



February 2, 2022

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

**Re: REVISED Deferral Request
ConocoPhillips Company
EVGSAU Central Tank Battery
Unit Letter A, Section 33, Township 17 South, Range 35 East
Lea County, New Mexico
1RP-4908
Incident ID nOY1800329179**

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips Company (COP) to assess a release that occurred at the East Vacuum Grayburg San Andres Unit (EVGSAU) Central Tank Battery (CTB) located within Unit Letter A, Section 33, Township 17 South, Range 35 East, in Lea County, New Mexico (Site). The site coordinates are 32.796665°, -103.458354°. The Site location is shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report, the release occurred on January 1, 2018 at the EVGSAU CTB. The cause of the release was a failure of a bypass line which released a total of 36.47 barrels (bbl) of oil and produced water to the ground surface. The release was contained within the earthen berm (firewall) of the northern tank battery.

Immediate action was to de-pressurize the bypass line and install a temporary clamp. A vacuum truck was dispatched recovering 15 bbls of oil and 20 bbls of produced water. The release area associated with 1RP-4908 was encompassed by the subsequent release associated with 1RP-5777. The release extent is shown on Figure 3. The C-141 Forms are included in Appendix A.

SITE CHARACTERIZATION

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

The Site is within a New Mexico oil and gas production area. According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are no water wells within ½ mile (800 meters) of the Site with data from within the last 25 years. According to the United States Geological Survey (USGS) National Water Information System, there is one water well listed within ½ mile (800 meters) of the Site. The most recent depth to groundwater measured in the well is 62.89 ft below ground surface (bgs) and the well was last measured in February of 1996. The site characterization data is included in Appendix B

Tetra Tech

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REGULATORY FRAMEWORK

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

CONSTITUENT	RRAL
Chloride	10,000 mg/kg
TPH (GRO+DRO+MRO)	2,500 mg/kg
GRO+DRO	1,000 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

As this reported contamination is in areas immediately under or around production tanks and pipelines, remediation would cause a major facility deconstruction. Per 19.15.29.12(2) NMAC, a deferral for the remediation, restoration, and reclamation for this release is requested until the equipment is removed during other operations, or when the facility is retrofitted or abandoned, whichever comes first.

INITIAL SITE ASSESSMENT

The footprint of incident nOY1800329179 (1RP-4908) was largely contained within the confines of the northern tank battery area. An initial scrape was performed by COP post-release to remove heavily impacted material; however, full remediation of the footprint was not feasible. As mentioned, the release area associated with 1RP-4908 was encompassed by the subsequent release associated with 1RP-5777.

On October 12, 2019, a test pit (SP-1) was installed to a depth of 9 feet bgs in the southern overflow pit release area by ConocoPhillips to assess and define the extent of impacted soil (Figure 3) resulting from the newer release at the facility, 1RP-5777/NRM1930848978. Both the 1RP-4908 and the 1RP-5777 release extents are indicated in Figure 3. The uppermost samples collected were analyzed for TPH by EPA method 8015 modified, BTEX by EPA Method 8021 and chlorides by EPA method 4500Cl-B at Cardinal Laboratories in Hobbs, New Mexico. The deeper samples were analyzed for chlorides only. The results of the October 2019 sampling event are summarized in Table 1. Copies of analytical reports and chain-of-custody documentation are included in Appendix C.

The analytical results associated with the initial site assessment exceeded the specified RRAL for total TPH (GRO + DRO + ORO) and BTEX at the surface sample location, however, the vertical extent of contamination quickly decreased with depth. The analytical results associated with the 2-3 sample interval were below the specified RRAL for TPH, chlorides and BTEX. Deeper sample intervals indicated that chlorides were below RRALs down to total depth of 9 feet bgs.

ADDITIONAL SITE DELINEATION

Based on review of analytical results from the previous sampling event, vertical delineation of contamination in the southern overflow pit area was attained as part of the initial assessment at the Site. To define the horizontal extents of the releases, if any, and to further delineate release impact, Tetra Tech personnel were onsite to conduct a subsurface investigation in November 2019. On November 18, 19, and 21, 2019, a total of eight (8) soil borings (BH-1 through BH-8) were completed with an air rotary drilling rig. Additionally, one hand auger hole (AH-1) was installed in the release area. Boring logs are included in Appendix D. The EVGSAU CTB has numerous underground utilities and aboveground lines, in addition to piping and production equipment inside and outside the battery. The soil boring locations were chosen to avoid safety and access issues due to the subsurface infrastructure. Total depths of the borings ranged from 1 to 20 feet bgs.

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A total of 45 soil samples were collected from the nine boring locations from in and around the release area (Figure 3). Selected samples were field screened and submitted to an analytical laboratory to be analyzed for TPH by EPA method 8015 modified, BTEX by EPA Method 8260B and chlorides by EPA method 300.0 at Pace Analytical National Center for Testing and Innovation in Mt. Juliet, Tennessee. Copies of analytical reports and chain-of-custody documentation are included in Appendix C.

BH-4 and AH-1 were installed within the release footprint to clarify the vertical extents in the northern battery. AH-1 (0-1') was collected with a hand auger within the northern tank battery release area. Deeper samples could not be collected as hand auger refusal was encountered due to the shallow caliche cap rock in the subsurface. BH-4 was completed with the drilling rig to a depth of 10 feet bgs. Borings BH-1 through BH-3 and BH-5 through BH-8 were completed to achieve horizontal delineation per 19.15.29.11(A)(5)(b) NMAC.

The analytical results associated with the additional site assessment and delineation were below the RRALs for BTEX at eight of nine locations. AH-1 (0-1') exceeded the RRAL for total TPH (GRO + DRO + ORO) and BTEX. Results associated with BH-1 (2-3'), collected to the north of the northern tank battery, was slightly over the RRAL for chloride. Given that BH-1 is upgradient of the release location and the overlying sample (0-1') had a chloride level below the RRAL, the exceedance in BH-1 (2-3') is likely unrelated to the release events addressed in this report. The analytical results associated with all other samples collected around the release area were below the RRALs for total TPH (GRO + DRO + ORO), BTEX and/or chloride in all samples. The boring locations are shown on Figure 3. The analytical results of the November 2019 sampling event are summarized in Table 2.

Photographic documentation of the release area post-initial response is included as Appendix E.

NMOCD CORRESPONDENCE

A Release Characterization and Deferral Request was prepared by Tetra Tech on behalf of COP and submitted to the NMOCD on January 15, 2020 with fee application payment PO Number UCMQL-200115-C-1410. The Work Plan described the two combined incidents, the results of the release assessment and provided characterization of the impact at the site.

On February 18, 2021, COP Environmental Coordinator Charles Beauvais received official correspondence from the NMOCD indicating that the "1RP-4908/nOY1800329215 – Incident is CLOSED in OCD data base". The email also indicated that "1RP-5777/nRM1930848978 – Incident is DEFERRED as per request and as per indicated rationale". These two incidents are the two releases at the EVGSAU CTB.

However, in later correspondence via the portal, the work plan was rejected by Bradford Billings of the NMOCD on Thursday, June 17, 2020. The reason for rejection included in the email was:

"As with other locations, each individual incident number must be associated with its own report. A report can be used more than once, but it must be connected to an individual incident identification. Please resubmit a report for each distinct incident number for review.

Tetra Tech reached out to Bradford Billings to clarify the conflicting information in the portal. Mr. Billings responded via email on July 15, 2021 that:

Nonetheless, for nOY1800329215, as this is the older release and is geographically covered by the newer one, if you were to resubmit the nOY incident under separate report and with only the nOY incident on the redone C-141 form I can close it and eliminate confusion. It is confusing as on data base it does indicate as being closed but does have a rejection notice in the file. Best guess was the "rejection notice" was supposed to be in a note section for informational use. But let me know when you have resubmitted to portal alone and I will immediately eliminate the rejection. The granted deferral for nRM1930848978 is still in place.

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In order to duly address the NMOCD reasoning for rejection, Tetra Tech revised the deferral request from two combined releases to individual reports. Associated NMOCD Correspondence is found in Appendix F.

CONCLUSION

After the assessment and initial response activities conducted at the Site, the contamination remaining in place is located in areas immediately under and around production equipment and does not cause an imminent risk to human health, the environment, or groundwater. The release was delineated horizontally and vertically, as detailed above.

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

In accordance with the NMOCD-stated reasoning for rejection of the January 2020 Deferral Request, ConocoPhillips requests deferral for the impacted area associated with the distinct incident number 1RP-4908 (nOY1800329179) release until site abandonment. The completed C-141 forms are enclosed in Appendix A. If you have any questions or comments concerning the assessment activities for this site, please call me at (512) 338-2861.

Sincerely,
Tetra Tech, Inc.



Christian M. Llull, P.G.
Program Manager

cc:
Ms. Sam Widmer, RMR – ConocoPhillips
Mr. Bradford Billings, NMOCD

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ConocoPhillips

List of Attachments

Figures:

- Figure 1 – Site Location Map
- Figure 2 – Site Location/Topographic Map
- Figure 3 – Release Assessment Map

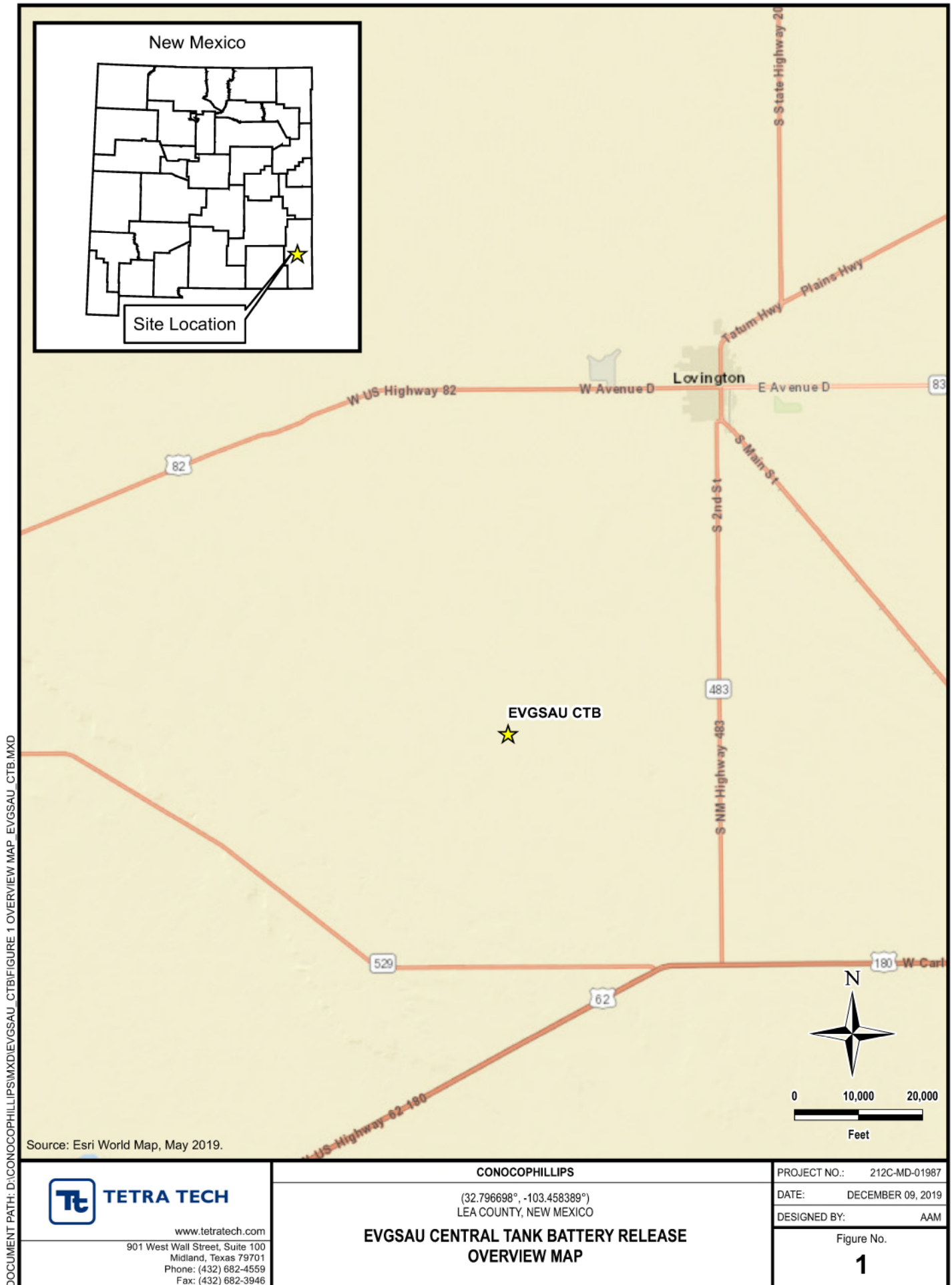
Tables:

- Table 1 – Summary of Analytical Results – Initial Soil Assessment
- Table 2 – Summary of Analytical Results – Soil Assessment

Appendices:

- Appendix A – C-141 Form
- Appendix B – Site Characterization Data
- Appendix C – Laboratory Analytical Reports
- Appendix D – Boring Logs
- Appendix E – Photographic Documentation
- Appendix F – NMOCD Correspondence

FIGURES





Source: Esri World Map, May 2019.

**TETRA TECH**

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CONOCOPHILLIPS

(32.796698°, -103.696659°)
LEA COUNTY, NEW MEXICO

EVGSAU CENTRAL TANK BATTERY RELEASE TOPOGRAPHIC MAP

PROJECT NO.: 212C-MD-01987

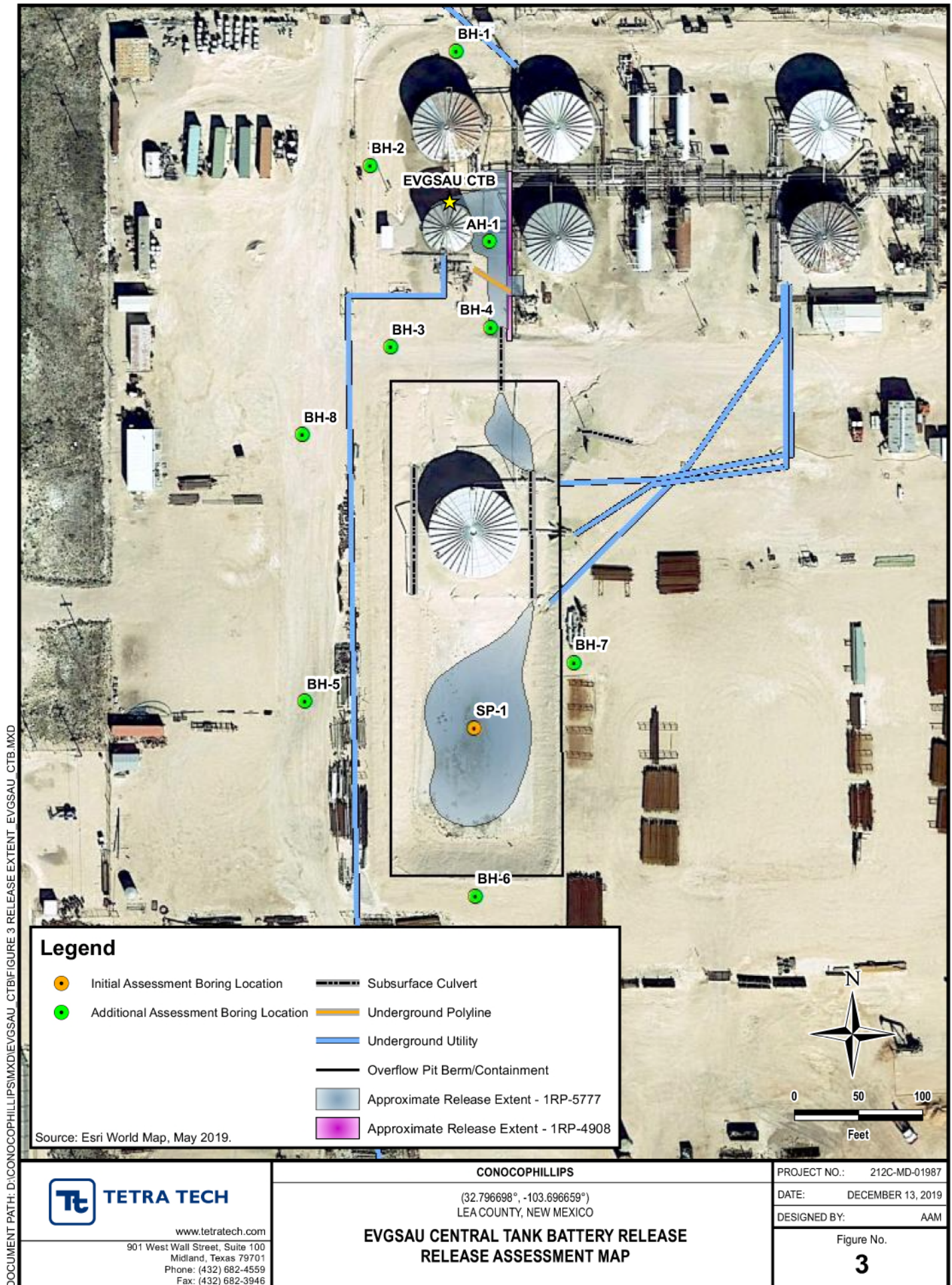
DATE: DECEMBER 09, 2019

DESIGNED BY: AAM

Figure No.

2

DOCUMENT PATH: D:\CONOCOPHILLIPS\MD\EVGSAU CTB\FIGURE 2 TOPO EVGSAU CTB.MXD



TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESSMENT EVGSAU
CTB RELEASE
1RP-4908
LEA COUNTY, NM

Sample ID	Sample Date	Sample Interval	Chloride ¹		BTEX ²								TPH ³							
					Benzene		Toluene		Ethylbenzene		Xylene		Total BTEX	GRO (C ₆ - C ₁₀) ⁴		DRO (>C ₁₀ - C ₂₈)		ORO (>C ₂₈ - C ₃₆)		TPH (C ₆ - C ₃₆)
		ft bgs	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
SP-1	10/22/19	SURFACE	96		1.48		19.2		18		66.7		105	3480		68200		14500		86180
		2-3	160		< 0.050		0.099		2.15		3.05		5.3	90.9		497		80.5		668.4
		4-5	96		NA		NA		NA		NA		--	NA		NA		NA		--
		6-7	80		NA		NA		NA		NA		--	NA		NA		NA		--
		8-9	112		NA		NA		NA		NA		--	NA		NA		NA		--

NOTES:

ft	Feet		<i>Bold and italicized values indicate exceedance of RRALS.</i>
bgs	Below ground surface	--	No value to report
ppm	Parts per million	1	Method 4500Cl-B
mg/kg	Milligrams per kilogram	2	Method 8021B
NA	Not analyzed	3	Method 8015M
TPH	Total Petroleum Hydrocarbons		
GRO	Gasoline range organics		
DRO	Diesel range organics		
ORO	Oil range organics		

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT
EVGSAU CTB RELEASE
1RP-4908
LEA COUNTY, NM

Sample ID	Sample Date	Sample Interval	Field Screening Results		Chloride ¹		BTEX ²								TPH ³							
							Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX	GRO (C ₃ - C ₁₀) ⁴		DRO (C ₁₀ - C ₂₈)		ORO (C ₂₈ - C ₄₀)		TPH (C ₃ - C ₄₀)
		ft bgs	Chloride	PID			mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
AH-1	11/19/19	0-1	330	339	479		23.7		196		189		255		663.7	5830		15400		5940		27170
BH -1	11/18/19	0-1	-	58.5	477		< 0.00105		< 0.00525		< 0.00263		< 0.00683		-	0.0355	B J	9.48		9.07		18.5855
		2-3	1180	6.7	734		< 0.00107		< 0.00535		< 0.00267		< 0.00695		-	0.0420	B J	3.91	J	8.52		12.4720
		4-5	-	8.8	220		< 0.00107		< 0.00536		< 0.00268		< 0.00696		-	0.0283	B J	5.11		8.59		13.7283
		6-7	-	11.2	78.5		0.000445	J	< 0.00524		< 0.00262		< 0.00681		0.000445	0.0429	B J	6.35		13.3		19.6929
		9-10	105	11.7	28.3		0.000641	J	< 0.00512		< 0.00256		< 0.00666		0.000641	0.0282	B J	< 4.10		1.13	J	1.15820
BH -2	11/18/19	0-1	-	10.6	392		< 0.00106		< 0.00529		< 0.00265		< 0.00688		-	0.0253	B J	< 4.23		2.79	J	2.8153
		2-3	323	12.2	125		< 0.00105		< 0.00523		< 0.00262		< 0.00680		-	< 0.105		2.08	J	6.53		8.61
		4-5	-	6.9	153		< 0.00107		< 0.00537		< 0.00268		< 0.00698	J4	-	0.0291	B J	1.96	J	11.7		13.6891
		6-7	-	12.9	22.4	B	< 0.00109		< 0.00543		< 0.00272		< 0.00706	J4	-	0.0284	B J	< 4.35		4.49		4.5184
		9-10	100	4.7	25.1	B	< 0.00112		< 0.00559		< 0.00279		< 0.00727	J4	-	0.0389	B J	< 4.47		0.873	J	0.9119
BH-3	11/18/19	0-1	-	8.9	102		< 0.00105		< 0.00523		< 0.00261		< 0.00680	J4	-	0.0288	B J	< 4.18		1.89	J	1.9188
		2-3	73.3	10.6	53.8	B	< 0.00106		< 0.00532		< 0.00266		< 0.00692	J4	-	0.0262	B J	< 4.26		4.10	J	4.1262
		4-5	-	15.5	9.46	B J	< 0.00104		< 0.00521		< 0.00261		< 0.00677	J4	-	0.0253	B J	< 4.17		1.02	J	1.0453
		6-7	-	13.6	4.30	B J	< 0.00106		< 0.00531		< 0.00265		< 0.00690	J4	-	0.0345	B J	< 4.25		1.18	J	1.2145
		9-10	46.6	11.4	3.34	B J	< 0.00104		< 0.00519		< 0.00260		< 0.00675	J4	-	0.0260	B J	< 4.15		< 4.15		0.0260
BH-4	11/21/19	0-1	184	1.9	34.3	B	< 0.00107		< 0.00537		< 0.00269		< 0.00699		-	0.0693	B J	5.75		3.17	J	8.9893
		2-3	-	3.2	30.0	B	< 0.00109		< 0.00546		< 0.00273		< 0.00710		-	0.0667	B J	< 4.37		0.363	J	0.4297
		4-5	-	3.2	116		< 0.00112		< 0.00559		< 0.00279		< 0.00726		-	0.0663	B J	< 4.47		< 4.47		0.0663
		6-7	301	4.4	22.3	B	< 0.00106		< 0.00530		< 0.00265		< 0.00689		-	0.0657	B J	1.72	J	1.11	J	2.8957
		9-10	351	5.0	109		< 0.00109		< 0.00545		< 0.00273		< 0.00709		-	0.0625	B J	< 4.36		< 4.36		0.0625
BH-5	11/21/19	0-1	-	3.0	24.0	B	< 0.00107		< 0.00536		< 0.00268		< 0.00697		-	0.0543	B J	< 4.29		1.09	J	1.1443
		2-3	-	3.4	61.9		< 0.00107		< 0.00536		< 0.00268		< 0.00697		-	0.0582	B J	< 4.29		1.71	J	1.7682
		4-5	-	3.9	45.4		< 0.00104		0.00156	J	< 0.00259		< 0.00674		0.00156	0.0552	B J	< 4.15		< 4.15		0.0552
		6-7	-	4.0	HOLD		HOLD		HOLD		HOLD		HOLD		-	HOLD		HOLD		HOLD		-
		9-10	-	4.0	46.8		< 0.00108		< 0.00539		< 0.00270		< 0.00701		-	0.0592	B J	< 4.31		< 4.31		0.0592
		11-12	-	3.9	28.3	B	< 0.00103		< 0.00517		< 0.00258		< 0.00672		-	0.0313	B J	< 4.13		< 4.13		0.0313
		14-15	91	0.8	16.6	B	< 0.00107		< 0.00537		< 0.00269		< 0.00699		-	0.0389	B J	< 4.30		< 4.30		0.0389
BH-6	11/21/19	0-1	-	0.8	422		< 0.00105		0.00135	J	< 0.00263		< 0.00684		0.00135	0.0450	B J	29.8		50.4		80.2450
		2-3	-	0.4	138		< 0.00105		< 0.00526		< 0.00263		< 0.00684		-	0.0359	B J	9.07		15.8		24.9059
		4-5	-	1.0	65.0		< 0.00107		0.00143	J	< 0.00268		< 0.00697		0.00143	< 0.107		< 4.29		< 4.29		-
		6-7	-	2.5	HOLD		HOLD		HOLD		HOLD		HOLD			HOLD		HOLD		HOLD		-
		9-10	53.7	2.9	18.2	B	< 0.00101		0.00142	J	< 0.00253		< 0.00659		0.00142	< 0.101		< 4.05		< 4.05		-
		13-14	-	2.8	15.0	B	< 0.00101		< 0.00505		< 0.00253		< 0.00657		-	< 0.101		< 4.04		< 4.04		-
		16-17	-	3.1	22.3	B	< 0.00106		< 0.00528		< 0.00264		< 0.00687		-	0.0361	B J	< 4.23		< 4.23		0.0361
		19-20	96.1	2.6	15.5	B	< 0.00105		< 0.00523		< 0.00261		< 0.00679		-	0.0342	B J	1.70	J	< 4.18		1.7342

