

Incident ID	nRM2002731369
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

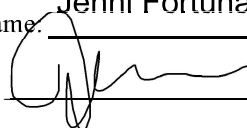
Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Jenni Fortunato

Title: Program Manager, Remediation

Signature: 

Date: 5/25/2021

email: jenni.fortunato@cop.com

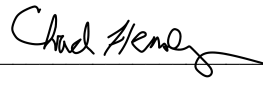
Telephone: 832-486-2477

OCD Only

Received by: Chad Hensley

Date: 08/04/2021

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: 

Date: 08/04/2021

Printed Name: Chad Hensley

Title: Environmental Specialist Advanced

SITE INFORMATION

Report Type: Closure Request nRM2002731369

General Site Information:

Site:	Philmex #15 Flowline Release					
Company:	ConocoPhillips					
Section, Township and Range	Unit Letter F	Sec. 27	T 17S	R 33E		
Lease Number:	N/A					
County:	Lea					
GPS:	32.807240°			-103.653390°		
Surface Owner:	State of New Mexico					
Mineral Owner:	N/A					
Directions:	Depart from Maljamar (Hwy 82/Maljamar Rd): Head south on Maljamar Rd for 0.6 miles. Turn left onto Mescalero Rd. Head southeast for 7.7 miles. Arrive at destination on the left.					

Release Data:

Date Released:	12/5/2019	
Type Release:	Crude Oil and Produced Water	
Source of Contamination:	Flowline leak	
Fluid Released:	11.86 bbls crude oil, 33.6 bbls produced water	
Fluids Recovered:	1 bbls crude oil, 1 bbls produced water	

Official Communication:

Name:	Marvin Soriwei		Christian M. Llull
Company:	Conoco Phillips - RMR		Tetra Tech
Address:	935 N. Eldridge Pkwy.		8911 North Capital of Texas Highway
	832-486-2730		Building 2, Suite 2310
City:	Houston, Texas 77079		Austin, Texas
Phone number:	(832) 486-2730		(512) 338-2861
Fax:			
Email:	Marvin.Soriwei@conocophillips.com		christian.llull@tetrattech.com

Site Characterization

Shallowest Depth to Groundwater:	184' below surface
Impact to groundwater or surface water:	No
Extents within 300 feet of a watercourse:	No
Extents within 200 feet of lakebed, sinkhole, or playa lake:	No
Extents within 300 feet of an occupied structure:	No
Extents within 500 horizontal feet of a private water well:	No
Extents within 1000 feet of any water well or spring:	No
Extents within incorporated municipal well field:	No
Extents within 300 feet of a wetland:	No
Extents overlying a subsurface mine:	No
Karst Potential:	Low
Extents within a 100-year floodplain:	No
Impact to areas not on a production site:	No

Recommended Remedial Action Levels (RRALs)

Benzene	Total BTEX	TPH (GRO+DRO)	TPH (GRO+DRO+MRO)	Chlorides
10 mg/kg	50 mg/kg	1,000 mg/kg	2,500 mg/kg	10,000 mg/kg



May 25, 2021

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

**Re: Closure Report
ConocoPhillips
Philmex #15 Flowline Release
Unit Letter F, Section 27, Township 17 South, Range 33 East
Lea County, New Mexico
nRM2002731369**

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a release that occurred from a flowline associated with the Philmex #15 well (API No. 30-025-27402) flowline, approximately 2,900 feet east-southeast of the wellhead. The release footprint is located in Public Land Survey System (PLSS) Unit Letter F, Section 27, Township 17 South, Range 33 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.807240°, -103.653390°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico Oil Conservation Division (NMOCD) C-141 Initial Report (Appendix A), the release was discovered by air patrol on December 5, 2019. The release was caused by a leak on a flowline located approximately 0.55 miles southeast of the Philmex #15 well pad and resulted in the discharge of 11.86 barrels (bbls) of oil and 33.6 bbls of produced water to the ground surface. During the initial response, 1 bbl of oil and 1 bbls of water were recovered with a vacuum truck. The NMOCD processed the initial C-141 on January 27, 2020 and assigned the Site the incident ID nRM2002731369.

SITE CHARACTERIZATION

A site characterization was performed and no watercourses, sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, playa lakes, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the distances specified in 19.15.0029 New Mexico Administrative Code (NMAC). The Site is in an area of low karst potential.

In the NMOCD-approved Work Plan, the depth to groundwater determination was inaccurately based upon a 1000-m radius search for an area approximately 20 miles to the east of the release site. However, the RRALs chosen as a result of the vicinity search were more conservative for the actual release area. According to the New Mexico Office of the State Engineer (NMOSE) well database, there are no wells located within an 1000-meter radius of the release Site. Thus, based on the approval, COP elected to remediate to the documented RRALs in the NMOCD-approved Work Plan. The average depth to groundwater documented in the approved Work Plan is 61 ft below ground surface (bgs). However, the average depth to groundwater in the vicinity of the release site is 184' bgs. The original Site characterization data included in the Work Plan is included in Appendix B.

Tetra Tech

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Closure Report
May 25, 2021

ConocoPhillips

REGULATORY FRAMEWORK

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

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

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

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

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

INITIAL RESPONSE

According to information provided by COP, the release extent was identified as an area along a flowline that extends from the Philmex #15 well to a flowline header located approximately 0.86 miles southeast of the Philmex #15 lease pad. The release occurred approximately 0.55 miles southeast of the Philmex #15 well pad in an area of pasture adjacent to a reclaimed pad and lease road. Review of historical imagery indicates that the former lease road and pad were reclaimed sometime between March 2012 and February 2014.

Per 19.15.29.8 B. (4) NMAC, the responsible party may commence remediation immediately after discovery of a release. Free fluids were recovered with a vacuum truck during initial response. The release footprint was fenced to limit access to the site as necessary to protect human health and the environment. COP initiated remediation activities in early 2020. During remediation, the visibly impacted soils within the release extent were excavated to approximately 2 feet below ground surface (bgs). The steel flowline from the Philmex #15 runs through the release extent footprint in a southeast to northwest trend. After the initial response remediation activities, further remediation efforts were halted to assess soils both vertically and horizontally for potential environmental impacts.

SITE ASSESSMENT AND SAMPLING RESULTS

Tetra Tech personnel were onsite on July 15, 2020 to conduct soil sampling to achieve vertical and horizontal delineation of the release. A total of eight (8) borings (BH-1 through BH-8) were installed using an air rotary drilling rig. Three borings (BH-1 through BH-3) were installed within the preexisting excavated area to 15 feet bgs (17 feet below pre-excavation surface) to achieve vertical delineation of the release. The uppermost samples collected at these locations were the 2 – 3 feet bgs interval, because the top 2 feet were previously excavated and not yet backfilled. The five remaining borings (B-4 through B-8) were installed on the perimeter of the release to the north, south, east, and west to confirm horizontal delineation

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of the release footprint. Figure 3 depicts the release extent, excavated area and the July 2020 soil boring locations.

A total of thirty-nine (39) samples were collected from the eight borings and submitted to Pace Analytical National Center for Testing & Innovation in Nashville, Tennessee to be analyzed for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B.

The results of the assessment sampling events are summarized in Table 1. The analytical results associated with the BH-2 and BH-3 boring locations exceeded the reclamation standards of 600 mg/kg chloride and 100 mg/kg TPH in the 2-3' sample interval. There were no other analytical results which exceeded the chloride RRAL for the upper four feet (600 mg/kg) during the assessment. Additionally, there were no other analytical results which exceeded the chloride RRAL for soils deeper than 4 feet bgs (10,000 mg/kg). The remainder of analytical results associated with the samples collected were below the respective RRAL for TPH (2,500 mg/kg). The analytical results associated with all samples analyzed were below the BTEX Site RRAL of 50 mg/kg. Therefore, both horizontal and vertical delineation was achieved during the July 2020 soil assessment activities.

REMEDIATION WORK PLAN AND ALTERNATIVE CONFIRMATION SAMPLE PLAN

The Release Characterization Work Plan (Work Plan) was prepared by Tetra Tech on behalf of ConocoPhillips and submitted to NMOC on September 10, 2020 with fee application payment PO Number RIWMM-200910-C-1410. The Work Plan described the results of the release assessment and provided characterization of the impact at the site. The Work Plan was approved via email by Cristina Eads on Monday, November 2, 2020.

REMEDIATION ACTIVITIES AND CONFIRMATION SAMPLING

From January 6, 2021 through February 2, 2021, Tetra Tech personnel were onsite to supervise the remediation activities proposed in the approved Work Plan, including excavation, disposal, and confirmation sampling. Impacted soils were excavated until a representative sample from the walls and bottom of the excavation had a field screening value inferred as lower than the RRALs for the Site. Once field screening was completed, confirmation floor and sidewall samples were collected for laboratory analysis to verify that the impacted materials were properly removed. Each confirmation sample laboratory analytical result was directly compared to the proposed RRALs to demonstrate compliance.

Per the approved Alternative Confirmation Sampling Plan, confirmation samples were collected such that each discrete sample (sidewall and floor) were representative of no more than 500 square feet of excavated area. A total of twenty-six (26) floor sample locations and thirty-seven (37) sidewall sample locations were collected during the remedial activities. Confirmation sidewall sample locations were categorized with the cardinal direction (N, E, S, W) followed by SW-#. Confirmation floor sample locations were labeled with "FS"-#. Selected areas required additional excavation to collect a representative sample that was below the respective RRALs for that location. As the analytical results associated with these sample locations exceeded the respective RRAL, additional excavation was conducted at those locations until field screening results indicated closure criteria were attained.

Iterative confirmation samples were located to encompass the original sample locations that triggered removal (nomenclature defined in Table 1) post-additional excavation. If the sidewall area was expanded due to unacceptable confirmation sample results, the parentheses indicate the expansion iteration. For floor samples, the parentheses indicate the excavation floor depth from which the sample was collected. Excavated areas, depths and confirmation sample locations are shown in Figure 4.

Collected confirmation samples were placed into laboratory-provided sample containers, transferred under chain-of-custody, and analyzed within appropriate holding times by Pace Analytical (Pace). The soil samples were analyzed for TPH (DRO and ORO) by EPA Method 8015, TPH Low Fraction (GRO) by EPA Method 8015D, BTEX by EPA Method 8021B, and chlorides by EPA Method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C.

Closure Report
May 25, 2021

ConocoPhillips

Per the NMOCD-approved Work Plan, the western portion of the release extent was excavated to 2 additional feet below existing grade (for a total of 4 feet below surrounding grade). Additionally, the majority of the eastern portion of the release extent was excavated to 2 additional feet below existing grade (for a total of 4 feet below surrounding grade) following reclamation standard exceedances for TPH at FS-17 and FS-18. Due to the various excavation expansions, areas containing many of the original confirmation sidewall sample locations were removed. In these areas, additional confirmation floor samples were collected in accordance with the approved Alternative Confirmation Sampling Plan.

After iterative confirmation sampling at the floor sample and sidewall sample locations, all final confirmation soil samples (floor and sidewall) were below the respective RRALs for chloride, BTEX, and TPH. The results of the January and February 2021 confirmation sampling events are summarized in Table 2.

All the excavated material was transported offsite for proper disposal. Approximately 1,500 cubic yards of material were transported to the R360 facility in Hobbs, New Mexico. Photographs from the excavated areas prior to backfill are provided in Appendix D. Once confirmation sampling activities were completed and associated analytical results were below the RRALs, the excavated areas were backfilled with clean material to surface grade. The reclaimed areas contain soil backfill consisting of suitable material to establish vegetation at the site.

As prescribed in the Work Plan, the backfilled areas were seeded to aid in revegetation. By request of the landowner, the remediated/reclaimed area was seeded on May 6, 2021. Based on the soils at the site and the approved Work Plan, the New Mexico State Land Office (NMSLO) Coarse (CS) Sites Seed Mixture was used for seeding and planted in the amount specified in the pounds pure live seed (PLS) per acre.

Site inspections will be performed to assess the revegetation progress and evaluate the site for the presence of primary or secondary noxious weeds. If noxious weeds are identified, the NMSLO will be contacted to determine an effective method for eradication. If the site does not show revegetation after one growing season, the area will be reseeded as appropriate.

CONCLUSION

ConocoPhillips respectfully requests closure of this release based on the confirmation sampling results and remediation activities performed. The final C-141 forms are enclosed in Appendix A. If you have any questions concerning the remediation activities for the Site, please call me at (512) 338-2861 or Greg at (432) 682-4559.

Sincerely,
Tetra Tech, Inc.



Christian M. Llull, P.G.
Project Manager



Greg W. Pope, P.G.
Program Manager

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

Closure Report
May 25, 2021

ConocoPhillips

LIST OF ATTACHMENTS

Figures:

- Figure 1 – Overview Map
- Figure 2 – Site Location/Topographic Map
- Figure 3 – Release Assessment Map
- Figure 4 – Remediation Extent and Confirmation Sample Locations

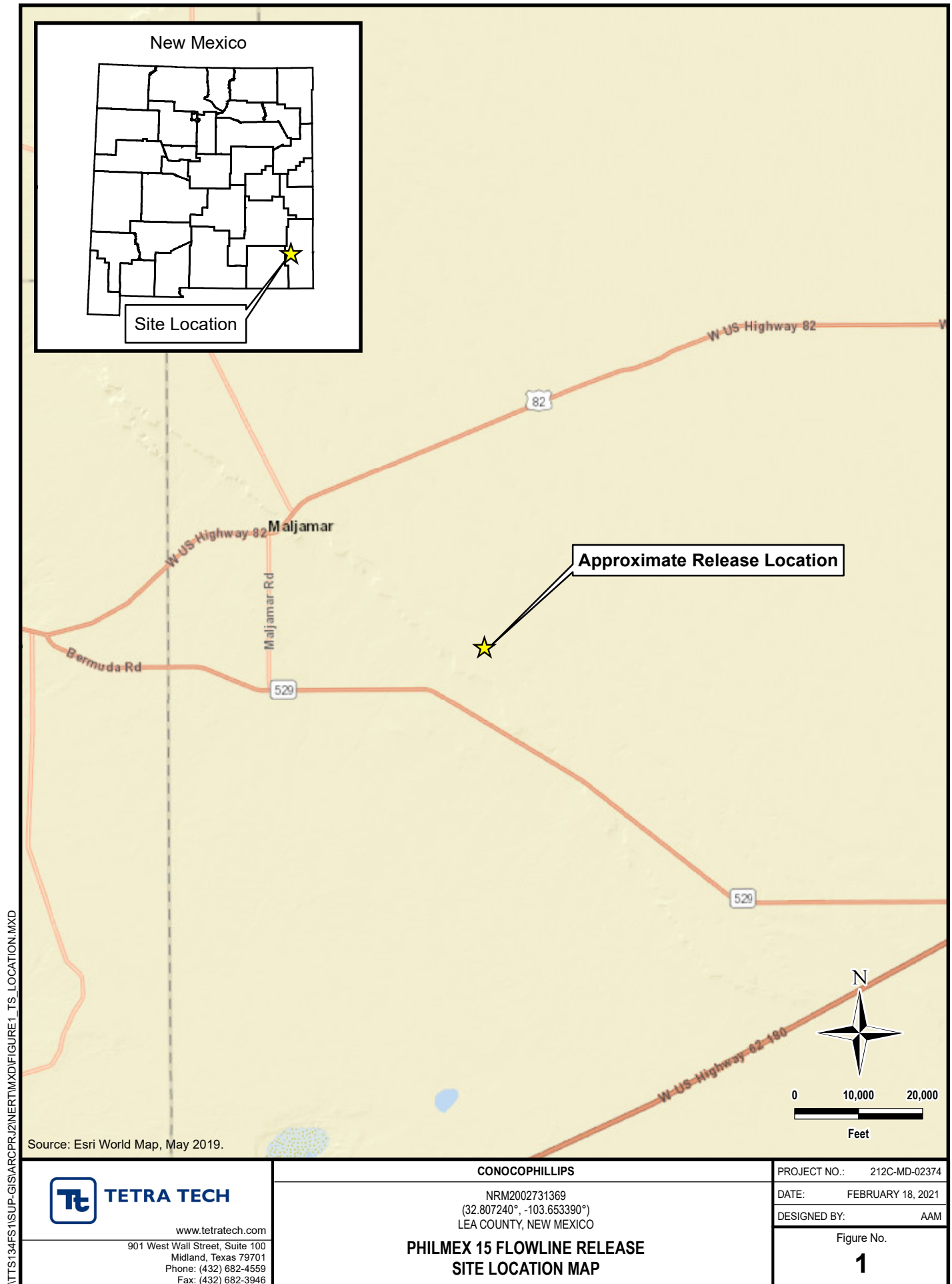
Tables:

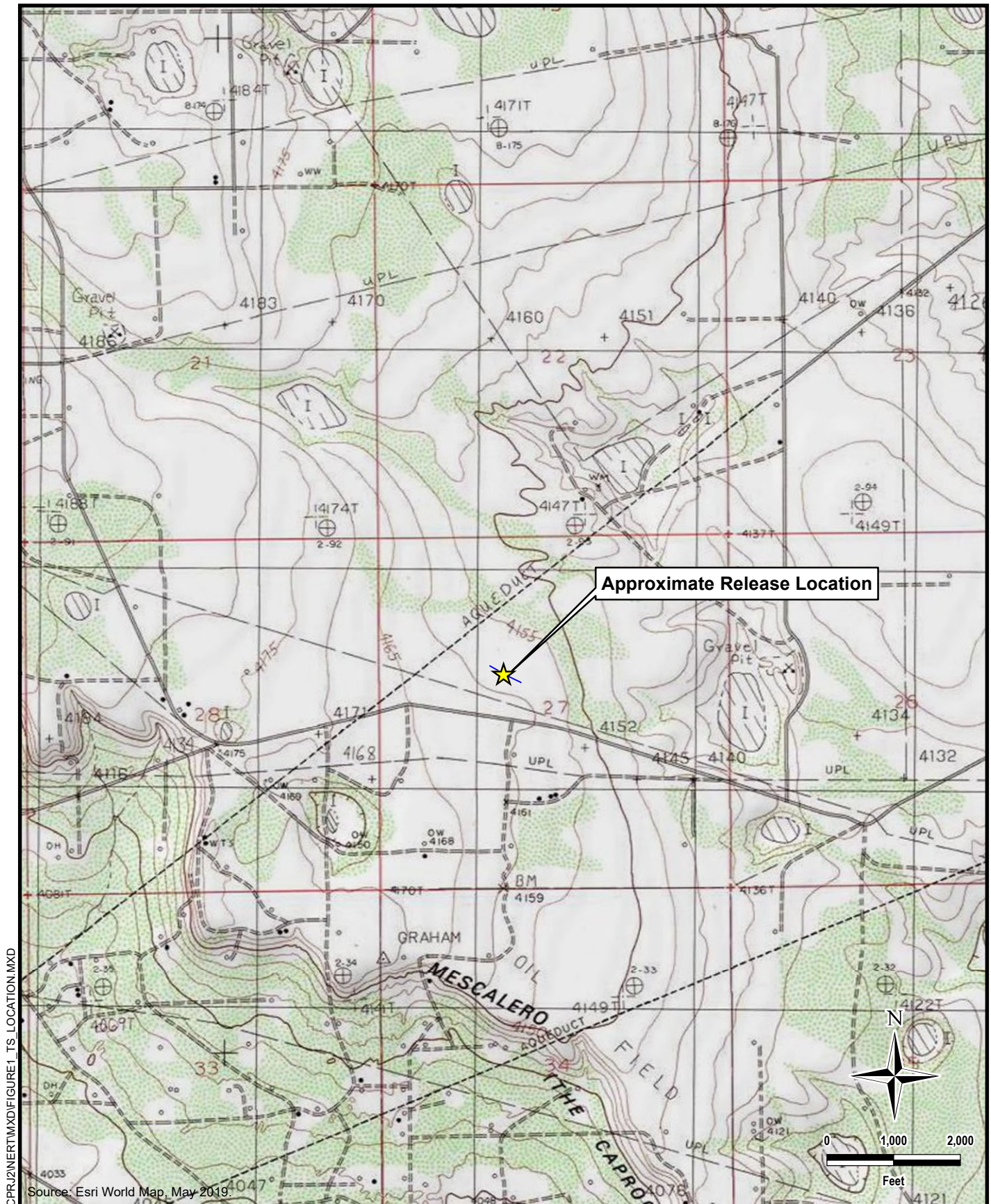
- Table 1 – Summary of Analytical Results – Soil Assessment
- Table 2 – Summary of Analytical Results – Confirmation Sampling

Appendices:

- Appendix A – C-141 Forms
- Appendix B – Site Characterization Data
- Appendix C – Laboratory Analytical Data
- Appendix D – Photographic Documentation

FIGURES





\TTS134FS1\SUP-GIS\ARCP\J2\NERT\MXD\FIGURE1_TS_LOCATION.MXD


TETRA TECH
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 Midland, Texas 79701
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CONOCOPHILLIPS

 NRM2002731369
 (32.807240°, -103.653390°)
 LEA COUNTY, NEW MEXICO

**PHILMEX 15 FLOWLINE RELEASE
 TOPOGRAPHIC MAP**

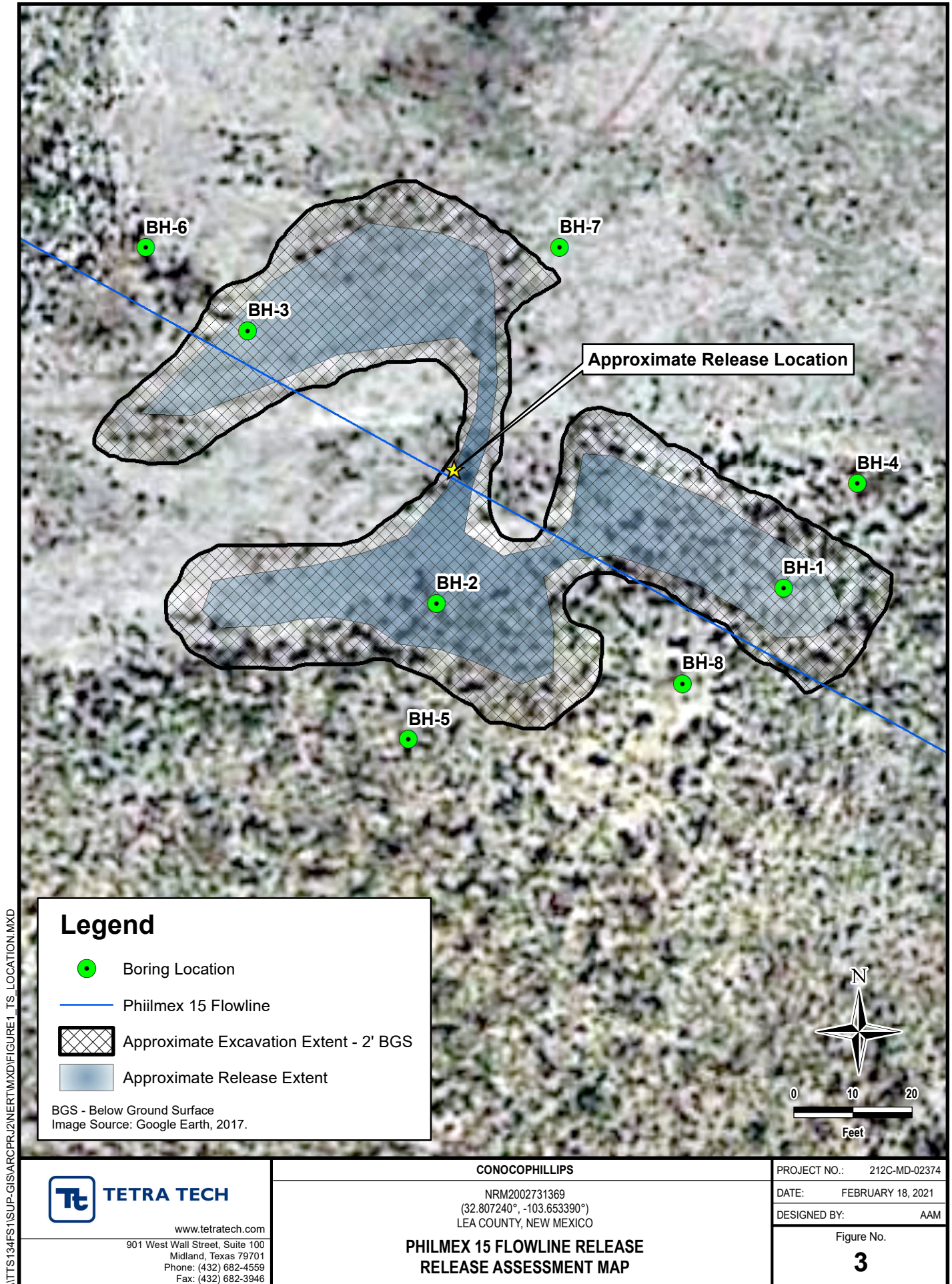
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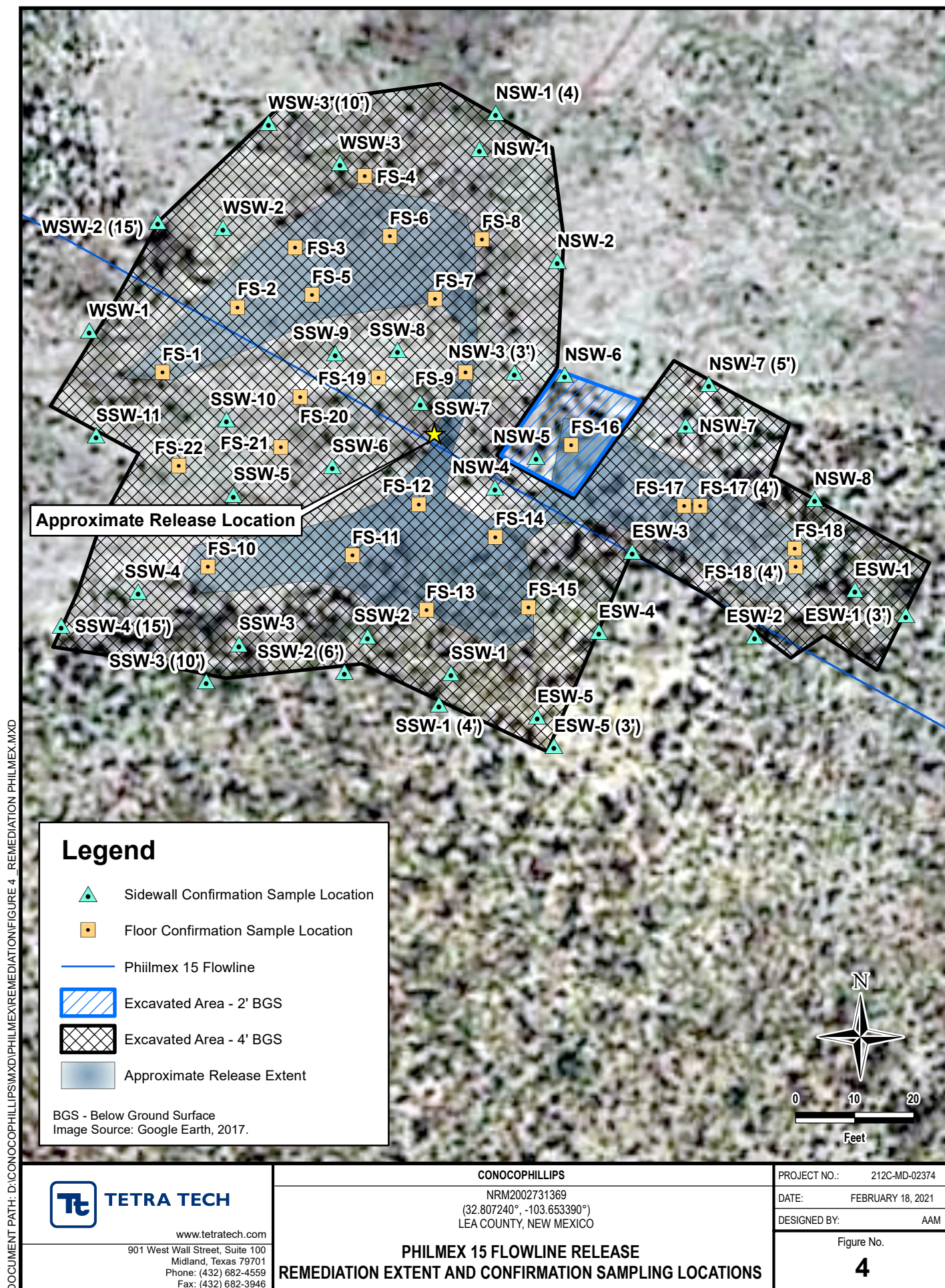
DATE: FEBRUARY 18, 2021

DESIGNED BY: AAM

Figure No.

