



January 2, 2020

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

**Re: Deferral Request
ConocoPhillips Company
Buck Federal Central Tank Battery
Unit Letter P, Section 17, Township 26 South, Range 32 East
Lea County, New Mexico
1RP-4262, 1RP-4275, and 1RP-4431**

Mr. Rickman:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips Company (COP) to evaluate releases 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

From April 23, 2016 to September 5, 2016, three releases (1RP-4262, 1RP-4275 and 1RP-4431) occurred at the Buck Federal CTB. Each release is described below.

1RP-4262

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.

1RP-4275

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

1RP-4431

According to the State of New Mexico C-141 Initial Report, the release was discovered on September 6, 2016, and released approximately 240 barrels of produced water due to a faulty T-joint. Immediate action

Tetra Tech

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

Tel 432.682.4559 Fax 432.682.3946 www.tetrattech.com

Deferral Request
January 2, 2020

ConocoPhillips

was to shut down and replace the T-joint. The release was contained within the earthen berm (firewall) of the tank battery. Vacuum trucks were dispatched to remove the freestanding fluids, recovering approximately 235 barrels of produced water. The interior of the berm area was scraped as a part of the emergency response. The initial C-141 Form is included in Appendix A.

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.

No water wells are listed in Section 17 on the New Mexico Office of the State Engineer's (NMOSE) website. Five water wells are in Section 21, with an average depth to groundwater of 240 feet below ground surface (bgs). The groundwater data is shown in Appendix B.

REGULATORY FRAMEWORK

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases, updated August 14, 2018. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil.

Based upon the Site characterization, the proposed RRALs are:

- Benzene: 10 milligrams per kilogram (mg/kg);
- Total BTEX (sum of benzene, toluene, ethylbenzene, and xylene): 50 mg/kg;
- TPH (GRO + DRO + ORO): 100 mg/kg;
- Chloride: 600 mg/kg in the top four feet.

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.

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

Deferral Request
January 2, 2020

ConocoPhillips

A third CAP (also erroneously dated April 28, 2016) was prepared for the additional release (1RP-4431) and submitted to NMOCD. The CAP provided the C-141, a photograph of the release source, and again outlined actions to be taken to remediate the release. The CAP also detailed that five discrete samples will be collected in total. Four surface samples would be collected just outside the berm on all four sides and the fifth sample will be from the center of the spill and will go down as deep as the spill penetrated. That CAP was approved October 24, 2016.

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

As a result of the additional correspondence, on October 19, 2017, a total of five (5) trenches (SP-1 through SP-5) were installed in the eastern portion of the release area by Stingray Environmental and Construction, LLC to assess and delineate the extent of impacted soil (Figure 4) to a depth of 7 feet bgs. Grab samples were field screened for chlorides and organic vapors with a PID at multiple depths. The samples collected from 7 feet bgs at each location were collected and analyzed for TPH by EPA method 8015 modified, BTEX by EPA Method 8260B and chlorides by EPA method 300.0. The results of the sampling event are summarized in Table 1. Copies of analytical reports and chain-of-custody documentation are included in Appendix C.

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

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

ADDITIONAL SITE ASSESSMENT

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

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

Deferral Request
January 2, 2020

ConocoPhillips

REMEDIATION ACTIVITIES AND CONFIRMATION SAMPLING

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

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

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

The analytical results for all sidewall samples were below the RRAL for BTEX. Additionally, sidewall samples NSW-3, WSW-2, WSW-3 and ESW-3 were below RRALs for TPH and chlorides. The other fifteen sidewall samples exceeded the RRALs for TPH and/or chloride. However, the sidewalls within the excavation areas were either in close proximity to production equipment, or extended to the foot of the containment berm, so it was not feasible to expand the excavation areas outward.

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

ADDITIONAL SITE DELINEATION

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

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

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

Photographic documentation of the assessment and remediation activities is included as Appendix E.

Deferral Request
January 2, 2020

ConocoPhillips

CONCLUSION

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

Final remediation and reclamation shall take place in accordance with 19.15.29.12 and 19.15.29.13 NMAC once the site is no longer being used for oil and gas operations. ConocoPhillips respectfully requests that NMOCD will consider delaying final remediation activities at the site until the end of life of the battery. At time of abandonment, retrofit, or inactivity, remediation will be completed in addition to reclamation. Based on the above, ConocoPhillips requests deferral for this impacted area until site abandonment. The completed C-141 forms are enclosed in Appendix A.

If you have any questions or comments concerning the assessment or remediation activities for this site, please call us at either (512) 338-2861 or (432) 682-4559.

Sincerely,
Tetra Tech, Inc.



Christian M. Llull, P.G.
Project Manager



Greg W. Pope, P.G.
Program Manager

cc:
Ms. Jenni Fortunato, RMR – ConocoPhillips
Mr. Gustavo Fejervary-Morena, GPBU - ConocoPhillips

Deferral Request
January 2, 2020

ConocoPhillips

List of Attachments

Figures:

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

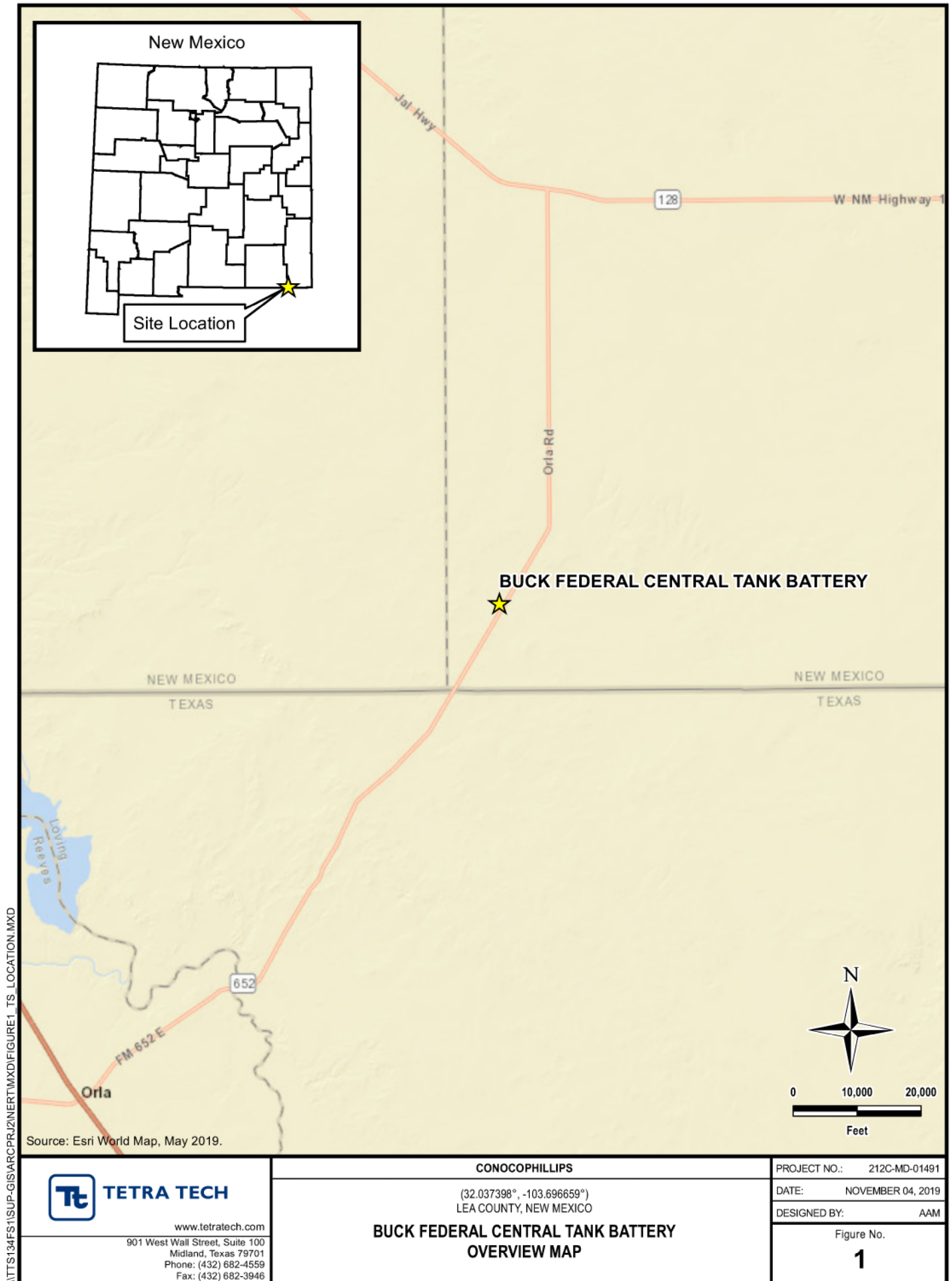
Tables:

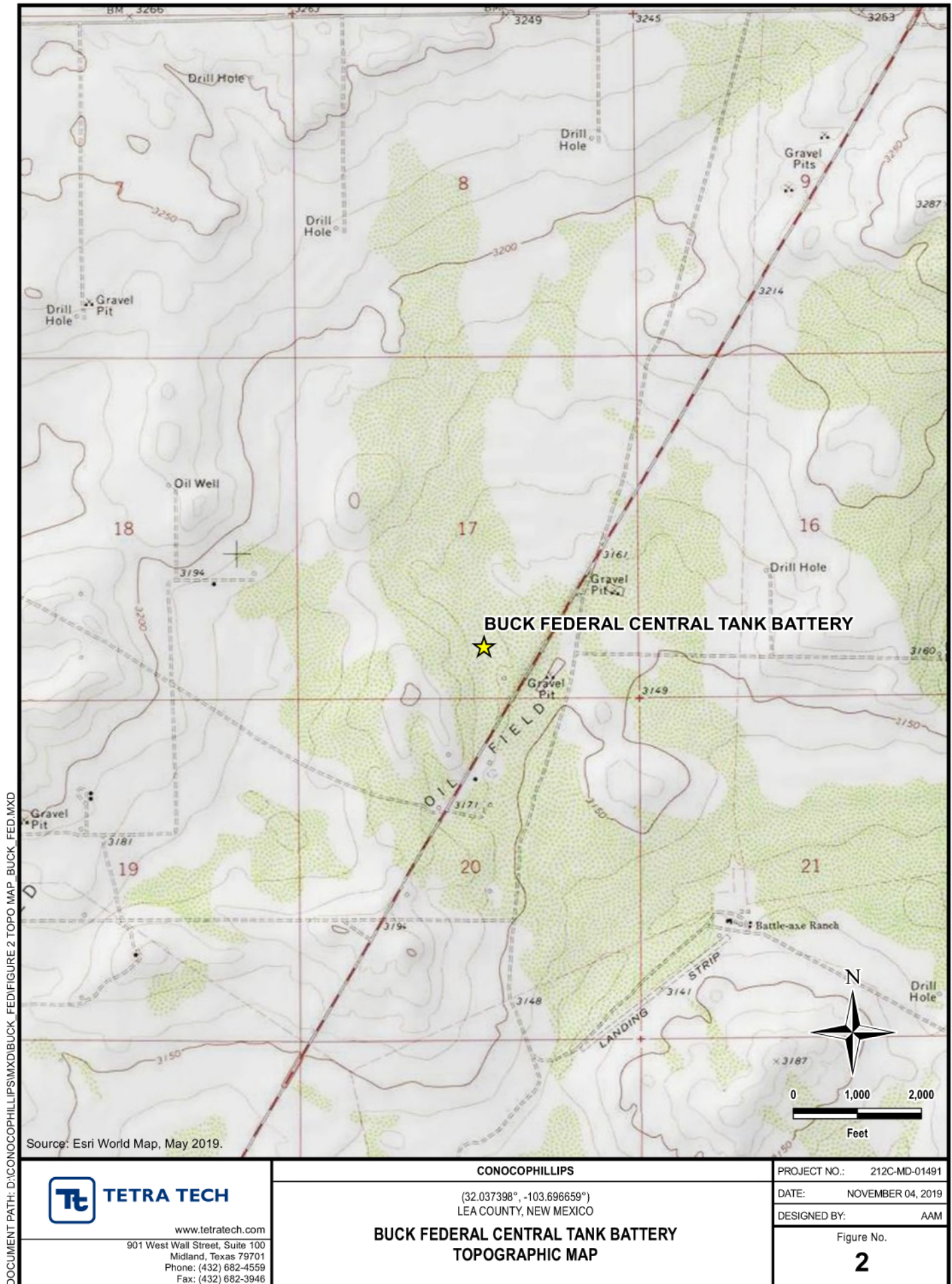
- Table 1 – Summary of Analytical Results – Initial Soil Assessment
- Table 2 – Summary of Analytical Results – Confirmation Soil Sampling
- Table 3 – Summary of Analytical Results – Horizontal Delineation

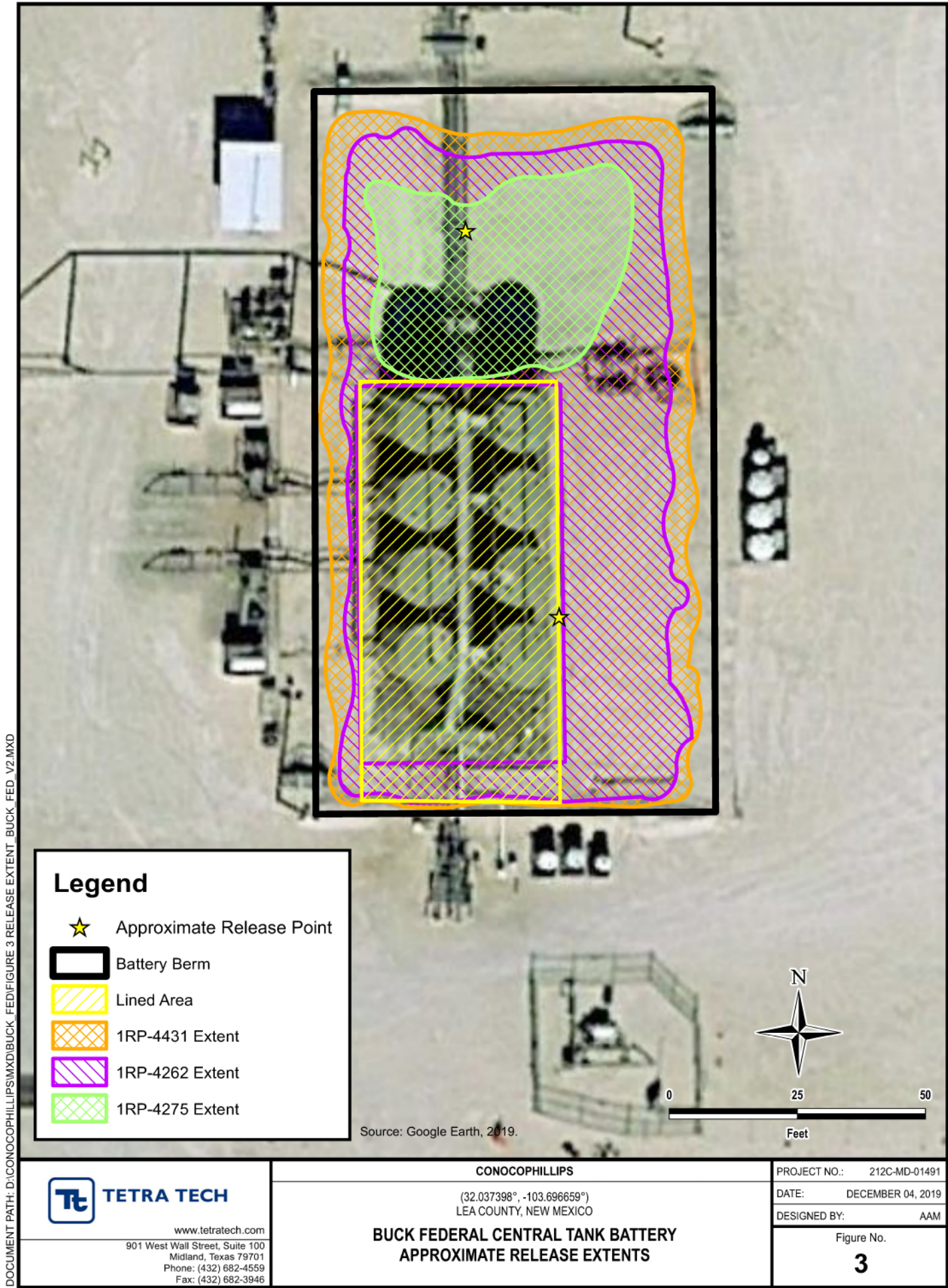
Appendices:

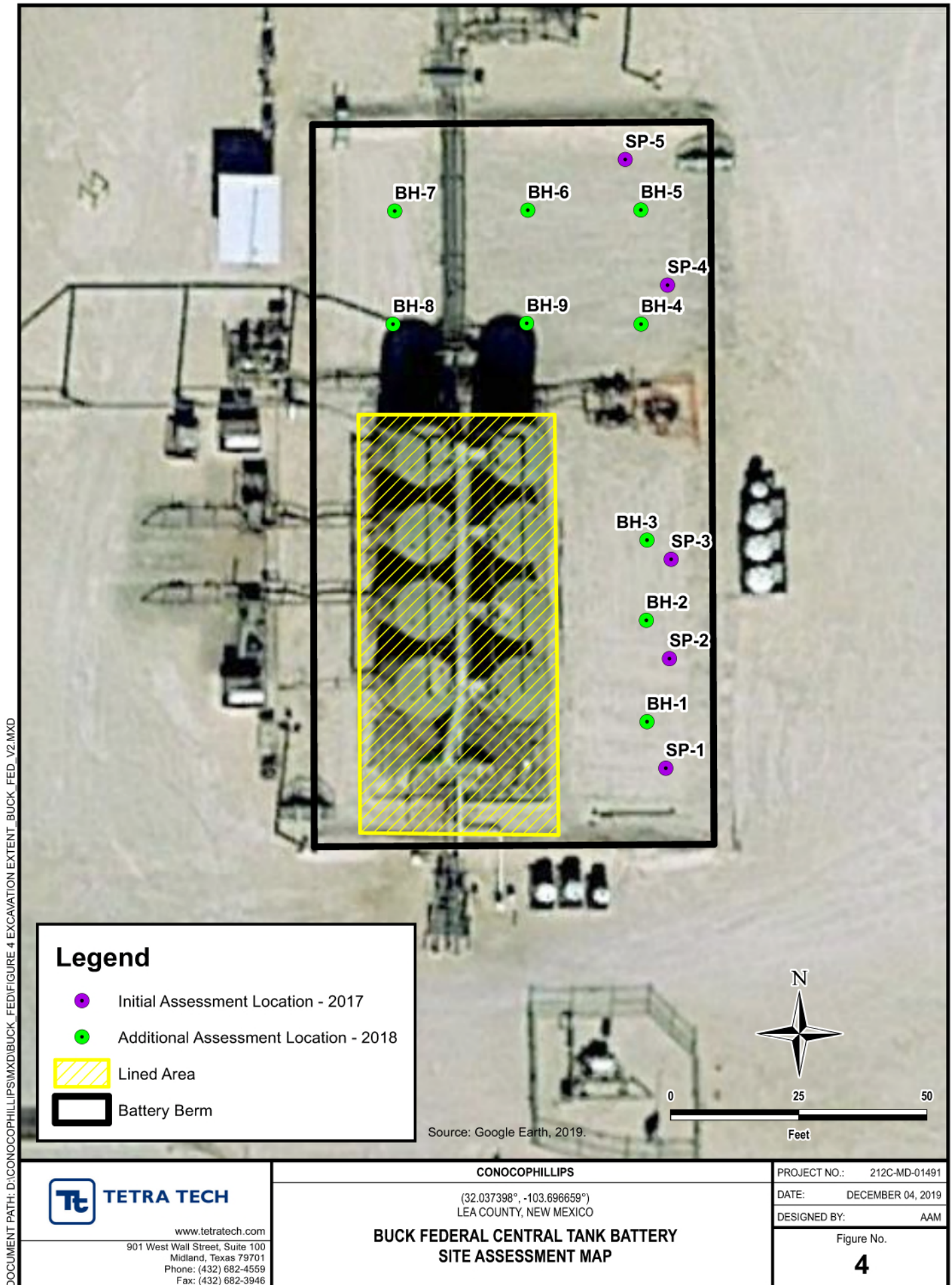
- Appendix A – C-141 Form
- Appendix B – NMOSE Groundwater Data and Karst Potential Map
- Appendix C – Laboratory Analytical Reports
- Appendix D – Waste Manifests
- Appendix E – Photographic Documentation