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT
EVGSAU CTB RELEASE
1RP-4908
LEA COUNTY, NM

Sample ID	Sample Date	Sample Interval	Field Screening Results		Chloride ¹		BTEX ²								TPH ³							
							Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX	GRO (C ₃ - C ₁₀) ⁴		DRO (C ₁₀ - C ₂₈)		ORO (C ₂₈ - C ₄₀)		TPH (C ₃ - C ₄₀)
		ft bgs	Chloride	PID			mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg
BH-7	11/21/19	0-1	-	2.7	351		< 0.00107		< 0.00534		< 0.00267		< 0.00694		-	0.0309	B J	2.88	J	1.12	J	4.0309
		2-3	-	3.6	286		< 0.00106		0.00159	J	< 0.00264		< 0.00688		0.00159	0.0300	B J	1.97	J	1.21	J	3.2100
		4-5	-	3.7	45.3		< 0.00105		< 0.00524		< 0.00262		< 0.00681		-	0.0271	B J	< 4.19		< 4.19		0.0271
		6-7	-	4.1	HOLD		HOLD		HOLD		HOLD		HOLD			HOLD		HOLD		HOLD		
		9-10	-	3.4	268		< 0.00109		< 0.00545		< 0.00272		< 0.00708		-	0.0327	B J	< 4.36		< 4.36		0.0327
		11-12	128	0.6	242		< 0.00106		< 0.00530		< 0.00265		< 0.00689		-	0.0303	B J	< 4.24		< 4.24		0.0303
		14-15	512	1.4	421		< 0.00109		< 0.00543		< 0.00271		< 0.00706		-	0.0279	B J	< 4.34		< 4.34		0.0279
BH-8	11/19/19	0-1	154	0.1	18.6	B	< 0.00105		< 0.00527		< 0.00263		< 0.00685		-	0.0348	B J	< 4.22		2.99	J	3.0248
		2-3	250	0.2	40.2	B	< 0.00109		< 0.00546		< 0.00273		< 0.00710		-	0.0384	B J	3.21	J	8.93		12.1784

NOTES:

ft Feet

bgs Below ground surface

ppm Parts per million

mg/kg Milligrams per kilogram

NM Not measured

TPH Total Petroleum Hydrocarbons

GRO Gasoline range organics

DRO Diesel range organics

ORO Oil range organics

Bold and italicized values indicate exceedance of RRALS.

-- No value to report

1 Method 300.0

2 Method 8260B

3 Method 8015

4 Method 8015D/GRO

B The same analyte is found in the associated blank.

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

J4 The associated batch QC was outside the established quality control range for accuracy.

APPENDIX A C-141 Forms

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

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: ConocoPhillips	Contact: Cullen Rosine
Address: 29 Vacuum Complex Lane	Telephone No. 575-391-3133
Facility Name: EVGSAU Central Tank Battery	Facility Type: CTB
Surface Owner: State	Mineral Owner: State API No. N/A

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	33	17S	35E					Lea

Latitude 32°47'48.41"N Longitude 103°27'29.79"W

NATURE OF RELEASE

Type of Release: Oil and Produced Water	Volume of Release: 36.47 BBL	Volume Recovered: 35 BBL
Source of Release: Pipe failure	Date and Hour of Occurrence 1-1-2018 10:00AM	Date and Hour of Discovery 1-1-2018 6:00 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Olivia Yu	
By Whom? Cullen Rosine	Date and Hour: 1-2-2018 0915 hours via phone	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.* N/A		

RECEIVED

By Olivia Yu at 7:45 am, Jan 03, 2018

Describe Cause of Problem and Remedial Action Taken. During normal operations, an inlet valve closed due to a high-level reading, causing fluid to be sent down a bypass line. The bypass line failed resulting in a 36.47 BBL spill. The line was depressurized and a temporary clamp installed. 15 BO and 20 BPW were recovered. Spill site will be remediated per NMOCD guidelines.

Describe Area Affected and Cleanup Action Taken. *
Area 1 – 132' x 12 x 1"

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

Signature: <i>Cullen Rosine</i>		OIL CONSERVATION DIVISION	
Printed Name: Cullen Rosine		Approved by Environmental Specialist: <i>oy</i>	
Title: HSE Specialist	Approval Date: 1/3/2018	Expiration Date:	
E-mail Address: Cullen.J.Rosine@conocophillips.com	Conditions of Approval: see attached directive		Attached ☒
Date: 1/2/2018	Phone: 575-391-3133		

* Attach Additional Sheets If Necessary

1RP-4908

nOY1800329215

fOY1800328995

pOY1800329179

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 1/2/2018 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 1RP-4908 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 1 office in Hobbs on or before 2/3/2018. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold

OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

Incident ID	nOY1800329215
District RP	1RP-4908
Facility ID	fOY1800328995
Application ID	pOY1800239179

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?	62 (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

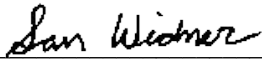
If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, 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	nOY1800329215
District RP	1RP-4908
Facility ID	fOY1800328995
Application ID	pOY1800239179

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Printed Name: Samuel Widmer Title: RM&R Program Manager
Signature:  Date: 01/27/2022
email: sam.widmer@cop.com Telephone: 281-206-5298

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: _____ Title: _____

Signature: San Wiedner Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral ApprovedSignature: Ashley Maxwell Date: _____

APPENDIX B

Site Characterization Data

Released to Imaging: 3/17/2023 9:25:23 AM

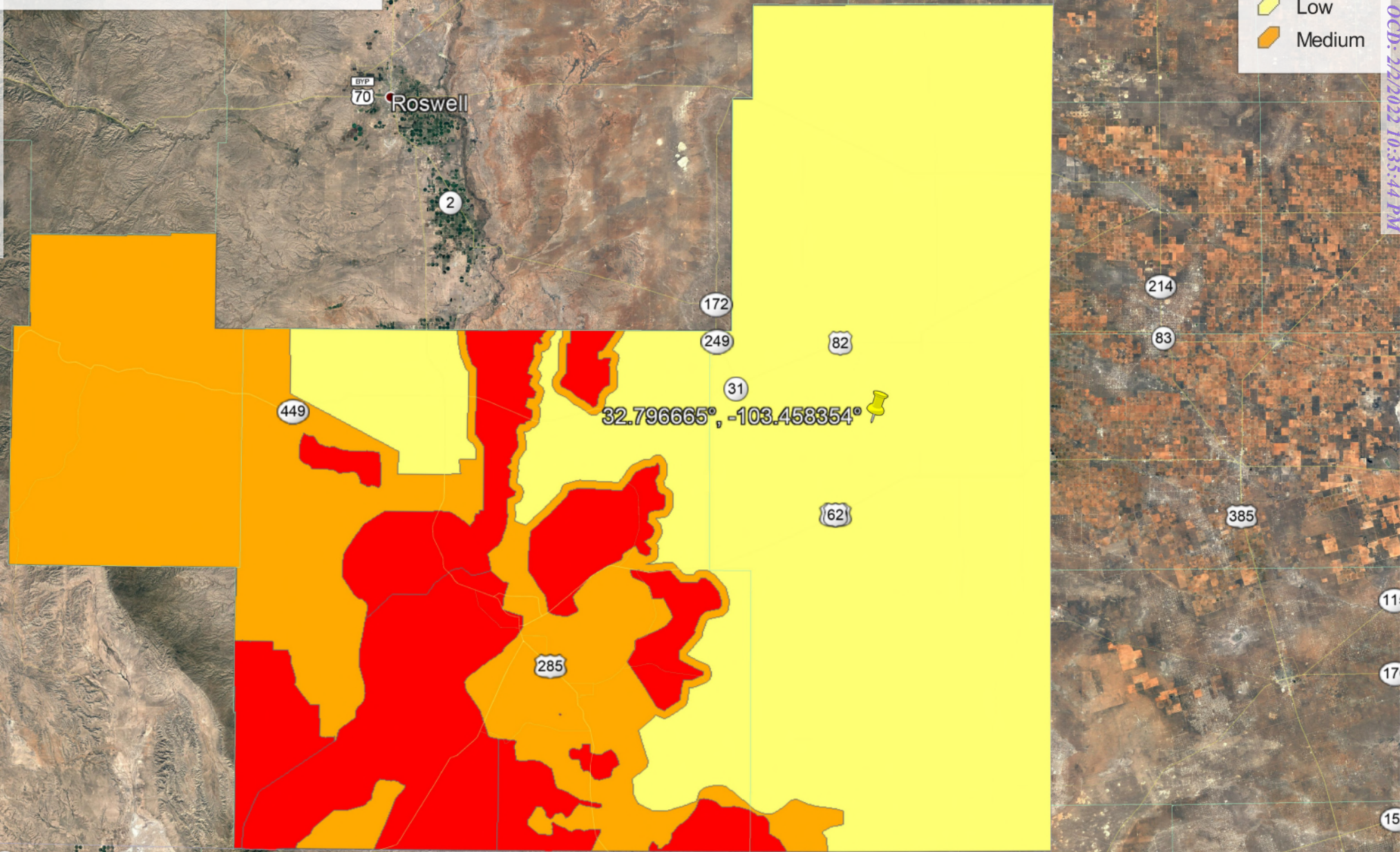
Received by OCD: 2/2/2022 10:35:44 PM

EVGSAU CTB Release

Karst Potential

Legend

- High
- Low
- Medium



60 mi



[USGS Home](#)
[Contact USGS](#)
[Search USGS](#)

National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:
Groundwater

Geographic Area:
United States

[Click to hide News Bulletins](#)

- Explore the *NEW* [USGS National Water Dashboard](#) interactive map to access real-time water data from over 13,500 stations nationwide.
- [Full News](#) 

Groundwater levels for the Nation

❶ Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 324734103264601

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 324734103264601 17S.35E.34.114223

Lea County, New Mexico

Latitude 32°47'47", Longitude 103°26'59" NAD27

Land-surface elevation 3,934.00 feet above NGVD29

This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer.

This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)

Date	Time	 Water-level date-time accuracy	 Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	 Status	 Method of measurement	 Measuring agency	 Source of measurement	 Water-level approval status

1961-02-16		D	62610		3885.54	NGVD29	1	Z		A
1961-02-16		D	62611		3887.01	NAVD88	1	Z		A
1961-02-16		D	72019	48.46			1	Z		A
1966-03-17		D	62610		3884.93	NGVD29	1	Z		A
1966-03-17		D	62611		3886.40	NAVD88	1	Z		A
1966-03-17		D	72019	49.07			1	Z		A
1971-02-12		D	62610		3884.36	NGVD29	1	Z		A
1971-02-12		D	62611		3885.83	NAVD88	1	Z		A
1971-02-12		D	72019	49.64			1	Z		A
1976-03-04		D	62610		3881.90	NGVD29	1	Z		A
1976-03-04		D	62611		3883.37	NAVD88	1	Z		A
1976-03-04		D	72019	52.10			1	Z		A
1981-01-21		D	62610		3878.81	NGVD29	1	Z		A
1981-01-21		D	62611		3880.28	NAVD88	1	Z		A
1981-01-21		D	72019	55.19			1	Z		A
1986-04-04		D	62610		3875.57	NGVD29	1	Z		A
1986-04-04		D	62611		3877.04	NAVD88	1	Z		A
1986-04-04		D	72019	58.43			1	Z		A
1990-12-20		D	62610		3872.85	NGVD29	1	Z		A
1990-12-20		D	62611		3874.32	NAVD88	1	Z		A
1990-12-20		D	72019	61.15			1	Z		A
1996-02-08		D	62610		3871.11	NGVD29	1	S		A
1996-02-08		D	62611		3872.58	NAVD88	1	S		A
1996-02-08		D	72019	62.89			1	S		A

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined

Water-level approval status	A	Approved for publication -- Processing and review completed.
-----------------------------	---	--

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[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2021-12-13 11:42:08 EST

0.29 0.26 nadww01



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	Depth Well	Depth Water	Water Column
L 04578	L	LE					33	17S	35E	643962	3629198*	126	60	66
L 04586	L	LE		3	3	4	33	17S	35E	644065	3628502*	125	50	75
L 04633	L	LE		2	4		33	17S	35E	644564	3629010*	130	65	65
L 04829 S5	L	LE		3	1		33	17S	35E	643347	3629400*	220	90	130
L 04880	L	LE		2	3		33	17S	35E	643757	3629002*	145	90	55
L 05834	R	L	LE	2	2	4	33	17S	35E	644663	3629109*	160	70	90
L 05834 POD5	L	LE		2	2	4	33	17S	35E	644663	3629109*	234	65	169

Average Depth to Water: **70 feet**

Minimum Depth: **50 feet**

Maximum Depth: **90 feet**

Record Count: 7

PLSS Search:

Section(s): 33

Township: 17S

Range: 35E

*UTM location was derived from PLSS - see Help

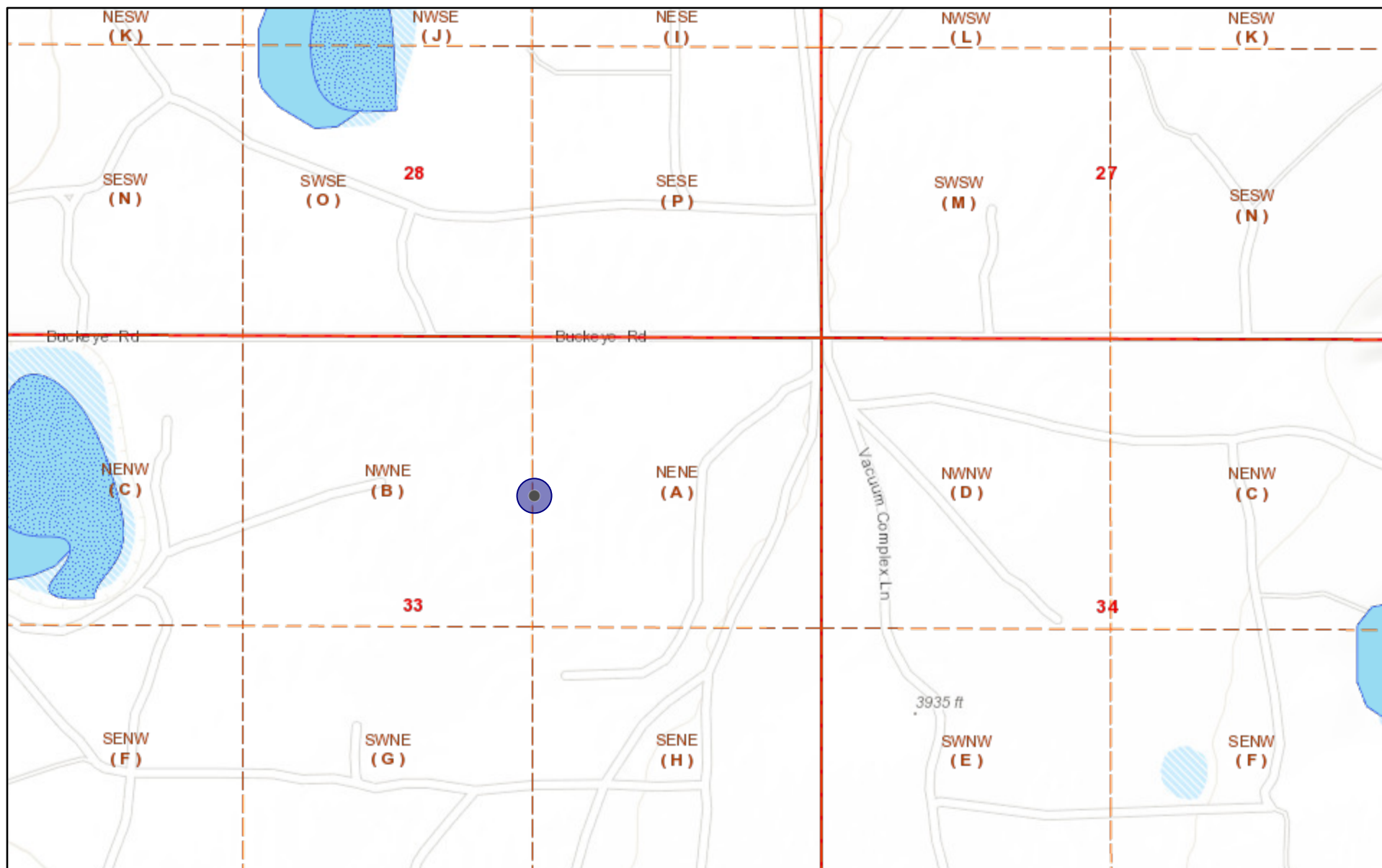
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

11/26/19 8:44 AM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

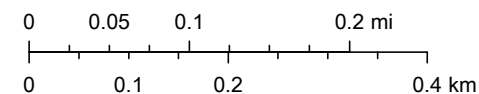
EVGSAU CTB - Watercourses and Playa Lakes



12/23/2019, 12:16:55 PM

- | | | | | | | | |
|--|---------------|--|----------------------|--|----------------------|--|-------------|
| | SITE | | OCD District Offices | | PLSS Townships | | OSE Streams |
| | OCD Districts | | PLSS First Division | | OSE Water-bodies | | |
| | | | PLSS Second Division | | PLJV Probable Playas | | |

1:9,028



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

APPENDIX C

Laboratory Analytical Reports



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 24, 2019

JUSTIN WRIGHT

Conoco Phillips - Hobbs

P. O. BOX 325

Hobbs, NM 88240

RE: EVGSAU CTB

Enclosed are the results of analyses for samples received by the laboratory on 10/23/19 16:31.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Conoco Phillips - Hobbs
 JUSTIN WRIGHT
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received:	10/23/2019	Sampling Date:	10/22/2019
Reported:	10/24/2019	Sampling Type:	Soil
Project Name:	EVGSAU CTB	Sampling Condition:	Cool & Intact
Project Number:	OVERFLOW PIT	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SP # 1 - SURFACE (H903630-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.48	0.500	10/24/2019	ND	1.93	96.4	2.00	0.401	
Toluene*	19.2	0.500	10/24/2019	ND	1.92	96.0	2.00	0.528	
Ethylbenzene*	18.0	0.500	10/24/2019	ND	1.95	97.4	2.00	0.150	
Total Xylenes*	66.7	1.50	10/24/2019	ND	5.85	97.5	6.00	0.0962	
Total BTEX	105	3.00	10/24/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	10/24/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	3480	100	10/24/2019	ND	220	110	200	0.281		
DRO >C10-C28*	68200	100	10/24/2019	ND	228	114	200	3.81		
EXT DRO >C28-C36	14500	100	10/24/2019	ND						

Surrogate: 1-Chlorooctane 378 % 41-142

Surrogate: 1-Chlorooctadecane 1870 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Conoco Phillips - Hobbs
 JUSTIN WRIGHT
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received: 10/23/2019
 Reported: 10/24/2019
 Project Name: EVGSAU CTB
 Project Number: OVERFLOW PIT
 Project Location: LEA COUNTY, NM

Sampling Date: 10/22/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP # 1 - 2' (H903630-02)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/24/2019	ND	1.93	96.4	2.00	0.401	
Toluene*	0.099	0.050	10/24/2019	ND	1.92	96.0	2.00	0.528	
Ethylbenzene*	2.15	0.050	10/24/2019	ND	1.95	97.4	2.00	0.150	
Total Xylenes*	3.05	0.150	10/24/2019	ND	5.85	97.5	6.00	0.0962	
Total BTEx	5.30	0.300	10/24/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 128 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	10/24/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	90.9	10.0	10/24/2019	ND	220	110	200	0.281	
DRO >C10-C28*	497	10.0	10/24/2019	ND	228	114	200	3.81	
EXT DRO >C28-C36	80.5	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Conoco Phillips - Hobbs
 JUSTIN WRIGHT
 P. O. BOX 325
 Hobbs NM, 88240
 Fax To: (575) 297-1477

Received: 10/23/2019
 Reported: 10/24/2019
 Project Name: EVGSAU CTB
 Project Number: OVERFLOW PIT
 Project Location: LEA COUNTY, NM

Sampling Date: 10/22/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP # 1 - 4' (H903630-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	10/24/2019	ND	400	100	400	3.92		

Sample ID: SP # 1 - 6' (H903630-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	10/24/2019	ND	400	100	400	3.92	

Sample ID: SP # 1 - 8' (H903630-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	10/24/2019	ND	400	100	400	3.92		

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

† Cardinal cannot accept verbal changes. Please email changes to celej.keene@cardinallabsnm.com



ANALYTICAL REPORT

December 05, 2019

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1164150
Samples Received: 11/22/2019
Project Number: 212C-MD-01987
Description: COP EVGSAU CTB

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.