2





TABLE

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT
CONOCOPHILLIPS
PHILMEX #15 FLOWLINE RELEASE
nRM2002731369
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth Interval	Field Screening Results		Chloride ¹		BTEX ²										TPH ³							
			Chloride	PID			Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX	GRO ⁴ C ₁ - C ₁₀		DRO C ₁₁ - C ₂₈		ORO C ₂₉ - C ₄₀		Total TPH (GRO+DRO+ORO)		
			ft. bgs	ppm	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg		
BH-1	7/15/2020	2-3	345	0.9	441		< 0.00105		< 0.00525		< 0.00262		0.00121	J	0.00121		0.0393	B J	3.94	J	6.02		10.0	
		4-5	850	0.0	810		< 0.00107		< 0.00536		< 0.00268		< 0.00696		-		0.0415	B J	2.28	J	1.62		3.94	
		6-7	-	0.0	354		< 0.00102		< 0.00511		< 0.00256		< 0.00664		-		0.0380	B J	< 4.09		1.24	J	1.28	
		8-9	138	0.0	196		< 0.00102		< 0.00511		< 0.00256		< 0.00664		-		< 0.102		< 4.09		2.35	J	2.35	
		11-12	74	0.0	33.6		< 0.00102		< 0.00509		< 0.00255		< 0.00662		-		< 0.102		1.89	J	2.61	J	4.50	
		16-17	50	0.0	34.6		< 0.00103		< 0.00517		< 0.00258		< 0.00672		-		< 0.103		2.40	J	3.23	J	5.63	
BH-2	7/15/2020	2-3	650	0.5	866		< 0.00102		< 0.00508		< 0.00254		< 0.00660		-		< 0.102		414		490		904	
		4-5	425	0.0	247		< 0.00123		< 0.00613		< 0.00307		< 0.00797		-		0.0580	B J	14.1		43.1		57.3	
		6-7	176	0.0	1800		< 0.00106		< 0.00532		< 0.00266		< 0.00691		-		0.0553	B J	< 4.26		1.30	J	1.36	
		8-9	100	0.0	1440		< 0.00106		< 0.00532		< 0.00266		< 0.00692		-		0.0543	B J	3.01	J	2.17	J	5.23	
		11-12	120	0.0	32.2		< 0.00106		< 0.00528		< 0.00264		< 0.00686		-		0.0421	B J	< 4.22		1.90	J	1.94	
		16-17	100	0.0	13.5	J	< 0.00141		< 0.00705		< 0.00353		< 0.00917		-		< 0.121		4.98		31.1		36.1	
BH-3	7/15/2020	2-3	400	394	2,590		< 0.00105		0.00220	J	0.0141		0.0442		0.0605		1.61		881	J3 V	687		1570	
		4-5	180	125	493		< 0.00106		< 0.00532		< 0.00266		< 0.00692		-		< 0.106		10.6		14.9		25.5	
		6-7	400	0.1	191		< 0.00102		< 0.00509		< 0.00255		< 0.00662		-		< 0.102		5.29		6.51		11.8	
		8-9	150	0.0	173		< 0.00102		< 0.00511		< 0.00255		< 0.00664		-		< 0.102		2.33	J	2.10	J	4.43	
		11-12	200	0.0	222		< 0.00106		< 0.00529		< 0.00265		< 0.00668		-		< 0.106		< 4.24		1.04	J	1.04	
		16-17	150	0.0	113		< 0.00103		< 0.00517		< 0.00259		< 0.00673		-		< 0.103		2.31	J	1.45	J	3.76	
BH-4	7/15/2020	0-1	70	0.0	< 20.6		< 0.00103		< 0.00516		0.00114	J	0.00196	J	0.00310		< 0.103		16.6		67.0		83.6	
		2-3	74	0.0	< 20.8		< 0.00104		< 0.00519		< 0.00260		< 0.00675		-		< 0.104		5.45		11.5		17.0	
		4-5	78	0.0	< 21.1		< 0.00105		< 0.00527		< 0.00263		< 0.00685		-		< 0.105		< 4.22		2.20	J	2.20	
		6-7	72	0.0	< 20.6		< 0.00103		< 0.00515		< 0.00258		< 0.00670		-		< 0.103		< 4.12		1.46	J	1.46	
		9-10	-	0.0	28.3		< 0.00150		< 0.00749		< 0.00375		< 0.00974		-		< 0.125		< 5.00		0.713	J	0.713	
BH-5	7/15/2020	0-1	100	0.0	15.4	J	< 0.00105		< 0.00526		< 0.00263		< 0.00683		-		< 0.105		7.64		21.7		29.3	
		2-3	200	0.0	166		< 0.00106		< 0.00531		< 0.00266		< 0.00691		-		< 0.106		< 4.25		2.91	J	2.91	
		4-5	78	0.0	44.0		< 0.00108		< 0.00541		< 0.00271		< 0.00704		-		< 0.108		2.75	J	0.862	J	3.61	
		6-7	95	0.0	74.4		< 0.00103		< 0.00516		< 0.00258		< 0.00671		-		< 0.103		2.46	J	< 4.13		2.46	
BH-6	7/15/2020	0-1	120	0.0	17.1	J	< 0.00104		< 0.00519		< 0.00260		0.00114	J	0.00114		< 0.104		11.1		21.6		32.7	
		2-3	68	0.0	55.3		< 0.00102		< 0.00512		< 0.00256		< 0.00666		-		< 0.102		2.70	J	1.44	J	4.14	
		4-5	67	0.0	44.2		< 0.00102		< 0.00508		< 0.00254		< 0.00660		-		< 0.102		2.44	J	< 4.06		2.44	
		6-7	120	0.0	25.5		< 0.00102		< 0.00510		< 0.00255		< 0.00663		-		< 0.102		2.90	J	< 4.08		2.90	
BH-7	7/15/2020	0-1	220	0.0	11.9	J	< 0.00107		< 0.00535		0.000910	J	0.00142	J	0.00233		< 0.107		10.5		24.7		35.2	
		2-3	86	0.0	10.4	J	< 0.00102		< 0.00509		< 0.00255		< 0.00662		-		< 0.102		1.81	J	< 4.07		1.81	
		4-5	160	0.0	19.8	J	< 0.00101		< 0.00504		< 0.00252		< 0.00656		-		< 0.101		1.80	J	1.40	J	3.20	
		6-7	200	0.0	144		< 0.00103		< 0.00514		< 0.00257		< 0.00669		-		< 0.103		2.35	J	1.28	J	3.63	
BH-8	7/15/2020	0-1	125	0.0	13.1	J	< 0.00101		< 0.00506		< 0.00253		< 0.00658		-		< 0.101		2.85	J	4.02	J	6.87	
		2-3	61	0.0	102		< 0.00102		< 0.00510		< 0.00255		< 0.00663		-		< 0.102		2.08	J	0.865	J	2.95	
		4-5	69	0.0	67.6		< 0.00101		< 0.00504		< 0.00252		< 0.00655		-		< 0.101		< 4.03		< 4.03		-	
		6-7	170	0.0	85.0		< 0.00102		< 0.00509		< 0.00254		< 0.00661		-		< 0.102		1.96	J	< 4.07		1.96	

NOTES:

ft. Feet
bgs Below ground surface
ppm Parts per million
mg/kg Milligrams per kilogram
TPH Total Petroleum Hydrocarbons
GRO Gasoline range organics
DRO Diesel range organics
ORO Oil range organics

Bold and italicized values indicate exceedance of proposed RRLs

Shaded rows indicate depth intervals proposed for excavation and remediation

- 1 EPA Method 300.0
- 2 EPA Method 8260B
- 3 EPA Method 8015
- 4 EPA Method 8015D/GRO

QUALIFIERS:

- B The same analyte is found in the associated blank.
J The identification of the analyte is acceptable; the reported value is an estimate.
J3 The associated batch QC was outside the established quality control range for precision.
V The sample concentration is too high to evaluate accurate spike recoveries.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
CONFIRMATION SAMPLING - nRM2002731369
CONOCOPHILLIPS
PHILMEX #15 FLOWLINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth	Chloride ¹		BTEX ²										TPH ³							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO ⁴		DRO		ORO		Total TPH (GRO+DRO+ORO)	
					mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q		
FS-1	1/25/2021	4	222		< 0.00108		< 0.00542		< 0.00271		< 0.00704		-	0.903	B J	2.74	J	3.64	J	7.28		
FS-2	1/25/2021	4	307		< 0.00112		< 0.00560		< 0.00280		< 0.00728		-	0.719	B J	187		283		471		
FS-3	1/21/2021	4	2530		< 0.00104		0.00223	J	0.00436		0.0126		0.0192	< 0.103		910		1120		2030		
FS-4	1/14/2021	4	650		< 0.00123		< 0.00613		< 0.00306		< 0.00797		-	0.251	B	425		386		811		
FS-5	1/21/2021	4	199		< 0.00105		< 0.00526		< 0.00263		< 0.00683		-	< 0.104		412		520		932		
FS-6	1/14/2021	4	712		< 0.00129		< 0.00644		0.00210	J	0.0281		0.0302	0.843		518		525		1044		
FS-7	1/14/2021	4	1310		< 0.00113		< 0.00565		< 0.00283		< 0.00735		-	0.0450	B J	25.2		41.9		67.1		
FS-8	1/14/2021	4	107		< 0.00141		< 0.00354		0.00117	J	0.0147		0.0159	2.62		208		196		407		
FS-9	1/21/2021	4	1250		< 0.00105		< 0.00525		< 0.00263		< 0.00683		-	< 0.103		691		650		1341		
FS-10	1/21/2021	4	1260		< 0.00110		< 0.00549		< 0.00275		< 0.00714		-	< 0.105		34.7		61.2		95.9		
FS-11	1/21/2021	4	1550		< 0.00112		< 0.00562		< 0.00281		< 0.00730		-	< 0.106		342		414		756		
FS-12	1/25/2021	4	56.1		< 0.00119		< 0.00597		< 0.00298		< 0.00776		-	0.685	B J	118	J6	166		285		
FS-13	1/21/2021	4	879		< 0.00127		< 0.00637		< 0.00319		< 0.00828		-	< 0.114		20.7		23.8		44.5		
FS-14	1/25/2021	4	744		< 0.00111		< 0.00555		< 0.00278		< 0.00721		-	1.21	B J	360		389		750		
FS-15	1/25/2021	4	36.3		< 0.00117		< 0.00584		< 0.00292		< 0.00760		-	0.895	B J	56.7		77.8		135		
FS-16	1/8/2021	2	201		< 0.00110		0.00202	J	0.00328		0.00755		0.0129	0.0926	J	25.0		46.8		71.9		
FS-17	1/8/2021	2	173		< 0.00104		0.00279	J	0.00413		0.00925		0.0162	< 0.102		2560		2410		4970		
FS-17 (4')*	1/21/2021	4	329		< 0.00118		< 0.00588		< 0.00294		< 0.00764		-	< 0.109		4.94		7.50		12.4		
FS-18	1/8/2021	2	77.5		< 0.00107		0.00233	J	0.00241	J	0.00407	J	0.00881	< 0.103		140		181		321		
FS-18 (4')*	1/21/2021	4	265		< 0.00119		< 0.00593		< 0.00297		< 0.00771		-	< 0.109		< 4.37		1.21	J	1.21		
FS-19 (4')	1/29/2021	4	46.5		< 0.00105		< 0.00525		< 0.00262		< 0.00682		-	0.0325	J	17.0		14.7		31.7		
FS-20 (4')	1/29/2021	4	47.1		< 0.00106		< 0.00529		< 0.00264		< 0.00687		-	< 0.103		23.2		19.3		42.5		
FS-21 (4')	1/29/2021	4	221		< 0.00112		< 0.00561		< 0.00281		< 0.00729		-	< 0.106		51.9		147		199		
FS-22 (4')	1/29/2021	4	47.4		< 0.00109		< 0.00544		< 0.00272		< 0.00707		-	< 0.104		28.4		23.3		51.7		
FS-23 (4')	1/29/2021	4	21.6		< 0.00105		< 0.00527		< 0.00263		< 0.00685		-	< 0.103		12.8		10.9		23.7		
FS-24 (4')	1/29/2021	4	998	J3	< 0.00109		< 0.00544		< 0.00272		< 0.00708		-	< 0.104		3.70	J	7.49		11.2		
NSW-1	1/14/2021	-	80.9		< 0.00118		< 0.00588		0.00115	J	0.00358	J	0.00473	0.343	B	748		641		1389		
NSW-1 (4')*	1/21/2021	-	82.2		< 0.00114		< 0.00569		< 0.00285		< 0.00740		-	< 0.108		8.30		35.0		43.3		
NSW-2	1/15/2021	-	42.6		< 0.00128		< 0.00640		< 0.00320		< 0.00832		-	1.44	B J	15.1		69.4		85.9		
NSW-3 (3')**	1/15/2021	-	4700		< 0.00139		< 0.00693		< 0.00346		< 0.00902		-	0.759	B J	76.1		137		214		
NSW-4**	1/15/2021	-	8370		< 0.00118		< 0.00592		< 0.00296		< 0.00770		-	0.913	B J	118		231		350		
NSW-5	1/8/2021	-	241		< 0.00111		0.00284	J	0.00836		0.0158		0.0270	0.0820	J	23.5		31.5		55.1		
NSW-6	1/8/2021	-	27.3		< 0.00107		< 0.00537		< 0.00268		0.00107	J	0.00107	< 0.104		12.9		32.2		45.1		
NSW-7	1/8/2021	-	306		< 0.00109		< 0.00547		< 0.00274		0.00107	J	0.00107	< 0.105		293		303		596		
NSW-7 (5')*	1/15/2021	-	260		< 0.00115		< 0.00574		< 0.00287		< 0.00746		-	0.625	B J	16.3		42.9		59.8		
NSW-8	1/8/2021	-	108		< 0.00104		0.00227	J	0.00186	J	0.00344	J	0.00757	< 0.102		32.5		61.8		94.3		

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
CONFIRMATION SAMPLING - nRM2002731369
CONOCOPHILLIPS
PHILMEX #15 FLOWLINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth	Chloride ¹		BTEX ²								TPH ³							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX	GRO ⁴		DRO		ORO		Total TPH (GRO+DRO+ORO)
					mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
ESW-1	1/8/2021	-	27.6		< 0.00105		< 0.00527		0.000817	J	0.00193	J	0.00275	< 0.103		1610		1530		3140
ESW-1 (3')*	1/15/2021	-	27.8		< 0.00122		< 0.00608		< 0.00304		< 0.00790		-	1.31	B J	5.49		21.1		27.9
ESW-2	1/8/2021	-	31.3		< 0.00109		< 0.00543		< 0.00272		< 0.00706		-	< 0.104		13.6		36.4		50.0
ESW-3	1/8/2021	-	299	J3	< 0.00109		< 0.00545		< 0.00272		< 0.00708		-	< 0.104		8.83		25.0		33.8
ESW-4	1/21/2021	-	510		< 0.00111		< 0.00554		< 0.00277		< 0.00720		-	< 0.106		21.7		49.0		70.7
ESW-5	1/21/2021	-	418		< 0.00111		< 0.00556		< 0.00278		< 0.00723		-	< 0.106		262		337		599
ESW-5 (3')*	1/27/2021	-	181		< 0.00157		< 0.00785		< 0.00393		0.00185	J	0.00185	1.61	J	3.37	J	6.36		11.3
SSW-1	1/19/2021	-	1850		< 0.00112		0.00303	J	0.0184		0.0539		0.0753	0.446		224		343		567
SSW-1 (4')*	1/27/2021	-	129		< 0.00128		< 0.00639		< 0.00320		0.00140	J	0.00140	< 3.20		3.42	J	8.38		11.8
SSW-2	1/19/2021	-	1320		< 0.00112		0.00346	J	0.0556		0.125		0.184	1.44		514		590		1105
SSW-2 (6')*	1/27/2021	-	74.4		< 0.00182		< 0.00911		< 0.00456		0.00218	J	0.00218	1.07	J	5.99		15.1		22.2
SSW-3	1/19/2021	-	3190		< 0.00109		< 0.00546		< 0.00273		< 0.00709		-	< 0.105		41.2		75.0		116
SSW-3 (10')*	1/27/2021	-	112		< 0.00149		< 0.00746		< 0.00373		< 0.00970		-	0.962	J	5.58		17.9		24.4
SSW-4	1/21/2021	-	1330		< 0.00111		< 0.00554		< 0.00277		< 0.00720		-	< 0.105		88.3		212		300
SSW-4 (15')*	1/27/2021	-	17.2	J	< 0.00155		< 0.00774		< 0.00387		< 0.0101		-	1.33	J	5.05		14.6		21.0
SSW-5**	1/19/2021	-	1260		< 0.00109		< 0.00546		< 0.00273		< 0.00709		-	< 0.105		42.2		91.9		134
SSW-6**	1/19/2021	-	2600		< 0.00115		< 0.00577		< 0.00289		< 0.00751		-	< 0.108		22.8		60.1		82.9
SSW-7**	1/19/2021	-	4100		< 0.00110		< 0.00549		< 0.00274		< 0.00714		-	< 0.105		42.0		122		164
SSW-8**	1/19/2021	-	1410		< 0.00113		< 0.00566		< 0.00283		< 0.00736		-	< 0.107		407		947		1354
SSW-9**	1/19/2021	-	225		< 0.00109		< 0.00547		< 0.00273		< 0.00711		-	< 0.105		671		1500		2171
SSW-10	1/25/2021	-	17.4	J	< 0.00126		< 0.00631		< 0.00316		< 0.00820		-	2.37	B J	8.40		14.9		25.7
SSW-11	1/25/2021	-	18.7	J	< 0.00118		< 0.00590		< 0.00295		< 0.00767		-	1.13	B J	14.6		27.6		43.3
WSW-1	1/25/2021	-	16.0	J	< 0.00123		< 0.00615		< 0.00308		< 0.00800		-	0.812	B J	11.7		21.4		33.9
WSW-2	1/19/2021	-	680		< 0.00109		< 0.00547		< 0.00274		< 0.00711		-	< 0.105		621		746		1367
WSW-2 (15')*	1/27/2021	-	180		< 0.00199		< 0.00994		< 0.00497		< 0.0129		-	< 4.97		7.95		16.6		24.6
WSW-3	1/19/2021	-	450		< 0.00117		< 0.00587		< 0.00294		< 0.00764		-	< 0.109		212		621		833
WSW-3 (10')*	1/27/2021	-	370		< 0.00190		< 0.00951		< 0.00475		< 0.0124		-	1.99	J	17.0		23.0		42.0

NOTES:

ft. Feet
bgs Below ground surface
ppm Parts per million
mg/kg Milligrams per kilogram
TPH Total Petroleum Hydrocarbons
GRO Gasoline range organics
DRO Diesel range organics
ORO Oil range organics
1 EPA Method 300.0
2 EPA Method 8260B
3 EPA Method 8015
4 EPA Method 8015D/GRO

Bold and italicized values indicate exceedance of proposed RRALs

Gold highlight represents soil horizons that were removed during deepening of excavation floors.

Green highlight represents soil intervals that were removed during horizontal expansion of excavation sidewalls.

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

** Entire soil interval containing RRAL exceedance was excavated.

QUALIFIERS:

B The same analyte is found in the associated blank.
J The identification of the analyte is acceptable; the reported value is an estimate.
J3 The associated batch QC was outside the established quality control range for precision.
J6 The sample matrix interfered with the ability to make any accurate determination; spike value is low.

APPENDIX A C-141 Forms

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	NRM2002731369
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

SGEYD-191211-C-1410

Responsible Party ConocoPhillips Company	OGRID 217817
Contact Name Gustavo Fejervary	Contact Telephone 432/210-7037
Contact email g.fejervary@cop.com	Incident # (assigned by OCD)
Contact mailing address 5735 SW 7000 Andrews, TX 79714	

Location of Release Source

Latitude 32.8110619 Longitude -103.6617508
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Philmex 15 flowline	Site Type flow line leak
Date Release Discovered 12/5/19	API# (if applicable)

Unit Letter	Section	Township	Range	County
A	28	17S	33E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 11.86	Volume Recovered (bbls) 1
☒ Produced Water	Volume Released (bbls) 33.6	Volume Recovered (bbls) 1
	Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release flow line leak

Form C-141

State of New Mexico
Oil Conservation Division

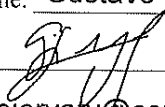
Page 2

Incident ID	NRM2002731369
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? it was more than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? It was given on 12/5/19 to district 1 email address and Bradford Billings	

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Gustavo Fejervary</u>	Title: <u>Environmental Coordinator</u>
Signature: 	Date: <u>12/11/19</u>
email: <u>g.fejervary@cop.com</u>	Telephone: <u>432/210-7037</u>
OCD Only Received by: <u>Ramona Marcus</u> Date: <u>1/27/2020</u>	

NRM2002731369

L48 Spill Volume Estimate Form									
Facility Name & Number:		Philmet 15 flowline							
Asset Area:		Majana							
Release Discovery Date & Time:		12/5/19 12:00p							
Release Type:		Oil Mixture							
Provide any known details about the event: Flow line leak found by air patrol, 2 bbls were recovered									
Spill Calculation - Subsurface Spill - Rectangle									
Was the release on pad or off-pad?									
Yes, On Pad - 8%; Off Pad - 13.57% soil spilled-fluid saturation factor; if No, use factors above.									
Convert irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	62.0	25.0	5.00	15.12%	114.958	17.382	25.00%	4.345	13.036
Rectangle B	22.0	3.0	5.00	15.12%	4.895	0.740	25.00%	0.185	0.555
Rectangle C	40.0	4.0	5.00	15.12%	11.867	1.794	25.00%	0.449	1.346
Rectangle D	55.0	10.0	5.00	15.12%	40.792	6.188	25.00%	1.542	4.626
Rectangle E	62.0	25.0	5.00	15.12%	114.958	17.382	25.00%	4.345	13.036
Rectangle F					0.000	0.000		0.000	0.000
Rectangle G					0.000	0.000		0.000	0.000
Rectangle H					0.000	0.000		0.000	0.000
Rectangle I					0.000	0.000		0.000	0.000
Rectangle J					0.000	0.000		0.000	0.000
Total Volume Release:					43.465			10.866	32.599

Incident ID	nRM2002731369
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	61 (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

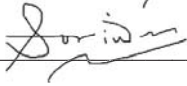
If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, 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	nRM2002731369
District RP	
Facility ID	
Application ID	

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

Printed Name: Marvin Soriwei Title: Program Manager, Risk Management & Remediation
Signature:  Date: 9/9/2020
email: marvin.soriwei@conocophillips.com Telephone: 8324862730

OCD Only

Received by: Cristina Eads Date: 09/10/2020

Incident ID	nRM2002731369
District RP	
Facility ID	
Application ID	

Remediation Plan

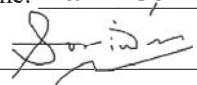
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

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

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

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Marvin Soriwei Title: Program Manager, Risk Management & Remediation
Signature:  Date: 9/9/2020
email: marvin.soriwei@conocophillips.com Telephone: 8324862730

OCD Only

Received by: Cristina Eads Date: 09/10/2020

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

Signature:  Date: 11/02/2020

Incident ID	nRM2002731369
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

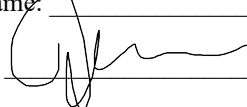
Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Jenni Fortunato

Title: Program Manager, Remediation

Signature: 

Date: 5/25/2021

email: jenni.fortunato@cop.com

Telephone: 832-486-2477

OCD Only

Received by: _____

Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____

Title: _____

APPENDIX B

Site Characterization Data



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 03194	L	LE		4	3	25	17S	36E		658227	3630422*	332	120	40	80
L 02566	L	LE		3	3	3	25	17S	36E	657723	3630314*	548	110	40	70
L 12562 POD9	L	LE		1	4	4	25	17S	36E	658980	3630480	925	122	107	15
L 03086	L	LE		1	1	25	17S	36E		657804	3631628*	947	122	60	62

Average Depth to Water: **61 feet**

Minimum Depth: **40 feet**

Maximum Depth: **107 feet**

Record Count: 4

UTMNAD83 Radius Search (in meters):

Easting (X): 658087.21

Northing (Y): 3630723.462

Radius: 1000

*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.

9/10/20 9:15 PM

Page 1 of 1

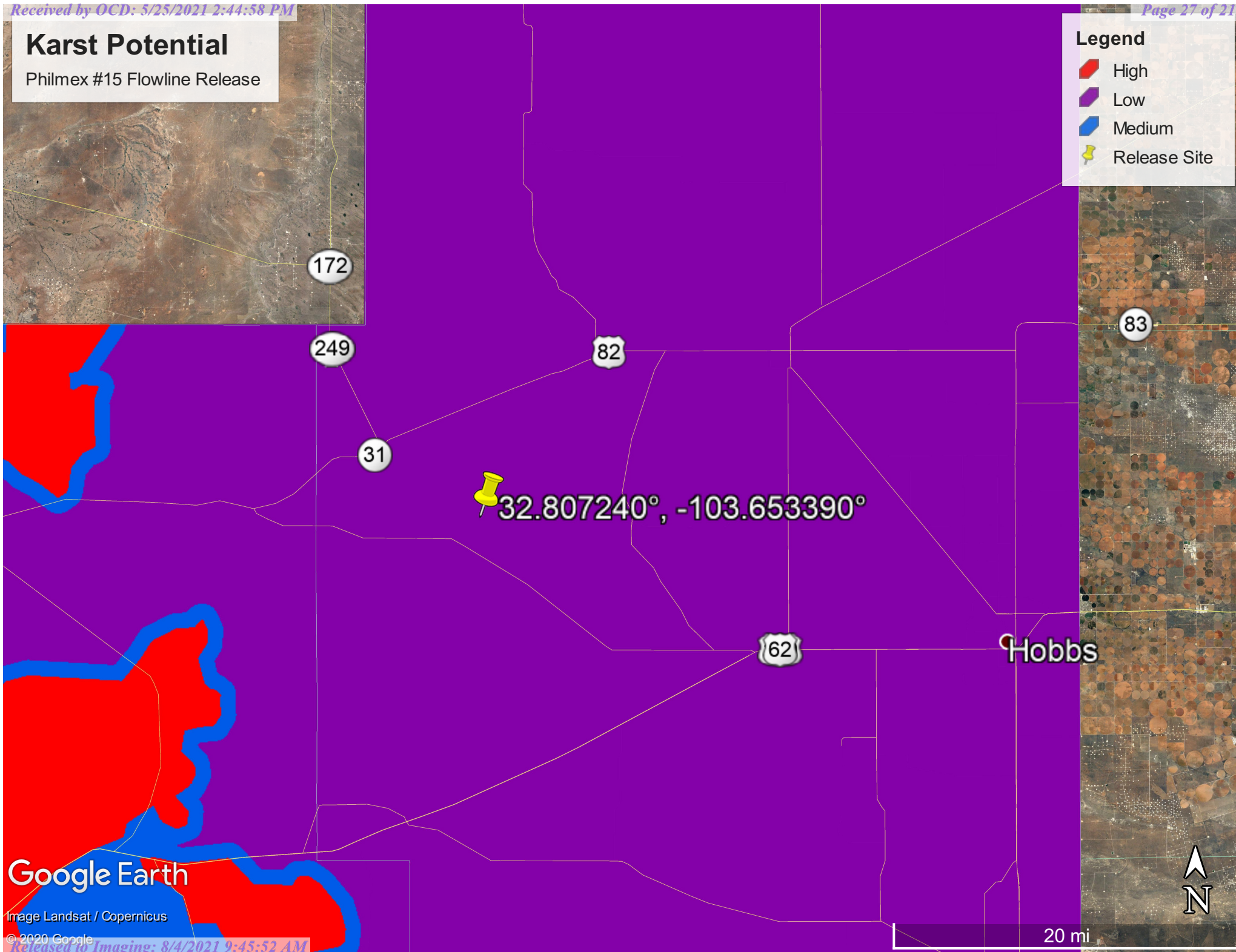
WATER COLUMN/ AVERAGE
DEPTH TO WATER

Karst Potential

Philmex #15 Flowline Release

Legend

- High
- Low
- Medium
- Release Site



Google Earth

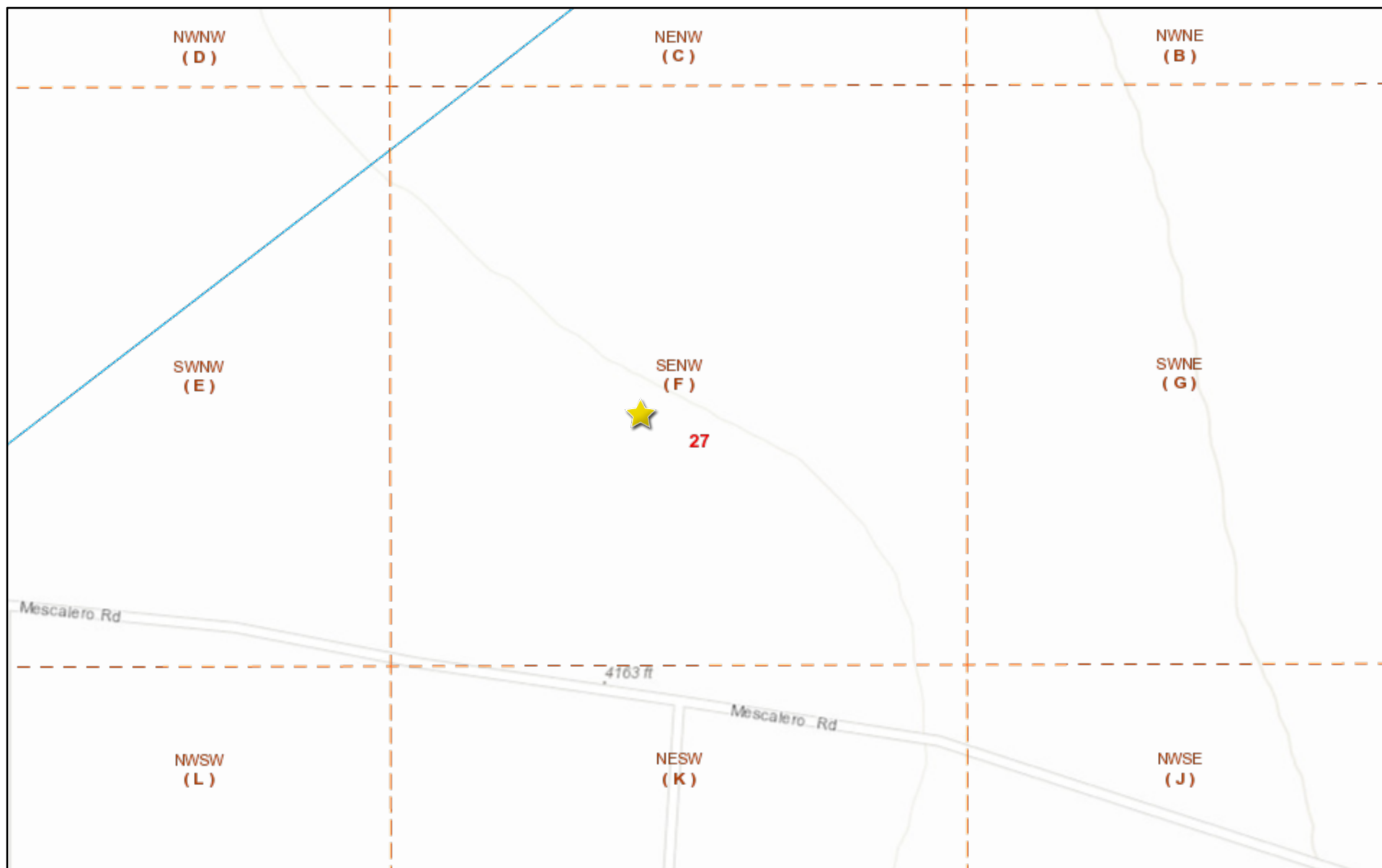
Image Landsat / Copernicus

© 2020 Google

Released to Imaging: 8/4/2021 9:45:52 AM

20 mi

Water Bodies



8/7/2020, 4:17:31 PM



Override 1



PLSS First Division



PLJV Probable Playas



OCD District Offices



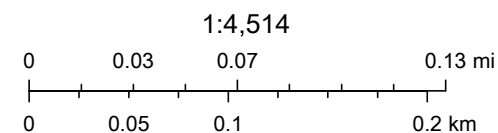
PLSS Second Division



OSE Streams



OSE Water-bodies



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

New Mexico Oil Conservation Division



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 03133	L	LE		3	1	3	23	17S	33E	627188	3631868*	1600	230		
L 03713	L	LE		3	4	1	28	17S	33E	624391	3630617*	1685	210		
L 14159 POD1	L	LE		3	1	3	28	17S	33E	624030	3630169	2116	298	165	133
L 13049 POD1	L	LE		2	2	2	29	17S	33E	623782	3631207*	2342	244	204	40

Average Depth to Water: **184 feet**

Minimum Depth: **165 feet**

Maximum Depth: **204 feet**

Record Count: 4

UTMNAD83 Radius Search (in meters):

Easting (X): 626073.22

Northing (Y): 3630720

Radius: 2400

*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.