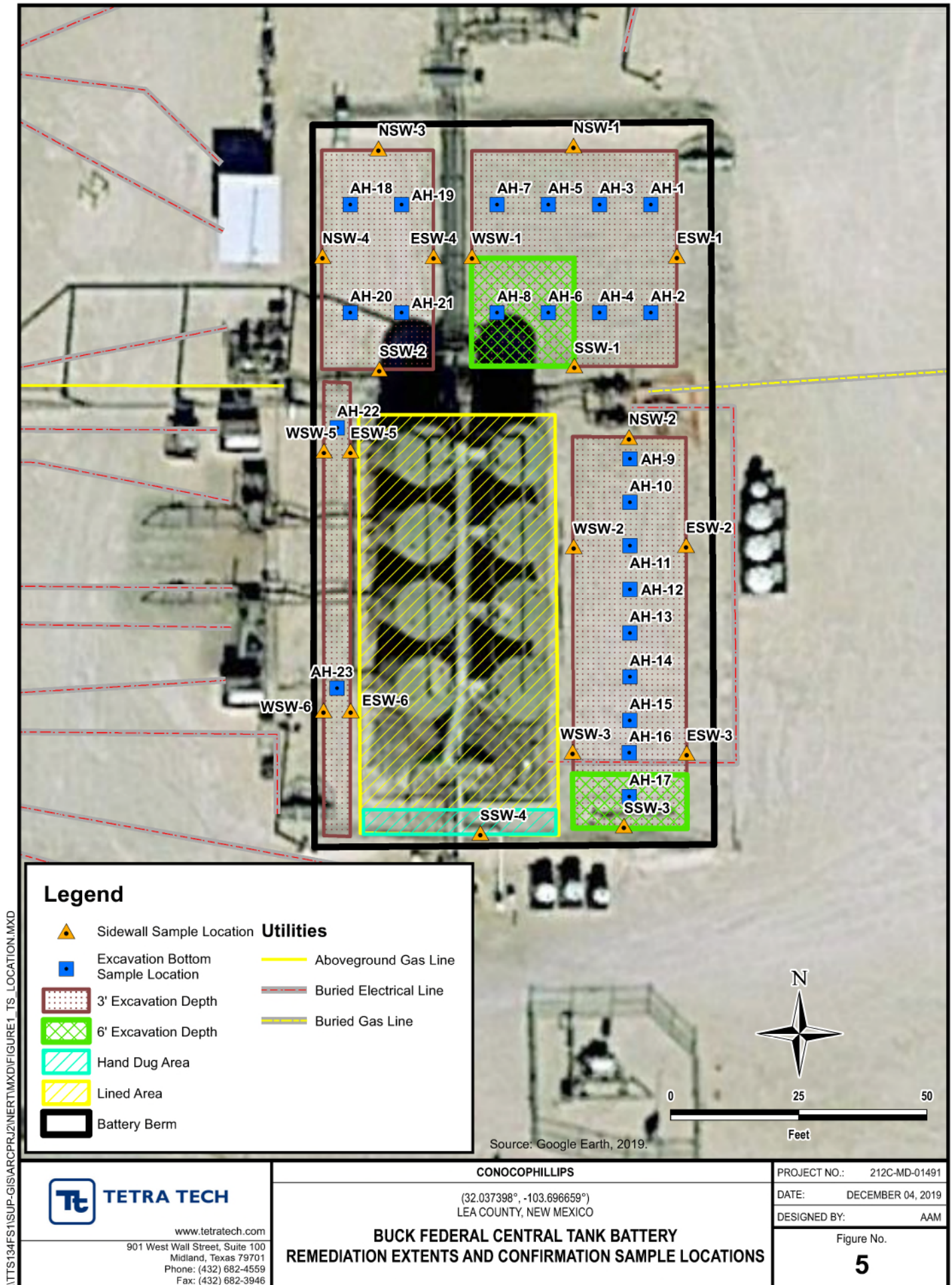
FIGURES











TETRA TECH

www.tetrattech.com

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

CONOCOPHILLIPS

(32.037398°, -103.696659°)
LEA COUNTY, NEW MEXICO

**BUCK FEDERAL CENTRAL TANK BATTERY
REMEDATION EXTENTS AND CONFIRMATION SAMPLE LOCATIONS**

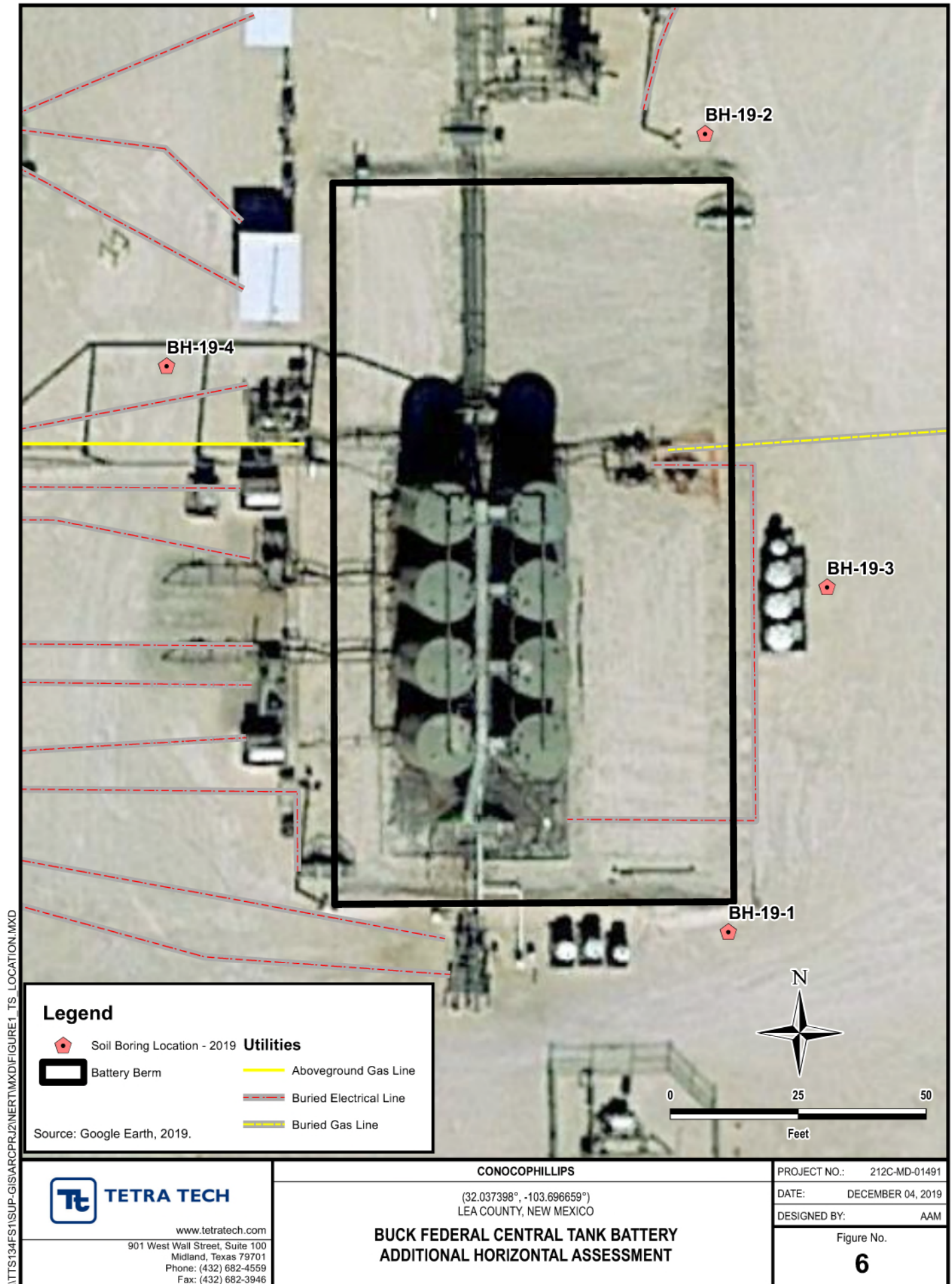
PROJECT NO.: 212C-MD-01491

DATE: DECEMBER 04, 2019

DESIGNED BY: AAM

Figure No.

5



TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESSMENT
BUCK FEDERAL CTB
1RP-4262, 1RP-4275, 1RP-4431
LEA COUNTY, NM

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

NOTES:

ft.	Feet	Shaded intervals indicate areas initially proposed for soil blending.	***	Samples arrived at laboratory outside temperature range due to shipping error
bgs	Below ground surface	Bold and italicized values indicate exceedance of 100 mg/kg limit for TPH.		
mg/kg	Milligrams per kilogram	B	The same analyte is found in the associated blank.	
ppm	Parts per million	J	The identification of the analyte is acceptable; the reported value is an estimate.	
TPH	Total Petroleum Hydrocarbons	J3	The associated batch QC was outside the established quality control range for precision.	
*	Field screening measurement	J5	The sample matrix interfered with the ability to make accurate determination; spike value is high.	
1	Method 300.0	J6	The sample matrix interfered with the ability to make accurate determination; spike is low.	
2	Method 8260B	V	The sample concentration is too high to evaluate accurate spike recoveries.	
3	TCEQ Method 1005	U	Not detected at the Sample Detection Limit (SDL).	

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
CONFIRMATION SOIL SAMPLING
BUCK FEDERAL CTB
1RP-4262, 1RP-4275, 1RP-4431
LEA COUNTY, NM

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

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
CONFIRMATION SOIL SAMPLING
BUCK FEDERAL CTB
1RP-4262, 1RP-4275, 1RP-4431
LEA COUNTY, NM

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

NOTES:

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

ft. Feet

Bold and italicized values indicate exceedance of proposed RRALs.

bgs Below ground surface

B The same analyte is found in the associated blank.

mg/kg Milligrams per kilogram

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

ppm Parts per million

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

TPH Total Petroleum Hydrocarbons

J5 The sample matrix interfered with the ability to make accurate determination; spike value is high.

* Field screening measurement

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

1 Method 300.0

V The sample concentration is too high to evaluate accurate spike recoveries.

2 Method 8260B

U Not detected at the Sample Detection Limit (SDL).

3 TCEQ Method 1005

TABLE 3
SUMMARY OF ANALYTICAL RESULTS
HORIZONTAL DELINEATION
BUCK FEDERAL CTB
1RP-4262, 1RP-4275, 1RP-4431
LEA COUNTY, NM

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

NOTES:

ft Feet

bgs Below ground surface

ppm Parts per million

mg/kg Milligrams per kilogram

NM Not measured

TPH Total Petroleum Hydrocarbons

GRO Gasoline range organics

DRO Diesel range organics

ORO Oil range organics

Bold and italicized values indicate exceedance of RRLs.

1 Method 300.0

2 Method 8260B

3 Method 8015

4 Method 8015D/GRO

B The same analyte is found in the associated blank.

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

APPENDIX A C-141 Forms

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 P	Section 17	Township 26S	Range 32E	Feet from the North	North/South Line North	Feet from the West	East/West Line West	County 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? ☒ Yes ☐ No ☐ 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? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Describe Area Affected and Cleanup Action Taken.*

A 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 ☐ IRP 4262
Date: 04/26/2016	Phone: 806-567-2790		

* Attach Additional Sheets If Necessary

nJXK1611836857

pJXK1611837010

Incident ID	
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?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
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 Title: Program Manager, Risk Management & Remediation
Signature:  Date: 1.2.2020
email: Jenni.Fortunato@cop.com Telephone: 832.486.2477

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	1RP-4262
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, Risk Management & Remediation
Signature:  Date: 1.2.2020
email: Jenni.Fortunato@cop.com Telephone: 832.486.2477

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

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 10:28 am, May 12, 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 P	Section 17	Township 26S	Range 32E	Feet from the North	North/South Line North	Feet from the West	East/West Line West	County LEA
-------------------------	----------------------	------------------------	---------------------	------------------------	---------------------------	-----------------------	------------------------	----------------------

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

NATURE OF RELEASE

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

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Describe Area Affected and Cleanup Action Taken.*

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

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

Joseph McLaughlin		OIL CONSERVATION DIVISION	
Signature:		Approved by Environmental Specialist: <i>Jamie Keyes</i>	
Printed Name: Joseph McLaughlin			
Title: HSE	Approval Date: 05/12/2016	Expiration Date: 07/12/2016	
E-mail Address: Joe.P.McLaughlin@conocophillips.com	Conditions of Approval: Discrete samples only. Delineate and remediate per NMOCD guidelines.		Attached ☐ IRP 4275
Date: 05/12/2016	Phone: 806-567-2790		

* Attach Additional Sheets If Necessary

nJXK1613337497
pJXK1613337629

Incident ID	
District RP	1RP-4275
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>125</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	1RP-4275
Facility ID	
Application ID	

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

Printed Name: jenni.fortunato@cop.com Title: Program Manager, Risk Management & Remediation
Signature:  Date: 1.2.2020
email: Jenni.Fortunato@cop.com Telephone: 832-486-2477

OCD Only

Received by: _____ Date: _____

Incident ID	
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, Risk Management & Remediation
Signature:  Date: 1.2.2020
email: Jenni.Fortunato@cop.com Telephone: 832-486-2477

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

RECEIVED

Page 28 of 392

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

By JKeyes at 12:33 pm, Sep 07, 2016

Revised August 8, 2011

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

Release Notification and Corrective Action**OPERATOR**
☒ Initial Report ☐ Final Report

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

LOCATION OF RELEASE

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

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

NATURE OF RELEASE

Type of Release: Produced Water Spill	Volume of Release: 240 BBLS	Volume Recovered: 235 BBLS
Source of Release: Produced Water tank over flow (see Lat/Long above).	Date and Hour of Occurrence 09/5/2016 10:00 pm	Date and Hour of Discovery 09/6/2016 12:00 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Jamie Keyes, NMOCD Trishia, BLM	
By Whom? Joseph McLaughlin	Date and Hour: 09/6/2016 08:15 am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Describe Area Affected and Cleanup Action Taken.*

A 240 BBL Produced Water release occurred on the ConocoPhillips Buck Federal CTB located in Lea County, New Mexico: MSO was making his rounds when he noticed water inside the berm located around the oil and water tanks. When inspecting it more closely, the water was coming from a broken water line located on the filtration line near the filters. MSO shut down the water filtration pumps and closed the line that comes from tanks to the pump. MSO called to notify supervisor and had a water truck vacuum out the produced water from the berm.

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: <i>Jamie Keyes</i>	
Printed Name: Joseph McLaughlin			
Title: HSE	Approval Date: 09/07/2016	Expiration Date: 11/07/2016	
E-mail Address: Joe.P.McLaughlin@conocophillips.com	Conditions of Approval: Discrete samples only. Delineate and remediate per NMOCD guidelines.		Attached ☐ IRP 4431
Date: 09/6/2016	Phone: 806-567-2790		

* Attach Additional Sheets If Necessary

nJXK1625144979
pJXK1625145108

Incident ID	
District RP	1RP-4431
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?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	1RP-4431
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 Title: Program Manager, Risk Management & Remediation
Signature:  Date: 1.2.2020
email: Jenni.Fortunato@cop.com Telephone: 832-486-2477

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	1RP-4431
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, Risk Management & Remediation
Signature:  Date: 1.2.2020
email: Jenni.Fortunato@cop.com Telephone: 832-486-2477

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

APPENDIX B

NMOSE Groundwater Data

Karst Potential Map



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02271	R	CUB	LE	2	3	21	26S	32E	624449	3544111*		150	125	25
C 02271 POD2		CUB	LE	3	2	3	21	26S	32E	624348	3544010*	270	250	20
C 02323		C	LE	3	2	3	21	26S	32E	624348	3544010*	405	405	0
C 03537 POD1		CUB	LE	3	2	3	21	26S	32E	624250	3543985	850		
C 03595 POD1		CUB	LE	4	2	3	21	26S	32E	624423	3544045	280	180	100

Average Depth to Water: **240 feet**

Minimum Depth: **125 feet**

Maximum Depth: **405 feet**

Record Count: 5

PLSS Search:

Section(s): 19-21

Township: 26S

Range: 32E

*UTM location was derived from PLSS - see Help

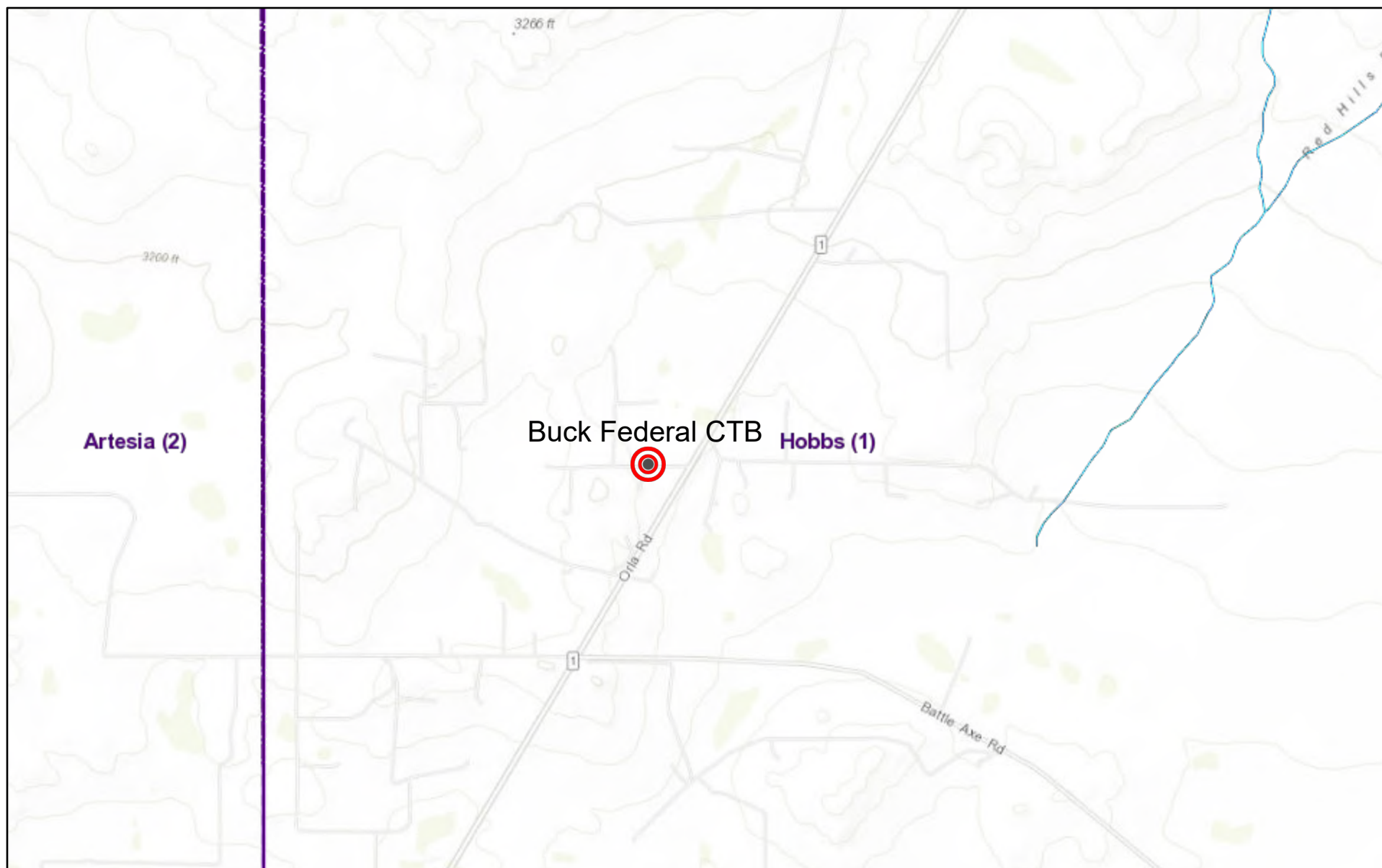
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

8/8/19 1:20 PM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

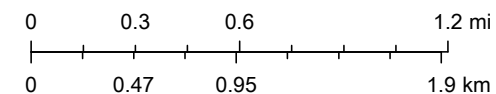
NMOCD Hydrology Map



11/13/2019 10:15:01 AM

- | | | | | | | | |
|--|----------------------|--|---------------------|--|----------------------|--|-------------|
| | Override 1 | | New Mexico Counties | | NMDOT Railroads | | OSE Streams |
| | OCD Districts | | New Mexico Towns | | OSE Water-bodies | | |
| | OCD District Offices | | NMDOT GPS ROADS | | PLJV Probable Playas | | |

1:41,284



US Census Bureau, NMDOT, Sources: Esri, HERE, Garmin, Intermap,

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. <http://nm-emnrd.maps.arcgis.com/apps/webappviewer/>: New Mexico Oil Conservation Division

Buck Federal CTB

Karst Potential Map

Legend

-  32.03722°, -103.6967
-  High
-  Low
-  Medium

32.03722°, -103.6967

1

Google Earth

© 2018 Google



1 mi

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 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 5 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:

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

Stringray 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 Duck Federal
Project Number: Concho Phillips Duck 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		116	70-130			
LCS (P7J2713-BS1) Prepared: 10/27/17 Analyzed: 10/31/17										
C6-C12	869	25.0	mg/kg wet	1000		86.9	75-125			
>C12-C28	902	25.0	"	1000		90.2	75-125			
Surrogate: 1-Chlorooctane	112		"	100		112	70-130			
Surrogate: o-Terphenyl	54.9		"	50.0		110	70-130			
LCS Dup (P7J2713-BSD1) Prepared: 10/27/17 Analyzed: 10/31/17										
C6-C12	872	25.0	mg/kg wet	1000		87.2	75-125	0.425	20	
>C12-C28	930	25.0	"	1000		93.0	75-125	3.04	20	
Surrogate: 1-Chlorooctane	114		"	100		114	70-130			
Surrogate: o-Terphenyl	55.4		"	50.0		111	70-130			
Calibration Blank (P7J2713-CCB1) Prepared: 10/27/17 Analyzed: 10/31/17										
C6-C12	24.3		mg/kg wet							
>C12-C28	14.8		"							
Surrogate: 1-Chlorooctane	97.3		"	100		97.3	70-130			
Surrogate: o-Terphenyl	58.0		"	50.0		116	70-130			
Calibration Blank (P7J2713-CCB2) Prepared: 10/27/17 Analyzed: 10/31/17										
C6-C12	22.0		mg/kg wet							
>C12-C28	20.5		"							
Surrogate: 1-Chlorooctane	103		"	100		103	70-130			
Surrogate: o-Terphenyl	56.9		"	50.0		114	70-130			

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 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

Singray 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)										Prepared & Analyzed: 10/27/17
% Moisture	10.0	0.1	%		8.0			22.2	20	
Duplicate (P7J2701-DUP2)										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)										Prepared & Analyzed: 10/30/17
Chloride	2980	11.6	mg/kg dry		3010			0.765	20	
Duplicate (P7J3001-DUP2)										Prepared & Analyzed: 10/30/17
Chloride	3490	27.2	mg/kg dry		3460			0.900	20	
Matrix Spike (P7J3001-MS1)										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

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-686-7235

Project Manager: Von Norman

Project Name: Conoco Phillips Buck Feden

Company Name STANDARD ETC

Project #: 11 11 11 11

Company Address: _____

Project Loc: _____

City/State/Zip: _____

PO #: _____

Telephone No: _____ Fax No: _____

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature: [Signature] e-mail: _____

e-mail:

[illegible]**Special Instructions:**

Relinquished by:	Date	Time	Received by:	Date	Time	Weight of Headspace Labels on container Custom seals on container Custom seals on cooler box
Van Jones	10-26-17	9:00 AM				
Relinquished by:	Date	Time	Received by:	Date	Time	Sample Hand Delivered By Sample Client Rep By Courier: UPS DHL FedEx Loric Star
Relinquished by:	Date	Time	Received by:	Date	Time	Temperature Upon Receipt Received: °C Adjusted: °C Factor
				10-26-17	9:00	1.0 °C Factor

Page 15 of 15

Rush 24 48 72 (Please call)

Preprints



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	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	5	
Sr: Sample Results	6	³ Ss
BH-1 (2-3) L1026990-01	6	
BH-1 (3-4) L1026990-02	7	⁴ Cn
BH-2 (2-3) L1026990-03	8	⁵ Sr
BH-2 (3-4) L1026990-04	9	
BH-3 (3-4) L1026990-05	10	⁶ Qc
BH-3 (4-5) L1026990-06	11	
BH-4 (2-3) L1026990-07	12	⁷ Gl
Qc: Quality Control Summary	13	⁸ Al
Total Solids by Method 2540 G-2011	13	
Wet Chemistry by Method 300.0	16	⁹ Sc
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
Clint Merritt

