Number: 212C-MD-01491
Description: Buck Fed CTB

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.



Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
AH-17 (6') L1049339-01	5
AH-6 (6') L1049339-02	6
AH-8 (6') L1049339-03	7
Qc: Quality Control Summary	8
Total Solids by Method 2540 G-2011	8
Wet Chemistry by Method 300.0	9
Volatile Organic Compounds (GC) by Method 8015D/GRO	10
Volatile Organic Compounds (GC/MS) by Method 8260B	11
Semi-Volatile Organic Compounds (GC) by Method 8015	12
Gl: Glossary of Terms	13
Al: Accreditations & Locations	14
Sc: Sample Chain of Custody	15



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

¹ Cp² Tc³ Ss⁴ Cn

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

⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

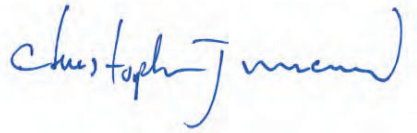
AH-8 (6') L1049339-03 Solid

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

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

Collected date/time: 11/30/18 10:35

L1049339

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/30/18 13:00

L1049339

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 11/30/18 13:15

L1049339

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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		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	<u>MB Qualifier</u>	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					
	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP RPD Limits %
Analyte	2020	1970	5	2.85	20
Chloride					

Laboratory Control Sample (LCS)

(LCS) R3365887-2 12/06/18 10:44					
	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Analyte	200	203	101	90.0-110	
Chloride					

L1048923-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L1048923-08 12/06/18 12:12 • (MS) R3365887-4 12/06/18 12:21					
	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MS Rec. %	Dilution
Analyte	599	16300	13300	0.000	1
Chloride					
					<u>MS Qualifier</u>
					80.0-120
					<u>EV</u>

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									
Spike Amount mg/kg		LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD Limits %
Analyte									
TPH (GC/FID) Low Fraction		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									
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 Limits %
Analyte									
TPH (GC/FID) Low Fraction		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,-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,-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,-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	4.00
C28-C40 Oil Range	U	0.274	4.00	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				

1 C
2 T
3 S
4 C
5 S
6 Qc
7 GI
8 AI
9 Sc

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	LA000356
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

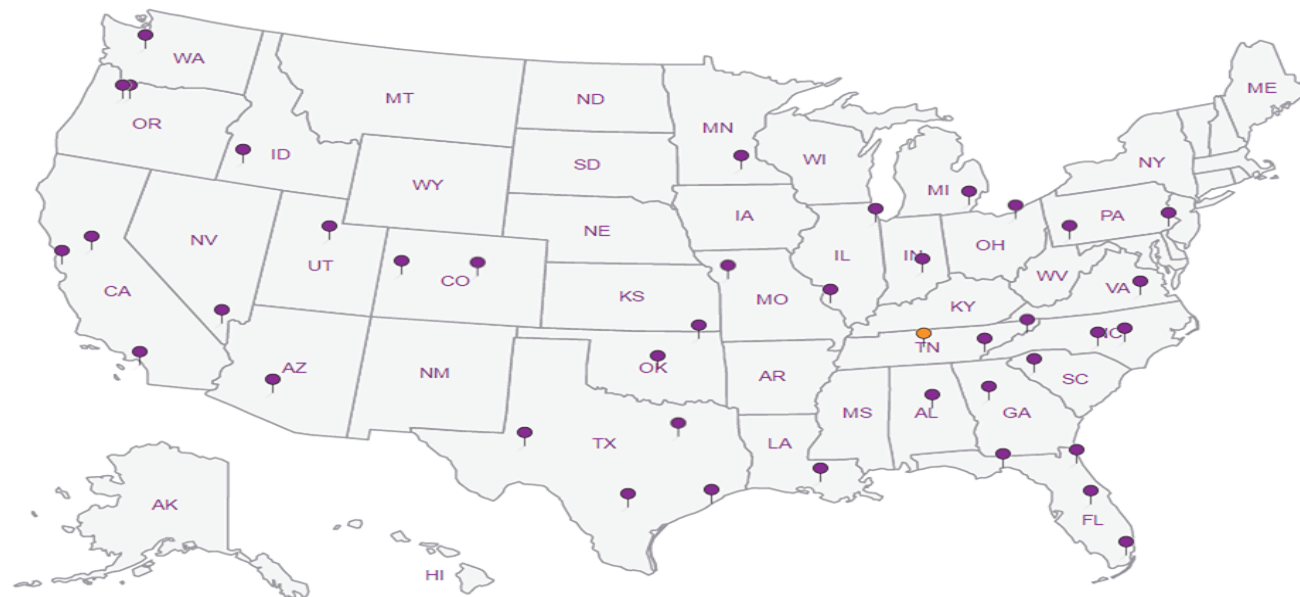
Third Party Federal Accreditations

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.