5/11/21 10:32 AM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

APPENDIX C

Laboratory Analytical Data

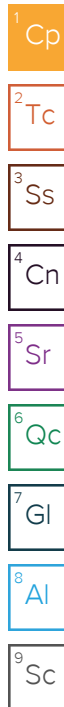


ANALYTICAL REPORT

January 12, 2021

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1304524
Samples Received: 01/09/2021
Project Number: 212C-MD-02374
Description: Philmex #15 Flowline Release
Site: LEA COUNTY, NEW MEXICO
Report To: Christian Llull
901 West Wall
Suite 100
Midland, TX 79701



Entire Report Reviewed By:

Chris McCord
Project Manager

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

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	5
Sr: Sample Results	6
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FS-18 L1304524-03	8
NSW-5 L1304524-04	9
NSW-6 L1304524-05	10
NSW-7 L1304524-06	11
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¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

FS-16 L1304524-01 Solid

				Collected by John Thurston	Collected date/time 01/08/21 00:00	Received date/time 01/09/21 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1603540	1	01/11/21 09:43	01/11/21 09:51	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1603157	1	01/09/21 15:17	01/10/21 03:12	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1603227	1	01/09/21 16:16	01/09/21 20:41	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1603323	1	01/09/21 16:16	01/10/21 06:49	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	1	01/09/21 13:44	01/09/21 21:58	JN	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

FS-17 L1304524-02 Solid

				Collected by John Thurston	Collected date/time 01/08/21 00:00	Received date/time 01/09/21 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1603540	1	01/11/21 09:43	01/11/21 09:51	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1603157	1	01/09/21 15:17	01/10/21 03:22	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1603227	1	01/09/21 16:16	01/09/21 21:02	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1603323	1	01/09/21 16:16	01/10/21 07:07	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	10	01/09/21 13:44	01/09/21 22:49	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	50	01/09/21 13:44	01/10/21 11:56	JN	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

FS-18 L1304524-03 Solid

				Collected by John Thurston	Collected date/time 01/08/21 00:00	Received date/time 01/09/21 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1603540	1	01/11/21 09:43	01/11/21 09:51	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1603157	1	01/09/21 15:17	01/10/21 03:31	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1603227	1	01/09/21 16:16	01/09/21 21:23	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1603323	1	01/09/21 16:16	01/10/21 07:26	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	1	01/09/21 13:44	01/09/21 21:07	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	5	01/09/21 13:44	01/10/21 11:05	JN	Mt. Juliet, TN

NSW-5 L1304524-04 Solid

				Collected by John Thurston	Collected date/time 01/08/21 00:00	Received date/time 01/09/21 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1603540	1	01/11/21 09:43	01/11/21 09:51	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1603157	1	01/09/21 15:17	01/10/21 03:41	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1603227	1	01/09/21 16:16	01/09/21 21:44	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1603323	1	01/09/21 16:16	01/10/21 07:44	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	1	01/09/21 13:44	01/09/21 19:39	JN	Mt. Juliet, TN

NSW-6 L1304524-05 Solid

				Collected by John Thurston	Collected date/time 01/08/21 00:00	Received date/time 01/09/21 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1603540	1	01/11/21 09:43	01/11/21 09:51	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1603157	1	01/09/21 15:17	01/10/21 03:50	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1603227	1	01/09/21 16:16	01/09/21 22:04	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1603323	1	01/09/21 16:16	01/10/21 08:03	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	1	01/09/21 13:44	01/09/21 19:51	JN	Mt. Juliet, TN

NSW-7 L1304524-06 Solid

Collected by John Thurston
Collected date/time 01/08/21 00:00
Received date/time 01/09/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1603540	1	01/11/21 09:43	01/11/21 09:51	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1603157	1	01/09/21 15:17	01/10/21 04:19	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1603227	1	01/09/21 16:16	01/09/21 22:25	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1603323	1	01/09/21 16:16	01/10/21 08:22	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	1	01/09/21 13:44	01/09/21 21:33	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	5	01/09/21 13:44	01/10/21 11:31	JN	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

NSW-8 L1304524-07 Solid

Collected by John Thurston
Collected date/time 01/08/21 00:00
Received date/time 01/09/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1603540	1	01/11/21 09:43	01/11/21 09:51	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1603157	1	01/09/21 15:17	01/10/21 04:28	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1603227	1	01/09/21 16:16	01/09/21 22:46	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1603323	1	01/09/21 16:16	01/10/21 08:40	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	1	01/09/21 13:44	01/09/21 20:04	JN	Mt. Juliet, TN

ESW-1 L1304524-08 Solid

Collected by John Thurston
Collected date/time 01/08/21 00:00
Received date/time 01/09/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1603540	1	01/11/21 09:43	01/11/21 09:51	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1603157	1	01/09/21 15:17	01/10/21 04:38	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1603227	1	01/09/21 16:16	01/09/21 23:06	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1603323	1	01/09/21 16:16	01/10/21 08:59	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	10	01/09/21 13:44	01/10/21 11:43	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	5	01/09/21 13:44	01/09/21 23:01	JN	Mt. Juliet, TN

ESW-2 L1304524-09 Solid

Collected by John Thurston
Collected date/time 01/08/21 00:00
Received date/time 01/09/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1603540	1	01/11/21 09:43	01/11/21 09:51	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1603157	1	01/09/21 15:17	01/10/21 04:48	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1603227	1	01/09/21 16:16	01/09/21 23:27	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1603323	1	01/09/21 16:16	01/10/21 09:18	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	1	01/09/21 13:44	01/09/21 20:17	JN	Mt. Juliet, TN

ESW-3 L1304524-10 Solid

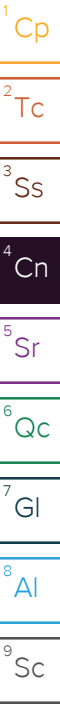
Collected by John Thurston
Collected date/time 01/08/21 00:00
Received date/time 01/09/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1603543	1	01/11/21 09:33	01/11/21 09:41	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1603157	1	01/09/21 15:17	01/10/21 04:57	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1603227	1	01/09/21 16:16	01/09/21 23:48	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1603323	1	01/09/21 16:16	01/10/21 09:36	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1603128	1	01/09/21 13:44	01/10/21 10:53	JN	Mt. Juliet, TN

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



Chris McCord
Project Manager



Collected date/time: 01/08/21 00:00

L1304524

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.1		1	01/11/2021 09:51	WG1603540

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	201		9.67	21.0	1	01/10/2021 03:12	WG1603157

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0926	J	0.0228	0.105	1	01/09/2021 20:41	WG1603227
(S) a,a,a-Trifluorotoluene(FID)	90.8			77.0-120		01/09/2021 20:41	WG1603227

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000515	0.00110	1	01/10/2021 06:49	WG1603323
Toluene	0.00202	J	0.00143	0.00551	1	01/10/2021 06:49	WG1603323
Ethylbenzene	0.00328		0.000812	0.00276	1	01/10/2021 06:49	WG1603323
Total Xylenes	0.00755		0.000970	0.00716	1	01/10/2021 06:49	WG1603323
(S) Toluene-d8	92.6			75.0-131		01/10/2021 06:49	WG1603323
(S) 4-Bromofluorobenzene	100			67.0-138		01/10/2021 06:49	WG1603323
(S) 1,2-Dichloroethane-d4	90.8			70.0-130		01/10/2021 06:49	WG1603323

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	25.0		1.69	4.20	1	01/09/2021 21:58	WG1603128
C28-C40 Oil Range	46.8		0.288	4.20	1	01/09/2021 21:58	WG1603128
(S) o-Terphenyl	48.3			18.0-148		01/09/2021 21:58	WG1603128

Collected date/time: 01/08/21 00:00

L1304524

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.1		1	01/11/2021 09:51	WG1603540

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	173		9.38	20.4	1	01/10/2021 03:22	WG1603157

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0221	0.102	1	01/09/2021 21:02	WG1603227
(S) a,a,a-Trifluorotoluene(FID)	91.1			77.0-120		01/09/2021 21:02	WG1603227

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000485	0.00104	1	01/10/2021 07:07	WG1603323
Toluene	0.00279	J	0.00135	0.00520	1	01/10/2021 07:07	WG1603323
Ethylbenzene	0.00413		0.000766	0.00260	1	01/10/2021 07:07	WG1603323
Total Xylenes	0.00925		0.000915	0.00676	1	01/10/2021 07:07	WG1603323
(S) Toluene-d8	95.9			75.0-131		01/10/2021 07:07	WG1603323
(S) 4-Bromofluorobenzene	98.9			67.0-138		01/10/2021 07:07	WG1603323
(S) 1,2-Dichloroethane-d4	91.0			70.0-130		01/10/2021 07:07	WG1603323

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	2560		16.4	40.8	10	01/09/2021 22:49	WG1603128
C28-C40 Oil Range	2410		14.0	204	50	01/10/2021 11:56	WG1603128
(S) o-Terphenyl	0.000	J2		18.0-148		01/09/2021 22:49	WG1603128
(S) o-Terphenyl	0.000	J7		18.0-148		01/10/2021 11:56	WG1603128

Sample Narrative:

L1304524-02 WG1603128: Surrogate failure due to matrix interference

Collected date/time: 01/08/21 00:00

L1304524

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.7		1	01/11/2021 09:51	WG1603540

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	77.5		9.52	20.7	1	01/10/2021 03:31	WG1603157

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0225	0.103	1	01/09/2021 21:23	WG1603227
(S) a,a,a-Trifluorotoluene(FID)	91.4			77.0-120		01/09/2021 21:23	WG1603227

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000499	0.00107	1	01/10/2021 07:26	WG1603323
Toluene	0.00233	J	0.00139	0.00535	1	01/10/2021 07:26	WG1603323
Ethylbenzene	0.00241	J	0.000788	0.00267	1	01/10/2021 07:26	WG1603323
Total Xylenes	0.00407	J	0.000941	0.00695	1	01/10/2021 07:26	WG1603323
(S) Toluene-d8	95.6			75.0-131		01/10/2021 07:26	WG1603323
(S) 4-Bromofluorobenzene	99.1			67.0-138		01/10/2021 07:26	WG1603323
(S) 1,2-Dichloroethane-d4	90.4			70.0-130		01/10/2021 07:26	WG1603323

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	140		1.67	4.14	1	01/09/2021 21:07	WG1603128
C28-C40 Oil Range	181		1.42	20.7	5	01/10/2021 11:05	WG1603128
(S) o-Terphenyl	44.6			18.0-148		01/10/2021 11:05	WG1603128
(S) o-Terphenyl	59.0			18.0-148		01/09/2021 21:07	WG1603128

Collected date/time: 01/08/21 00:00

L1304524

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.7		1	01/11/2021 09:51	WG1603540

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	241		9.72	21.1	1	01/10/2021 03:41	WG1603157

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0820	J	0.0229	0.106	1	01/09/2021 21:44	WG1603227
(S) a,a,a-Trifluorotoluene(FID)	91.1			77.0-120		01/09/2021 21:44	WG1603227

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000519	0.00111	1	01/10/2021 07:44	WG1603323
Toluene	0.00284	J	0.00145	0.00556	1	01/10/2021 07:44	WG1603323
Ethylbenzene	0.00836		0.000819	0.00278	1	01/10/2021 07:44	WG1603323
Total Xylenes	0.0158		0.000978	0.00723	1	01/10/2021 07:44	WG1603323
(S) Toluene-d8	96.8			75.0-131		01/10/2021 07:44	WG1603323
(S) 4-Bromofluorobenzene	99.1			67.0-138		01/10/2021 07:44	WG1603323
(S) 1,2-Dichloroethane-d4	88.8			70.0-130		01/10/2021 07:44	WG1603323

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	23.5		1.70	4.22	1	01/09/2021 19:39	WG1603128
C28-C40 Oil Range	31.5		0.289	4.22	1	01/09/2021 19:39	WG1603128
(S) o-Terphenyl	43.9			18.0-148		01/09/2021 19:39	WG1603128

Collected date/time: 01/08/21 00:00

L1304524

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.5		1	01/11/2021 09:51	WG1603540

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	27.3		9.54	20.7	1	01/10/2021 03:50	WG1603157

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0225	0.104	1	01/09/2021 22:04	WG1603227
(S) a,a,a-Trifluorotoluene(FID)	92.6			77.0-120		01/09/2021 22:04	WG1603227

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000501	0.00107	1	01/10/2021 08:03	WG1603323
Toluene	U		0.00140	0.00537	1	01/10/2021 08:03	WG1603323
Ethylbenzene	U		0.000791	0.00268	1	01/10/2021 08:03	WG1603323
Total Xylenes	0.00107	J	0.000945	0.00698	1	01/10/2021 08:03	WG1603323
(S) Toluene-d8	97.8			75.0-131		01/10/2021 08:03	WG1603323
(S) 4-Bromofluorobenzene	98.4			67.0-138		01/10/2021 08:03	WG1603323
(S) 1,2-Dichloroethane-d4	89.4			70.0-130		01/10/2021 08:03	WG1603323

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	12.9		1.67	4.15	1	01/09/2021 19:51	WG1603128
C28-C40 Oil Range	32.2		0.284	4.15	1	01/09/2021 19:51	WG1603128
(S) o-Terphenyl	49.7			18.0-148		01/09/2021 19:51	WG1603128

Collected date/time: 01/08/21 00:00

L1304524

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.5		1	01/11/2021 09:51	WG1603540

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	306		9.64	20.9	1	01/10/2021 04:19	WG1603157

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0227	0.105	1	01/09/2021 22:25	WG1603227
(S) a,a,a-Trifluorotoluene(FID)	84.9			77.0-120		01/09/2021 22:25	WG1603227

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000511	0.00109	1	01/10/2021 08:22	WG1603323
Toluene	U		0.00142	0.00547	1	01/10/2021 08:22	WG1603323
Ethylbenzene	U		0.000807	0.00274	1	01/10/2021 08:22	WG1603323
Total Xylenes	0.00107	J	0.000964	0.00712	1	01/10/2021 08:22	WG1603323
(S) Toluene-d8	98.4			75.0-131		01/10/2021 08:22	WG1603323
(S) 4-Bromofluorobenzene	98.5			67.0-138		01/10/2021 08:22	WG1603323
(S) 1,2-Dichloroethane-d4	85.3			70.0-130		01/10/2021 08:22	WG1603323

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	293		1.69	4.19	1	01/09/2021 21:33	WG1603128
C28-C40 Oil Range	303		1.44	20.9	5	01/10/2021 11:31	WG1603128
(S) o-Terphenyl	54.2			18.0-148		01/10/2021 11:31	WG1603128
(S) o-Terphenyl	89.9			18.0-148		01/09/2021 21:33	WG1603128

Collected date/time: 01/08/21 00:00

L1304524

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.9		1	01/11/2021 09:51	WG1603540

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	108		9.40	20.4	1	01/10/2021 04:28	WG1603157

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0222	0.102	1	01/09/2021 22:46	WG1603227
(S) a,a,a-Trifluorotoluene(FID)	92.3			77.0-120		01/09/2021 22:46	WG1603227

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000487	0.00104	1	01/10/2021 08:40	WG1603323
Toluene	0.00227	J	0.00136	0.00522	1	01/10/2021 08:40	WG1603323
Ethylbenzene	0.00186	J	0.000769	0.00261	1	01/10/2021 08:40	WG1603323
Total Xylenes	0.00344	J	0.000918	0.00678	1	01/10/2021 08:40	WG1603323
(S) Toluene-d8	97.8			75.0-131		01/10/2021 08:40	WG1603323
(S) 4-Bromofluorobenzene	97.2			67.0-138		01/10/2021 08:40	WG1603323
(S) 1,2-Dichloroethane-d4	85.5			70.0-130		01/10/2021 08:40	WG1603323

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	32.5		1.64	4.09	1	01/09/2021 20:04	WG1603128
C28-C40 Oil Range	61.8		0.280	4.09	1	01/09/2021 20:04	WG1603128
(S) o-Terphenyl	46.6			18.0-148		01/09/2021 20:04	WG1603128

Collected date/time: 01/08/21 00:00

L1304524

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.3		1	01/11/2021 09:51	WG1603540

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	27.6		9.45	20.5	1	01/10/2021 04:38	WG1603157

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0223	0.103	1	01/09/2021 23:06	WG1603227
(S) a,a,a-Trifluorotoluene(FID)	91.5			77.0-120		01/09/2021 23:06	WG1603227

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000493	0.00105	1	01/10/2021 08:59	WG1603323
Toluene	U		0.00137	0.00527	1	01/10/2021 08:59	WG1603323
Ethylbenzene	0.000817	J	0.000777	0.00264	1	01/10/2021 08:59	WG1603323
Total Xylenes	0.00193	J	0.000928	0.00686	1	01/10/2021 08:59	WG1603323
(S) Toluene-d8	96.8			75.0-131		01/10/2021 08:59	WG1603323
(S) 4-Bromofluorobenzene	98.3			67.0-138		01/10/2021 08:59	WG1603323
(S) 1,2-Dichloroethane-d4	86.2			70.0-130		01/10/2021 08:59	WG1603323

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	1610		8.27	20.5	5	01/09/2021 23:01	WG1603128
C28-C40 Oil Range	1530		2.82	41.1	10	01/10/2021 11:43	WG1603128
(S) o-Terphenyl	136			18.0-148		01/10/2021 11:43	WG1603128
(S) o-Terphenyl	0.000	J2		18.0-148		01/09/2021 23:01	WG1603128

Sample Narrative:

L1304524-08 WG1603128: Surrogate failure due to matrix interference

Collected date/time: 01/08/21 00:00

L1304524

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.9		1	01/11/2021 09:51	WG1603540

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	31.3		9.60	20.9	1	01/10/2021 04:48	WG1603157

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0226	0.104	1	01/09/2021 23:27	WG1603227
(S) a,a,a-Trifluorotoluene(FID)	93.0			77.0-120		01/09/2021 23:27	WG1603227

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000507	0.00109	1	01/10/2021 09:18	WG1603323
Toluene	U		0.00141	0.00543	1	01/10/2021 09:18	WG1603323
Ethylbenzene	U		0.000801	0.00272	1	01/10/2021 09:18	WG1603323
Total Xylenes	U		0.000956	0.00706	1	01/10/2021 09:18	WG1603323
(S) Toluene-d8	96.1			75.0-131		01/10/2021 09:18	WG1603323
(S) 4-Bromofluorobenzene	94.6			67.0-138		01/10/2021 09:18	WG1603323
(S) 1,2-Dichloroethane-d4	84.6			70.0-130		01/10/2021 09:18	WG1603323

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	13.6		1.68	4.17	1	01/09/2021 20:17	WG1603128
C28-C40 Oil Range	36.4		0.286	4.17	1	01/09/2021 20:17	WG1603128
(S) o-Terphenyl	46.0			18.0-148		01/09/2021 20:17	WG1603128

Collected date/time: 01/08/21 00:00

L1304524

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.7		1	01/11/2021 09:41	WG1603543

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	299	J3	9.61	20.9	1	01/10/2021 04:57	WG1603157

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0227	0.104	1	01/09/2021 23:48	WG1603227
(S) a,a,a-Trifluorotoluene(FID)	92.6			77.0-120		01/09/2021 23:48	WG1603227

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000509	0.00109	1	01/10/2021 09:36	WG1603323
Toluene	U		0.00142	0.00545	1	01/10/2021 09:36	WG1603323
Ethylbenzene	U		0.000803	0.00272	1	01/10/2021 09:36	WG1603323
Total Xylenes	U		0.000959	0.00708	1	01/10/2021 09:36	WG1603323
(S) Toluene-d8	96.6			75.0-131		01/10/2021 09:36	WG1603323
(S) 4-Bromofluorobenzene	96.3			67.0-138		01/10/2021 09:36	WG1603323
(S) 1,2-Dichloroethane-d4	85.2			70.0-130		01/10/2021 09:36	WG1603323

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	8.83		1.68	4.18	1	01/10/2021 10:53	WG1603128
C28-C40 Oil Range	25.0		0.286	4.18	1	01/10/2021 10:53	WG1603128
(S) o-Terphenyl	55.5			18.0-148		01/10/2021 10:53	WG1603128

Total Solids by Method 2540 G-2011 [L1304524-01,02,03,04,05,06,07,08,09](#)

Method Blank (MB)

(MB) R3611636-1 01/11/21 09:51

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1304524-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1304524-02 01/11/21 09:51 • (DUP) R3611636-3 01/11/21 09:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	98.1	97.9	1	0.170		10

Laboratory Control Sample (LCS)

(LCS) R3611636-2 01/11/21 09:51

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

⁷ Gl

⁸ Al

⁹ Sc

Total Solids by Method 2540 G-2011 [L1304524-10](#)

Method Blank (MB)

(MB) R3611635-1 01/11/21 09:41

Analyte	MB Result %	<u>MB Qualifier</u>	MB MDL %	MB RDL %
Total Solids	0.00100			

L1304607-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1304607-02 01/11/21 09:41 • (DUP) R3611635-3 01/11/21 09:41

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits
Total Solids	79.4	79.7	1	0.399		10

Laboratory Control Sample (LCS)

(LCS) R3611635-2 01/11/21 09:41

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
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

[L1304524-01,02,03,04,05,06,07,08,09,10](#)

Method Blank (MB)

(MB) R3611199-1 01/10/21 00:30

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1304100-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1304100-02 01/10/21 01:18 • (DUP) R3611199-5 01/10/21 01:28

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	251	250	1	0.582		20

L1304524-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1304524-10 01/10/21 04:57 • (DUP) R3611199-6 01/10/21 05:07

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	299	392	1	26.8	J3	20

Laboratory Control Sample (LCS)

(LCS) R3611199-7 01/10/21 11:42

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	201	100	90.0-110	

L1304100-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1304100-01 01/10/21 00:49 • (MS) R3611199-3 01/10/21 00:59 • (MSD) R3611199-4 01/10/21 01:09

	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	374	833	816	91.7	88.3	1	80.0-120			2.05	20

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

[L1304524-01,02,03,04,05,06,07,08,09,10](#)

Method Blank (MB)

(MB) R3611529-2 01/09/21 18:46

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)	94.8			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3611529-1 01/09/21 18:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.96	90.2	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			108	77.0-120	

L1304388-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1304388-10 01/10/21 01:11 • (MS) R3611529-3 01/10/21 01:32 • (MSD) R3611529-4 01/10/21 01:53

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	132	0.738	146	140	110	106	25	10.0-151			4.20	28
(S) a,a,a-Trifluorotoluene(FID)					109	110		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

[L1304524-01,02,03,04,05,06,07,08,09,10](#)

Method Blank (MB)

(MB) R3611541-3 01/10/21 05:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	92.7			75.0-131
(S) 4-Bromofluorobenzene	98.6			67.0-138
(S) 1,2-Dichloroethane-d4	90.7			70.0-130

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

(LCS) R3611541-1 01/10/21 04:22 • (LCSD) R3611541-2 01/10/21 04:41

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	0.132	0.132	106	106	70.0-123			0.000	20
Ethylbenzene	0.125	0.129	0.125	103	100	74.0-126			3.15	20
Toluene	0.125	0.126	0.125	101	100	75.0-121			0.797	20
Xylenes, Total	0.375	0.382	0.381	102	102	72.0-127			0.262	20
(S) Toluene-d8				95.2	94.8	75.0-131				
(S) 4-Bromofluorobenzene				98.8	95.5	67.0-138				
(S) 1,2-Dichloroethane-d4				89.1	92.1	70.0-130				

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 [L1304524-01,02,03,04,05,06,07,08,09,10](#)

Method Blank (MB)

(MB) R3611169-1 01/09/21 17:19

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	63.4			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3611169-2 01/09/21 17:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	40.4	80.8	50.0-150	
(S) o-Terphenyl			64.1	18.0-148	

L1304351-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1304351-03 01/09/21 17:45 • (MS) R3611169-3 01/09/21 17:57 • (MSD) R3611169-4 01/09/21 18:10

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	49.4	2.17	37.2	34.4	70.9	68.0	1	50.0-150			7.82	20
(S) o-Terphenyl					45.3	43.2		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

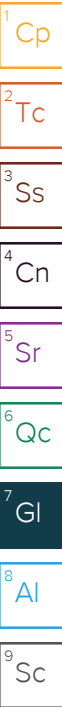
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

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



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* 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	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-20-18
Maine	TN00003	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	998093910
Montana	CERT0086	Wyoming	A2LA

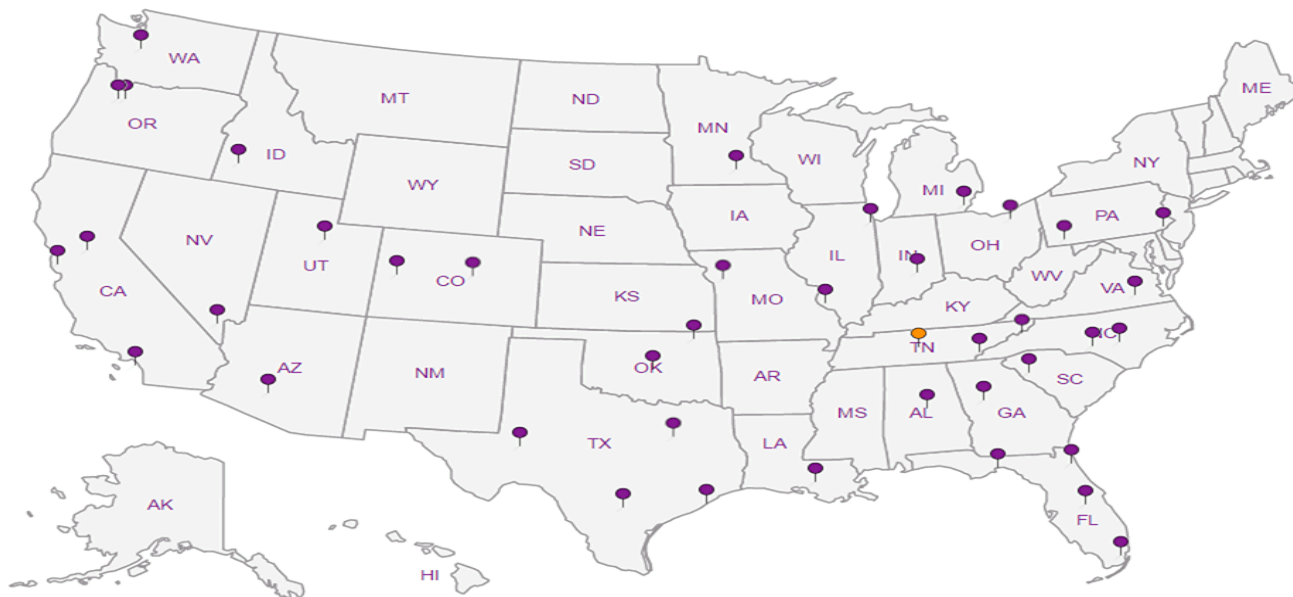
Third Party Federal Accreditations

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

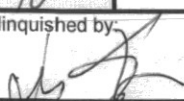
Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Analysis Request of Chain of Custody Record

L1304524

Page : 1 of 1

 Tetra Tech, Inc.				901 West Wall Street, Suite 100 Midland, Texas 79701 Tel (432) 682-4559 Fax (432) 682-3946				1052							
Client Name: Conoco Phillips				Site Manager: Christian Llull				ANALYSIS REQUEST (Circle or Specify Method No.)							
Project Name: Philmex #15 Flowline Release				Contact Info: Email: christian.llull@tetratech.com Phone: (512) 338-1667											
Project Location: Lea County, New Mexico				Project #: 212C-MD-02374											
Invoice to: Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701															
Receiving Laboratory: Pace Analytical				Sampler Signature: John Thurston											
Comments: COPTETRA Acctnum															
LAB # (LAB USE ONLY)		SAMPLE IDENTIFICATION		SAMPLING YEAR: 2021		MATRIX		PRESERVATIVE METHOD		# CONTAINERS FILTERED (Y/N)					
				DATE TIME		WATER SOIL		HCL HNO ₃ ICE NONE							
-01		FS-16		1/8/2021		X		X		1 N		X X			
-02		FS-17		1/8/2021		X		X		1 N		X X			
-03		FS-18		1/8/2021		X		X		1 N		X X			
-04		NSW-5		1/8/2021		X		X		1 N		X X			
-05		NSW-6		1/8/2021		X		X		1 N		X X			
-06		NSW-7		1/8/2021		X		X		1 N		X X			
-07		NSW-8		1/8/2021		X		X		1 N		X X			
-08		ESW-1		1/8/2021		X		X		1 N		X X			
-09		ESW-2		1/8/2021		X		X		1 N		X X			
-10		ESW-3		1/8/2021		X		X		1 N		X X			
Relinquished by: 				Date: 1-8-2021 Time: 1329				Received by:				Date: Time:			
Relinquished by:				Date: Time:				Received by:				Date: Time:			
Relinquished by:				Date: Time:				Received by:				Date: Time:			
LAB USE ONLY								REMARKS:							
Sample Temperature								☐ Standard							
☒ RUSH: Same Day 24 hr. 48 hr. 72 hr.								☐ Rush Charges Authorized							
☐ Special Report Limits or TRRP Report								(Circle) HAND DELIVERED FEDEX UPS Tracking #:							

(Circle) HAND DELIVERED **FEDEX** UPS Tracking #:

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form			
Client:		L1304524	
Cooler Received/Opened On: 1 / 9 / 21		Temperature:	5
Received By: Gisely Quiles			
Signature: <i>Gisely Quiles</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?			

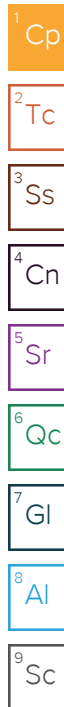


ANALYTICAL REPORT

January 19, 2021

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1307315
Samples Received: 01/16/2021
Project Number: 212C-MD-02374
Description: Philmex #15 Flowline Release
Site: LEA COUNTY, NEW MEXICO
Report To: Christian Llull
901 West Wall
Suite 100
Midland, TX 79701



Entire Report Reviewed By:

Chris McCord
Project Manager

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

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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FS - 4 L1307315-01 Solid

				Collected by Adrian	Collected date/time 01/14/21 12:00	Received date/time 01/16/21 09:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1607188	1	01/19/21 10:14	01/19/21 10:23	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1606935	1	01/17/21 15:51	01/17/21 17:58	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1606854	1	01/16/21 16:27	01/17/21 02:59	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1606832	1	01/16/21 16:27	01/16/21 19:07	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1607052	5	01/17/21 22:18	01/18/21 05:34	JN	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

FS - 6 L1307315-02 Solid

				Collected by Adrian	Collected date/time 01/14/21 13:00	Received date/time 01/16/21 09:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1607188	1	01/19/21 10:14	01/19/21 10:23	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1606935	1	01/17/21 15:51	01/17/21 18:07	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1606854	1	01/16/21 16:27	01/17/21 03:22	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1606832	1	01/16/21 16:27	01/16/21 19:26	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1607052	5	01/17/21 22:18	01/18/21 06:00	JN	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

FS - 7 L1307315-03 Solid

				Collected by Adrian	Collected date/time 01/14/21 13:30	Received date/time 01/16/21 09:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1607188	1	01/19/21 10:14	01/19/21 10:23	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1606935	5	01/17/21 15:51	01/17/21 18:17	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1606854	1	01/16/21 16:27	01/17/21 03:45	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1606832	1	01/16/21 16:27	01/16/21 19:45	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1607052	1	01/17/21 22:18	01/18/21 03:09	JN	Mt. Juliet, TN

9 Sc

FS - 8 L1307315-04 Solid

				Collected by Adrian	Collected date/time 01/14/21 13:45	Received date/time 01/16/21 09:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1607188	1	01/19/21 10:14	01/19/21 10:23	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1606935	1	01/17/21 15:51	01/17/21 18:45	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1606854	1	01/16/21 16:27	01/17/21 04:08	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1606832	1	01/16/21 16:27	01/16/21 20:04	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1607052	1	01/17/21 22:18	01/18/21 03:35	JN	Mt. Juliet, TN

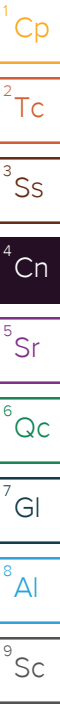
NSW - 1 L1307315-05 Solid

				Collected by Adrian	Collected date/time 01/14/21 14:00	Received date/time 01/16/21 09:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1607318	1	01/18/21 11:15	01/18/21 11:23	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1606935	1	01/17/21 15:51	01/17/21 18:55	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1606854	1	01/16/21 16:27	01/17/21 04:31	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1606832	1	01/16/21 16:27	01/16/21 20:23	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1607052	5	01/17/21 22:18	01/18/21 05:47	JN	Mt. Juliet, TN

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



Chris McCord
Project Manager



Collected date/time: 01/14/21 12:00

L1307315

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.9		1	01/19/2021 10:23	WG1607188

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	650		10.2	22.3	1	01/17/2021 17:58	WG1606935

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.251	<u>B</u>	0.0241	0.111	1	01/17/2021 02:59	WG1606854
(S) a,a,a-Trifluorotoluene(FID)	88.6			77.0-120		01/17/2021 02:59	WG1606854

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000572	0.00123	1	01/16/2021 19:07	WG1606832
Toluene	U		0.00159	0.00613	1	01/16/2021 19:07	WG1606832
Ethylbenzene	U		0.000903	0.00306	1	01/16/2021 19:07	WG1606832
Total Xylenes	U		0.00108	0.00797	1	01/16/2021 19:07	WG1606832
(S) Toluene-d8	106			75.0-131		01/16/2021 19:07	WG1606832
(S) 4-Bromofluorobenzene	91.7			67.0-138		01/16/2021 19:07	WG1606832
(S) 1,2-Dichloroethane-d4	91.3			70.0-130		01/16/2021 19:07	WG1606832

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	425		8.96	22.3	5	01/18/2021 05:34	WG1607052
C28-C40 Oil Range	386		1.52	22.3	5	01/18/2021 05:34	WG1607052
(S) o-Terphenyl	107			18.0-148		01/18/2021 05:34	WG1607052

Collected date/time: 01/14/21 13:00

L1307315

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	87.4		1	01/19/2021 10:23	WG1607188

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	712		10.5	22.9	1	01/17/2021 18:07	WG1606935

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.843		0.0248	0.114	1	01/17/2021 03:22	WG1606854
(S) a,a,a-Trifluorotoluene(FID)	90.7			77.0-120		01/17/2021 03:22	WG1606854

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000602	0.00129	1	01/16/2021 19:26	WG1606832
Toluene	U		0.00168	0.00644	1	01/16/2021 19:26	WG1606832
Ethylbenzene	0.00210	J	0.000950	0.00322	1	01/16/2021 19:26	WG1606832
Total Xylenes	0.0281		0.00113	0.00838	1	01/16/2021 19:26	WG1606832
(S) Toluene-d8	106			75.0-131		01/16/2021 19:26	WG1606832
(S) 4-Bromofluorobenzene	94.8			67.0-138		01/16/2021 19:26	WG1606832
(S) 1,2-Dichloroethane-d4	91.6			70.0-130		01/16/2021 19:26	WG1606832

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	518		9.21	22.9	5	01/18/2021 06:00	WG1607052
C28-C40 Oil Range	525		1.57	22.9	5	01/18/2021 06:00	WG1607052
(S) o-Terphenyl	110			18.0-148		01/18/2021 06:00	WG1607052

Collected date/time: 01/14/21 13:30

L1307315

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.9		1	01/19/2021 10:23	WG1607188