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

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

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

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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

Collected by
Clint Merritt

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

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

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

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

Collected by
Clint Merritt

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

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

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

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

Collected by
Clint Merritt

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

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

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

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

Collected by
Clint Merritt

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

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

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

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

Collected by
Clint Merritt

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

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

1

Cp

2

Tc

3

Ss

4

Cn

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

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

Collected by
Clint Merritt

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

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

5

Sr

6

Qc

7

Gl

8

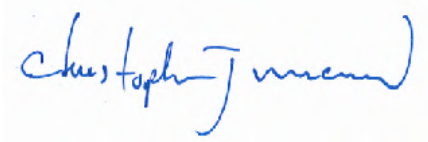
Al

9

Sc

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

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



Chris McCord
Project Manager

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

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

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

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

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	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

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

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

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

Total Solids by Method 2540 G-2011

[L1026990-04.05.06.07](#)

Method Blank (MB)

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

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
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	<u>DUP Qualifier</u>	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	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Total Solids by Method 2540 G-2011 [L1026990-01,02](#)

Method Blank (MB)

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

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
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	<u>DUP Qualifier</u>	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	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

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

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
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

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

Laboratory Control Sample (LCS)

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

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 300.0

L1026990-01,02,03,04,05,06,07

Method Blank (MB)

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

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

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

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

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

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

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

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

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

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	217	217	108	108	90.0-110			0.0549	20

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

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

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	613	7080	6160	9400	0.000	378	1	80.0-120	E V	E J3 V	41.7	20

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

L1026990-01,02,03,04,05,06,07

Method Blank (MB)

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

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

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

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

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.91	5.85	107	106	72.0-127			1.10	20
(S) a,a,a-Trifluorotoluene(FID)				111	110	77.0-120				

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

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

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	6.95	0.373	4.81	5.09	63.9	67.9	1	10.0-151			5.60	28
(S) a,a,a-Trifluorotoluene(FID)					101	102		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

L1026990-01,02

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

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

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

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

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

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

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

L1026990-03,04,05,06,07

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

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

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

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

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

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.144	ND	0.0733	0.112	50.9	77.7	1	10.0-149		J3	41.7	37
Ethylbenzene	0.144	ND	0.0927	0.148	64.3	102	1	10.0-160		J3	45.8	38
Toluene	0.144	ND	0.0884	0.134	61.3	92.7	1	10.0-156		J3	40.8	38
Xylenes, Total	0.432	ND	0.306	0.479	70.7	111	1	10.0-160		J3	44.1	38
(S) Toluene-d8					120	119		75.0-131				
(S) Dibromofluoromethane					92.1	93.1		65.0-129				
(S) a,a,a-Trifluorotoluene					94.2	95.1		80.0-120				
(S) 4-Bromofluorobenzene					94.7	97.4		67.0-138				

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

L1026990-01,02

Method Blank (MB)

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

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

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

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

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	0.125	0.108	0.0999	86.4	79.9	74.0-126			7.72	20
Xylenes, Total	0.375	0.381	0.355		94.7	72.0-127			7.07	20
(S) Toluene-d8				104	104	75.0-131				
(S) Dibromofluoromethane				110	110	65.0-129				
(S) a,a,a-Trifluorotoluene				102	103	80.0-120				
(S) 4-Bromofluorobenzene				86.4	87.6	67.0-138				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

[L1026990-01,02,03,04,05,06,07](#)

Method Blank (MB)

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

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

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

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

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	43.7	37.3	87.4	74.6	50.0-150			15.8	20
(S) o-Terphenyl				95.0	87.4	18.0-148				

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

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

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	56.8	32.6	119	101	153	121	1	50.0-150	J5		16.4	20
(S) o-Terphenyl					75.7	83.5		18.0-148				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

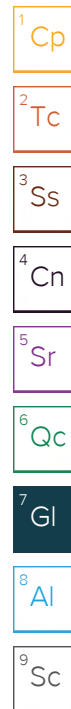
Guide to Reading and Understanding Your Laboratory Report

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.
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

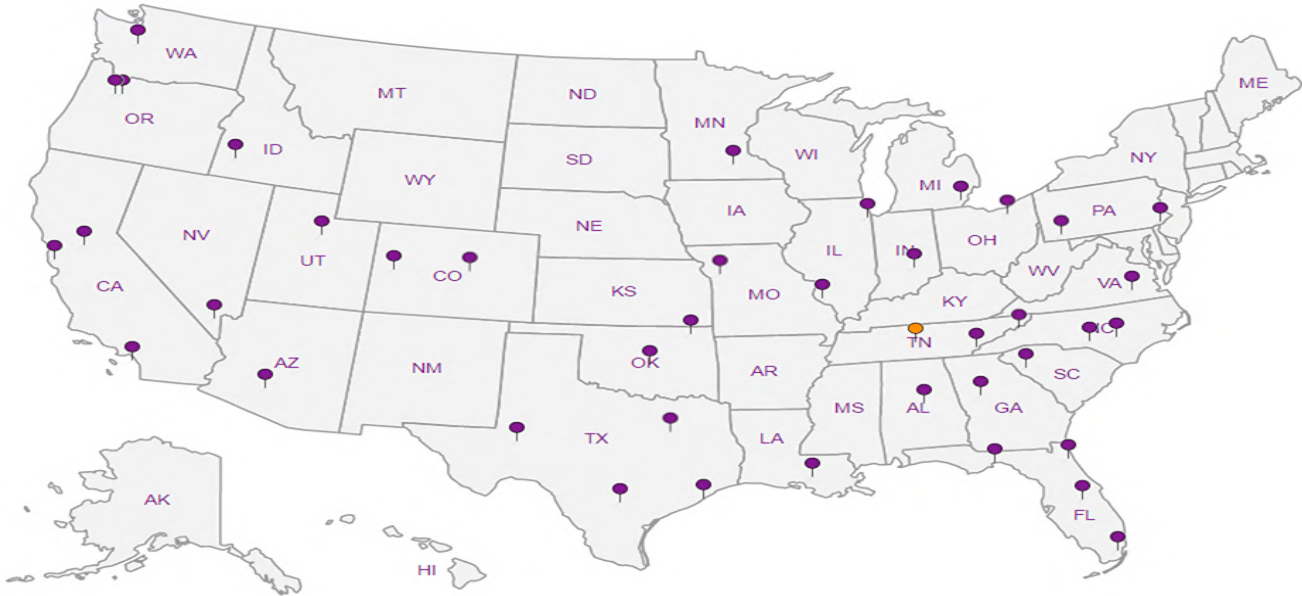
Third Party Federal Accreditations

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

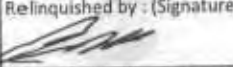
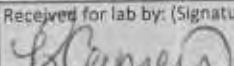
Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Released to Imaging: 4/5/2023 10:41:13 AM

Released to Imaging: 4/5/2023 10:41:13 AM

ConocoPhillips - Tetra Tech 4001 N. Big Spring St., Ste. 401 Midland, TX 79705		Billing Information: Accounts Payable 4001 N. Big Spring St., Ste. 401 Midland, TX 79705		Pres Chk		Analysis / Container / Preservative										Chain of Custody Page  12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859					
Report to: <u>Kayla Taylor</u>		Email To: <u>Kayla Taylor</u>														L# <u>1020990</u> Table # Acctnum: COPTETRA Template: Prelogin: TSR: 526 - Chris McCord PB: Shipped Via:					
Project Description: <u>Buck Feed</u>		City/State Collected: <u>La Com</u>		Lab Project #																	
Phone: 432-687-8137		Client Project # <u>00724</u>		Lab Project #																	
Fax:		<u>212C-MD-00724</u>		P.O. #																	
Collected by (print): <u>Chick Smith</u>		Site/Facility ID #		Quote #																	
Collected by (signature): <u>[Signature]</u>		Rush? (Lab MUST Be Notified) ☐ Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day		Date Results Needed																	
Immediately Packed on Ice N <u>Y</u>																					
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs															
BH-3(8-9)	Grab	SS		9/17	12:50	1	BTEX	TPH	CL-												
(9-10)					12:55	1															
(10-11)					13:00	1															
(11-12)					13:05	1															
(12-13)					13:10	1															
(13-14)					13:15	1															
BH-4(1-2)					13:25	1	X	X	X												
(2-3)					13:30	1	X	X	X												
(3-4)					13:35	1															
(4-5)					13:40	1															
* Matrix:		Remarks:																			
SS - Soil AIR - Air F - Filter																					
GW - Groundwater B - Bioassay																					
WW - WasteWater																					
DW - Drinking Water																					
OT - Other																					
Samples returned via:		RAD SCREEN: <0.5 mR/hr																			
UPS ☒ FedEx ☐ Courier ☐		Tracking # <u>4430 3429 2184 2190</u>																			
Relinquished by: (Signature) <u>[Signature]</u>		Date: <u>9/18</u>		Time: <u>15:30</u>		Received by: (Signature) <u>[Signature]</u>		Trip Blank Received: Yes (No) <u>Yes</u>		HCL / MeOH TBR											
Relinquished by: (Signature)		Date:		Time:		Received by: (Signature)		Temp: °C <u>23.2</u>		Bottles Received: <u>31</u>											
Relinquished by: (Signature)		Date:		Time:		Received for lab by: (Signature) <u>[Signature]</u>		Date: <u>9/19/18</u>		Time: <u>0845</u>		Hold:				Condition: <u>OK</u>					

ConocoPhillips - Tetra Tech 4001 N. Big Spring St., Ste. 401 Midland, TX 79705		Billing Information: Accounts Payable 4001 N. Big Spring St., Ste. 401 Midland, TX 79705		Pres Chk		Analysis / Container / Preservative										Chain of Custody Page 78 of 392  L.A.B. S.C.I.E.N.C.E.S. a subsidiary of  12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 			
Report to: <u>Kayla Taylor</u>		Email To: <u>Kayla Taylor</u>		City/State												L # <u>10W990</u>			
Project Description: <u>Buck Fed</u>		Client Project # <u>212C-MD-00724</u>		Lab Project #												Table #			
Phone: <u>432-687-8137</u>		Site/Facility ID # <u>Buck Fed</u>		P.O. #												Acctnum: <u>COPTETRA</u>			
Collected by (print): <u>Client Request</u>		Rush? (Lab MUST Be Notified)		Quote #												Template:			
Collected by (signature): 		☐ Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day		Date Results Needed												Prelogin:			
Immediately Packed on Ice <u>N</u> <u>Y</u> ☒																TSR: <u>526 - Chris McCord</u>			
																PB:			
																Shipped Via:			
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time	Concs											Remarks	
SBH-4 (5-6)		1cm6	SS		9/17	13:45	1											X	
(6-7)						13:50	1											X	
(7-8)						13:55	1											X	
(8-9)						14:00	10											X	
(9-10)						14:05	1											X	
(10-11)						14:10	1											X	
(11-12)						14:15	1											X	
(12-13)						14:20	1											X	
(13-14)						14:25	1											X	
(14-15)						14:30	1											X	
* Matrix:		Remarks:																Sample Receipt Checklist:	
SS - Soil AIR - Air F - Filter																		COC Seal Present/Intact: <u>NP</u> <u>Y</u> <u>N</u>	
GW - Groundwater B - Bioassay																		COC Signed/Accurate: <u>X</u> <u>Y</u> <u>N</u>	
WW - WasteWater																		Bottles Arrive Intact: <u>X</u> <u>Y</u> <u>N</u>	
DW - Drinking Water																		Correct bottles used: <u>X</u> <u>Y</u> <u>N</u>	
OT - Other																		Sufficient volume sent: <u>X</u> <u>Y</u> <u>N</u>	
Samples returned via:																		If Applicable	
UPS ☒ FedEx ☐ Courier ☐																		VOA Zero Headspace: <u>Y</u> <u>N</u>	
Tracking # <u>4430 3429 2189 / 2190</u>																		Preservation Correct/Checked: <u>Y</u> <u>N</u>	
Relinquished by: (Signature) 		Date: <u>9/18</u>	Time: <u>15:30</u>	Received by: (Signature) 		Trip Blank Received: Yes ☒ No ☐												HCL / MeOH TBR	
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Temp: <u>23.5</u> °C												Bottles Received: <u>39</u>	
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature) 		Date: <u>9/19/18</u>												Time: <u>0845</u>	
																		Hold:	
																		Condition: <u>NCP</u> / <u>OK</u>	

[illegible]

Kathryn L. Cason



Pace Analytical
National Center for Testing & Innovation

Login #:1026990	Client:COPIETRA	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	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	6	
Sr: Sample Results	7	³ Ss
BH-1(0-1) L1033537-01	7	
BH-1(1-2) L1033537-02	8	⁴ Cn
BH-2(0-1) L1033537-03	9	⁵ Sr
BH-2(1-2) L1033537-04	10	
BH-3(0-1) L1033537-05	11	⁶ Qc
BH-3(1-2) L1033537-06	12	
BH-4(0-1) L1033537-07	13	⁷ Gl
BH-4(1-2) L1033537-08	14	⁸ Al
BH-5(0-1) L1033537-09	15	
BH-6(0-1) L1033537-10	16	⁹ Sc
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	Collected date/time	Received date/time
			Clint Merritt	10/04/18 10:00	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

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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

			Collected by	Collected date/time	Received date/time
			Clint Merritt	10/04/18 10:05	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	Collected date/time	Received date/time
			Clint Merritt	10/04/18 10:10	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	Collected date/time	Received date/time
			Clint Merritt	10/04/18 10:15	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	Collected date/time	Received date/time
			Clint Merritt	10/04/18 10:20	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	Collected date/time	Received date/time
			Clint Merritt	10/04/18 10:25	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

¹Cp²Tc³Ss⁴Cn

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

			Collected by	Collected date/time	Received date/time
			Clint Merritt	10/04/18 10:30	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

⁵Sr⁶Qc⁷Gl⁸Al

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

			Collected by	Collected date/time	Received date/time
			Clint Merritt	10/04/18 10:35	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

⁹Sc

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

			Collected by	Collected date/time	Received date/time
			Clint Merritt	10/04/18 11:00	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	Collected date/time	Received date/time
			Clint Merritt	10/04/18 11:20	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

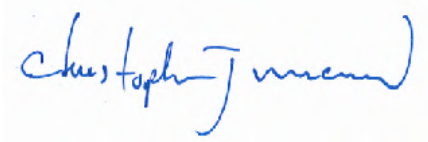
BH-9(0-1) L1033537-14 Solid

			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

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

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 date / time	Batch
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 date / time	Batch
Chloride	717		0.934	10.0	11.7	1	10/16/2018 04:21	WG1179230

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

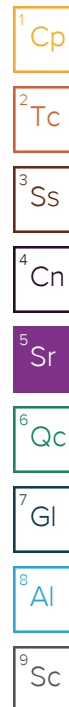
Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	2.57		0.0255	0.100	0.117	1	10/15/2018 16:02	WG1180849
(S) a,a,a-Trifluorotoluene(FID)	87.5				77.0-120		10/15/2018 16:02	WG1180849

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

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis 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

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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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	Batch
	%			date / time	
Total Solids	81.2		1	10/12/2018 10:53	WG1179982

Wet Chemistry by Method 300.0

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

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

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

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

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

Semi-Volatile Organic Compounds (GC) by Method 8015

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

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

L1033537

Total Solids by Method 2540 G-2011

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

Wet Chemistry by Method 300.0

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

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

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

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

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

Semi-Volatile Organic Compounds (GC) by Method 8015

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

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

Total Solids by Method 2540 G-2011 [L1033537-01,02,03,04,05,06,07,08,09,10](#)

Method Blank (MB)

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

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
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

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

Laboratory Control Sample (LCS)

(LCS) R3350560-2 10/12/18 11:06

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011

[L1033537-11,12,13,14,15](#)

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	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 300.0

[L1033537-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15](#)

Method Blank (MB)

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

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

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

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

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Chloride	200	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

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	556	1840	2420	2400	104	99.4	1	80.0-120	E	E	1.11	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1033537-01,02,05,06,07,09,14

Method Blank (MB)

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

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	107			77.0-120

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

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

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	6.37	6.35	116	115	72.0-127			0.384	20
(S) a,a,a-Trifluorotoluene(FID)				108	107	77.0-120				

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

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

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	6.73	332	397	392	38.4	35.7	25	10.0-151	E	E	1.14	28
(S) a,a,a-Trifluorotoluene(FID)					84.7	84.4		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

[L1033537-03,04,08,10,11,12,13,15](#)

Method Blank (MB)

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

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

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

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

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	6.06	6.05	110	110	72.0-127			0.0541	20
(S) a,a,a-Trifluorotoluene(FID)				105	105	77.0-120				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

L1033537-01,02,03,04,05,06,07,08,09,10,11,12

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				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1033537-13,14,15

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

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

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.121	0.118	96.6	94.3	70.0-123			2.43	20
Ethylbenzene	0.125	0.104	0.103	83.3	82.4	74.0-126			0.997	20
Toluene	0.125	0.113	0.112	90.4	89.8	75.0-121			0.629	20
Xylenes, Total	0.375	0.308	0.304	82.1	81.1	72.0-127			1.31	20
(S) Toluene-d8				107	108	75.0-131				
(S) Dibromofluoromethane				91.5	89.6	65.0-129				
(S) a,a,a-Trifluorotoluene				87.0	87.0	80.0-120				
(S) 4-Bromofluorobenzene				92.3	90.7	67.0-138				

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

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

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.135	U	0.151	0.149	112	111	1	10.0-149			1.38	37
Ethylbenzene	0.135	U	0.143	0.140	106	104	1	10.0-160			1.74	38
Toluene	0.135	U	0.151	0.143	112	106	1	10.0-156			5.78	38
Xylenes, Total	0.405	U	0.416	0.399	103	98.4	1	10.0-160			4.24	38
(S) Toluene-d8					110	106		75.0-131				
(S) Dibromofluoromethane					84.0	87.6		65.0-129				
(S) a,a,a-Trifluorotoluene					80.6	82.0		80.0-120				
(S) 4-Bromofluorobenzene					103	86.6		67.0-138				

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

[L1033537-01,02,03,04](#)

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	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 L1033537-01,02,03,04

Method Blank (MB)

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

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

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

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

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	32.8	34.0	65.6	68.0	50.0-150			3.59	20
(S) o-Terphenyl				77.3	85.9	18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 [L1033537-05,06,07,08,09,10,11,12,13,14,15](#)

Method Blank (MB)

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

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

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

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

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	41.8	41.7	83.6	83.4	50.0-150			0.240	20
(S) o-Terphenyl				102	106	18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

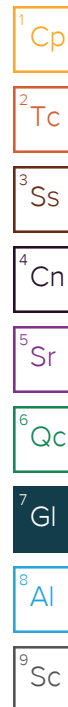
Guide to Reading and Understanding Your Laboratory Report

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.



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	TN2000002
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

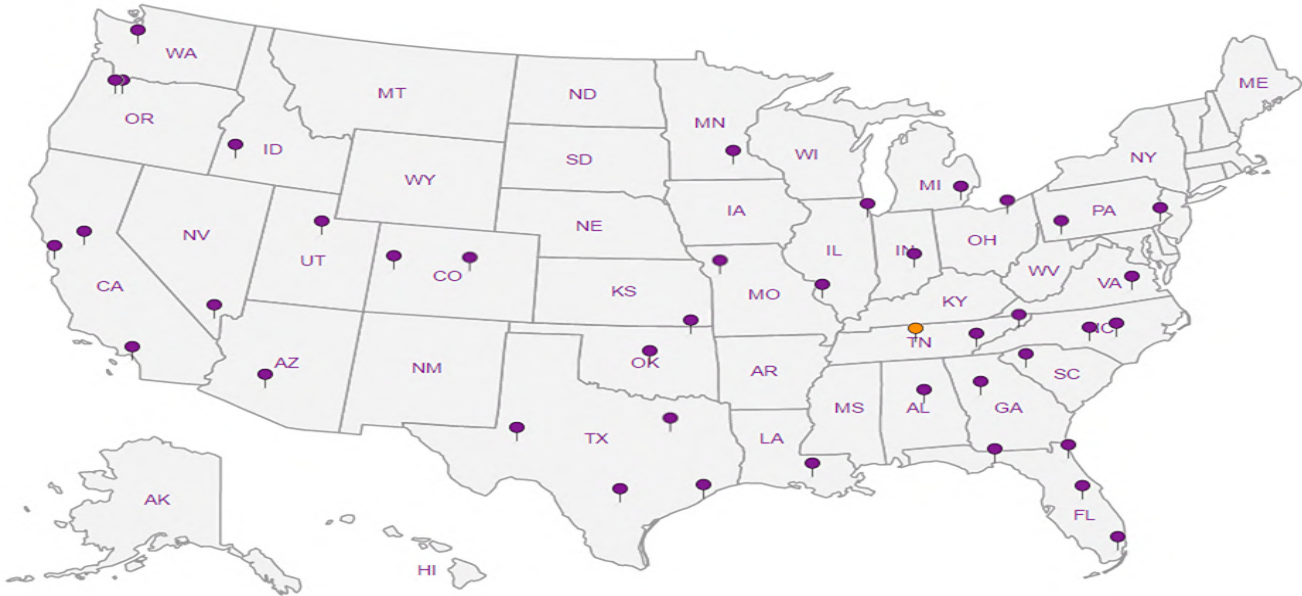
Third Party Federal Accreditations

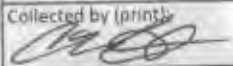
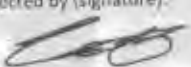
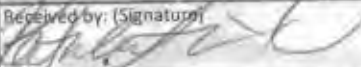
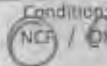
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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.