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BH-1 (0-1) L1164150-01 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 13:00	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388294	1	11/29/19 15:18	11/29/19 15:27	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387087	1	11/27/19 08:40	11/27/19 15:13	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1388787	1	11/26/19 08:28	11/29/19 14:00	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1387924	1	11/26/19 08:28	11/27/19 16:47	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387778	1	11/27/19 08:28	11/27/19 23:43	JDG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

BH-1 (2-3) L1164150-02 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 13:05	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388294	1	11/29/19 15:18	11/29/19 15:27	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387087	1	11/27/19 08:40	11/27/19 15:32	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1389650	1	12/02/19 11:26	12/02/19 11:52	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1387924	1	11/26/19 08:28	11/27/19 17:07	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387733	1	11/27/19 08:57	11/28/19 20:49	SHG	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

BH-1 (4-5) L1164150-03 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 13:10	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388294	1	11/29/19 15:18	11/29/19 15:27	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387087	1	11/27/19 08:40	11/27/19 15:42	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1388787	1	11/26/19 08:28	11/29/19 14:41	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1387924	1	11/26/19 08:28	11/27/19 17:27	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387733	1	11/27/19 08:57	11/29/19 08:08	SHG	Mt. Juliet, TN

9 Sc

BH-1 (6-7) L1164150-04 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 13:20	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388294	1	11/29/19 15:18	11/29/19 15:27	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387087	1	11/27/19 08:40	11/27/19 15:51	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1389310	1	11/26/19 08:28	12/01/19 11:53	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389397	1	11/26/19 08:28	12/01/19 15:16	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387733	1	11/27/19 08:57	11/29/19 08:21	SHG	Mt. Juliet, TN

BH-1 (9-10) L1164150-05 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 13:25	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388294	1	11/29/19 15:18	11/29/19 15:27	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387087	1	11/27/19 08:40	11/27/19 16:01	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1388787	1.01	11/26/19 08:28	11/29/19 15:22	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1387955	1	11/26/19 08:28	11/27/19 19:08	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387733	1	11/27/19 08:57	11/29/19 08:34	SHG	Mt. Juliet, TN

BH-2 (0-1) L1164150-06 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 14:00	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388295	1	11/29/19 15:06	11/29/19 15:17	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387581	1	12/01/19 18:10	12/01/19 21:42	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1388787	1	11/26/19 08:28	11/29/19 15:43	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1387955	1	11/26/19 08:28	11/27/19 19:27	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387733	1	11/27/19 08:57	11/29/19 08:47	SHG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

BH-2 (2-3) L1164150-07 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 14:05	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388295	1	11/29/19 15:06	11/29/19 15:17	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387581	1	12/01/19 18:10	12/01/19 21:50	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1388787	1	11/26/19 08:28	11/29/19 16:04	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1387955	1	11/26/19 08:28	11/27/19 19:46	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387733	1	11/27/19 08:57	11/29/19 09:53	SHG	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

BH-2 (4-5) L1164150-08 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 14:10	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388295	1	11/29/19 15:06	11/29/19 15:17	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387581	1	12/01/19 18:10	12/01/19 22:00	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1388787	1	11/26/19 08:28	11/29/19 16:24	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388275	1	11/26/19 08:28	11/28/19 04:16	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387733	1	11/27/19 08:57	11/29/19 10:06	SHG	Mt. Juliet, TN

9 Sc

BH-2 (6-7) L1164150-09 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 14:15	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388295	1	11/29/19 15:06	11/29/19 15:17	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387581	1	12/01/19 18:10	12/01/19 22:10	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1388787	1	11/26/19 08:28	11/29/19 16:45	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388275	1	11/26/19 08:28	11/28/19 04:36	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387733	1	11/27/19 08:57	11/29/19 10:19	SHG	Mt. Juliet, TN

BH-2 (9-10) L1164150-10 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 14:25	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388295	1	11/29/19 15:06	11/29/19 15:17	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387581	1	12/01/19 18:10	12/01/19 22:29	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1389310	1	11/26/19 08:28	12/01/19 12:41	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388275	1	11/26/19 08:28	11/28/19 04:56	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387733	1	11/27/19 08:57	11/29/19 10:33	SHG	Mt. Juliet, TN

BH-3 (0-1) L1164150-11 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 14:50	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388295	1	11/29/19 15:06	11/29/19 15:17	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387581	1	12/01/19 18:10	12/01/19 22:38	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1388787	1	11/26/19 08:28	11/29/19 17:26	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388275	1	11/26/19 08:28	11/28/19 05:16	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387734	1	11/27/19 10:17	11/28/19 05:25	JDG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

BH-3 (2-3) L1164150-12 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 14:55	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388295	1	11/29/19 15:06	11/29/19 15:17	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387581	1	12/01/19 18:10	12/01/19 22:48	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1388787	1	11/26/19 08:28	11/29/19 17:47	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388275	1	11/26/19 08:28	11/28/19 05:36	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387734	1	11/27/19 10:17	11/28/19 05:38	JDG	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

BH-3 (4-5) L1164150-13 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 15:00	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388295	1	11/29/19 15:06	11/29/19 15:17	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387581	1	12/01/19 18:10	12/01/19 23:16	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1388787	1	11/26/19 08:28	11/29/19 18:07	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388275	1	11/26/19 08:28	11/28/19 05:56	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387734	1	11/27/19 10:17	11/28/19 05:51	JDG	Mt. Juliet, TN

9 Sc

BH-3 (6-7) L1164150-14 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 15:10	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388295	1	11/29/19 15:06	11/29/19 15:17	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387581	1	12/01/19 18:10	12/01/19 23:26	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1388787	1	11/26/19 08:28	11/29/19 18:28	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388275	1	11/26/19 08:28	11/28/19 06:16	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387734	1	11/27/19 10:17	11/28/19 06:04	JDG	Mt. Juliet, TN

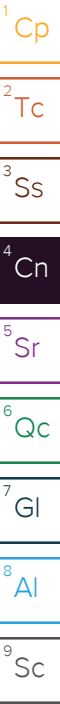
BH-3 (9-10) L1164150-15 Solid

				Collected by	Collected date/time	Received date/time
					11/18/19 15:20	11/22/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388295	1	11/29/19 15:06	11/29/19 15:17	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1387581	1	12/01/19 18:10	12/01/19 23:54	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1388787	1	11/26/19 08:28	11/29/19 18:49	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388275	1	11/26/19 08:28	11/28/19 06:37	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387734	1	11/27/19 10:17	11/28/19 06:25	JDG	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: 11/18/19 13:00

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.2		1	11/29/2019 15:27	WG1388294

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	477		0.835	10.5	1	11/27/2019 15:13	WG1387087

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	0.0355	B J	0.0228	0.105	1	11/29/2019 14:00	WG1388787
(S) a,a,a-Trifluorotoluene(FID)	95.9			77.0-120		11/29/2019 14:00	WG1388787

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		0.000420	0.00105	1	11/27/2019 16:47	WG1387924
Toluene	U		0.00131	0.00525	1	11/27/2019 16:47	WG1387924
Ethylbenzene	U		0.000557	0.00263	1	11/27/2019 16:47	WG1387924
Total Xylenes	U		0.00502	0.00683	1	11/27/2019 16:47	WG1387924
(S) Toluene-d8	101			75.0-131		11/27/2019 16:47	WG1387924
(S) 4-Bromofluorobenzene	87.6			67.0-138		11/27/2019 16:47	WG1387924
(S) 1,2-Dichloroethane-d4	91.6			70.0-130		11/27/2019 16:47	WG1387924

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	9.48		1.69	4.20	1	11/27/2019 23:43	WG1387778
C28-C40 Oil Range	9.07		0.288	4.20	1	11/27/2019 23:43	WG1387778
(S) o-Terphenyl	86.3			18.0-148		11/27/2019 23:43	WG1387778

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

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.5		1	11/29/2019 15:27	WG1388294

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	734		0.850	10.7	1	11/27/2019 15:32	WG1387087

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	0.0420	B J	0.0232	0.107	1	12/02/2019 11:52	WG1389650
(S) a,a,a-Trifluorotoluene(FID)	104			77.0-120		12/02/2019 11:52	WG1389650

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		0.000428	0.00107	1	11/27/2019 17:07	WG1387924
Toluene	U		0.00134	0.00535	1	11/27/2019 17:07	WG1387924
Ethylbenzene	U		0.000567	0.00267	1	11/27/2019 17:07	WG1387924
Total Xylenes	U		0.00511	0.00695	1	11/27/2019 17:07	WG1387924
(S) Toluene-d8	98.8			75.0-131		11/27/2019 17:07	WG1387924
(S) 4-Bromofluorobenzene	89.4			67.0-138		11/27/2019 17:07	WG1387924
(S) 1,2-Dichloroethane-d4	94.0			70.0-130		11/27/2019 17:07	WG1387924

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	3.91	J	1.72	4.28	1	11/28/2019 20:49	WG1387733
C28-C40 Oil Range	8.52		0.293	4.28	1	11/28/2019 20:49	WG1387733
(S) o-Terphenyl	65.2			18.0-148		11/28/2019 20:49	WG1387733

Collected date/time: 11/18/19 13:10

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.4		1	11/29/2019 15:27	WG1388294

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	220		0.852	10.7	1	11/27/2019 15:42	WG1387087

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	0.0283	B J	0.0232	0.107	1	11/29/2019 14:41	WG1388787
(S) a,a,a-Trifluorotoluene(FID)	94.8			77.0-120		11/29/2019 14:41	WG1388787

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000428	0.00107	1	11/27/2019 17:27	WG1387924
Toluene	U		0.00134	0.00536	1	11/27/2019 17:27	WG1387924
Ethylbenzene	U		0.000568	0.00268	1	11/27/2019 17:27	WG1387924
Total Xylenes	U		0.00512	0.00696	1	11/27/2019 17:27	WG1387924
(S) Toluene-d8	101			75.0-131		11/27/2019 17:27	WG1387924
(S) 4-Bromofluorobenzene	87.8			67.0-138		11/27/2019 17:27	WG1387924
(S) 1,2-Dichloroethane-d4	95.1			70.0-130		11/27/2019 17:27	WG1387924

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	5.11		1.72	4.28	1	11/29/2019 08:08	WG1387733
C28-C40 Oil Range	8.59		0.293	4.28	1	11/29/2019 08:08	WG1387733
(S) o-Terphenyl	58.6			18.0-148		11/29/2019 08:08	WG1387733

Collected date/time: 11/18/19 13:20

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.5		1	11/29/2019 15:27	WG1388294

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	78.5		0.833	10.5	1	11/27/2019 15:51	WG1387087

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	0.0429	B J	0.0227	0.105	1	12/01/2019 11:53	WG1389310
(S) a,a,a-Trifluorotoluene(FID)	102			77.0-120		12/01/2019 11:53	WG1389310

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	0.000445	J	0.000419	0.00105	1	12/01/2019 15:16	WG1389397
Toluene	U		0.00131	0.00524	1	12/01/2019 15:16	WG1389397
Ethylbenzene	U		0.000555	0.00262	1	12/01/2019 15:16	WG1389397
Total Xylenes	U		0.00501	0.00681	1	12/01/2019 15:16	WG1389397
(S) Toluene-d8	96.1			75.0-131		12/01/2019 15:16	WG1389397
(S) 4-Bromofluorobenzene	91.4			67.0-138		12/01/2019 15:16	WG1389397
(S) 1,2-Dichloroethane-d4	114			70.0-130		12/01/2019 15:16	WG1389397

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	6.35		1.69	4.19	1	11/29/2019 08:21	WG1387733
C28-C40 Oil Range	13.3		0.287	4.19	1	11/29/2019 08:21	WG1387733
(S) o-Terphenyl	60.6			18.0-148		11/29/2019 08:21	WG1387733

Collected date/time: 11/18/19 13:25

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.6		1	11/29/2019 15:27	WG1388294

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	28.3		0.815	10.2	1	11/27/2019 16:01	WG1387087

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	0.0282	B J	0.0224	0.104	1.01	11/29/2019 15:22	WG1388787
(S) a,a,a-Trifluorotoluene(FID)	95.2			77.0-120		11/29/2019 15:22	WG1388787

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	0.000641	J	0.000410	0.00102	1	11/27/2019 19:08	WG1387955
Toluene	U		0.00128	0.00512	1	11/27/2019 19:08	WG1387955
Ethylbenzene	U		0.000543	0.00256	1	11/27/2019 19:08	WG1387955
Total Xylenes	U		0.00490	0.00666	1	11/27/2019 19:08	WG1387955
(S) Toluene-d8	99.5			75.0-131		11/27/2019 19:08	WG1387955
(S) 4-Bromofluorobenzene	89.9			67.0-138		11/27/2019 19:08	WG1387955
(S) 1,2-Dichloroethane-d4	104			70.0-130		11/27/2019 19:08	WG1387955

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	U		1.65	4.10	1	11/29/2019 08:34	WG1387733
C28-C40 Oil Range	1.13	J	0.281	4.10	1	11/29/2019 08:34	WG1387733
(S) o-Terphenyl	52.8			18.0-148		11/29/2019 08:34	WG1387733

Collected date/time: 11/18/19 14:00

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.5		1	11/29/2019 15:17	WG1388295

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	392		0.841	10.6	1	12/01/2019 21:42	WG1387581

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	0.0253	B J	0.0230	0.106	1	11/29/2019 15:43	WG1388787
(S) a,a,a-Trifluorotoluene(FID)	95.3			77.0-120		11/29/2019 15:43	WG1388787

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		0.000423	0.00106	1	11/27/2019 19:27	WG1387955
Toluene	U		0.00132	0.00529	1	11/27/2019 19:27	WG1387955
Ethylbenzene	U		0.000561	0.00265	1	11/27/2019 19:27	WG1387955
Total Xylenes	U		0.00506	0.00688	1	11/27/2019 19:27	WG1387955
(S) Toluene-d8	101			75.0-131		11/27/2019 19:27	WG1387955
(S) 4-Bromofluorobenzene	89.4			67.0-138		11/27/2019 19:27	WG1387955
(S) 1,2-Dichloroethane-d4	97.4			70.0-130		11/27/2019 19:27	WG1387955

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	U		1.70	4.23	1	11/29/2019 08:47	WG1387733
C28-C40 Oil Range	2.79	J	0.290	4.23	1	11/29/2019 08:47	WG1387733
(S) o-Terphenyl	62.8			18.0-148		11/29/2019 08:47	WG1387733

Collected date/time: 11/18/19 14:05

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.6		1	11/29/2019 15:17	WG1388295

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	125		0.832	10.5	1	12/01/2019 21:50	WG1387581

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		0.0227	0.105	1	11/29/2019 16:04	WG1388787
(S) a,a,a-Trifluorotoluene(FID)	94.9			77.0-120		11/29/2019 16:04	WG1388787

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		0.000419	0.00105	1	11/27/2019 19:46	WG1387955
Toluene	U		0.00131	0.00523	1	11/27/2019 19:46	WG1387955
Ethylbenzene	U		0.000555	0.00262	1	11/27/2019 19:46	WG1387955
Total Xylenes	U		0.00500	0.00680	1	11/27/2019 19:46	WG1387955
(S) Toluene-d8	99.9			75.0-131		11/27/2019 19:46	WG1387955
(S) 4-Bromofluorobenzene	96.1			67.0-138		11/27/2019 19:46	WG1387955
(S) 1,2-Dichloroethane-d4	114			70.0-130		11/27/2019 19:46	WG1387955

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	2.08	J	1.68	4.19	1	11/29/2019 09:53	WG1387733
C28-C40 Oil Range	6.53		0.287	4.19	1	11/29/2019 09:53	WG1387733
(S) o-Terphenyl	60.1			18.0-148		11/29/2019 09:53	WG1387733

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

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.2		1	11/29/2019 15:17	WG1388295

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	153		0.853	10.7	1	12/01/2019 22:00	WG1387581

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	0.0291	B J	0.0233	0.107	1	11/29/2019 16:24	WG1388787
(S) a,a,a-Trifluorotoluene(FID)	95.0			77.0-120		11/29/2019 16:24	WG1388787

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		0.000429	0.00107	1	11/28/2019 04:16	WG1388275
Toluene	U		0.00134	0.00537	1	11/28/2019 04:16	WG1388275
Ethylbenzene	U		0.000569	0.00268	1	11/28/2019 04:16	WG1388275
Total Xylenes	U	J4	0.00513	0.00698	1	11/28/2019 04:16	WG1388275
(S) Toluene-d8	99.9			75.0-131		11/28/2019 04:16	WG1388275
(S) 4-Bromofluorobenzene	90.4			67.0-138		11/28/2019 04:16	WG1388275
(S) 1,2-Dichloroethane-d4	96.9			70.0-130		11/28/2019 04:16	WG1388275

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	1.96	J	1.73	4.29	1	11/29/2019 10:06	WG1387733
C28-C40 Oil Range	11.7		0.294	4.29	1	11/29/2019 10:06	WG1387733
(S) o-Terphenyl	55.5			18.0-148		11/29/2019 10:06	WG1387733

Collected date/time: 11/18/19 14:15

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.1		1	11/29/2019 15:17	WG1388295

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	22.4	B	0.864	10.9	1	12/01/2019 22:10	WG1387581

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	0.0284	B J	0.0236	0.109	1	11/29/2019 16:45	WG1388787
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	94.9			77.0-120		11/29/2019 16:45	WG1388787

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		0.000435	0.00109	1	11/28/2019 04:36	WG1388275
Toluene	U		0.00136	0.00543	1	11/28/2019 04:36	WG1388275
Ethylbenzene	U		0.000576	0.00272	1	11/28/2019 04:36	WG1388275
Total Xylenes	U	J4	0.00519	0.00706	1	11/28/2019 04:36	WG1388275
(S) <i>Toluene-d8</i>	102			75.0-131		11/28/2019 04:36	WG1388275
(S) <i>4-Bromofluorobenzene</i>	91.8			67.0-138		11/28/2019 04:36	WG1388275
(S) <i>1,2-Dichloroethane-d4</i>	98.2			70.0-130		11/28/2019 04:36	WG1388275

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	U		1.75	4.35	1	11/29/2019 10:19	WG1387733
C28-C40 Oil Range	4.49		0.298	4.35	1	11/29/2019 10:19	WG1387733
(S) <i>o</i> -Terphenyl	57.5			18.0-148		11/29/2019 10:19	WG1387733

Collected date/time: 11/18/19 14:25

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.5		1	11/29/2019 15:17	WG1388295

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	25.1	B	0.889	11.2	1	12/01/2019 22:29	WG1387581

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

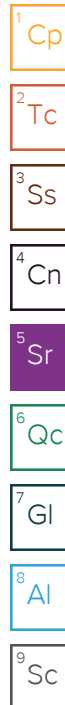
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0389	B J	0.0243	0.112	1	12/01/2019 12:41	WG1389310
(S) a,a,a-Trifluorotoluene(FID)	102			77.0-120		12/01/2019 12:41	WG1389310

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		0.000447	0.00112	1	11/28/2019 04:56	WG1388275
Toluene	U		0.00140	0.00559	1	11/28/2019 04:56	WG1388275
Ethylbenzene	U		0.000592	0.00279	1	11/28/2019 04:56	WG1388275
Total Xylenes	U	J4	0.00534	0.00727	1	11/28/2019 04:56	WG1388275
(S) Toluene-d8	104			75.0-131		11/28/2019 04:56	WG1388275
(S) 4-Bromofluorobenzene	84.7			67.0-138		11/28/2019 04:56	WG1388275
(S) 1,2-Dichloroethane-d4	97.6			70.0-130		11/28/2019 04:56	WG1388275

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	U		1.80	4.47	1	11/29/2019 10:33	WG1387733
C28-C40 Oil Range	0.873	J	0.306	4.47	1	11/29/2019 10:33	WG1387733
(S) o-Terphenyl	132			18.0-148		11/29/2019 10:33	WG1387733



Collected date/time: 11/18/19 14:50

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.6		1	11/29/2019 15:17	WG1388295

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	102		0.831	10.5	1	12/01/2019 22:38	WG1387581

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	0.0288	B J	0.0227	0.105	1	11/29/2019 17:26	WG1388787
(S) a,a,a-Trifluorotoluene(FID)	95.6			77.0-120		11/29/2019 17:26	WG1388787

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000418	0.00105	1	11/28/2019 05:16	WG1388275
Toluene	U		0.00131	0.00523	1	11/28/2019 05:16	WG1388275
Ethylbenzene	U		0.000554	0.00261	1	11/28/2019 05:16	WG1388275
Total Xylenes	U	J4	0.00500	0.00680	1	11/28/2019 05:16	WG1388275
(S) Toluene-d8	102			75.0-131		11/28/2019 05:16	WG1388275
(S) 4-Bromofluorobenzene	87.6			67.0-138		11/28/2019 05:16	WG1388275
(S) 1,2-Dichloroethane-d4	97.8			70.0-130		11/28/2019 05:16	WG1388275

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	U		1.68	4.18	1	11/28/2019 05:25	WG1387734
C28-C40 Oil Range	1.89	J	0.286	4.18	1	11/28/2019 05:25	WG1387734
(S) o-Terphenyl	47.3			18.0-148		11/28/2019 05:25	WG1387734

Collected date/time: 11/18/19 14:55

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.0		1	11/29/2019 15:17	WG1388295

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	53.8	B	0.846	10.6	1	12/01/2019 22:48	WG1387581

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	0.0262	B J	0.0231	0.106	1	11/29/2019 17:47	WG1388787
(S) a,a,a-Trifluorotoluene(FID)	94.8			77.0-120		11/29/2019 17:47	WG1388787

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		0.000426	0.00106	1	11/28/2019 05:36	WG1388275
Toluene	U		0.00133	0.00532	1	11/28/2019 05:36	WG1388275
Ethylbenzene	U		0.000564	0.00266	1	11/28/2019 05:36	WG1388275
Total Xylenes	U	J4	0.00509	0.00692	1	11/28/2019 05:36	WG1388275
(S) Toluene-d8	102			75.0-131		11/28/2019 05:36	WG1388275
(S) 4-Bromofluorobenzene	88.5			67.0-138		11/28/2019 05:36	WG1388275
(S) 1,2-Dichloroethane-d4	99.3			70.0-130		11/28/2019 05:36	WG1388275

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	U		1.71	4.26	1	11/28/2019 05:38	WG1387734
C28-C40 Oil Range	4.10	J	0.292	4.26	1	11/28/2019 05:38	WG1387734
(S) o-Terphenyl	43.4			18.0-148		11/28/2019 05:38	WG1387734

Collected date/time: 11/18/19 15:00

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.0		1	11/29/2019 15:17	WG1388295

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	9.46	B J	0.829	10.4	1	12/01/2019 23:16	WG1387581

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	0.0253	B J	0.0226	0.104	1	11/29/2019 18:07	WG1388787
(S) a,a,a-Trifluorotoluene(FID)	95.8			77.0-120		11/29/2019 18:07	WG1388787

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000417	0.00104	1	11/28/2019 05:56	WG1388275
Toluene	U		0.00130	0.00521	1	11/28/2019 05:56	WG1388275
Ethylbenzene	U		0.000552	0.00261	1	11/28/2019 05:56	WG1388275
Total Xylenes	U	J4	0.00498	0.00677	1	11/28/2019 05:56	WG1388275
(S) Toluene-d8	101			75.0-131		11/28/2019 05:56	WG1388275
(S) 4-Bromofluorobenzene	86.8			67.0-138		11/28/2019 05:56	WG1388275
(S) 1,2-Dichloroethane-d4	98.8			70.0-130		11/28/2019 05:56	WG1388275

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	U		1.68	4.17	1	11/28/2019 05:51	WG1387734
C28-C40 Oil Range	1.02	J	0.286	4.17	1	11/28/2019 05:51	WG1387734
(S) o-Terphenyl	45.6			18.0-148		11/28/2019 05:51	WG1387734