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1310		49.0	106	5	01/17/2021 18:17	WG1606935

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0450	B J	0.0231	0.106	1	01/17/2021 03:45	WG1606854
(S) a,a,a-Trifluorotoluene(FID)	93.6			77.0-120		01/17/2021 03:45	WG1606854

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000528	0.00113	1	01/16/2021 19:45	WG1606832
Toluene	U		0.00147	0.00565	1	01/16/2021 19:45	WG1606832
Ethylbenzene	U		0.000833	0.00283	1	01/16/2021 19:45	WG1606832
Total Xylenes	U		0.000995	0.00735	1	01/16/2021 19:45	WG1606832
(S) Toluene-d8	105			75.0-131		01/16/2021 19:45	WG1606832
(S) 4-Bromofluorobenzene	90.8			67.0-138		01/16/2021 19:45	WG1606832
(S) 1,2-Dichloroethane-d4	89.3			70.0-130		01/16/2021 19:45	WG1606832

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	25.2		1.71	4.26	1	01/18/2021 03:09	WG1607052
C28-C40 Oil Range	41.9		0.292	4.26	1	01/18/2021 03:09	WG1607052
(S) o-Terphenyl	69.1			18.0-148		01/18/2021 03:09	WG1607052

Collected date/time: 01/14/21 13:45

L1307315

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	82.8		1	01/19/2021 10:23	WG1607188

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	107		11.1	24.1	1	01/17/2021 18:45	WG1606935

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	2.62		0.0262	0.121	1	01/17/2021 04:08	WG1606854
(S) a,a,a-Trifluorotoluene(FID)	93.2			77.0-120		01/17/2021 04:08	WG1606854

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000661	0.00141	1	01/16/2021 20:04	WG1606832
Toluene	U		0.00184	0.00707	1	01/16/2021 20:04	WG1606832
Ethylbenzene	0.00117	J	0.00104	0.00354	1	01/16/2021 20:04	WG1606832
Total Xylenes	0.0147		0.00124	0.00919	1	01/16/2021 20:04	WG1606832
(S) Toluene-d8	107			75.0-131		01/16/2021 20:04	WG1606832
(S) 4-Bromofluorobenzene	95.4			67.0-138		01/16/2021 20:04	WG1606832
(S) 1,2-Dichloroethane-d4	88.3			70.0-130		01/16/2021 20:04	WG1606832

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	208		1.94	4.83	1	01/18/2021 03:35	WG1607052
C28-C40 Oil Range	196		0.331	4.83	1	01/18/2021 03:35	WG1607052
(S) o-Terphenyl	52.8			18.0-148		01/18/2021 03:35	WG1607052

Collected date/time: 01/14/21 14:00

L1307315

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.0		1	01/18/2021 11:23	WG1607318

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	80.9		10.0	21.8	1	01/17/2021 18:55	WG1606935

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.343	<u>B</u>	0.0236	0.109	1	01/17/2021 04:31	WG1606854
(S) a,a,a-Trifluorotoluene(FID)	89.6			77.0-120		01/17/2021 04:31	WG1606854

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000549	0.00118	1	01/16/2021 20:23	WG1606832
Toluene	U		0.00153	0.00588	1	01/16/2021 20:23	WG1606832
Ethylbenzene	0.00115	<u>J</u>	0.000866	0.00294	1	01/16/2021 20:23	WG1606832
Total Xylenes	0.00358	<u>J</u>	0.00103	0.00764	1	01/16/2021 20:23	WG1606832
(S) Toluene-d8	106			75.0-131		01/16/2021 20:23	WG1606832
(S) 4-Bromofluorobenzene	93.1			67.0-138		01/16/2021 20:23	WG1606832
(S) 1,2-Dichloroethane-d4	86.5			70.0-130		01/16/2021 20:23	WG1606832

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	748		8.75	21.8	5	01/18/2021 05:47	WG1607052
C28-C40 Oil Range	641		1.49	21.8	5	01/18/2021 05:47	WG1607052
(S) o-Terphenyl	168	<u>J1</u>		18.0-148		01/18/2021 05:47	WG1607052

Sample Narrative:

L1307315-05 WG1607052: Surrogate failure due to matrix interference

Total Solids by Method 2540 G-2011 [L1307315-01,02,03,04](#)

Method Blank (MB)

(MB) R3614026-1 01/19/21 10:23

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

L1307024-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1307024-01 01/19/21 10:23 • (DUP) R3614026-3 01/19/21 10:23

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP RPD Limits
Total Solids	89.2	89.2	1	0.0892	10

Laboratory Control Sample (LCS)

(LCS) R3614026-2 01/19/21 10:23

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 [L1307315-05](#)

Method Blank (MB)

(MB) R3613682-1 01/18/21 11:23

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

L1304680-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1304680-02 01/18/21 11:23 • (DUP) R3613682-3 01/18/21 11:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
	%	%		%		%
Total Solids	82.7	82.8	1	0.146		10

Laboratory Control Sample (LCS)

(LCS) R3613682-2 01/18/21 11:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	%	%	%	%	
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

L1307315-01,02,03,04,05

Method Blank (MB)

(MB) R3613702-1 01/17/21 16:52

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1306897-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1306897-01 01/17/21 17:29 • (DUP) R3613702-3 01/17/21 17:39

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	28.7	25.9	1	10.3		20

L1307387-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1307387-02 01/17/21 20:40 • (DUP) R3613702-6 01/17/21 20:49

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	2370	2300	10	3.19		20

Laboratory Control Sample (LCS)

(LCS) R3613702-2 01/17/21 17:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	198	98.8	90.0-110	

L1307378-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1307378-01 01/17/21 19:04 • (MS) R3613702-4 01/17/21 19:14 • (MSD) R3613702-5 01/17/21 19:23

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	500	485	1010	1020	105	107	1	80.0-120	E	E	0.807	20

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

L1307315-01,02,03,04,05

Method Blank (MB)

(MB) R3613644-2 01/16/21 20:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0699	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	96.5			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3613644-1 01/16/21 19:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.27	114	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			106	77.0-120	

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) • (MS) R3613644-3 01/17/21 07:20 • (MSD) R3613644-4 01/17/21 08:43

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 %
TPH (GC/FID) Low Fraction	270		151	131	49.0	41.6	50	10.0-151			14.2	28
(S) a,a,a-Trifluorotoluene(FID)					100	99.8		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1307315-01,02,03,04,05

Method Blank (MB)

(MB) R3613641-2 01/16/21 17:01

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	106			75.0-131
(S) 4-Bromofluorobenzene	90.8			67.0-138
(S) 1,2-Dichloroethane-d4	90.4			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) R3613641-1 01/16/21 16:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.113	90.4	70.0-123	
Ethylbenzene	0.125	0.122	97.6	74.0-126	
Toluene	0.125	0.129	103	75.0-121	
Xylenes, Total	0.375	0.379	101	72.0-127	
(S) Toluene-d8			107	75.0-131	
(S) 4-Bromofluorobenzene			90.2	67.0-138	
(S) 1,2-Dichloroethane-d4			93.0	70.0-130	

L1306499-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1306499-01 01/16/21 20:41 • (MS) R3613641-3 01/17/21 01:05 • (MSD) R3613641-4 01/17/21 01:24

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	0.124	U	0.134	0.143	108	115	1	10.0-149			6.50	37
Ethylbenzene	0.124	U	0.157	0.167	127	135	1	10.0-160			6.17	38
Toluene	0.124	U	0.149	0.158	120	127	1	10.0-156			5.86	38
Xylenes, Total	0.372	U	0.453	0.479	122	129	1	10.0-160			5.58	38
(S) Toluene-d8					105	104		75.0-131				
(S) 4-Bromofluorobenzene					90.9	91.1		67.0-138				
(S) 1,2-Dichloroethane-d4					91.5	92.4		70.0-130				

Semi-Volatile Organic Compounds (GC) by Method 8015

[L1307315-01,02,03,04,05](#)

Method Blank (MB)

(MB) R3613457-1 01/18/21 02:16

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	67.9			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3613457-2 01/18/21 02:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	37.7	75.4	50.0-150	
(S) o-Terphenyl			86.6	18.0-148	

L1306914-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1306914-04 01/18/21 04:28 • (MS) R3613457-3 01/18/21 04:41 • (MSD) R3613457-4 01/18/21 04:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	49.4	159	227	194	138	70.9	5	50.0-150			15.7	20
(S) o-Terphenyl					81.2	77.2		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.

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

Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
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.

1	Cp
2	Tc
3	Ss
4	Cn
5	Sr
6	Qc
7	Gi
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.

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

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

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

Alabama	40160
ANSI National Accreditation Board	L2239

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

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

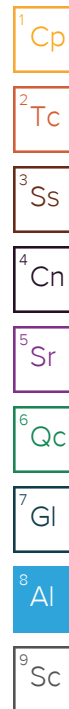
Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1
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Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18
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¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable



Analysis Request of Chain of Custody Record



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: Philmex 15 Flowline Release

 Contact Info: Email: christian.llull@tetrattech.com
 Phone: (512) 338-1667

 Project Location:
 (county, state) Lea County, New Mexico

Project #: 212C-MD-02374

 Invoice to: Accounts Payable
 901 West Wall Street, Suite 100 Midland, Texas 79701

Receiving Laboratory: Pace Analytical

Sampler Signature: Adrian

Comments: COPTETRA Acctnum

 ANALYSIS REQUEST
 (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX			PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	BTX 8260B / 624	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
		YEAR: 2020		WATER	SOIL	HCL	HNO ₃	ICE	NONE																								
		DATE	TIME																														
L1307315 -01	FS - 4	1/14/2021	1200		X			X		1	N	X	X															X					
02	FS - 6	1/14/2021	1300		X			X		1	N	X	X															X					
03	FS - 7	1/14/2021	1330		X			X		1	N	X	X															X					
04	FS - 8	1/14/2021	1345		X			X		1	N	X	X															X					
05	NSW - 1	1/14/2021	1400		X			X		1	N	X	X															X					

Relinquished by:

Date: Time:

Received by:

Date: Time:

LAB USE ONLY

REMARKS:

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

Sample Temperature

Relinquished by:

Date: Time:

Received by:

Date: Time:

Relinquished by:

Date: Time:

Received by:

Date: Time:

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

Sample Receipt Checklist

 COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Net volume sent: ☒ Y ☐ N
 RAB Screen <0.5 mR/hr: ☒ Y ☐ N

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C086

MPAS - 5-2015



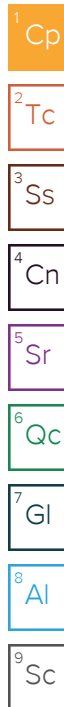
ANALYTICAL REPORT

January 19, 2021

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1307540
Samples Received: 01/18/2021
Project Number: 212C-MD-02374
Description: Philmex #15 Flowline Release

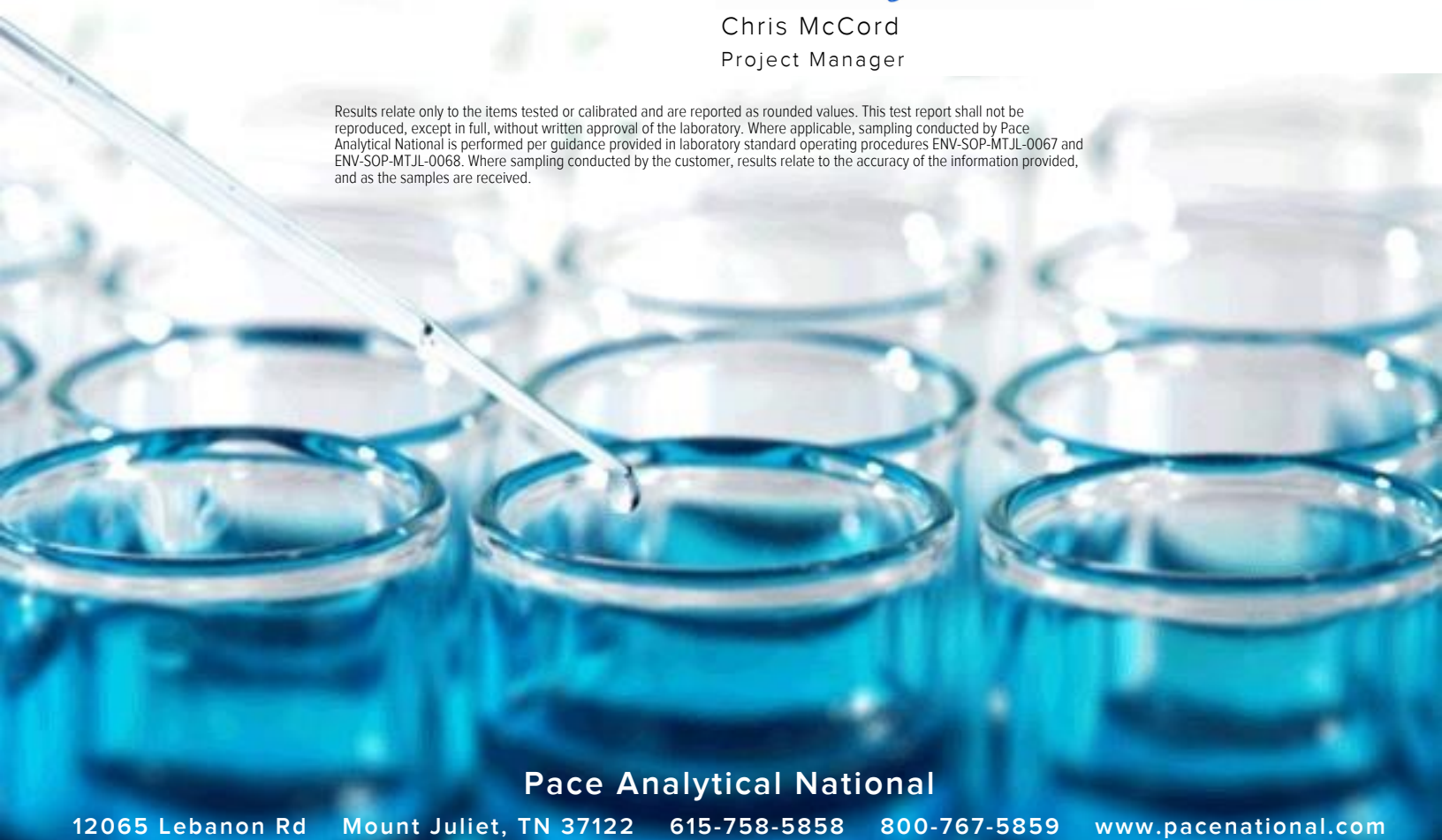
Report To: Christian Llull
901 West Wall
Suite 100
Midland, TX 79701



Entire Report Reviewed By:

Chris McCord
Project Manager

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

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

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NSW-2 L1307540-01 Solid

Collected by John Thurston
Collected date/time 01/15/21 10:30
Received date/time 01/18/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1607395	1	01/18/21 13:12	01/18/21 13:22	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1606942	1	01/19/21 01:27	01/19/21 04:40	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1607425	26.5	01/15/21 10:30	01/18/21 15:27	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1607394	1.06	01/15/21 10:30	01/18/21 12:26	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1607436	2	01/18/21 20:28	01/19/21 05:17	JN	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

NSW-3 (3') L1307540-02 Solid

Collected by John Thurston
Collected date/time 01/15/21 10:40
Received date/time 01/18/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1607395	1	01/18/21 13:12	01/18/21 13:22	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1606942	10	01/19/21 01:27	01/19/21 04:57	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1607425	29.8	01/15/21 10:40	01/18/21 15:50	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1607394	1.19	01/15/21 10:40	01/18/21 12:45	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1607436	1	01/18/21 20:28	01/19/21 04:12	JN	Mt. Juliet, TN

NSW-4 L1307540-03 Solid

Collected by John Thurston
Collected date/time 01/15/21 10:50
Received date/time 01/18/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1607395	1	01/18/21 13:12	01/18/21 13:22	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1606942	20	01/19/21 01:27	01/19/21 05:15	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1607425	25	01/15/21 10:50	01/18/21 16:13	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1607394	1	01/15/21 10:50	01/18/21 13:05	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1607436	5	01/18/21 20:28	01/19/21 04:38	JN	Mt. Juliet, TN

NSW-7 (5') L1307540-04 Solid

Collected by John Thurston
Collected date/time 01/15/21 11:00
Received date/time 01/18/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1607395	1	01/18/21 13:12	01/18/21 13:22	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1606942	1	01/19/21 01:27	01/19/21 05:32	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1607425	25.5	01/15/21 11:00	01/18/21 16:36	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1607394	1.02	01/15/21 11:00	01/18/21 13:24	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1607436	1	01/18/21 20:28	01/19/21 03:59	JN	Mt. Juliet, TN

ESW-1 (3') L1307540-05 Solid

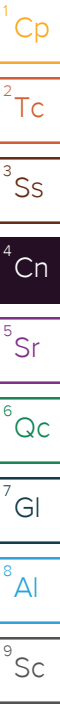
Collected by John Thurston
Collected date/time 01/15/21 11:10
Received date/time 01/18/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1607395	1	01/18/21 13:12	01/18/21 13:22	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1606942	1	01/19/21 01:27	01/19/21 05:50	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1607717	27	01/15/21 11:10	01/19/21 12:58	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1607394	1.08	01/15/21 11:10	01/18/21 13:43	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1607436	1	01/18/21 20:28	01/19/21 03:46	JN	Mt. Juliet, TN

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



Chris McCord
Project Manager



Collected date/time: 01/15/21 10:30

L1307540

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.3		1	01/18/2021 13:22	WG1607395

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	42.6		10.2	22.1	1	01/19/2021 04:40	WG1606942

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.44	B J	0.695	3.20	26.5	01/18/2021 15:27	WG1607425
(S) a,a,a-Trifluorotoluene(FID)	98.6			77.0-120		01/18/2021 15:27	WG1607425

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000598	0.00128	1.06	01/18/2021 12:26	WG1607394
Toluene	U		0.00167	0.00640	1.06	01/18/2021 12:26	WG1607394
Ethylbenzene	U		0.000944	0.00320	1.06	01/18/2021 12:26	WG1607394
Total Xylenes	U		0.00113	0.00832	1.06	01/18/2021 12:26	WG1607394
(S) Toluene-d8	98.3			75.0-131		01/18/2021 12:26	WG1607394
(S) 4-Bromofluorobenzene	99.2			67.0-138		01/18/2021 12:26	WG1607394
(S) 1,2-Dichloroethane-d4	117			70.0-130		01/18/2021 12:26	WG1607394

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	15.1		3.56	8.86	2	01/19/2021 05:17	WG1607436
C28-C40 Oil Range	69.4		0.607	8.86	2	01/19/2021 05:17	WG1607436
(S) o-Terphenyl	75.1			18.0-148		01/19/2021 05:17	WG1607436

Collected date/time: 01/15/21 10:40

L1307540

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.8		1	01/18/2021 13:22	WG1607395

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	4700		100	218	10	01/19/2021 04:57	WG1606942

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.759	B J	0.754	3.47	29.8	01/18/2021 15:50	WG1607425
(S) a,a,a-Trifluorotoluene(FID)	97.6			77.0-120		01/18/2021 15:50	WG1607425

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000648	0.00139	1.19	01/18/2021 12:45	WG1607394
Toluene	U		0.00181	0.00693	1.19	01/18/2021 12:45	WG1607394
Ethylbenzene	U		0.00102	0.00346	1.19	01/18/2021 12:45	WG1607394
Total Xylenes	U		0.00122	0.00902	1.19	01/18/2021 12:45	WG1607394
(S) Toluene-d8	99.2			75.0-131		01/18/2021 12:45	WG1607394
(S) 4-Bromofluorobenzene	97.8			67.0-138		01/18/2021 12:45	WG1607394
(S) 1,2-Dichloroethane-d4	111			70.0-130		01/18/2021 12:45	WG1607394

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	76.1		1.75	4.36	1	01/19/2021 04:12	WG1607436
C28-C40 Oil Range	137		0.299	4.36	1	01/19/2021 04:12	WG1607436
(S) o-Terphenyl	83.0			18.0-148		01/19/2021 04:12	WG1607436

Collected date/time: 01/15/21 10:50

L1307540

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.6		1	01/18/2021 13:22	WG1607395

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	8370		201	437	20	01/19/2021 05:15	WG1606942

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.913	B J	0.643	2.96	25	01/18/2021 16:13	WG1607425
(S) a,a,a-Trifluorotoluene(FID)	98.1			77.0-120		01/18/2021 16:13	WG1607425

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000553	0.00118	1	01/18/2021 13:05	WG1607394
Toluene	U		0.00154	0.00592	1	01/18/2021 13:05	WG1607394
Ethylbenzene	U		0.000873	0.00296	1	01/18/2021 13:05	WG1607394
Total Xylenes	U		0.00104	0.00770	1	01/18/2021 13:05	WG1607394
(S) Toluene-d8	98.4			75.0-131		01/18/2021 13:05	WG1607394
(S) 4-Bromofluorobenzene	100			67.0-138		01/18/2021 13:05	WG1607394
(S) 1,2-Dichloroethane-d4	108			70.0-130		01/18/2021 13:05	WG1607394

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	118		8.79	21.8	5	01/19/2021 04:38	WG1607436
C28-C40 Oil Range	231		1.50	21.8	5	01/19/2021 04:38	WG1607436
(S) o-Terphenyl	75.5			18.0-148		01/19/2021 04:38	WG1607436

Collected date/time: 01/15/21 11:00

L1307540

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.1		1	01/18/2021 13:22	WG1607395

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	260		9.78	21.3	1	01/19/2021 05:32	WG1606942

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.625	B J	0.622	2.87	25.5	01/18/2021 16:36	WG1607425
(S) a,a,a-Trifluorotoluene(FID)	96.7			77.0-120		01/18/2021 16:36	WG1607425

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000535	0.00115	1.02	01/18/2021 13:24	WG1607394
Toluene	U		0.00150	0.00574	1.02	01/18/2021 13:24	WG1607394
Ethylbenzene	U		0.000846	0.00287	1.02	01/18/2021 13:24	WG1607394
Total Xylenes	U		0.00101	0.00746	1.02	01/18/2021 13:24	WG1607394
(S) Toluene-d8	98.2			75.0-131		01/18/2021 13:24	WG1607394
(S) 4-Bromofluorobenzene	100			67.0-138		01/18/2021 13:24	WG1607394
(S) 1,2-Dichloroethane-d4	114			70.0-130		01/18/2021 13:24	WG1607394

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	16.3		1.71	4.25	1	01/19/2021 03:59	WG1607436
C28-C40 Oil Range	42.9		0.291	4.25	1	01/19/2021 03:59	WG1607436
(S) o-Terphenyl	73.0			18.0-148		01/19/2021 03:59	WG1607436

Collected date/time: 01/15/21 11:10

L1307540

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.9		1	01/18/2021 13:22	WG1607395

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	27.8		9.80	21.3	1	01/19/2021 05:50	WG1606942

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	1.31	B J	0.660	3.04	27	01/19/2021 12:58	WG1607717
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	97.7			77.0-120		01/19/2021 12:58	WG1607717

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000568	0.00122	1.08	01/18/2021 13:43	WG1607394
Toluene	U		0.00158	0.00608	1.08	01/18/2021 13:43	WG1607394
Ethylbenzene	U		0.000896	0.00304	1.08	01/18/2021 13:43	WG1607394
Total Xylenes	U		0.00107	0.00790	1.08	01/18/2021 13:43	WG1607394
(S) <i>Toluene-d8</i>	97.6			75.0-131		01/18/2021 13:43	WG1607394
(S) <i>4-Bromofluorobenzene</i>	98.1			67.0-138		01/18/2021 13:43	WG1607394
(S) <i>1,2-Dichloroethane-d4</i>	103			70.0-130		01/18/2021 13:43	WG1607394

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	5.49		1.72	4.26	1	01/19/2021 03:46	WG1607436
C28-C40 Oil Range	21.1		0.292	4.26	1	01/19/2021 03:46	WG1607436
(S) <i>o</i> -Terphenyl	62.4			18.0-148		01/19/2021 03:46	WG1607436

Total Solids by Method 2540 G-2011

[L1307540-01,02,03,04,05](#)

Method Blank (MB)

(MB) R3613834-1 01/18/21 13:22

Analyte	MB Result %	<u>MB Qualifier</u>	MB MDL %	MB RDL %
Total Solids	0.000			

L1307367-32 Original Sample (OS) • Duplicate (DUP)

(OS) L1307367-32 01/18/21 13:22 • (DUP) R3613834-3 01/18/21 13:22

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits
Total Solids	82.8	83.0	1	0.148		10

Laboratory Control Sample (LCS)

(LCS) R3613834-2 01/18/21 13:22

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
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

[L1307540-01,02,03,04,05](#)

Method Blank (MB)

(MB) R3613832-1 01/19/21 03:48

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

L1307130-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1307130-01 01/19/21 06:07 • (DUP) R3613832-3 01/19/21 06:24

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3613832-2 01/19/21 04:05

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	213	106	90.0-110	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO [L1307540-01,02,03,04](#)

Method Blank (MB)

(MB) R3613790-2 01/18/21 13:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0862	⌵	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	97.1			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3613790-1 01/18/21 11:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.89	107	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) by Method 8015D/GRO [L1307540-05](#)

Method Blank (MB)

(MB) R3613948-2 01/19/21 11:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0823	⌵	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	97.3			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3613948-1 01/19/21 10:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.48	99.6	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			104	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1307540-01,02,03,04,05

Method Blank (MB)

(MB) R3613654-2 01/18/21 08:46

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	97.2			75.0-131
(S) 4-Bromofluorobenzene	95.9			67.0-138
(S) 1,2-Dichloroethane-d4	111			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3613654-1 01/18/21 07:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.124	99.2	70.0-123	
Ethylbenzene	0.125	0.114	91.2	74.0-126	
Toluene	0.125	0.116	92.8	75.0-121	
Xylenes, Total	0.375	0.352	93.9	72.0-127	
(S) Toluene-d8			94.7	75.0-131	
(S) 4-Bromofluorobenzene			101	67.0-138	
(S) 1,2-Dichloroethane-d4			118	70.0-130	

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 [L1307540-01,02,03,04,05](#)

Method Blank (MB)

(MB) R3613768-1 01/19/21 03:20

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	93.4			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3613768-2 01/19/21 03:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	46.6	93.2	50.0-150	
(S) o-Terphenyl			93.5	18.0-148	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

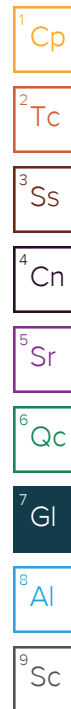
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.



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.

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

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California	2961	Oregon	CA300002
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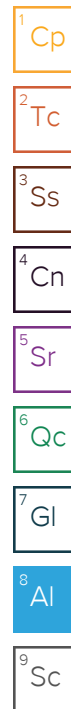
Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1
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Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18
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¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable





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Midland, Texas 79701
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Fax (432) 682-

4307540

D093

Client Name:	Conoco Phillips	Site Manager:	Christian Llull
Project Name:	Philmex #15 Flowline Release	Contact Info:	Email: christian.llull@tetrattech.com Phone: (512) 338-1667
Project Location: county, state)	Lea County, New Mexico	Project #:	212C-MD-02374
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	John Thurston
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 / 624	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	
		YEAR: 2021		WATER	SOIL	HCL	HNO ₃	ICE	NONE																								
		DATE	TIME																														
	NSW-2	1/15/2021	1030		X				X		1	N	X	X																			
	NSW-3 (3')	1/15/2021	1040		X				X		1	N	X	X																			
	NSW-4	1/15/2021	1050		X				X		1	N	X	X																			
	NSW-7 (5')	1/15/2021	1100		X				X		1	N	X	X																			
	ESW-1 (3')	1/15/2021	1110		X				X		1	N	X	X																			
					X				X		1	N	X	X																			
					X				X		1	N	X	X																			
					X				X		1	N	X	X																			
					X				X		1	N	X	X																			
					X				X		1	N	X	X																			

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	1/15/2021	15:10			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

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



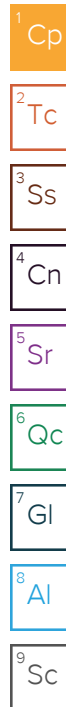
ANALYTICAL REPORT

January 25, 2021

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1309378
Samples Received: 01/22/2021
Project Number: 212C-MD-02374
Description: Philmex #15 Flowline Release

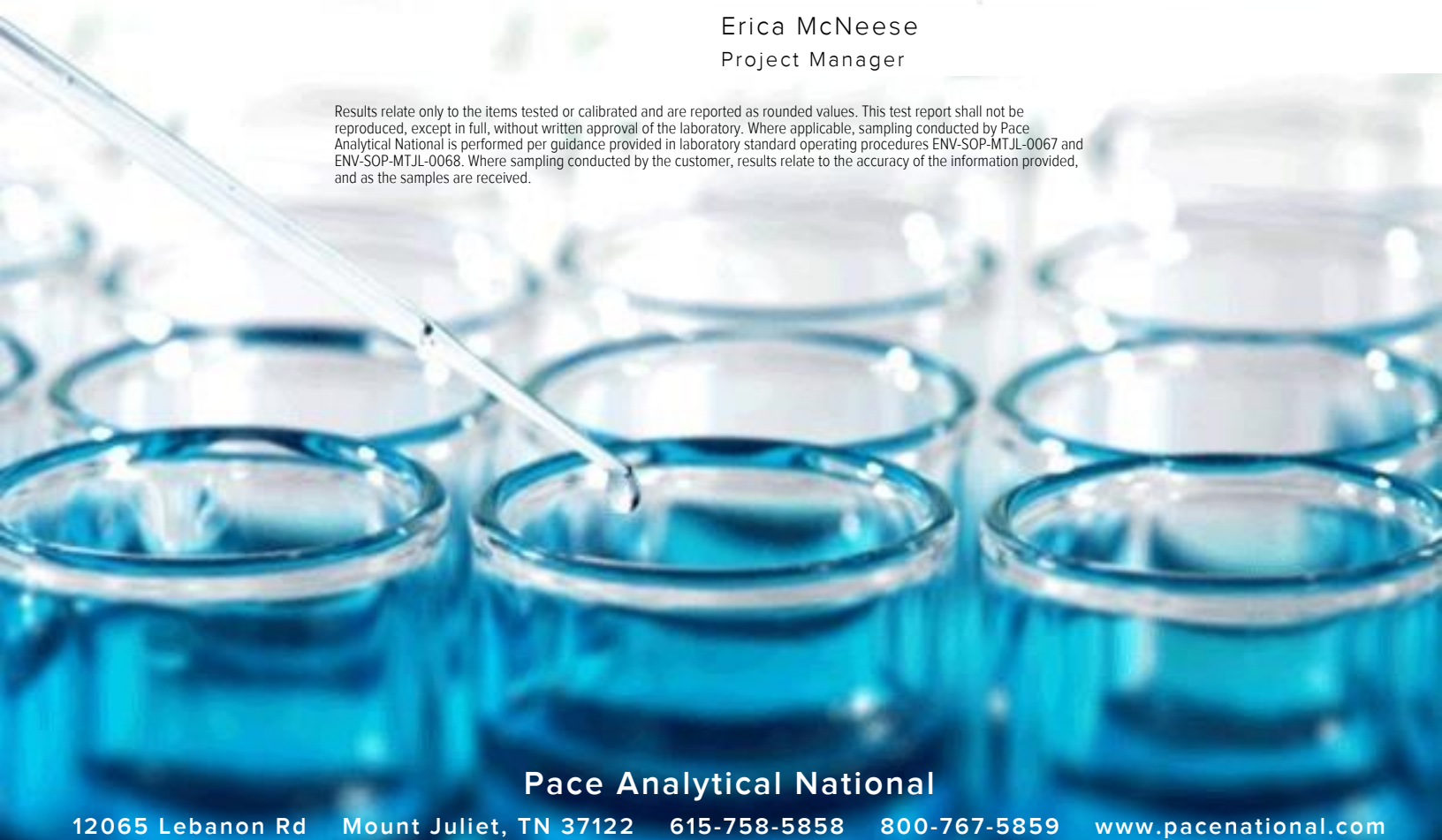
Report To: Christian Llull
901 West Wall
Suite 100
Midland, TX 79701



Entire Report Reviewed By:

Erica McNeese
Project Manager

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

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

WSW-2 L1309378-01 Solid

Collected by
Matthew C.