ConocoPhillips - Tetra Tech 4001 N. Big Spring St., Ste. 401 Midland, TX 79705		Billing Information: Accounts Payable 4001 N. Big Spring St., Ste. 401 Midland, TX 79705		Pres Chk		Analysis / Container / Preservative										Chain of Custody  12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5555 Fax: 615-758-5859						
Report to: <i>Kayla Taylor</i>		Email To: <i>Kayla Taylor</i>														L# <i>L1033531</i> D195						
Project Description: <i>Buck Fed</i>		City/State Collected:		Lab Project #												Accnum: COPTETRA						
Phone: 432-687-8137 Fax:		Client Project # <i>212C-ND-01358</i>		P.O. #												Template:						
Collected by (print): 		Site/Facility ID # <i>Buck Fed</i>		Quote #												Prelogin:						
Collected by (signature): 		Rush? (Lab MUST Be Notified) ☐ Same Day ☐ Five Day ☐ Next Day ☒ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day		Date Results Needed												TSR: 526 - Chris McCord						
Immediately Packed on Ice: N ☐ Y ☒																PB:						
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs											Shipped Via:				
<i>BH-1(0-1)</i>		-	<i>SS</i>	-	<i>10/4</i>	<i>10:00</i>	1	X	X	X											Remarks	
<i>BH-1(1-2)</i>		-		-		<i>10:05</i>	1	X	X	X											Sample # (lab only)	
<i>BH-2(0-1)</i>		-		-		<i>10:10</i>	1	X	X	X											-01	
<i>BH-2(1-2)</i>		-		-		<i>10:15</i>	1	X	X	X											-02	
<i>BH-3(0-1)</i>		-		-		<i>10:20</i>	1	X	X	X											-03	
<i>BH-3(1-2)</i>		-		-		<i>10:25</i>	1	X	X	X											-04	
<i>BH-4(0-1)</i>		-		-		<i>10:30</i>	1	X	X	X											-05	
<i>BH-4(1-2)</i>		-		-		<i>10:35</i>	1	X	X	X											-06	
<i>BH-5(0-1)</i>		-		-	<i>10/4</i>	<i>11:00</i>	1	X	X	X											-07	
<i>BH-6(0-1)</i>		-	<i>V</i>	-		<i>11:20</i>	1	X	X	X											-08	
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - Wastewater DW - Drinking Water OT - Other		Remarks: RAD SCHEDULE <i>06</i> <i>10/9/14</i>		pH _____ Temp _____ Flow _____ Other _____		Sample Receipt Checklist: OGC Seal Present/Intact: ☒ Y ☐ N OGC Signed/Accurate: ☒ Y ☐ N Bottles arrive intact: ☒ Y ☐ N Correct bottles used: ☒ Y ☐ N Sufficient volume sent: ☒ Y ☐ N If Applicable VOA Zero Headspace: ☒ Y ☐ N Preservation Correct/Checked: ☒ Y ☐ N																
Samples returned via: UPS ☐ FedEx ☐ Courier ☐		Tracking # <i>4430 3429 3461</i>		Received by (Signature): 		Trip Blank Received: Yes ☒ No ☐ HCL / MeOH TBR										If preservation required by Login: Date/Time						
Relinquished by: (Signature) 		Date: <i>10/5</i>		Time: <i>15:00</i>		Temp: <i>-22 °C</i> Bottles Received: <i>1491479 15-402</i>										Hold:						
Relinquished by: (Signature)		Date:		Time:		Received for lab by: (Signature) 										Date: <i>10/9/18</i> Time: <i>8:45</i>		Condition: 				

Released to Imaging: 4/5/2023 10:41:13 AM

Katie Ingram



Login #: L1033537	Client: COPETRA	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	
Improper temperature	Chain of custody is incomplete	If Broken Container: Insufficient packing material around container Insufficient packing material inside cooler
Improper container type	Please specify Metals requested.	
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: Received by: Date/Time: Temp./Cont Rec./pH: Carrier: Tracking#
Broken container	Client did not "X" analysis.	
Broken container.	Chain of Custody is missing	
Sufficient sample remains		

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	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	6	
Sr: Sample Results	7	³ Ss
AH-1 (3') L1045249-01	7	
AH-2 (3') L1045249-02	8	⁴ Cn
AH-3 (3') L1045249-03	9	⁵ Sr
AH-4 (3') L1045249-04	10	
AH-5 (3') L1045249-05	11	⁶ Qc
AH-6 (3') L1045249-06	12	
AH-7 (3') L1045249-07	13	⁷ Gl
AH-8 (3') L1045249-08	14	⁸ Al
NSW-1 L1045249-09	15	
SSW-1 L1045249-10	16	⁹ Sc
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	

AH-1 (3') L1045249-01 Solid

			Collected by Devin Dominguez	Collected date/time 11/14/18 09:30	Received date/time 11/16/18 07:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199499	1	11/24/18 09:08	11/24/18 10:10	JD
Wet Chemistry by Method 300.0	WG1198190	1	11/17/18 15:00	11/20/18 04:29	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1201380	1	11/25/18 21:39	11/26/18 13:34	JAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 12:35	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1199763	1	11/20/18 12:40	11/21/18 15:41	KME
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1199763	5	11/20/18 12:40	11/21/18 22:07	KME

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

AH-2 (3') L1045249-02 Solid

			Collected by Devin Dominguez	Collected date/time 11/14/18 09:40	Received date/time 11/16/18 07:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199499	1	11/24/18 09:08	11/24/18 10:10	JD
Wet Chemistry by Method 300.0	WG1198190	5	11/17/18 15:00	11/20/18 04:38	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	1	11/19/18 10:30	11/20/18 19:29	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 12:54	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	2	11/25/18 00:51	11/27/18 00:04	KME

AH-3 (3') L1045249-03 Solid

			Collected by Devin Dominguez	Collected date/time 11/14/18 09:46	Received date/time 11/16/18 07:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199499	1	11/24/18 09:08	11/24/18 10:10	JD
Wet Chemistry by Method 300.0	WG1198190	1	11/17/18 15:00	11/20/18 04:47	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	1	11/19/18 10:30	11/20/18 19:54	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 13:13	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	1	11/25/18 00:51	11/26/18 21:49	KME

AH-4 (3') L1045249-04 Solid

			Collected by Devin Dominguez	Collected date/time 11/14/18 09:58	Received date/time 11/16/18 07:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199499	1	11/24/18 09:08	11/24/18 10:10	JD
Wet Chemistry by Method 300.0	WG1198190	1	11/17/18 15:00	11/20/18 05:13	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	1	11/19/18 10:30	11/20/18 20:18	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 13:32	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	1	11/25/18 00:51	11/26/18 22:09	KME
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	5	11/25/18 00:51	11/27/18 23:09	AAT

AH-5 (3') L1045249-05 Solid

			Collected by Devin Dominguez	Collected date/time 11/14/18 10:00	Received date/time 11/16/18 07:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1199499	1	11/24/18 09:08	11/24/18 10:10	JD
Wet Chemistry by Method 300.0	WG1198190	5	11/17/18 15:00	11/20/18 05:22	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1199157	1	11/19/18 10:30	11/20/18 20:42	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1198957	1	11/19/18 10:30	11/19/18 13:51	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1198511	5	11/25/18 00:51	11/27/18 01:22	KME

AH-6 (3') L1045249-06 Solid

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

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

¹ Cp² Tc³ Ss⁴ Cn

AH-7 (3') L1045249-07 Solid

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

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

⁵ Sr⁶ Qc⁷ Gl⁸ Al

AH-8 (3') L1045249-08 Solid

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

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

NSW-1 L1045249-09 Solid

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

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

SSW-1 L1045249-10 Solid

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

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

⁹ Sc

ESW-1 L1045249-11 Solid

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

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

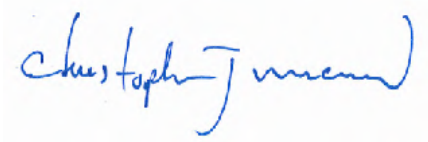
9Sc

WSW-1 L1045249-12 Solid

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

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

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



Chris McCord
Project Manager

- 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

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

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	Batch
	%			date / time	
Total Solids	92.1		1	11/20/2018 15:24	WG1199502

Wet Chemistry by Method 300.0

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

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

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

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

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

Semi-Volatile Organic Compounds (GC) by Method 8015

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

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	Batch
	%			date / time	
Total Solids	90.5		1	11/20/2018 15:24	WG1199502

Wet Chemistry by Method 300.0

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

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

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

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

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

Semi-Volatile Organic Compounds (GC) by Method 8015

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

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

L1045249

Total Solids by Method 2540 G-2011

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

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	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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Total Solids by Method 2540 G-2011 [L1045249-01,02,03,04,05,06,07](#)

Method Blank (MB)

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

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
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

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

Laboratory Control Sample (LCS)

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

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011 [L1045249-08,09,10,11,12](#)

Method Blank (MB)

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

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
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

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

Laboratory Control Sample (LCS)

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

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 300.0

L1045249-01,02,03,04,05,06,07,08,09,10

Method Blank (MB)

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

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

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

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

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

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

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

Laboratory Control Sample (LCS)

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

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

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

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

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

Wet Chemistry by Method 300.0 [L1045249-11,12](#)

Method Blank (MB)

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

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

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

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

Laboratory Control Sample (LCS)

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

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

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

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

L1045249-02,03,04,05,06,07,08,09,10,11,12

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	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120

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

(LCS) R3362662-1 11/20/18 14:56 • (LCSD) R3362662-2 11/20/18 15:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	6.53	6.50	119	118	72.0-127			0.494	20
(S) a,a,a-Trifluorotoluene(FID)				106	106	77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1045249-01

Method Blank (MB)

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

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

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

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

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	6.10	5.99	111	109	72.0-127			1.76	20
(S) a,a,a-Trifluorotoluene(FID)				105	104	77.0-120				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

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

L1045249-01,02,03,04,05,06,07,08,09,10,11,12

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			

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

L1045249-02,03,04,05,06,07,08,09,10,11,12

Method Blank (MB)

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

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

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

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

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	53.1	50.8	106	102	50.0-150			4.43	20
(S) o-Terphenyl				117	113	18.0-148				

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

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

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

Sample Narrative:

OS: Surrogate failure due to matrix interference

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 [L1045249-01](#)

Method Blank (MB)

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

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

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

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

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	42.0	44.0	84.0	88.0	50.0-150			4.65	20
(S) o-Terphenyl				140	143	18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

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 %	RPD Limits %
Extractable Petroleum Hydrocarbon	50.0	33.6	35.9	67.2	71.8	50.0-150			6.62	20
C10-C28 Diesel Range	50.0	36.2	38.5	72.4	77.0	50.0-150			6.16	20
(S) o-Terphenyl				81.4	80.5	18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

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.
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.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

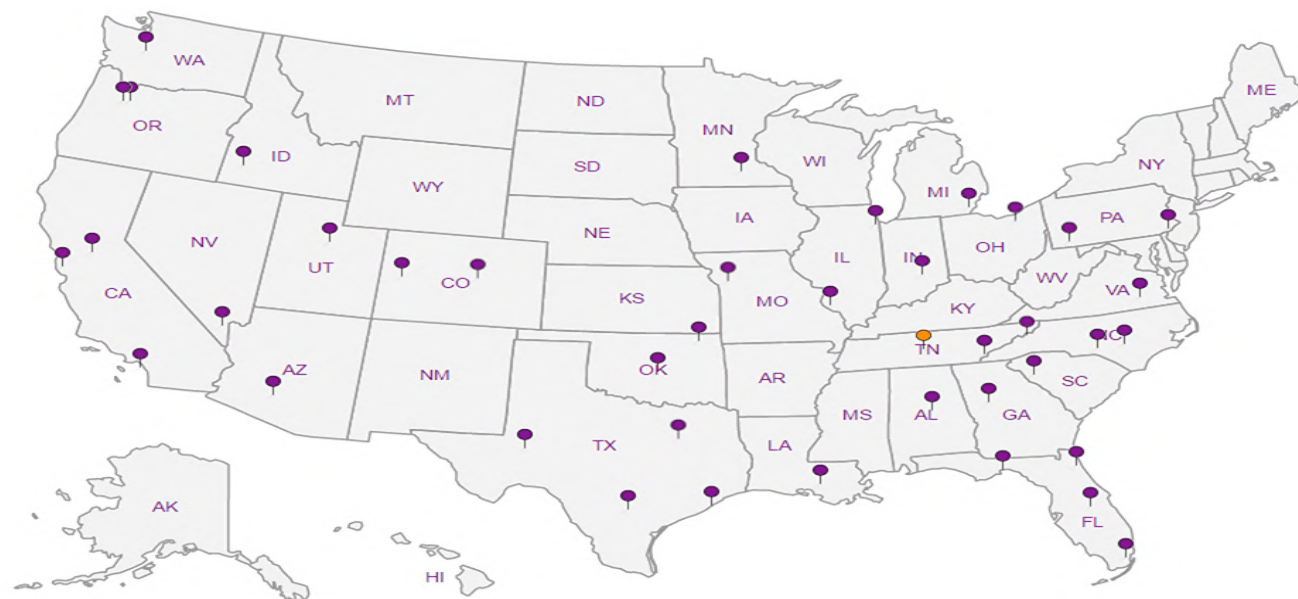
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

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		

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

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



F093

Analysis Request of Chain of Custody Record

Page 1 of 2



Tetra Tech, Inc.

900 West Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4558
Fax (432) 682-3946

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

ANALYSIS REQUEST

(Circle or Specify Method No.)

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

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX			PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)
		YEAR: 2018		WATER	SOIL		HCL	HNO ₃	ICE	None		
		DATE	TIME									
21045249												
-01	AH-1 (3')	11/14/2018	930		X				X		1	N
02	AH-2 (3')	11/14/2018	940		X				X		1	N
03	AH-3 (3')	11/14/2018	946		X				X		1	N
04	AH-4 (3')	11/14/2018	958		X				X		1	N
05	AH-5 (3')	11/14/2018	1000		X				X		1	N
06	AH-6 (3')	11/14/2018	1015		X				X		1	N
07	AH-7 (3')	11/14/2018	1035		X				X		1	N
08	AH-8 (3')	11/14/2018	1050		X				X		1	N
09	NSW-1	11/14/2018	1105		X				X		1	N
10	SSW-1	11/14/2018	1120		X				X		1	N

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

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

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

T-C = 12:40z

0.3 to 1 = 0.9 g

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form			
Client:	CORTETRA	SDG#	21045249
Cooler Received/Opened On: 11/ 6/18	Temperature:	0-4	
Received By: Patrick Nshizirungu			
Signature: 			
Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	/		
COC Signed / Accurate?		/	
Bottles arrive intact?		/	
Correct bottles used?		/	
Sufficient volume sent?		/	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			



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



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 Cp² Tc³ Ss⁴ 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 Sr⁶ Qc⁷ Gl⁸ 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 Cp² Tc³ Ss⁴ 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 Sr⁶ Qc⁷ Gl⁸ 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 Cp² Tc³ Ss⁴ 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 Sr⁶ Qc⁷ Gl⁸ Al⁹ 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 Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

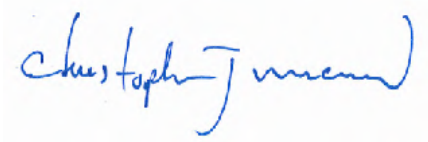
WSW-4 L1046071-17 Solid

				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

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

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

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

5 Sr

6 Qc

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

7 Gl

8 Al

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

9 Sc

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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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 date / time	Batch
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

Total Solids by Method 2540 G-2011 [L1046071-01,02,03](#)

Method Blank (MB)

(MB) R3363176-1 11/26/18 14:18

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
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

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	88.8	89.5	1	0.823		10

Laboratory Control Sample (LCS)

(LCS) R3363176-2 11/26/18 14:18

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011 [L1046071-04,05,06,07,08,09,10,11,12,13](#)

Method Blank (MB)

(MB) R3363174-1 11/26/18 14:06

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
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

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	94.5	94.3	1	0.310		10

Laboratory Control Sample (LCS)

(LCS) R3363174-2 11/26/18 14:06

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3363173-1 11/26/18 13:52

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

L1046071-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1046071-17 11/26/18 13:52 • (DUP) R3363173-3 11/26/18 13:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	90.9	89.9	1	1.18		10

Laboratory Control Sample (LCS)

(LCS) R3363173-2 11/26/18 13:52

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 300.0

L1046071-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15,16,17

Method Blank (MB)

(MB) R3363335-1 11/27/18 08:48

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1045558-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1045558-04 11/27/18 10:05 • (DUP) R3363335-3 11/27/18 10:14

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

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	1440	1440	5	0.491		20

Laboratory Control Sample (LCS)

(LCS) R3363335-2 11/27/18 08:57

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

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	574	377	996	1050	108	118	1	80.0-120			5.69	20

Wet Chemistry by Method 300.0

L1046071-18

Method Blank (MB)

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

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

L1046071-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1046071-18 11/27/18 18:00 • (DUP) R3363485-4 11/27/18 18:08

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1360	1530	5	12.2		20

L1046466-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1046466-05 11/28/18 01:34 • (DUP) R3363485-8 11/28/18 01:43

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3090	3510	5	12.8		20

Laboratory Control Sample (LCS)

(LCS) R3363485-3 11/27/18 17:42

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

L1046455-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046455-01 11/27/18 18:17 • (MS) R3363485-5 11/27/18 18:26 • (MSD) R3363485-6 11/27/18 18:35

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	610	4320	5170	5020	139	115	1	80.0-120	EV	E	2.84	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1046071-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15,16,17,18

Method Blank (MB)

(MB) R3363238-3 11/21/18 20:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.4			77.0-120

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

(LCS) R3363238-1 11/21/18 19:03 • (LCSD) R3363238-2 11/21/18 19:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.53	5.58	101	102	72.0-127			0.928	20
(S) a,a,a-Trifluorotoluene(FID)				104	104	77.0-120				

L1046071-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046071-18 11/22/18 04:08 • (MS) R3363238-4 11/22/18 04:32 • (MSD) R3363238-5 11/22/18 04:56

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	6.09	439	829	799	64.2	59.1	100	10.0-151			3.79	28
(S) a,a,a-Trifluorotoluene(FID)					102	101		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1046071-01,02,03,04

Method Blank (MB)

(MB) R3362689-2 11/21/18 13:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	100			75.0-131
(S) Dibromofluoromethane	91.5			65.0-129
(S) a,a,a-Trifluorotoluene	110			80.0-120
(S) 4-Bromofluorobenzene	100			67.0-138

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3362689-1 11/21/18 11:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.106	84.9	70.0-123	
Ethylbenzene	0.125	0.114	91.1	74.0-126	
Toluene	0.125	0.115	92.1	75.0-121	
Xylenes, Total	0.375	0.349	93.1	72.0-127	
(S) Toluene-d8			95.2	75.0-131	
(S) Dibromofluoromethane			94.9	65.0-129	
(S) a,a,a-Trifluorotoluene			112	80.0-120	
(S) 4-Bromofluorobenzene			96.2	67.0-138	

L1045482-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1045482-19 11/21/18 19:00 • (MS) R3362689-3 11/21/18 19:56 • (MSD) R3362689-4 11/21/18 20:15

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	1.94	7.35	9.57	54.1	76.3	80	10.0-149			26.3	37
Ethylbenzene	0.125	23.4	30.4	34.6	70.1	112	80	10.0-160			12.9	38
Toluene	0.125	25.9	32.1	35.7	62.1	98.2	80	10.0-156			10.6	38
Xylenes, Total	0.375	141	166	181	83.7	131	80	10.0-160			8.13	38
(S) Toluene-d8					101	99.7		75.0-131				
(S) Dibromofluoromethane					96.7	93.8		65.0-129				
(S) a,a,a-Trifluorotoluene					111	112		80.0-120				
(S) 4-Bromofluorobenzene					98.3	95.8		67.0-138				

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

L1046071-05,06,07,08,09,10,11,12,13,14,15,16,17,18

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3363004-1 11/21/18 18:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.0924	74.0	70.0-123	
Ethylbenzene	0.125	0.129	103	74.0-126	
Toluene	0.125	0.101	80.9	75.0-121	
Xylenes, Total	0.375	0.383	102	72.0-127	
(S) Toluene-d8			105	75.0-131	
(S) Dibromofluoromethane			99.5	65.0-129	
(S) a,a,a-Trifluorotoluene			107	80.0-120	
(S) 4-Bromofluorobenzene			104	67.0-138	

L1046071-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046071-15 11/22/18 00:21 • (MS) R3363004-3 11/22/18 02:22 • (MSD) R3363004-4 11/22/18 02:42

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.139	U	0.0481	0.113	34.7	81.5	1	10.0-149		J3	80.5	37
Ethylbenzene	0.139	U	0.0714	0.168	51.5	121	1	10.0-160		J3	80.6	38
Toluene	0.139	U	0.0584	0.139	42.1	99.9	1	10.0-156		J3	81.4	38
Xylenes, Total	0.416	U	0.226	0.496	54.3	119	1	10.0-160		J3	74.7	38
(S) Toluene-d8					110	111		75.0-131				
(S) Dibromofluoromethane					94.5	90.7		65.0-129				
(S) a,a,a-Trifluorotoluene					107	107		80.0-120				
(S) 4-Bromofluorobenzene					111	110		67.0-138				

Semi-Volatile Organic Compounds (GC) by Method 8015 [L1046071-01,02,03,04,05,06,07,08,09,10,11](#)

Method Blank (MB)

(MB) R3362656-1 11/24/18 16:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	84.4			18.0-148

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

(LCS) R3362656-2 11/24/18 17:25 • (LCSD) R3362656-3 11/24/18 17:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Extractable Petroleum Hydrocarbon	50.0	31.8	36.0	63.6	72.0	50.0-150			12.4	20
C10-C28 Diesel Range	50.0	37.0	40.9	74.0	81.8	50.0-150			10.0	20
(S) o-Terphenyl				87.4	83.5	18.0-148				

L1046080-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046080-01 11/24/18 21:27 • (MS) R3362656-4 11/24/18 21:44 • (MSD) R3362656-5 11/24/18 21:58

Analyte	Spike Amount mg/kg	Original Result	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Extractable Petroleum Hydrocarbon	50.0		29.2	35.8	53.0	66.2	1	50.0-150		J3	20.3	20
C10-C28 Diesel Range	50.0	ND	31.5	38.4	63.0	76.8	1	50.0-150			19.7	20
(S) o-Terphenyl					70.0	64.7		18.0-148				

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 L1046071-12,13,14,15,16,17,18

Method Blank (MB)

(MB) R3363864-1 11/29/18 04:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	86.8			18.0-148

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

(LCS) R3363864-2 11/29/18 05:09 • (LCSD) R3363864-3 11/29/18 05:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	38.0	40.8	76.0	81.6	50.0-150			7.11	20
(S) o-Terphenyl				85.9	90.5	18.0-148				

L1046071-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046071-17 11/29/18 08:47 • (MS) R3363864-4 11/29/18 09:23 • (MSD) R3363864-5 11/29/18 09:37

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	55.0	13000	12300	13100	0.000	200	10	50.0-150	E V	E V	6.06	20
(S) o-Terphenyl					0.000	0.000		18.0-148	J2	J2		

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

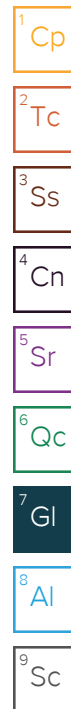
Guide to Reading and Understanding Your Laboratory Report

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.
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	TN2000002
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

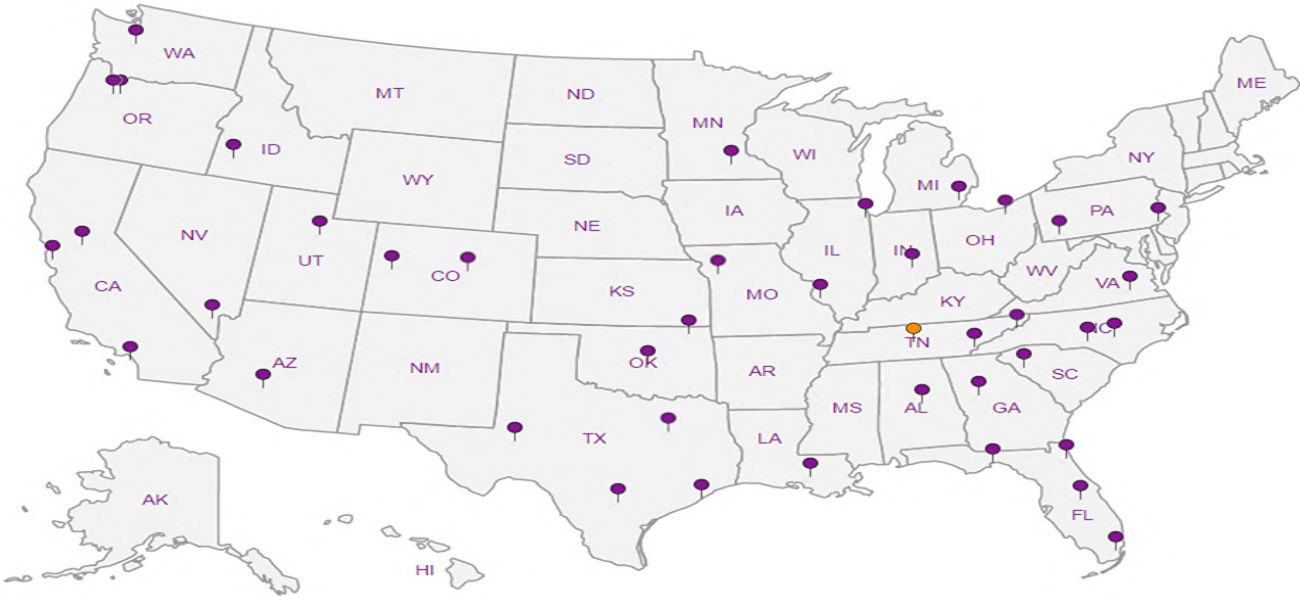
Third Party Federal Accreditations

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



Tetra Tech, Inc.