Pace Analytical National Center for Testing & Innovation Cooler Receipt Form

Client:	SDG#	L1049339
Cooler Received/Opened On: 12/ 24/18	Temperature:	63
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?		



ANALYTICAL REPORT

December 19, 2018

ConocoPhillips - Tetra Tech

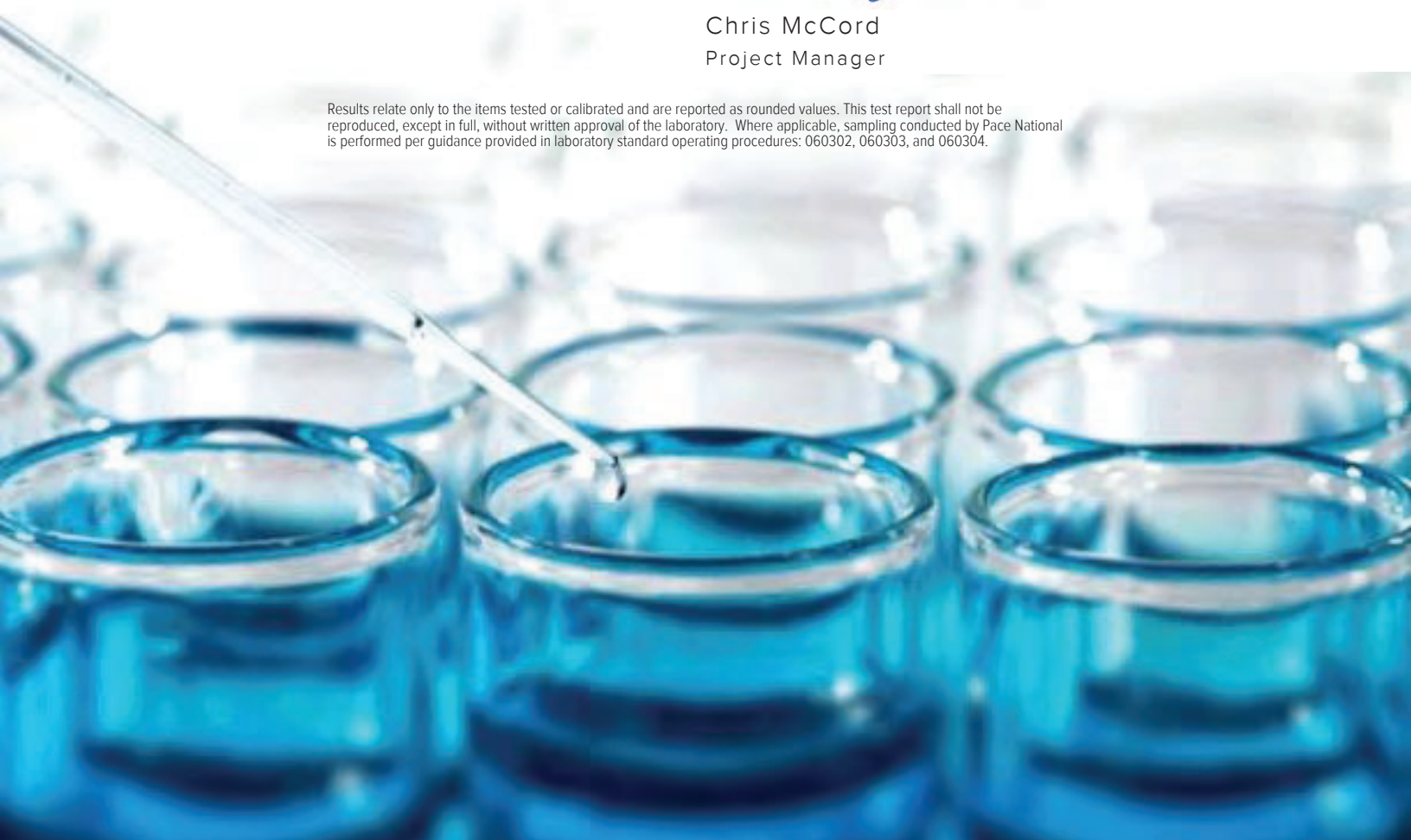
Sample Delivery Group: L1051879
Samples Received: 12/11/2018
Project Number: 212C-MD-01491
Description: Buck Fed CTB

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.



Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	³ Ss
AH-22 (3') L1051879-01	5	
AH-23 (3') L1051879-02	6	⁴ Cn
Qc: Quality Control Summary	7	⁵ Sr
Total Solids by Method 2540 G-2011	7	
Wet Chemistry by Method 300.0	8	⁶ Qc
Volatile Organic Compounds (GC) by Method 8015D/GRO	9	
Volatile Organic Compounds (GC/MS) by Method 8260B	10	⁷ Gl
Semi-Volatile Organic Compounds (GC) by Method 8015	11	⁸ Al
Gl: Glossary of Terms	12	
Al: Accreditations & Locations	13	⁹ Sc
Sc: Sample Chain of Custody	14	

AH-22 (3') L1051879-01 Solid

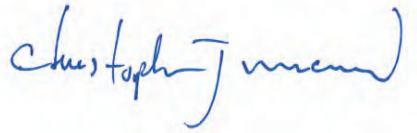
			Collected by	Collected date/time	Received date/time
				12/06/18 12:00	12/11/18 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1210272	1	12/13/18 13:55	12/13/18 14:05	KBC
Wet Chemistry by Method 300.0	WG1210216	2.09205	12/13/18 10:17	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

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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

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

Collected date/time: 12/06/18 12:00

L1051879

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

Collected date/time: 12/06/18 14:30

L1051879

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		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	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	500	275	690	710	1	80.0-120		83.0	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									
Spike Amount mg/kg		LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD Limits %
Analyte									
TPH (GC/FID) Low Fraction		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									
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 %	RPD Limits %
Analyte									
TPH (GC/FID) Low Fraction		122	711	652	96.6	86.9	100	10.0-151	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,-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. %	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	74.0-126			0.422	20
Toluene	0.125	0.109	0.109	87.0	75.0-121			0.400	20
Xylenes, Total	0.375	0.379	0.375	101	72.0-127			1.06	20
(S) Toluene-d8				106	75.0-131				
(S) Dibromofluoromethane				105	65.0-129				
(S) a,a,-Trifluorotoluene				105	80.0-120				
(S) 4-Bromofluorobenzene				103	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	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,-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	4.00	
C28-C40 Oil Range	U	0.274	4.00	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									
Spike Amount mg/kg		LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD Limits %
Analyte									
Extractable Petroleum Hydrocarbon		50.0	35.4	33.4	70.8	50.0-150			
C10-C28 Diesel Range		50.0	39.2	37.0	78.4	50.0-150			
(S) o-Terphenyl					84.7	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											
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 Limits %
Analyte											
Extractable Petroleum Hydrocarbon		48.5	63.3	35.7	29.5	0.000	10	50.0-150	J6	J6	20
C10-C28 Diesel Range		48.5	ND	33.8	33.9	69.7	10	50.0-150		0.295	20
(S) o-Terphenyl					132	111		18.0-148			

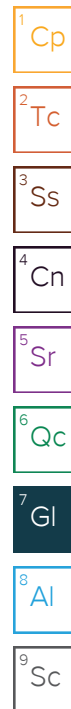
Guide to Reading and Understanding Your Laboratory Report

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	LA000356
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

