

Rodman Brunz 21-26 Wellhead

NENW, Sec 26, T2N, R66W, 6PM

API: 05-123-21586

Remediation Project #: 35916

Decommissioning Package

Prepared by Quandary Consultants, Inc.



On behalf of Crestone Peak Resources Operating, LLC



FIELD NOTES AND PHOTO LOG

Decommissioning Field Form Background Assessment



SITE NAME: Rodman Brunz 21-26 Wellhead						REM. PROJECT # 35916		WEATHER: Sunny	
SITE DIRECTIONS: From CR18 & CR31 travel east 1.25 mile, south 0.1 mile, east 0.1 mile into						CLIENT: Civitas			
LAT/LONG: 40.114903, -104.746409						PERSONNEL: Robert Lodge			
SURROUNDING LAND USE: Ranch Land						SURFACE GRADIENT: Southwest			
SOIL TYPE: See below									
						Observations			
Sample ID	Date	Approx. Depth (ft bgs)	Time	Soil Type	PID (ppm)	Visual (Y/N)	Olfactory (Y/N)	Photo (Y/N)	Lab (Y/N)
WH-B01 @6'	9/12/2024	6	10:15	Silty sand	0.0	N	N	Y	Y
WH-N01 @5'	9/12/2024	5	10:21	Silty sand	0.0	N	N	Y	N
WH-E01 @5'	9/12/2024	5	10:22	Silty sand	0.0	N	N	Y	N
WH-S01 @5'	9/12/2024	5	10:26	Silty sand	0.0	N	N	Y	N
WH-W01 @5'	9/12/2024	5	10:24	Silty sand	0.0	N	N	Y	N
WHS-N01 @3"	9/12/2024	0.25	10:42	Silty sand	0.0	N	N	Y	N
WHS-E01 @3"	9/12/2024	0.25	10:38	Silty sand	0.0	N	N	Y	N
WHS-S01 @3"	9/12/2024	0.25	10:41	Silty sand	0.0	N	N	Y	N
WHS-W01 @3"	9/12/2024	0.25	10:39	Silty sand	0.0	N	N	Y	N
FL-B01 @3'	9/12/2024	3	9:45	Silty sand	0.0	N	N	Y	Y
FL-B02 @5'	9/12/2024	5	9:10	Silty sand	0.0	N	N	Y	N
FL-B03 @6'	9/12/2024	6	9:20	Silty sand	0.0	N	N	Y	Y
FL-B04 @6'	9/12/2024	6	10:00	Silty sand	0.0	N	N	Y	Y
FL-B05 @5'	9/12/2024	5	10:28	Silty sand	0.0	N	N	Y	Y
WH-BG01 @3'	9/12/2024	3	10:50	Silty sand	4.0	N	N	Y	Y
WH-BG01 @6'	9/12/2024	6	10:52	Silty sand	2.6	N	N	Y	Y
WH-BG02 @3'	9/12/2024	3	10:55	Silty sand	0.6	N	N	Y	Y
WH-BG02 @6'	9/12/2024	6	10:57	Silty sand	0.0	N	N	Y	Y

Groundwater	
Date Encountered: NA	Depth: NA
GW Contact w/ Impacted Soil (Y/N)	NA
LNAPL or Sheen (Y/N)	NA
Sample I.D.(s):	NA
Photo (Y/N)	NA

Material Management	
# Test Pits/Boreholes	4
Material Backfilled in Place (Y/N)	Y
Volume Soil Removed (cy)	0
Name of Disposal Facility	NA

Sample ID Designations	
Wellhead	WH
Wellhead Surface	WHS
Flowline	FL
Background	BG

ft bgs = feet below ground surface

PID = photoionization detector

ppm = parts per million

cy = cubic yards

Visual - if Yes, indicate staining (S) or free product (FP)

Olfactory - if Yes, indicates presence of hydrocarbon odor.

NA - Not applicable

N = No

Y = Yes

Rodman Brunz 21-26 Wellhead Photo Log

West Elevation

☼ 90°E (T) ● 40°6'43"N, 104°45'1"W ±16ft ▲ 5070ft



South West Elevation

☀ 57°NE (T) ● 40°6'43"N, 104°45'1"W ±16ft ▲ 5074ft

FL-B03@6'

12 Sep 2024, 09:13:27

South Elevation

☉ 17°N (T) ☉ 40°6'43"N, 104°45'0"W ±16ft ▲ 5069ft



12 Sep 2024, 09:42:15

North West Elevation

☉ 149°SE (T) ☉ 40°6'42"N, 104°45'2"W ±13ft ▲ 5077ft

FL-B01@3'

12 Sep 2024, 09:47:52

North East Elevation

☉ 212°SW (T) ☉ 40°6'53"N, 104°44'47"W ±16ft ▲ 5086ft

FL-B04@6'

12 Sep 2024 10:00:01

North Elevation

☉ 162°S (T) ☉ 40°6'53"N, 104°44'47"W ±16ft ▲ 5091ft



North Elevation

☉ 181°S (T) ☉ 40°6'53"N, 104°44'47"W ±16ft ▲ 5090ft

WH-N01 @ 5'

12 Sep 2024 10:23:11

East Elevation

☉ 276°W (T) ☉ 40°6'53"N, 104°44'47"W ±16ft ▲ 5089ft



12 Sep 2024, 10:23:20

South Elevation

☉ 340°N (T) ☉ 40°6'53"N, 104°44'47"W ±16ft ▲ 5088ft



WH-S01@5'

12 Sep 2024 10:31:33

West Elevation

☉ 73°E (T) ● 40°6'53"N, 104°44'47"W ±16ft ▲ 5089ft

WH-W01 @ 5'

12 Sep 2024, 10:32:08

South West Elevation

☀ 31°NE (T) ● 40°6'53"N, 104°44'47"W ±16ft ▲ 5090ft



West Elevation

☉ 109°E (T) ☉ 40°6'53"N, 104°44'47"W ±32ft ▲ 5100ft

WHS-N01 @ 3"

12 Sep 2024, 10:54:06

North East Elevation

☉ 204°SW (T) ☉ 40°6'53"N, 104°44'46"W ±32ft ▲ 5100ft

WHS-E01@3"

12 Sep 2024, 10:54:18

East Elevation

☉ 255°W (T) ☉ 40°6'53"N, 104°44'47"W ±16ft ▲ 5103ft



South West Elevation

☉ 24°NE (T) ☉ 40°6'53"N, 104°44'47"W ±16ft ▲ 5104ft

WHS-W01@3"

12 Sep 2024, 10:54:37

East Elevation

☉ 253°W (T) ☉ 40°6'53"N, 104°44'46"W ±16ft ▲ 5109ft

WH-BG01@3',6'

12 Sep 2024 10:55:10

North East Elevation

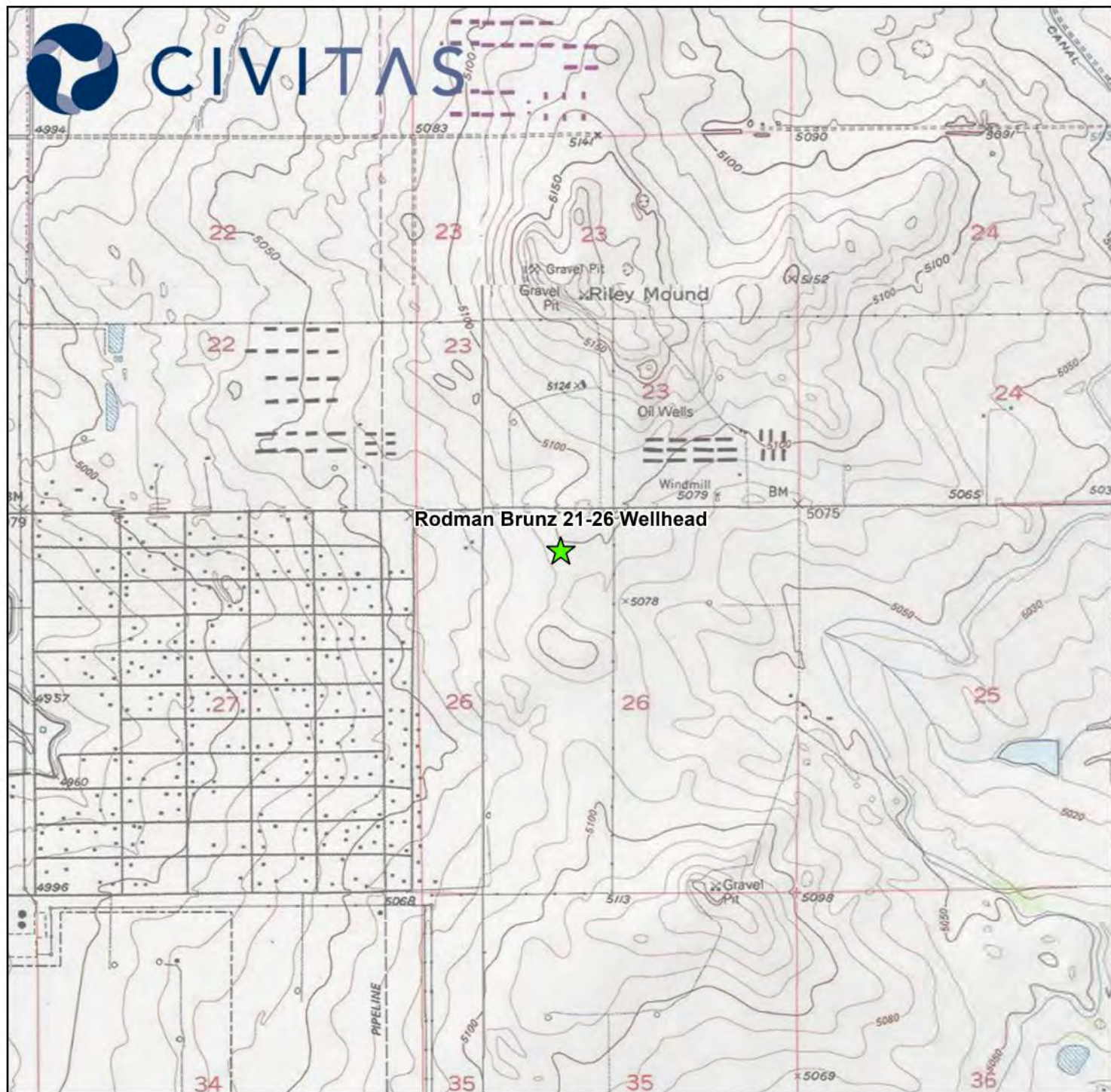
☉ 226°SW (T) ☉ 40°6'53"N, 104°44'46"W ±16ft ▲ 5101ft