900 West Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4589
Fax (432) 682-3946

F164

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

ANALYSIS REQUEST
(Circle or Specify Method No.)[illegible]

L1646071 LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX			PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)
		YEAR: 2018		WATER	SOIL		HCL	HNO ₃	ICE	None		
		DATE	TIME									
01	AH-9	11/15/18	1005		X				X		1	N
02	AH-10	11/15/18	1010		X				X		1	N
03	AH-11	11/15/18	1020		X				X		1	N
04	AH-12	11/15/18	1030		X				X		1	N
05	AH-13	11/15/18	1051		X				X		1	N
06	AH-14	11/15/18	1105		X				X		1	N
07	AH-15	11/15/18	1132		X				X		1	N
08	AH-16	11/15/18	1150		X				X		1	N
09	AH-17	11/15/18	1200		X				X		1	N
10	NSW-2	11/16/18	1000		X				X		1	N

Relinquished by: <i>Aglo</i>	Date: <i>11-19-18</i>	Time: <i>0900</i>	Received by: <i>Cyber</i>	Date: <i>11/19</i>	Time: <i>09:01</i>
Relinquished by: <i>Kayla Layton</i>	Date: <i>11-19-18</i>	Time: <i>1500</i>	Received by: <i>Leah</i>	Date: <i>11-19-18</i>	Time: <i>15:00</i>
Relinquished by:	Date:	Time:	Received by: <i>PS</i>	Date: <i>11/20/18</i>	Time: <i>745</i>

LAB USE
ONLY

Sample Temperature

REMARKS:

☒ ~~STANDARD~~ = 5 day TAT

☐ RUSH: Same Day 24 hr 48 hr 72 hr☐ Rush Charges Authorized☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

$$T.C = 18 \times 402$$
RAD DOSE RATE: <0.5 mR/hr
$$1.3 - .3 = 1.0 \text{ atm}$$

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

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

Page 2 of 2

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

 ANALYSIS REQUEST
 (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	BTEX 8260B	TPH TX1005 (EXT to C35)	TPH 8015M (GRO - DRO)	PAH 8270C	Total Metals Ag As Ba Cd	TCLP Metals Ag As Ba Cd	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry	Anion/Cation Balance	TPH 8015R	Hold
		YEAR: 2018		WATER	SOIL	HCL	HNO ₃	ICE	None																							
		DATE	TIME																													

11	SSW-2	11/16/18	1030		X			X			1	N	X	X																			
12	ESW-2	11/16/18	1115		X				X			1	N	X	X												X						
13	ESW-3	11/16/18	1200		X				X			1	N	X	X												X						
14	WSW-2	11/16/18	1300		X				X			1	N	X	X												X						
15	WSW-3	11/16/18	1330		X				X			1	N	X	X												X						
16	AH-17	11/16/18	1355		X				X			1	N	X	X												X						
17	WSW-4	11/16/18	1505		X				X			1	N	X	X												X						
18	ESW-4	11/16/18	1540		X				X			1	N	X	X												X						
RSW														X	X												X						

Relinquished by: Date: Time:

Received by: Date: Time:

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

 Received by: *CH* Date: 11/19 Time: 09:01

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

 Received by: *Kayla Taylor* Date: 11-19-18 Time: 15:00

Relinquished by: Date: Time:

 Received by: *RS* Date: 11/20/18 Time: 745

LAB USE ONLY

Sample Temperature

REMARKS:

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

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

T-C = 18 x 402

 FAS 25.0 < 0.5 mg/L
 1.3 = 1.0 mg/L

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form					
Client:	COPTETRA		SDG#	L1646071	
Cooler Received/Opened On:	11/20/18	Temperature:	10		
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 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	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	5	
Sr: Sample Results	6	³ Ss
NSW-3 L1047275-01	6	
SSW-3 L1047275-02	7	⁴ Cn
ESW-6 L1047275-03	8	⁵ Sr
WSW-6 L1047275-04	9	
AH-18 L1047275-05	10	⁶ Qc
AH-19 L1047275-06	11	
AH-20 L1047275-07	12	⁷ Gl
AH-21 L1047275-08	13	⁸ Al
Qc: Quality Control Summary	14	
Total Solids by Method 2540 G-2011	14	⁹ Sc
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	Collected date/time	Received date/time
			Joe Tyler	11/19/18 14:10	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
Cn5
Sr6
Qc7
Gl8
Al9
Sc

SSW-3 L1047275-02 Solid

			Collected by	Collected date/time	Received date/time
			Joe Tyler	11/20/18 11:00	11/27/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1202265	1	11/28/18 11:06	11/28/18 11:15	JD
Wet Chemistry by Method 300.0	WG1202061	1	11/28/18 10:53	11/29/18 12:27	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1202378	1	11/27/18 16:56	11/28/18 18:21	JAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1202609	1	11/27/18 16:56	11/28/18 20:55	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1202659	1	11/28/18 15:38	11/30/18 19:33	MTJ

ESW-6 L1047275-03 Solid

			Collected by	Collected date/time	Received date/time
			Joe Tyler	11/21/18 11:35	11/27/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1202265	1	11/28/18 11:06	11/28/18 11:15	JD
Wet Chemistry by Method 300.0	WG1202061	1	11/28/18 10:53	11/29/18 09:40	ELN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1202378	1	11/27/18 16:56	11/28/18 18:45	JAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1202609	1	11/27/18 16:56	11/28/18 21:15	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1202659	1	11/28/18 15:38	11/30/18 20:33	MTJ

WSW-6 L1047275-04 Solid

			Collected by	Collected date/time	Received date/time
			Joe Tyler	11/21/18 11:00	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	Collected date/time	Received date/time
			Joe Tyler	11/21/18 12:00	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 Cp² Tc³ Ss⁴ Cn

AH-20 L1047275-07 Solid

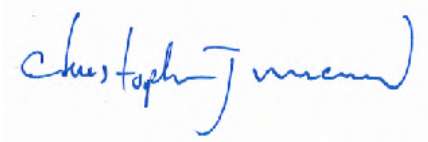
			Collected by	Collected date/time	Received date/time
			Joe Tyler	11/19/18 13:05	11/27/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1202265	1	11/28/18 11:06	11/28/18 11:15	JD
Wet Chemistry by Method 300.0	WG1202061	5	11/28/18 10:53	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

⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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

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

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

L1047275

Total Solids by Method 2540 G-2011

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

Total Solids by Method 2540 G-2011 [L1047275-01,02,03,04,05,06,07,08](#)

Method Blank (MB)

(MB) R3363884-1 11/28/18 11:15

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

L1047275-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1047275-07 11/28/18 11:15 • (DUP) R3363884-3 11/28/18 11:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	85.1	86.8	1	1.97		10

Laboratory Control Sample (LCS)

(LCS) R3363884-2 11/28/18 11:15

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 300.0

L1047275-01,02,03,04,05,06,07,08

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

[L1047275-01,02,03,04,05,06,07](#)

Method Blank (MB)

(MB) R3363879-3 11/28/18 11:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.8			77.0-120

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

(LCS) R3363879-1 11/28/18 10:23 • (LCSD) R3363879-2 11/28/18 10:46

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	6.13	6.32	111	115	72.0-127			3.18	20
(S) a,a,a-Trifluorotoluene(FID)				105	107	77.0-120				

L1046908-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046908-05 11/28/18 17:09 • (MS) R3363879-4 11/29/18 00:59 • (MSD) R3363879-5 11/29/18 01:22

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	ND	81.6	84.4	58.9	61.0	25	10.0-151			3.36	28
(S) a,a,a-Trifluorotoluene(FID)					102	102		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1047275-08

Method Blank (MB)

(MB) R3364106-3 11/29/18 04:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.4			77.0-120

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

(LCS) R3364106-1 11/29/18 02:58 • (LCSD) R3364106-2 11/29/18 03:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.60	5.53	102	101	72.0-127			1.33	20
(S) a,a,a-Trifluorotoluene(FID)				104	105	77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1047275-01,02,03,04,05,06,07,08

Method Blank (MB)

(MB) R3363876-2 11/28/18 15:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	114			75.0-131
(S) Dibromofluoromethane	95.6			65.0-129
(S) a,a,a-Trifluorotoluene	97.5			80.0-120
(S) 4-Bromofluorobenzene	94.1			67.0-138

Laboratory Control Sample (LCS)

(LCS) R3363876-1 11/28/18 14:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.128	102	70.0-123	
Ethylbenzene	0.125	0.101	80.9	74.0-126	
Toluene	0.125	0.118	94.0	75.0-121	
Xylenes, Total	0.375	0.327	87.2	72.0-127	
(S) Toluene-d8			103	75.0-131	
(S) Dibromofluoromethane			105	65.0-129	
(S) a,a,a-Trifluorotoluene			93.7	80.0-120	
(S) 4-Bromofluorobenzene			95.0	67.0-138	

L1047275-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1047275-08 11/28/18 22:52 • (MS) R3363876-3 11/28/18 23:50 • (MSD) R3363876-4 11/29/18 00:09

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.150	U	0.129	0.0683	86.4	45.6	1	10.0-149		J3	61.8	37
Ethylbenzene	0.150	U	0.149	0.0729	99.4	48.7	1	10.0-160		J3	68.5	38
Toluene	0.150	U	0.143	0.0740	95.5	49.4	1	10.0-156		J3	63.7	38
Xylenes, Total	0.450	U	0.430	0.223	95.7	49.5	1	10.0-160		J3	63.6	38
(S) Toluene-d8					112	112		75.0-131				
(S) Dibromofluoromethane					90.7	96.0		65.0-129				
(S) a,a,a-Trifluorotoluene					92.0	93.7		80.0-120				
(S) 4-Bromofluorobenzene					117	106		67.0-138				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 [L1047275-01,02,03,04,05,06,07,08](#)

Method Blank (MB)

(MB) R3364371-1 11/30/18 17:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	100			18.0-148

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

(LCS) R3364371-2 11/30/18 17:19 • (LCSD) R3364371-3 11/30/18 17:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	39.7	42.3	79.4	84.6	50.0-150			6.34	20
(S) o-Terphenyl				84.2	94.0	18.0-148				

L1047275-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1047275-02 11/30/18 19:33 • (MS) R3364371-4 11/30/18 19:47 • (MSD) R3364371-5 11/30/18 20:03

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	53.5	104	201	143	182	73.9	1	50.0-150	J5	J3	33.7	20
(S) o-Terphenyl					108	104		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

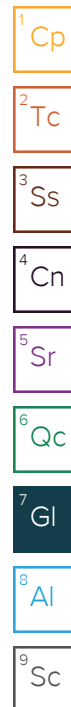
Guide to Reading and Understanding Your Laboratory Report

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.
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	TN2000002
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

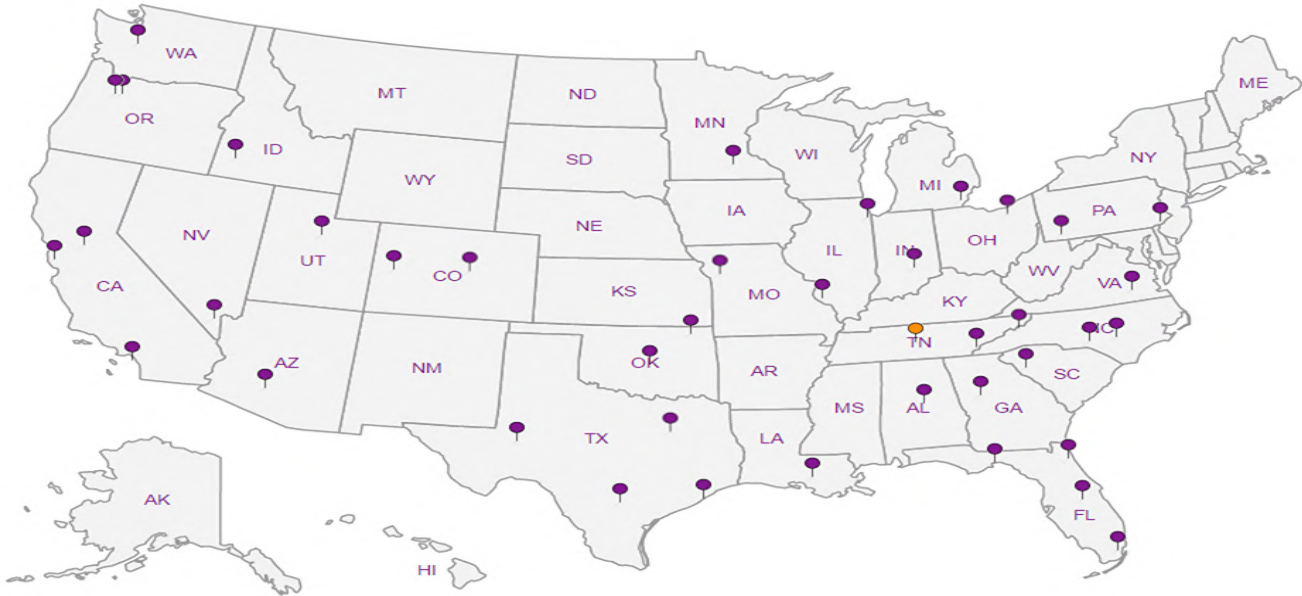
Third Party Federal Accreditations

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.



Tetra Tech		Billing Information: CORTETRA		Pres Chk		Analysis / Container / Preservative										Chain of Custody Page 1 of 1	
Report to: Kayla Faylor		Email To: Kayla.lovellytaylor@tetratech.com														 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859	
Project Description: COP Buck Federal		City/State Collected: Lea Co., NM														L# L1047275 E137	
Phone: 432-210-5443		Client Project # 212C-MD-01491		Lab Project #												Acctnum: CORTETRA Template: Prelogin: TSR: PB:	
Collected by (print): Joe Tyler		Site/Facility ID #		P.O. #												Shipped Via:	
Collected by (signature): Joe Tyler		Rush? (Lab MUST Be Notified) ☐ Same Day ☒ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day		Quote #												Remarks Sample # (lab only)	
Immediately Packed on Ice: N ☐ Y ☒		Date Results Needed		No. of Cntrs													
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time												
NSW-3		SS	-	11/19	14:10	1	X	X	X							-01	
SSW-3			-	11/20	11:00	1	X	X	X							02	
ESW-6			-	11/21	11:35	1	X	X	X							03	
WSW-6			-	11/21	11:00	1	X	X	X							04	
AH-18			-	11/21	12:00	1	X	X	X							05	
AH-19			11/19	12:30	12:30	1	X	X	X							06	
AH-20			-	11/19	13:05	1	X	X	X							07	
AH-21			-	11/19	13:30	1	X	X	X							08	
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other		Remarks:		Samples returned via: UPS FedEx Courier SW		Tracking #		pH Temp		Flow Other		Sample Receipt Checklist COC Seal Present/Intact: ☒ Y N COC Signed/Accurate: ☒ Y N Bottles arrive intact: ☒ Y N Correct bottles used: ☒ Y N Sufficient volume sent: ☒ Y N If Applicable VOA Zero Headpace: ☒ Y N Preservation Correct/Checked: ☒ Y N RAD SCREEN: <0.5 mR/hr					
Relinquished by: (Signature) Joe Tyler		Date: 11/26		Time: 09:00		Received by: (Signature) [Signature]		Trip Blank Received: Yes/No HCL/MeOH TBR		Temp: 20.1°C		Bottles Received: 9		If preservation required by Login: Date/Time			
Relinquished by: (Signature) [Signature]		Date: 11/26		Time: 13:45		Received by: (Signature) [Signature]		Date: 11/27/18		Time: 045		Hold:		Condition: NCF / OK			



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

¹Cp

²Tc

³Ss

⁴Cn

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

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

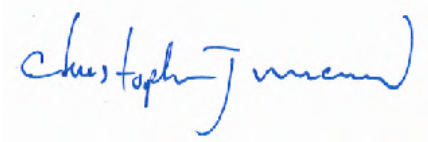
AH-23 L1048605-04 Solid

			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

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

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

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	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

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	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Total Solids	92.8	92.9	1	0.118		10

Laboratory Control Sample (LCS)

(LCS) R3364657-2 12/01/18 11:02

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011 [L1048605-05](#)

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	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Wet Chemistry by Method 300.0

[L1048605-01,02,03,04,05](#)

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

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO L1048605-01,03,04,05

Method Blank (MB)

(MB) R3365357-3 12/04/18 22:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	94.6			77.0-120

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

(LCS) R3365357-1 12/04/18 21:34 • (LCSD) R3365357-2 12/04/18 21:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.17	5.55	93.9	101	72.0-127			7.14	20
(S) a,a,a-Trifluorotoluene(FID)				107	108	77.0-120				

L1049339-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1049339-03 12/05/18 05:23 • (MS) R3365357-4 12/05/18 05:44 • (MSD) R3365357-5 12/05/18 06:05

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	6.06	263	651	684	32.0	34.7	200	10.0-151			4.92	28
(S) a,a,a-Trifluorotoluene(FID)					95.9	95.9		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3365710-3 12/05/18 11:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	93.7			77.0-120

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

(LCS) R3365710-1 12/05/18 10:00 • (LCSD) R3365710-2 12/05/18 10:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.98	5.54	109	101	72.0-127			7.56	20
(S) a,a,a-Trifluorotoluene(FID)				109	108	77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1048605-01,02,03,04,05

Method Blank (MB)

(MB) R3365742-2 12/05/18 22:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	112			75.0-131
(S) Dibromofluoromethane	91.2			65.0-129
(S) a,a,a-Trifluorotoluene	98.2			80.0-120
(S) 4-Bromofluorobenzene	108			67.0-138

Laboratory Control Sample (LCS)

(LCS) R3365742-1 12/05/18 21:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.0994	79.5	70.0-123	
Ethylbenzene	0.125	0.153	123	74.0-126	
Toluene	0.125	0.0991	79.3	75.0-121	
Xylenes, Total	0.375	0.424	113	72.0-127	
(S) Toluene-d8			106	75.0-131	
(S) Dibromofluoromethane			96.0	65.0-129	
(S) a,a,a-Trifluorotoluene			98.5	80.0-120	
(S) 4-Bromofluorobenzene			107	67.0-138	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

L1048605-01,02,03,04,05

Method Blank (MB)

(MB) R3364516-1 12/02/18 09:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	99.8			18.0-148

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

(LCS) R3364516-2 12/02/18 09:33 • (LCSD) R3364516-3 12/02/18 09:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Extractable Petroleum Hydrocarbon	50.0	33.8	39.9	67.6	79.8	50.0-150			16.6	20
C10-C28 Diesel Range	50.0	35.5	41.6	71.0	83.2	50.0-150			15.8	20
(S) o-Terphenyl				122	133	18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

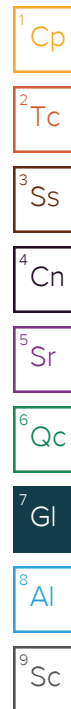
Guide to Reading and Understanding Your Laboratory Report

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.
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	TN2000002
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

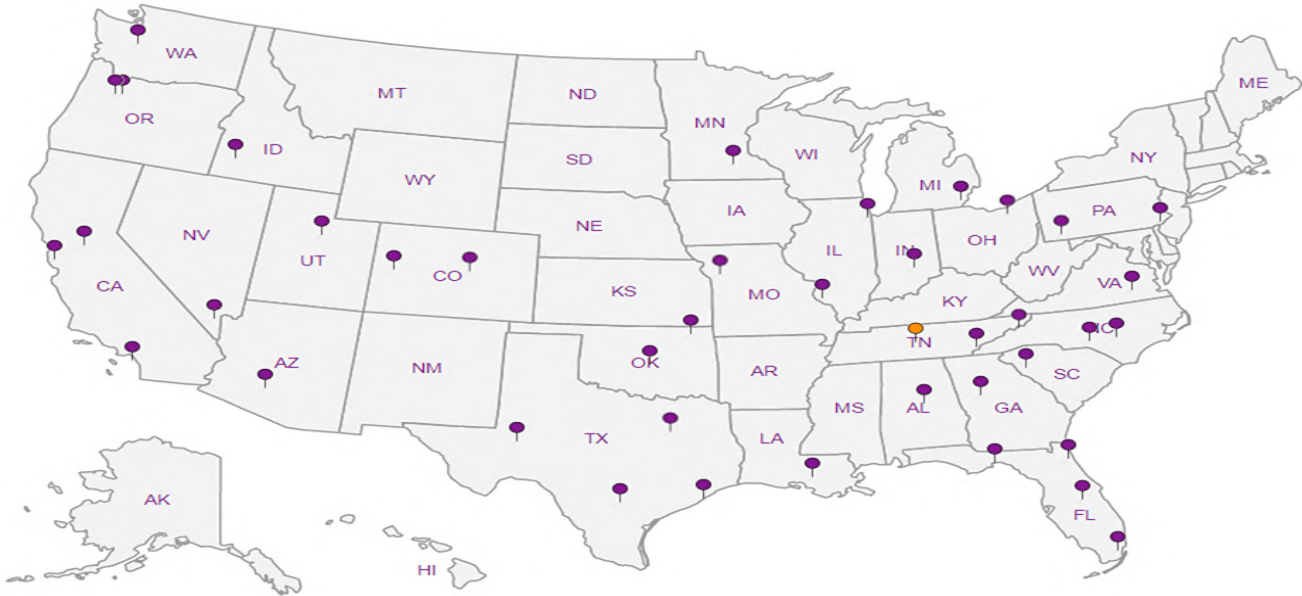
Third Party Federal Accreditations

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.