Collected date/time
01/19/21 13:00

Received date/time
01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610409	1	01/25/21 05:41	01/25/21 05:47	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610464	1	01/23/21 14:05	01/23/21 19:21	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610482	1	01/22/21 19:52	01/23/21 13:35	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610561	1	01/22/21 19:52	01/23/21 21:26	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610417	5	01/23/21 07:05	01/23/21 20:46	JN	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn

WSW-3 L1309378-02 Solid

Collected by
Matthew C.

Collected date/time
01/19/21 13:15

Received date/time
01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610409	1	01/25/21 05:41	01/25/21 05:47	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610464	1	01/23/21 14:05	01/23/21 19:50	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610482	1	01/22/21 19:52	01/23/21 13:57	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610561	1	01/22/21 19:52	01/23/21 22:23	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610417	5	01/23/21 07:05	01/23/21 20:19	JN	Mt. Juliet, TN

⁵ Sr⁶ Qc⁷ Gl⁸ Al

SSW-1 L1309378-03 Solid

Collected by
Matthew C.

Collected date/time
01/19/21 13:25

Received date/time
01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610409	1	01/25/21 05:41	01/25/21 05:47	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610464	5	01/23/21 14:05	01/23/21 19:59	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610482	1	01/22/21 19:52	01/23/21 14:20	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610561	1	01/22/21 19:52	01/23/21 22:42	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610417	2	01/23/21 07:05	01/23/21 19:25	JN	Mt. Juliet, TN

⁹ Sc

SSW-2 L1309378-04 Solid

Collected by
Matthew C.

Collected date/time
01/19/21 13:35

Received date/time
01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610409	1	01/25/21 05:41	01/25/21 05:47	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610464	5	01/23/21 14:05	01/23/21 20:09	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610482	1	01/22/21 19:52	01/23/21 14:57	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610561	1	01/22/21 19:52	01/23/21 23:01	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610417	5	01/23/21 07:05	01/23/21 21:13	JN	Mt. Juliet, TN

SSW-3 L1309378-05 Solid

Collected by
Matthew C.

Collected date/time
01/19/21 13:45

Received date/time
01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610409	1	01/25/21 05:41	01/25/21 05:47	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610464	5	01/23/21 14:05	01/23/21 20:18	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610482	1	01/22/21 19:52	01/23/21 15:19	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610561	1	01/22/21 19:52	01/23/21 23:20	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610417	1	01/23/21 07:05	01/23/21 18:31	JN	Mt. Juliet, TN

SSW-5 L1309378-06 Solid

Collected by
Matthew C.

Collected date/time
01/19/21 13:55

Received date/time
01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610409	1	01/25/21 05:41	01/25/21 05:47	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610464	5	01/23/21 14:05	01/23/21 20:28	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610482	1	01/22/21 19:52	01/23/21 15:42	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610561	1	01/22/21 19:52	01/23/21 23:39	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610417	1	01/23/21 07:05	01/23/21 19:12	JN	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn

SSW-6 L1309378-07 Solid

Collected by
Matthew C.

Collected date/time
01/19/21 14:10

Received date/time
01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610409	1	01/25/21 05:41	01/25/21 05:47	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610464	5	01/23/21 14:05	01/23/21 20:38	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610482	1	01/22/21 19:52	01/23/21 16:04	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610561	1	01/22/21 19:52	01/23/21 23:58	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610417	1	01/23/21 07:05	01/23/21 18:45	JN	Mt. Juliet, TN

⁵ Sr⁶ Qc⁷ Gl⁸ Al

SSW-7 L1309378-08 Solid

Collected by
Matthew C.

Collected date/time
01/19/21 14:20

Received date/time
01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610409	1	01/25/21 05:41	01/25/21 05:47	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610464	5	01/23/21 14:05	01/23/21 20:47	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610482	1	01/22/21 19:52	01/23/21 16:53	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610561	1	01/22/21 19:52	01/24/21 00:17	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610417	1	01/23/21 07:05	01/23/21 18:58	JN	Mt. Juliet, TN

⁹ Sc

SSW-8 L1309378-09 Solid

Collected by
Matthew C.

Collected date/time
01/19/21 14:35

Received date/time
01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610409	1	01/25/21 05:41	01/25/21 05:47	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610464	5	01/23/21 14:05	01/23/21 20:57	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610482	1	01/22/21 19:52	01/23/21 17:15	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610561	1	01/22/21 19:52	01/24/21 00:36	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610417	10	01/23/21 07:05	01/24/21 10:40	JN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610417	4	01/23/21 07:05	01/23/21 19:52	JN	Mt. Juliet, TN

SSW-9 L1309378-10 Solid

Collected by
Matthew C.

Collected date/time
01/19/21 14:45

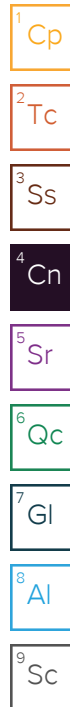
Received date/time
01/22/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610410	1	01/25/21 05:48	01/25/21 05:56	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610464	1	01/23/21 14:05	01/23/21 21:06	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610482	1	01/22/21 19:52	01/23/21 17:38	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610561	1	01/22/21 19:52	01/24/21 00:55	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610417	10	01/23/21 07:05	01/23/21 21:40	JN	Mt. Juliet, TN

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



Erica McNeese
Project Manager



Collected date/time: 01/19/21 13:00

L1309378

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.5		1	01/25/2021 05:47	WG1610409

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	680		9.63	20.9	1	01/23/2021 19:21	WG1610464

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0227	0.105	1	01/23/2021 13:35	WG1610482
(S) a,a,a-Trifluorotoluene(FID)	94.9			77.0-120		01/23/2021 13:35	WG1610482

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000511	0.00109	1	01/23/2021 21:26	WG1610561
Toluene	U		0.00142	0.00547	1	01/23/2021 21:26	WG1610561
Ethylbenzene	U		0.000806	0.00274	1	01/23/2021 21:26	WG1610561
Total Xylenes	U		0.000963	0.00711	1	01/23/2021 21:26	WG1610561
(S) Toluene-d8	97.8			75.0-131		01/23/2021 21:26	WG1610561
(S) 4-Bromofluorobenzene	98.4			67.0-138		01/23/2021 21:26	WG1610561
(S) 1,2-Dichloroethane-d4	102			70.0-130		01/23/2021 21:26	WG1610561

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	621		8.43	20.9	5	01/23/2021 20:46	WG1610417
C28-C40 Oil Range	746		1.43	20.9	5	01/23/2021 20:46	WG1610417
(S) o-Terphenyl	169	J1		18.0-148		01/23/2021 20:46	WG1610417

Sample Narrative:

L1309378-01 WG1610417: Surrogate failure due to matrix interference

Collected date/time: 01/19/21 13:15

L1309378

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.0		1	01/25/2021 05:47	WG1610409

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	450		10.0	21.7	1	01/23/2021 19:50	WG1610464

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0236	0.109	1	01/23/2021 13:57	WG1610482
(S) a,a,a-Trifluorotoluene(FID)	93.7			77.0-120		01/23/2021 13:57	WG1610482

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000549	0.00117	1	01/23/2021 22:23	WG1610561
Toluene	U		0.00153	0.00587	1	01/23/2021 22:23	WG1610561
Ethylbenzene	U		0.000866	0.00294	1	01/23/2021 22:23	WG1610561
Total Xylenes	U		0.00103	0.00764	1	01/23/2021 22:23	WG1610561
(S) Toluene-d8	94.6			75.0-131		01/23/2021 22:23	WG1610561
(S) 4-Bromofluorobenzene	97.8			67.0-138		01/23/2021 22:23	WG1610561
(S) 1,2-Dichloroethane-d4	91.7			70.0-130		01/23/2021 22:23	WG1610561

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	212		8.75	21.7	5	01/23/2021 20:19	WG1610417
C28-C40 Oil Range	621		1.49	21.7	5	01/23/2021 20:19	WG1610417
(S) o-Terphenyl	64.5			18.0-148		01/23/2021 20:19	WG1610417

Collected date/time: 01/19/21 13:25

L1309378

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.2		1	01/25/2021 05:47	WG1610409

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	1850		48.8	106	5	01/23/2021 19:59	WG1610464

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.446		0.0230	0.106	1	01/23/2021 14:20	WG1610482
(S) a,a,a-Trifluorotoluene(FID)	95.0			77.0-120		01/23/2021 14:20	WG1610482

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000525	0.00112	1	01/23/2021 22:42	WG1610561
Toluene	0.00303	J	0.00146	0.00562	1	01/23/2021 22:42	WG1610561
Ethylbenzene	0.0184		0.000828	0.00281	1	01/23/2021 22:42	WG1610561
Total Xylenes	0.0539		0.000989	0.00730	1	01/23/2021 22:42	WG1610561
(S) Toluene-d8	97.4			75.0-131		01/23/2021 22:42	WG1610561
(S) 4-Bromofluorobenzene	98.3			67.0-138		01/23/2021 22:42	WG1610561
(S) 1,2-Dichloroethane-d4	95.7			70.0-130		01/23/2021 22:42	WG1610561

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	224		3.42	8.49	2	01/23/2021 19:25	WG1610417
C28-C40 Oil Range	343		0.582	8.49	2	01/23/2021 19:25	WG1610417
(S) o-Terphenyl	68.4			18.0-148		01/23/2021 19:25	WG1610417

Collected date/time: 01/19/21 13:35

L1309378

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.5		1	01/25/2021 05:47	WG1610409

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1320		48.7	106	5	01/23/2021 20:09	WG1610464

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.44		0.0230	0.106	1	01/23/2021 14:57	WG1610482
(S) a,a,a-Trifluorotoluene(FID)	95.1			77.0-120		01/23/2021 14:57	WG1610482

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000521	0.00112	1	01/23/2021 23:01	WG1610561
Toluene	0.00346	J	0.00145	0.00558	1	01/23/2021 23:01	WG1610561
Ethylbenzene	0.0556		0.000823	0.00279	1	01/23/2021 23:01	WG1610561
Total Xylenes	0.125		0.000982	0.00725	1	01/23/2021 23:01	WG1610561
(S) Toluene-d8	100			75.0-131		01/23/2021 23:01	WG1610561
(S) 4-Bromofluorobenzene	101			67.0-138		01/23/2021 23:01	WG1610561
(S) 1,2-Dichloroethane-d4	92.9			70.0-130		01/23/2021 23:01	WG1610561

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	514		8.52	21.2	5	01/23/2021 21:13	WG1610417
C28-C40 Oil Range	590		1.45	21.2	5	01/23/2021 21:13	WG1610417
(S) o-Terphenyl	108			18.0-148		01/23/2021 21:13	WG1610417

Collected date/time: 01/19/21 13:45

L1309378

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.7		1	01/25/2021 05:47	WG1610409

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	3190		48.1	105	5	01/23/2021 20:18	WG1610464

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0227	0.105	1	01/23/2021 15:19	WG1610482
(S) a,a,a-Trifluorotoluene(FID)	98.2			77.0-120		01/23/2021 15:19	WG1610482

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000510	0.00109	1	01/23/2021 23:20	WG1610561
Toluene	U		0.00142	0.00546	1	01/23/2021 23:20	WG1610561
Ethylbenzene	U		0.000804	0.00273	1	01/23/2021 23:20	WG1610561
Total Xylenes	U		0.000960	0.00709	1	01/23/2021 23:20	WG1610561
(S) Toluene-d8	96.9			75.0-131		01/23/2021 23:20	WG1610561
(S) 4-Bromofluorobenzene	96.4			67.0-138		01/23/2021 23:20	WG1610561
(S) 1,2-Dichloroethane-d4	88.6			70.0-130		01/23/2021 23:20	WG1610561

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	41.2		1.68	4.18	1	01/23/2021 18:31	WG1610417
C28-C40 Oil Range	75.0		0.286	4.18	1	01/23/2021 18:31	WG1610417
(S) o-Terphenyl	51.6			18.0-148		01/23/2021 18:31	WG1610417

Collected date/time: 01/19/21 13:55

L1309378

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.7		1	01/25/2021 05:47	WG1610409

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1260		48.1	105	5	01/23/2021 20:28	WG1610464

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0227	0.105	1	01/23/2021 15:42	WG1610482
(S) a,a,a-Trifluorotoluene(FID)	93.6			77.0-120		01/23/2021 15:42	WG1610482

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000510	0.00109	1	01/23/2021 23:39	WG1610561
Toluene	U		0.00142	0.00546	1	01/23/2021 23:39	WG1610561
Ethylbenzene	U		0.000804	0.00273	1	01/23/2021 23:39	WG1610561
Total Xylenes	U		0.000960	0.00709	1	01/23/2021 23:39	WG1610561
(S) Toluene-d8	97.4			75.0-131		01/23/2021 23:39	WG1610561
(S) 4-Bromofluorobenzene	99.3			67.0-138		01/23/2021 23:39	WG1610561
(S) 1,2-Dichloroethane-d4	86.4			70.0-130		01/23/2021 23:39	WG1610561

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	42.2		1.68	4.18	1	01/23/2021 19:12	WG1610417
C28-C40 Oil Range	91.9		0.286	4.18	1	01/23/2021 19:12	WG1610417
(S) o-Terphenyl	46.8			18.0-148		01/23/2021 19:12	WG1610417

Collected date/time: 01/19/21 14:10

L1309378

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.8		1	01/25/2021 05:47	WG1610409

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	2600		49.6	108	5	01/23/2021 20:38	WG1610464

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0234	0.108	1	01/23/2021 16:04	WG1610482
(S) a,a,a-Trifluorotoluene(FID)	94.3			77.0-120		01/23/2021 16:04	WG1610482

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000539	0.00115	1	01/23/2021 23:58	WG1610561
Toluene	U		0.00150	0.00577	1	01/23/2021 23:58	WG1610561
Ethylbenzene	U		0.000851	0.00289	1	01/23/2021 23:58	WG1610561
Total Xylenes	U		0.00102	0.00751	1	01/23/2021 23:58	WG1610561
(S) Toluene-d8	98.2			75.0-131		01/23/2021 23:58	WG1610561
(S) 4-Bromofluorobenzene	96.8			67.0-138		01/23/2021 23:58	WG1610561
(S) 1,2-Dichloroethane-d4	92.4			70.0-130		01/23/2021 23:58	WG1610561

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	22.8		1.73	4.31	1	01/23/2021 18:45	WG1610417
C28-C40 Oil Range	60.1		0.295	4.31	1	01/23/2021 18:45	WG1610417
(S) o-Terphenyl	52.3			18.0-148		01/23/2021 18:45	WG1610417

Collected date/time: 01/19/21 14:20

L1309378

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.3		1	01/25/2021 05:47	WG1610409

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	4100		48.2	105	5	01/23/2021 20:47	WG1610464

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0228	0.105	1	01/23/2021 16:53	WG1610482
(S) a,a,a-Trifluorotoluene(FID)	92.8			77.0-120		01/23/2021 16:53	WG1610482

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000513	0.00110	1	01/24/2021 00:17	WG1610561
Toluene	U		0.00143	0.00549	1	01/24/2021 00:17	WG1610561
Ethylbenzene	U		0.000809	0.00274	1	01/24/2021 00:17	WG1610561
Total Xylenes	U		0.000966	0.00714	1	01/24/2021 00:17	WG1610561
(S) Toluene-d8	99.0			75.0-131		01/24/2021 00:17	WG1610561
(S) 4-Bromofluorobenzene	97.1			67.0-138		01/24/2021 00:17	WG1610561
(S) 1,2-Dichloroethane-d4	89.3			70.0-130		01/24/2021 00:17	WG1610561

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	42.0		1.69	4.20	1	01/23/2021 18:58	WG1610417
C28-C40 Oil Range	122		0.287	4.20	1	01/23/2021 18:58	WG1610417
(S) o-Terphenyl	49.4			18.0-148		01/23/2021 18:58	WG1610417

Collected date/time: 01/19/21 14:35

L1309378

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.8		1	01/25/2021 05:47	WG1610409

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1410		49.0	107	5	01/23/2021 20:57	WG1610464

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0231	0.107	1	01/23/2021 17:15	WG1610482
(S) a,a,a-Trifluorotoluene(FID)	89.9			77.0-120		01/23/2021 17:15	WG1610482

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000529	0.00113	1	01/24/2021 00:36	WG1610561
Toluene	U		0.00147	0.00566	1	01/24/2021 00:36	WG1610561
Ethylbenzene	U		0.000835	0.00283	1	01/24/2021 00:36	WG1610561
Total Xylenes	U		0.000997	0.00736	1	01/24/2021 00:36	WG1610561
(S) Toluene-d8	98.0			75.0-131		01/24/2021 00:36	WG1610561
(S) 4-Bromofluorobenzene	96.8			67.0-138		01/24/2021 00:36	WG1610561
(S) 1,2-Dichloroethane-d4	91.4			70.0-130		01/24/2021 00:36	WG1610561

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	407		6.87	17.1	4	01/23/2021 19:52	WG1610417
C28-C40 Oil Range	947		2.92	42.6	10	01/24/2021 10:40	WG1610417
(S) o-Terphenyl	83.9			18.0-148		01/23/2021 19:52	WG1610417
(S) o-Terphenyl	102			18.0-148		01/24/2021 10:40	WG1610417

Collected date/time: 01/19/21 14:45

L1309378

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.5		1	01/25/2021 05:56	WG1610410

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	225		9.63	20.9	1	01/23/2021 21:06	WG1610464

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0227	0.105	1	01/23/2021 17:38	WG1610482
(S) a,a,a-Trifluorotoluene(FID)	92.9			77.0-120		01/23/2021 17:38	WG1610482

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000511	0.00109	1	01/24/2021 00:55	WG1610561
Toluene	U		0.00142	0.00547	1	01/24/2021 00:55	WG1610561
Ethylbenzene	U		0.000806	0.00273	1	01/24/2021 00:55	WG1610561
Total Xylenes	U		0.000963	0.00711	1	01/24/2021 00:55	WG1610561
(S) Toluene-d8	98.1			75.0-131		01/24/2021 00:55	WG1610561
(S) 4-Bromofluorobenzene	97.2			67.0-138		01/24/2021 00:55	WG1610561
(S) 1,2-Dichloroethane-d4	88.9			70.0-130		01/24/2021 00:55	WG1610561

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	671		16.9	41.9	10	01/23/2021 21:40	WG1610417
C28-C40 Oil Range	1500		2.87	41.9	10	01/23/2021 21:40	WG1610417
(S) o-Terphenyl	105			18.0-148		01/23/2021 21:40	WG1610417

Total Solids by Method 2540 G-2011 [L1309378-01,02,03,04,05,06,07,08,09](#)

Method Blank (MB)

(MB) R3615965-1 01/25/21 05:47

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

L1309378-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1309378-09 01/25/21 05:47 • (DUP) R3615965-3 01/25/21 05:47

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	93.8	94.8	1	1.12		10

Laboratory Control Sample (LCS)

(LCS) R3615965-2 01/25/21 05:47

	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 [L1309378-10](#)

Method Blank (MB)

(MB) R3615967-1 01/25/21 05:56

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00100			

L1307908-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1307908-05 01/25/21 05:56 • (DUP) R3615967-3 01/25/21 05:56

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	81.5	81.7	1	0.285		10

Laboratory Control Sample (LCS)

(LCS) R3615967-2 01/25/21 05:56

	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

L1309378-01,02,03,04,05,06,07,08,09,10

Method Blank (MB)

(MB) R3615640-1 01/23/21 17:39

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

L1307381-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1307381-01 01/23/21 18:15 • (DUP) R3615640-3 01/23/21 18:24

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	U	U	1	0.000		20

L1309378-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1309378-10 01/23/21 21:06 • (DUP) R3615640-6 01/23/21 21:16

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	225	229	1	1.76		20

Laboratory Control Sample (LCS)

(LCS) R3615640-2 01/23/21 17:48

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

L1307381-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1307381-02 01/23/21 18:34 • (MS) R3615640-4 01/23/21 18:43 • (MSD) R3615640-5 01/23/21 18:53

	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	U	499	502	99.8	100	1	80.0-120			0.543	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

L1309378-01,02,03,04,05,06,07,08,09,10

Method Blank (MB)

(MB) R3615606-2 01/23/21 11:43

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)	99.6			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3615606-1 01/23/21 10:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.62	102	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			104	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1309378-01.02.03.04.05.06.07.08.09.10

Method Blank (MB)

(MB) R3615594-2 01/23/21 21:06

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	97.4			75.0-131
(S) 4-Bromofluorobenzene	98.2			67.0-138
(S) 1,2-Dichloroethane-d4	102			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) R3615594-1 01/23/21 20:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.117	93.6	70.0-123	
Ethylbenzene	0.125	0.109	87.2	74.0-126	
Toluene	0.125	0.107	85.6	75.0-121	
Xylenes, Total	0.375	0.326	86.9	72.0-127	
(S) Toluene-d8			96.6	75.0-131	
(S) 4-Bromofluorobenzene			100	67.0-138	
(S) 1,2-Dichloroethane-d4			111	70.0-130	

L1309378-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1309378-01 01/23/21 21:26 • (MS) R3615594-3 01/24/21 04:24 • (MSD) R3615594-4 01/24/21 04:43

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.136	U	0.0980	0.115	72.3	84.7	1	10.0-149			15.8	37
Ethylbenzene	0.136	U	0.0922	0.106	68.0	78.5	1	10.0-160			14.3	38
Toluene	0.136	U	0.104	0.113	76.5	83.1	1	10.0-156			8.29	38
Xylenes, Total	0.407	U	0.276	0.313	67.7	76.9	1	10.0-160			12.6	38
(S) Toluene-d8					98.4	98.8		75.0-131				
(S) 4-Bromofluorobenzene					99.8	98.7		67.0-138				
(S) 1,2-Dichloroethane-d4					93.0	93.6		70.0-130				

Semi-Volatile Organic Compounds (GC) by Method 8015

[L1309378-01,02,03,04,05,06,07,08,09,10](#)

Method Blank (MB)

(MB) R3615599-1 01/23/21 13:06

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	61.3			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3615599-2 01/23/21 13:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	28.2	56.4	50.0-150	
(S) o-Terphenyl			69.1	18.0-148	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

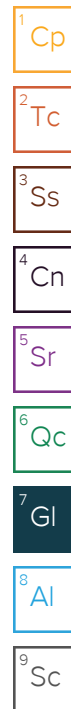
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.



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.

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

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California	2961	Oregon	CA300002
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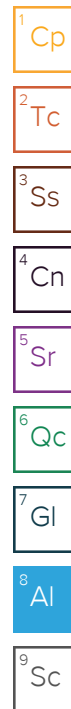
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Texas	T104704328-20-18
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¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable



F161

U309378 Page : 1 of 1

Released to Imaging: 8/4/2021 9:45:52 AM

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form			
Client: <u>CORTETRA</u>		L1309378	
Cooler Received/Opened On: 1 / <u>22</u> / 21		Temperature: <u>0.6</u>	
Received By: <u>Olivia Turner</u>			
Signature: <u>Olivia Turner</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

January 26, 2021

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1309832
Samples Received: 01/23/2021
Project Number: 212C-MD-02374
Description: Philmex #15 Flowline Release

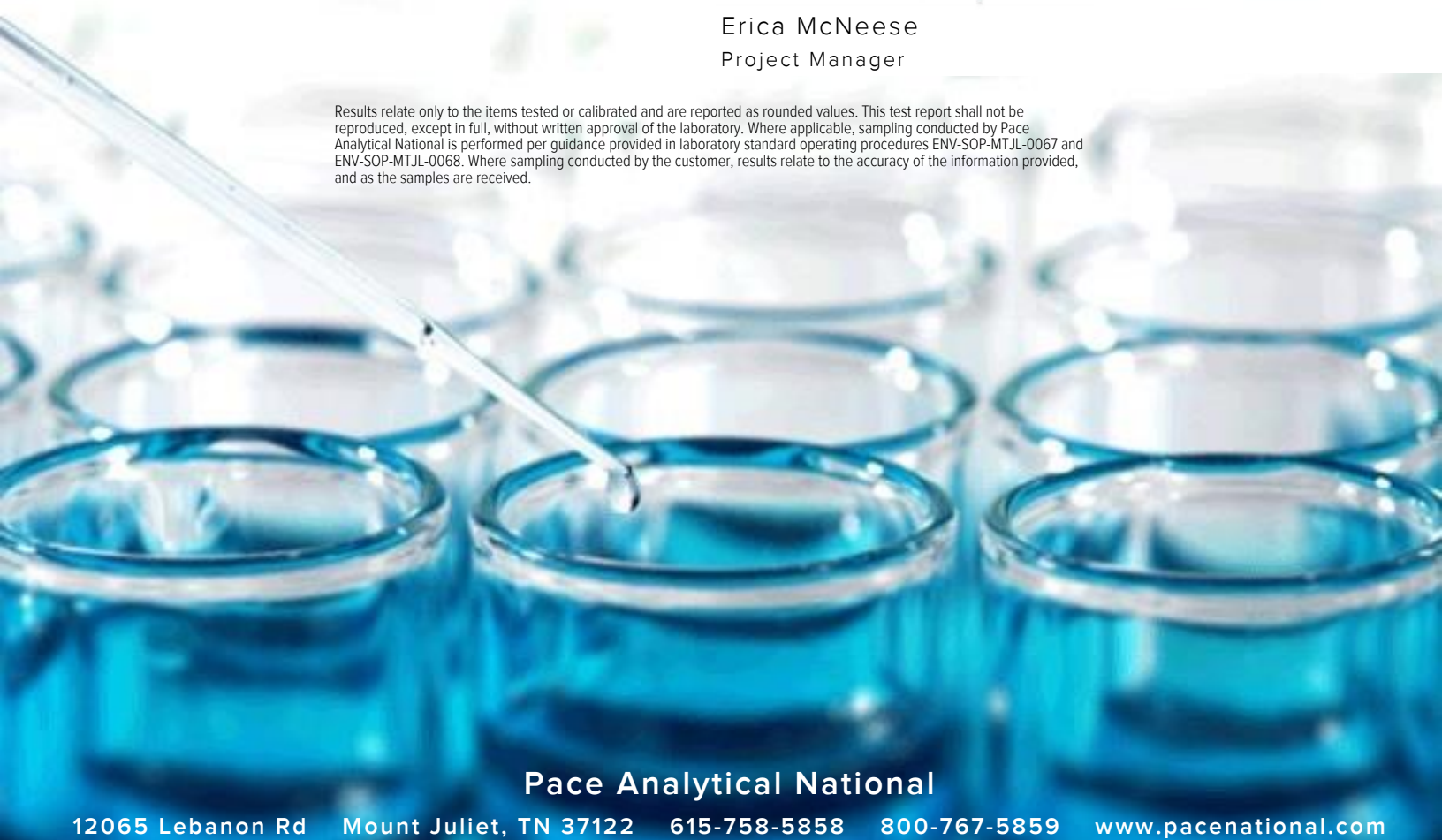
Report To: Christian Llull
901 West Wall
Suite 100
Midland, TX 79701



Entire Report Reviewed By:

Erica McNeese
Project Manager

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

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

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

FS-13 L1309832-01 Solid

				Collected by	Collected date/time	Received date/time
				John Thurston	01/21/21 00:00	01/23/21 14:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610928	1	01/25/21 08:00	01/25/21 08:09	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610761	1	01/24/21 21:10	01/25/21 00:34	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610678	1	01/23/21 19:13	01/24/21 03:06	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610672	1	01/23/21 19:13	01/23/21 23:17	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610723	1	01/24/21 18:53	01/25/21 04:19	CAG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

FS-17 (4') L1309832-02 Solid

				Collected by	Collected date/time	Received date/time
				John Thurston	01/21/21 00:00	01/23/21 14:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610928	1	01/25/21 08:00	01/25/21 08:09	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610761	1	01/24/21 21:10	01/25/21 00:52	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610678	1	01/23/21 19:13	01/24/21 03:29	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610672	1	01/23/21 19:13	01/23/21 23:36	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610723	1	01/24/21 18:53	01/25/21 03:25	CAG	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

FS-18 (4') L1309832-03 Solid

				Collected by	Collected date/time	Received date/time
				John Thurston	01/21/21 00:00	01/23/21 14:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610928	1	01/25/21 08:00	01/25/21 08:09	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610761	1	01/24/21 21:10	01/25/21 01:02	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610678	1	01/23/21 19:13	01/24/21 03:51	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610672	1	01/23/21 19:13	01/23/21 23:55	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610723	1	01/24/21 18:53	01/25/21 03:38	CAG	Mt. Juliet, TN

9 Sc

NSW-1 (4') L1309832-04 Solid

				Collected by	Collected date/time	Received date/time
				John Thurston	01/21/21 00:00	01/23/21 14:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610928	1	01/25/21 08:00	01/25/21 08:09	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610761	1	01/24/21 21:10	01/25/21 01:11	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610678	1.01	01/23/21 19:13	01/24/21 04:14	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610672	1	01/23/21 19:13	01/24/21 00:14	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610723	1	01/24/21 18:53	01/25/21 05:00	CAG	Mt. Juliet, TN

ESW-4 L1309832-05 Solid

				Collected by	Collected date/time	Received date/time
				John Thurston	01/21/21 00:00	01/23/21 14:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610928	1	01/25/21 08:00	01/25/21 08:09	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610761	1	01/24/21 21:10	01/25/21 01:21	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610678	1.01	01/23/21 19:13	01/24/21 04:36	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610672	1	01/23/21 19:13	01/24/21 00:32	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610723	1	01/24/21 18:53	01/25/21 04:06	CAG	Mt. Juliet, TN

ESW-5 L1309832-06 Solid

Collected by John Thurston
Collected date/time 01/21/21 00:00
Received date/time 01/23/21 14:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610928	1	01/25/21 08:00	01/25/21 08:09	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610761	1	01/24/21 21:10	01/25/21 01:30	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610678	1	01/23/21 19:13	01/24/21 04:58	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610672	1	01/23/21 19:13	01/24/21 00:51	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610723	10	01/24/21 18:53	01/25/21 05:14	CAG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

FS-3 L1309832-07 Solid

Collected by John Thurston
Collected date/time 01/21/21 00:00
Received date/time 01/23/21 14:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610928	1	01/25/21 08:00	01/25/21 08:09	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610761	5	01/24/21 21:10	01/25/21 01:40	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610678	1.01	01/23/21 19:13	01/24/21 05:21	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610672	1	01/23/21 19:13	01/24/21 01:10	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610723	20	01/24/21 18:53	01/25/21 06:35	CAG	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

FS-5 L1309832-08 Solid

Collected by John Thurston
Collected date/time 01/21/21 00:00
Received date/time 01/23/21 14:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610928	1	01/25/21 08:00	01/25/21 08:09	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610761	1	01/24/21 21:10	01/25/21 02:08	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610678	1.01	01/23/21 19:13	01/24/21 05:43	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610672	1	01/23/21 19:13	01/24/21 01:28	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610723	20	01/24/21 18:53	01/25/21 06:08	CAG	Mt. Juliet, TN

9 Sc

FS-9 L1309832-09 Solid

Collected by John Thurston
Collected date/time 01/21/21 00:00
Received date/time 01/23/21 14:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610929	1	01/25/21 07:53	01/25/21 07:58	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610761	5	01/24/21 21:10	01/25/21 02:18	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610678	1	01/23/21 19:13	01/24/21 06:05	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610672	1	01/23/21 19:13	01/24/21 01:47	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610723	20	01/24/21 18:53	01/25/21 05:55	CAG	Mt. Juliet, TN

FS-10 L1309832-10 Solid

Collected by John Thurston
Collected date/time 01/21/21 00:00
Received date/time 01/23/21 14:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610929	1	01/25/21 07:53	01/25/21 07:58	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610761	5	01/24/21 21:10	01/25/21 02:56	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610678	1	01/23/21 19:13	01/24/21 06:28	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610672	1	01/23/21 19:13	01/24/21 02:06	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610723	1	01/24/21 18:53	01/25/21 07:03	CAG	Mt. Juliet, TN

FS-11 L1309832-11 Solid

Collected by
John Thurston

Collected date/time
01/21/21 00:00

Received date/time
01/23/21 14:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610929	1	01/25/21 07:53	01/25/21 07:58	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610761	5	01/24/21 21:10	01/25/21 03:05	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610678	1	01/23/21 19:13	01/24/21 06:51	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610672	1	01/23/21 19:13	01/24/21 02:24	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610723	20	01/24/21 18:53	01/25/21 05:41	CAG	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn

SSW-4 L1309832-12 Solid

Collected by
John Thurston

Collected date/time
01/21/21 00:00

Received date/time
01/23/21 14:30

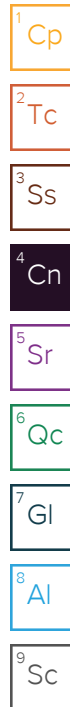
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1610929	1	01/25/21 07:53	01/25/21 07:58	CMK	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1610761	5	01/24/21 21:10	01/25/21 03:15	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1610678	1	01/23/21 19:13	01/24/21 07:13	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1610672	1	01/23/21 19:13	01/24/21 02:43	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1610723	4	01/24/21 18:53	01/25/21 09:33	CAG	Mt. Juliet, TN

⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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



Erica McNeese
Project Manager



Collected date/time: 01/21/21 00:00

L1309832

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	87.9		1	01/25/2021 08:09	WG1610928

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	879		10.5	22.7	1	01/25/2021 00:34	WG1610761

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0247	0.114	1	01/24/2021 03:06	WG1610678
(S) a,a,a-Trifluorotoluene(FID)	95.2			77.0-120		01/24/2021 03:06	WG1610678

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000595	0.00127	1	01/23/2021 23:17	WG1610672
Toluene	U		0.00166	0.00637	1	01/23/2021 23:17	WG1610672
Ethylbenzene	U		0.000939	0.00319	1	01/23/2021 23:17	WG1610672
Total Xylenes	U		0.00112	0.00828	1	01/23/2021 23:17	WG1610672
(S) Toluene-d8	108			75.0-131		01/23/2021 23:17	WG1610672
(S) 4-Bromofluorobenzene	107			67.0-138		01/23/2021 23:17	WG1610672
(S) 1,2-Dichloroethane-d4	89.9			70.0-130		01/23/2021 23:17	WG1610672

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	20.7		1.83	4.55	1	01/25/2021 04:19	WG1610723
C28-C40 Oil Range	23.8		0.312	4.55	1	01/25/2021 04:19	WG1610723
(S) o-Terphenyl	63.9			18.0-148		01/25/2021 04:19	WG1610723

Collected date/time: 01/21/21 00:00

L1309832

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.0		1	01/25/2021 08:09	WG1610928

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	329		10.0	21.7	1	01/25/2021 00:52	WG1610761

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0236	0.109	1	01/24/2021 03:29	WG1610678
(S) a,a,a-Trifluorotoluene(FID)	94.3			77.0-120		01/24/2021 03:29	WG1610678

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000549	0.00118	1	01/23/2021 23:36	WG1610672
Toluene	U		0.00153	0.00588	1	01/23/2021 23:36	WG1610672
Ethylbenzene	U		0.000866	0.00294	1	01/23/2021 23:36	WG1610672
Total Xylenes	U		0.00103	0.00764	1	01/23/2021 23:36	WG1610672
(S) Toluene-d8	108			75.0-131		01/23/2021 23:36	WG1610672
(S) 4-Bromofluorobenzene	104			67.0-138		01/23/2021 23:36	WG1610672
(S) 1,2-Dichloroethane-d4	90.3			70.0-130		01/23/2021 23:36	WG1610672

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	4.94		1.75	4.35	1	01/25/2021 03:25	WG1610723
C28-C40 Oil Range	7.50		0.298	4.35	1	01/25/2021 03:25	WG1610723
(S) o-Terphenyl	63.5			18.0-148		01/25/2021 03:25	WG1610723

Collected date/time: 01/21/21 00:00

L1309832

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.5		1	01/25/2021 08:09	WG1610928

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	mg/kg		mg/kg	mg/kg			
Chloride	265		10.1	21.9	1	01/25/2021 01:02	WG1610761

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	mg/kg		mg/kg	mg/kg			
TPH (GC/FID) Low Fraction	U		0.0237	0.109	1	01/24/2021 03:51	WG1610678
(S) a,a,a-Trifluorotoluene(FID)	94.7			77.0-120		01/24/2021 03:51	WG1610678

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	mg/kg		mg/kg	mg/kg			
Benzene	U		0.000554	0.00119	1	01/23/2021 23:55	WG1610672
Toluene	U		0.00154	0.00593	1	01/23/2021 23:55	WG1610672
Ethylbenzene	U		0.000874	0.00297	1	01/23/2021 23:55	WG1610672
Total Xylenes	U		0.00104	0.00771	1	01/23/2021 23:55	WG1610672
(S) Toluene-d8	106			75.0-131		01/23/2021 23:55	WG1610672
(S) 4-Bromofluorobenzene	111			67.0-138		01/23/2021 23:55	WG1610672
(S) 1,2-Dichloroethane-d4	99.3			70.0-130		01/23/2021 23:55	WG1610672

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	mg/kg		mg/kg	mg/kg			
C10-C28 Diesel Range	U		1.76	4.37	1	01/25/2021 03:38	WG1610723
C28-C40 Oil Range	1.21	J	0.300	4.37	1	01/25/2021 03:38	WG1610723
(S) o-Terphenyl	58.6			18.0-148		01/25/2021 03:38	WG1610723

Collected date/time: 01/21/21 00:00

L1309832

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.5		1	01/25/2021 08:09	WG1610928

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	82.2		9.84	21.4	1	01/25/2021 01:11	WG1610761

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0234	0.108	1.01	01/24/2021 04:14	WG1610678
(S) a,a,a-Trifluorotoluene(FID)	93.8			77.0-120		01/24/2021 04:14	WG1610678

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000532	0.00114	1	01/24/2021 00:14	WG1610672
Toluene	U		0.00148	0.00569	1	01/24/2021 00:14	WG1610672
Ethylbenzene	U		0.000839	0.00285	1	01/24/2021 00:14	WG1610672
Total Xylenes	U		0.00100	0.00740	1	01/24/2021 00:14	WG1610672
(S) Toluene-d8	109			75.0-131		01/24/2021 00:14	WG1610672
(S) 4-Bromofluorobenzene	109			67.0-138		01/24/2021 00:14	WG1610672
(S) 1,2-Dichloroethane-d4	97.9			70.0-130		01/24/2021 00:14	WG1610672

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	8.30		1.72	4.28	1	01/25/2021 05:00	WG1610723
C28-C40 Oil Range	35.0		0.293	4.28	1	01/25/2021 05:00	WG1610723
(S) o-Terphenyl	58.7			18.0-148		01/25/2021 05:00	WG1610723

Collected date/time: 01/21/21 00:00

L1309832

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.9		1	01/25/2021 08:09	WG1610928

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	510		9.70	21.1	1	01/25/2021 01:21	WG1610761

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0231	0.106	1.01	01/24/2021 04:36	WG1610678
(S) a,a,a-Trifluorotoluene(FID)	93.7			77.0-120		01/24/2021 04:36	WG1610678

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000518	0.00111	1	01/24/2021 00:32	WG1610672
Toluene	U		0.00144	0.00554	1	01/24/2021 00:32	WG1610672
Ethylbenzene	U		0.000817	0.00277	1	01/24/2021 00:32	WG1610672
Total Xylenes	U		0.000975	0.00720	1	01/24/2021 00:32	WG1610672
(S) Toluene-d8	109			75.0-131		01/24/2021 00:32	WG1610672
(S) 4-Bromofluorobenzene	109			67.0-138		01/24/2021 00:32	WG1610672
(S) 1,2-Dichloroethane-d4	96.8			70.0-130		01/24/2021 00:32	WG1610672

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	21.7		1.70	4.22	1	01/25/2021 04:06	WG1610723
C28-C40 Oil Range	49.0		0.289	4.22	1	01/25/2021 04:06	WG1610723
(S) o-Terphenyl	63.5			18.0-148		01/25/2021 04:06	WG1610723

Collected date/time: 01/21/21 00:00

L1309832

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.7		1	01/25/2021 08:09	WG1610928

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	418		9.72	21.1	1	01/25/2021 01:30	WG1610761

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0229	0.106	1	01/24/2021 04:58	WG1610678
(S) a,a,a-Trifluorotoluene(FID)	94.6			77.0-120		01/24/2021 04:58	WG1610678

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000520	0.00111	1	01/24/2021 00:51	WG1610672
Toluene	U		0.00145	0.00556	1	01/24/2021 00:51	WG1610672
Ethylbenzene	U		0.000820	0.00278	1	01/24/2021 00:51	WG1610672
Total Xylenes	U		0.000979	0.00723	1	01/24/2021 00:51	WG1610672
(S) Toluene-d8	107			75.0-131		01/24/2021 00:51	WG1610672
(S) 4-Bromofluorobenzene	109			67.0-138		01/24/2021 00:51	WG1610672
(S) 1,2-Dichloroethane-d4	99.4			70.0-130		01/24/2021 00:51	WG1610672

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	262		17.0	42.2	10	01/25/2021 05:14	WG1610723
C28-C40 Oil Range	337		2.89	42.2	10	01/25/2021 05:14	WG1610723
(S) o-Terphenyl	84.6			18.0-148		01/25/2021 05:14	WG1610723

Collected date/time: 01/21/21 00:00

L1309832

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.1		1	01/25/2021 08:09	WG1610928

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	2530		46.9	102	5	01/25/2021 01:40	WG1610761

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0223	0.103	1.01	01/24/2021 05:21	WG1610678
(S) a,a,a-Trifluorotoluene(FID)	93.5			77.0-120		01/24/2021 05:21	WG1610678

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000485	0.00104	1	01/24/2021 01:10	WG1610672
Toluene	0.00223	J	0.00135	0.00519	1	01/24/2021 01:10	WG1610672
Ethylbenzene	0.00436		0.000765	0.00260	1	01/24/2021 01:10	WG1610672
Total Xylenes	0.0126		0.000914	0.00675	1	01/24/2021 01:10	WG1610672
(S) Toluene-d8	112			75.0-131		01/24/2021 01:10	WG1610672
(S) 4-Bromofluorobenzene	106			67.0-138		01/24/2021 01:10	WG1610672
(S) 1,2-Dichloroethane-d4	89.9			70.0-130		01/24/2021 01:10	WG1610672

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	910		32.8	81.5	20	01/25/2021 06:35	WG1610723
C28-C40 Oil Range	1120		5.59	81.5	20	01/25/2021 06:35	WG1610723
(S) o-Terphenyl	128	J7		18.0-148		01/25/2021 06:35	WG1610723

Collected date/time: 01/21/21 00:00

L1309832

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.5		1	01/25/2021 08:09	WG1610928

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	199		9.44	20.5	1	01/25/2021 02:08	WG1610761

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0225	0.104	1.01	01/24/2021 05:43	WG1610678
(S) a,a,a-Trifluorotoluene(FID)	94.5			77.0-120		01/24/2021 05:43	WG1610678

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000491	0.00105	1	01/24/2021 01:28	WG1610672
Toluene	U		0.00137	0.00526	1	01/24/2021 01:28	WG1610672
Ethylbenzene	U		0.000775	0.00263	1	01/24/2021 01:28	WG1610672
Total Xylenes	U		0.000925	0.00683	1	01/24/2021 01:28	WG1610672
(S) Toluene-d8	109			75.0-131		01/24/2021 01:28	WG1610672
(S) 4-Bromofluorobenzene	109			67.0-138		01/24/2021 01:28	WG1610672
(S) 1,2-Dichloroethane-d4	83.3			70.0-130		01/24/2021 01:28	WG1610672

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	412		33.0	82.0	20	01/25/2021 06:08	WG1610723
C28-C40 Oil Range	520		5.62	82.0	20	01/25/2021 06:08	WG1610723
(S) o-Terphenyl	107	J7		18.0-148		01/25/2021 06:08	WG1610723

Collected date/time: 01/21/21 00:00

L1309832

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.5		1	01/25/2021 07:58	WG1610929

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	mg/kg		mg/kg	mg/kg			
Chloride	1250		47.2	103	5	01/25/2021 02:18	WG1610761

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	mg/kg		mg/kg	mg/kg			
TPH (GC/FID) Low Fraction	U		0.0222	0.103	1	01/24/2021 06:05	WG1610678
(S) a,a,a-Trifluorotoluene(FID)	94.3			77.0-120		01/24/2021 06:05	WG1610678

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg	mg/kg			
Benzene	U		0.000491	0.00105	1	01/24/2021 01:47	WG1610672
Toluene	U		0.00137	0.00525	1	01/24/2021 01:47	WG1610672
Ethylbenzene	U		0.000774	0.00263	1	01/24/2021 01:47	WG1610672
Total Xylenes	U		0.000924	0.00683	1	01/24/2021 01:47	WG1610672
(S) Toluene-d8	110			75.0-131		01/24/2021 01:47	WG1610672
(S) 4-Bromofluorobenzene	106			67.0-138		01/24/2021 01:47	WG1610672
(S) 1,2-Dichloroethane-d4	88.9			70.0-130		01/24/2021 01:47	WG1610672

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg	mg/kg			
C10-C28 Diesel Range	691		33.0	82.0	20	01/25/2021 05:55	WG1610723
C28-C40 Oil Range	650		5.62	82.0	20	01/25/2021 05:55	WG1610723
(S) o-Terphenyl	137	J7		18.0-148		01/25/2021 05:55	WG1610723

Collected date/time: 01/21/21 00:00

L1309832

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.3		1	01/25/2021 07:58	WG1610929

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1260		48.3	105	5	01/25/2021 02:56	WG1610761

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0228	0.105	1	01/24/2021 06:28	WG1610678
(S) a,a,a-Trifluorotoluene(FID)	95.0			77.0-120		01/24/2021 06:28	WG1610678

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000513	0.00110	1	01/24/2021 02:06	WG1610672
Toluene	U		0.00143	0.00549	1	01/24/2021 02:06	WG1610672
Ethylbenzene	U		0.000809	0.00275	1	01/24/2021 02:06	WG1610672
Total Xylenes	U		0.000966	0.00714	1	01/24/2021 02:06	WG1610672
(S) Toluene-d8	110			75.0-131		01/24/2021 02:06	WG1610672
(S) 4-Bromofluorobenzene	108			67.0-138		01/24/2021 02:06	WG1610672
(S) 1,2-Dichloroethane-d4	83.9			70.0-130		01/24/2021 02:06	WG1610672

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	34.7		1.69	4.20	1	01/25/2021 07:03	WG1610723
C28-C40 Oil Range	61.2		0.287	4.20	1	01/25/2021 07:03	WG1610723
(S) o-Terphenyl	52.0			18.0-148		01/25/2021 07:03	WG1610723

Collected date/time: 01/21/21 00:00

L1309832

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.2		1	01/25/2021 07:58	WG1610929

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1550		48.8	106	5	01/25/2021 03:05	WG1610761

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0230	0.106	1	01/24/2021 06:51	WG1610678
(S) a,a,a-Trifluorotoluene(FID)	94.3			77.0-120		01/24/2021 06:51	WG1610678

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000525	0.00112	1	01/24/2021 02:24	WG1610672
Toluene	U		0.00146	0.00562	1	01/24/2021 02:24	WG1610672
Ethylbenzene	U		0.000828	0.00281	1	01/24/2021 02:24	WG1610672
Total Xylenes	U		0.000989	0.00730	1	01/24/2021 02:24	WG1610672
(S) Toluene-d8	109			75.0-131		01/24/2021 02:24	WG1610672
(S) 4-Bromofluorobenzene	106			67.0-138		01/24/2021 02:24	WG1610672
(S) 1,2-Dichloroethane-d4	83.6			70.0-130		01/24/2021 02:24	WG1610672

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	342		34.2	84.9	20	01/25/2021 05:41	WG1610723
C28-C40 Oil Range	414		5.82	84.9	20	01/25/2021 05:41	WG1610723
(S) o-Terphenyl	128	J7		18.0-148		01/25/2021 05:41	WG1610723

Collected date/time: 01/21/21 00:00

L1309832

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.9		1	01/25/2021 07:58	WG1610929

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1330		48.5	105	5	01/25/2021 03:15	WG1610761

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0229	0.105	1	01/24/2021 07:13	WG1610678
(S) a,a,a-Trifluorotoluene(FID)	94.0			77.0-120		01/24/2021 07:13	WG1610678

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000517	0.00111	1	01/24/2021 02:43	WG1610672
Toluene	U		0.00144	0.00554	1	01/24/2021 02:43	WG1610672
Ethylbenzene	U		0.000817	0.00277	1	01/24/2021 02:43	WG1610672
Total Xylenes	U		0.000975	0.00720	1	01/24/2021 02:43	WG1610672
(S) Toluene-d8	108			75.0-131		01/24/2021 02:43	WG1610672
(S) 4-Bromofluorobenzene	115			67.0-138		01/24/2021 02:43	WG1610672
(S) 1,2-Dichloroethane-d4	97.9			70.0-130		01/24/2021 02:43	WG1610672

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	88.3		6.79	16.9	4	01/25/2021 09:33	WG1610723
C28-C40 Oil Range	212		1.16	16.9	4	01/25/2021 09:33	WG1610723
(S) o-Terphenyl	60.4			18.0-148		01/25/2021 09:33	WG1610723

Total Solids by Method 2540 G-2011 [L1309832-01,02,03,04,05,06,07,08](#)

Method Blank (MB)

(MB) R3615969-1 01/25/21 08:09

Analyte	MB Result %	<u>MB Qualifier</u>	MB MDL %	MB RDL %
Total Solids	0.000			

L1309832-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1309832-01 01/25/21 08:09 • (DUP) R3615969-3 01/25/21 08:09

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits
Total Solids	87.9	90.7	1	3.13		10

Laboratory Control Sample (LCS)

(LCS) R3615969-2 01/25/21 08:09

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
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 [L1309832-09,10,11,12](#)

Method Blank (MB)

(MB) R3615968-1 01/25/21 07:58

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

L1309832-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1309832-09 01/25/21 07:58 • (DUP) R3615968-3 01/25/21 07:58

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	97.5	97.8	1	0.258		10

Laboratory Control Sample (LCS)

(LCS) R3615968-2 01/25/21 07:58

	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

[L1309832-01,02,03,04,05,06,07,08,09,10,11,12](#)

Method Blank (MB)

(MB) R3615812-1 01/24/21 23:04

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

L1309832-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1309832-01 01/25/21 00:34 • (DUP) R3615812-3 01/25/21 00:43

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	879	882	1	0.378		20

L1309838-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1309838-08 01/25/21 04:50 • (DUP) R3615812-6 01/25/21 05:00

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	150	150	1	0.477		20

Laboratory Control Sample (LCS)

(LCS) R3615812-2 01/24/21 23:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	197	98.4	90.0-110	

L1309832-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1309832-10 01/25/21 02:27 • (MS) R3615812-4 01/25/21 02:37 • (MSD) R3615812-5 01/25/21 02:46

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 %
Chloride	525	1230	1900	1870	128	122	1	80.0-120	E J5	E J5	1.74	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

[L1309832-01,02,03,04,05,06,07,08,09,10,11,12](#)

Method Blank (MB)

(MB) R3615823-3 01/24/21 01:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	97.1			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3615823-2 01/24/21 01:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.92	89.5	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			98.0	77.0-120	

L1307422-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1307422-01 01/24/21 09:50 • (MS) R3615823-6 01/24/21 10:57 • (MSD) R3615823-7 01/24/21 11:19

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 %
TPH (GC/FID) Low Fraction	1960	941	2720	2730	90.4	91.2	250	10.0-151			0.522	28
(S) a,a,a-Trifluorotoluene(FID)					98.4	98.0		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1309832-01,02,03,04,05,06,07,08,09,10,11,12

Method Blank (MB)

(MB) R3616035-2 01/23/21 21:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	107			75.0-131
(S) 4-Bromofluorobenzene	109			67.0-138
(S) 1,2-Dichloroethane-d4	100			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) R3616035-1 01/23/21 20:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.133	106	70.0-123	
Ethylbenzene	0.125	0.131	105	74.0-126	
Toluene	0.125	0.129	103	75.0-121	
Xylenes, Total	0.375	0.398	106	72.0-127	
(S) Toluene-d8			105	75.0-131	
(S) 4-Bromofluorobenzene			110	67.0-138	
(S) 1,2-Dichloroethane-d4			100	70.0-130	

L1308857-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1308857-06 01/24/21 04:36 • (MS) R3616035-3 01/24/21 05:33 • (MSD) R3616035-4 01/24/21 05:52

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	18.0	183	245	277	344	522	200	10.0-149	V	V	12.3	37
Ethylbenzene	18.0	U	21.8	22.4	121	124	200	10.0-160			2.71	38
Toluene	18.0	U	21.6	22.1	120	123	200	10.0-156			2.29	38
Xylenes, Total	54.0	U	66.4	68.7	123	127	200	10.0-160			3.40	38
(S) Toluene-d8					105	103		75.0-131				
(S) 4-Bromofluorobenzene					111	110		67.0-138				
(S) 1,2-Dichloroethane-d4					98.7	98.6		70.0-130				

Semi-Volatile Organic Compounds (GC) by Method 8015

[L1309832-01,02,03,04,05,06,07,08,09,10,11,12](#)

Method Blank (MB)

(MB) R3615870-1 01/25/21 02:58

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	65.0			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3615870-2 01/25/21 03:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	32.0	64.0	50.0-150	
(S) o-Terphenyl			83.0	18.0-148	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

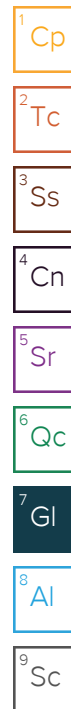
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

Abbreviations and Definitions

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

Qualifier	Description
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.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
V	The sample concentration is too high to evaluate accurate spike recoveries.



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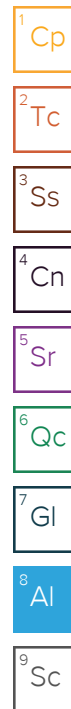
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¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable



$$5.4 \pm 0 = 5.4 \text{ m/s}$$

Analysis Request of Chain of Custody Record

[illegible]

Pace Analytical National Center for Testing & Innovation				
Cooler Receipt Form				
Client:	COPTETRA		1309832	
Cooler Received/Opened On:	1 123 / 21	Temperature:	4	
Received By:	Olivia Turner			
Signature:	Olivia Turner			
Receipt Check List		NP	Yes	No
COC Seal Present / Intact?		/		
COC Signed / Accurate?			/	
Bottles arrive intact?			/	
Correct bottles used?			/	
Sufficient volume sent?			/	
If Applicable				
VOA Zero headspace?				
Preservation Correct / Checked?				



ANALYTICAL REPORT

January 28, 2021

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1310470
Samples Received: 01/27/2021
Project Number: 212C-MD-02374
Description: Philmex #15 Flowline Release

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



Entire Report Reviewed By:

Erica McNeese
Project Manager

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FS-1 L1310470-01 Solid

Collected by John Thurston
Collected date/time 01/25/21 11:30
Received date/time 01/27/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612357	1	01/27/21 14:25	01/27/21 14:34	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612398	1	01/27/21 16:24	01/27/21 23:32	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612204	25	01/25/21 11:30	01/27/21 13:35	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612294	1	01/25/21 11:30	01/28/21 05:07	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612296	1	01/27/21 15:39	01/28/21 00:57	JN	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

FS-2 L1310470-02 Solid

Collected by John Thurston
Collected date/time 01/25/21 11:40
Received date/time 01/27/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612357	1	01/27/21 14:25	01/27/21 14:34	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612398	1	01/27/21 16:24	01/27/21 23:51	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612204	25	01/25/21 11:40	01/27/21 13:56	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612294	1	01/25/21 11:40	01/28/21 05:26	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612296	10	01/27/21 15:39	01/28/21 02:53	JN	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

FS-14 L1310470-03 Solid

Collected by John Thurston
Collected date/time 01/25/21 12:30
Received date/time 01/27/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612357	1	01/27/21 14:25	01/27/21 14:34	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612398	1	01/27/21 16:24	01/28/21 00:00	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612204	26.3	01/25/21 12:30	01/27/21 14:18	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612294	1.05	01/25/21 12:30	01/28/21 05:45	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612296	5	01/27/21 15:39	01/28/21 07:02	CAG	Mt. Juliet, TN

9 Sc

FS-15 L1310470-04 Solid

Collected by John Thurston
Collected date/time 01/25/21 12:35
Received date/time 01/27/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612357	1	01/27/21 14:25	01/27/21 14:34	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612398	1	01/27/21 16:24	01/28/21 00:10	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612204	25	01/25/21 12:35	01/27/21 14:40	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612294	1	01/25/21 12:35	01/28/21 06:04	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612296	1	01/27/21 15:39	01/28/21 01:35	JN	Mt. Juliet, TN

FS-12 L1310470-05 Solid

Collected by John Thurston
Collected date/time 01/25/21 12:40
Received date/time 01/27/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612357	1	01/27/21 14:25	01/27/21 14:34	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612398	1	01/27/21 16:24	01/28/21 00:58	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612204	25	01/25/21 12:40	01/27/21 15:01	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612294	1	01/25/21 12:40	01/28/21 06:23	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612296	1	01/27/21 15:39	01/28/21 01:48	JN	Mt. Juliet, TN

WSW-1 L1310470-06 Solid

Collected by
John Thurston

Collected date/time
01/25/21 13:20

Received date/time
01/27/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612357	1	01/27/21 14:25	01/27/21 14:34	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612398	1	01/27/21 16:24	01/28/21 00:20	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612204	25	01/25/21 13:20	01/27/21 15:23	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612294	1	01/25/21 13:20	01/28/21 06:42	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612296	1	01/27/21 15:39	01/28/21 01:22	JN	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn

SSW-10 L1310470-07 Solid

Collected by
John Thurston

Collected date/time
01/25/21 13:30

Received date/time
01/27/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612358	1	01/27/21 14:42	01/27/21 14:48	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612398	1	01/27/21 16:24	01/28/21 00:29	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612204	25	01/25/21 13:30	01/27/21 16:28	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612294	1	01/25/21 13:30	01/28/21 07:01	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612296	1	01/27/21 15:39	01/28/21 01:09	JN	Mt. Juliet, TN

⁵ Sr⁶ Qc⁷ Gl⁸ Al

SSW-11 L1310470-08 Solid

Collected by
John Thurston

Collected date/time
01/25/21 13:40

Received date/time
01/27/21 08:00

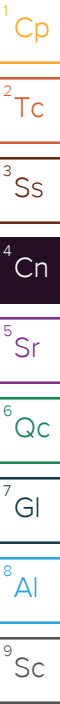
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612358	1	01/27/21 14:42	01/27/21 14:48	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612398	1	01/27/21 16:24	01/28/21 01:26	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612204	25	01/25/21 13:40	01/27/21 16:49	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612294	1	01/25/21 13:40	01/28/21 07:20	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612296	1	01/27/21 15:39	01/28/21 02:27	JN	Mt. Juliet, TN

⁹ Sc

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



Erica McNeese
Project Manager



Collected date/time: 01/25/21 11:30

L1310470

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.4		1	01/27/2021 14:34	WG1612357

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	222		9.54	20.7	1	01/27/2021 23:32	WG1612398

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.903	B J	0.588	2.71	25	01/27/2021 13:35	WG1612204
(S) a,a,a-Trifluorotoluene(FID)	95.6			77.0-120		01/27/2021 13:35	WG1612204

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000506	0.00108	1	01/28/2021 05:07	WG1612294
Toluene	U		0.00141	0.00542	1	01/28/2021 05:07	WG1612294
Ethylbenzene	U		0.000799	0.00271	1	01/28/2021 05:07	WG1612294
Total Xylenes	U		0.000954	0.00704	1	01/28/2021 05:07	WG1612294
(S) Toluene-d8	99.6			75.0-131		01/28/2021 05:07	WG1612294
(S) 4-Bromofluorobenzene	99.1			67.0-138		01/28/2021 05:07	WG1612294
(S) 1,2-Dichloroethane-d4	90.0			70.0-130		01/28/2021 05:07	WG1612294

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.74	J	1.67	4.15	1	01/28/2021 00:57	WG1612296
C28-C40 Oil Range	3.64	J	0.284	4.15	1	01/28/2021 00:57	WG1612296
(S) o-Terphenyl	57.3			18.0-148		01/28/2021 00:57	WG1612296

Collected date/time: 01/25/21 11:40

L1310470

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.5		1	01/27/2021 14:34	WG1612357

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	307		9.64	20.9	1	01/27/2021 23:51	WG1612398

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.719	B J	0.608	2.80	25	01/27/2021 13:56	WG1612204
(S) a,a,a-Trifluorotoluene(FID)	95.8			77.0-120		01/27/2021 13:56	WG1612204

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000523	0.00112	1	01/28/2021 05:26	WG1612294
Toluene	U		0.00146	0.00560	1	01/28/2021 05:26	WG1612294
Ethylbenzene	U		0.000826	0.00280	1	01/28/2021 05:26	WG1612294
Total Xylenes	U		0.000986	0.00728	1	01/28/2021 05:26	WG1612294
(S) Toluene-d8	98.3			75.0-131		01/28/2021 05:26	WG1612294
(S) 4-Bromofluorobenzene	96.9			67.0-138		01/28/2021 05:26	WG1612294
(S) 1,2-Dichloroethane-d4	91.5			70.0-130		01/28/2021 05:26	WG1612294

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	187		16.9	41.9	10	01/28/2021 02:53	WG1612296
C28-C40 Oil Range	283		2.87	41.9	10	01/28/2021 02:53	WG1612296
(S) o-Terphenyl	39.3			18.0-148		01/28/2021 02:53	WG1612296

Collected date/time: 01/25/21 12:30

L1310470

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.2		1	01/27/2021 14:34	WG1612357

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	744		9.47	20.6	1	01/28/2021 00:00	WG1612398

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.21	B J	0.603	2.78	26.3	01/27/2021 14:18	WG1612204
(S) a,a,a-Trifluorotoluene(FID)	95.7			77.0-120		01/27/2021 14:18	WG1612204

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000518	0.00111	1.05	01/28/2021 05:45	WG1612294
Toluene	U		0.00144	0.00555	1.05	01/28/2021 05:45	WG1612294
Ethylbenzene	U		0.000818	0.00278	1.05	01/28/2021 05:45	WG1612294
Total Xylenes	U		0.000976	0.00721	1.05	01/28/2021 05:45	WG1612294
(S) Toluene-d8	99.7			75.0-131		01/28/2021 05:45	WG1612294
(S) 4-Bromofluorobenzene	100			67.0-138		01/28/2021 05:45	WG1612294
(S) 1,2-Dichloroethane-d4	91.3			70.0-130		01/28/2021 05:45	WG1612294

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	360		8.28	20.6	5	01/28/2021 07:02	WG1612296
C28-C40 Oil Range	389		1.41	20.6	5	01/28/2021 07:02	WG1612296
(S) o-Terphenyl	89.5			18.0-148		01/28/2021 07:02	WG1612296

Collected date/time: 01/25/21 12:35

L1310470

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.2		1	01/27/2021 14:34	WG1612357

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	36.3		9.87	21.5	1	01/28/2021 00:10	WG1612398

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.895	B J	0.635	2.92	25	01/27/2021 14:40	WG1612204
(S) a,a,a-Trifluorotoluene(FID)	95.8			77.0-120		01/27/2021 14:40	WG1612204

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000546	0.00117	1	01/28/2021 06:04	WG1612294
Toluene	U		0.00152	0.00584	1	01/28/2021 06:04	WG1612294
Ethylbenzene	U		0.000861	0.00292	1	01/28/2021 06:04	WG1612294
Total Xylenes	U		0.00103	0.00760	1	01/28/2021 06:04	WG1612294
(S) Toluene-d8	99.7			75.0-131		01/28/2021 06:04	WG1612294
(S) 4-Bromofluorobenzene	98.9			67.0-138		01/28/2021 06:04	WG1612294
(S) 1,2-Dichloroethane-d4	89.5			70.0-130		01/28/2021 06:04	WG1612294

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	56.7		1.73	4.29	1	01/28/2021 01:35	WG1612296
C28-C40 Oil Range	77.8		0.294	4.29	1	01/28/2021 01:35	WG1612296
(S) o-Terphenyl	47.3			18.0-148		01/28/2021 01:35	WG1612296

Collected date/time: 01/25/21 12:40

L1310470

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.3		1	01/27/2021 14:34	WG1612357

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	56.1		9.87	21.4	1	01/28/2021 00:58	WG1612398

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.685	B J	0.648	2.98	25	01/27/2021 15:01	WG1612204
(S) a,a,a-Trifluorotoluene(FID)	95.9			77.0-120		01/27/2021 15:01	WG1612204