FIGURES



CIVITAS



Legend

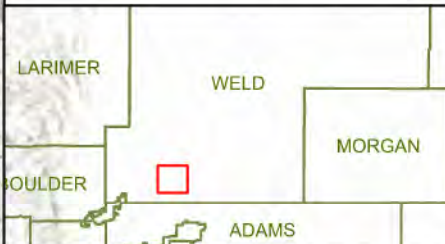
★ Site Location



CIVITAS RESOURCES

Figure 1. Rodman Brunz 21-26 Wellhead
Topographic Site Location Map

40.114912, -104.746509
NENW, Sec 26, T2N, R66W, 6PM
Weld County, CO



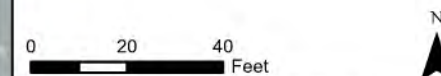
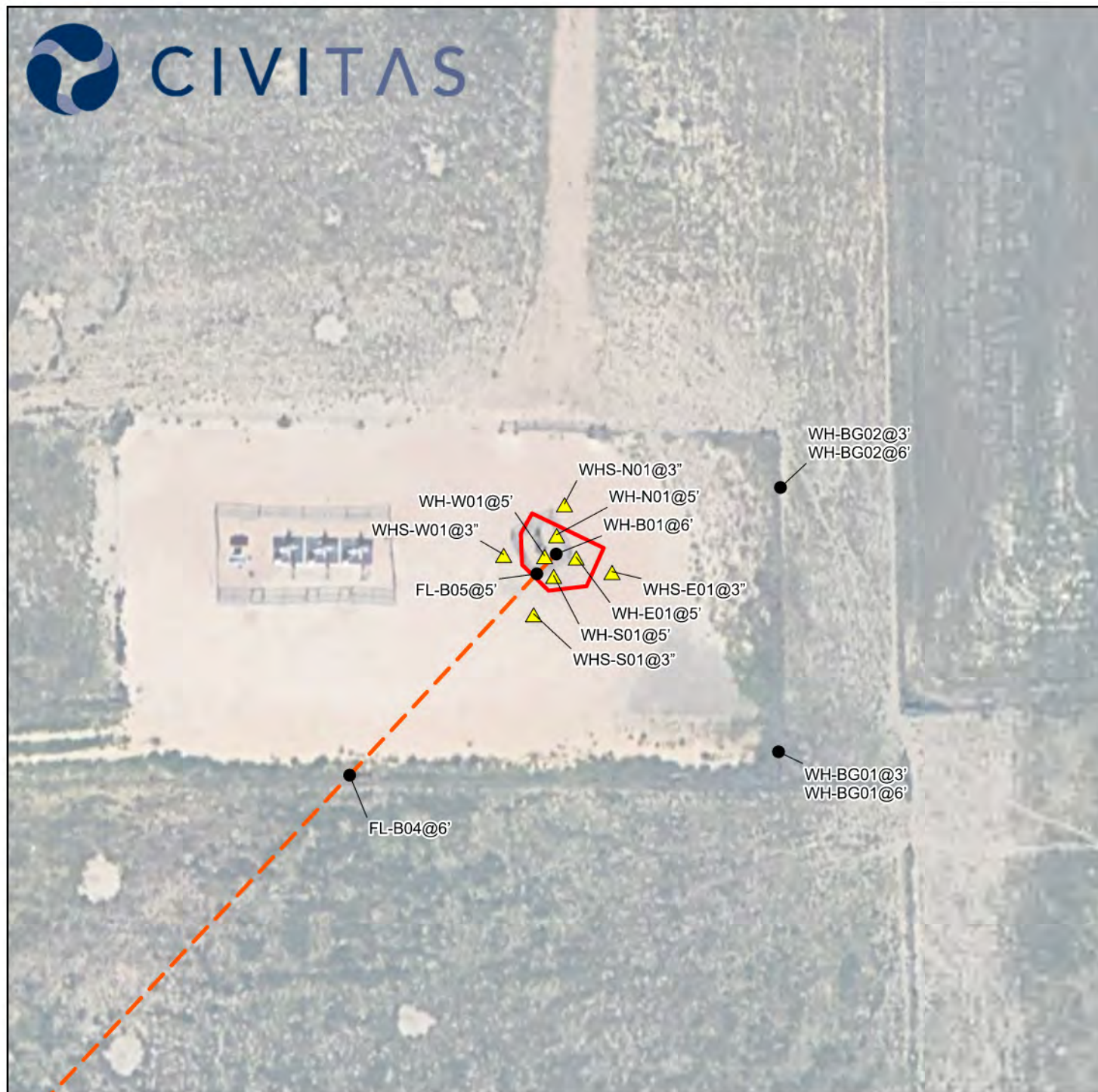
QUANDARY
CONSULTANTS

Author: JG Date: 10/16/2024

Data Sources: Esri, CGIAR, USGS, Maxar

Legend

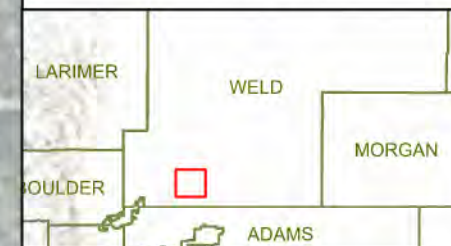
- Soil Sample Location
- ▲ Soil Screening Location
- Approximate Excavation Extent
- - - Flowline



CIVITAS RESOURCES

Figure 2. Rodman Brunz 21-26 Wellhead Inorganics Excavation and Sampling Map

40.114912, -104.746509
NENW, Sec 26, T2N, R66W, 6PM
Weld County, CO



Author: JG Date: 10/16/2024

Data Sources: Esri, CGIAR, USGS, Google Earth 2023



Legend

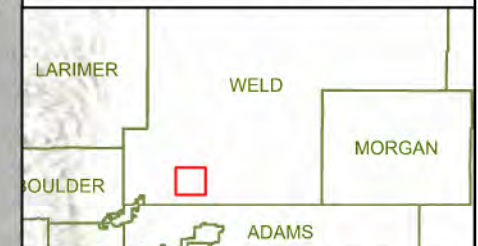
- Soil Sample Location
- ▲ Soil Screening Location
- Flowline



CIVITAS RESOURCES

Figure 3. Rodman Brunz 21-26 Flowline Inorganics Excavation and Sampling Map

40.114912, -104.746509
NENW, Sec 26, T2N, R66W, 6PM
Weld County, CO



Author: JG Date: 10/16/2024

Data Sources: Esri, CGIAR, USGS, Google Earth 2023

TABLES

TABLE 1
SOIL SAMPLE FIELD DATA SUMMARY TABLE
RODMAN BRUNZ 21-26 WELLHEAD
WELD COUNTY, COLORADO
CIVITAS RESOURCES, INC.



				Observations				
Sample ID	Date	Approx. Depth (ft bgs)	PID (ppm-v)	Visual (Y/N)	Olfactory (Y/N)	Lab (Y/N)	Latitude	Longitude
WELLHEAD								
WH-B01@6'	9/12/2024	6	0.0	N	N	Y	40.114906	-104.746413
WH-N01@5'	9/12/2024	5	0.0	N	N	N	40.114921	-104.746412
WH-E01@5'	9/12/2024	5	0.0	N	N	N	40.114904	-104.746393
WH-S01@5'	9/12/2024	5	0.0	N	N	N	40.114890	-104.746415
WH-W01@5'	9/12/2024	5	0.0	N	N	N	40.114905	-104.746424
WHS-N01@3"	9/12/2024	0.25	0.0	N	N	N	40.114944	-104.746404
WHS-E01@3"	9/12/2024	0.25	0.0	N	N	N	40.114893	-104.746358
WHS-S01@3"	9/12/2024	0.25	0.0	N	N	N	40.114861	-104.746435
WHS-W01@3"	9/12/2024	0.25	0.0	N	N	N	40.114927	-104.746520
FLOWLINE								
FL-B01@3'	9/12/2024	3	0.0	N	N	Y	40.111833	-104.750695
FL-B02@5'	9/12/2024	5	0.0	N	N	N	40.111995	-104.750306
FL-B03@6'	9/12/2024	6	0.0	N	N	Y	40.112182	-104.750035
FL-B04@6'	9/12/2024	6	0.0	N	N	Y	40.114739	-104.746617
FL-B05@5'	9/12/2024	5	0.0	N	N	Y	40.114891	-104.746432
BACKGROUNDS								
WH-BG01@3'	9/12/2024	3	4.0	N	N	Y	40.114756	-104.746194
WH-BG01@6'	9/12/2024	6	2.6	N	N	Y	40.114756	-104.746194
WH-BG02@3'	9/12/2024	3	0.6	N	N	Y	40.114956	-104.746191
WH-BG02@6'	9/12/2024	6	0.0	N	N	Y	40.114956	-104.746191

Notes:

ft = Feet

bgs= below ground surface

PID = photoionization detector

ppm-v = parts per million by volume

Y = Yes

N =No

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS SUMMARY - VOCs
RODMAN BRUNZ 21-26 WELLHEAD
WELD COUNTY, COLORADO
CIVITAS RESOURCES, INC.