900 West Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4558
Fax (432) 682-3946

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

ANALYSIS REQUEST
(Circle or Specify Method No.)[illegible][illegible]

Relinquished by:  Date: 11-28-18 Time: 1530
11-29-18

Relinquished by: _____ Date: _____ Time: _____

Relinquished by: _____ Date: _____ Time: _____

Received by: [Signature] Date: 11-29-18 Time: 15:30

Received by: asm Date: 11/30/18 Time: 900

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

LAB USE ONLY

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #

ORIGINAL COPY

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation

Cooler Receipt Form

Client:	COPTETRA	SDG#	L1048605	
Cooler Received/Opened On:	11/ 30 /18	Temperature:	1.4	
Received By: Alexandra Murtaugh				
Signature: <i>asm</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

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

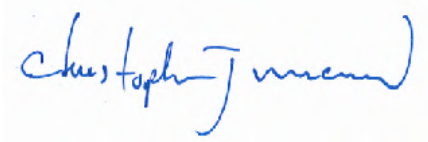
			Collected by	Collected date/time	Received date/time
				11/30/18 13:00	12/04/18 08:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1205617	1	12/05/18 09:26	12/05/18 09:35	KDW
Wet Chemistry by Method 300.0	WG1205791	1	12/05/18 12:41	12/06/18 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	Batch
	%			date / time	
Total Solids	90.7		1	12/05/2018 09:35	WG1205617

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	343		0.877	10.0	11.0	1	12/06/2018 12:03	WG1205791

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	263		4.79	0.100	22.1	200	12/05/2018 05:23	WG1205563
(S) a,a,a-Trifluorotoluene(FID)	91.5				77.0-120		12/05/2018 05:23	WG1205563

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.00882	0.00100	0.0221	20	12/04/2018 22:47	WG1205525
Toluene	0.159		0.0276	0.00500	0.110	20	12/04/2018 22:47	WG1205525
Ethylbenzene	0.414		0.0117	0.00250	0.0551	20	12/04/2018 22:47	WG1205525
Total Xylenes	3.74		0.105	0.00650	0.143	20	12/04/2018 22:47	WG1205525
(S) Toluene-d8	101				75.0-131		12/04/2018 22:47	WG1205525
(S) Dibromofluoromethane	109				65.0-129		12/04/2018 22:47	WG1205525
(S) a,a,a-Trifluorotoluene	105				80.0-120		12/04/2018 22:47	WG1205525
(S) 4-Bromofluorobenzene	111				67.0-138		12/04/2018 22:47	WG1205525

Sample Narrative:

L1049339-03 WG1205525: Non-target compounds too high to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	3680		44.4	4.00	110	25	12/06/2018 13:29	WG1205367
C28-C40 Oil Range	912		1.51	4.00	22.1	5	12/06/2018 12:41	WG1205367
(S) o-Terphenyl	471	J1			18.0-148		12/06/2018 12:41	WG1205367
(S) o-Terphenyl	0.000	J7			18.0-148		12/06/2018 13:29	WG1205367

Sample Narrative:

L1049339-03 WG1205367: Surrogate failure due to matrix interference

Total Solids by Method 2540 G-2011 [L1049339-01,02,03](#)

Method Blank (MB)

(MB) R3365705-1 12/05/18 09:35

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
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

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	89.1	89.2	1	0.112		10

Laboratory Control Sample (LCS)

(LCS) R3365705-2 12/05/18 09:35

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 300.0

[L1049339-01,02,03](#)

Method Blank (MB)

(MB) R3365887-1 12/06/18 10:36

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	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)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	2020	1970	5	2.85		20

Laboratory Control Sample (LCS)

(LCS) R3365887-2 12/06/18 10:44

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	203	101	90.0-110	

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

(OS) L1048923-08 12/06/18 12:12 • (MS) R3365887-4 12/06/18 12:21

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Chloride	599	16300	13300	0.000	1	80.0-120	E V

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

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

[L1049339-01,02,03](#)

Method Blank (MB)

(MB) R3365357-3 12/04/18 22:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	94.6			77.0-120

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

(LCS) R3365357-1 12/04/18 21:34 • (LCSD) R3365357-2 12/04/18 21:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.17	5.55	93.9	101	72.0-127			7.14	20
(S) a,a,a-Trifluorotoluene(FID)				107	108	77.0-120				

L1049339-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1049339-03 12/05/18 05:23 • (MS) R3365357-4 12/05/18 05:44 • (MSD) R3365357-5 12/05/18 06:05

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	6.06	263	651	684	32.0	34.7	200	10.0-151			4.92	28
(S) a,a,a-Trifluorotoluene(FID)					95.9	95.9		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1049339-01,02,03

Method Blank (MB)

(MB) R3365315-2 12/04/18 21:46

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	113			75.0-131
(S) Dibromofluoromethane	88.5			65.0-129
(S) a,a,a-Trifluorotoluene	110			80.0-120
(S) 4-Bromofluorobenzene	106			67.0-138

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3365315-1 12/04/18 20:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.103	82.5	70.0-123	
Ethylbenzene	0.125	0.141	113	74.0-126	
Toluene	0.125	0.113	90.7	75.0-121	
Xylenes, Total	0.375	0.422	113	72.0-127	
(S) Toluene-d8			107	75.0-131	
(S) Dibromofluoromethane			103	65.0-129	
(S) a,a,a-Trifluorotoluene			103	80.0-120	
(S) 4-Bromofluorobenzene			105	67.0-138	

L1048899-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1048899-07 12/05/18 04:12 • (MS) R3365315-3 12/05/18 04:52 • (MSD) R3365315-4 12/05/18 05:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	12.5	16.4	19.6	79.4	143	40	10.0-149			17.7	37
Ethylbenzene	0.125	56.6	64.2	73.0	152	328	40	10.0-160		V	12.9	38
Toluene	0.125	160	180	202	389	823	40	10.0-156	EV	EV	11.4	38
Xylenes, Total	0.375	298	329	378	207	533	40	10.0-160	EV	EV	13.9	38
(S) Toluene-d8					99.6	104		75.0-131				
(S) Dibromofluoromethane					99.8	105		65.0-129				
(S) a,a,a-Trifluorotoluene					100	99.1		80.0-120				
(S) 4-Bromofluorobenzene					105	106		67.0-138				

Semi-Volatile Organic Compounds (GC) by Method 8015 L1049339-01,02,03

Method Blank (MB)

(MB) R3365823-1 12/06/18 11:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	73.3			18.0-148

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

(LCS) R3365823-2 12/06/18 11:40 • (LCSD) R3365823-3 12/06/18 11:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Extractable Petroleum Hydrocarbon	50.0	31.8	32.7	63.6	65.4	50.0-150			2.79	20
C10-C28 Diesel Range	50.0	33.7	34.7	67.4	69.4	50.0-150			2.92	20
(S) o-Terphenyl				67.7	68.0	18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

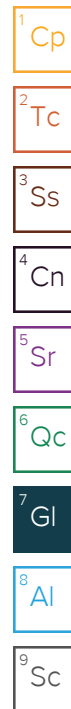
Guide to Reading and Understanding Your Laboratory Report

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.
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	TN2000002
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

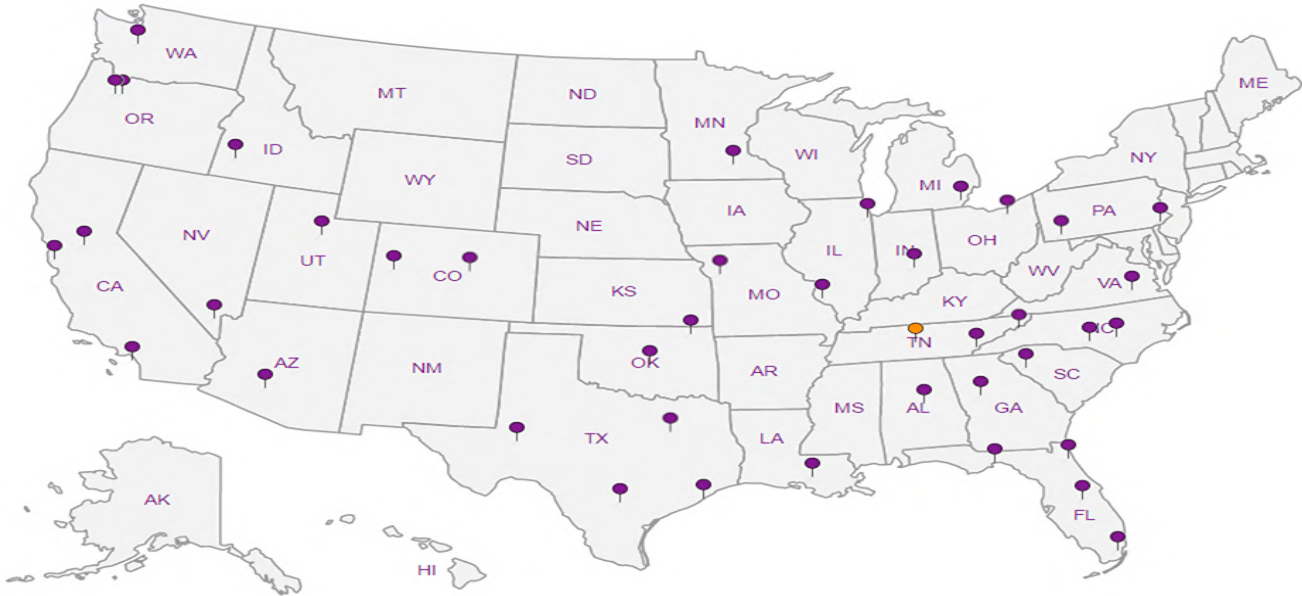
Third Party Federal Accreditations

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

ORIGINAL COPY

T-C = 9 \times 402

RAI = 0.05 mR/hr

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

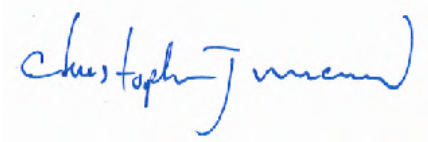
8Al

9Sc

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

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	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

Total Solids by Method 2540 G-2011 [L1051879-01,02](#)

Method Blank (MB)

(MB) R3368174-1 12/13/18 14:05

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
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

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	83.4	81.7	1	2.03		10

Laboratory Control Sample (LCS)

(LCS) R3368174-2 12/13/18 14:05

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 300.0 [L1051879-01,02](#)

Method Blank (MB)

(MB) R3368093-1 12/13/18 12:21

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

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

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	93.4	81.2	1	14.0		20

Laboratory Control Sample (LCS)

(LCS) R3368093-2 12/13/18 12:37

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

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	500	275	690	710	83.0	87.0	1	80.0-120			2.86	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO L1051879-01,02

Method Blank (MB)

(MB) R3368594-3 12/15/18 14:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	91.3			77.0-120

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

(LCS) R3368594-1 12/15/18 13:50 • (LCSD) R3368594-2 12/15/18 14:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.73	5.69	104	103	72.0-127			0.688	20
(S) a,a,a-Trifluorotoluene(FID)				106	106	77.0-120				

L1051879-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1051879-01 12/15/18 22:41 • (MS) R3368594-4 12/15/18 23:02 • (MSD) R3368594-5 12/15/18 23:23

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	6.10	122	711	652	96.6	86.9	100	10.0-151			8.72	28
(S) a,a,a-Trifluorotoluene(FID)					102	104		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1051879-01,02

Method Blank (MB)

(MB) R3368600-3 12/15/18 21:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	110			75.0-131
(S) Dibromofluoromethane	93.5			65.0-129
(S) a,a,a-Trifluorotoluene	109			80.0-120
(S) 4-Bromofluorobenzene	104			67.0-138

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3368600-1 12/15/18 20:13 • (LCSD) R3368600-2 12/15/18 20:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.101	0.0996	80.5	79.7	70.0-123			0.993	20
Ethylbenzene	0.125	0.126	0.126	101	101	74.0-126			0.422	20
Toluene	0.125	0.109	0.109	87.0	87.3	75.0-121			0.400	20
Xylenes, Total	0.375	0.379	0.375	101	100	72.0-127			1.06	20
(S) Toluene-d8				106	108	75.0-131				
(S) Dibromofluoromethane				105	104	65.0-129				
(S) a,a,a-Trifluorotoluene				105	103	80.0-120				
(S) 4-Bromofluorobenzene				103	106	67.0-138				

L1051783-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1051783-02 12/15/18 23:16 • (MS) R3368600-4 12/16/18 04:41 • (MSD) R3368600-5 12/16/18 05:01

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	ND	0.0816	0.0646	65.3	51.7	1	10.0-149			23.3	37
Ethylbenzene	0.125	ND	0.123	0.0919	98.4	73.5	1	10.0-160			28.9	38
Toluene	0.125	ND	0.103	0.0819	82.6	65.5	1	10.0-156			23.0	38
Xylenes, Total	0.375	ND	0.358	0.285	95.5	76.0	1	10.0-160			22.7	38
(S) Toluene-d8					116	116		75.0-131				
(S) Dibromofluoromethane					89.0	88.4		65.0-129				
(S) a,a,a-Trifluorotoluene					110	106		80.0-120				
(S) 4-Bromofluorobenzene					106	106		67.0-138				

Semi-Volatile Organic Compounds (GC) by Method 8015 L1051879-01,02

Method Blank (MB)

(MB) R3368012-1 12/13/18 11:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	89.6			18.0-148

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

(LCS) R3368012-2 12/13/18 11:41 • (LCSD) R3368012-3 12/13/18 11:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Extractable Petroleum Hydrocarbon	50.0	35.4	33.4	70.8	66.8	50.0-150			5.81	20
C10-C28 Diesel Range	50.0	39.2	37.0	78.4	74.0	50.0-150			5.77	20
(S) o-Terphenyl				84.7	78.2	18.0-148				

L1052100-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1052100-02 12/13/18 15:06 • (MS) R3368012-4 12/13/18 15:19 • (MSD) R3368012-5 12/13/18 15:33

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Extractable Petroleum Hydrocarbon	48.5	63.3	35.7	29.5	0.000	0.000	10	50.0-150	J6	J6	19.0	20
C10-C28 Diesel Range	48.5	ND	33.8	33.9	69.7	67.8	10	50.0-150			0.295	20
(S) o-Terphenyl					132	111		18.0-148				

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

Guide to Reading and Understanding Your Laboratory Report

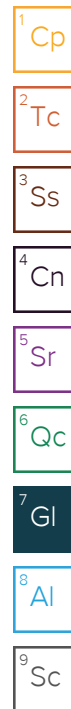
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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	TN2000002
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

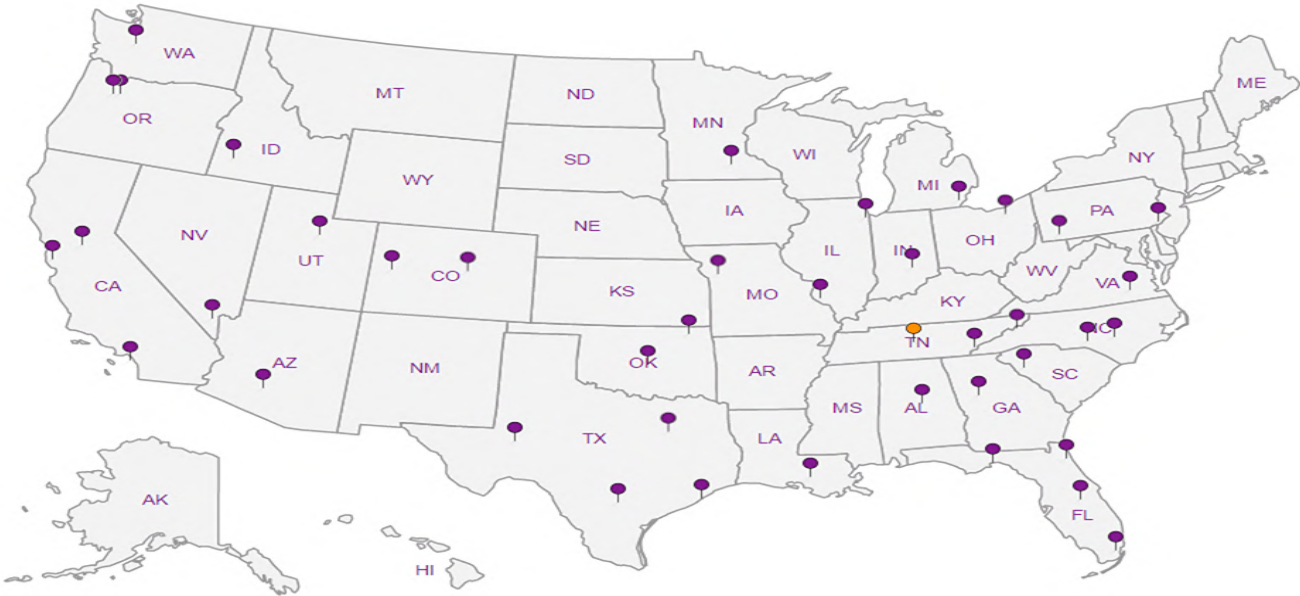
Third Party Federal Accreditations

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.



41051879

Page 1 of 1

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

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

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

D233

[illegible]

Relinquished by: 	Date: 12-10-18	Time: 1345	Received by: 	Date: 12-10-18	Time: 12:45
Relinquished by:	Date:	Time:	Received by: 	Date: 12/11	Time: 9:00
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY	REMARKS: <i>SD only TAT KI</i> ☒ STANDARD ☐ RUSH: Same Day 24 hr 48 hr 72 hr ☐ Rush Charges Authorized ☐ Special Report Limits or TRRP Report
Sample Temperature <i>+0.1</i> <i>0.2 0.342</i>	

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form			
Client: <u>COPTETRIA</u>	SDG#	<u>L1051879</u>	
Cooler Received/Opened On: <u>12/11</u> /18	Temperature:	<u>0.2</u>	
Received By: <u>malik Tisdale</u>			
Signature: <u>Malik T.</u>			
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

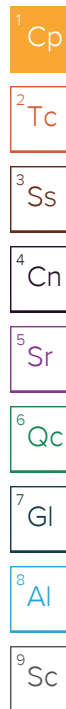
Sample Delivery Group: L1150137
Samples Received: 10/15/2019
Project Number: 212C-MD-01491
Description: COP Buck Fed CTB

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



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 Cn

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

⁵ Sr⁶ Qc⁷ Gl⁸ Al

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

⁹ Sc

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 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 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

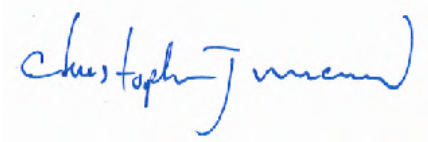
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1367018	1	10/23/19 13:49	10/23/19 14:00	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1365616	1	10/20/19 15:10	10/20/19 18:37	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by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

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

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

Total Solids by Method 2540 G-2011 [L1150137-01,02,03,04,05,06,07,08,09,10](#)

Method Blank (MB)

(MB) R3464628-1 10/23/19 14:13

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
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

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	94.8	94.7	1	0.126		10

Laboratory Control Sample (LCS)

(LCS) R3464628-2 10/23/19 14:13

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011

[L1150137-11,12,13,14,15,16,17,18](#)

Method Blank (MB)

(MB) R3464621-1 10/23/19 14:00

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
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

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	95.0	94.6	1	0.349		10

Laboratory Control Sample (LCS)

(LCS) R3464621-2 10/23/19 14:00

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 300.0

[L1150137-01,02,03,04,05,06,07,08,09,10,11,12,13](#)

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	⬇	0.795	10.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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	⬇3	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

Wet Chemistry by Method 300.0

L1150137-14,15,16,17,18

Method Blank (MB)

(MB) R3463039-1 10/20/19 16:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	3.42		0.795	10.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1150393-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1150393-01 10/20/19 19:44 • (DUP) R3463039-3 10/20/19 19:53

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

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	824	913	1	10.2		20

Laboratory Control Sample (LCS)

(LCS) R3463039-2 10/20/19 17:00

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

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	587	6270	6260	6550	0.000	47.9	1	80.0-120			4.51	20

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

L1150137-01,02,03,04,05,06,07,08,09,10,11,12

Method Blank (MB)

(MB) R3463029-2 10/20/19 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0731	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	106			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3463029-1 10/20/19 13:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.45	99.1	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			103	77.0-120	

L1150129-29 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150129-29 10/20/19 17:25 • (MS) R3463029-3 10/20/19 23:24 • (MSD) R3463029-4 10/20/19 23:46

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.69	0.0784	1.22	2.19	20.1	37.2	1	10.0-151		J3	57.0	28
(S) a,a,a-Trifluorotoluene(FID)					101	90.9		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

L1150137-13,14,15,16

Method Blank (MB)

(MB) R3463765-2 10/19/19 20:48

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

Laboratory Control Sample (LCS)

(LCS) R3463765-1 10/19/19 19:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.14	93.5	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			102	77.0-120	

L1150129-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150129-07 10/19/19 23:42 • (MS) R3463765-3 10/20/19 05:33 • (MSD) R3463765-4 10/20/19 05:54

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	575	46.3	589	602	94.3	96.5	100	10.0-151			2.11	28
(S) a,a,a-Trifluorotoluene(FID)					108	109		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

[L1150137-17.18](#)

Method Blank (MB)

(MB) R3463260-3 10/20/19 10:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0244	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	95.2			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3463260-2 10/20/19 09:56

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

[L1150137-01,02,03](#)

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				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1150137-04.05

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3463541-1 10/21/19 09:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.114	91.2	70.0-123	
Ethylbenzene	0.125	0.131	105	74.0-126	
Toluene	0.125	0.127	102	75.0-121	
Xylenes, Total	0.375	0.435	116	72.0-127	
(S) Toluene-d8			108	75.0-131	
(S) 4-Bromofluorobenzene			100	67.0-138	
(S) 1,2-Dichloroethane-d4			87.9	70.0-130	

L1149584-67 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1149584-67 10/21/19 19:58 • (MS) R3463541-3 10/21/19 17:48 • (MSD) R3463541-4 10/21/19 18:07

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	ND	21.2	12.4	84.8	49.6	200	10.0-149		J3	52.4	37
Ethylbenzene	25.0	35.8	61.8	55.1	104	77.2	200	10.0-160			11.5	38
Toluene	25.0	ND	24.9	15.5	99.6	62.0	200	10.0-156		J3	46.5	38
Xylenes, Total	75.0	210	299	283	119	97.3	200	10.0-160			5.50	38
(S) Toluene-d8					100	112		75.0-131				
(S) 4-Bromofluorobenzene					103	110		67.0-138				
(S) 1,2-Dichloroethane-d4					90.1	88.9		70.0-130				

Sample Narrative:

OS: Target compounds too high to run at a lower dilution.