Collected date/time: 11/18/19 15:10

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.2		1	11/29/2019 15:17	WG1388295

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	4.30	B J	0.844	10.6	1	12/01/2019 23:26	WG1387581

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	0.0345	B J	0.0230	0.106	1	11/29/2019 18:28	WG1388787
(S) a,a,a-Trifluorotoluene(FID)	95.4			77.0-120		11/29/2019 18:28	WG1388787

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		0.000425	0.00106	1	11/28/2019 06:16	WG1388275
Toluene	U		0.00133	0.00531	1	11/28/2019 06:16	WG1388275
Ethylbenzene	U		0.000563	0.00265	1	11/28/2019 06:16	WG1388275
Total Xylenes	U	J4	0.00508	0.00690	1	11/28/2019 06:16	WG1388275
(S) Toluene-d8	101			75.0-131		11/28/2019 06:16	WG1388275
(S) 4-Bromofluorobenzene	90.1			67.0-138		11/28/2019 06:16	WG1388275
(S) 1,2-Dichloroethane-d4	101			70.0-130		11/28/2019 06:16	WG1388275

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	U		1.71	4.25	1	11/28/2019 06:04	WG1387734
C28-C40 Oil Range	1.18	J	0.291	4.25	1	11/28/2019 06:04	WG1387734
(S) o-Terphenyl	51.1			18.0-148		11/28/2019 06:04	WG1387734

Collected date/time: 11/18/19 15:20

L1164150

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.3		1	11/29/2019 15:17	WG1388295

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	3.34	B J	0.825	10.4	1	12/01/2019 23:54	WG1387581

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	0.0260	B J	0.0225	0.104	1	11/29/2019 18:49	WG1388787
(S) a,a,a-Trifluorotoluene(FID)	95.7			77.0-120		11/29/2019 18:49	WG1388787

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000415	0.00104	1	11/28/2019 06:37	WG1388275
Toluene	U		0.00130	0.00519	1	11/28/2019 06:37	WG1388275
Ethylbenzene	U		0.000550	0.00260	1	11/28/2019 06:37	WG1388275
Total Xylenes	U	J4	0.00496	0.00675	1	11/28/2019 06:37	WG1388275
(S) Toluene-d8	102			75.0-131		11/28/2019 06:37	WG1388275
(S) 4-Bromofluorobenzene	87.3			67.0-138		11/28/2019 06:37	WG1388275
(S) 1,2-Dichloroethane-d4	99.1			70.0-130		11/28/2019 06:37	WG1388275

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	U		1.67	4.15	1	11/28/2019 06:25	WG1387734
C28-C40 Oil Range	U		0.284	4.15	1	11/28/2019 06:25	WG1387734
(S) o-Terphenyl	48.8			18.0-148		11/28/2019 06:25	WG1387734

Total Solids by Method 2540 G-2011 [L1164150-01,02,03,04,05](#)

Method Blank (MB)

(MB) R3477590-1 11/29/19 15:27

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

L1164149-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1164149-02 11/29/19 15:27 • (DUP) R3477590-3 11/29/19 15:27

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	80.9	79.7	1	1.57		10

Laboratory Control Sample (LCS)

(LCS) R3477590-2 11/29/19 15:27

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

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Total Solids by Method 2540 G-2011 [L1164150-06,07,08,09,10,11,12,13,14,15](#)

Method Blank (MB)

(MB) R3477589-1 11/29/19 15:17

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

L1164150-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1164150-12 11/29/19 15:17 • (DUP) R3477589-3 11/29/19 15:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Total Solids	94.0	94.7	1	0.772		10

Laboratory Control Sample (LCS)

(LCS) R3477589-2 11/29/19 15:17

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

[L1164150-01,02,03,04,05](#)

Method Blank (MB)

(MB) R3477068-1 11/27/19 10:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	2.64	⬇	0.795	10.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1163490-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1163490-01 11/27/19 13:47 • (DUP) R3477068-5 11/27/19 13:57

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3110	3120	5	0.316		20

L1164150-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1164150-01 11/27/19 15:13 • (DUP) R3477068-6 11/27/19 15:23

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	477	453	1	5.25		20

Laboratory Control Sample (LCS)

(LCS) R3477068-2 11/27/19 10:46

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	199	99.5	90.0-110	

L1163000-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1163000-02 11/27/19 11:44 • (MS) R3477068-3 11/27/19 11:53 • (MSD) R3477068-4 11/27/19 12:03

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	141	648	638	101	99.4	1	80.0-120			1.62	20

Wet Chemistry by Method 300.0

[L1164150-06,07,08,09,10,11,12,13,14,15](#)

Method Blank (MB)

(MB) R3477907-1 12/01/19 19:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	5.38	⬇	0.795	10.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1164150-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1164150-09 12/01/19 22:10 • (DUP) R3477907-3 12/01/19 22:19

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	22.4	21.6	1	3.32		20

L1164842-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1164842-05 12/02/19 00:42 • (DUP) R3477907-6 12/02/19 01:10

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	23.4	15.0	1	43.6	P1	20

Laboratory Control Sample (LCS)

(LCS) R3477907-2 12/01/19 19:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	212	106	90.0-110	

L1164150-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1164150-14 12/01/19 23:26 • (MS) R3477907-4 12/01/19 23:35 • (MSD) R3477907-5 12/01/19 23:45

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	531	4.30	535	527	99.9	98.5	1	80.0-120			1.40	20

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

[L1164150-01,03,05,06,07,08,09,11,12,13,14,15](#)

Method Blank (MB)

(MB) R3477674-3 11/29/19 12:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0365	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	98.9			77.0-120

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

(LCS) R3477674-1 11/29/19 11:09 • (LCSD) R3477674-2 11/29/19 11:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.24	5.59	95.3	102	72.0-127			6.46	20
(S) a,a,a-Trifluorotoluene(FID)				110	112	77.0-120				

L1164519-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1164519-03 11/29/19 19:09 • (MS) R3477674-4 11/29/19 20:52 • (MSD) R3477674-5 11/29/19 21:26

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	136	U	121	130	88.2	94.8	25	10.0-151			7.17	28
(S) a,a,a-Trifluorotoluene(FID)					110	110		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3477967-2 12/01/19 10:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0371	⌵	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	103			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3477967-1 12/01/19 10:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.49	99.8	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			113	77.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

L1164150-02

Method Blank (MB)

(MB) R3478135-2 12/02/19 10:42

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0410	⌵	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	107			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3478135-1 12/02/19 10:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.55	101	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			114	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

L1164150-01,02,03

Method Blank (MB)

(MB) R3477017-2 11/27/19 08:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	99.1			75.0-131
(S) 4-Bromofluorobenzene	92.7			67.0-138
(S) 1,2-Dichloroethane-d4	100			70.0-130

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

(LCS) R3477017-1 11/27/19 05:54 • (LCSD) R3477017-3 11/27/19 09:17

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	0.129	0.128	103	102	70.0-123			0.778	20
Ethylbenzene	0.125	0.147	0.142	118	114	74.0-126			3.46	20
Toluene	0.125	0.103	0.103	82.4	82.4	75.0-121			0.000	20
Xylenes, Total	0.375	0.478	0.456	127	122	72.0-127			4.71	20
(S) Toluene-d8				101	99.5	75.0-131				
(S) 4-Bromofluorobenzene				105	106	67.0-138				
(S) 1,2-Dichloroethane-d4				97.4	99.9	70.0-130				

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

L1164150-05.06.07

Method Blank (MB)

(MB) R3477714-2 11/27/19 16:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	103			75.0-131
(S) 4-Bromofluorobenzene	87.9			67.0-138
(S) 1,2-Dichloroethane-d4	95.0			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) R3477714-1 11/27/19 15:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.134	107	70.0-123	
Ethylbenzene	0.125	0.103	82.4	74.0-126	
Toluene	0.125	0.116	92.8	75.0-121	
Xylenes, Total	0.375	0.302	80.5	72.0-127	
(S) Toluene-d8			101	75.0-131	
(S) 4-Bromofluorobenzene			89.1	67.0-138	
(S) 1,2-Dichloroethane-d4			102	70.0-130	

L1164077-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1164077-21 11/27/19 20:05 • (MS) R3477714-3 11/27/19 23:31 • (MSD) R3477714-4 11/27/19 23:50

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	1.00	7.70	21.7	20.4	1400	1270	8	10.0-149	E V	E V	6.18	37
Ethylbenzene	1.00	3.04	7.74	6.73	470	369	8	10.0-160	J5	J5	14.0	38
Toluene	1.00	1.35	5.96	5.00	461	365	8	10.0-156	J5	J5	17.5	38
Xylenes, Total	3.00	5.13	15.4	12.5	342	246	8	10.0-160	J5	J5	20.8	38
(S) Toluene-d8					100	99.2		75.0-131				
(S) 4-Bromofluorobenzene					91.0	88.9		67.0-138				
(S) 1,2-Dichloroethane-d4					100	97.2		70.0-130				

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

L1164150-08,09,10,11,12,13,14,15

Method Blank (MB)

(MB) R3477494-3 11/28/19 00:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	100			75.0-131
(S) 4-Bromofluorobenzene	91.3			67.0-138
(S) 1,2-Dichloroethane-d4	92.9			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) R3477494-1 11/27/19 22:56 • (LCSD) R3477494-2 11/27/19 23:16

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	0.130	0.132	104	106	70.0-123			1.53	20
Ethylbenzene	0.125	0.154	0.154	123	123	74.0-126			0.000	20
Toluene	0.125	0.103	0.105	82.4	84.0	75.0-121			1.92	20
Xylenes, Total	0.375	0.474	0.483	126	129	72.0-127		J4	1.88	20
(S) Toluene-d8				98.8	101	75.0-131				
(S) 4-Bromofluorobenzene				102	102	67.0-138				
(S) 1,2-Dichloroethane-d4				95.1	94.8	70.0-130				

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

L1164150-04

Method Blank (MB)

(MB) R3477908-3 12/01/19 11:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	98.4			75.0-131
(S) 4-Bromofluorobenzene	90.3			67.0-138
(S) 1,2-Dichloroethane-d4	110			70.0-130

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

(LCS) R3477908-1 12/01/19 09:50 • (LCSD) R3477908-2 12/01/19 10:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.132	0.146	106	117	70.0-123			10.1	20
Ethylbenzene	0.125	0.111	0.124	88.8	99.2	74.0-126			11.1	20
Toluene	0.125	0.106	0.116	84.8	92.8	75.0-121			9.01	20
Xylenes, Total	0.375	0.362	0.405	96.5	108	72.0-127			11.2	20
(S) Toluene-d8				93.1	93.1	75.0-131				
(S) 4-Bromofluorobenzene				92.3	92.9	67.0-138				
(S) 1,2-Dichloroethane-d4				116	116	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 [L1164150-02,03,04,05,06,07,08,09,10](#)

Method Blank (MB)

(MB) R3477219-1 11/27/19 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	91.7			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3477219-2 11/27/19 23:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	49.4	98.8	50.0-150	
(S) o-Terphenyl			94.9	18.0-148	

L1164838-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1164838-18 11/29/19 10:47 • (MS) R3477496-1 11/29/19 11:00 • (MSD) R3477496-2 11/29/19 11:13

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	49.8	U	37.7	37.6	75.7	75.5	1	50.0-150			0.266	20
(S) o-Terphenyl					52.9	58.6		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 L1164150-11,12,13,14,15

Method Blank (MB)

(MB) R3477356-1 11/28/19 04:59

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	46.4			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3477356-2 11/28/19 05:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	30.5	61.0	50.0-150	
(S) o-Terphenyl			61.7	18.0-148	

L1164624-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1164624-01 11/29/19 21:49 • (MS) R3477659-1 11/29/19 22:02 • (MSD) R3477659-2 11/29/19 22:15

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	49.7	ND	24.5	22.1	49.3	44.6	10	50.0-150	J6	J6	10.3	20
(S) o-Terphenyl					70.7	72.9		18.0-148				

Sample Narrative:

OS: Dilution due to matrix impact during extract concentration procedure

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 L1164150-01

Method Blank (MB)

(MB) R3477220-1 11/27/19 23:15

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	70.1			18.0-148

Method Blank (MB)

(MB) R3477676-1 11/30/19 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	83.3			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3477220-2 11/27/19 23:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	53.0	106	50.0-150	
(S) o-Terphenyl			96.2	18.0-148	

L1164838-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1164838-12 11/28/19 19:05 • (MS) R3477497-1 11/28/19 19:18 • (MSD) R3477497-2 11/28/19 19:31

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	49.8	U	29.3	36.8	58.8	73.6	1	50.0-150		J3	22.7	20
(S) o-Terphenyl					42.8	56.5		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.

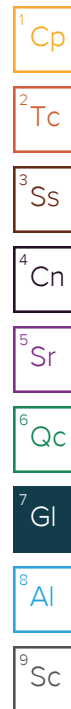
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. 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.
ND	Not detected at the Reporting Limit (or MDL where applicable).
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.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.



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

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

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

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

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

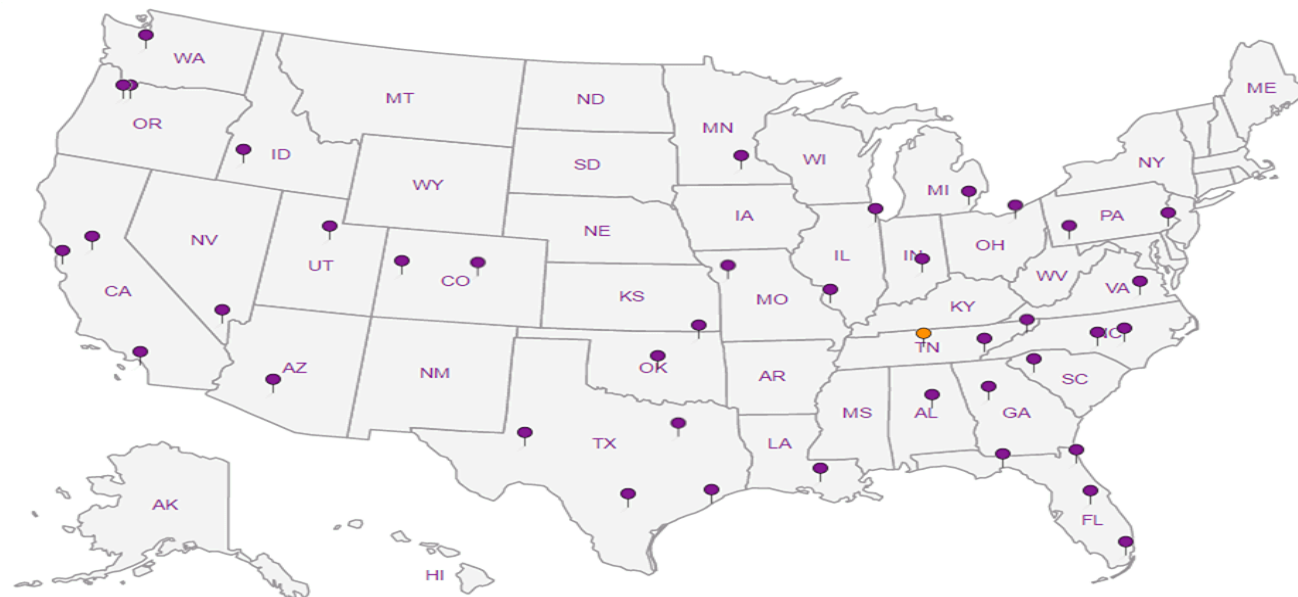
Third Party Federal Accreditations

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

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

Our Locations

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





Tetra Tech, Inc.

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

L164150

Client Name:	ConocoPhillips	Site Manager:	Christian Llull
Project Name:	COP EVGSAU CTB		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-01987
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	<i>[Signature]</i>
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: 2019		WATER	SOIL		HCL	HNO3	ICE	NONE																								
		DATE	TIME																															
	BH-1 (0-1)	11/18/2019	1300	X				X			1	N	X	X														X						
	BH-1 (2-3)	11/18/2019	1305	X				X			1	N	X	X														X						
	BH-1 (4-5)	11/18/2019	1310	X				X			1	N	X	X														X						
	BH-1 (6-7)	11/18/2019	1320	X				X			1	N	X	X														X						
	BH-1 (9-10)	11/18/2019	1325	X				X			1	N	X	X														X						
	BH-2 (0-1)	11/18/2019	1400	X				X			1	N	X	X														X						
	BH-2 (2-3)	11/18/2019	1405	X				X			1	N	X	X														X						
	BH-2 (4-5)	11/18/2019	1410	X				X			1	N	X	X														X						
	BH-2 (6-7)	11/18/2019	1415	X				X			1	N	X	X														X						
	BH-2 (9-10)	11/18/2019	1425	X				X			1	N	X	X														X						

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>[Signature]</i>	11-20-2019	1615	<i>[Signature]</i>	11-21-19	12:00
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>[Signature]</i>	11-21-19	16:45	<i>[Signature]</i>	11-21-19	16:45
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
			<i>[Signature]</i>	11-22-19	16:45

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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0830

Analysis Request of Chain of Custody Record

Page : 2 of 2

**Tetra Tech, Inc.**901 West Wall Street, Suite 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

L1164150

Client Name:	ConocoPhillips	Site Manager:	Christian Llull
Project Name:	COP EVGSAU CTB		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-01987
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX			PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	BTX 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: 2019		WATER	SOIL	HCL	HNO ₃	ICE	NONE																								
		DATE	TIME																														
	BH-3 (0-1)	11/18/2019	1450	X			X			1	N	X	X														X						
	BH-3 (2-3)	11/18/2019	1455	X			X			1	N	X	X														X						
	BH-3 (4-5)	11/18/2019	1500	X			X			1	N	X	X														X						
	BH-3 (6-7)	11/18/2019	1510	X			X			1	N	X	X														X						
	BH-3 (9-10)	11/18/2019	1520	X			X			1	N	X	X														X						

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	11-20-2019	1615		11-21-19	12:00
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	11-21-19	16:45	SWA	11-21-19	16:45
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

1.7-1.1=1.0 uM
A2

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	COPTETRA	L1164350	
Cooler Received/Opened On:	11/12/19	Temperature:	1.6
Received By:	Tanner Windham		
Signature:	<i>K</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?	☐	☐	☐

Andy Vann

From: Chris McCord
Sent: Monday, November 25, 2019 2:09 PM
To: Troy Dunlap; Project Service
Subject: RE: COCs EVGSAU CTB *COPTETRA*

Please add all tests back to L1164150-01 thru -15.

Thanks,
Christopher McCord
Project Manager

Pace Analytical National Center for Testing & Innovation
12065 Lebanon Road | Mt. Juliet, TN 37122
615.773.3281 | Cell 615.504.3183
cmccord@pacenational.com | www.pacenational.com

ESC Lab Sciences is now Pace Analytical National Center for Testing & Innovation! Please make note of my new email address and website.

From: Troy Dunlap
Sent: Friday, November 22, 2019 9:32 PM
To: Chris McCord; Project Service
Subject: RE: COCs EVGSAU CTB *COPTETRA*

This was logged to L1164150 and sent to the labs.. Removed all analysis.

From: Chris McCord <CMcCord@pacenational.com>
Sent: Thursday, November 21, 2019 9:34 AM
To: Project Service <ProjServ@pacenational.com>
Subject: FW: COCs EVGSAU CTB *COPTETRA*
Importance: High

We will receive the attached samples today and tomorrow. Please place all samples on hold until further notice.

Thanks,
Christopher McCord
Project Manager

Pace Analytical National Center for Testing & Innovation
12065 Lebanon Road | Mt. Juliet, TN 37122

615.773.3281 | Cell 615.504.3183
cmccord@pacenational.com | pacenational.com

ESC Lab Sciences is now Pace Analytical National Center for Testing & Innovation! Please make note of my new email address and website.

From: Llull, Christian [<mailto:Christian.Llull@tetratech.com>]
Sent: Wednesday, November 20, 2019 5:36 PM
To: Chris McCord
Subject: Fwd: COCs EVGSAU CTB

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Chris.

You will receive these samples in the next couple days.

Project 212C-MD-01998 EVGSAU CTB

Please hold all these samples until further notice.

I apologize for the inconvenience. There was an error in the field crew following scope.

We may do some analysis but I need to evaluate.

Christian

From: Merritt, Clint
Sent: Wednesday, November 20, 2019 2:02 PM
To: Llull, Christian <Christian.Llull@tetratech.com>
Subject: COCs EVGSAU CTB

Take a look at these COC's real quick and make sure that they are correct

Thanks Christian!

Clinton Merritt | Staff Scientist I

Cell: 432.553.6375 Office: 432.687.8124

clint.merritt@tetrattech.com

Tetra Tech OGA | Complex World, Clear Solutions™
901 W. Wall Street., Suite 100 | Midland, TX 79701 | www.tetrattech.com

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ANALYTICAL REPORT

December 05, 2019

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1164452
Samples Received: 11/23/2019
Project Number: 212C-MD-01987
Description: COP EVGSAU CTB

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.