Sample ID	Date	Depth (ft bgs)	TPH-GRO* (mg/kg)	TPH-DRO* (mg/kg)	TPH-ORO* (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4- Trimethyl benzene (mg/kg)	1,3,5- Trimethyl benzene (mg/kg)	Naphthalene (mg/kg)
GSSL (1)			500			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038
RSSL (2)			500			1.2	490	5.8	9.9	30	27	2
WELLHEAD												
WH-B01 @6'	9/12/2024	6	<0.500	<50.0	<50.0	<0.00200	<0.00500	<0.00500	<0.0100	<0.00500	<0.00500	<0.00408
FLOWLINE												
FL-B01 @3'	9/12/2024	3	<0.500	<50.0	<50.0	<0.00200	<0.00500	<0.00500	<0.0100	<0.00500	<0.00500	0.0173
FL-B03 @6'	9/12/2024	6	<0.500	<50.0	65.2	<0.00200	<0.00500	<0.00500	<0.0100	<0.00500	<0.00500	<0.00408
FL-B04 @6'	9/12/2024	6	<0.500	<50.0	55.8	<0.00200	<0.00500	<0.00500	<0.0100	<0.00500	<0.00500	<0.00408
FL-B05 @5'	9/12/2024	5	<0.500	<50.0	<50.0	<0.00200	<0.00500	<0.00500	<0.0100	<0.00500	<0.00500	<0.00408

Notes:

ECMC = Colorado Energy and Carbon Management Commission

(1) Standards for soil are taken from ECMC Table 915-1 Organic Compounds in Soils - Protection of Groundwater Soil Screening Level Concentrations (Effective January 15, 2021)

(2) Standards for soil are taken from ECMC Table 915-1 Organic Compounds in Soils - Residential Soil Screening Level Concentrations (Effective January 15, 2021)

TPH = total petroleum hydrocarbons

GRO = gasoline range organics

DRO = diesel range organics

ORO = oil range organics

*Allowable level for TPH is 500 mg/kg for combined GRO, DRO, ORO

Bold = exceeds ECMC Table 915-1 standards

ft = feet

bgs = below ground surface

mg/kg - milligrams per kilogram

< - less than laboratory reporting limit

TABLE 3
SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
SOIL SUITABILITY FOR RECLAMATION
RODMAN BRUNZ 21-26 WELLHEAD
WELD COUNTY, COLORADO
CIVITAS RESOURCES, INC.



Sample ID	Date	Depth (ft bgs)	Boron (mg/L)	pH	SAR	EC (mmhos/cm)
ECMC Soil Suitability for Reclamation (1)			2	6-8.3	<6	<4
Background Limits			2.00	8.28	1.15	0.536
BACKGROUND						
WH-BG01@3'	9/12/2024	3	<2.00	8.04	0.678	0.536
WH-BG01@6'	9/12/2024	6	<2.00	8.28	0.886	0.269
WH-BG02@3'	9/12/2024	3	<2.00	8.07	1.15	0.472
WH-BG02@6'	9/12/2024	6	<2.00	8.10	0.865	0.309
SITE						
ECMC Soil Suitability for Reclamation (1)			2	6-8.3	<6	<4
Background Limits			2.00	8.28	1.15	0.536
WH-B01@6'	9/12/2024	6	<2.00	8.20	0.250	0.295
FL-B01@3'	9/12/2024	3	<2.00	8.12	0.176	0.163
FL-B03@6'	9/12/2024	6	<2.00	7.93	0.787	0.405
FL-B04@6'	9/12/2024	6	<2.00	8.13	0.602	0.254
FL-B05@5'	9/12/2024	5	<2.00	8.20	0.576	0.216

Notes:

1. Standards for soil are taken from ECMC Table 915-1, effective January 15, 2021

ECMC = Colorado Energy and Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory minimum detection limit

ft = feet

bgs = below ground surface

mg/L = milligrams per liter

SAR = sodium adsorption ratio

EC = electrical conductivity

mmhos/cm = millimhos per centimeter

Blue highlight = Highest background concentration

Bold = exceeds ECMC Table 915-1 standards

Bold = Concentrations greater than max background value and Table 915-1 standards

TABLE 4
SOIL SAMPLE RESULTS SUMMARY TABLE - PAHs
RODMAN BRUNZ 21-26 WELLHEAD
WELD COUNTY, COLORADO
CIVITAS RESOURCES, INC.

Sample ID	Date	Depth (ft bgs)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo(a)-anthracene (mg/kg)	Benzo(a)-pyrene (mg/kg)	Benzo(b)- fluoranthene (mg/kg)	Benzo(k)- fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h)- anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Ideno(1,2,3-cd)- pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl- naphthalene (mg/kg)	2-Methyl- naphthalene (mg/kg)
GSSL (1)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
RSSL (1)			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
WELLHEAD																
WH-B01@6'	9/12/2024	6	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FLOWLINE																
FL-B01@3'	9/12/2024	3	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00533
FL-B03@6'	9/12/2024	6	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL-B04@6'	9/12/2024	6	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL-B05@5'	9/12/2024	5	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Notes:

ECMC = Colorado Energy and Carbon Management Commission

(1) Standards for soil are taken from ECMC Table 915-1 Organic Compounds in Soils - Protection of Groundwater Soil Screening Level Concentrations (Effective January 15, 2021)

(2) Standards for soil are taken from ECMC Table 915-1 Organic Compounds in Soils - Residential Soil Screening Level Concentrations (Effective January 15, 2021)

(<) = Analytical result is less than the indicated laboratory reporting limit

ft = Feet

mg/kg = milligrams per kilogram

PAH = Polycyclic Aromatic Hydrocarbons

TABLE 5
SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - METALS
RODMAN BRUNZ 21-26 WELLHEAD
WELD COUNTY, COLORADO
CIVITAS RESOURCES, INC.



Sample ID	Date	Depth (ft bgs)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)	Chromium VI (mg/kg)
GSSL (1)			0.29	82	0.38	46	14	26	0.26	0.8	370	0.000067
RSSL (2)			0.68	15000	71	3100	400	1500	390	390	23000	0.3
Background Limits			8.55	371	0.269	17.1	14.4	18.6	0.795	0.1081	63.6	0.375
WELLHEAD												
WH-B01 @6'	9/12/2024	6	2.65	207	<0.200	8.80	15.6	8.29	0.474	<0.0865	29.2	<0.300
FLOWLINE												
FL-B01 @3'	9/12/2024	3	1.62	45.9	<0.200	4.54	5.40	4.36	0.325	<0.0865	19.3	<0.300
FL-B03 @6'	9/12/2024	6	2.34	230	<0.200	5.71	6.20	5.93	0.574	<0.0865	26.4	<0.300
FL-B04 @6'	9/12/2024	6	2.59	114	<0.200	5.48	6.73	8.07	0.409	<0.0865	28.2	<0.300
FL-B05 @5'	9/12/2024	5	2.43	203	<0.200	6.53	11.9	6.23	0.296	<0.0865	45.9	<0.300
BACKGROUND												
WH-BG01 @3'	9/12/2024	3	4.77	297	<0.200	8.86	8.04	14.2	0.520	<0.0865	33.6	<0.300
WH-BG01 @6'	9/12/2024	6	6.84	132	<0.200	13.7	11.1	14.9	0.636	<0.0865	50.9	<0.300
WH-BG02 @3'	9/12/2024	3	5.85	215	<0.200	10.2	9.43	10.2	0.546	<0.0865	38.1	<0.300
WH-BG02 @6'	9/12/2024	6	4.26	131	0.215	11.1	11.5	9.02	0.630	<0.0865	39.5	<0.300

Notes:

1. Standards for soil are taken from ECMC Table 915-1: Metals in Soils - Protection of Groundwater Soil Screening Level Concentrations (Effective January 15, 2021)

2. Standards for soil are taken from ECMC Table 915-1: Metals in Soils - Residential Soil Screening Level Concentrations (Effective January 15, 2021)

ECMC = Colorado Energy and Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory minimum detection limit

mg/kg = milligrams per kilogram

ft = feet

bgs = below ground surface

Blue highlight = Highest background concentration x 1.25

Bold = exceeds ECMC Table 915-1 standards

Bold = Concentrations greater than 1.25x max background concentration and Table 915-1 standards

LABORATORY ANALYTICAL DATA

Civitas - CO

Sample Delivery Group: L1777449
Samples Received: 09/13/2024
Project Number:
Description: Well decomis
Site: RODMAN BRUNTZ 21-26
Report To: Mike Dinkel
4480 Garfield Street
Denver, CO 80216

Entire Report Reviewed By:



Chris Ward
Project Manager

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

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

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FL-B05@5' L1777449-04	13
WH-B01@6' L1777449-05	15
WH-BG01@3' L1777449-06	17
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¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