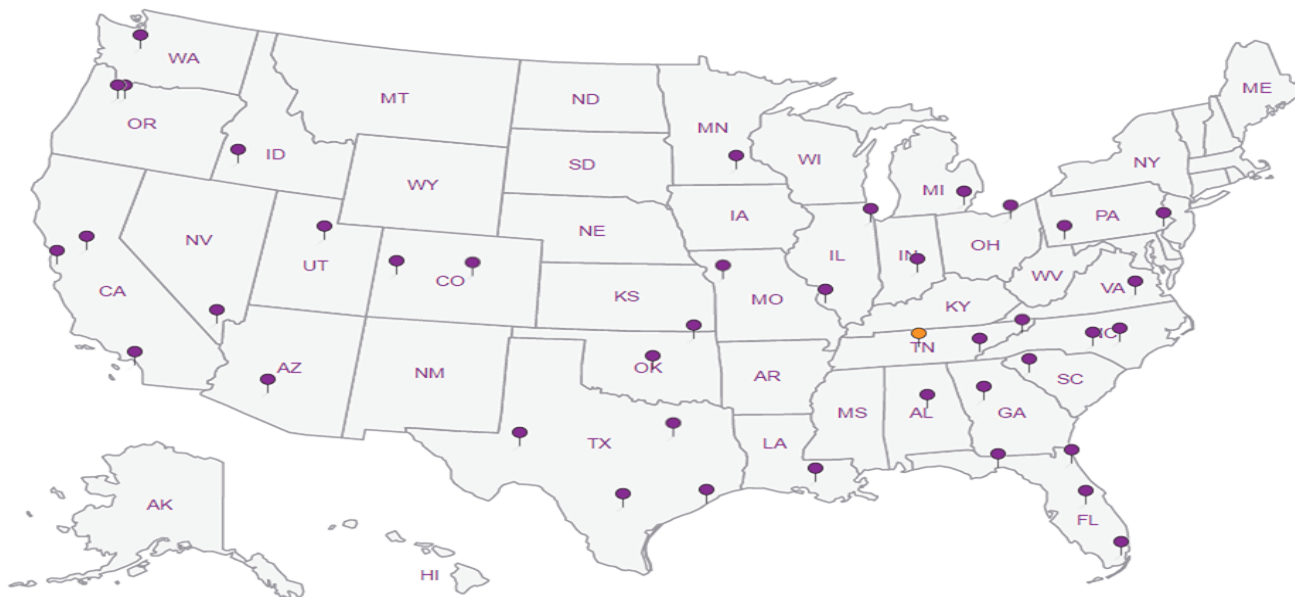
Third Party Federal Accreditations

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.



Page 1 of 1

Tetra Tech, Inc.

500 West Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4550
Fax (432) 882-3946

ANALYSIS REQUEST

(Circle or Specify Method No.)

D233

[illegible]

LAB USE ONLY

REMARKS: SD STANDARD-
☒

☐ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRAP Report

REMARKS: 2 Days TAT ✓

Sample Temperature
0.2 0.342

Received by:	Date:	Time:
--------------	-------	-------

Relinquished by: / / Date: / / Time:

Received by: _____ Date: _____ Time: _____

Relinquished by: _____ Date: _____ Time: _____

Received by: _____ Date: _____ Time: _____

Relinquished by: _____ Date: _____ Time: _____

Circle(s)	HAND DELIVERED	FEDEX	UPS	Tracking #:

ORIGINAL COPY

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form

Client: COPTERA	SDG#	U051879
Cooler Received/Opened On: 12/11/18	Temperature:	0.2
Received By: malik Tisdale		
Signature: <i>malik T.</i>		
Receipt Check List	NP	Yes No
COC Seal Present / Intact?		
COC Signed / Accurate?		
Bottles arrive intact?		
Correct bottles used?		
Sufficient volume sent?		
If Applicable		
VOA Zero headspace?		
Preservation Correct / Checked?		



ANALYTICAL REPORT

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.



Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	7
Sr: Sample Results	8
BH-19-1 (0'-1') L1150137-01	8
BH-19-1 (2'-3') L1150137-02	9
BH-19-1 (4'-5') L1150137-03	10
BH-19-2 (0'-1') L1150137-04	11
BH-19-2 (2'-3') L1150137-05	12
BH-19-2 (4'-5') L1150137-06	13
BH-19-3 (0'-1') L1150137-07	14
BH-19-3 (2'-3') L1150137-08	15
BH-19-3 (4'-5') L1150137-09	16
BH-19-3 (6'-7') L1150137-10	17
BH-19-3 (9'-10') L1150137-11	18
BH-19-3 (14'-15') L1150137-12	19
BH-19-4 (0'-1') L1150137-13	20
BH-19-4 (2'-3') L1150137-14	21
BH-19-4 (4'-5') L1150137-15	22
BH-19-4 (6'-7') L1150137-16	23
BH-19-4 (9'-10') L1150137-17	24
BH-19-4 (14'-15') L1150137-18	25
Qc: Quality Control Summary	26
Total Solids by Method 2540 G-2011	26
Wet Chemistry by Method 300.0	28
Volatile Organic Compounds (GC) by Method 8015D/GRO	30
Volatile Organic Compounds (GC/MS) by Method 8260B	33
Semi-Volatile Organic Compounds (GC) by Method 8015	38
Gl: Glossary of Terms	41
Al: Accreditations & Locations	43
Sc: Sample Chain of Custody	44