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

BH-4 (0-1') L1164452-01 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 10:10	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388955	1	11/30/19 20:49	11/30/19 21:18	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389848	1	12/02/19 19:00	12/02/19 21:35	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390223	1	11/26/19 10:58	12/03/19 16:59	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388748	1	11/26/19 10:58	11/30/19 01:48	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 03:39	KME	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

BH-4 (2-3') L1164452-02 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 10:15	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388955	1	11/30/19 20:49	11/30/19 21:18	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389848	1	12/02/19 19:00	12/02/19 21:44	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390223	1	11/26/19 10:58	12/03/19 17:21	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388748	1	11/26/19 10:58	11/30/19 02:08	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 03:51	KME	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

BH-4 (4-5') L1164452-03 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 10:20	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388955	1	11/30/19 20:49	11/30/19 21:18	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389848	1	12/02/19 19:00	12/02/19 21:54	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390223	1	11/26/19 10:58	12/03/19 18:32	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388748	1	11/26/19 10:58	11/30/19 02:28	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 04:04	KME	Mt. Juliet, TN

9 Sc

BH-4 (6-7') L1164452-04 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 10:25	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388955	1	11/30/19 20:49	11/30/19 21:18	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389848	1	12/02/19 19:00	12/02/19 22:13	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390223	1	11/26/19 10:58	12/03/19 18:55	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388748	1	11/26/19 10:58	11/30/19 02:48	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 04:16	KME	Mt. Juliet, TN

BH-4 (9-10') L1164452-05 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 10:30	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388955	1	11/30/19 20:49	11/30/19 21:18	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389848	1	12/02/19 19:00	12/02/19 22:22	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390223	1	11/26/19 10:58	12/03/19 19:17	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388748	1	11/26/19 10:58	11/30/19 03:07	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 06:15	KME	Mt. Juliet, TN

BH-5 (0-1') L1164452-06 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 11:00	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388955	1	11/30/19 20:49	11/30/19 21:18	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389848	1	12/02/19 19:00	12/02/19 22:32	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390223	1	11/26/19 10:58	12/03/19 19:39	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388748	1	11/26/19 10:58	11/30/19 03:27	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 06:28	KME	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

BH-5 (2-3') L1164452-07 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 11:05	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388955	1	11/30/19 20:49	11/30/19 21:18	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389848	1	12/02/19 19:00	12/02/19 22:41	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390223	1	11/26/19 10:58	12/03/19 20:02	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388748	1	11/26/19 10:58	11/30/19 03:48	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 06:41	KME	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

BH-5 (4-5') L1164452-08 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 11:10	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388955	1	11/30/19 20:49	11/30/19 21:18	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389848	1	12/02/19 19:00	12/02/19 23:10	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390223	1	11/26/19 10:58	12/03/19 20:24	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 02:43	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 06:53	KME	Mt. Juliet, TN

9 Sc

BH-5 (9-10') L1164452-09 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 11:20	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388955	1	11/30/19 20:49	11/30/19 21:18	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389848	1	12/02/19 19:00	12/02/19 23:19	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390223	1	11/26/19 10:58	12/03/19 20:46	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 03:03	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 07:06	KME	Mt. Juliet, TN

BH-5 (11-12') L1164452-10 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 11:30	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388955	1	11/30/19 20:49	11/30/19 21:18	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389848	1	12/02/19 19:00	12/02/19 23:29	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1391592	1	11/26/19 10:58	12/05/19 13:08	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 03:23	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 07:19	KME	Mt. Juliet, TN

BH-5 (14-15') L1164452-11 Solid

Collected by
Collected date/time
Received date/time

11/21/19 11:40
11/23/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388957	1	11/30/19 20:27	11/30/19 20:44	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/02/19 23:02	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1391592	1	11/26/19 10:58	12/05/19 13:29	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 03:44	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 07:31	KME	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn

BH-6 (0-1') L1164452-12 Solid

Collected by
Collected date/time
Received date/time

11/21/19 12:00
11/23/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388957	1	11/30/19 20:27	11/30/19 20:44	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/02/19 23:32	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1391592	1	11/26/19 10:58	12/05/19 13:49	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 04:04	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/28/19 04:46	KME	Mt. Juliet, TN

⁵ Sr⁶ Qc⁷ Gl⁸ Al

BH-6 (2-3') L1164452-13 Solid

Collected by
Collected date/time
Received date/time

11/21/19 12:05
11/23/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388957	1	11/30/19 20:27	11/30/19 20:44	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/02/19 23:47	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1391592	1	11/26/19 10:58	12/05/19 14:09	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 04:25	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	12/02/19 17:49	KME	Mt. Juliet, TN

⁹ Sc

BH-6 (4-5') L1164452-14 Solid

Collected by
Collected date/time
Received date/time

11/21/19 12:10
11/23/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388957	1	11/30/19 20:27	11/30/19 20:44	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/03/19 00:02	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1391127	1	11/26/19 10:58	12/05/19 12:58	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 04:45	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 07:44	KME	Mt. Juliet, TN

BH-6 (9-10') L1164452-15 Solid

Collected by
Collected date/time
Received date/time

11/21/19 12:20
11/23/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388957	1	11/30/19 20:27	11/30/19 20:44	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/03/19 00:47	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1391127	1	11/26/19 10:58	12/05/19 13:22	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 05:06	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 07:57	KME	Mt. Juliet, TN

BH-6 (13-14') L1164452-16 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 12:25	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388957	1	11/30/19 20:27	11/30/19 20:44	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/03/19 01:32	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1391127	1	11/26/19 10:58	12/05/19 13:46	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 05:26	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 08:10	KME	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn

BH-6 (16-17') L1164452-17 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 12:30	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388957	1	11/30/19 20:27	11/30/19 20:44	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/03/19 01:47	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390277	1	11/26/19 10:58	12/04/19 03:38	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 05:47	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 08:22	KME	Mt. Juliet, TN

⁵ Sr⁶ Qc⁷ Gl⁸ Al

BH-6 (19-20') L1164452-18 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 12:40	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388957	1	11/30/19 20:27	11/30/19 20:44	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/03/19 02:01	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390277	1	11/26/19 10:58	12/04/19 03:58	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 06:08	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 08:35	KME	Mt. Juliet, TN

⁹ Sc

BH-7 (0-1') L1164452-19 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 13:30	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388957	1	11/30/19 20:27	11/30/19 20:44	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/03/19 02:16	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390277	1	11/26/19 10:58	12/04/19 04:19	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 06:28	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 08:47	KME	Mt. Juliet, TN

BH-7 (2-3') L1164452-20 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 13:35	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388957	1	11/30/19 20:27	11/30/19 20:44	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/03/19 02:31	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390277	1	11/26/19 10:58	12/04/19 04:40	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 06:49	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387426	1	11/26/19 18:00	11/27/19 09:00	KME	Mt. Juliet, TN

BH-7 (4-5') L1164452-21 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 13:40	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388958	1	11/30/19 18:47	11/30/19 19:03	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/03/19 02:46	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390277	1	11/26/19 10:58	12/04/19 05:00	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 07:09	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387427	1	11/26/19 17:01	11/26/19 22:22	JDG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

BH-7 (9-10') L1164452-22 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 13:50	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388958	1	11/30/19 18:47	11/30/19 19:03	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/03/19 03:01	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390277	1	11/26/19 10:58	12/04/19 05:21	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389006	1	11/26/19 10:58	12/01/19 07:30	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387427	1	11/26/19 17:01	11/26/19 22:58	JDG	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

BH-7 (11-12') L1164452-23 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 13:55	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388958	1	11/30/19 18:47	11/30/19 19:03	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/03/19 03:16	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390277	1	11/26/19 10:58	12/04/19 05:42	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389012	1	11/26/19 10:58	11/30/19 00:28	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387427	1	11/26/19 17:01	11/26/19 23:12	JDG	Mt. Juliet, TN

9 Sc

BH-7 (14-15') L1164452-24 Solid

				Collected by	Collected date/time	Received date/time
					11/21/19 14:00	11/23/19 08:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1388958	1	11/30/19 18:47	11/30/19 19:03	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/03/19 03:31	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390277	1	11/26/19 10:58	12/04/19 06:02	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389012	1	11/26/19 10:58	11/30/19 00:47	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1387427	1	11/26/19 17:01	11/26/19 23:27	JDG	Mt. Juliet, TN

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



Chris McCord
Project Manager

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

Collected date/time: 11/21/19 10:10

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.0		1	11/30/2019 21:18	WG1388955

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	34.3	B	0.855	10.7	1	12/02/2019 21:35	WG1389848

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	0.0693	B J	0.0233	0.107	1	12/03/2019 16:59	WG1390223
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	101			77.0-120		12/03/2019 16:59	WG1390223

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		0.000430	0.00107	1	11/30/2019 01:48	WG1388748
Toluene	U		0.00134	0.00537	1	11/30/2019 01:48	WG1388748
Ethylbenzene	U		0.000570	0.00269	1	11/30/2019 01:48	WG1388748
Total Xylenes	U		0.00514	0.00699	1	11/30/2019 01:48	WG1388748
(S) <i>Toluene-d8</i>	103			75.0-131		11/30/2019 01:48	WG1388748
(S) <i>4-Bromofluorobenzene</i>	78.4			67.0-138		11/30/2019 01:48	WG1388748
(S) <i>1,2-Dichloroethane-d4</i>	102			70.0-130		11/30/2019 01:48	WG1388748

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	5.75		1.73	4.30	1	11/27/2019 03:39	WG1387426
C28-C40 Oil Range	3.17	J	0.295	4.30	1	11/27/2019 03:39	WG1387426
(S) <i>o</i> -Terphenyl	68.7			18.0-148		11/27/2019 03:39	WG1387426

Collected date/time: 11/21/19 10:15

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.5		1	11/30/2019 21:18	WG1388955

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	30.0	B	0.869	10.9	1	12/02/2019 21:44	WG1389848

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	0.0667	B J	0.0237	0.109	1	12/03/2019 17:21	WG1390223
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120		12/03/2019 17:21	WG1390223

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		0.000437	0.00109	1	11/30/2019 02:08	WG1388748
Toluene	U		0.00137	0.00546	1	11/30/2019 02:08	WG1388748
Ethylbenzene	U		0.000579	0.00273	1	11/30/2019 02:08	WG1388748
Total Xylenes	U		0.00522	0.00710	1	11/30/2019 02:08	WG1388748
(S) Toluene-d8	102			75.0-131		11/30/2019 02:08	WG1388748
(S) 4-Bromofluorobenzene	82.6			67.0-138		11/30/2019 02:08	WG1388748
(S) 1,2-Dichloroethane-d4	106			70.0-130		11/30/2019 02:08	WG1388748

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	U		1.76	4.37	1	11/27/2019 03:51	WG1387426
C28-C40 Oil Range	0.363	J	0.299	4.37	1	11/27/2019 03:51	WG1387426
(S) o-Terphenyl	54.1			18.0-148		11/27/2019 03:51	WG1387426

Collected date/time: 11/21/19 10:20

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.5		1	11/30/2019 21:18	WG1388955

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	116		0.888	11.2	1	12/02/2019 21:54	WG1389848

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	0.0663	B J	0.0242	0.112	1	12/03/2019 18:32	WG1390223
(S) a,a,a-Trifluorotoluene(FID)	99.8			77.0-120		12/03/2019 18:32	WG1390223

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		0.000447	0.00112	1	11/30/2019 02:28	WG1388748
Toluene	U		0.00140	0.00559	1	11/30/2019 02:28	WG1388748
Ethylbenzene	U		0.000592	0.00279	1	11/30/2019 02:28	WG1388748
Total Xylenes	U		0.00534	0.00726	1	11/30/2019 02:28	WG1388748
(S) Toluene-d8	103			75.0-131		11/30/2019 02:28	WG1388748
(S) 4-Bromofluorobenzene	81.6			67.0-138		11/30/2019 02:28	WG1388748
(S) 1,2-Dichloroethane-d4	104			70.0-130		11/30/2019 02:28	WG1388748

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	U		1.80	4.47	1	11/27/2019 04:04	WG1387426
C28-C40 Oil Range	U		0.306	4.47	1	11/27/2019 04:04	WG1387426
(S) o-Terphenyl	77.2			18.0-148		11/27/2019 04:04	WG1387426

Collected date/time: 11/21/19 10:25

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.3		1	11/30/2019 21:18	WG1388955

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	22.3	B	0.843	10.6	1	12/02/2019 22:13	WG1389848

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	0.0657	B J	0.0230	0.106	1	12/03/2019 18:55	WG1390223
(S) a,a,a-Trifluorotoluene(FID)	100			77.0-120		12/03/2019 18:55	WG1390223

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000424	0.00106	1	11/30/2019 02:48	WG1388748
Toluene	U		0.00133	0.00530	1	11/30/2019 02:48	WG1388748
Ethylbenzene	U		0.000562	0.00265	1	11/30/2019 02:48	WG1388748
Total Xylenes	U		0.00507	0.00689	1	11/30/2019 02:48	WG1388748
(S) Toluene-d8	100			75.0-131		11/30/2019 02:48	WG1388748
(S) 4-Bromofluorobenzene	81.6			67.0-138		11/30/2019 02:48	WG1388748
(S) 1,2-Dichloroethane-d4	102			70.0-130		11/30/2019 02:48	WG1388748

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	1.72	J	1.71	4.24	1	11/27/2019 04:16	WG1387426
C28-C40 Oil Range	1.11	J	0.291	4.24	1	11/27/2019 04:16	WG1387426
(S) o-Terphenyl	63.8			18.0-148		11/27/2019 04:16	WG1387426

Collected date/time: 11/21/19 10:30

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.7		1	11/30/2019 21:18	WG1388955

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	109		0.867	10.9	1	12/02/2019 22:22	WG1389848

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	0.0625	B J	0.0237	0.109	1	12/03/2019 19:17	WG1390223
(S) a,a,a-Trifluorotoluene(FID)	100			77.0-120		12/03/2019 19:17	WG1390223

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		0.000436	0.00109	1	11/30/2019 03:07	WG1388748
Toluene	U		0.00136	0.00545	1	11/30/2019 03:07	WG1388748
Ethylbenzene	U		0.000578	0.00273	1	11/30/2019 03:07	WG1388748
Total Xylenes	U		0.00521	0.00709	1	11/30/2019 03:07	WG1388748
(S) Toluene-d8	101			75.0-131		11/30/2019 03:07	WG1388748
(S) 4-Bromofluorobenzene	80.6			67.0-138		11/30/2019 03:07	WG1388748
(S) 1,2-Dichloroethane-d4	104			70.0-130		11/30/2019 03:07	WG1388748

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	U		1.76	4.36	1	11/27/2019 06:15	WG1387426
C28-C40 Oil Range	U		0.299	4.36	1	11/27/2019 06:15	WG1387426
(S) o-Terphenyl	72.7			18.0-148		11/27/2019 06:15	WG1387426

Collected date/time: 11/21/19 11:00

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.2		1	11/30/2019 21:18	WG1388955

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	24.0	<u>B</u>	0.853	10.7	1	12/02/2019 22:32	WG1389848

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	0.0543	<u>B J</u>	0.0233	0.107	1	12/03/2019 19:39	WG1390223
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120		12/03/2019 19:39	WG1390223

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		0.000429	0.00107	1	11/30/2019 03:27	WG1388748
Toluene	U		0.00134	0.00536	1	11/30/2019 03:27	WG1388748
Ethylbenzene	U		0.000569	0.00268	1	11/30/2019 03:27	WG1388748
Total Xylenes	U		0.00513	0.00697	1	11/30/2019 03:27	WG1388748
(S) Toluene-d8	103			75.0-131		11/30/2019 03:27	WG1388748
(S) 4-Bromofluorobenzene	77.9			67.0-138		11/30/2019 03:27	WG1388748
(S) 1,2-Dichloroethane-d4	103			70.0-130		11/30/2019 03:27	WG1388748

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	U		1.73	4.29	1	11/27/2019 06:28	WG1387426
C28-C40 Oil Range	1.09	<u>J</u>	0.294	4.29	1	11/27/2019 06:28	WG1387426
(S) o-Terphenyl	77.0			18.0-148		11/27/2019 06:28	WG1387426

Collected date/time: 11/21/19 11:05

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.2		1	11/30/2019 21:18	WG1388955

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	61.9		0.853	10.7	1	12/02/2019 22:41	WG1389848

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	0.0582	B J	0.0233	0.107	1	12/03/2019 20:02	WG1390223
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120		12/03/2019 20:02	WG1390223

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		0.000429	0.00107	1	11/30/2019 03:48	WG1388748
Toluene	U		0.00134	0.00536	1	11/30/2019 03:48	WG1388748
Ethylbenzene	U		0.000568	0.00268	1	11/30/2019 03:48	WG1388748
Total Xylenes	U		0.00513	0.00697	1	11/30/2019 03:48	WG1388748
(S) Toluene-d8	100			75.0-131		11/30/2019 03:48	WG1388748
(S) 4-Bromofluorobenzene	82.9			67.0-138		11/30/2019 03:48	WG1388748
(S) 1,2-Dichloroethane-d4	105			70.0-130		11/30/2019 03:48	WG1388748

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	U		1.73	4.29	1	11/27/2019 06:41	WG1387426
C28-C40 Oil Range	1.71	J	0.294	4.29	1	11/27/2019 06:41	WG1387426
(S) o-Terphenyl	69.4			18.0-148		11/27/2019 06:41	WG1387426

Collected date/time: 11/21/19 11:10

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.4		1	11/30/2019 21:18	WG1388955

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	45.4		0.824	10.4	1	12/02/2019 23:10	WG1389848

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	0.0552	B J	0.0225	0.104	1	12/03/2019 20:24	WG1390223
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120		12/03/2019 20:24	WG1390223

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		0.000415	0.00104	1	12/01/2019 02:43	WG1389006
Toluene	0.00156	J	0.00130	0.00519	1	12/01/2019 02:43	WG1389006
Ethylbenzene	U		0.000550	0.00259	1	12/01/2019 02:43	WG1389006
Total Xylenes	U		0.00496	0.00674	1	12/01/2019 02:43	WG1389006
(S) Toluene-d8	104			75.0-131		12/01/2019 02:43	WG1389006
(S) 4-Bromofluorobenzene	98.8			67.0-138		12/01/2019 02:43	WG1389006
(S) 1,2-Dichloroethane-d4	108			70.0-130		12/01/2019 02:43	WG1389006

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	U		1.67	4.15	1	11/27/2019 06:53	WG1387426
C28-C40 Oil Range	U		0.284	4.15	1	11/27/2019 06:53	WG1387426
(S) o-Terphenyl	66.6			18.0-148		11/27/2019 06:53	WG1387426

Collected date/time: 11/21/19 11:20

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.7		1	11/30/2019 21:18	WG1388955

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	46.8		0.858	10.8	1	12/02/2019 23:19	WG1389848

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	0.0592	B J	0.0234	0.108	1	12/03/2019 20:46	WG1390223
(S) a,a,a-Trifluorotoluene(FID)	100			77.0-120		12/03/2019 20:46	WG1390223

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		0.000431	0.00108	1	12/01/2019 03:03	WG1389006
Toluene	U		0.00135	0.00539	1	12/01/2019 03:03	WG1389006
Ethylbenzene	U		0.000572	0.00270	1	12/01/2019 03:03	WG1389006
Total Xylenes	U		0.00516	0.00701	1	12/01/2019 03:03	WG1389006
(S) Toluene-d8	105			75.0-131		12/01/2019 03:03	WG1389006
(S) 4-Bromofluorobenzene	104			67.0-138		12/01/2019 03:03	WG1389006
(S) 1,2-Dichloroethane-d4	110			70.0-130		12/01/2019 03:03	WG1389006

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	U		1.74	4.31	1	11/27/2019 07:06	WG1387426
C28-C40 Oil Range	U		0.296	4.31	1	11/27/2019 07:06	WG1387426
(S) o-Terphenyl	69.4			18.0-148		11/27/2019 07:06	WG1387426

Collected date/time: 11/21/19 11:30

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.7		1	11/30/2019 21:18	WG1388955

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	28.3	B	0.822	10.3	1	12/02/2019 23:29	WG1389848

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	0.0313	B J	0.0224	0.103	1	12/05/2019 13:08	WG1391592
(S) a,a,a-Trifluorotoluene(FID)	98.3			77.0-120		12/05/2019 13:08	WG1391592

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		0.000413	0.00103	1	12/01/2019 03:23	WG1389006
Toluene	U		0.00129	0.00517	1	12/01/2019 03:23	WG1389006
Ethylbenzene	U		0.000548	0.00258	1	12/01/2019 03:23	WG1389006
Total Xylenes	U		0.00494	0.00672	1	12/01/2019 03:23	WG1389006
(S) Toluene-d8	103			75.0-131		12/01/2019 03:23	WG1389006
(S) 4-Bromofluorobenzene	96.9			67.0-138		12/01/2019 03:23	WG1389006
(S) 1,2-Dichloroethane-d4	109			70.0-130		12/01/2019 03:23	WG1389006

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	U		1.66	4.13	1	11/27/2019 07:19	WG1387426
C28-C40 Oil Range	U		0.283	4.13	1	11/27/2019 07:19	WG1387426
(S) o-Terphenyl	79.1			18.0-148		11/27/2019 07:19	WG1387426

Collected date/time: 11/21/19 11:40

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.0		1	11/30/2019 20:44	WG1388957

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	16.6	B	0.854	10.7	1	12/02/2019 23:02	WG1389887

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0389	B J	0.0233	0.107	1	12/05/2019 13:29	WG1391592
(S) a,a,a-Trifluorotoluene(FID)	97.6			77.0-120		12/05/2019 13:29	WG1391592

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		0.000430	0.00107	1	12/01/2019 03:44	WG1389006
Toluene	U		0.00134	0.00537	1	12/01/2019 03:44	WG1389006
Ethylbenzene	U		0.000570	0.00269	1	12/01/2019 03:44	WG1389006
Total Xylenes	U		0.00514	0.00699	1	12/01/2019 03:44	WG1389006
(S) Toluene-d8	104			75.0-131		12/01/2019 03:44	WG1389006
(S) 4-Bromofluorobenzene	101			67.0-138		12/01/2019 03:44	WG1389006
(S) 1,2-Dichloroethane-d4	111			70.0-130		12/01/2019 03:44	WG1389006

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	U		1.73	4.30	1	11/27/2019 07:31	WG1387426
C28-C40 Oil Range	U		0.294	4.30	1	11/27/2019 07:31	WG1387426
(S) o-Terphenyl	80.9			18.0-148		11/27/2019 07:31	WG1387426

Collected date/time: 11/21/19 12:00

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.0		1	11/30/2019 20:44	WG1388957

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	422		0.837	10.5	1	12/02/2019 23:32	WG1389887

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	0.0228	0.105	1	12/05/2019 13:49	WG1391592
(S) a,a,a-Trifluorotoluene(FID)	97.6			77.0-120		12/05/2019 13:49	WG1391592

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		0.000421	0.00105	1	12/01/2019 04:04	WG1389006
Toluene	0.00135	J	0.00132	0.00526	1	12/01/2019 04:04	WG1389006
Ethylbenzene	U		0.000558	0.00263	1	12/01/2019 04:04	WG1389006
Total Xylenes	U		0.00503	0.00684	1	12/01/2019 04:04	WG1389006
(S) Toluene-d8	104			75.0-131		12/01/2019 04:04	WG1389006
(S) 4-Bromofluorobenzene	96.0			67.0-138		12/01/2019 04:04	WG1389006
(S) 1,2-Dichloroethane-d4	101			70.0-130		12/01/2019 04:04	WG1389006

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	29.8		1.70	4.21	1	11/28/2019 04:46	WG1387426
C28-C40 Oil Range	50.4		0.289	4.21	1	11/28/2019 04:46	WG1387426
(S) o-Terphenyl	52.1			18.0-148		11/28/2019 04:46	WG1387426

Collected date/time: 11/21/19 12:05

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.0		1	11/30/2019 20:44	WG1388957

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	138		0.837	10.5	1	12/02/2019 23:47	WG1389887

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	0.0359	B J	0.0228	0.105	1	12/05/2019 14:09	WG1391592
(S) a,a,a-Trifluorotoluene(FID)	98.6			77.0-120		12/05/2019 14:09	WG1391592

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		0.000421	0.00105	1	12/01/2019 04:25	WG1389006
Toluene	U		0.00132	0.00526	1	12/01/2019 04:25	WG1389006
Ethylbenzene	U		0.000558	0.00263	1	12/01/2019 04:25	WG1389006
Total Xylenes	U		0.00503	0.00684	1	12/01/2019 04:25	WG1389006
(S) Toluene-d8	104			75.0-131		12/01/2019 04:25	WG1389006
(S) 4-Bromofluorobenzene	99.1			67.0-138		12/01/2019 04:25	WG1389006
(S) 1,2-Dichloroethane-d4	105			70.0-130		12/01/2019 04:25	WG1389006

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	9.07		1.69	4.21	1	12/02/2019 17:49	WG1387426
C28-C40 Oil Range	15.8		0.288	4.21	1	12/02/2019 17:49	WG1387426
(S) o-Terphenyl	70.1			18.0-148		12/02/2019 17:49	WG1387426

Collected date/time: 11/21/19 12:10

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.3		1	11/30/2019 20:44	WG1388957

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	65.0		0.852	10.7	1	12/03/2019 00:02	WG1389887

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		0.0233	0.107	1	12/05/2019 12:58	WG1391127
(S) a,a,a-Trifluorotoluene(FID)	96.5			77.0-120		12/05/2019 12:58	WG1391127