SAMPLE SUMMARY

FL-B01@3' L1777449-01 Solid

Collected by Robert Lodge
Collected date/time 09/12/24 09:45
Received date/time 09/13/24 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2366832	1	09/21/24 03:59	09/21/24 03:59	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2363347	1	09/18/24 09:34	09/19/24 00:58	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2367009	1	09/21/24 06:37	09/21/24 09:50	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2367011	1	09/21/24 06:36	09/21/24 13:47	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2366863	1	09/20/24 21:32	09/21/24 01:03	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2364782	5	09/23/24 08:20	09/23/24 23:34	UNP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2364176	1	09/17/24 00:40	09/17/24 17:15	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2363942	1	09/17/24 00:40	09/17/24 17:04	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2366300	1	09/23/24 15:54	09/24/24 03:01	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2366288	1	09/22/24 16:38	09/24/24 00:06	JCH	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

FL-B03@6' L1777449-02 Solid

Collected by Robert Lodge
Collected date/time 09/12/24 09:20
Received date/time 09/13/24 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2366836	1	09/21/24 22:14	09/21/24 22:14	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2363347	1	09/18/24 09:34	09/19/24 01:07	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2367405	1	09/22/24 08:52	09/22/24 11:32	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2367406	1	09/22/24 08:55	09/22/24 12:41	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2368301	1	09/25/24 12:00	09/26/24 00:15	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2364782	25	09/23/24 08:20	09/24/24 01:15	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2364782	5	09/23/24 08:20	09/23/24 23:37	UNP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2364176	1	09/17/24 00:40	09/17/24 17:39	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2363942	1	09/17/24 00:40	09/17/24 17:24	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2366300	1	09/23/24 15:54	09/24/24 03:27	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2366288	1	09/22/24 16:38	09/24/24 00:24	JCH	Mt. Juliet, TN

⁷ Gl

⁸ Al

⁹ Sc

FL-B04@6' L1777449-03 Solid

Collected by Robert Lodge
Collected date/time 09/12/24 10:00
Received date/time 09/13/24 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2366836	1	09/21/24 22:16	09/21/24 22:16	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2363347	1	09/18/24 09:34	09/19/24 01:52	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2367405	1	09/22/24 08:52	09/22/24 11:32	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2367406	1	09/22/24 08:55	09/22/24 12:41	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2368302	1	09/27/24 20:58	09/28/24 00:07	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2364782	5	09/23/24 08:20	09/23/24 23:40	UNP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2364176	1	09/17/24 00:40	09/17/24 18:03	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2363942	1	09/17/24 00:40	09/17/24 17:44	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2366300	1	09/23/24 15:54	09/23/24 23:58	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2366288	1	09/22/24 16:38	09/24/24 00:42	JCH	Mt. Juliet, TN

Collected by Robert Lodge
Collected date/time 09/12/24 10:28
Received date/time 09/13/24 08:00

FL-B05@5' L1777449-04 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2366834	1	09/22/24 22:40	09/22/24 22:40	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2363347	1	09/18/24 09:34	09/19/24 02:01	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2367412	1	09/22/24 09:11	09/22/24 11:37	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2367413	1	09/22/24 09:26	09/22/24 12:22	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2366850	1	09/21/24 15:09	09/22/24 23:24	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2364782	5	09/23/24 08:20	09/23/24 23:59	UNP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2364176	1	09/17/24 00:40	09/17/24 18:27	JHH	Mt. Juliet, TN

SAMPLE SUMMARY

FL-B05@5' L1777449-04 Solid

Collected by
Robert Lodge

Collected date/time
09/12/24 10:28

Received date/time
09/13/24 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2363942	1	09/17/24 00:40	09/17/24 18:03	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2366300	1	09/23/24 15:54	09/24/24 04:00	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2366288	1	09/22/24 16:38	09/24/24 01:00	JCH	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

WH-B01@6' L1777449-05 Solid

Collected by
Robert Lodge

Collected date/time
09/12/24 10:15

Received date/time
09/13/24 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2366834	1	09/22/24 22:42	09/22/24 22:42	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2363347	1	09/18/24 09:34	09/19/24 02:27	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2367412	1	09/22/24 09:11	09/22/24 11:37	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2367413	1	09/22/24 09:26	09/22/24 12:22	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2366850	1	09/21/24 15:09	09/22/24 23:25	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2364782	25	09/23/24 08:20	09/24/24 01:43	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2364782	5	09/23/24 08:20	09/24/24 00:02	UNP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2364176	1	09/17/24 00:40	09/17/24 18:55	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2363942	1	09/17/24 00:40	09/17/24 18:23	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2366300	1	09/23/24 15:54	09/24/24 01:29	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2366288	1	09/22/24 16:38	09/24/24 01:18	JCH	Mt. Juliet, TN

WH-BG01@3' L1777449-06 Solid

Collected by
Robert Lodge

Collected date/time
09/12/24 10:50

Received date/time
09/13/24 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2366837	1	09/21/24 02:38	09/21/24 02:38	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2363347	1	09/18/24 09:34	09/19/24 02:36	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2367008	1	09/21/24 06:38	09/21/24 10:12	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2367012	1	09/21/24 06:38	09/21/24 13:22	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2366847	1	09/21/24 15:08	09/22/24 23:53	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2364782	25	09/23/24 08:20	09/24/24 01:12	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2364782	5	09/23/24 08:20	09/23/24 23:17	UNP	Mt. Juliet, TN

WH-BG01@6' L1777449-07 Solid

Collected by
Robert Lodge

Collected date/time
09/12/24 10:52

Received date/time
09/13/24 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2366836	1	09/21/24 22:18	09/21/24 22:18	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2363347	1	09/18/24 09:34	09/19/24 02:45	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2367405	1	09/22/24 08:52	09/22/24 11:32	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2367406	1	09/22/24 08:55	09/22/24 12:41	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2368302	1	09/27/24 20:58	09/28/24 00:08	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2364782	5	09/23/24 08:20	09/24/24 00:10	UNP	Mt. Juliet, TN

WH-BG02@3' L1777449-08 Solid

Collected by
Robert Lodge

Collected date/time
09/12/24 10:55

Received date/time
09/13/24 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2366834	1	09/22/24 22:43	09/22/24 22:43	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2363347	1	09/18/24 09:34	09/19/24 02:54	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2367412	1	09/22/24 09:11	09/22/24 11:37	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2367413	1	09/22/24 09:26	09/22/24 12:22	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2366850	1	09/21/24 15:09	09/22/24 23:27	CCE	Mt. Juliet, TN

SAMPLE SUMMARY

WH-BG02@3' L1777449-08 Solid

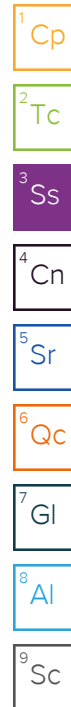
Collected by Robert Lodge
Collected date/time 09/12/24 10:55
Received date/time 09/13/24 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2364782	25	09/23/24 08:20	09/24/24 01:22	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2364782	5	09/23/24 08:20	09/24/24 00:14	UNP	Mt. Juliet, TN

WH-BG02@6' L1777449-09 Solid

Collected by Robert Lodge
Collected date/time 09/12/24 10:57
Received date/time 09/13/24 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2366836	1	09/21/24 22:19	09/21/24 22:19	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2363347	1	09/18/24 09:34	09/19/24 03:03	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2367405	1	09/22/24 08:52	09/22/24 11:32	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2367406	1	09/22/24 08:55	09/22/24 12:41	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2368302	1	09/27/24 20:58	09/28/24 00:10	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2364782	5	09/23/24 08:20	09/24/24 00:17	UNP	Mt. Juliet, TN



CASE NARRATIVE

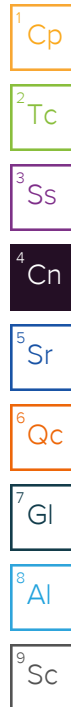
All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples 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 Ward
Project Manager

Project Narrative

The requested project specific reporting limits may be less than laboratory standard quantitation limits (PQL) but will be greater than or equal to the laboratory method detection limits (MDL). It is noted that results reported below lab standard quantitation limits (PQLs) may result in false positive/false negative values that may require additional laboratory quality assurance review, if requested. Routine laboratory procedures do not initiate a data review process for detections below the laboratory's PQL unless requested by the client.



Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte					
Sodium Adsorption Ratio	0.176		1	09/21/2024 03:59	WG2366832

Wet Chemistry by Method 7199

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Hexavalent Chromium	ND		0.300	1	09/19/2024 00:58	WG2363347

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	su				
pH	8.12	T8	1	09/21/2024 09:50	WG2367009

Sample Narrative:

L1777449-01 WG2367009: 8.12 at 21.6C

Wet Chemistry by Method 9050AMod

	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte				umhos/cm			
Specific Conductance	163	umhos/cm		10.0	1	09/21/2024 13:47	WG2367011

Sample Narrative:

L1777449-01 WG2367011: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l			
Hot Water Sol. Boron	ND		2.00	1	09/21/2024 01:03	WG2366863

Metals (ICPMS) by Method 6020

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Arsenic	1.62		0.200	5	09/23/2024 23:34	WG2364782
Barium	45.9		0.400	5	09/23/2024 23:34	WG2364782
Cadmium	ND		0.200	5	09/23/2024 23:34	WG2364782
Copper	4.54	J	0.400	5	09/23/2024 23:34	WG2364782
Lead	5.40		0.200	5	09/23/2024 23:34	WG2364782
Nickel	4.36		0.400	5	09/23/2024 23:34	WG2364782
Selenium	0.325	J	0.260	5	09/23/2024 23:34	WG2364782
Silver	ND		0.0865	5	09/23/2024 23:34	WG2364782
Zinc	19.3	J	0.740	5	09/23/2024 23:34	WG2364782

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

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	ND		0.500	1	09/17/2024 17:15	WG2364176
(S) a,a,a-Trifluorotoluene(FID)	98.0			77.0-120	09/17/2024 17:15	WG2364176

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00200	1	09/17/2024 17:04	WG2363942
Toluene	ND		0.00500	1	09/17/2024 17:04	WG2363942
Ethylbenzene	ND		0.00500	1	09/17/2024 17:04	WG2363942
Xylenes, Total	ND		0.0100	1	09/17/2024 17:04	WG2363942
1,2,4-Trimethylbenzene	ND		0.00500	1	09/17/2024 17:04	WG2363942
1,3,5-Trimethylbenzene	ND		0.00500	1	09/17/2024 17:04	WG2363942
(S) Toluene-d8	104			75.0-131	09/17/2024 17:04	WG2363942
(S) 4-Bromofluorobenzene	95.0			67.0-138	09/17/2024 17:04	WG2363942
(S) 1,2-Dichloroethane-d4	91.7			70.0-130	09/17/2024 17:04	WG2363942

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		50.0	1	09/24/2024 03:01	WG2366300
C28-C36 Motor Oil Range	ND		50.0	1	09/24/2024 03:01	WG2366300
(S) o-Terphenyl	60.0			18.0-148	09/24/2024 03:01	WG2366300

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00500	1	09/24/2024 00:06	WG2366288
Anthracene	ND		0.00500	1	09/24/2024 00:06	WG2366288
Benzo(a)anthracene	ND		0.00500	1	09/24/2024 00:06	WG2366288
Benzo(b)fluoranthene	ND		0.00500	1	09/24/2024 00:06	WG2366288
Benzo(k)fluoranthene	ND		0.00500	1	09/24/2024 00:06	WG2366288
Benzo(a)pyrene	ND		0.00500	1	09/24/2024 00:06	WG2366288
Chrysene	ND		0.00500	1	09/24/2024 00:06	WG2366288
Dibenz(a,h)anthracene	ND		0.00500	1	09/24/2024 00:06	WG2366288
Fluoranthene	ND		0.00500	1	09/24/2024 00:06	WG2366288
Fluorene	ND		0.00500	1	09/24/2024 00:06	WG2366288
Indeno(1,2,3-cd)pyrene	ND		0.00500	1	09/24/2024 00:06	WG2366288
1-Methylnaphthalene	ND		0.00500	1	09/24/2024 00:06	WG2366288
2-Methylnaphthalene	0.00533	U	0.00500	1	09/24/2024 00:06	WG2366288
Naphthalene	0.0173	U	0.00408	1	09/24/2024 00:06	WG2366288
Pyrene	ND		0.00500	1	09/24/2024 00:06	WG2366288
(S) p-Terphenyl-d14	72.1			23.0-120	09/24/2024 00:06	WG2366288
(S) Nitrobenzene-d5	34.1			14.0-149	09/24/2024 00:06	WG2366288
(S) 2-Fluorobiphenyl	55.1			34.0-125	09/24/2024 00:06	WG2366288

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte					
Sodium Adsorption Ratio	0.787		1	09/21/2024 22:14	WG2366836

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Wet Chemistry by Method 7199

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Hexavalent Chromium	ND		0.300	1	09/19/2024 01:07	WG2363347

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	su				
pH	7.93	T8	1	09/22/2024 11:32	WG2367405

Sample Narrative:

L1777449-02 WG2367405: 7.93 at 22.4C

Wet Chemistry by Method 9050AMod

	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte				umhos/cm			
Specific Conductance	405	umhos/cm		10.0	1	09/22/2024 12:41	WG2367406

Sample Narrative:

L1777449-02 WG2367406: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l			
Hot Water Sol. Boron	ND		2.00	1	09/26/2024 00:15	WG2368301

Metals (ICPMS) by Method 6020

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Arsenic	2.34		0.200	5	09/23/2024 23:37	WG2364782
Barium	230		0.760	25	09/24/2024 01:15	WG2364782
Cadmium	ND		0.200	5	09/23/2024 23:37	WG2364782
Copper	5.71		0.400	5	09/23/2024 23:37	WG2364782
Lead	6.20		0.200	5	09/23/2024 23:37	WG2364782
Nickel	5.93		0.400	5	09/23/2024 23:37	WG2364782
Selenium	0.574	J	0.260	5	09/23/2024 23:37	WG2364782
Silver	ND		0.0865	5	09/23/2024 23:37	WG2364782
Zinc	26.4		0.740	5	09/23/2024 23:37	WG2364782

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

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	ND		0.500	1	09/17/2024 17:39	WG2364176
(S) a,a,a-Trifluorotoluene(FID)	96.3			77.0-120	09/17/2024 17:39	WG2364176

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

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00200	1	09/17/2024 17:24	WG2363942
Toluene	ND		0.00500	1	09/17/2024 17:24	WG2363942
Ethylbenzene	ND		0.00500	1	09/17/2024 17:24	WG2363942
Xylenes, Total	ND		0.0100	1	09/17/2024 17:24	WG2363942
1,2,4-Trimethylbenzene	ND		0.00500	1	09/17/2024 17:24	WG2363942
1,3,5-Trimethylbenzene	ND		0.00500	1	09/17/2024 17:24	WG2363942
(S) Toluene-d8	104			75.0-131	09/17/2024 17:24	WG2363942
(S) 4-Bromofluorobenzene	93.4			67.0-138	09/17/2024 17:24	WG2363942
(S) 1,2-Dichloroethane-d4	98.2			70.0-130	09/17/2024 17:24	WG2363942

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		50.0	1	09/24/2024 03:27	WG2366300
C28-C36 Motor Oil Range	65.2		50.0	1	09/24/2024 03:27	WG2366300
(S) o-Terphenyl	64.0			18.0-148	09/24/2024 03:27	WG2366300

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00500	1	09/24/2024 00:24	WG2366288
Anthracene	ND		0.00500	1	09/24/2024 00:24	WG2366288
Benzo(a)anthracene	ND		0.00500	1	09/24/2024 00:24	WG2366288
Benzo(b)fluoranthene	ND		0.00500	1	09/24/2024 00:24	WG2366288
Benzo(k)fluoranthene	ND		0.00500	1	09/24/2024 00:24	WG2366288
Benzo(a)pyrene	ND		0.00500	1	09/24/2024 00:24	WG2366288
Chrysene	ND		0.00500	1	09/24/2024 00:24	WG2366288
Dibenz(a,h)anthracene	ND		0.00500	1	09/24/2024 00:24	WG2366288
Fluoranthene	ND		0.00500	1	09/24/2024 00:24	WG2366288
Fluorene	ND		0.00500	1	09/24/2024 00:24	WG2366288
Indeno(1,2,3-cd)pyrene	ND		0.00500	1	09/24/2024 00:24	WG2366288
1-Methylnaphthalene	ND		0.00500	1	09/24/2024 00:24	WG2366288
2-Methylnaphthalene	ND		0.00500	1	09/24/2024 00:24	WG2366288
Naphthalene	ND		0.00408	1	09/24/2024 00:24	WG2366288
Pyrene	ND		0.00500	1	09/24/2024 00:24	WG2366288
(S) p-Terphenyl-d14	79.3			23.0-120	09/24/2024 00:24	WG2366288
(S) Nitrobenzene-d5	38.3			14.0-149	09/24/2024 00:24	WG2366288
(S) 2-Fluorobiphenyl	60.4			34.0-125	09/24/2024 00:24	WG2366288

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte					
Sodium Adsorption Ratio	0.602		1	09/21/2024 22:16	WG2366836

1
Cp

2
Tc

Wet Chemistry by Method 7199

	Result	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Analyte	mg/kg					
Hexavalent Chromium	ND		0.300	1	09/19/2024 01:52	WG2363347

3
Ss

4
Cn

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	su				
pH	8.13	T8	1	09/22/2024 11:32	WG2367405

5
Sr

6
Qc

Sample Narrative:

L1777449-03 WG2367405: 8.13 at 23C

7
Gl

8
Al

Wet Chemistry by Method 9050AMod

	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte				umhos/cm			
Specific Conductance	254	umhos/cm		10.0	1	09/22/2024 12:41	WG2367406

9
Sc

Sample Narrative:

L1777449-03 WG2367406: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l			
Hot Water Sol. Boron	ND		2.00	1	09/28/2024 00:07	WG2368302

Metals (ICPMS) by Method 6020

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Arsenic	2.59		0.200	5	09/23/2024 23:40	WG2364782
Barium	114		0.400	5	09/23/2024 23:40	WG2364782
Cadmium	ND		0.200	5	09/23/2024 23:40	WG2364782
Copper	5.48		0.400	5	09/23/2024 23:40	WG2364782
Lead	6.73		0.200	5	09/23/2024 23:40	WG2364782
Nickel	8.07		0.400	5	09/23/2024 23:40	WG2364782
Selenium	0.409	J	0.260	5	09/23/2024 23:40	WG2364782
Silver	ND		0.0865	5	09/23/2024 23:40	WG2364782
Zinc	28.2		0.740	5	09/23/2024 23:40	WG2364782

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

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	ND		0.500	1	09/17/2024 18:03	WG2364176
(S) a,a,a-Trifluorotoluene(FID)	96.9			77.0-120	09/17/2024 18:03	WG2364176