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

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

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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

¹ Cp² Tc³ Ss⁴ Cn

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

⁵ Sr⁶ Qc⁷ Gl⁸ Al

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

⁹ Sc

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

¹ Cp² Tc³ Ss⁴ Cn

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

⁵ Sr⁶ Qc⁷ Gl⁸ Al

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

⁹ Sc

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

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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

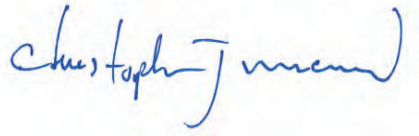
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367018	1	10/23/19 13:49	10/23/19 14:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1365616	1	10/20/19 15:10	10/20/19 18:37	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by 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

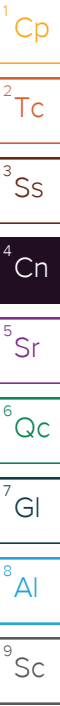
Collected by JT
Collected date/time 10/10/19 15:00
Received date/time 10/15/19 09:15

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



Collected date/time: 10/08/19 11:00

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/08/19 11:10

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/08/19 11:20

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/08/19 11:50

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
Chloride	30.0	<u>B</u>	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 date / time	Batch
TPH (GC/FID) Low Fraction	0.0691	<u>B J</u>	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 date / time	Batch
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 date / time	Batch
C10-C28 Diesel Range	U		1.74	4.00	4.32	1	10/18/2019 22:56	WG1365094
C28-C40 Oil Range	0.837	<u>J</u>	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

Collected date/time: 10/08/19 12:00

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/08/19 12:10

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/08/19 12:40

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
Chloride	80.7		0.849	10.0	10.7	1	10/18/2019 00:00	WG1364664

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

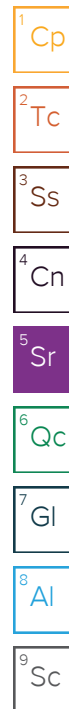
Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0739	B J	0.0232	0.100	0.107	1	10/20/2019 21:11	WG1365550
(S) a,a,a-Trifluorotoluene(FID)	106				77.0-120		10/20/2019 21:11	WG1365550

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis date / time	Batch
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 date / time	Batch
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



Collected date/time: 10/08/19 12:50

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/08/19 13:00

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/08/19 13:10

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/08/19 13:20

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/08/19 13:30

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/10/19 14:00

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
Chloride	42.9	<u>B</u>	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 date / time	Batch
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 date / time	Batch
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	<u>J1</u>			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 date / time	Batch
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

Collected date/time: 10/10/19 14:10

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/10/19 14:15

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/10/19 14:20

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/10/19 14:40

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Collected date/time: 10/10/19 15:00

L1150137

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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	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	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		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
mg/kg		mg/kg		mg/kg	mg/kg
Analyte					
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		DUP Result	Dilution	DUP RPD	DUP RPD Limits
(dry)		(dry)		%	%
mg/kg		mg/kg			
Analyte					
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 RPD Limits
(dry)		(dry)		%	%
mg/kg		mg/kg			
Analyte					
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
mg/kg		mg/kg	%	%	
Analyte					
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		Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier
(dry)		(dry)	(dry)	(dry)	%	%		%	
mg/kg		mg/kg	mg/kg	mg/kg					
Analyte									
Chloride	587	6270	6260	6550	0.000	47.9	1	80.0-120	E.V. E.V.