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		0.000429	0.00107	1	12/01/2019 04:45	WG1389006
Toluene	0.00143	J	0.00134	0.00536	1	12/01/2019 04:45	WG1389006
Ethylbenzene	U		0.000568	0.00268	1	12/01/2019 04:45	WG1389006
Total Xylenes	U		0.00512	0.00697	1	12/01/2019 04:45	WG1389006
(S) Toluene-d8	105			75.0-131		12/01/2019 04:45	WG1389006
(S) 4-Bromofluorobenzene	98.4			67.0-138		12/01/2019 04:45	WG1389006
(S) 1,2-Dichloroethane-d4	111			70.0-130		12/01/2019 04:45	WG1389006

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	U		1.73	4.29	1	11/27/2019 07:44	WG1387426
C28-C40 Oil Range	U		0.294	4.29	1	11/27/2019 07:44	WG1387426
(S) o-Terphenyl	79.0			18.0-148		11/27/2019 07:44	WG1387426

Collected date/time: 11/21/19 12:20

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.7		1	11/30/2019 20:44	WG1388957

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	18.2	B	0.806	10.1	1	12/03/2019 00:47	WG1389887

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		0.0220	0.101	1	12/05/2019 13:22	WG1391127
(S) a,a,a-Trifluorotoluene(FID)	96.8			77.0-120		12/05/2019 13:22	WG1391127

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		0.000405	0.00101	1	12/01/2019 05:06	WG1389006
Toluene	0.00142	J	0.00127	0.00507	1	12/01/2019 05:06	WG1389006
Ethylbenzene	U		0.000537	0.00253	1	12/01/2019 05:06	WG1389006
Total Xylenes	U		0.00484	0.00659	1	12/01/2019 05:06	WG1389006
(S) Toluene-d8	105			75.0-131		12/01/2019 05:06	WG1389006
(S) 4-Bromofluorobenzene	102			67.0-138		12/01/2019 05:06	WG1389006
(S) 1,2-Dichloroethane-d4	104			70.0-130		12/01/2019 05:06	WG1389006

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	U		1.63	4.05	1	11/27/2019 07:57	WG1387426
C28-C40 Oil Range	U		0.278	4.05	1	11/27/2019 07:57	WG1387426
(S) o-Terphenyl	68.5			18.0-148		11/27/2019 07:57	WG1387426

Collected date/time: 11/21/19 12:25

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	99.0		1	11/30/2019 20:44	WG1388957

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	15.0	<u>B</u>	0.803	10.1	1	12/03/2019 01:32	WG1389887

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		0.0219	0.101	1	12/05/2019 13:46	WG1391127
(S) a,a,a-Trifluorotoluene(FID)	95.9			77.0-120		12/05/2019 13:46	WG1391127

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		0.000404	0.00101	1	12/01/2019 05:26	WG1389006
Toluene	U		0.00126	0.00505	1	12/01/2019 05:26	WG1389006
Ethylbenzene	U		0.000535	0.00253	1	12/01/2019 05:26	WG1389006
Total Xylenes	U		0.00483	0.00657	1	12/01/2019 05:26	WG1389006
(S) Toluene-d8	103			75.0-131		12/01/2019 05:26	WG1389006
(S) 4-Bromofluorobenzene	98.6			67.0-138		12/01/2019 05:26	WG1389006
(S) 1,2-Dichloroethane-d4	105			70.0-130		12/01/2019 05:26	WG1389006

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	U		1.63	4.04	1	11/27/2019 08:10	WG1387426
C28-C40 Oil Range	U		0.277	4.04	1	11/27/2019 08:10	WG1387426
(S) o-Terphenyl	80.6			18.0-148		11/27/2019 08:10	WG1387426

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

Collected date/time: 11/21/19 12:30

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.6		1	11/30/2019 20:44	WG1388957

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	22.3	B	0.840	10.6	1	12/03/2019 01:47	WG1389887

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	0.0361	B J	0.0229	0.106	1	12/04/2019 03:38	WG1390277
(S) a,a,a-Trifluorotoluene(FID)	93.3			77.0-120		12/04/2019 03:38	WG1390277

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		0.000423	0.00106	1	12/01/2019 05:47	WG1389006
Toluene	U		0.00132	0.00528	1	12/01/2019 05:47	WG1389006
Ethylbenzene	U		0.000560	0.00264	1	12/01/2019 05:47	WG1389006
Total Xylenes	U		0.00505	0.00687	1	12/01/2019 05:47	WG1389006
(S) Toluene-d8	101			75.0-131		12/01/2019 05:47	WG1389006
(S) 4-Bromofluorobenzene	98.9			67.0-138		12/01/2019 05:47	WG1389006
(S) 1,2-Dichloroethane-d4	109			70.0-130		12/01/2019 05:47	WG1389006

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	U		1.70	4.23	1	11/27/2019 08:22	WG1387426
C28-C40 Oil Range	U		0.290	4.23	1	11/27/2019 08:22	WG1387426
(S) o-Terphenyl	73.1			18.0-148		11/27/2019 08:22	WG1387426

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

Collected date/time: 11/21/19 12:40

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.7		1	11/30/2019 20:44	WG1388957

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	15.5	B	0.831	10.5	1	12/03/2019 02:01	WG1389887

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	0.0342	B J	0.0227	0.105	1	12/04/2019 03:58	WG1390277
(S) a,a,a-Trifluorotoluene(FID)	93.5			77.0-120		12/04/2019 03:58	WG1390277

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		0.000418	0.00105	1	12/01/2019 06:08	WG1389006
Toluene	U		0.00131	0.00523	1	12/01/2019 06:08	WG1389006
Ethylbenzene	U		0.000554	0.00261	1	12/01/2019 06:08	WG1389006
Total Xylenes	U		0.00500	0.00679	1	12/01/2019 06:08	WG1389006
(S) Toluene-d8	105			75.0-131		12/01/2019 06:08	WG1389006
(S) 4-Bromofluorobenzene	97.5			67.0-138		12/01/2019 06:08	WG1389006
(S) 1,2-Dichloroethane-d4	106			70.0-130		12/01/2019 06:08	WG1389006

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	1.70	J	1.68	4.18	1	11/27/2019 08:35	WG1387426
C28-C40 Oil Range	U		0.286	4.18	1	11/27/2019 08:35	WG1387426
(S) o-Terphenyl	73.3			18.0-148		11/27/2019 08:35	WG1387426

Collected date/time: 11/21/19 13:30

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.6		1	11/30/2019 20:44	WG1388957

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	351		0.849	10.7	1	12/03/2019 02:16	WG1389887

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	0.0309	B J	0.0232	0.107	1	12/04/2019 04:19	WG1390277
(S) a,a,a-Trifluorotoluene(FID)	93.5			77.0-120		12/04/2019 04:19	WG1390277

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000427	0.00107	1	12/01/2019 06:28	WG1389006
Toluene	U		0.00134	0.00534	1	12/01/2019 06:28	WG1389006
Ethylbenzene	U		0.000566	0.00267	1	12/01/2019 06:28	WG1389006
Total Xylenes	U		0.00511	0.00694	1	12/01/2019 06:28	WG1389006
(S) Toluene-d8	104			75.0-131		12/01/2019 06:28	WG1389006
(S) 4-Bromofluorobenzene	101			67.0-138		12/01/2019 06:28	WG1389006
(S) 1,2-Dichloroethane-d4	108			70.0-130		12/01/2019 06:28	WG1389006

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	2.88	J	1.72	4.27	1	11/27/2019 08:47	WG1387426
C28-C40 Oil Range	1.12	J	0.293	4.27	1	11/27/2019 08:47	WG1387426
(S) o-Terphenyl	70.7			18.0-148		11/27/2019 08:47	WG1387426

Collected date/time: 11/21/19 13:35

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.5		1	11/30/2019 20:44	WG1388957

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	286		0.841	10.6	1	12/03/2019 02:31	WG1389887

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	0.0300	B J	0.0230	0.106	1	12/04/2019 04:40	WG1390277
(S) a,a,a-Trifluorotoluene(FID)	93.6			77.0-120		12/04/2019 04:40	WG1390277

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000423	0.00106	1	12/01/2019 06:49	WG1389006
Toluene	0.00159	J	0.00132	0.00529	1	12/01/2019 06:49	WG1389006
Ethylbenzene	U		0.000561	0.00264	1	12/01/2019 06:49	WG1389006
Total Xylenes	U		0.00506	0.00688	1	12/01/2019 06:49	WG1389006
(S) Toluene-d8	103			75.0-131		12/01/2019 06:49	WG1389006
(S) 4-Bromofluorobenzene	96.6			67.0-138		12/01/2019 06:49	WG1389006
(S) 1,2-Dichloroethane-d4	109			70.0-130		12/01/2019 06:49	WG1389006

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	1.97	J	1.70	4.23	1	11/27/2019 09:00	WG1387426
C28-C40 Oil Range	1.21	J	0.290	4.23	1	11/27/2019 09:00	WG1387426
(S) o-Terphenyl	71.3			18.0-148		11/27/2019 09:00	WG1387426

Collected date/time: 11/21/19 13:40

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.5		1	11/30/2019 19:03	WG1388958

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	45.3		0.833	10.5	1	12/03/2019 02:46	WG1389887

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	0.0271	B J	0.0227	0.105	1	12/04/2019 05:00	WG1390277
(S) a,a,a-Trifluorotoluene(FID)	94.5			77.0-120		12/04/2019 05:00	WG1390277

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000419	0.00105	1	12/01/2019 07:09	WG1389006
Toluene	U		0.00131	0.00524	1	12/01/2019 07:09	WG1389006
Ethylbenzene	U		0.000555	0.00262	1	12/01/2019 07:09	WG1389006
Total Xylenes	U		0.00501	0.00681	1	12/01/2019 07:09	WG1389006
(S) Toluene-d8	104			75.0-131		12/01/2019 07:09	WG1389006
(S) 4-Bromofluorobenzene	97.9			67.0-138		12/01/2019 07:09	WG1389006
(S) 1,2-Dichloroethane-d4	108			70.0-130		12/01/2019 07:09	WG1389006

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	U		1.69	4.19	1	11/26/2019 22:22	WG1387427
C28-C40 Oil Range	U		0.287	4.19	1	11/26/2019 22:22	WG1387427
(S) o-Terphenyl	75.1			18.0-148		11/26/2019 22:22	WG1387427

Collected date/time: 11/21/19 13:50

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.8		1	11/30/2019 19:03	WG1388958

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	268		0.866	10.9	1	12/03/2019 03:01	WG1389887

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	0.0327	B J	0.0236	0.109	1	12/04/2019 05:21	WG1390277
(S) a,a,a-Trifluorotoluene(FID)	93.7			77.0-120		12/04/2019 05:21	WG1390277

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000436	0.00109	1	12/01/2019 07:30	WG1389006
Toluene	U		0.00136	0.00545	1	12/01/2019 07:30	WG1389006
Ethylbenzene	U		0.000577	0.00272	1	12/01/2019 07:30	WG1389006
Total Xylenes	U		0.00521	0.00708	1	12/01/2019 07:30	WG1389006
(S) Toluene-d8	104			75.0-131		12/01/2019 07:30	WG1389006
(S) 4-Bromofluorobenzene	101			67.0-138		12/01/2019 07:30	WG1389006
(S) 1,2-Dichloroethane-d4	104			70.0-130		12/01/2019 07:30	WG1389006

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	U		1.75	4.36	1	11/26/2019 22:58	WG1387427
C28-C40 Oil Range	U		0.299	4.36	1	11/26/2019 22:58	WG1387427
(S) o-Terphenyl	82.6			18.0-148		11/26/2019 22:58	WG1387427

Collected date/time: 11/21/19 13:55

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.4		1	11/30/2019 19:03	WG1388958

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	242		0.842	10.6	1	12/03/2019 03:16	WG1389887

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	0.0303	B J	0.0230	0.106	1	12/04/2019 05:42	WG1390277
(S) a,a,a-Trifluorotoluene(FID)	94.0			77.0-120		12/04/2019 05:42	WG1390277

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000424	0.00106	1	11/30/2019 00:28	WG1389012
Toluene	U		0.00132	0.00530	1	11/30/2019 00:28	WG1389012
Ethylbenzene	U		0.000562	0.00265	1	11/30/2019 00:28	WG1389012
Total Xylenes	U		0.00506	0.00689	1	11/30/2019 00:28	WG1389012
(S) Toluene-d8	102			75.0-131		11/30/2019 00:28	WG1389012
(S) 4-Bromofluorobenzene	90.9			67.0-138		11/30/2019 00:28	WG1389012
(S) 1,2-Dichloroethane-d4	103			70.0-130		11/30/2019 00:28	WG1389012

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	U		1.71	4.24	1	11/26/2019 23:12	WG1387427
C28-C40 Oil Range	U		0.290	4.24	1	11/26/2019 23:12	WG1387427
(S) o-Terphenyl	80.8			18.0-148		11/26/2019 23:12	WG1387427

Collected date/time: 11/21/19 14:00

L1164452

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.1		1	11/30/2019 19:03	WG1388958

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	421		0.863	10.9	1	12/03/2019 03:31	WG1389887

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	0.0279	B J	0.0236	0.109	1	12/04/2019 06:02	WG1390277
(S) a,a,a-Trifluorotoluene(FID)	93.4			77.0-120		12/04/2019 06:02	WG1390277

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		0.000434	0.00109	1	11/30/2019 00:47	WG1389012
Toluene	U		0.00136	0.00543	1	11/30/2019 00:47	WG1389012
Ethylbenzene	U		0.000575	0.00271	1	11/30/2019 00:47	WG1389012
Total Xylenes	U		0.00519	0.00706	1	11/30/2019 00:47	WG1389012
(S) Toluene-d8	102			75.0-131		11/30/2019 00:47	WG1389012
(S) 4-Bromofluorobenzene	87.1			67.0-138		11/30/2019 00:47	WG1389012
(S) 1,2-Dichloroethane-d4	102			70.0-130		11/30/2019 00:47	WG1389012

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	U		1.75	4.34	1	11/26/2019 23:27	WG1387427
C28-C40 Oil Range	U		0.298	4.34	1	11/26/2019 23:27	WG1387427
(S) o-Terphenyl	84.7			18.0-148		11/26/2019 23:27	WG1387427

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 [L1164452-01,02,03,04,05,06,07,08,09,10](#)

Method Blank (MB)

(MB) R3478064-1 11/30/19 21:18

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

L1164452-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1164452-01 11/30/19 21:18 • (DUP) R3478064-3 11/30/19 21:18

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	93.0	91.6	1	1.51		10

Laboratory Control Sample (LCS)

(LCS) R3478064-2 11/30/19 21:18

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	49.9	99.9	85.0-115	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011 [L1164452-11,12,13,14,15,16,17,18,19,20](#)

Method Blank (MB)

(MB) R3478061-1 11/30/19 20:44

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00200			

L1164452-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1164452-12 11/30/19 20:44 • (DUP) R3478061-3 11/30/19 20:44

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	95.0	94.4	1	0.604		10

Laboratory Control Sample (LCS)

(LCS) R3478061-2 11/30/19 20:44

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.1	100	85.0-115	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011 [L1164452-21,22,23,24](#)

Method Blank (MB)

(MB) R3478060-1 11/30/19 19:03

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

L1164453-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1164453-03 11/30/19 19:03 • (DUP) R3478060-3 11/30/19 19:03

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	93.2	93.0	1	0.197		10

Laboratory Control Sample (LCS)

(LCS) R3478060-2 11/30/19 19:03

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.2	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

[L1164452-01,02,03,04,05,06,07,08,09,10](#)

Method Blank (MB)

(MB) R3478358-1 12/02/19 20:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	3.53		0.795	10.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1164452-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1164452-03 12/02/19 21:54 • (DUP) R3478358-3 12/02/19 22:03

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	116	119	1	2.88		20

L1165381-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1165381-10 12/03/19 01:42 • (DUP) R3478358-6 12/03/19 01:52

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	24.6	21.6	1	12.9		20

Laboratory Control Sample (LCS)

(LCS) R3478358-2 12/02/19 20:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	207	103	90.0-110	

L1165381-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1165381-01 12/02/19 23:39 • (MS) R3478358-4 12/02/19 23:48 • (MSD) R3478358-5 12/02/19 23:58

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	517	20.4	535	526	99.5	97.8	1	80.0-120			1.68	20

Wet Chemistry by Method 300.0

[L1164452-11,12,13,14,15,16,17,18,19,20,21,22,23,24](#)

Method Blank (MB)

(MB) R3478363-1 12/02/19 22:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	4.28		0.795	10.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1164452-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1164452-11 12/02/19 23:02 • (DUP) R3478363-3 12/02/19 23:17

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	16.6	15.7	1	5.86		20

L1164838-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1164838-03 12/03/19 05:31 • (DUP) R3478363-6 12/03/19 05:45

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	6300	6330	20	0.341		20

Laboratory Control Sample (LCS)

(LCS) R3478363-2 12/02/19 22:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	208	104	90.0-110	

L1164452-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1164452-14 12/03/19 00:02 • (MS) R3478363-4 12/03/19 00:17 • (MSD) R3478363-5 12/03/19 00:32

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	65.0	627	623	105	104	1	80.0-120			0.546	20

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

[L1164452-01,02,03,04,05,06,07,08,09](#)

Method Blank (MB)

(MB) R3479355-3 12/03/19 11:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0557	⌵	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	102			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3479355-2 12/03/19 10:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.33	96.9	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) by Method 8015D/GRO

[L1164452-17,18,19,20,21,22,23,24](#)

Method Blank (MB)

(MB) R3479341-2 12/03/19 22:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0273	⌵	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.2			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3479341-1 12/03/19 21:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.79	105	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			105	77.0-120	

L1164452-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1164452-22 12/04/19 05:21 • (MS) R3479341-3 12/04/19 06:44 • (MSD) R3479341-4 12/04/19 07:04

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.99	0.0327	3.61	3.97	59.6	65.6	1	10.0-151			9.50	28
(S) a,a,a-Trifluorotoluene(FID)					98.2	102		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1164452-14,15,16

Method Blank (MB)

(MB) R3479507-3 12/05/19 07:45

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	97.5			77.0-120

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

(LCS) R3479507-1 12/05/19 06:32 • (LCSD) R3479507-2 12/05/19 06:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.43	5.50	98.7	100	72.0-127			1.28	20
(S) a,a,a-Trifluorotoluene(FID)				105	105	77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

L1164452-10,11,12,13

Method Blank (MB)

(MB) R3479517-4 12/05/19 05:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0260	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.4			77.0-120

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

(LCS) R3479517-2 12/05/19 04:36 • (LCSD) R3479517-3 12/05/19 04:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	4.98	5.49	90.5	99.8	72.0-127			9.74	20
(S) a,a,a-Trifluorotoluene(FID)				108	110	77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

[L1164452-01,02,03,04,05,06,07](#)

Method Blank (MB)

(MB) R3477985-2 11/29/19 20:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	101			75.0-131
(S) 4-Bromofluorobenzene	83.8			67.0-138
(S) 1,2-Dichloroethane-d4	101			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) R3477985-1 11/29/19 19:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.127	102	70.0-123	
Ethylbenzene	0.125	0.134	107	74.0-126	
Toluene	0.125	0.102	81.6	75.0-121	
Xylenes, Total	0.375	0.449	120	72.0-127	
(S) Toluene-d8			101	75.0-131	
(S) 4-Bromofluorobenzene			105	67.0-138	
(S) 1,2-Dichloroethane-d4			98.5	70.0-130	

L1164432-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1164432-14 11/30/19 01:28 • (MS) R3477985-3 11/30/19 04:08 • (MSD) R3477985-4 11/30/19 04:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	ND	0.144	0.117	115	93.6	1	10.0-149			20.7	37
Ethylbenzene	0.125	ND	0.147	0.120	118	96.0	1	10.0-160			20.2	38
Toluene	0.125	ND	0.112	0.0936	89.6	74.9	1	10.0-156			17.9	38
Xylenes, Total	0.375	ND	0.486	0.391	130	104	1	10.0-160			21.7	38
(S) Toluene-d8					99.4	103		75.0-131				
(S) 4-Bromofluorobenzene					103	100		67.0-138				
(S) 1,2-Dichloroethane-d4					96.5	99.1		70.0-130				

Method Blank (MB)

(MB) R3479511-2 12/01/19 00:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	101			75.0-131
(S) 4-Bromofluorobenzene	96.8			67.0-138
(S) 1,2-Dichloroethane-d4	106			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3479511-1 11/30/19 23:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.126	101	70.0-123	
Ethylbenzene	0.125	0.114	91.2	74.0-126	
Toluene	0.125	0.111	88.8	75.0-121	
Xylenes, Total	0.375	0.319	85.1	72.0-127	
(S) Toluene-d8			102	75.0-131	
(S) 4-Bromofluorobenzene			99.0	67.0-138	
(S) 1,2-Dichloroethane-d4			109	70.0-130	

L1164393-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1164393-06 12/01/19 01:01 • (MS) R3479511-3 12/01/19 07:51 • (MSD) R3479511-4 12/01/19 08:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	1.00	ND	0.612	0.599	61.2	59.9	8	10.0-149			2.15	37
Ethylbenzene	1.00	ND	0.413	0.354	41.3	35.4	8	10.0-160			15.4	38
Toluene	1.00	ND	0.464	0.446	46.4	44.6	8	10.0-156			3.96	38
Xylenes, Total	3.00	ND	1.11	1.11	37.0	37.0	8	10.0-160			0.000	38
(S) Toluene-d8					104	103		75.0-131				
(S) 4-Bromofluorobenzene					101	103		67.0-138				
(S) 1,2-Dichloroethane-d4					112	112		70.0-130				

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

[L1164452-23,24](#)

Method Blank (MB)

(MB) R3478511-2 11/29/19 23:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	104			75.0-131
(S) 4-Bromofluorobenzene	88.2			67.0-138
(S) 1,2-Dichloroethane-d4	93.8			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3478511-1 11/29/19 21:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.127	102	70.0-123	
Ethylbenzene	0.125	0.0949	75.9	74.0-126	
Toluene	0.125	0.108	86.4	75.0-121	
Xylenes, Total	0.375	0.291	77.6	72.0-127	
(S) Toluene-d8			101	75.0-131	
(S) 4-Bromofluorobenzene			89.8	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

Semi-Volatile Organic Compounds (GC) by Method 8015

[L1164452-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15,16,17,18,19,20](#)

Method Blank (MB)

(MB) R3476759-1 11/27/19 03:13

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	79.1			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3476759-2 11/27/19 03:26

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	45.6	91.2	50.0-150	
(S) o-Terphenyl			95.8	18.0-148	

L1164452-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1164452-04 11/27/19 04:16 • (MS) R3476759-3 11/27/19 04:29 • (MSD) R3476759-4 11/27/19 05:56

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	53.0	1.72	43.3	44.8	78.4	81.2	1	50.0-150			3.37	20
(S) o-Terphenyl					81.7	92.0		18.0-148				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 [L1164452-21,22,23,24](#)

Method Blank (MB)

(MB) R3476698-1 11/26/19 21:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	80.0			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3476698-2 11/26/19 21:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	45.2	90.4	50.0-150	
(S) o-Terphenyl			83.0	18.0-148	

L1164481-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1164481-03 11/27/19 12:09 • (MS) R3476698-3 11/27/19 12:23 • (MSD) R3476698-4 11/27/19 12:37

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	50.3	16.4	44.2	44.5	55.3	56.8	1	50.0-150			0.676	20
(S) o-Terphenyl					67.5	68.6		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.