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

L1150137-06,07,08,09,10,11,12

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

(LCS) R3463542-1 10/21/19 20:54 • (LCSD) R3463542-2 10/21/19 21:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.104	0.106	83.2	84.8	70.0-123			1.90	20
Ethylbenzene	0.125	0.129	0.128	103	102	74.0-126			0.778	20
Toluene	0.125	0.121	0.122	96.8	97.6	75.0-121			0.823	20
Xylenes, Total	0.375	0.413	0.437	110	117	72.0-127			5.65	20
(S) Toluene-d8				107	108	75.0-131				
(S) 4-Bromofluorobenzene				101	110	67.0-138				
(S) 1,2-Dichloroethane-d4				89.1	90.5	70.0-130				

L1150137-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150137-12 10/22/19 01:23 • (MS) R3463542-4 10/22/19 06:23 • (MSD) R3463542-5 10/22/19 06:42

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.132	U	0.0923	0.0566	70.2	43.0	1	10.0-149		J3	47.9	37
Ethylbenzene	0.132	U	0.111	0.0655	84.0	49.8	1	10.0-160		J3	51.2	38
Toluene	0.132	U	0.107	0.0645	81.6	49.0	1	10.0-156		J3	49.8	38
Xylenes, Total	0.395	U	0.362	0.231	91.7	58.4	1	10.0-160		J3	44.4	38
(S) Toluene-d8					108	110		75.0-131				
(S) 4-Bromofluorobenzene					100	102		67.0-138				
(S) 1,2-Dichloroethane-d4					90.4	89.6		70.0-130				

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

L1150137-13,14,15,16,17

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

(LCS) R3464753-1 10/24/19 06:45 • (LCSD) R3464753-2 10/24/19 07:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.107	0.108	85.6	86.4	70.0-123			0.930	20
Ethylbenzene	0.125	0.113	0.105	90.4	84.0	74.0-126			7.34	20
Toluene	0.125	0.108	0.106	86.4	84.8	75.0-121			1.87	20
Xylenes, Total	0.375	0.352	0.350	93.9	93.3	72.0-127			0.570	20
(S) Toluene-d8				95.6	94.0	75.0-131				
(S) 4-Bromofluorobenzene				96.9	97.5	67.0-138				
(S) 1,2-Dichloroethane-d4				119	124	70.0-130				

L1149492-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1149492-03 10/24/19 08:18 • (MS) R3464753-4 10/24/19 16:09 • (MSD) R3464753-5 10/24/19 16:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	ND	0.103	0.109	82.4	87.2	1	10.0-149			5.66	37
Ethylbenzene	0.125	ND	0.0963	0.108	77.0	86.4	1	10.0-160			11.5	38
Toluene	0.125	ND	0.104	0.109	83.2	87.2	1	10.0-156			4.69	38
Xylenes, Total	0.375	ND	0.327	0.354	87.2	94.4	1	10.0-160			7.93	38
(S) Toluene-d8					94.4	95.3		75.0-131				
(S) 4-Bromofluorobenzene					93.9	96.6		67.0-138				
(S) 1,2-Dichloroethane-d4					126	128		70.0-130				

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

L1150137-18

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3464397-1 10/23/19 17:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.125	100	70.0-123	
Ethylbenzene	0.125	0.116	92.8	74.0-126	
Toluene	0.125	0.110	88.0	75.0-121	
Xylenes, Total	0.375	0.305	81.3	72.0-127	
(S) Toluene-d8			103	75.0-131	
(S) 4-Bromofluorobenzene			99.2	67.0-138	
(S) 1,2-Dichloroethane-d4			110	70.0-130	

L1150137-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150137-18 10/23/19 23:09 • (MS) R3464397-3 10/24/19 02:16 • (MSD) R3464397-4 10/24/19 02:36

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.127	U	0.112	0.120	88.0	94.4	1	10.0-149			7.02	37
Ethylbenzene	0.127	U	0.107	0.117	84.0	92.0	1	10.0-160			9.09	38
Toluene	0.127	U	0.102	0.111	79.9	87.2	1	10.0-156			8.71	38
Xylenes, Total	0.382	U	0.275	0.303	72.0	79.5	1	10.0-160			9.86	38
(S) Toluene-d8					105	103		75.0-131				
(S) 4-Bromofluorobenzene					97.6	96.6		67.0-138				
(S) 1,2-Dichloroethane-d4					99.9	97.8		70.0-130				

Semi-Volatile Organic Compounds (GC) by Method 8015

L1150137-01,02,03,04,05

Method Blank (MB)

(MB) R3462663-1 10/18/19 13:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	84.5			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3462663-2 10/18/19 13:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	43.1	86.2	50.0-150	
(S) o-Terphenyl			105	18.0-148	

L1150103-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150103-20 10/18/19 21:39 • (MS) R3462663-3 10/18/19 21:52 • (MSD) R3462663-4 10/18/19 22:05

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.1	U	44.5	44.6	88.9	88.0	1	50.0-150			0.231	20
(S) o-Terphenyl					108	105		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

[L1150137-06,07,08,09,10,11,12,13,14,15](#)

Method Blank (MB)

(MB) R3462800-1 10/19/19 09:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	88.3			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3462800-2 10/19/19 09:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	43.1	86.2	50.0-150	
(S) o-Terphenyl			107	18.0-148	

L1150129-35 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1150129-35 10/19/19 09:56 • (MS) R3462800-3 10/19/19 10:08 • (MSD) R3462800-4 10/19/19 10:21

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	53.2	U	46.9	44.2	88.1	83.2	1	50.0-150			5.87	20
(S) o-Terphenyl					96.7	91.7		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 [L1150137-16,17,18](#)

Method Blank (MB)

(MB) R3462886-1 10/19/19 16:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	64.9			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3462886-2 10/19/19 16:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	34.7	69.4	50.0-150	
(S) o-Terphenyl			61.9	18.0-148	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

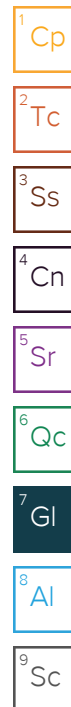
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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	TN2000002
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

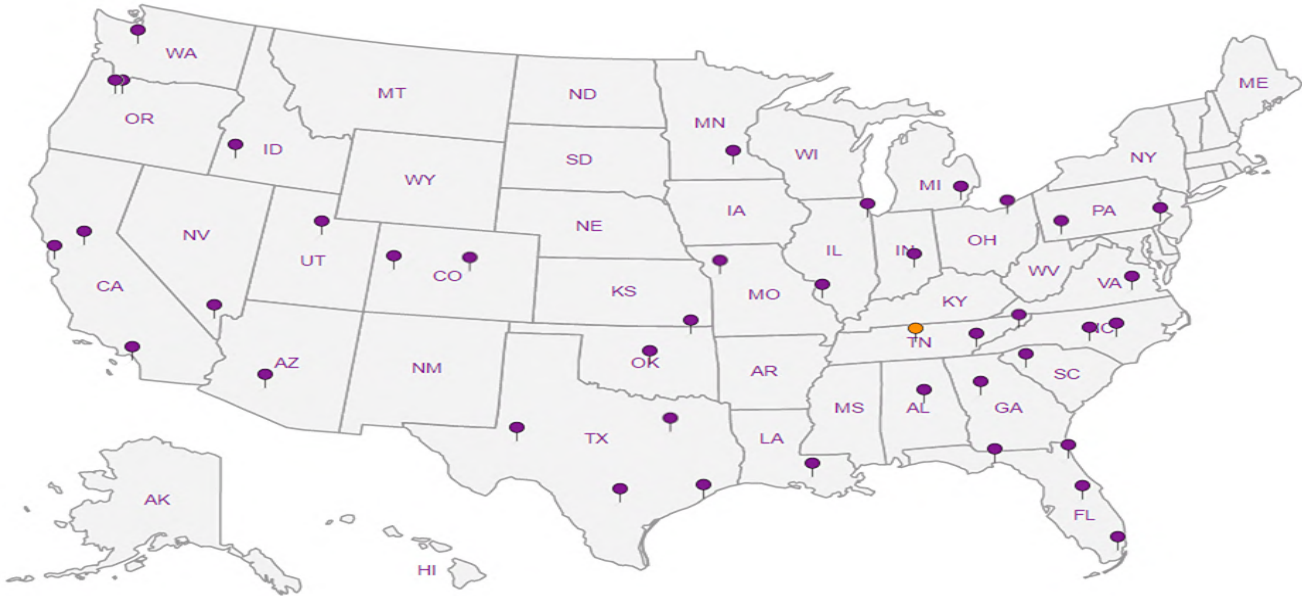
Third Party Federal Accreditations

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

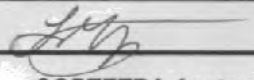
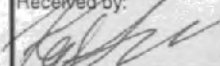
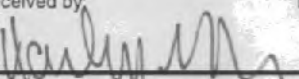
Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



F200

Page : 1 of 2

Analysis Request of Chain of Custody Record

Tt Tetra Tech, Inc.				901 West Wall Street, Suite 100 Midland, Texas 79701 Tel (432) 682-4559 Fax (432) 682-3946																														
Client Name: Conoco Phillips				Site Manager: Christian Llull																														
Project Name: COP Buck Fed CTB																																		
Project Location: Lea County, New Mexico				Project #: 212C-MD-01491																														
Invoice to: Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701																																		
Receiving Laboratory: Pace Analytical				Sampler Signature: 																														
Comments: Run deeper samples if GRO+DRO exceeds 100 mg/kg or if benzene exceeds 10 mg/kg or if total BTEX exceeds 50 mg/kg or if chlorides exceed 600 mg/kg.				COPTETRA Acctnum																														
LAB # (LAB USE ONLY)		SAMPLE IDENTIFICATION		SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)	ANALYSIS REQUEST (Circle or Specify Method No.) BTEX 8021B BTEX 8260B TPH TX1005 (Ext to C35) TPH 8015M (GRO - DRO - ORO - MRO) PAH 8270C Total Metals Ag As Ba Cd Cr Pb Se Hg TCLP Metals Ag As Ba Cd Cr Pb Se Hg TCLP Volatiles TCLP Semi Volatiles ROI GC/MS Vol. 8260B / 624 GC/MS Semi. Vol. 8270C/625 PCB's 8082 / 608 NORM PLM (Asbestos) Chloride 300.0 Chloride Sulfate TDS General Water Chemistry (see attached list) Anion/Cation Balance TPH 8015R HOLD																						
				YEAR: 2019																														
		DATE	TIME	WATER	SOIL	HCL	HNO3	ICE	NONE			BTEX 8021B	BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	ROI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R	HOLD		
01		BH-19-1 (0'- 1')	10/8/2019 1100	X				X			1	N	X	X														X						
02		BH-19-1 (2'- 3')	10/8/2019 1110	X				X			1	N	X	X														X						
03		BH-19-1 (4'- 5')	10/8/2019 1120	X				X			1	N	X	X														X						
04		BH-19-2 (0'- 1')	10/8/2019 1150	X				X			1	N	X	X														X						
05		BH-19-2 (2'- 3')	10/8/2019 1200	X				X			1	N	X	X														X						
06		BH-19-2 (4'- 5')	10/8/2019 1210	X				X			1	N	X	X														X						
07		BH-19-3 (0'- 1')	10/8/2019 1240	X				X			1	N	X	X														X						
08		BH-19-3 (2'- 3')	10/8/2019 1250	X				X			1	N	X	X														X						
09		BH-19-3 (4'- 5')	10/8/2019 1300	X				X			1	N	X	X														X						
10		BH-19-3 (6'- 7')	10/8/2019 1310	X				X			1	N	X	X														X						
Relinquished by:  Date: 10-14-19 Time: 14:00				Received by:  Date: 10-14-19 Time: 14:00				LAB USE ONLY				REMARKS: ☒ STANDARD ☐ RUSH: Same Day 24 hr 48 hr 72 hr ☐ Rush Charges Authorized ☐ Special Report Limits or TRRP Report																						
Relinquished by: Date: Time:				Received by: Date: Time:				Sample Temperature																										
Relinquished by: Date: Time:				Received by:  Date: 10/15/19 Time: 8:15																														
(Circle) HAND DELIVERED FEDEX UPS Tracking #:																																		

ORIGINAL COPY

RAD SCREEN: <0.5 mR/hr

0.2-0.20.2 ASM

[illegible]

ORIGINAL COPY

RAD SCREEN: <0.5 mR/hr

$$0.2 - 0 = 0.2 \text{ AS}$$

Pace Analytical National Center for Testing & Innovation

Cooler Receipt Form

Client: <i>COPTETRA</i>	1150137		
Cooler Received/Opened On: <i>10/15/19</i>	Temperature:	<i>0.2</i>	
Received By: Hailey Melson			
Signature: <i>Hailey Me</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?			

APPENDIX D

Waste Manifests

TRANSPORTER'S MANIFESTMANIFEST # 1**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

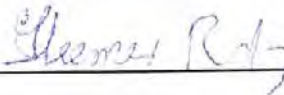
575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:18 cu. yds.**FACILITY CONTACT:**Date: 11-13-18Signature of Contact:
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**Date: 11-13-18

Signature Driver:

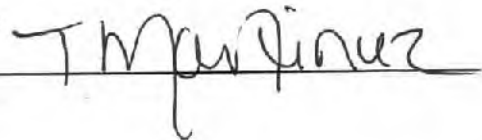
**DISPOSAL SITE:**

R360

P.O. Box 388

Hobbs, New Mexico 88241

Date:

11-13-18Representative
Signature



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: _____

TRANSPORTER'S MANIFEST

MANIFEST #

2**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,

Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:

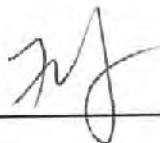
20 cu. yds.**FACILITY CONTACT:**Date: 11-13-18Signature of Contact: 
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**Date: 11-13-18Signature Driver: Renzo Heredia**DISPOSAL SITE:**

R360

P.O. Box 388

Hobbs, New Mexico 88241

Date:

11/13/18Representative
Signature



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: _____

TRANSPORTER'S MANIFESTMANIFEST # 3**SHIPPING FACILITY NAME & ADDRESS:**

ConocoPhillips Company
600 N. Dairy Ashford Rd, Houston, TX 77079
Attn. Jenni Fortunato
Jenni.Fortunato@conocophillips.com
832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project
GL Account No.: 702000
WBS Element: WAO.000.7090.00.AS
PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.
Buck Federal CTB
Section 17 - Township 26 South - Range 32 East,
Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners
4008 N. Grimes
Hobbs, New Mexico 88240
575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:

20 cu. yds.

FACILITY CONTACT:

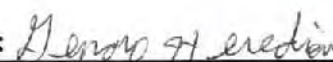
Date: 11-13-18

Signature of Contact:
(Agent for ConocoPhillips)

Joe Tyler

**NAME OF TRANSPORTER (Driver):**

Date: 11-13-18

Signature Driver: 

DISPOSAL SITE:

R360
P.O. Box 388
Hobbs, New Mexico 88241

Date:

11/13/18

Representative
Signature





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 T7
 Well #:
 Field:
 Field #:
 Rig: NON-DRILLING
 County: LEA (NM)

CTB

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 4**SHIPPING FACILITY NAME & ADDRESS:**

ConocoPhillips Company
600 N. Dairy Ashford Rd, Houston, TX 77079
Attn. Jenni Fortunato
Jenni.Fortunato@conocophillips.com
832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project
GL Account No.: 702000
WBS Element: WAO.000.7090.00.AS
PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.
Buck Federal CTB
Section 17 - Township 26 South - Range 32 East,
Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners
4008 N. Grimes
Hobbs, New Mexico 88240
575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:

18 cu. yds.

FACILITY CONTACT:

Date:

11-13-18

Signature of Contact:
(Agent for ConocoPhillips)

**NAME OF TRANSPORTER (Driver):**

Date:

11-13-18

Signature Driver:

Genaro Rodriguez

DISPOSAL SITE:

R360
P.O. Box 388
Hobbs, New Mexico 88241

Date:

11/13/18

Representative
Signature

Y Martinez



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: _____

TRANSPORTER'S MANIFESTMANIFEST # 5**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn: Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

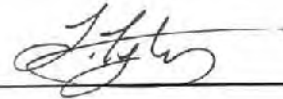
Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

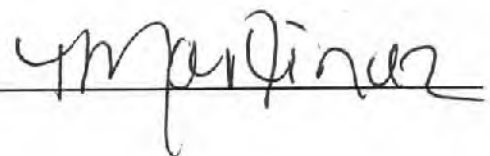
575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil***QUANTITY:***20 cu. yds.***FACILITY CONTACT:**Date: *11-13-18*Signature of Contact:
(Agent for ConocoPhillips)*Joe Tyler***NAME OF TRANSPORTER (Driver):**Date: *11-13-18*

Signature Driver:

*Jenni Fortunato***DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

*11-13-18*Representative
Signature



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: _____

TRANSPORTER'S MANIFESTMANIFEST # 6**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil*QUANTITY: *18 cu. yds.***FACILITY CONTACT:**Date: *11-13-18*Signature of Contact:
(Agent for ConocoPhillips)*See File*
*J. Fortunato***NAME OF TRANSPORTER (Driver):**

Date:

Signature Driver:

*Shumer Rdz***DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

Representative
Signature



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: _____

TRANSPORTER'S MANIFEST

MANIFEST #

7**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,

Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners

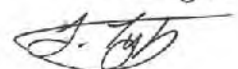
4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:20 cu. yds.**FACILITY CONTACT:**Date: 11-14-18Signature of Contact:
(Agent for ConocoPhillips)Joe Tyb
**NAME OF TRANSPORTER (Driver):**Date: 11-14-18

Signature Driver:

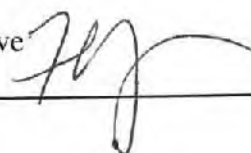
Gerardo Hernandez**DISPOSAL SITE:**

R360

P.O. Box 388

Hobbs, New Mexico 88241

Date:

11/14/18Representative
Signature



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: _____

TRANSPORTER'S MANIFESTMANIFEST # 8**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,

Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil*

QUANTITY:

*20 cu. yds.***FACILITY CONTACT:**

Date:

11-14-18

Signature of Contact:

(Agent for ConocoPhillips)

Joe Tyler**NAME OF TRANSPORTER (Driver):**

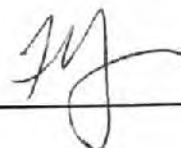
Date:

11-14-18

Signature Driver:

M79
**DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

*11/14/18*Representative
Signature



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: _____

TRANSPORTER'S MANIFESTMANIFEST # 9**SHIPPING FACILITY NAME & ADDRESS:**

ConocoPhillips Company
600 N. Dairy Ashford Rd, Houston, TX 77079
Attn. Jenni Fortunato
Jenni.Fortunato@conocophillips.com
832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project
GL Account No.: 702000
WBS Element: WAO.000.7090.00.AS
PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.
Buck Federal CTB
Section 17 - Township 26 South - Range 32 East,
Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

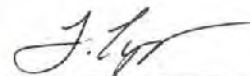
McNabb Partners
4008 N. Grimes
Hobbs, New Mexico 88240
575.397.0050

DESCRIPTION OF WASTE:

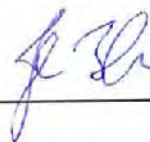
Impacted Soil

QUANTITY:

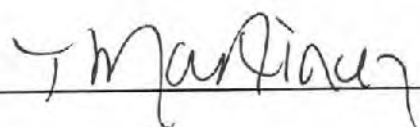
20 cu. yds.