Method Blank (MB)

(MB) R3463029-2 10/20/19 14:10					
	MB Result	MB Qualifier	MB MDL	MB RDL	
	mg/kg		mg/kg	mg/kg	
Analyte					
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					
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Analyte					
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									
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MSD Qualifier
	(dry)	(dry)	mg/kg	mg/kg	%	%		%	mg/kg
Analyte									
TPH (GC/FID) Low Fraction	5.69	0.0784	1.22	2.19	20.1	37.2	1	10.0-151	J3
(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	<u>MB Qualifier</u> mg/kg	MB MDL mg/kg	MB RDL mg/kg	
TPH (GC/FID) Low Fraction	U	0.0217		0.100	
(S) a,a,α-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 %	<u>LCS Qualifier</u>
	TPH (GC/FID) Low Fraction	5.14	93.5	72.0-127	
(S) a,a,α-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 mg/kg	MS Rec. %	MSD Result (dry) mg/kg	MSD Rec. %	Dilution	Rec. Limits %	RPD Limits %
	TPH (GC/FID) Low Fraction	46.3	589	94.3	602	96.5	100	10.0-151	28
(S) a,a,α-Trifluorotoluene(FID)				108		109		77.0-120	

Method Blank (MB)

(MB) R3463260-3 10/20/19 10:59					
MB Result		MB Qualifier		MB MDL	MB RDL
mg/kg				mg/kg	mg/kg
Analyte					
TPH (GC/FID) Low Fraction	0.0244	J	0.0217	0.100	0.100
(S)	95.2			77.0-120	
a,a,a-Trifluorotoluene(FID)					

Laboratory Control Sample (LCS)

(LCS) R3463260-2 10/20/19 09:56					
Spike Amount		LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
mg/kg		mg/kg	%	%	
Analyte					
TPH (GC/FID) Low Fraction	5.50	4.76	86.5	72.0-127	
(S)		106		77.0-120	
a,a,a-Trifluorotoluene(FID)					

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	618	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. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.104	0.106	83.2	70.0-123			1.90	20
Ethylbenzene	0.125	0.129	0.128	103	74.0-126			0.778	20
Toluene	0.125	0.121	0.122	96.8	75.0-121			0.823	20
Xylenes, Total	0.375	0.413	0.437	110	72.0-127			5.65	20
(S) Toluene-d8				107	75.0-131				
(S) 4-Bromofluorobenzene				101	67.0-138				
(S) 1,2-Dichloroethane-d4				89.1	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 mg/kg	Original Result (dry) mg/kg	MS Result 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. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.107	0.108	85.6	70.0-123			0.930	20
Ethylbenzene	0.125	0.113	0.105	90.4	74.0-126			7.34	20
Toluene	0.125	0.108	0.106	86.4	75.0-121			1.87	20
Xylenes, Total	0.375	0.352	0.350	93.9	72.0-127			0.570	20
(S) Toluene-d8				95.6	75.0-131				
(S) 4-Bromofluorobenzene				96.9	67.0-138				
(S) 1,2-Dichloroethane-d4				119	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	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 mg/kg	MS Rec. %	MSD Result (dry) mg/kg	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD	RPD Limits %
Benzene	0.127	U	0.112	88.0	0.120	94.4	1	10.0-149		7.02	7.02	37
Ethylbenzene	0.127	U	0.107	84.0	0.117	92.0	1	10.0-160		9.09	9.09	38
Toluene	0.127	U	0.102	79.9	0.111	87.2	1	10.0-156		8.71	8.71	38
Xylenes, Total	0.382	U	0.275	72.0	0.303	79.5	1	10.0-160		9.86	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	<u>MB Qualifier</u> mg/kg	MB MDL mg/kg	MB RDL mg/kg	
C10-C28 Diesel Range	U	1.61	4.00	4.00	
C28-C40 Oil Range	U	0.274	4.00	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 %	<u>LCS Qualifier</u>
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 mg/kg	MS Rec. %	MSD Result (dry) mg/kg	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>
C10-C28 Diesel Range	50.1	U	44.5	88.9	44.6	88.0	1	50.0-150		
(S) o-Terphenyl				108		105		18.0-148	0.231	20



Method Blank (MB)

(MB) R3462800-1 10/19/19 09:30					
Analyte	MB Result mg/kg	<u>MB Qualifier</u> mg/kg	MB MDL mg/kg	MB RDL mg/kg	
C10-C28 Diesel Range	U	1.61	4.00	4.00	
C28-C40 Oil Range	U	0.274	4.00	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 %	<u>LCS Qualifier</u>
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 mg/kg	MS Rec. %	MSD Result (dry) mg/kg	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD Limits %
C10-C28 Diesel Range	53.2	U	46.9	88.1	44.2	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	<u>MB Qualifier</u> mg/kg	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U	1.61	4.00	4.00
C28-C40 Oil Range	U	0.274	4.00	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 %	<u>LCS Qualifier</u>
C10-C28 Diesel Range	50.0	34.7	69.4	50.0-150	
(S) o-Terphenyl			61.9	18.0-148	

Received by OCD: 11/8/2021 9:36:04 PM

1C

2T

3S

4C

5S

6Qc

7GI

8AI

9Sc

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.