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000557	0.00119	1	01/28/2021 06:23	WG1612294
Toluene	U		0.00155	0.00597	1	01/28/2021 06:23	WG1612294
Ethylbenzene	U		0.000880	0.00298	1	01/28/2021 06:23	WG1612294
Total Xylenes	U		0.00105	0.00776	1	01/28/2021 06:23	WG1612294
(S) Toluene-d8	100			75.0-131		01/28/2021 06:23	WG1612294
(S) 4-Bromofluorobenzene	98.5			67.0-138		01/28/2021 06:23	WG1612294
(S) 1,2-Dichloroethane-d4	90.6			70.0-130		01/28/2021 06:23	WG1612294

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	118	J6	1.73	4.29	1	01/28/2021 01:48	WG1612296
C28-C40 Oil Range	166		0.294	4.29	1	01/28/2021 01:48	WG1612296
(S) o-Terphenyl	57.2			18.0-148		01/28/2021 01:48	WG1612296

Collected date/time: 01/25/21 13:20

L1310470

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.5		1	01/27/2021 14:34	WG1612357

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	16.0	J	10.1	21.9	1	01/28/2021 00:20	WG1612398

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.812	B J	0.668	3.08	25	01/27/2021 15:23	WG1612204
(S) a,a,a-Trifluorotoluene(FID)	95.7			77.0-120		01/27/2021 15:23	WG1612204

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000574	0.00123	1	01/28/2021 06:42	WG1612294
Toluene	U		0.00160	0.00615	1	01/28/2021 06:42	WG1612294
Ethylbenzene	U		0.000907	0.00308	1	01/28/2021 06:42	WG1612294
Total Xylenes	U		0.00108	0.00800	1	01/28/2021 06:42	WG1612294
(S) Toluene-d8	98.2			75.0-131		01/28/2021 06:42	WG1612294
(S) 4-Bromofluorobenzene	98.1			67.0-138		01/28/2021 06:42	WG1612294
(S) 1,2-Dichloroethane-d4	91.3			70.0-130		01/28/2021 06:42	WG1612294

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	11.7		1.76	4.37	1	01/28/2021 01:22	WG1612296
C28-C40 Oil Range	21.4		0.299	4.37	1	01/28/2021 01:22	WG1612296
(S) o-Terphenyl	58.9			18.0-148		01/28/2021 01:22	WG1612296

Collected date/time: 01/25/21 13:30

L1310470

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.7		1	01/27/2021 14:48	WG1612358

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	17.4	J	10.0	21.8	1	01/28/2021 00:29	WG1612398

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	2.37	B J	0.685	3.16	25	01/27/2021 16:28	WG1612204
(S) a,a,a-Trifluorotoluene(FID)	96.1			77.0-120		01/27/2021 16:28	WG1612204

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000589	0.00126	1	01/28/2021 07:01	WG1612294
Toluene	U		0.00164	0.00631	1	01/28/2021 07:01	WG1612294
Ethylbenzene	U		0.000930	0.00316	1	01/28/2021 07:01	WG1612294
Total Xylenes	U		0.00111	0.00820	1	01/28/2021 07:01	WG1612294
(S) Toluene-d8	98.8			75.0-131		01/28/2021 07:01	WG1612294
(S) 4-Bromofluorobenzene	97.8			67.0-138		01/28/2021 07:01	WG1612294
(S) 1,2-Dichloroethane-d4	92.4			70.0-130		01/28/2021 07:01	WG1612294

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	8.40		1.76	4.36	1	01/28/2021 01:09	WG1612296
C28-C40 Oil Range	14.9		0.299	4.36	1	01/28/2021 01:09	WG1612296
(S) o-Terphenyl	53.4			18.0-148		01/28/2021 01:09	WG1612296

Collected date/time: 01/25/21 13:40

L1310470

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.4		1	01/27/2021 14:48	WG1612358

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	18.7	J	9.85	21.4	1	01/28/2021 01:26	WG1612398

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.13	B J	0.641	2.95	25	01/27/2021 16:49	WG1612204
(S) a,a,a-Trifluorotoluene(FID)	96.1			77.0-120		01/27/2021 16:49	WG1612204

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000551	0.00118	1	01/28/2021 07:20	WG1612294
Toluene	U		0.00153	0.00590	1	01/28/2021 07:20	WG1612294
Ethylbenzene	U		0.000870	0.00295	1	01/28/2021 07:20	WG1612294
Total Xylenes	U		0.00104	0.00767	1	01/28/2021 07:20	WG1612294
(S) Toluene-d8	98.3			75.0-131		01/28/2021 07:20	WG1612294
(S) 4-Bromofluorobenzene	98.3			67.0-138		01/28/2021 07:20	WG1612294
(S) 1,2-Dichloroethane-d4	91.6			70.0-130		01/28/2021 07:20	WG1612294

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	14.6		1.72	4.28	1	01/28/2021 02:27	WG1612296
C28-C40 Oil Range	27.6		0.293	4.28	1	01/28/2021 02:27	WG1612296
(S) o-Terphenyl	66.6			18.0-148		01/28/2021 02:27	WG1612296

Total Solids by Method 2540 G-2011 [L1310470-01,02,03,04,05,06](#)

Method Blank (MB)

(MB) R3616908-1 01/27/21 14:34

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

L1310156-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1310156-01 01/27/21 14:34 • (DUP) R3616908-3 01/27/21 14:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Total Solids	83.2	82.4	1	1.05		10

Laboratory Control Sample (LCS)

(LCS) R3616908-2 01/27/21 14:34

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 [L1310470-07.08](#)

Method Blank (MB)

(MB) R3616911-1 01/27/21 14:48

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

L1310573-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1310573-01 01/27/21 14:48 • (DUP) R3616911-3 01/27/21 14:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	83.7	83.2	1	0.588		10

Laboratory Control Sample (LCS)

(LCS) R3616911-2 01/27/21 14:48

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

[L1310470-01,02,03,04,05,06,07,08](#)

Method Blank (MB)

(MB) R3616963-1 01/27/21 23:04

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

L1310470-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1310470-01 01/27/21 23:32 • (DUP) R3616963-3 01/27/21 23:41

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	222	214	1	3.87		20

L1310470-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1310470-08 01/28/21 01:26 • (DUP) R3616963-6 01/28/21 01:36

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	18.7	18.8	1	0.469	⌵	20

Laboratory Control Sample (LCS)

(LCS) R3616963-2 01/27/21 23:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	188	94.2	90.0-110	

L1310470-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1310470-05 01/28/21 00:58 • (MS) R3616963-4 01/28/21 01:07 • (MSD) R3616963-5 01/28/21 01:17

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	536	56.1	550	525	92.1	87.5	1	80.0-120			4.50	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

[L1310470-01,02,03,04,05,06,07,08](#)

Method Blank (MB)

(MB) R3616727-3 01/27/21 12:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0461	⌵	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	95.6			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3616727-2 01/27/21 11:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.98	90.5	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			98.2	77.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

L1310470-01,02,03,04,05,06,07,08

Method Blank (MB)

(MB) R3616931-3 01/28/21 01:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	98.9			75.0-131
(S) 4-Bromofluorobenzene	96.4			67.0-138
(S) 1,2-Dichloroethane-d4	87.3			70.0-130

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

(LCS) R3616931-1 01/28/21 00:21 • (LCSD) R3616931-2 01/28/21 00:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.115	0.117	92.0	93.6	70.0-123			1.72	20
Ethylbenzene	0.125	0.110	0.112	88.0	89.6	74.0-126			1.80	20
Toluene	0.125	0.115	0.118	92.0	94.4	75.0-121			2.58	20
Xylenes, Total	0.375	0.334	0.351	89.1	93.6	72.0-127			4.96	20
(S) Toluene-d8				98.1	100	75.0-131				
(S) 4-Bromofluorobenzene				101	103	67.0-138				
(S) 1,2-Dichloroethane-d4				100	98.3	70.0-130				

L1309467-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1309467-10 01/28/21 04:48 • (MS) R3616931-4 01/28/21 08:16 • (MSD) R3616931-5 01/28/21 08:35

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.223	U	0.217	0.223	97.3	100	1.78	10.0-149			2.73	37
Ethylbenzene	0.223	U	0.200	0.204	89.7	91.5	1.78	10.0-160			1.98	38
Toluene	0.223	U	0.219	0.229	98.2	103	1.78	10.0-156			4.46	38
Xylenes, Total	0.668	U	0.601	0.621	90.0	93.0	1.78	10.0-160			3.27	38
(S) Toluene-d8					96.9	98.2		75.0-131				
(S) 4-Bromofluorobenzene					97.5	99.2		67.0-138				
(S) 1,2-Dichloroethane-d4					90.6	91.1		70.0-130				

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 [L1310470-01,02,03,04,05,06,07,08](#)

Method Blank (MB)

(MB) R3616817-1 01/27/21 23:05

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	55.1			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3616817-2 01/27/21 23:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	32.4	64.8	50.0-150	
(S) o-Terphenyl			45.6	18.0-148	

L1310470-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1310470-05 01/28/21 01:48 • (MS) R3616817-3 01/28/21 02:01 • (MSD) R3616817-4 01/28/21 02:14

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	53.0	118	106	96.2	0.000	0.000	1	50.0-150	J6	J6	9.86	20
(S) o-Terphenyl					32.5	29.5		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

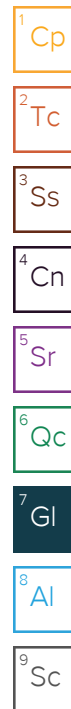
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.



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.

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Arkansas	88-0469	New Jersey-NELAP	TN002
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Colorado	TN00003	New York	11742
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Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
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Illinois	200008	Oklahoma	9915
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Kansas	E-10277	Rhode Island	LAO00356
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Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
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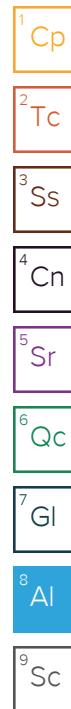
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Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18
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¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable



A071



Tetra Tech, Inc.

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

11310470

Client Name:	Conoco Phillips	Site Manager:	Christian Llull
Project Name:	Philmex #15 Flowline Release	Contact Info:	Email: christian.llull@tetratech.com Phone: (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-02374
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	John Thurston
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 / 624	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
		YEAR: 2021		WATER	SOIL	HCL	HNO ₃	ICE	NONE																								
		DATE	TIME																														
	FS-1	1/25/2021	11:30	X				X		1	N	X	X																				
	FS-2	1/25/2021	11:40	X				X		1	N	X	X																				
	FS-14	1/25/2021	12:30	X				X		1	N	X	X																				
	FS-15	1/25/2021	12:35	X				X		1	N	X	X																				
	FS-12	1/25/2021	12:40	X				X		1	N	X	X																				
	WSW-1	1/25/2021	13:20	X				X		1	N	X	X																				
	SSW-10	1/25/2021	13:30	X				X		1	N	X	X																				
	SSW-11	1/25/2021	13:40	X				X		1	N	X	X																				

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>John Thurston</i>	1/26/2021	13:00	<i>John Thurston</i>	1-26-21	13:00
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>John Thurston</i>	1-26-21	16:30	<i>John Thurston</i>	1-26-21	16:30
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>John Thurston</i>			<i>John Thurston</i>		

LAB USE ONLY	REMARKS:
Sample Temperature	☐ 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 #: _____

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form			
Client:	COPTEBA		61310470
Cooler Received/Opened On:	1 / 27 / 21	Temperature:	2.7
Received By:	DECARSO GOODE		
Signature:	<i>[Signature]</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?			



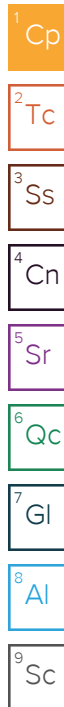
ANALYTICAL REPORT

January 29, 2021

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1311056
Samples Received: 01/28/2021
Project Number: 212C-MD-02374
Description: Philmex #15 Flowline Release

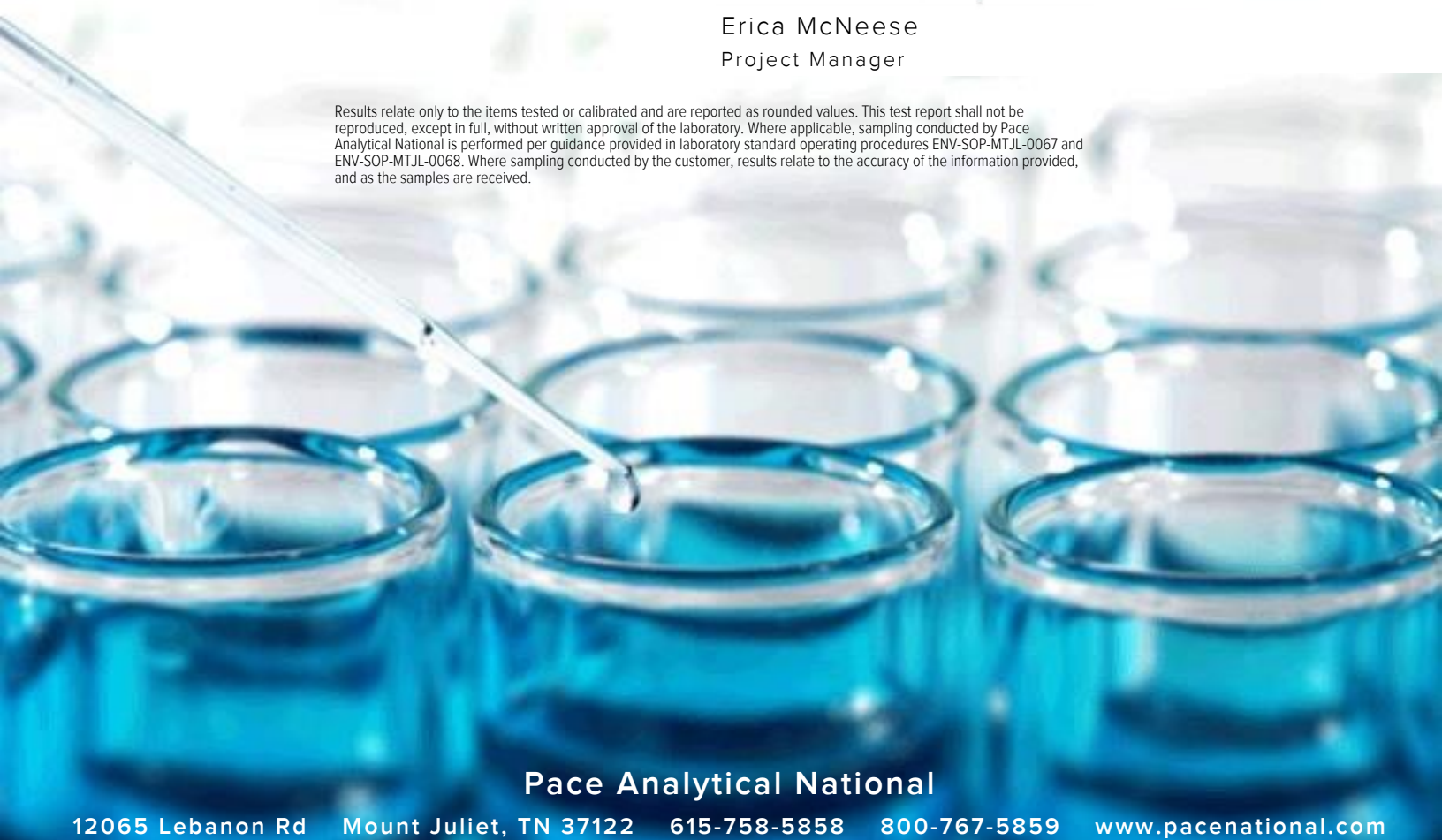
Report To: Christian Llull
901 West Wall
Suite 100
Midland, TX 79701



Entire Report Reviewed By:

Erica McNeese
Project Manager

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

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

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Sc: Sample Chain of Custody	20



ESW-5 (3') L1311056-01 Solid

Collected by
John Thurston

Collected date/time
01/27/21 09:30

Received date/time
01/28/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612878	1	01/28/21 12:45	01/28/21 12:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612881	1	01/28/21 18:49	01/29/21 06:32	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612902	37.3	01/27/21 09:30	01/28/21 16:58	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612917	1.49	01/27/21 09:30	01/28/21 14:12	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612947	1	01/28/21 16:59	01/29/21 00:07	DMG	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn

SSW-1 (4') L1311056-02 Solid

Collected by
John Thurston

Collected date/time
01/27/21 09:40

Received date/time
01/28/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612878	1	01/28/21 12:45	01/28/21 12:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612881	1	01/28/21 18:49	01/29/21 06:42	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612902	30.3	01/27/21 09:40	01/28/21 17:20	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612917	1.21	01/27/21 09:40	01/28/21 14:30	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612947	1	01/28/21 16:59	01/29/21 00:20	DMG	Mt. Juliet, TN

⁵ Sr⁶ Qc⁷ Gl⁸ Al

SSW-2 (6') L1311056-03 Solid

Collected by
John Thurston

Collected date/time
01/27/21 09:50

Received date/time
01/28/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612878	1	01/28/21 12:45	01/28/21 12:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612881	1	01/28/21 18:49	01/29/21 06:51	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612902	43	01/27/21 09:50	01/28/21 17:42	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612917	1.72	01/27/21 09:50	01/28/21 14:49	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612947	1	01/28/21 16:59	01/29/21 00:32	DMG	Mt. Juliet, TN

⁹ Sc

SSW-3 (10') L1311056-04 Solid

Collected by
John Thurston

Collected date/time
01/27/21 10:00

Received date/time
01/28/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612878	1	01/28/21 12:45	01/28/21 12:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612881	1	01/28/21 18:49	01/29/21 07:01	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612902	34.8	01/27/21 10:00	01/28/21 18:04	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612917	1.39	01/27/21 10:00	01/28/21 15:08	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612947	1	01/28/21 16:59	01/29/21 00:45	DMG	Mt. Juliet, TN

SSW-4 (15') L1311056-05 Solid

Collected by
John Thurston

Collected date/time
01/27/21 10:10

Received date/time
01/28/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612878	1	01/28/21 12:45	01/28/21 12:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612881	1	01/28/21 18:49	01/29/21 07:10	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612902	34.3	01/27/21 10:10	01/28/21 18:26	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612917	1.37	01/27/21 10:10	01/28/21 15:26	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612947	1	01/28/21 16:59	01/29/21 01:23	DMG	Mt. Juliet, TN

WSW-2 (15') L1311056-06 Solid

Collected by
John Thurston

Collected date/time
01/27/21 10:20

Received date/time
01/28/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612878	1	01/28/21 12:45	01/28/21 12:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612881	1	01/28/21 18:49	01/29/21 07:20	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612902	38.5	01/27/21 10:20	01/28/21 18:48	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612917	1.54	01/27/21 10:20	01/28/21 15:45	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612947	1	01/28/21 16:59	01/29/21 01:35	DMG	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn

WSW-3 (10') L1311056-07 Solid

Collected by
John Thurston

Collected date/time
01/27/21 10:30

Received date/time
01/28/21 08:45

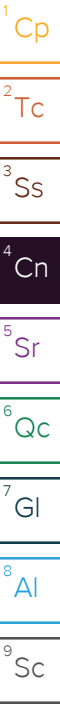
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1612878	1	01/28/21 12:45	01/28/21 12:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1612881	1	01/28/21 18:49	01/29/21 07:29	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1612902	42.5	01/27/21 10:30	01/28/21 19:10	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1612917	1.7	01/27/21 10:30	01/28/21 16:04	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1612947	1	01/28/21 16:59	01/29/21 01:48	DMG	Mt. Juliet, TN

⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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



Erica McNeese
Project Manager



Collected date/time: 01/27/21 09:30

L1311056

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.9		1	01/28/2021 12:54	WG1612878

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	181		9.50	20.7	1	01/29/2021 06:32	WG1612881

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.61	J	0.853	3.93	37.3	01/28/2021 16:58	WG1612902
(S) a,a,a-Trifluorotoluene(FID)	115			77.0-120		01/28/2021 16:58	WG1612902

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000734	0.00157	1.49	01/28/2021 14:12	WG1612917
Toluene	U		0.00205	0.00785	1.49	01/28/2021 14:12	WG1612917
Ethylbenzene	U		0.00116	0.00393	1.49	01/28/2021 14:12	WG1612917
Total Xylenes	0.00185	J	0.00138	0.0102	1.49	01/28/2021 14:12	WG1612917
(S) Toluene-d8	106			75.0-131		01/28/2021 14:12	WG1612917
(S) 4-Bromofluorobenzene	102			67.0-138		01/28/2021 14:12	WG1612917
(S) 1,2-Dichloroethane-d4	93.3			70.0-130		01/28/2021 14:12	WG1612917

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	3.37	J	1.66	4.13	1	01/29/2021 00:07	WG1612947
C28-C40 Oil Range	6.36		0.283	4.13	1	01/29/2021 00:07	WG1612947
(S) o-Terphenyl	69.7			18.0-148		01/29/2021 00:07	WG1612947

Collected date/time: 01/27/21 09:40

L1311056

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.0		1	01/28/2021 12:54	WG1612878

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	129		9.48	20.6	1	01/29/2021 06:42	WG1612881

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.695	3.20	30.3	01/28/2021 17:20	WG1612902
(S) a,a,a-Trifluorotoluene(FID)	116			77.0-120		01/28/2021 17:20	WG1612902

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000597	0.00128	1.21	01/28/2021 14:30	WG1612917
Toluene	U		0.00166	0.00639	1.21	01/28/2021 14:30	WG1612917
Ethylbenzene	U		0.000942	0.00320	1.21	01/28/2021 14:30	WG1612917
Total Xylenes	0.00140	J	0.00112	0.00830	1.21	01/28/2021 14:30	WG1612917
(S) Toluene-d8	104			75.0-131		01/28/2021 14:30	WG1612917
(S) 4-Bromofluorobenzene	102			67.0-138		01/28/2021 14:30	WG1612917
(S) 1,2-Dichloroethane-d4	94.6			70.0-130		01/28/2021 14:30	WG1612917

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	3.42	J	1.66	4.12	1	01/29/2021 00:20	WG1612947
C28-C40 Oil Range	8.38		0.282	4.12	1	01/29/2021 00:20	WG1612947
(S) o-Terphenyl	78.0			18.0-148		01/29/2021 00:20	WG1612947

Collected date/time: 01/27/21 09:50

L1311056

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.4		1	01/28/2021 12:54	WG1612878

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	74.4		9.55	20.8	1	01/29/2021 06:51	WG1612881

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.07	J	0.988	4.56	43	01/28/2021 17:42	WG1612902
(S) a,a,a-Trifluorotoluene(FID)	115			77.0-120		01/28/2021 17:42	WG1612902

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000851	0.00182	1.72	01/28/2021 14:49	WG1612917
Toluene	U		0.00237	0.00911	1.72	01/28/2021 14:49	WG1612917
Ethylbenzene	U		0.00135	0.00456	1.72	01/28/2021 14:49	WG1612917
Total Xylenes	0.00218	J	0.00160	0.0119	1.72	01/28/2021 14:49	WG1612917
(S) Toluene-d8	105			75.0-131		01/28/2021 14:49	WG1612917
(S) 4-Bromofluorobenzene	104			67.0-138		01/28/2021 14:49	WG1612917
(S) 1,2-Dichloroethane-d4	94.7			70.0-130		01/28/2021 14:49	WG1612917

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	5.99		1.67	4.15	1	01/29/2021 00:32	WG1612947
C28-C40 Oil Range	15.1		0.284	4.15	1	01/29/2021 00:32	WG1612947
(S) o-Terphenyl	79.8			18.0-148		01/29/2021 00:32	WG1612947

Collected date/time: 01/27/21 10:00

L1311056

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.9		1	01/28/2021 12:54	WG1612878

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	112		9.59	20.9	1	01/29/2021 07:01	WG1612881

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.962	J	0.810	3.73	34.8	01/28/2021 18:04	WG1612902
(S) a,a,a-Trifluorotoluene(FID)	115			77.0-120		01/28/2021 18:04	WG1612902

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000696	0.00149	1.39	01/28/2021 15:08	WG1612917
Toluene	U		0.00194	0.00746	1.39	01/28/2021 15:08	WG1612917
Ethylbenzene	U		0.00109	0.00373	1.39	01/28/2021 15:08	WG1612917
Total Xylenes	U		0.00131	0.00970	1.39	01/28/2021 15:08	WG1612917
(S) Toluene-d8	105			75.0-131		01/28/2021 15:08	WG1612917
(S) 4-Bromofluorobenzene	104			67.0-138		01/28/2021 15:08	WG1612917
(S) 1,2-Dichloroethane-d4	94.8			70.0-130		01/28/2021 15:08	WG1612917

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	5.58		1.68	4.17	1	01/29/2021 00:45	WG1612947
C28-C40 Oil Range	17.9		0.286	4.17	1	01/29/2021 00:45	WG1612947
(S) o-Terphenyl	83.9			18.0-148		01/29/2021 00:45	WG1612947

Collected date/time: 01/27/21 10:10

L1311056

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.0		1	01/28/2021 12:54	WG1612878

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	17.2	J	9.89	21.5	1	01/29/2021 07:10	WG1612881

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.33	J	0.840	3.87	34.3	01/28/2021 18:26	WG1612902
(S) a,a,a-Trifluorotoluene(FID)	116			77.0-120		01/28/2021 18:26	WG1612902

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000723	0.00155	1.37	01/28/2021 15:26	WG1612917
Toluene	U		0.00201	0.00774	1.37	01/28/2021 15:26	WG1612917
Ethylbenzene	U		0.00114	0.00387	1.37	01/28/2021 15:26	WG1612917
Total Xylenes	U		0.00137	0.0101	1.37	01/28/2021 15:26	WG1612917
(S) Toluene-d8	104			75.0-131		01/28/2021 15:26	WG1612917
(S) 4-Bromofluorobenzene	101			67.0-138		01/28/2021 15:26	WG1612917
(S) 1,2-Dichloroethane-d4	94.4			70.0-130		01/28/2021 15:26	WG1612917

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	5.05		1.73	4.30	1	01/29/2021 01:23	WG1612947
C28-C40 Oil Range	14.6		0.295	4.30	1	01/29/2021 01:23	WG1612947
(S) o-Terphenyl	88.8			18.0-148		01/29/2021 01:23	WG1612947

Collected date/time: 01/27/21 10:20

L1311056

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	85.0		1	01/28/2021 12:54	WG1612878

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	180		10.8	23.5	1	01/29/2021 07:20	WG1612881

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		1.08	4.97	38.5	01/28/2021 18:48	WG1612902
(S) a,a,a-Trifluorotoluene(FID)	114			77.0-120		01/28/2021 18:48	WG1612902

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000928	0.00199	1.54	01/28/2021 15:45	WG1612917
Toluene	U		0.00258	0.00994	1.54	01/28/2021 15:45	WG1612917
Ethylbenzene	U		0.00146	0.00497	1.54	01/28/2021 15:45	WG1612917
Total Xylenes	U		0.00176	0.0129	1.54	01/28/2021 15:45	WG1612917
(S) Toluene-d8	105			75.0-131		01/28/2021 15:45	WG1612917
(S) 4-Bromofluorobenzene	103			67.0-138		01/28/2021 15:45	WG1612917
(S) 1,2-Dichloroethane-d4	95.9			70.0-130		01/28/2021 15:45	WG1612917

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	7.95		1.89	4.71	1	01/29/2021 01:35	WG1612947
C28-C40 Oil Range	16.6		0.322	4.71	1	01/29/2021 01:35	WG1612947
(S) o-Terphenyl	73.5			18.0-148		01/29/2021 01:35	WG1612947

Collected date/time: 01/27/21 10:30

L1311056

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.0		1	01/28/2021 12:54	WG1612878

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	370		9.89	21.5	1	01/29/2021 07:29	WG1612881

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.99	J	1.03	4.75	42.5	01/28/2021 19:10	WG1612902
(S) a,a,a-Trifluorotoluene(FID)	114			77.0-120		01/28/2021 19:10	WG1612902

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000888	0.00190	1.7	01/28/2021 16:04	WG1612917
Toluene	U		0.00247	0.00951	1.7	01/28/2021 16:04	WG1612917
Ethylbenzene	U		0.00140	0.00475	1.7	01/28/2021 16:04	WG1612917
Total Xylenes	U		0.00168	0.0124	1.7	01/28/2021 16:04	WG1612917
(S) Toluene-d8	107			75.0-131		01/28/2021 16:04	WG1612917
(S) 4-Bromofluorobenzene	105			67.0-138		01/28/2021 16:04	WG1612917
(S) 1,2-Dichloroethane-d4	95.3			70.0-130		01/28/2021 16:04	WG1612917

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	17.0		1.73	4.30	1	01/29/2021 01:48	WG1612947
C28-C40 Oil Range	23.0		0.294	4.30	1	01/29/2021 01:48	WG1612947
(S) o-Terphenyl	78.7			18.0-148		01/29/2021 01:48	WG1612947

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 [L1311056-01,02,03,04,05,06,07](#)

Method Blank (MB)

(MB) R3617340-1 01/28/21 12:54

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

L1310726-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1310726-15 01/28/21 12:54 • (DUP) R3617340-3 01/28/21 12:54

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	80.6	80.9	1	0.426		10

Laboratory Control Sample (LCS)

(LCS) R3617340-2 01/28/21 12:54

	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

[L1311056-01,02,03,04,05,06,07](#)

Method Blank (MB)

(MB) R3617427-1 01/29/21 04:19

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1309821-32 Original Sample (OS) • Duplicate (DUP)

(OS) L1309821-32 01/29/21 05:16 • (DUP) R3617427-5 01/29/21 05:25

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	U	U	1	0.000		20

L1311056-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1311056-07 01/29/21 07:29 • (DUP) R3617427-6 01/29/21 07:39

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	370	347	1	6.42		20

Laboratory Control Sample (LCS)

(LCS) R3617427-2 01/29/21 04:28

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	200	99.9	90.0-110	

L1309821-31 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1309821-31 01/29/21 04:47 • (MS) R3617427-3 01/29/21 04:57 • (MSD) R3617427-4 01/29/21 05:06

	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	13.7	482	486	93.6	94.4	1	80.0-120			0.834	20

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

L1311056-01,02,03,04,05,06,07

Method Blank (MB)

(MB) R3617321-3 01/28/21 14:08

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)	113			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3617321-2 01/28/21 13:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.34	97.1	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			101	77.0-120	

L1310369-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1310369-06 01/28/21 19:54 • (MS) R3617321-4 01/28/21 22:13 • (MSD) R3617321-5 01/28/21 22:35

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	97.9	18.1	170	150	100	87.0	25	10.0-151			12.7	28
(S) a,a,a-Trifluorotoluene(FID)					110	108		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

L1311056-01,02,03,04,05,06,07

Method Blank (MB)

(MB) R3617329-3 01/28/21 12:13

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	107			75.0-131
(S) 4-Bromofluorobenzene	104			67.0-138
(S) 1,2-Dichloroethane-d4	94.6			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) R3617329-1 01/28/21 10:58 • (LCSD) R3617329-2 01/28/21 11:17

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	0.120	0.113	96.0	90.4	70.0-123			6.01	20
Ethylbenzene	0.125	0.123	0.119	98.4	95.2	74.0-126			3.31	20
Toluene	0.125	0.121	0.118	96.8	94.4	75.0-121			2.51	20
Xylenes, Total	0.375	0.366	0.351	97.6	93.6	72.0-127			4.18	20
(S) Toluene-d8				104	104	75.0-131				
(S) 4-Bromofluorobenzene				99.9	101	67.0-138				
(S) 1,2-Dichloroethane-d4				93.0	92.5	70.0-130				

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) • (MS) R3617329-4 01/28/21 20:28 • (MSD) R3617329-5 01/28/21 20:47

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 %
Benzene	0.125		0.119	0.0621	95.2	49.7	1	10.0-149		J3	62.8	37
Ethylbenzene	0.125		0.126	0.0664	101	53.1	1	10.0-160		J3	62.0	38
Toluene	0.125		0.124	0.0665	99.2	53.2	1	10.0-156		J3	60.4	38
Xylenes, Total	0.375		0.371	0.207	98.9	55.2	1	10.0-160		J3	56.7	38
(S) Toluene-d8					103	103		75.0-131				
(S) 4-Bromofluorobenzene					100	100		67.0-138				
(S) 1,2-Dichloroethane-d4					90.0	89.9		70.0-130				

Semi-Volatile Organic Compounds (GC) by Method 8015

[L1311056-01,02,03,04,05,06,07](#)

Method Blank (MB)