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

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00200	1	09/17/2024 17:44	WG2363942
Toluene	ND		0.00500	1	09/17/2024 17:44	WG2363942
Ethylbenzene	ND		0.00500	1	09/17/2024 17:44	WG2363942
Xylenes, Total	ND		0.0100	1	09/17/2024 17:44	WG2363942
1,2,4-Trimethylbenzene	ND		0.00500	1	09/17/2024 17:44	WG2363942
1,3,5-Trimethylbenzene	ND		0.00500	1	09/17/2024 17:44	WG2363942
(S) Toluene-d8	104			75.0-131	09/17/2024 17:44	WG2363942
(S) 4-Bromofluorobenzene	93.9			67.0-138	09/17/2024 17:44	WG2363942
(S) 1,2-Dichloroethane-d4	94.1			70.0-130	09/17/2024 17:44	WG2363942

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		50.0	1	09/23/2024 23:58	WG2366300
C28-C36 Motor Oil Range	55.8		50.0	1	09/23/2024 23:58	WG2366300
(S) o-Terphenyl	61.1			18.0-148	09/23/2024 23:58	WG2366300

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00500	1	09/24/2024 00:42	WG2366288
Anthracene	ND		0.00500	1	09/24/2024 00:42	WG2366288
Benzo(a)anthracene	ND		0.00500	1	09/24/2024 00:42	WG2366288
Benzo(b)fluoranthene	ND		0.00500	1	09/24/2024 00:42	WG2366288
Benzo(k)fluoranthene	ND		0.00500	1	09/24/2024 00:42	WG2366288
Benzo(a)pyrene	ND		0.00500	1	09/24/2024 00:42	WG2366288
Chrysene	ND		0.00500	1	09/24/2024 00:42	WG2366288
Dibenz(a,h)anthracene	ND		0.00500	1	09/24/2024 00:42	WG2366288
Fluoranthene	ND		0.00500	1	09/24/2024 00:42	WG2366288
Fluorene	ND		0.00500	1	09/24/2024 00:42	WG2366288
Indeno(1,2,3-cd)pyrene	ND		0.00500	1	09/24/2024 00:42	WG2366288
1-Methylnaphthalene	ND		0.00500	1	09/24/2024 00:42	WG2366288
2-Methylnaphthalene	ND		0.00500	1	09/24/2024 00:42	WG2366288
Naphthalene	ND		0.00408	1	09/24/2024 00:42	WG2366288
Pyrene	ND		0.00500	1	09/24/2024 00:42	WG2366288
(S) p-Terphenyl-d14	73.9			23.0-120	09/24/2024 00:42	WG2366288
(S) Nitrobenzene-d5	39.8			14.0-149	09/24/2024 00:42	WG2366288
(S) 2-Fluorobiphenyl	58.4			34.0-125	09/24/2024 00:42	WG2366288

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte					
Sodium Adsorption Ratio	0.576		1	09/22/2024 22:40	WG2366834

1Cp

2Tc

Wet Chemistry by Method 7199

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Hexavalent Chromium	ND		0.300	1	09/19/2024 02:01	WG2363347

3Ss

4Cn

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	su				
pH	8.20	T8	1	09/22/2024 11:37	WG2367412

5Sr

6Qc

Sample Narrative:

L1777449-04 WG2367412: 8.2 at 22.8C

7Gl

8Al

Wet Chemistry by Method 9050AMod

	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte				umhos/cm			
Specific Conductance	216	umhos/cm		10.0	1	09/22/2024 12:22	WG2367413

9Sc

Sample Narrative:

L1777449-04 WG2367413: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l			
Hot Water Sol. Boron	ND		2.00	1	09/22/2024 23:24	WG2366850

Metals (ICPMS) by Method 6020

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Arsenic	2.43		0.200	5	09/23/2024 23:59	WG2364782
Barium	203		0.400	5	09/23/2024 23:59	WG2364782
Cadmium	ND		0.200	5	09/23/2024 23:59	WG2364782
Copper	6.53		0.400	5	09/23/2024 23:59	WG2364782
Lead	11.9		0.200	5	09/23/2024 23:59	WG2364782
Nickel	6.23		0.400	5	09/23/2024 23:59	WG2364782
Selenium	0.296	J	0.260	5	09/23/2024 23:59	WG2364782
Silver	ND		0.0865	5	09/23/2024 23:59	WG2364782
Zinc	45.9		0.740	5	09/23/2024 23:59	WG2364782

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

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	ND		0.500	1	09/17/2024 18:27	WG2364176
(S) a,a,a-Trifluorotoluene(FID)	97.2			77.0-120	09/17/2024 18:27	WG2364176

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

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00200	1	09/17/2024 18:03	WG2363942
Toluene	ND		0.00500	1	09/17/2024 18:03	WG2363942
Ethylbenzene	ND		0.00500	1	09/17/2024 18:03	WG2363942
Xylenes, Total	ND		0.0100	1	09/17/2024 18:03	WG2363942
1,2,4-Trimethylbenzene	ND		0.00500	1	09/17/2024 18:03	WG2363942
1,3,5-Trimethylbenzene	ND		0.00500	1	09/17/2024 18:03	WG2363942
(S) Toluene-d8	105			75.0-131	09/17/2024 18:03	WG2363942
(S) 4-Bromofluorobenzene	97.2			67.0-138	09/17/2024 18:03	WG2363942
(S) 1,2-Dichloroethane-d4	98.8			70.0-130	09/17/2024 18:03	WG2363942

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		50.0	1	09/24/2024 04:00	WG2366300
C28-C36 Motor Oil Range	ND		50.0	1	09/24/2024 04:00	WG2366300
(S) o-Terphenyl	59.9			18.0-148	09/24/2024 04:00	WG2366300

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00500	1	09/24/2024 01:00	WG2366288
Anthracene	ND		0.00500	1	09/24/2024 01:00	WG2366288
Benzo(a)anthracene	ND		0.00500	1	09/24/2024 01:00	WG2366288
Benzo(b)fluoranthene	ND		0.00500	1	09/24/2024 01:00	WG2366288
Benzo(k)fluoranthene	ND		0.00500	1	09/24/2024 01:00	WG2366288
Benzo(a)pyrene	ND		0.00500	1	09/24/2024 01:00	WG2366288
Chrysene	ND		0.00500	1	09/24/2024 01:00	WG2366288
Dibenz(a,h)anthracene	ND		0.00500	1	09/24/2024 01:00	WG2366288
Fluoranthene	ND		0.00500	1	09/24/2024 01:00	WG2366288
Fluorene	ND		0.00500	1	09/24/2024 01:00	WG2366288
Indeno(1,2,3-cd)pyrene	ND		0.00500	1	09/24/2024 01:00	WG2366288
1-Methylnaphthalene	ND		0.00500	1	09/24/2024 01:00	WG2366288
2-Methylnaphthalene	ND		0.00500	1	09/24/2024 01:00	WG2366288
Naphthalene	ND		0.00408	1	09/24/2024 01:00	WG2366288
Pyrene	ND		0.00500	1	09/24/2024 01:00	WG2366288
(S) p-Terphenyl-d14	77.4			23.0-120	09/24/2024 01:00	WG2366288
(S) Nitrobenzene-d5	31.1			14.0-149	09/24/2024 01:00	WG2366288
(S) 2-Fluorobiphenyl	43.7			34.0-125	09/24/2024 01:00	WG2366288

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte					
Sodium Adsorption Ratio	0.250		1	09/22/2024 22:42	WG2366834

1
Cp

2
Tc

Wet Chemistry by Method 7199

	Result	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Analyte	mg/kg					
Hexavalent Chromium	ND		0.300	1	09/19/2024 02:27	WG2363347

3
Ss

4
Cn

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	su				
pH	8.20	T8	1	09/22/2024 11:37	WG2367412

5
Sr

6
Qc

Sample Narrative:

L1777449-05 WG2367412: 8.2 at 22.9C

7
Gl

8
Al

Wet Chemistry by Method 9050AMod

	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte				umhos/cm			
Specific Conductance	295	umhos/cm		10.0	1	09/22/2024 12:22	WG2367413

9
Sc

Sample Narrative:

L1777449-05 WG2367413: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l			
Hot Water Sol. Boron	ND		2.00	1	09/22/2024 23:25	WG2366850

Metals (ICPMS) by Method 6020

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Arsenic	2.65		0.200	5	09/24/2024 00:02	WG2364782
Barium	207		0.760	25	09/24/2024 01:43	WG2364782
Cadmium	ND		0.200	5	09/24/2024 00:02	WG2364782
Copper	8.80		0.400	5	09/24/2024 00:02	WG2364782
Lead	15.6		0.200	5	09/24/2024 00:02	WG2364782
Nickel	8.29		0.400	5	09/24/2024 00:02	WG2364782
Selenium	0.474	J	0.260	5	09/24/2024 00:02	WG2364782
Silver	ND		0.0865	5	09/24/2024 00:02	WG2364782
Zinc	29.2		0.740	5	09/24/2024 00:02	WG2364782

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

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
TPH (GC/FID) Low Fraction	ND		0.500	1	09/17/2024 18:55	WG2364176
(S) a,a,a-Trifluorotoluene(FID)	97.1			77.0-120	09/17/2024 18:55	WG2364176