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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	LA000356
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

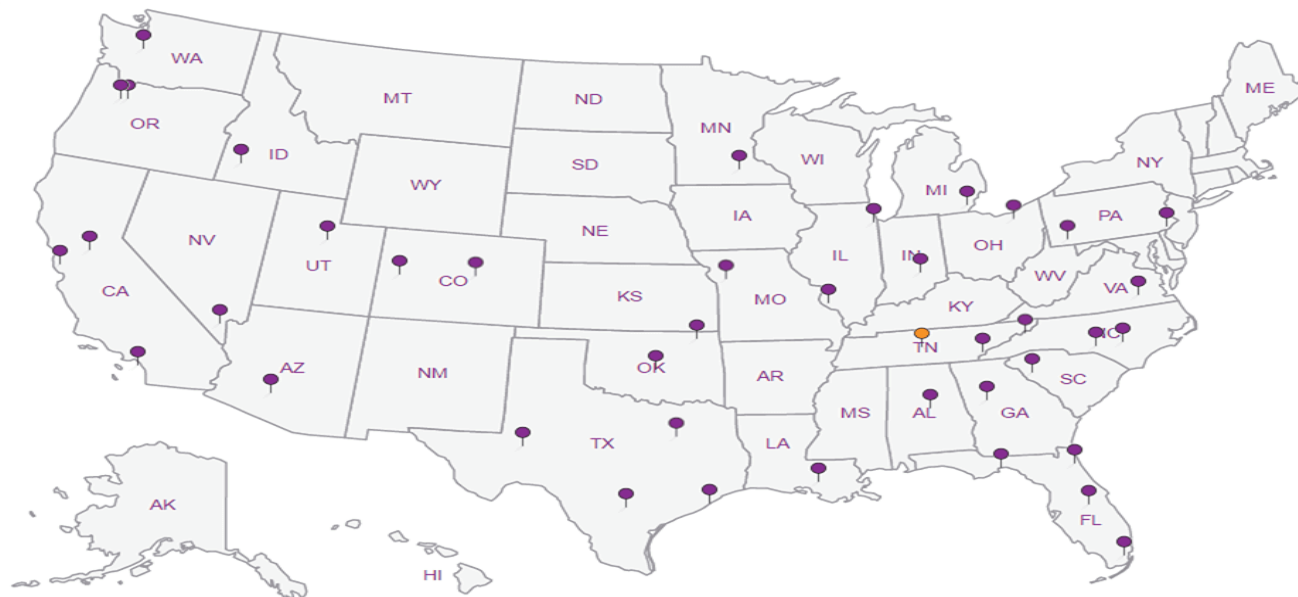
Third Party Federal Accreditations

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.



Pace Analytical National Center for Testing & Innovation			
Cooler Receipt Form			
Client: <i>COPTETRA</i>		<i>1150137</i>	
Cooler Received/Opened On: <i>10/15/19</i>	Temperature: <i>0.2</i>		
Received By: <i>Hailey Melson</i>			
Signature: <i>Hailey M</i>			
Receipt Check List			
	NP	Yes	No
COC Seal Present / Intact?	<input checked="" type="checkbox"/>		
COC Signed / Accurate?		<input checked="" type="checkbox"/>	
Bottles arrive intact?		<input checked="" type="checkbox"/>	
Correct bottles used?		<input checked="" type="checkbox"/>	
Sufficient volume sent?		<input checked="" type="checkbox"/>	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

APPENDIX D

Waste Manifests



Permian Basin

Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: JOE TYLER
 AFE #:
 PO #:
 Manifest #: 1
 Manif. Date: 11/13/2018
 Hauler: MCNABB PARTNERS
 Driver: GUMER
 Truck #: M32
 Card #
 Job Ref #