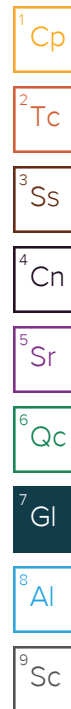
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. 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.
ND	Not detected at the Reporting Limit (or MDL where applicable).
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.

State Accreditations

Alabama	40660
Alaska	17-026
Arizona	AZ0612
Arkansas	88-0469
California	2932
Colorado	TN00003
Connecticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia ¹	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky ^{1 6}	90010
Kentucky ²	16
Louisiana	AI30792
Louisiana ¹	LA180010
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086

Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey-NELAP	TN002
New Mexico ¹	n/a
New York	11742
North Carolina	Env375
North Carolina ¹	DW21704
North Carolina ³	41
North Dakota	R-140
Ohio-VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	LA000356
South Carolina	84004
South Dakota	n/a
Tennessee ^{1 4}	2006
Texas	T104704245-18-15
Texas ⁵	LAB0152
Utah	TN00003
Vermont	VT2006
Virginia	460132
Washington	C847
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

Third Party Federal Accreditations

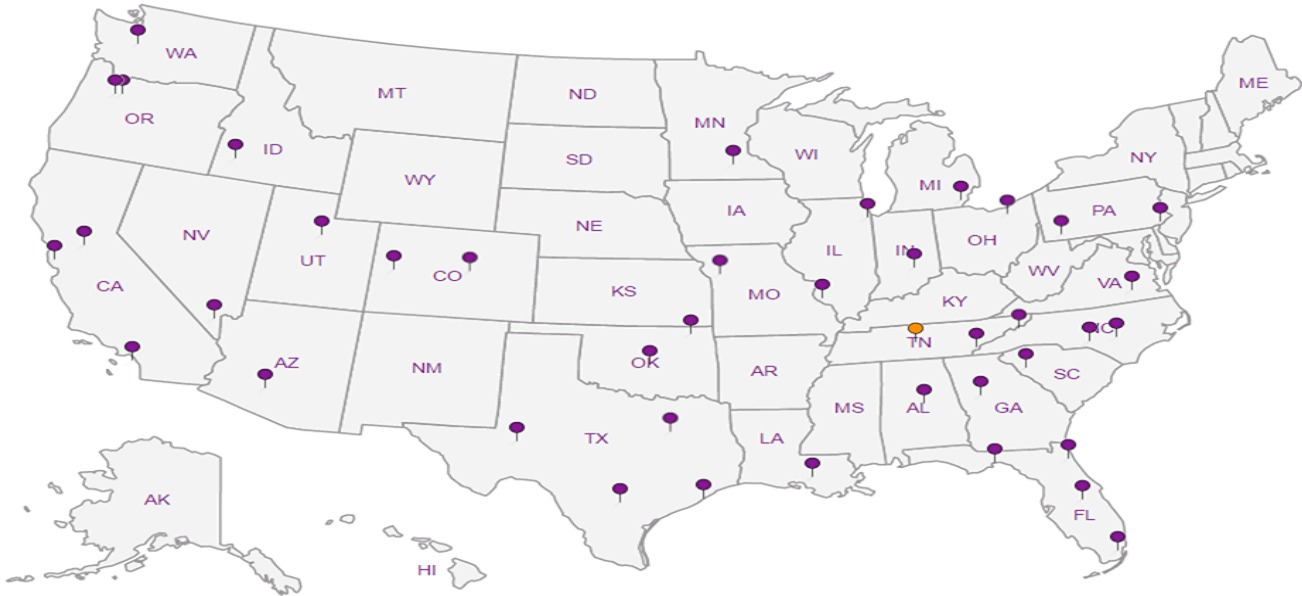
A2LA – ISO 17025	1461.01
A2LA – ISO 17025 ⁵	1461.02
Canada	1461.01
EPA-Crypto	TN00003

AIHA-LAP,LLC EMLAP	100789
DOD	1461.01
USDA	P330-15-00234

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

Our Locations

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



Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

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

G227

Client Name:	ConocoPhillips	Site Manager:	Christian Llull
Project Name:	COP EVGSAU CTB		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-01987
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	<i>[Signature]</i>

Comments: COPTETRA Acctnum

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	ANALYSIS REQUEST (Circle or Specify Method No.)															HOLD						
		YEAR: 2019		WATER	SOIL	HCL	HNO ₃	ICE	NONE			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	
		DATE	TIME																														
	BH-4 (0'-1')	11/21/2019	1010	X			X			1	N	X	X														X						
01	BH-4 (2'-3')	11/21/2019	1015	X			X			1	N	X	X														X						
02	BH-4 (4'-5')	11/21/2019	1020	X			X			1	N	X	X														X						
03	BH-4 (6'-7')	11/21/2019	1025	X			X			1	N	X	X														X						
04	BH-4 (9'-10')	11/21/2019	1030	X			X			1	N	X	X														X						
05	BH-5 (0'-1')	11/21/2019	1100	X			X			1	N	X	X														X						
06	BH-5 (2'-3')	11/21/2019	1105	X			X			1	N	X	X														X						
07	BH-5 (4'-5')	11/21/2019	1110	X			X			1	N	X	X														X						
08	BH-5 (6'-7')	11/21/2019	1115	X			X			1	N																						X
09	BH-5 (9'-10')	11/21/2019	1120	X			X			1	N	X	X														X						
Date: Time:		Received by: /		Date: Time:		LAB USE							REMARKS:																				

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>[Signature]</i>	11/22	16:00	<i>[Signature]</i>	11/22/19	16:00
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>[Signature]</i>	11/22/19	17:00	<i>[Signature]</i>	11/22/19	17:00
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>[Signature]</i>			<i>[Signature]</i>	11/23/19	0830

LAB USE ONLY

Sample Temperature

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

11-177

ORIGINAL COPY

RAD SCREEN: <0.5 mR/hr

A8t-a.9 Ase

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: ConocoPhillips Site Manager: Christian Llull

Project Name: COP EVGSAU CTB

Project Location: Lea County, New Mexico Project #: 212C-MD-01987

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

Receiving Laboratory: Pace Analytical Sampler Signature: *[Signature]*

Comments: COPTETRA Acctnum

LAB # (LAB USE ONLY)		SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	COPIETRA Accutram																HOLD																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
			YEAR: 2019		WATER	SOIL	HCL	HNO ₃	ICE	NONE			BTEX 8021B	BTEX 8021B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0		Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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10		BH-5 (11'-12')	11/21/2019	1130		X				X		1	N	X	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

Relinquished by: *[Signature]* Date: 11/22/19 Time: 16:00 Received by: *[Signature]* Date: 11/22/19 Time: 16:00

Relinquished by: *[Signature]* Date: 11/22/19 Time: 17:00 Received by: *[Signature]* Date: 11/22/19 Time: 17:00

Relinquished by: *[Signature]* Date: 11/23/19 Time: 0630 Received by: *[Signature]* Date: 11/23/19 Time: 0630

LAB USE ONLY

Sample Temperature

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

RAD SCREEN: <0.5 mR/hr

Analysis Request of Chain of Custody Record

Page : 3 of 3

**Tetra Tech, Inc.**901 West Wall Street, Suite 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

1164452

Client Name:	ConocoPhillips	Site Manager:	Christian Llull
Project Name:	COP EVGSAU CTB		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-01987
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	Pace Analytical	Sampler Signature:	
Comments:	COPTETRA Acctnum		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX			PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	BTX 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: 2019		WATER	SOIL	HCL	HNO ₃	ICE	NONE																									
		DATE	TIME																															
19	BH-7 (0'-1')	11/21/2019	1330		X				X			1	N	X	X																			
20	BH-7 (2'-3')	11/21/2019	1335		X				X			1	N	X	X														X					
21	BH-7 (4'-5')	11/21/2019	1340		X				X			1	N	X	X														X					
22	BH-7 (6'-7')	11/21/2019	1345		X				X			1	N																					X
23	BH-7 (9'-10')	11/21/2019	1350		X				X			1	N	X	X														X					
24	BH-7 (11'-12')	11/21/2019	1355		X				X			1	N	X	X														X					
25	BH-7 (14'-15')	11/21/2019	1400		X				X			1	N	X	X														X					

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	11/22	16:00		11/22/19	16:00
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	11/22/19	17:00	SOA	11/22/19	17:00
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
				11/23/19	0830

LAB USE ONLY

Sample Temperature

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

RAD SCREEN: <0.5 mR/hr

0.841 = 0.9 ASm

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	Capitol	SGD:	1164452
Cooler Received/Opened On:	11 / 23 / 19	Temperature:	0.9
Received By:	Kelsey Stephenson		
Signature:			
Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	/		
COC Signed / Accurate?		/	
Bottles arrive intact?		/	
Correct bottles used?		/	
Sufficient volume sent?		/	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			



ANALYTICAL REPORT

December 05, 2019

ConocoPhillips - Tetra Tech

Sample Delivery Group: L1164665
Samples Received: 11/21/2019
Project Number: 212C-MD-01987
Description: COP EVGSAU CTB

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.



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BH-8 (2-3) L1164665-02	6	⁴ Cn
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BH-8 (0-1) L1164665-01 Solid

Collected by
Clint Meritt

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

Received date/time
11/21/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1389060	1	11/30/19 15:13	11/30/19 15:28	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/03/19 03:46	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1389121	1	11/26/19 12:39	12/03/19 13:11	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388741	1	11/26/19 12:39	11/29/19 13:08	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1389942	1	12/03/19 07:35	12/04/19 12:23	KME	Mt. Juliet, TN

¹ Cp² Tc³ Ss⁴ Cn

BH-8 (2-3) L1164665-02 Solid

Collected by
Clint Meritt

Collected date/time
11/19/19 11:55

Received date/time
11/21/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1389060	1	11/30/19 15:13	11/30/19 15:28	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	1	12/02/19 20:10	12/03/19 04:31	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1389121	1	11/26/19 12:39	12/03/19 13:32	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1388741	1	11/26/19 12:39	11/29/19 13:28	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1389942	1	12/03/19 07:35	12/04/19 12:35	KME	Mt. Juliet, TN

⁵ Sr⁶ Qc⁷ Gl⁸ Al

AH-1 (0-1) L1164665-03 Solid

Collected by
Clint Meritt

Collected date/time
11/19/19 12:00

Received date/time
11/21/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1389060	1	11/30/19 15:13	11/30/19 15:28	KBC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG1389887	5	12/02/19 20:10	12/03/19 04:46	MCG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1390431	2500	11/26/19 12:39	12/03/19 17:59	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1389414	200	11/26/19 12:39	12/01/19 13:42	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1389942	100	12/03/19 07:35	12/04/19 12:48	KME	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.



Chris McCord
Project Manager



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

L1164665

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.9		1	11/30/2019 15:28	WG1389060

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	18.6	B	0.838	10.5	1	12/03/2019 03:46	WG1389887

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	0.0348	B J	0.0229	0.105	1	12/03/2019 13:11	WG1389121
(S) a,a,a-Trifluorotoluene(FID)	94.3			77.0-120		12/03/2019 13:11	WG1389121

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		0.000422	0.00105	1	11/29/2019 13:08	WG1388741
Toluene	U		0.00132	0.00527	1	11/29/2019 13:08	WG1388741
Ethylbenzene	U		0.000559	0.00263	1	11/29/2019 13:08	WG1388741
Total Xylenes	U		0.00504	0.00685	1	11/29/2019 13:08	WG1388741
(S) Toluene-d8	99.5			75.0-131		11/29/2019 13:08	WG1388741
(S) 4-Bromofluorobenzene	91.4			67.0-138		11/29/2019 13:08	WG1388741
(S) 1,2-Dichloroethane-d4	101			70.0-130		11/29/2019 13:08	WG1388741

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	U		1.70	4.22	1	12/04/2019 12:23	WG1389942
C28-C40 Oil Range	2.99	J	0.289	4.22	1	12/04/2019 12:23	WG1389942
(S) o-Terphenyl	70.9			18.0-148		12/04/2019 12:23	WG1389942

Collected date/time: 11/19/19 11:55

L1164665

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.6		1	11/30/2019 15:28	WG1389060

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	40.2	B	0.868	10.9	1	12/03/2019 04:31	WG1389887

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	0.0384	B J	0.0237	0.109	1	12/03/2019 13:32	WG1389121
(S) a,a,a-Trifluorotoluene(FID)	94.9			77.0-120		12/03/2019 13:32	WG1389121

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		0.000437	0.00109	1	11/29/2019 13:28	WG1388741
Toluene	U		0.00136	0.00546	1	11/29/2019 13:28	WG1388741
Ethylbenzene	U		0.000579	0.00273	1	11/29/2019 13:28	WG1388741
Total Xylenes	U		0.00522	0.00710	1	11/29/2019 13:28	WG1388741
(S) Toluene-d8	100			75.0-131		11/29/2019 13:28	WG1388741
(S) 4-Bromofluorobenzene	89.7			67.0-138		11/29/2019 13:28	WG1388741
(S) 1,2-Dichloroethane-d4	103			70.0-130		11/29/2019 13:28	WG1388741

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	3.21	J	1.76	4.37	1	12/04/2019 12:35	WG1389942
C28-C40 Oil Range	8.93		0.299	4.37	1	12/04/2019 12:35	WG1389942
(S) o-Terphenyl	64.8			18.0-148		12/04/2019 12:35	WG1389942

Collected date/time: 11/19/19 12:00

L1164665

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	88.3		1	11/30/2019 15:28	WG1389060

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	479		4.51	56.6	5	12/03/2019 04:46	WG1389887

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	5830		61.5	283	2500	12/03/2019 17:59	WG1390431
(S) a,a,a-Trifluorotoluene(FID)	96.8			77.0-120		12/03/2019 17:59	WG1390431

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	23.7		0.0906	0.226	200	12/01/2019 13:42	WG1389414
Toluene	196		0.283	1.13	200	12/01/2019 13:42	WG1389414
Ethylbenzene	189		0.120	0.566	200	12/01/2019 13:42	WG1389414
Total Xylenes	255		1.08	1.47	200	12/01/2019 13:42	WG1389414
(S) Toluene-d8	96.6			75.0-131		12/01/2019 13:42	WG1389414
(S) 4-Bromofluorobenzene	91.9			67.0-138		12/01/2019 13:42	WG1389414
(S) 1,2-Dichloroethane-d4	114			70.0-130		12/01/2019 13:42	WG1389414

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	15400		182	453	100	12/04/2019 12:48	WG1389942
C28-C40 Oil Range	5940		31.0	453	100	12/04/2019 12:48	WG1389942
(S) o-Terphenyl	0.000	J7		18.0-148		12/04/2019 12:48	WG1389942

Total Solids by Method 2540 G-2011 [L1164665-01,02,03](#)

Method Blank (MB)

(MB) R3478033-1 11/30/19 15:28

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

L1165733-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1165733-01 11/30/19 15:28 • (DUP) R3478033-3 11/30/19 15:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	83.1	83.4	1	0.317		10

Laboratory Control Sample (LCS)

(LCS) R3478033-2 11/30/19 15:28

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	49.7	99.4	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

[L1164665-01,02,03](#)

Method Blank (MB)

(MB) R3478363-1 12/02/19 22:17

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	4.28	⬇	0.795	10.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1164452-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1164452-11 12/02/19 23:02 • (DUP) R3478363-3 12/02/19 23:17

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	16.6	15.7	1	5.86		20

L1164838-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1164838-03 12/03/19 05:31 • (DUP) R3478363-6 12/03/19 05:45

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	5690	5710	20	0.341		20

Laboratory Control Sample (LCS)

(LCS) R3478363-2 12/02/19 22:32

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	208	104	90.0-110	

L1164452-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1164452-14 12/03/19 00:02 • (MS) R3478363-4 12/03/19 00:17 • (MSD) R3478363-5 12/03/19 00:32

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	536	65.0	627	623	105	104	1	80.0-120			0.546	20

Volatile Organic Compounds (GC) by Method 8015D/GRO [L1164665-01,02](#)

Method Blank (MB)

(MB) R3478579-2 12/03/19 09:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0567	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	97.6			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3478579-1 12/03/19 08:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.23	95.1	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			107	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

[L1164665-03](#)

Method Blank (MB)

(MB) R3478699-2 12/03/19 09:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0567	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	97.6			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3478699-1 12/03/19 08:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.23	95.1	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			107	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

L1164665-01,02

Method Blank (MB)

(MB) R3477734-3 11/29/19 10:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	0.000525	U	0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	101			75.0-131
(S) 4-Bromofluorobenzene	90.1			67.0-138
(S) 1,2-Dichloroethane-d4	99.6			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) R3477734-1 11/29/19 09:18 • (LCSD) R3477734-2 11/29/19 09:38

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	0.119	0.120	95.2	96.0	70.0-123			0.837	20
Ethylbenzene	0.125	0.131	0.129	105	103	74.0-126			1.54	20
Toluene	0.125	0.0974	0.0956	77.9	76.5	75.0-121			1.87	20
Xylenes, Total	0.375	0.435	0.424	116	113	72.0-127			2.56	20
(S) Toluene-d8				102	100	75.0-131				
(S) 4-Bromofluorobenzene				101	109	67.0-138				
(S) 1,2-Dichloroethane-d4				97.8	98.4	70.0-130				

L1163722-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1163722-05 11/29/19 11:07 • (MS) R3477734-4 11/29/19 17:29 • (MSD) R3477734-5 11/29/19 17:49

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	0.129	ND	0.123	0.141	95.3	109	1.03	10.0-149			13.6	37
Ethylbenzene	0.129	ND	0.126	0.142	97.7	110	1.03	10.0-160			11.9	38
Toluene	0.129	0.0122	0.102	0.114	69.6	78.9	1.03	10.0-156			11.1	38
Xylenes, Total	0.387	0.00689	0.407	0.454	103	116	1.03	10.0-160			10.9	38
(S) Toluene-d8					101	101		75.0-131				
(S) 4-Bromofluorobenzene					102	98.3		67.0-138				
(S) 1,2-Dichloroethane-d4					97.4	97.0		70.0-130				

Volatile Organic Compounds (GC/MS) by Method 8260B L1164665-01,02

L1163779-37 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1163779-37 11/29/19 11:27 • (MS) R3477734-6 11/29/19 18:09 • (MSD) R3477734-7 11/29/19 18:54

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 %
Benzene	0.102	ND	0.0948	0.0927	92.9	90.9	1	10.0-149			2.24	37
Ethylbenzene	0.102	ND	0.0998	0.0933	97.8	91.5	1	10.0-160			6.73	38
Toluene	0.102	ND	0.0807	0.0752	79.1	73.7	1	10.0-156			7.06	38
Xylenes, Total	0.305	ND	0.321	0.302	105	99.0	1	10.0-160			6.10	38
(S) Toluene-d8					103	101		75.0-131				
(S) 4-Bromofluorobenzene					98.4	101		67.0-138				
(S) 1,2-Dichloroethane-d4					95.8	98.9		70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3477909-3 12/01/19 11:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	98.4			75.0-131
(S) 4-Bromofluorobenzene	90.3			67.0-138
(S) 1,2-Dichloroethane-d4	110			70.0-130

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

(LCS) R3477909-1 12/01/19 09:50 • (LCSD) R3477909-2 12/01/19 10:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.132	0.146	106	117	70.0-123			10.1	20
Ethylbenzene	0.125	0.111	0.124	88.8	99.2	74.0-126			11.1	20
Toluene	0.125	0.106	0.116	84.8	92.8	75.0-121			9.01	20
Xylenes, Total	0.375	0.362	0.405	96.5	108	72.0-127			11.2	20
(S) Toluene-d8				93.1	93.1	75.0-131				
(S) 4-Bromofluorobenzene				92.3	92.9	67.0-138				
(S) 1,2-Dichloroethane-d4				116	116	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015 [L1164665-01,02,03](#)

Method Blank (MB)

(MB) R3478638-1 12/03/19 15:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	73.9			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3478638-2 12/03/19 16:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	41.7	83.4	50.0-150	
(S) o-Terphenyl			86.8	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.

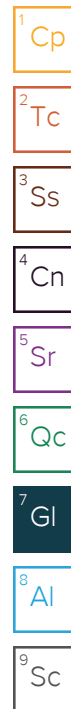
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

Qualifier Description

B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

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

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

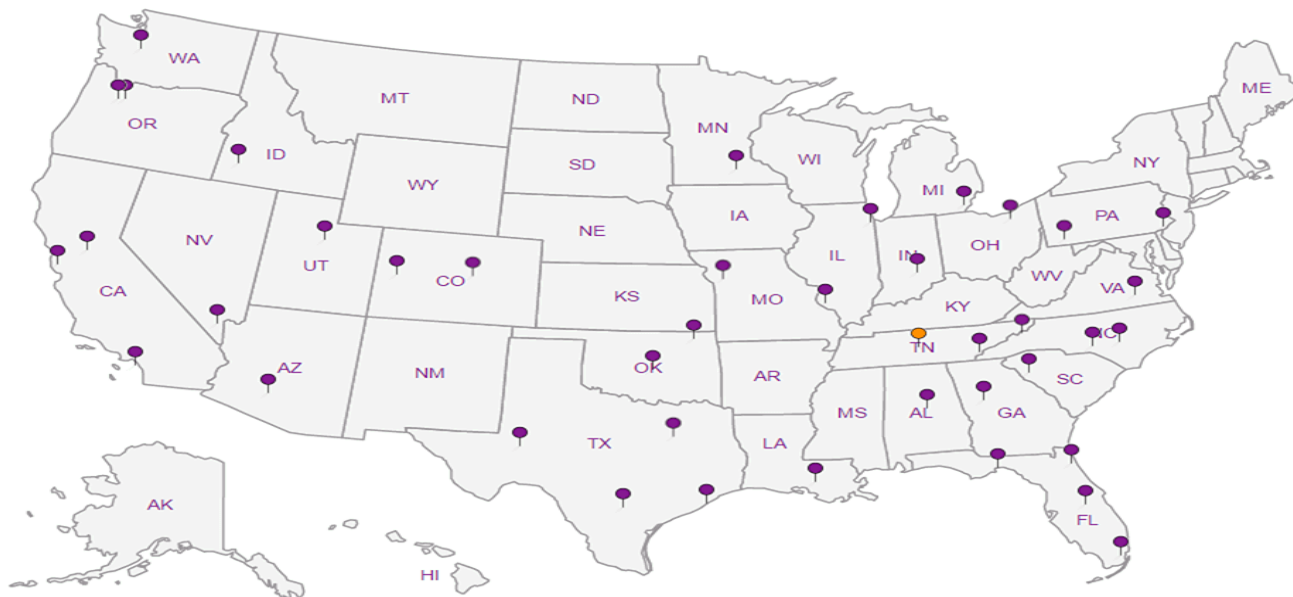
Third Party Federal Accreditations

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

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

Our Locations

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



G023

Page 1 of 2

Analysis Request of Chain of Custody Record

[illegible]

containers received 13

ORIGINAL COPY

RAD HALF-EN: 6.7 hr

$$0.7 + 0.5 = 1.2$$

MM A3

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland, Texas 79705
Tel (432) 682-4509
Fax (432) 682-3946

L1164665

[illegible]

ORIGINAL COPY

$$0.7 + 0.5 = 1.2$$

MM A3

RAD SCREEN: <0.5 mR/hr

Andy Vann

From: Chris McCord
Sent: Monday, November 25, 2019 2:17 PM
To: Project Service
Subject: FW: *COPTETRA* log from hold 11-156
Attachments: HOLD COC rev.pdf

Please see attached revised COC. Please log hold samples BH-8(0-1), BH-8 (2-3), and AH-1 (0-1) for CHLORIDE-300, GRO, V8260BTEX, DRORLA, and TS. Log as R5 due 12/3.