FACILITY CONTACT:Date: 11-14-18Signature of Contact:
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**Date: 11/14/18

Signature Driver:

**DISPOSAL SITE:**

R360
P.O. Box 388
Hobbs, New Mexico 88241

Date: 11/14/18Representative
Signature



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: _____

TRANSPORTER'S MANIFESTMANIFEST # 10**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil***QUANTITY:***20 cu. yds.***FACILITY CONTACT:**

Date:

*11-14-18*Signature of Contact:
(Agent for ConocoPhillips)*[Signature]***NAME OF TRANSPORTER (Driver):**Date: *11-14-18*Signature Driver: *Dennis H. Medina***DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

*11/14/18*Representative
Signature*[Signature]*



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 #: O8UJ9A0009Z1
 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)

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 11**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn: Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

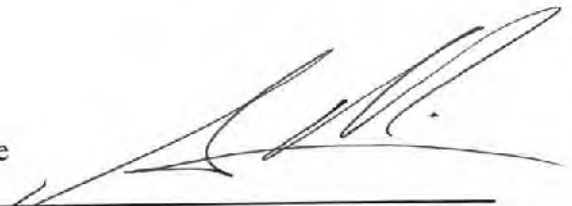
575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil***QUANTITY:***20 cu.yds.***FACILITY CONTACT:**Date: *11-15-18*Signature of Contact:
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**Date: *11/15/18*

Signature Driver:

**DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

Representative
Signature



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: _____

TRANSPORTER'S MANIFESTMANIFEST # 12**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,

Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:

20 cu. yds.**FACILITY CONTACT:**Date: 11-15-18Signature of Contact:
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**Date: 11-15-18Signature Driver: Benny Heredia**DISPOSAL SITE:**

R360

P.O. Box 388

Hobbs, New Mexico 88241

Date:

11-15-18Representative
Signature



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: _____

TRANSPORTER'S MANIFEST

MANIFEST # 13

SHIPPING FACILITY NAME & ADDRESS:

ConocoPhillips Company

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed - RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,

Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:

20 cu. yds

FACILITY CONTACT:

Date: 11-15-18Signature of Contact:
(Agent for ConocoPhillips)

NAME OF TRANSPORTER (Driver):

Date: 11-15-18Signature Driver: Henry Heredia

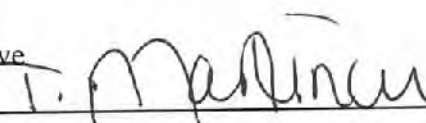
DISPOSAL SITE:

R360

P.O. Box 388

Hobbs, New Mexico 88241

Date:

11/15/18Representative
Signature



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: _____

TRANSPORTER'S MANIFESTMANIFEST # 14**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

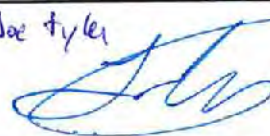
Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

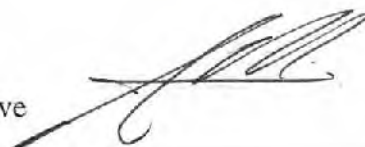
575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil***QUANTITY:***20 bags***FACILITY CONTACT:**Date: *11-15-18*Signature of Contact:
(Agent for ConocoPhillips)*Joe Tyler***NAME OF TRANSPORTER (Driver):**Date: *11-15-18*

Signature Driver:

**DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

Representative
Signature



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: _____

TRANSPORTER'S MANIFEST

MANIFEST # 15

SHIPPING FACILITY NAME & ADDRESS:

ConocoPhillips Company
600 N. Dairy Ashford Rd, Houston, TX 77079
Attn. Jenni Fortunato
Jenni.Fortunato@conocophillips.com
832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project
GL Account No.: 702000
WBS Element: WAO.000.7090.00.AS
PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.
Buck Federal CTB
Section 17 - Township 26 South - Range 32 East,
Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners
4008 N. Grimes
Hobbs, New Mexico 88240
575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

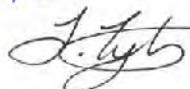
QUANTITY:

20 cu. yds.

FACILITY CONTACT:

Date: 11-15-18

Signature of Contact:
(Agent for ConocoPhillips)

be type


NAME OF TRANSPORTER (Driver):

Date: 11-15-18

Signature Driver:

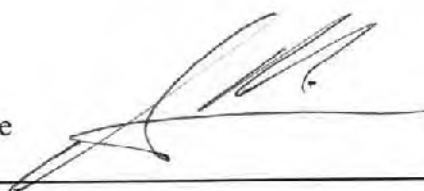


DISPOSAL SITE:

R360
P.O. Box 388
Hobbs, New Mexico 88241

Date:

Representative
Signature





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: _____

TRANSPORTER'S MANIFESTMANIFEST # 16**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,

Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners

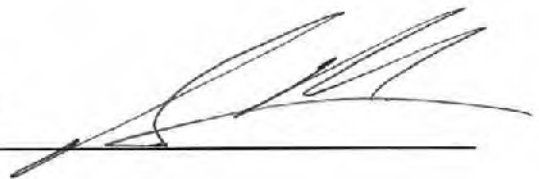
4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil***QUANTITY:***20 cu. yds.***FACILITY CONTACT:**Date: *11-15-18*Signature of Contact:
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**Date: *11-15-18*Signature Driver: *Genaro Hernandez***DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

Representative
Signature



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

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 17**SHIPPING FACILITY NAME & ADDRESS:**

ConocoPhillips Company
600 N. Dairy Ashford Rd, Houston, TX 77079
Attn. Jenni Fortunato
Jenni.Fortunato@conocophillips.com
832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project
GL Account No.: 702000
WBS Element: WAO.000.7090.00.AS
PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.
Buck Federal CTB
Section 17 - Township 26 South - Range 32 East,
Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners
4008 N. Grimes
Hobbs, New Mexico 88240
575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY: 20 cu. yds.

FACILITY CONTACT:

Date: 11-16-18

Signature of Contact:
(Agent for ConocoPhillips)

**NAME OF TRANSPORTER (Driver):**

Date: 11-16-18

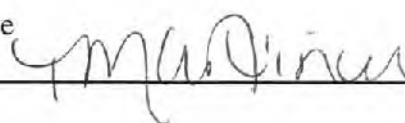
Signature Driver: Heredia

DISPOSAL SITE:

R360
P.O. Box 388
Hobbs, New Mexico 88241

Date: 11/16/18

Representative
Signature





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: _____

TRANSPORTER'S MANIFESTMANIFEST # 18**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

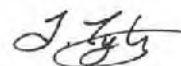
Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

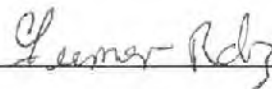
Hobbs, New Mexico 88240

575.397.0050

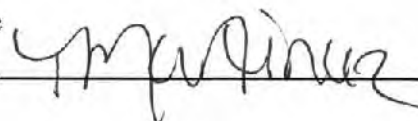
DESCRIPTION OF WASTE:*Impacted Soil***QUANTITY:***18**cu. yds.***FACILITY CONTACT:**Date: *11-16-18*Signature of Contact:
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**

Date:

Signature Driver:

**DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

Representative
Signature*11/16/18*



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)

Permian Basin

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 19**SHIPPING FACILITY NAME & ADDRESS:**

ConocoPhillips Company
600 N. Dairy Ashford Rd, Houston, TX 77079
Attn. Jenni Fortunato
Jenni.Fortunato@conocophillips.com
832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project
GL Account No.: 702000
WBS Element: WAO.000.7090.00.AS
PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.
Buck Federal CTB
Section 17 - Township 26 South - Range 32 East,
Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners
4008 N. Grimes
Hobbs, New Mexico 88240
575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:

20 cu. yds.

FACILITY CONTACT:

Date: 11-16-18

Signature of Contact:
(Agent for ConocoPhillips)

J. Zyls

NAME OF TRANSPORTER (Driver):

Date: 11-16-18

Signature Driver: Gonzalo Hernandez

DISPOSAL SITE:

R360
P.O. Box 388
Hobbs, New Mexico 88241

Date: 11/16/18

Representative
Signature

Y. Martinez



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)

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 20**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed - RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil***QUANTITY:***18 cu. yds.***FACILITY CONTACT:**

Date:

11-16-18

Signature of Contact:

(Agent for ConocoPhillips)

*J. Lyb***NAME OF TRANSPORTER (Driver):**

Date:

11-16-18

Signature Driver:

Sherry R. L.
*[Signature]***DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

*11/14/18*Representative
Signature*[Signature]*



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)

Permian Basin

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 21**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil***QUANTITY:***20 cu-yds.***FACILITY CONTACT:**Date: *11-19-18*Signature of Contact:
(Agent for ConocoPhillips)*L. Ty 5***NAME OF TRANSPORTER (Driver):**Date: *11 19 18*

Signature Driver:

*[Signature]***DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

Representative
Signature*[Signature]*



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 T7
 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: _____

TRANSPORTER'S MANIFESTMANIFEST # 22**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,

Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners

4008 N. Grimes

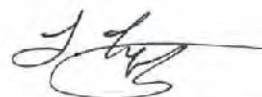
Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:

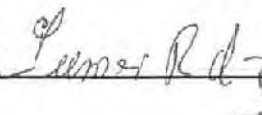
Impacted Soil

QUANTITY:

18 cu. yds.**FACILITY CONTACT:**Date: 11-19-18Signature of Contact:
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**

Date:

Signature Driver:

**DISPOSAL SITE:**

R360

P.O. Box 388

Hobbs, New Mexico 88241

Date:

Representative
Signature



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)

Permian Basin

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 23**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

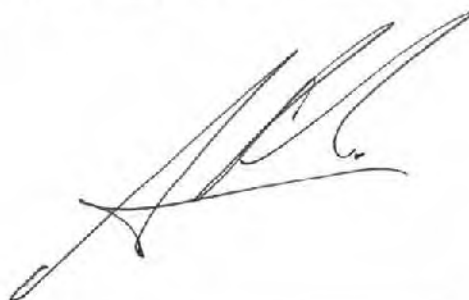
4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil***QUANTITY:***20 cu. yds.***FACILITY CONTACT:**Date: *11-19-18*Signature of Contact:
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**Date: *11-19-18*Signature Driver: *Herold Hernandez***DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

Representative
Signature



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 T7
 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: _____

TRANSPORTER'S MANIFESTMANIFEST # 24**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

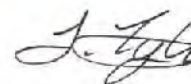
Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

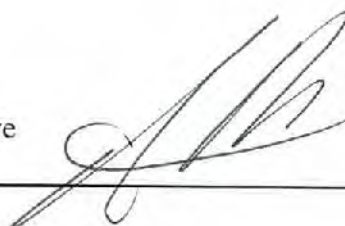
575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil***QUANTITY:***20 cu yds***FACILITY CONTACT:**Date: *11/19/18*Signature of Contact:
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**Date: *11/19/18*

Signature Driver:

**DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

Representative
Signature



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

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 25**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

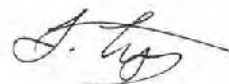
Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

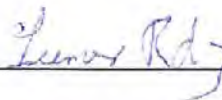
Hobbs, New Mexico 88240

575.397.0050

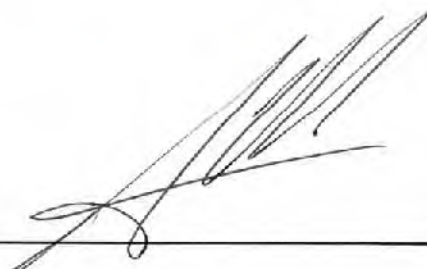
DESCRIPTION OF WASTE:*Impacted Soil*QUANTITY: 18 cu yds**FACILITY CONTACT:**Date: 11/19/18Signature of Contact:
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**

Date:

Signature Driver:

**DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

Representative
Signature



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

Permian Basin

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 26

SHIPPING FACILITY NAME & ADDRESS:
ConocoPhillips Company
600 N. Dairy Ashford Rd, Houston, TX 77079
Attn. Jenni Fortunato
Jenni.Fortunato@conocophillips.com
832.486.2477

ACCOUNTING INFORMATION
Buck Fed – RMR Project
GL Account No.: 702000
WBS Element: WAO.000.7090.00.AS
PO No.: Pending

LOCATION OF MATERIAL:
ConocoPhillips Co.
Buck Federal CTB
Section 17 - Township 26 South - Range 32 East,
Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners
4008 N. Grimes
Hobbs, New Mexico 88240
575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY: 20 cu yds

FACILITY CONTACT:

Date: 11/19/18

Signature of Contact:
(Agent for ConocoPhillips)

**NAME OF TRANSPORTER (Driver):**

Date: 11-19-18

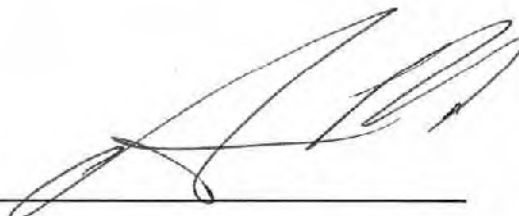
Signature Driver: Gendo Heredia

DISPOSAL SITE:

R360
P.O. Box 388
Hobbs, New Mexico 88241

Date:

Representative
Signature





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)

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 27**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil*

QUANTITY:

*20 cu yds***FACILITY CONTACT:**Date: *11-20-18*Signature of Contact:
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**Date: *11/20/18*

Signature Driver:

**DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

Representative
Signature



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)

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 28**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil***QUANTITY:***00 cu yds***FACILITY CONTACT:**Date: *11-27-18*Signature of Contact:
(Agent for ConocoPhillips)*Joe Tyler***NAME OF TRANSPORTER (Driver):**Date: *11/27/18*

Signature Driver:

**DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

Representative
Signature



Customer: CONOCOPHILLIPS
 Customer #: CRI2190
 Ordered by: JUSTIN WRIGHT
 AFE #: *Joetyle*
 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)

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 29**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:20 cu. yds.**FACILITY CONTACT:**Date: 11-27-18Signature of Contact:
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**TRUCK # M82Date: 11-27-18Signature Driver: Genaro Heredia**DISPOSAL SITE:**

R360

P.O. Box 388

Hobbs, New Mexico 88241

Date:

Representative
Signature



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 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
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: _____

TRANSPORTER'S MANIFESTMANIFEST # 30**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil*

QUANTITY:

*20 cu.yds.***FACILITY CONTACT:**

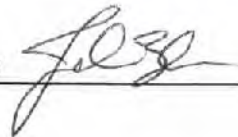
Date:

*11-27-18*Signature of Contact:
(Agent for ConocoPhillips)**NAME OF TRANSPORTER (Driver):**

Date:

11/27/18

Signature Driver:

**DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

Representative
Signature



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

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 31**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,

Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:

20. cu. yds.

FACILITY CONTACT:

Date:

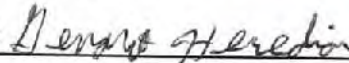
11-27-18

Signature of Contact:

(Agent for ConocoPhillips)

**NAME OF TRANSPORTER (Driver):** TRUCK # M 82

Date: 11-27-18

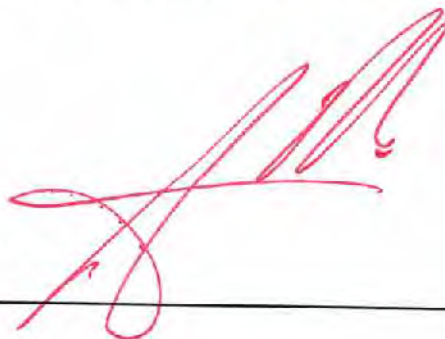
Signature Driver: **DISPOSAL SITE:**

R360

P.O. Box 388

Hobbs, New Mexico 88241

Date:

Representative
Signature



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

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: _____

TRANSPORTER'S MANIFEST

MANIFEST # 32

SHIPPING FACILITY NAME & ADDRESS:

ConocoPhillips Company

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed - RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,

Lea County, New Mexico

JOE TYLER

TRANSPORTER NAME AND ADDRESS:

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:

20 cu. yds.

78

1

FACILITY CONTACT:

Date: 11-29-18

Signature of Contact:
(Agent for ConocoPhillips)

JOE TYLER



NAME OF TRANSPORTER (Driver):

Date: 11-29-18

Signature Driver:



DISPOSAL SITE:

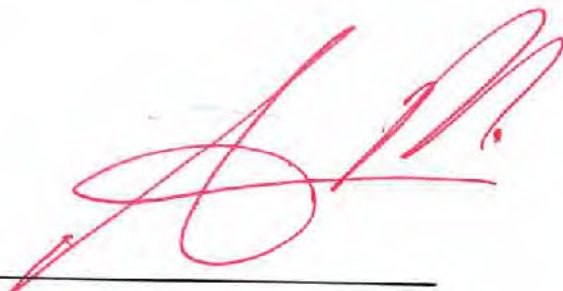
R360

R360

P.O. Box 388

Hobbs, New Mexico 88241

Date: 11-29-18

Representative
Signature



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 17
 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 item(s).
☐ 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: _____

TRANSPORTER'S MANIFEST

MANIFEST # 33

SHIPPING FACILITY NAME & ADDRESS:

ConocoPhillips Company

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed - RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,

Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:

20 cu. yds. 78

FACILITY CONTACT:

Date: 11-29-18

Signature of Contact:
(Agent for ConocoPhillips)

Joe Tylon

NAME OF TRANSPORTER (Driver):

Date: 11/29/18

Signature Driver:

[Signature]

DISPOSAL SITE:

R360

P.O. Box 388

Hobbs, New Mexico 88241

Date: 11/29/18

Representative
Signature

[Signature]



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

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: _____

TRANSPORTER'S MANIFEST

MANIFEST #

34

SHIPPING FACILITY NAME & ADDRESS:

ConocoPhillips Company

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed - RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,

Lea County, New Mexico

TRANSPORTER NAME AND ADDRESS:

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:

20 cu. yds

78

FACILITY CONTACT:

Date: 11-30-18

Signature of Contact:
(Agent for ConocoPhillips)

Joe Tyler (Tetra Tech)

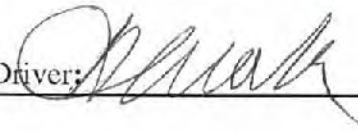


JOE TYLER TYLER

NAME OF TRANSPORTER (Driver):

Date: 11/30/18

Signature Driver:



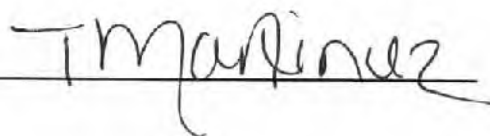
DISPOSAL SITE:

R360

P.O. Box 388

Hobbs, New Mexico 88241

Date: 11/30/18

Representative
Signature



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)

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 35**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:

18 cu yds.**FACILITY CONTACT:**

Date:

11-30-18Signature of Contact:
(Agent for ConocoPhillips)Joe Tyler (Tetra Tech)**NAME OF TRANSPORTER (Driver):**

Date:

11-30-18

Signature Driver:

Chris Luna**DISPOSAL SITE:**

R360

P.O. Box 388

Hobbs, New Mexico 88241

Date:

~~11/30/18~~ 11/30/18Representative
SignatureJY



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 11
 Well #:
 Field:
 Field #:
 Rig: NON-DRILLING
 County: LEA (NM)

Permian Basin

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 36**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:

Impacted Soil

QUANTITY:20
20 cu. yds**FACILITY CONTACT:**Date: 11-30-18Signature of Contact:
(Agent for ConocoPhillips)Joe Tyler[Signature]**NAME OF TRANSPORTER (Driver):**Date: 11 30 18

Signature Driver:

[Signature]**DISPOSAL SITE:**

R360

P.O. Box 388

Hobbs, New Mexico 88241

Date: 11 30 18Representative
Signature[Signature]



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)

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: _____

TRANSPORTER'S MANIFESTMANIFEST # 57**SHIPPING FACILITY NAME & ADDRESS:****ConocoPhillips Company**

600 N. Dairy Ashford Rd, Houston, TX 77079

Attn. Jenni Fortunato

Jenni.Fortunato@conocophillips.com

832.486.2477

ACCOUNTING INFORMATION

Buck Fed – RMR Project

GL Account No.: 702000

WBS Element: WAO.000.7090.00.AS

PO No.: Pending

LOCATION OF MATERIAL:

ConocoPhillips Co.

Buck Federal CTB

Section 17 - Township 26 South - Range 32 East,**Lea County, New Mexico****TRANSPORTER NAME AND ADDRESS:**

McNabb Partners

4008 N. Grimes

Hobbs, New Mexico 88240

575.397.0050

DESCRIPTION OF WASTE:*Impacted Soil***QUANTITY:***18 Cu. yds.***FACILITY CONTACT:**

Date:

*11-30-18*Signature of Contact:
(Agent for ConocoPhillips)*Joe Tyler*
*J. Tyler***NAME OF TRANSPORTER (Driver):**

Date:

11-30-18

Signature Driver:

*Chris Lema***DISPOSAL SITE:***R360**P.O. Box 388**Hobbs, New Mexico 88241*

Date:

*12/13/18*Representative
Signature*martinez*



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: _____

APPENDIX E

Photographic Documentation



TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View north. Assessment activities at southeastern corner of tank battery containment.	1
	SITE NAME	Buck Federal CTB	10/19/2017



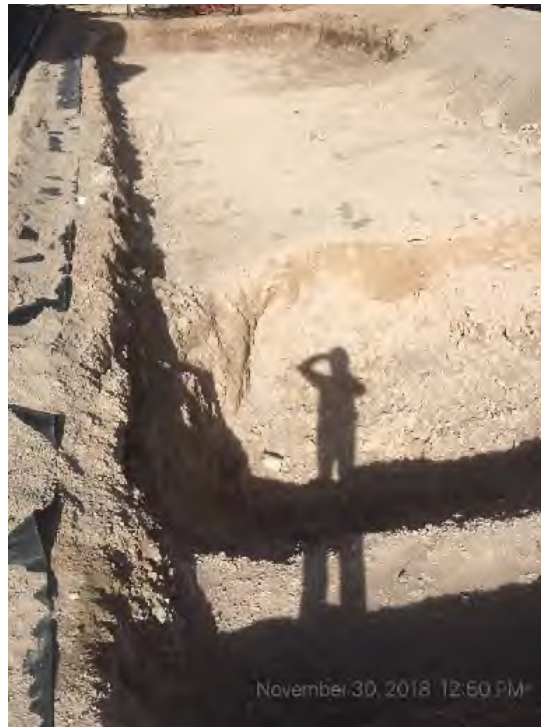
TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View southeast. Assessment activities at northeastern corner of tank battery containment.	2
	SITE NAME	Buck Federal CTB	10/19/2017



TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View east. Lined area in southern portion of the containment.	3
	SITE NAME	Buck Federal CTB	11/27/2018



TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View northwest. Excavated area in the northern portion of the containment.	4
	SITE NAME	Buck Federal CTB	11/30/2018



TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View north. Excavated area in eastern portion the of containment.	5
	SITE NAME	Buck Federal CTB	11/30/2018



TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View northeast. Excavated area at the southeastern corner of the containment.	6
	SITE NAME	Buck Federal CTB	11/30/2018



TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View north. Excavated area in western portion of containment.	7
	SITE NAME	Buck Federal CTB	12/6/2018



TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View north. Excavated area in western portion of containment.	8
	SITE NAME	Buck Federal CTB	12/6/2018



TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View south. Backfilled area in the northwestern portion of the containment.	9
	SITE NAME	Buck Federal CTB	12/7/2018



TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View north. Backfilled area in the eastern portion of the containment.	10
	SITE NAME	Buck Federal CTB	12/7/2018



TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View north. Backfilled area in western portion of containment.	11
	SITE NAME	Buck Federal CTB	12/7/2018



TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View west. Backfilled area in the southern portion of the containment.	12
	SITE NAME	Buck Federal CTB	12/7/2018



TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View southeast. Excavated area in northeastern portion of containment.	13
	SITE NAME	Buck Federal CTB	1/7/2019



TETRA TECH, INC. PROJECT NO. 212C-MD-01491	DESCRIPTION	View southeast. Backfilled area in northeastern portion of containment.	14
	SITE NAME	Buck Federal CTB	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 204471

CONDITIONS

Operator: CONOCOPHILLIPS CO. 3300 North A St. Midland, TX 79705	OGRID: 321825
	Action Number: 204471
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	4/5/2023