Ticket #: 700-951558
 Bid #: O6UJ9A0009Z1
 Date: 11/13/2018
 Generator: CONOCOPHILLIPS
 Generator #:
 Well Ser. #: 999908 *Federal*
 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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



Permian Basin

Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: JENNI FORTUNATO
 AFE #:
 PO #:
 Manifest #: 2
 Manif. Date: 11/13/2018
 Hauler: MCNABB PARTNERS
 Driver: JR
 Truck #: M82
 Card #
 Job Ref #

Ticket #: 700-951557
 Bid #: O6UJ9A0009Z1
 Date: 11/13/2018
 Generator: CONOCOPHILLIPS
 Generator #:
 Well Ser. #: 999908 *Federal*
 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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



Permian Basin

Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: JOE TYLER
 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 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:

- ☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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 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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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 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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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

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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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

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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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 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:

- ☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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 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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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 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:

- ☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



Permian Basin

Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: JOE TYLER
 AFE #:
 PO #:
 Manifest #: 13
 Manif. Date: 11/15/2018
 Hauler: MCNABB PARTNERS
 Driver: JR
 Truck #: M82
 Card #
 Job Ref #

Ticket #: 700-952702
 Bid #: O6UJ9A0009Z1
 Date: 11/15/2018
 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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



Permian Basin

Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: JOE TAYLOR
 AFE #:
 PO #:
 Manifest #: 14
 Manif. Date: 11/15/2018
 Hauler: MCNABB PARTNERS
 Driver: JOSH
 Truck #: M79
 Card #
 Job Ref #

Ticket #: 700-952698
 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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.
☐ 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: _____



Permian Basin

Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: JOE TYLER
 AFE #:
 PO #:
 Manifest #: 16
 Manif. Date: 11/15/2018
 Hauler: MCNABB PARTNERS
 Driver: JR
 Truck #: M82
 Card #
 Job Ref #

Ticket #: 700-952780
 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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



Permian Basin

Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: JOE TYLER
 AFE #:
 PO #:
 Manifest #: 17
 Manif. Date: 11/16/2018
 Hauler: MCNABB PARTNERS
 Driver: JR
 Truck #: M82
 Card #
 Job Ref #

Ticket #: 700-953014
 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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.
☐ 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: _____



Permian Basin

Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: JOE TYLER
 AFE #:
 PO #:
 Manifest #: 18
 Manif. Date: 11/16/2018
 Hauler: MCNABB PARTNERS
 Driver: GUMER
 Truck #: M32
 Card #
 Job Ref #

Ticket #: 700-953015
 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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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
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:

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.
☐ 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: _____



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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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 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:

- ☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.
☐ 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: _____



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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.
☐ 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: _____



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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



Permian Basin

Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: JUSTIN WRIGHT
 AFE #: *Joey Tyler*
 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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



Permian Basin

Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: JUSTIN WRIGHT
 AFE #: Joe Tyler
 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 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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



Permian Basin

Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: ~~JUSTIN WRIGHT~~
 AFE #: Joe Tyler
 PO #:
 Manifest #: NA
 Manif. Date: 11/27/2018
 Hauler: MCNABB PARTNERS
 Driver: JOSH
 Truck #: M79
 Card #
 Job Ref #

Ticket #: 700-956467
 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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



Permian Basin

Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: JUSTIN WRIGHT
 AFE #: JOE TYLER
 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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.
☐ 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: _____



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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.
☐ 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: _____



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 #: M32 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 1/
 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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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 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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



Permian Basin

Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: JOE TYLER
 AFE #:
 PO #:
 Manifest #: 37
 Manif. Date: 11/30/2018
 Hauler: MCNABB PARTNERS
 Driver: CLEO
 Truck #: M31
 Card #
 Job Ref #

Ticket #: 700-958343
 Bid #: O6UJ9A0009Z1
 Date: 12/3/2018
 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:

- ☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____



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)

Permian Basin

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:

☒ RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste
☐ 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: _____

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-4262)	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-4262)	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-4262)	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-4262)	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-4262)	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-4262)	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-4262)	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-4262)	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-4262)	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-4262)	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-4262)	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-4262)	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-4262)	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-4262)	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 60909

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 60909
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	Deferral approved. Incident will remain open until the 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-4262 closed. Please refer to incident #NJXK1611836857 in all future correspondence.	10/11/2022