(MB) R3617297-1 01/28/21 23:18

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	77.3			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3617297-2 01/28/21 23:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	40.8	81.6	50.0-150	
(S) o-Terphenyl			81.2	18.0-148	

L1311056-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311056-04 01/29/21 00:45 • (MS) R3617297-3 01/29/21 00:58 • (MSD) R3617297-4 01/29/21 01:10

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	51.3	5.58	41.0	34.2	69.0	54.9	1	50.0-150			18.0	20
(S) o-Terphenyl					77.3	72.1		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

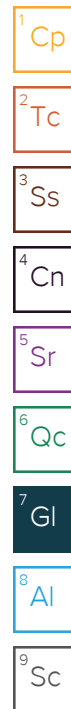
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

Abbreviations and Definitions

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

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



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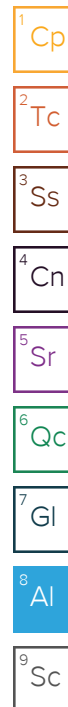
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¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable



Analysis Request of Chain of Custody Record

Tetra Tech

TT		Tetra Tech, Inc.		D220		901 West Wall Street Midland, Texas 79701 882-4559 Fax (432)		COC Seal Present/Intact: ☒ Y ☐ N If Applicable COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N Bottles arrive intact: ☒ Y ☐ N Pres. Correct / Check: ☒ Y ☐ N Correct bottles used: ☒ Y ☐ N Sufficient volume sent: ☒ Y ☐ N RAD Screen <0.5 mR/hr: ☒ Y ☐ N																																																																																																																																																																																																																																																									
Client Name: Conoco Phillips				Site Manager: Christian Llull				L311056 ANALYSIS REQUEST (Circle or Specify Method No.) <table border="1" style="width:100%; border-collapse: collapse; font-size: 0.8em;"><tr><td style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX 8021B BTEX 8260B</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH TX1005 (Ext to C35)</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH 8015M (GRO - DRO - ORO - MRO)</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">PAH 8270C</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">Total Metals Ag As Ba Cd Cr Pb Se Hg</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">TCPLP Metals Ag As Ba Cd Cr Pb Se Hg</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">TCPLP Volatiles</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">TCPLP Semi Volatiles</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">RCI</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">GC/MS Vol. 8260B / 624</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">GC/MS Semi. Vol. 8270C/625</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">PCBs 8082 / 608</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">NORM</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">PLM (Asbestos)</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">Chloride 300.0</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">Chloride Sulfate TDS</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">General Water Chemistry (see attached list)</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">Anion/Cation Balance</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH 8015R</td><td style="writing-mode: vertical-rl; transform: rotate(180deg);">HOLD</td></tr><tr><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>										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	TCPLP Metals Ag As Ba Cd Cr Pb Se Hg	TCPLP Volatiles	TCPLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCBs 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R	HOLD	X	X													X						X	X													X						X	X													X						X	X													X						X	X													X						X	X													X						X	X													X																																																																																					
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Project Name: Philmex #15 Flowline Release				Contact Info: Email: christian.llull@tetratech.com Phone: (512) 338-1667																																																																																																																																																																																																																																																													
Project Location: (county, state) Lea County, New Mexico				Project #: 212C-MD-02374																																																																																																																																																																																																																																																													
Invoice to: Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701				Sampler Signature: John Thurston																																																																																																																																																																																																																																																													
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	SSW-2 (6')	1/27/2021	9:50	X														X		1	N																																																																																																																																																																																																																																												
	SSW-3 (10')	1/27/2021	10:00	X														X		1	N																																																																																																																																																																																																																																												
	SSW-4 (15')	1/27/2021	10:10	X														X		1	N																																																																																																																																																																																																																																												
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Relinquished by:	Date:	Time:	Received by
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ANALYTICAL REPORT

February 02, 2021

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1312059
Samples Received: 01/30/2021
Project Number: 212C-MD-02374
Description: Philmex #15 Flowline Release

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

Entire Report Reviewed By:

Chris McCord
Project Manager

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

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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FS-19 (4) L1312059-01 Solid

Collected by
John Thurston

Collected date/time
01/29/21 08:15

Received date/time
01/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614329	1	02/01/21 10:54	02/01/21 11:05	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1613952	1	01/30/21 16:17	01/31/21 22:23	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1614306	1	01/30/21 12:40	02/01/21 02:54	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613988	1	01/30/21 12:40	01/30/21 22:17	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1614648	1	01/30/21 12:40	02/01/21 16:41	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614125	1	01/31/21 16:27	02/01/21 01:38	JN	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

FS-20 (4) L1312059-02 Solid

Collected by
John Thurston

Collected date/time
01/29/21 08:23

Received date/time
01/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614330	1	02/01/21 10:44	02/01/21 10:52	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1613952	1	01/30/21 16:17	01/31/21 22:41	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1614306	1	01/30/21 12:40	02/01/21 03:16	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613988	1	01/30/21 12:40	01/30/21 22:36	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614125	1	01/31/21 16:27	02/01/21 01:52	JN	Mt. Juliet, TN

FS-21 (4) L1312059-03 Solid

Collected by
John Thurston

Collected date/time
01/29/21 08:31

Received date/time
01/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614330	1	02/01/21 10:44	02/01/21 10:52	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1613952	1	01/30/21 16:17	01/31/21 23:35	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1614306	1	01/30/21 12:40	02/01/21 03:38	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613988	1	01/30/21 12:40	01/30/21 22:55	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614125	10	01/31/21 16:27	02/01/21 03:23	JN	Mt. Juliet, TN

FS-22 (4) L1312059-04 Solid

Collected by
John Thurston

Collected date/time
01/29/21 08:39

Received date/time
01/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614330	1	02/01/21 10:44	02/01/21 10:52	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1613952	1	01/30/21 16:17	01/31/21 23:52	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1614306	1	01/30/21 12:40	02/01/21 04:00	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613988	1	01/30/21 12:40	01/30/21 23:13	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614125	1	01/31/21 16:27	02/01/21 02:05	JN	Mt. Juliet, TN

FS-23 (2) L1312059-05 Solid

Collected by
John Thurston

Collected date/time
01/29/21 08:47

Received date/time
01/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614330	1	02/01/21 10:44	02/01/21 10:52	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1613952	1	01/30/21 16:17	02/01/21 00:10	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1614306	1	01/30/21 12:40	02/01/21 04:24	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613988	1	01/30/21 12:40	01/30/21 23:32	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614125	1	01/31/21 16:27	02/01/21 02:18	JN	Mt. Juliet, TN

FS-24 (4) L1312059-06 Solid

Collected by
John Thurston

Collected date/time
01/29/21 08:55

Received date/time
01/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614330	1	02/01/21 10:44	02/01/21 10:52	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1613952	1	01/30/21 16:17	02/01/21 12:25	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1614306	1	01/30/21 12:40	02/01/21 04:46	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613988	1	01/30/21 12:40	01/30/21 23:51	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1614125	1	01/31/21 16:27	02/01/21 02:31	JN	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

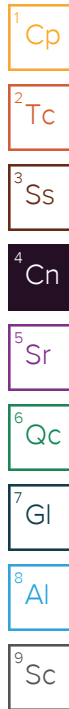
⁸Al

⁹Sc

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



Chris McCord
Project Manager



Collected date/time: 01/29/21 08:15

L1312059

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.6		1	02/01/2021 11:05	WG1614329

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	46.5		9.43	20.5	1	01/31/2021 22:23	WG1613952

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0325	J	0.0222	0.102	1	02/01/2021 02:54	WG1614306
(S) a,a,a-Trifluorotoluene(FID)	111			77.0-120		02/01/2021 02:54	WG1614306

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000490	0.00105	1	01/30/2021 22:17	WG1613988
Toluene	U		0.00136	0.00525	1	01/30/2021 22:17	WG1613988
Ethylbenzene	U		0.000773	0.00262	1	01/30/2021 22:17	WG1613988
Total Xylenes	U		0.000923	0.00682	1	02/01/2021 16:41	WG1614648
(S) Toluene-d8	107			75.0-131		01/30/2021 22:17	WG1613988
(S) Toluene-d8	105			75.0-131		02/01/2021 16:41	WG1614648
(S) 4-Bromofluorobenzene	113			67.0-138		01/30/2021 22:17	WG1613988
(S) 4-Bromofluorobenzene	99.1			67.0-138		02/01/2021 16:41	WG1614648
(S) 1,2-Dichloroethane-d4	86.3			70.0-130		01/30/2021 22:17	WG1613988
(S) 1,2-Dichloroethane-d4	93.9			70.0-130		02/01/2021 16:41	WG1614648

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	17.0		1.65	4.10	1	02/01/2021 01:38	WG1614125
C28-C40 Oil Range	14.7		0.281	4.10	1	02/01/2021 01:38	WG1614125
(S) o-Terphenyl	43.2			18.0-148		02/01/2021 01:38	WG1614125

Collected date/time: 01/29/21 08:23

L1312059

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.2		1	02/01/2021 10:52	WG1614330

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	47.1		9.46	20.6	1	01/31/2021 22:41	WG1613952

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0223	0.103	1	02/01/2021 03:16	WG1614306
(S) a,a,a-Trifluorotoluene(FID)	110			77.0-120		02/01/2021 03:16	WG1614306

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000494	0.00106	1	01/30/2021 22:36	WG1613988
Toluene	U		0.00137	0.00529	1	01/30/2021 22:36	WG1613988
Ethylbenzene	U		0.000779	0.00264	1	01/30/2021 22:36	WG1613988
Total Xylenes	U		0.000930	0.00687	1	01/30/2021 22:36	WG1613988
(S) Toluene-d8	109			75.0-131		01/30/2021 22:36	WG1613988
(S) 4-Bromofluorobenzene	110			67.0-138		01/30/2021 22:36	WG1613988
(S) 1,2-Dichloroethane-d4	84.4			70.0-130		01/30/2021 22:36	WG1613988

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	23.2		1.66	4.11	1	02/01/2021 01:52	WG1614125
C28-C40 Oil Range	19.3		0.282	4.11	1	02/01/2021 01:52	WG1614125
(S) o-Terphenyl	40.4			18.0-148		02/01/2021 01:52	WG1614125

Collected date/time: 01/29/21 08:31

L1312059

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.3		1	02/01/2021 10:52	WG1614330

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	221		9.76	21.2	1	01/31/2021 23:35	WG1613952

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0230	0.106	1	02/01/2021 03:38	WG1614306
(S) a,a,a-Trifluorotoluene(FID)	111			77.0-120		02/01/2021 03:38	WG1614306

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000524	0.00112	1	01/30/2021 22:55	WG1613988
Toluene	U		0.00146	0.00561	1	01/30/2021 22:55	WG1613988
Ethylbenzene	U		0.000827	0.00281	1	01/30/2021 22:55	WG1613988
Total Xylenes	U		0.000987	0.00729	1	01/30/2021 22:55	WG1613988
(S) Toluene-d8	107			75.0-131		01/30/2021 22:55	WG1613988
(S) 4-Bromofluorobenzene	112			67.0-138		01/30/2021 22:55	WG1613988
(S) 1,2-Dichloroethane-d4	82.3			70.0-130		01/30/2021 22:55	WG1613988

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	51.9		17.1	42.4	10	02/01/2021 03:23	WG1614125
C28-C40 Oil Range	147		2.91	42.4	10	02/01/2021 03:23	WG1614125
(S) o-Terphenyl	43.4			18.0-148		02/01/2021 03:23	WG1614125

Collected date/time: 01/29/21 08:39

L1312059

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.8		1	02/01/2021 10:52	WG1614330

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	47.4		9.61	20.9	1	01/31/2021 23:52	WG1613952

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0227	0.104	1	02/01/2021 04:00	WG1614306
(S) a,a,a-Trifluorotoluene(FID)	113			77.0-120		02/01/2021 04:00	WG1614306

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000508	0.00109	1	01/30/2021 23:13	WG1613988
Toluene	U		0.00141	0.00544	1	01/30/2021 23:13	WG1613988
Ethylbenzene	U		0.000802	0.00272	1	01/30/2021 23:13	WG1613988
Total Xylenes	U		0.000958	0.00707	1	01/30/2021 23:13	WG1613988
(S) Toluene-d8	108			75.0-131		01/30/2021 23:13	WG1613988
(S) 4-Bromofluorobenzene	114			67.0-138		01/30/2021 23:13	WG1613988
(S) 1,2-Dichloroethane-d4	85.0			70.0-130		01/30/2021 23:13	WG1613988

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	28.4		1.68	4.18	1	02/01/2021 02:05	WG1614125
C28-C40 Oil Range	23.3		0.286	4.18	1	02/01/2021 02:05	WG1614125
(S) o-Terphenyl	50.8			18.0-148		02/01/2021 02:05	WG1614125

Collected date/time: 01/29/21 08:47

L1312059

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.4		1	02/01/2021 10:52	WG1614330

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	21.6		9.44	20.5	1	02/01/2021 00:10	WG1613952

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0223	0.103	1	02/01/2021 04:24	WG1614306
(S) a,a,a-Trifluorotoluene(FID)	112			77.0-120		02/01/2021 04:24	WG1614306

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000492	0.00105	1	01/30/2021 23:32	WG1613988
Toluene	U		0.00137	0.00527	1	01/30/2021 23:32	WG1613988
Ethylbenzene	U		0.000776	0.00263	1	01/30/2021 23:32	WG1613988
Total Xylenes	U		0.000927	0.00685	1	01/30/2021 23:32	WG1613988
(S) Toluene-d8	107			75.0-131		01/30/2021 23:32	WG1613988
(S) 4-Bromofluorobenzene	114			67.0-138		01/30/2021 23:32	WG1613988
(S) 1,2-Dichloroethane-d4	84.9			70.0-130		01/30/2021 23:32	WG1613988

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	12.8		1.65	4.11	1	02/01/2021 02:18	WG1614125
C28-C40 Oil Range	10.9		0.281	4.11	1	02/01/2021 02:18	WG1614125
(S) o-Terphenyl	45.7			18.0-148		02/01/2021 02:18	WG1614125

Collected date/time: 01/29/21 08:55

L1312059

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.8		1	02/01/2021 10:52	WG1614330

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	998	J3	9.61	20.9	1	02/01/2021 12:25	WG1613952

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0227	0.104	1	02/01/2021 04:46	WG1614306
(S) a,a,a-Trifluorotoluene(FID)	113			77.0-120		02/01/2021 04:46	WG1614306

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000508	0.00109	1	01/30/2021 23:51	WG1613988
Toluene	U		0.00142	0.00544	1	01/30/2021 23:51	WG1613988
Ethylbenzene	U		0.000802	0.00272	1	01/30/2021 23:51	WG1613988
Total Xylenes	U		0.000958	0.00708	1	01/30/2021 23:51	WG1613988
(S) Toluene-d8	109			75.0-131		01/30/2021 23:51	WG1613988
(S) 4-Bromofluorobenzene	112			67.0-138		01/30/2021 23:51	WG1613988
(S) 1,2-Dichloroethane-d4	83.7			70.0-130		01/30/2021 23:51	WG1613988

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	3.70	J	1.68	4.18	1	02/01/2021 02:31	WG1614125
C28-C40 Oil Range	7.49		0.286	4.18	1	02/01/2021 02:31	WG1614125
(S) o-Terphenyl	44.9			18.0-148		02/01/2021 02:31	WG1614125

Total Solids by Method 2540 G-2011 [L1312059-01](#)

Method Blank (MB)

(MB) R3618442-1 02/01/21 11:05

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

L1310369-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1310369-08 02/01/21 11:05 • (DUP) R3618442-3 02/01/21 11:05

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	78.3	82.5	1	5.21		10

Laboratory Control Sample (LCS)

(LCS) R3618442-2 02/01/21 11:05

	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

Total Solids by Method 2540 G-2011 [L1312059-02,03,04,05,06](#)

Method Blank (MB)

(MB) R3618440-1 02/01/21 10:52

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00100			

L1310814-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1310814-02 02/01/21 10:52 • (DUP) R3618440-3 02/01/21 10:52

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	82.4	81.5	1	1.12		10

Laboratory Control Sample (LCS)

(LCS) R3618440-2 02/01/21 10:52

	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

Wet Chemistry by Method 300.0 L1312059-01,02,03,04,05,06

Method Blank (MB)

(MB) R3618192-1 01/31/21 15:26

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

L1310426-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1310426-01 01/31/21 17:01 • (DUP) R3618192-3 01/31/21 17:18

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	U	U	1	0.000		20

L1312059-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1312059-06 02/01/21 12:25 • (DUP) R3618192-6 02/01/21 12:43

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	998	727	1	31.4	J3	20

Laboratory Control Sample (LCS)

(LCS) R3618192-2 01/31/21 15:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	192	95.9	90.0-110	

L1310426-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1310426-06 01/31/21 18:48 • (MS) R3618192-4 01/31/21 19:06 • (MSD) R3618192-5 01/31/21 20:00

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	500	U	456	461	91.2	92.1	1	80.0-120			1.06	20

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

L1312059-01,02,03,04,05,06

Method Blank (MB)

(MB) R3618217-3 01/30/21 19:22

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	108			75.0-131
(S) 4-Bromofluorobenzene	114			67.0-138
(S) 1,2-Dichloroethane-d4	84.2			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) R3618217-1 01/30/21 18:07 • (LCSD) R3618217-2 01/30/21 18:26

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	0.114	0.120	91.2	96.0	70.0-123			5.13	20
Ethylbenzene	0.125	0.113	0.117	90.4	93.6	74.0-126			3.48	20
Toluene	0.125	0.113	0.116	90.4	92.8	75.0-121			2.62	20
Xylenes, Total	0.375	0.350	0.363	93.3	96.8	72.0-127			3.65	20
(S) Toluene-d8				107	105	75.0-131				
(S) 4-Bromofluorobenzene				114	113	67.0-138				
(S) 1,2-Dichloroethane-d4				86.4	81.6	70.0-130				

L1312059-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1312059-05 01/30/21 23:32 • (MS) R3618217-4 01/31/21 04:21 • (MSD) R3618217-5 01/31/21 04:39

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.132	U	0.152	0.161	115	122	1	10.0-149			6.06	37
Ethylbenzene	0.132	U	0.166	0.176	126	134	1	10.0-160			5.54	38
Toluene	0.132	U	0.155	0.167	118	127	1	10.0-156			7.84	38
Xylenes, Total	0.395	U	0.508	0.521	129	132	1	10.0-160			2.66	38
(S) Toluene-d8					108	110		75.0-131				
(S) 4-Bromofluorobenzene					118	111		67.0-138				
(S) 1,2-Dichloroethane-d4					88.1	86.8		70.0-130				

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

[L1312059-01](#)

Method Blank (MB)

(MB) R3618395-2 02/01/21 15:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	108			75.0-131
(S) 4-Bromofluorobenzene	99.3			67.0-138
(S) 1,2-Dichloroethane-d4	86.1			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3618395-1 02/01/21 14:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Xylenes, Total	0.375	0.312	83.2	72.0-127	
(S) Toluene-d8			106	75.0-131	
(S) 4-Bromofluorobenzene			101	67.0-138	
(S) 1,2-Dichloroethane-d4			92.6	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 [L1312059-01,02,03,04,05,06](#)

Method Blank (MB)

(MB) R3617989-1 01/31/21 22:48

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	62.9			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3617989-2 01/31/21 23:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	43.8	87.6	50.0-150	
(S) o-Terphenyl			61.1	18.0-148	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

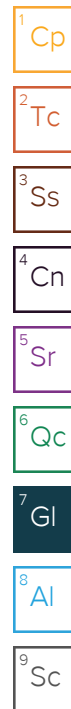
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

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



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* 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.

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

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

Alabama	40160
ANSI National Accreditation Board	L2239

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

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

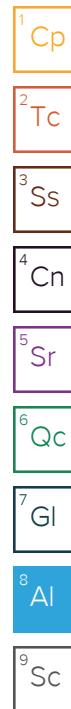
Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1
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Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18
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¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable



Tetra Tech, Inc.

Tel

(432) 682-4559

Fax (432) 682-

U1312059

ANALYSIS REQUEST
(Circle or Specify Method No.)

Site Manager: Christian Lull

Contact Info: Email: christian.llull@tetrattech.com
Phone: (512) 338-1667

Project #: 212C-MD-02374

Receiving Laboratory: Pace Analytical

Sampler Signature: John Thurston

Comments: COPTETRA Acctnum

[illegible]

Relinquished by: Le T. B. Date: 1/29/2021 Time: 13:00

Received by: Karley Miller Date: 1-30-21 Time: 9:00

LAB USE ONLY

Sample Temperature

.4-.1=.3
A2 0T

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 #: _____

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	CURTETNA	L1312059	
Cooler Received/Opened On:	1 / 30 / 21	Temperature:	0.4
Received By:	Kailey Miller		
Signature:	Kailey Miller		
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

Photographic Documentation



TETRA TECH, INC. PROJECT NO. 212C-MD-02239	DESCRIPTION	View north of steel flowline in excavation in formerly impacted surface area. Site Coordinates: 32.807240°, -103.653390°	1
	SITE NAME	Philmex #15 Flowline Release	7/15/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02239	DESCRIPTION	View east over excavation in formerly impacted surface area. Steel flowline visible on the left.	2
	SITE NAME	Philmex #15 Flowline Release	7/15/2020



TETRA TECH, INC. PROJECT NO. 212C-MD-02239	DESCRIPTION	View south over excavation in formerly impacted surface area. Access ramp for drilling rig visible on left.	3
	SITE NAME	Philmex #15 Flowline Release	7/15/2020



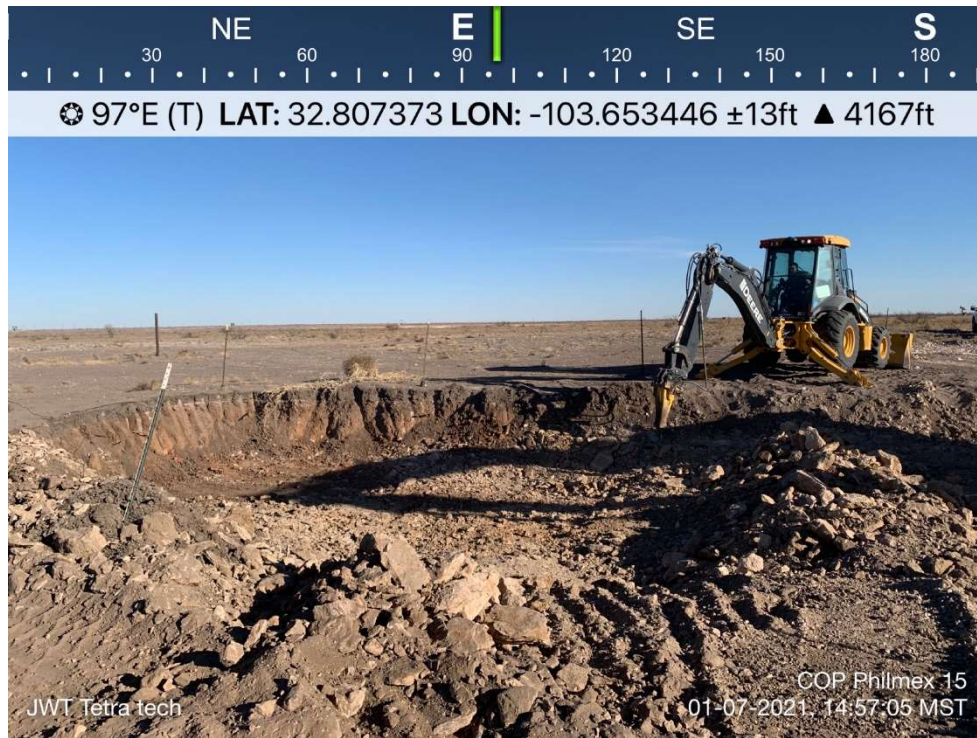
TETRA TECH, INC. PROJECT NO. 212C-MD-02239	DESCRIPTION	View northeast of steel flowline in excavation in formerly impacted surface area.	4
	SITE NAME	Philmex #15 Flowline Release	7/15/2020



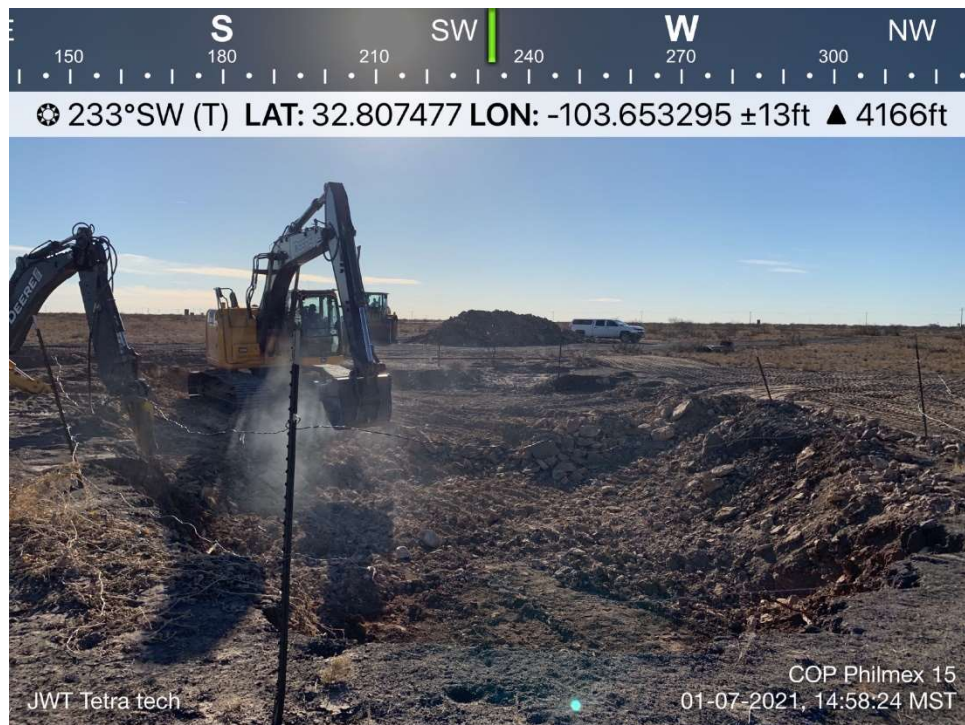
TETRA TECH, INC. PROJECT NO. 212C-MD-02374	DESCRIPTION	View northeast. General view of excavation progress.	5
	SITE NAME	Philmex #15 Flowline Release	1/6/2021



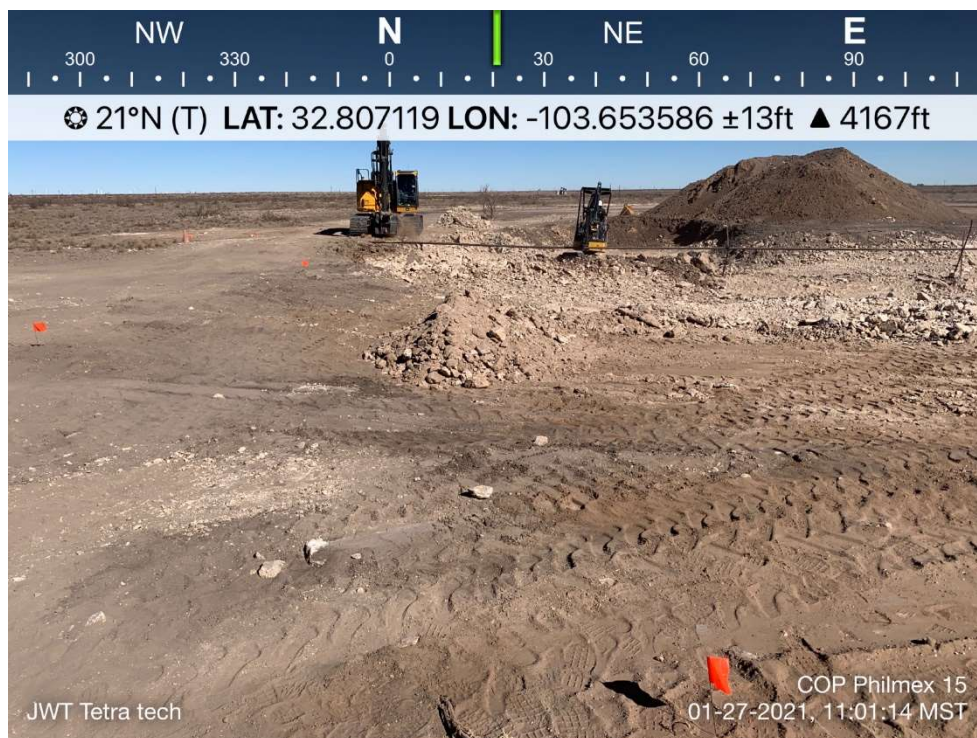
TETRA TECH, INC. PROJECT NO. 212C-MD-02374	DESCRIPTION	View east. Northern portion of excavation area	6
	SITE NAME	Philmex #15 Flowline Release	1/6/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02374	DESCRIPTION	View east. Northern portion of the excavated area.	7
	SITE NAME	Philmex #15 Flowline Release	1/7/2021



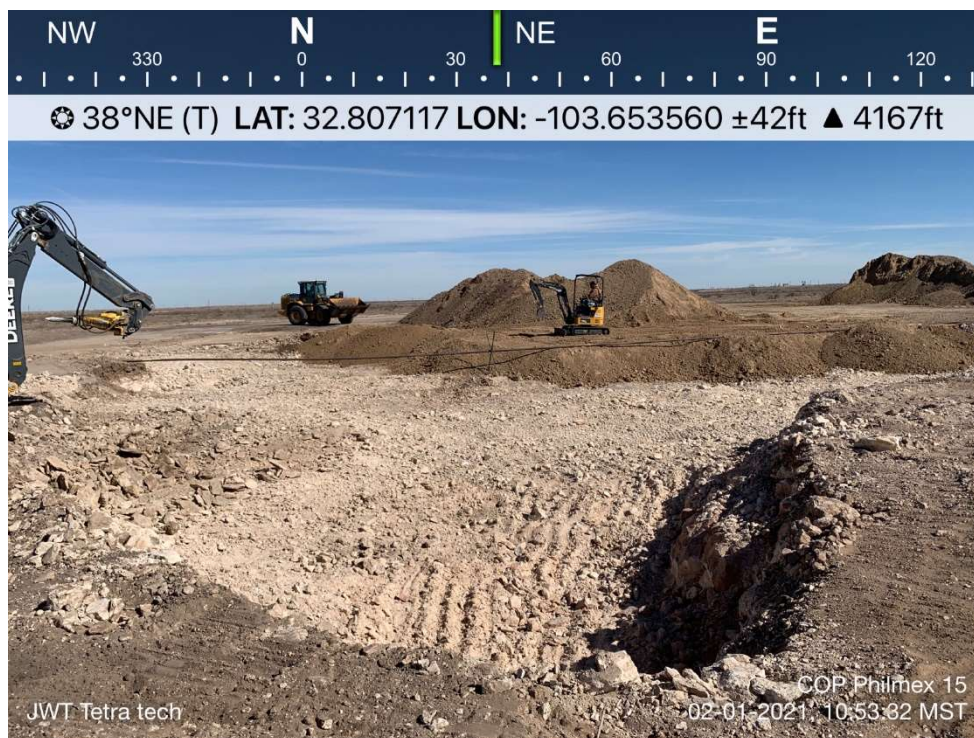
TETRA TECH, INC. PROJECT NO. 212C-MD-02374	DESCRIPTION	View southwest. General view of excavation.	8
	SITE NAME	Philmex #15 Flowline Release	1/7/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02374	DESCRIPTION	View north. Backfilling activities along western edge of remediation.	9
	SITE NAME	Philmex #15 Flowline Release	1/27/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02374	DESCRIPTION	View east. Backfilling activities in western portion of remediation	10
	SITE NAME	Philmex #15 Flowline Release	2/1/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02374	DESCRIPTION	View northeast. Backfilling activities in the southern portion of remediation.	11
	SITE NAME	Philmex #15 Flowline Release	2/1/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02374	DESCRIPTION	View northwest. Backfilling activities in southern portion of remediation.	12
	SITE NAME	Philmex #15 Flowline Release	2/1/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02374	DESCRIPTION	Seeding activities in the backfilled areas.	13
	SITE NAME	Philmex #15 Flowline Release	5/6/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02374	DESCRIPTION	. View of remediated area post-seeding activities.	14
	SITE NAME	Philmex #15 Flowline Release	2/1/2021

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 29482

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 29482
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	8/4/2021