Thanks,
Christopher McCord
Project Manager

Pace Analytical National Center for Testing & Innovation
12065 Lebanon Road | Mt. Juliet, TN 37122
615.773.3281 | Cell 615.504.3183
cmccord@pacenational.com | www.pacenational.com

ESC Lab Sciences is now Pace Analytical National Center for Testing & Innovation! Please make note of my new email address and website.

From: Llull, Christian [mailto:Christian.Llull@tetratech.com]
Sent: Monday, November 25, 2019 1:52 PM
To: Chris McCord
Subject: RE: *COPTETRA* hold 11-156

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Chris,

Please see this revised COC for EVGSAU CTB.
Of the 13 submitted only three will be analyzed (all on page 2).
Please let me know you have received or if you need clarification.
This makes 39+3 for 42 total on the project.

Christian

From: Chris McCord <CMcCord@pacenational.com>
Sent: Friday, November 22, 2019 6:17 PM

To: Llull, Christian <Christian.Llull@tetrattech.com>
Subject: *COPTETRA* hold 11-156

⚠ CAUTION: This email originated from an external sender. Verify the source before opening links or attachments. ⚠

Hold COC from yesterday is attached.

Thanks,

Christopher McCord

Project Manager

Pace Analytical National Center for Testing & Innovation

12065 Lebanon Road | Mt. Juliet, TN 37122

615.773.3281 | Cell 615.504.3183

cmccord@pacenational.com | pacenational.com

ESC Lab Sciences is now Pace Analytical National Center for Testing & Innovation! Please make note of my new email address and website.

APPENDIX D

Boring Logs

212C-MD-01987		TETRA TECH		LOG OF BORING AH-1				Page 1 of 1							
Project Name: EVGSAU CTB Release															
Borehole Location: GPS: 32.796611°, -103.458285°						Surface Elevation: 3943 ft									
Borehole Number: AH-1				Borehole Diameter (in.): 2		Date Started: 11/19/2019		Date Finished: 11/19/2019							
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:			
												MATERIAL DESCRIPTION		DEPTH (ft)	REMARKS
			330	339								-SP- SAND: Dark brown, loose, with gravel, heavy odor, heavy staining.		1	AH-1 (0-1')
Bottom of borehole at 1.0 feet.															

Sampler Types: Split Spoon Shelby Bulk Sample Grab Sample Acetate Liner Vane Shear California Test Pit	Operation Types: Mud Rotary Continuous Flight Auger Wash Rotary Auger Air Rotary Core Barrel Direct Push	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
---	---	--

Logger: Clint Merritt

Drilling Equipment: Hand Auger

Driller: Tetra Tech

EVGSAU CTB LOGS.GPJ ` 12-5-19 ` TT_AUSTIN_GEOTECH_NOWELL3 ` 2015 TT TEMPLATE DECEMBER WELL.GDT ` `

Revised 5-16-12 (RHM)

212C-MD-01987		TETRA TECH		LOG OF BORING BH-1				Page 1 of 1	
Project Name: EVGSAU CTB Release									
Borehole Location: GPS: 32.797019°, -103.458365°					Surface Elevation: 3945 ft				
Borehole Number: BH-1				Borehole Diameter (in.): 8		Date Started: 11/18/2019		Date Finished: 11/18/2019	
WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:									
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX
			ExStik	PID				LL	PI
			1180	58.5					
				6.7					
5				8.8					
				11.2					
10			105	11.7					
MATERIAL DESCRIPTION									
-SM- SILTY SAND: Tan, dense, moderately cemented, with gravel, low odor, no staining.									
-SM- SILTY SAND: Brown, loose, with few gravel, no odor, no staining.									
-SM- SILTY SAND: Tan, very dense, heavily cemented, with heavy gravel, no odor, no staining.									
Bottom of borehole at 10.0 feet.									

Sampler Types: Split Spoon Shelby Bulk Sample Grab Sample Acetate Liner Vane Shear California Test Pit	Operation Types: Mud Rotary Continuous Flight Auger Wash Rotary Auger Air Rotary Core Barrel Direct Push	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: Joe Tyler	Drilling Equipment: Air Rotary	Driller: Scarborough Drilling

212C-MD-01987		TETRA TECH		LOG OF BORING BH-2				Page 1 of 1							
Project Name: EVGSAU CTB Release															
Borehole Location: GPS: 32.796777°, -103.458586°					Surface Elevation: 3945 ft										
Borehole Number: BH-2				Borehole Diameter (in.): 8		Date Started: 11/18/2019		Date Finished: 11/18/2019							
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS			
												While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:			
MATERIAL DESCRIPTION												DEPTH (ft)	REMARKS		
5	[Wavy Line]	[X]	323	10.6							[Diagonal Hatching]	-SM- SILTY SAND: Tan, dense, moderately cemented, with heavy gravel, no odor, no staining.	1.5	BH-2 (0-1')	
				12.2								-CL- SILTY CLAY: Brown, medium stiff to stiff, with heavy gravel, no odor, no staining.		BH-2 (2-3')	
				6.9										5.5	BH-2 (4-5')
				12.9									-SM- SILTY SAND: Tan, very dense, heavily cemented, with heavy gravel, no odor, no staining.		BH-2 (6-7')
10			100	4.7										10	BH-2 (9-10')

Bottom of borehole at 10.0 feet.

Sampler Types: Split Spoon Shelby Bulk Sample Grab Sample Acetate Liner Vane Shear California Test Pit	Operation Types: Mud Rotary Continuous Flight Auger Wash Rotary Auger Air Rotary Core Barrel Direct Push	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: Joe Tyler	Drilling Equipment: Air Rotary	Driller: Scarborough Drilling

212C-MD-01987		TETRA TECH		LOG OF BORING BH-3				Page 1 of 1						
Project Name: EVGSAU CTB Release														
Borehole Location: GPS: 32.796387°, -103.458538°					Surface Elevation: 3945 ft									
Borehole Number: BH-3				Borehole Diameter (in.): 8		Date Started: 11/18/2019		Date Finished: 11/18/2019						
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:		
												MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
5	[Wavy Line]	[X]	73.3	8.9							[Dotted Pattern]	-SM- SILTY SAND: Tan, dense, moderately cemented, with heavy gravel, low odor, no staining.	0-1'	[Dotted Pattern]
				10.6								3.5	BH-3 (2-3')	
				15.5								5.5	BH-3 (4-5')	
				13.6								6-7'	BH-3 (6-7')	
10	[Wavy Line]	[X]	46.6	11.4							[Dotted Pattern]	-ML- SILTY SAND: Tan, very dense, heavily cemented, with moderate gravel, no odor, no staining.	9-10'	BH-3 (9-10')

Bottom of borehole at 10.0 feet.

Sampler Types: Split Spoon Shelby Bulk Sample Grab Sample Acetate Liner Vane Shear California Test Pit	Operation Types: Mud Rotary Continuous Flight Auger Wash Rotary Auger Air Rotary Core Barrel Direct Push	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: Joe Tyler	Drilling Equipment: Air Rotary	Driller: Scarborough Drilling

212C-MD-01987		TETRA TECH		LOG OF BORING BH-4				Page 1 of 1						
Project Name: EVGSAU CTB Release														
Borehole Location: GPS: 32.796428°, -103.458282°						Surface Elevation: 3945 ft								
Borehole Number: BH-4				Borehole Diameter (in.): 8		Date Started: 11/21/2019		Date Finished: 11/21/2019						
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling ☒ DRY ft Upon Completion of Drilling ☒ DRY ft Remarks:		
												MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
5			184	1.9								-SM- SILTY SAND: Tan, dense, moderately cemented, with heavy gravel, low odor, little staining.	1.5	BH-4 (0-1')
				3.2						-SM- SILTY SAND: Tan, dense, moderately cemented, with heavy gravel, no odor, no staining.		3.5	BH-4 (2-3')	
				3.2						-SM- SILTYSAND: Brown, medium dense, with heavy gravel, no odor, no staining.		5.5	BH-4 (4-5')	
			301	4.4						-SM- SILTY SAND: Tan, very dense, heavily cemented, with moderate gravel, no odor, no staining.			BH-4 (6-7')	
10			351	5									10	BH-4 (9-10')

Bottom of borehole at 10.0 feet.

Sampler Types: Split Spoon Shelby Bulk Sample Grab Sample Acetate Liner Vane Shear California Test Pit	Operation Types: Mud Rotary Continuous Flight Auger Wash Rotary Auger Air Rotary Core Barrel Direct Push	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: Joe Tyler	Drilling Equipment: Air Rotary	Driller: Scarborough Drilling

Released to Imaging: 3/17/2023 9:25:23 AM

212C-MD-01987		TETRA TECH		LOG OF BORING BH-6				Page 1 of 1	
Project Name: EVGSAU CTB Release									
Borehole Location: GPS: 32.795210°, -103.458332°					Surface Elevation: 3945 ft				
Borehole Number: BH-6				Borehole Diameter (in.): 8		Date Started: 11/21/2019		Date Finished: 11/21/2019	

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS			
												While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft			
												Remarks:			
MATERIAL DESCRIPTION												DEPTH (ft)	REMARKS		
5	[Wavy Line]	[X]		0.8							[Diagonal Hatching]	-SC- CLAYEY SAND: Tan with brown, medium dense, with heavy gravel, no odor, no staining.	0	BH-6 (0-1')	
				0.4									3.5	BH-6 (2-3')	
10	[Wavy Line]	[X]	53.7	1							[Dotted Pattern]	-SM- SILTY SAND: Tan, very dense, heavily cemented, with moderate gravel, no odor, no staining.	4	BH-6 (4-5')	
				2.5									8	BH-6 (6-7')	
15	[Wavy Line]	[X]		2.9							[Dotted Pattern]	-SM- SILTY SAND: White, very dense, heavily cemented, with moderate gravel, low odor, no staining.	10	BH-6 (9-10')	
				2.8									15	BH-6 (13-14')	
20	[Wavy Line]	[X]	96.1	3.1							[Dotted Pattern]	-SM- SILTY SAND: Tan, dense, moderately cemented, with no odor, no staining.	16	BH-6 (16-17')	
				2.6									20	BH-6 (19-20')	
Bottom of borehole at 20.0 feet.															

Sampler Types: Split Spoon Shelby Bulk Sample Grab Sample Acetate Liner Vane Shear California Test Pit	Operation Types: Mud Rotary Continuous Flight Auger Wash Rotary Auger Air Rotary Core Barrel Direct Push	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
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Logger: Joe Tyler	Drilling Equipment: Air Rotary	Driller: Scarborough Drilling
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212C-MD-01987	 TETRA TECH	LOG OF BORING BH-7	Page 1 of 1
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Project Name: EVGSAU CTB Release

Borehole Location: GPS: 32.795710°, -103.458078°

Surface Elevation: 3945 ft

Borehole Number: BH-7

Borehole
Diameter (in.): 8

Date Started: 11/21/2019

Date Finished: 11/21/2019

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS				
												While Drilling	<u>▽</u> <u>DRY</u> ft	Upon Completion of Drilling	<u>▽</u> <u>DRY</u> ft	
												Remarks:				
MATERIAL DESCRIPTION												DEPTH (ft)	REMARKS			
5				2.7									- SM - SILTY SAND: Tan, dense, moderately cemented, with heavy gravel, no odor, no staining.	3.5	BH-7 (0-1')	
				3.6									BH-7 (2-3')			
				3.7									BH-7 (4-5')			
				4.1									BH-7 (6-7')			
10				3.4									- SM - SILTY SAND: Tan, very dense, heavily cemented, with moderate gravel, no odor, no staining.	8	BH-7 (9-10')	
15			128	0.6									- SM - SILTY SAND: Tan, dense to very dense, heavily cemented, with few gravel, no odor, no staining.		BH-7 (11-12')	
			512	1.4											15	BH-7 (14-15')

Bottom of borehole at 15.0 feet.

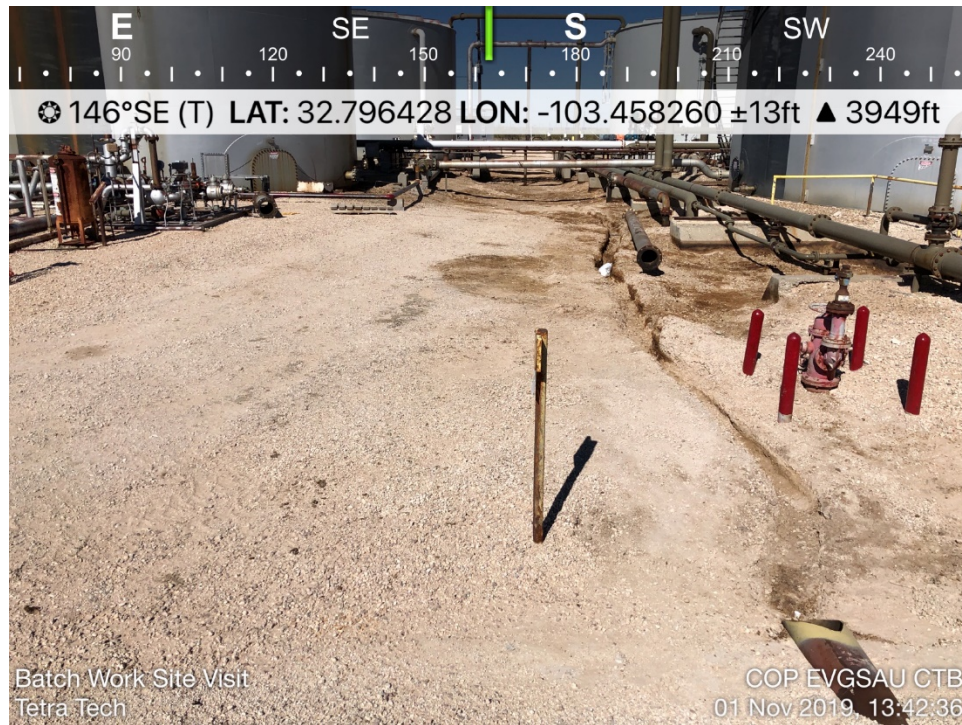
Sampler Types: ☒ Split Spoon ☒ Shelby ☒ Bulk Sample ☒ Grab Sample ☐ Acetate Liner ☐ Vane Shear ☒ California ☐ Test Pit	Operation Types: ☐ Mud Rotary ☐ Continuous Flight Auger ☐ Wash Rotary ☐ Auger ☐ Air Rotary ☐ Core Barrel ☐ Direct Push	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: Joe Tyler	Drilling Equipment: Air Rotary	Driller: Scarborough Drilling

212C-MD-01987		TETRA TECH		LOG OF BORING BH-8				Page 1 of 1						
Project Name: EVGSAU CTB Release														
Borehole Location: GPS: 32.796202°, -103.458763°					Surface Elevation: 3945 ft									
Borehole Number: BH-8				Borehole Diameter (in.): 8		Date Started: 11/19/2019		Date Finished: 11/19/2019						
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:		
			ExStik	PID					LL			PI	MATERIAL DESCRIPTION	DEPTH (ft)
154	0.1											-SM- SILTY SAND: White, dense, moderately cemented, with heavy gravel, no odor, no staining.	—	BH-8 (0-1')
250	0.2												3	BH-8 (2-3')
Bottom of borehole at 3.0 feet.														

Sampler Types: Split Spoon Shelby Bulk Sample Grab Sample Acetate Liner Vane Shear California Test Pit	Operation Types: Mud Rotary Continuous Flight Auger Wash Rotary Auger Air Rotary Core Barrel Direct Push	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
Logger: Clint Merritt	Drilling Equipment: Air Rotary	Driller: Scarborough Drilling

APPENDIX E

Photographic Documentation



TETRA TECH, INC. PROJECT NO. 212C-MD-01987	DESCRIPTION	View north. Release area in the northern tank battery.	1
	SITE NAME	EVGSAU CTB Release (1RP-4908)	11/1/2019



TETRA TECH, INC. PROJECT NO. 212C-MD-01987	DESCRIPTION	View south. Central portion of the release area south of the northern tank battery.	2
	SITE NAME	EVGSAU CTB Release (1RP-5777)	11/1/2019



TETRA TECH, INC. PROJECT NO. 212C-MD-01987	DESCRIPTION	View southeast. Southern portion of the release area.	3
	SITE NAME	EVGSAU CTB Release (1RP-5777)	11/1/2019



TETRA TECH, INC. PROJECT NO. 212C-MD-01987	DESCRIPTION	View northeast. Southern portion of the release area.	4
	SITE NAME	EVGSAU CTB Release (1RP-5777)	11/1/2019



TETRA TECH, INC. PROJECT NO. 212C-MD-01987	DESCRIPTION	View northeast. Typical production lines and equipment at the Site.	5
	SITE NAME	EVGSAU CTB Release (1RP-4908)	11/1/2019

APPENDIX F

NMOCD Correspondence

Llull, Christian

From: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>
Sent: Thursday, July 15, 2021 2:30 PM
To: Llull, Christian
Subject: RE: The Oil Conservation Division (OCD) has rejected the application, Application ID: 3390

⚠ CAUTION: This email originated from an external sender. Verify the source before opening links or attachments. **⚠**

Hello,

Your reading is correct on the rejection notice, not sure of sequence of events, but with 1,000;s it is going to happen occasionally that something gets fouled-up. Nonetheless, for nOY1800329215, as this is the older release and is geographically covered by the newer one, if you were to resubmit the nOY incident under separate report and with only the nOY incident on the redone C-141 form I can close it and eliminate confusion. It is confusing as on data base it does indicate as being closed but does have a rejection notice in the file. Best guess was the "rejection notice" was supposed to be in a note section for informational use. But let me know when you have resubmitted to portal alone and I will immediately eliminate the rejection. The granted deferral for nRM1930848978 is still in place.

Sorry for the trouble, and thank you more so for noting the issue. Hope this makes sense, if not let me know.

Bradford Billings
EMNRD/OCD

From: Llull, Christian <Christian.Llull@tetrattech.com>
Sent: Thursday, July 15, 2021 9:52 AM
To: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>
Cc: Soriwei, Marvin <Marvin.Soriwei@conocophillips.com>
Subject: FW: The Oil Conservation Division (OCD) has rejected the application, Application ID: 3390

Mr. Billings,

RE:
Deferral Request
ConocoPhillips Company
EVGSAU Central Tank Battery
Unit Letter A, Section 33, Township 17 South, Range 35 East
Lea County, New Mexico
1RP-4908 and 1RP-5777
Incidents nOY1800329215
nRM1930848978

We have conflicting information for this incident.

The rejection is odd because we have notice from you (Karen Collins) via email (attached) that one incident is closed and one is deferred.

However, the fact remains that via the portal you have now sent this rejection, which creates confusion.

Is it the case that the reports are acceptable, and will be approved, but they just have to be submitted separately?
If so, COP would be glad to complete this request for you.

Christian

Christian Llull, P.G. | Project Manager

Direct +1 (512) 338-2861 | Business +1 (512) 338-1667 | Fax +1 (512) 338-1331 | christian.llull@tetrattech.com

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8911 N. Capital of Texas Highway | Bldg. 2, Suite 2310 | Austin, TX 78759 | tetrattech.com

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From: Llull, Christian <Christian.Llull@tetrattech.com>

Sent: Thursday, June 17, 2021 3:29 PM

To: Abbott, Sam <Sam.Abbott@tetrattech.com>

Subject: Fwd: The Oil Conservation Division (OCD) has rejected the application, Application ID: 3390

Can you please check this one too?

Christian

Get [Outlook](#) for iOS

From: OCDOnline@state.nm.us <OCDOnline@state.nm.us>

Sent: Thursday, June 17, 2021 3:23:28 PM

To: Llull, Christian <Christian.Llull@tetrattech.com>

Subject: The Oil Conservation Division (OCD) has rejected the application, Application ID: 3390

⚠ CAUTION: This email originated from an external sender. Verify the source before opening links or attachments. **⚠**

To whom it may concern (c/o Christian Llull for CONOCOPHILLIPS COMPANY),

The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nOY1800329215, for the following reasons:

- **As with other locations, each individual incident number must be associated with its own report. A report can be used more than once, but it must be connected to an individual incident identification. Please resubmit a report for each distinct incident number for review.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 3390. Please review and make the required correction(s) prior to resubmitting.

If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.

Thank you,
Bradford Billings
Hydrologist/E.Spec.A
505-670-6549
bradford.billings@state.nm.us

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Collins, Karen, EMNRD

From: Billings, Bradford, EMNRD
Sent: Thursday, February 18, 2021 1:11 PM
To: Beauvais, Charles R
Subject: Decisions on Several Incidnets

02/18/2021

Charles Beauvais – Conoco Phillips

RE Oil Conservation Decisions of Several Incidents/Releases

Following review and consideration of data and information via reports the following:

- 1) 1RP-4908/nOY1800329215 – Incident is CLOSED in OCD data base.
- 2) 1RP-5777/nRM1930848978 – Incident is DEFFERED as re request and as per indicated rationale.
- 3) 1RP-3231/nTO1422438684 – Work Plan is APPROVED and variance to a maximum of 500 sq. ft. for conformation sampling is also APPROVED.
- 4) 1RP-1500/nBGB2104654782 - Work Plan is APPROVED and variance to a maximum of 500 sq. ft. for conformation sampling is also APPROVED, as is liner request.
- 5) nRM2003450092 – Work Plan is APPROVED and variance to a maximum of 500 sq. ft. for conformation sampling is also APPROVED.
- 6) 1RP-1601/nBGB2104659526 – Work Plan is APPROVED and variance to a maximum of 500 sq. ft. for conformation sampling is also APPROVED.
- 7) 1RP-4388/nJXK1621825385 – UNABLE to work on this, as report tendered to review did not contain data or Figures. Resubmit with needed information.
- 8) 1RP-4183/nJXK1604825469 – Work Plan is APPROVED and variance to a maximum of 500 sq. ft. for conformation sampling is also APPROVED.
- 9) 1RP-4716/nOY1715955207 - Incident is CLOSED in OCD data base.

Thank you for your efforts. Please contact me with any questions. Please keep a copy of this communication, as NO paper copy will follow.

Sincerely,

Bradford Billings

Bradford Billings • Enviro. Spec. A
Environmental Bureau
EMNRD - Oil Conservation Division
5200 Oakland Ave. NE Suite 100 | Albuquerque, NM 87113
505.670.6549. |bradford.billings@state.nm.us
<http://www.emnrd.state.nm.us/OCD/>

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations

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 77977

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 77977
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Deferral Request Approved. The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue. The OCD will not close a release, where contaminants are left in place, due to close proximity to equipment. The incident will only be closed after all contaminated soil has been remediated to meet OCD Spill Rule Standards.	3/17/2023