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

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00200	1	09/17/2024 18:23	WG2363942
Toluene	ND		0.00500	1	09/17/2024 18:23	WG2363942
Ethylbenzene	ND		0.00500	1	09/17/2024 18:23	WG2363942
Xylenes, Total	ND		0.0100	1	09/17/2024 18:23	WG2363942
1,2,4-Trimethylbenzene	ND		0.00500	1	09/17/2024 18:23	WG2363942
1,3,5-Trimethylbenzene	ND		0.00500	1	09/17/2024 18:23	WG2363942
(S) Toluene-d8	104			75.0-131	09/17/2024 18:23	WG2363942
(S) 4-Bromofluorobenzene	95.7			67.0-138	09/17/2024 18:23	WG2363942
(S) 1,2-Dichloroethane-d4	91.0			70.0-130	09/17/2024 18:23	WG2363942

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		50.0	1	09/24/2024 01:29	WG2366300
C28-C36 Motor Oil Range	ND		50.0	1	09/24/2024 01:29	WG2366300
(S) o-Terphenyl	59.6			18.0-148	09/24/2024 01:29	WG2366300

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00500	1	09/24/2024 01:18	WG2366288
Anthracene	ND		0.00500	1	09/24/2024 01:18	WG2366288
Benzo(a)anthracene	ND		0.00500	1	09/24/2024 01:18	WG2366288
Benzo(b)fluoranthene	ND		0.00500	1	09/24/2024 01:18	WG2366288
Benzo(k)fluoranthene	ND		0.00500	1	09/24/2024 01:18	WG2366288
Benzo(a)pyrene	ND		0.00500	1	09/24/2024 01:18	WG2366288
Chrysene	ND		0.00500	1	09/24/2024 01:18	WG2366288
Dibenz(a,h)anthracene	ND		0.00500	1	09/24/2024 01:18	WG2366288
Fluoranthene	ND		0.00500	1	09/24/2024 01:18	WG2366288
Fluorene	ND		0.00500	1	09/24/2024 01:18	WG2366288
Indeno(1,2,3-cd)pyrene	ND		0.00500	1	09/24/2024 01:18	WG2366288
1-Methylnaphthalene	ND		0.00500	1	09/24/2024 01:18	WG2366288
2-Methylnaphthalene	ND		0.00500	1	09/24/2024 01:18	WG2366288
Naphthalene	ND		0.00408	1	09/24/2024 01:18	WG2366288
Pyrene	ND		0.00500	1	09/24/2024 01:18	WG2366288
(S) p-Terphenyl-d14	67.1			23.0-120	09/24/2024 01:18	WG2366288
(S) Nitrobenzene-d5	54.2			14.0-149	09/24/2024 01:18	WG2366288
(S) 2-Fluorobiphenyl	56.8			34.0-125	09/24/2024 01:18	WG2366288

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte					
Sodium Adsorption Ratio	0.678		1	09/21/2024 02:38	WG2366837

Wet Chemistry by Method 7199

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Hexavalent Chromium	ND		0.300	1	09/19/2024 02:36	WG2363347

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	su				
pH	8.04	T8	1	09/21/2024 10:12	WG2367008

Sample Narrative:
L1777449-06 WG2367008: 8.04 at 22.5C

Wet Chemistry by Method 9050AMod

	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte				umhos/cm			
Specific Conductance	536	umhos/cm		10.0	1	09/21/2024 13:22	WG2367012

Sample Narrative:
L1777449-06 WG2367012: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l			
Hot Water Sol. Boron	ND		2.00	1	09/22/2024 23:53	WG2366847

Metals (ICPMS) by Method 6020

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Arsenic	4.77		0.200	5	09/23/2024 23:17	WG2364782
Barium	297		0.760	25	09/24/2024 01:12	WG2364782
Cadmium	ND		0.200	5	09/23/2024 23:17	WG2364782
Copper	8.86	O1	0.400	5	09/23/2024 23:17	WG2364782
Lead	8.04		0.200	5	09/23/2024 23:17	WG2364782
Nickel	14.2		0.400	5	09/23/2024 23:17	WG2364782
Selenium	0.520	J	0.260	5	09/23/2024 23:17	WG2364782
Silver	ND		0.0865	5	09/23/2024 23:17	WG2364782
Zinc	33.6		0.740	5	09/23/2024 23:17	WG2364782

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte					
Sodium Adsorption Ratio	0.886		1	09/21/2024 22:18	WG2366836

Wet Chemistry by Method 7199

	Result	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Analyte	mg/kg					
Hexavalent Chromium	ND		0.300	1	09/19/2024 02:45	WG2363347

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	su				
pH	8.28	T8	1	09/22/2024 11:32	WG2367405

Sample Narrative:
L1777449-07 WG2367405: 8.28 at 23C

Wet Chemistry by Method 9050AMod

	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte				umhos/cm			
Specific Conductance	269	umhos/cm		10.0	1	09/22/2024 12:41	WG2367406

Sample Narrative:
L1777449-07 WG2367406: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l			
Hot Water Sol. Boron	ND		2.00	1	09/28/2024 00:08	WG2368302

Metals (ICPMS) by Method 6020

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Arsenic	6.84		0.200	5	09/24/2024 00:10	WG2364782
Barium	132		0.400	5	09/24/2024 00:10	WG2364782
Cadmium	ND		0.200	5	09/24/2024 00:10	WG2364782
Copper	13.7		0.400	5	09/24/2024 00:10	WG2364782
Lead	11.1		0.200	5	09/24/2024 00:10	WG2364782
Nickel	14.9		0.400	5	09/24/2024 00:10	WG2364782
Selenium	0.636	J	0.260	5	09/24/2024 00:10	WG2364782
Silver	ND		0.0865	5	09/24/2024 00:10	WG2364782
Zinc	50.9		0.740	5	09/24/2024 00:10	WG2364782

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte					
Sodium Adsorption Ratio	1.15		1	09/22/2024 22:43	WG2366834

Wet Chemistry by Method 7199

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Hexavalent Chromium	ND		0.300	1	09/19/2024 02:54	WG2363347

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	su				
pH	8.07	T8	1	09/22/2024 11:37	WG2367412

Sample Narrative:
L1777449-08 WG2367412: 8.07 at 22.8C

Wet Chemistry by Method 9050AMod

	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte				umhos/cm			
Specific Conductance	472	umhos/cm		10.0	1	09/22/2024 12:22	WG2367413

Sample Narrative:
L1777449-08 WG2367413: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l			
Hot Water Sol. Boron	ND		2.00	1	09/22/2024 23:27	WG2366850

Metals (ICPMS) by Method 6020

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Arsenic	5.85		0.200	5	09/24/2024 00:14	WG2364782
Barium	215		0.760	25	09/24/2024 01:22	WG2364782
Cadmium	ND		0.200	5	09/24/2024 00:14	WG2364782
Copper	10.2		0.400	5	09/24/2024 00:14	WG2364782
Lead	9.43		0.200	5	09/24/2024 00:14	WG2364782
Nickel	10.2		0.400	5	09/24/2024 00:14	WG2364782
Selenium	0.546	J	0.260	5	09/24/2024 00:14	WG2364782
Silver	ND		0.0865	5	09/24/2024 00:14	WG2364782
Zinc	38.1		0.740	5	09/24/2024 00:14	WG2364782

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte					
Sodium Adsorption Ratio	0.865		1	09/21/2024 22:19	WG2366836

Wet Chemistry by Method 7199

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Hexavalent Chromium	ND		0.300	1	09/19/2024 03:03	WG2363347

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	su				
pH	8.10	T8	1	09/22/2024 11:32	WG2367405

Sample Narrative:
L1777449-09 WG2367405: 8.1 at 23C

Wet Chemistry by Method 9050AMod

	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte				umhos/cm			
Specific Conductance	309	umhos/cm		10.0	1	09/22/2024 12:41	WG2367406

Sample Narrative:
L1777449-09 WG2367406: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l			
Hot Water Sol. Boron	ND		2.00	1	09/28/2024 00:10	WG2368302

Metals (ICPMS) by Method 6020

	Result	Qualifier	RL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg			
Arsenic	4.26		0.200	5	09/24/2024 00:17	WG2364782
Barium	131		0.400	5	09/24/2024 00:17	WG2364782
Cadmium	0.215	J	0.200	5	09/24/2024 00:17	WG2364782
Copper	11.1		0.400	5	09/24/2024 00:17	WG2364782
Lead	11.5		0.200	5	09/24/2024 00:17	WG2364782
Nickel	9.02		0.400	5	09/24/2024 00:17	WG2364782
Selenium	0.630	J	0.260	5	09/24/2024 00:17	WG2364782
Silver	ND		0.0865	5	09/24/2024 00:17	WG2364782
Zinc	39.5		0.740	5	09/24/2024 00:17	WG2364782

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4121530-1 09/19/24 00:41

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Hexavalent Chromium	ND		0.255	1.00

L1777449-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1777449-09 09/19/24 03:03 • (DUP) R4121530-7 09/19/24 03:12

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	ND	ND	1	0.000		20

L1777484-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1777484-01 09/19/24 04:51 • (DUP) R4121530-8 09/19/24 05:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4121530-2 09/19/24 00:49

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.5	105	80.0-120	

L1777449-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777449-02 09/19/24 01:07 • (MS) R4121530-4 09/19/24 01:25 • (MSD) R4121530-5 09/19/24 01:34

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Hexavalent Chromium	20.0	ND	15.4	16.7	77.2	83.5	1	75.0-125			7.85	20

L1777449-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1777449-02 09/19/24 01:07 • (MS) R4121530-6 09/19/24 01:43

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	643	ND	541	84.2	50	75.0-125	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1777016-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1777016-04 09/21/24 10:12 • (DUP) R4122653-2 09/21/24 10:12

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.58	7.54	1	0.529		1

Sample Narrative:

OS: 7.58 at 21.3C

DUP: 7.54 at 20.9C



L1777532-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1777532-04 09/21/24 10:12 • (DUP) R4122653-3 09/21/24 10:12

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	pH	su		%		%
pH	8.56	8.57	1	0.117		1

Sample Narrative:

OS: 8.56 at 22C

DUP: 8.57 at 20.9C

Laboratory Control Sample (LCS)

(LCS) R4122653-1 09/21/24 10:12

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	su	su	%	%	
pH	10.0	9.98	99.8	99.0-101	

Sample Narrative:

LCS: 9.98 at 20.7C

L1777016-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1777016-02 09/21/24 09:50 • (DUP) R4122673-2 09/21/24 09:50

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.80	7.76	1	0.514		1

Sample Narrative:

OS: 7.8 at 21.4C

DUP: 7.76 at 22.6C



L1777032-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1777032-03 09/21/24 09:50 • (DUP) R4122673-3 09/21/24 09:50

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.19	8.24	1	0.609		1

Sample Narrative:

OS: 8.19 at 21.7C

DUP: 8.24 at 21.2C

Laboratory Control Sample (LCS)

(LCS) R4122673-1 09/21/24 09:50

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10 at 20.7C

L1777439-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1777439-01 09/22/24 11:32 • (DUP) R4122860-2 09/22/24 11:32

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	7.11	7.09	1	0.282		1

Sample Narrative:

OS: 7.11 at 22.8C

DUP: 7.09 at 22.9C



L1777455-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1777455-03 09/22/24 11:32 • (DUP) R4122860-3 09/22/24 11:32

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	7.51	7.56	1	0.664		1

Sample Narrative:

OS: 7.51 at 23C

DUP: 7.56 at 23.1C

Laboratory Control Sample (LCS)

(LCS) R4122860-1 09/22/24 11:32

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10 at 21.4C

L1777439-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1777439-02 09/22/24 11:37 • (DUP) R4122861-2 09/22/24 11:37

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	7.28	7.26	1	0.275		1

Sample Narrative:

OS: 7.28 at 22.7C

DUP: 7.26 at 22.8C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1777532-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1777532-03 09/22/24 11:37 • (DUP) R4122861-3 09/22/24 11:37

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	pH	su		%		%
pH	7.94	7.96	1	0.252		1

Sample Narrative:

OS: 7.94 at 22.7C

DUP: 7.96 at 22.7C

Laboratory Control Sample (LCS)

(LCS) R4122861-1 09/22/24 11:37

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10 at 21.7C

Method Blank (MB)

(MB) R4122750-1 09/21/24 13:47

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	ND		10.0	10.0

Sample Narrative:

BLANK: at 25C

L1777016-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1777016-01 09/21/24 13:47 • (DUP) R4122750-3 09/21/24 13:47

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	243	243	1	0.0412		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1777449-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1777449-01 09/21/24 13:47 • (DUP) R4122750-4 09/21/24 13:47

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	163	165	1	0.855		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4122750-2 09/21/24 13:47

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	673	91.8	85.0-115	

Sample Narrative:

LCS: at 25C



Method Blank (MB)

(MB) R4122748-1 09/21/24 13:22

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	ND		10.0	10.0

Sample Narrative:

BLANK: at 25C

L1776993-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1776993-02 09/21/24 13:22 • (DUP) R4122748-3 09/21/24 13:22

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	222	220	1	0.634		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1777536-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1777536-01 09/21/24 13:22 • (DUP) R4122748-4 09/21/24 13:22

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	320	315	1	1.57		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4122748-2 09/21/24 13:22

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	686	93.6	85.0-115	

Sample Narrative:

LCS: at 25C



Method Blank (MB)

(MB) R4122868-1 09/22/24 12:41

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	ND		10.0	10.0

Sample Narrative:

BLANK: at 25C

L1777439-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1777439-03 09/22/24 12:41 • (DUP) R4122868-3 09/22/24 12:41

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	365	364	1	0.274		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1777455-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1777455-01 09/22/24 12:41 • (DUP) R4122868-4 09/22/24 12:41

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	855	852	1	0.351		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4122868-2 09/22/24 12:41

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	747	102	85.0-115	

Sample Narrative:

LCS: at 25C



Method Blank (MB)

(MB) R4122865-1 09/22/24 12:22

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	ND		10.0	10.0

Sample Narrative:

BLANK: at 25C

L1777439-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1777439-02 09/22/24 12:22 • (DUP) R4122865-3 09/22/24 12:22

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	616	616	1	0.000		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1777532-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1777532-01 09/22/24 12:22 • (DUP) R4122865-4 09/22/24 12:22

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1480	1480	1	0.0674		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4122865-2 09/22/24 12:22

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	756	103	85.0-115	

Sample Narrative:

LCS: at 25C



Method Blank (MB)

(MB) R4122971-1 09/22/24 23:47

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	ND		0.0167	0.200

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

(LCS) R4122971-2 09/22/24 23:49 • (LCSD) R4122971-3 09/22/24 23:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.01	1.01	101	101	80.0-120			0.544	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4122970-1 09/22/24 22:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	ND		0.0167	0.200

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

(LCS) R4122970-2 09/22/24 23:00 • (LCSD) R4122970-3 09/22/24 23:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	0.996	1.02	99.6	102	80.0-120			2.12	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4122660-1 09/21/24 00:18

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	ND		0.0167	0.200

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

(LCS) R4122660-2 09/21/24 00:20 • (LCSD) R4122660-3 09/21/24 00:22

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.03	1.03	103	103	80.0-120			0.0672	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4124527-1 09/25/24 23:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	ND		0.0167	0.200

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

(LCS) R4124527-2 09/25/24 23:31 • (LCSD) R4124527-3 09/25/24 23:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	0.994	0.979	99.4	97.9	80.0-120			1.49	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4125621-1 09/28/24 00:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	ND		0.0167	0.200

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

(LCS) R4125621-2 09/28/24 00:03 • (LCSD) R4125621-3 09/28/24 00:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.03	1.00	103	100	80.0-120			3.11	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4123314-1 09/23/24 23:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	ND		0.100	1.00
Barium	ND		0.152	2.50
Cadmium	ND		0.0855	1.00
Copper	ND		0.133	5.00
Lead	ND		0.0990	2.00
Nickel	ND		0.197	2.50
Selenium	ND		0.180	2.50
Silver	ND		0.0865	0.500
Zinc	ND		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R4123314-2 09/23/24 23:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	92.8	92.8	80.0-120	
Barium	100	91.2	91.2	80.0-120	
Cadmium	100	96.3	96.3	80.0-120	
Copper	100	94.6	94.6	80.0-120	
Lead	100	90.5	90.5	80.0-120	
Nickel	100	96.6	96.6	80.0-120	
Selenium	100	96.2	96.2	80.0-120	
Silver	20.0	20.1	100	80.0-120	
Zinc	100	92.8	92.8	80.0-120	

L1777449-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777449-06 09/23/24 23:17 • (MS) R4123314-5 09/23/24 23:27 • (MSD) R4123314-6 09/23/24 23:30

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 %
Arsenic	100	4.77	91.7	91.4	87.0	86.6	5	75.0-125			0.364	20
Cadmium	100	ND	87.8	89.7	87.6	89.5	5	75.0-125			2.14	20
Copper	100	8.86	94.7	93.8	85.8	84.9	5	75.0-125			0.997	20
Lead	100	8.04	92.1	93.0	84.0	85.0	5	75.0-125			1.05	20
Nickel	100	14.2	98.2	98.3	84.0	84.1	5	75.0-125			0.146	20
Selenium	100	0.520	87.4	91.4	86.8	90.9	5	75.0-125			4.54	20
Silver	20.0	ND	18.4	18.7	92.2	93.6	5	75.0-125			1.50	20
Zinc	100	33.6	115	117	81.7	83.6	5	75.0-125			1.68	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4122046-3 09/17/24 11:55

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)	97.5			77.0-120

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

(LCS) R4122046-1 09/17/24 10:16 • (LCSD) R4122046-2 09/17/24 10:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.00	5.47	5.15	109	103	72.0-127			6.03	20
(S) a,a,a-Trifluorotoluene(FID)				106	105	77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4120776-3 09/17/24 11:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	ND		0.000467	0.00100
Toluene	ND		0.00130	0.00500
Ethylbenzene	ND		0.000737	0.00250
Xylenes, Total	ND		0.000880	0.00650
1,2,4-Trimethylbenzene	ND		0.00158	0.00500
1,3,5-Trimethylbenzene	ND		0.00200	0.00500
(S) Toluene-d8	105			75.0-131
(S) 4-Bromofluorobenzene	96.2			67.0-138
(S) 1,2-Dichloroethane-d4	101			70.0-130

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

(LCS) R4120776-1 09/17/24 09:50 • (LCSD) R4120776-2 09/17/24 10:10

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	0.142	0.127	114	102	70.0-123			11.2	20
Toluene	0.125	0.143	0.124	114	99.2	75.0-121			14.2	20
Ethylbenzene	0.125	0.149	0.126	119	101	74.0-126			16.7	20
Xylenes, Total	0.375	0.411	0.361	110	96.3	72.0-127			13.0	20
1,2,4-Trimethylbenzene	0.125	0.133	0.123	106	98.4	70.0-126			7.81	20
1,3,5-Trimethylbenzene	0.125	0.141	0.123	113	98.4	73.0-127			13.6	20
(S) Toluene-d8				101	99.7	75.0-131				
(S) 4-Bromofluorobenzene				102	98.4	67.0-138				
(S) 1,2-Dichloroethane-d4				102	106	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4123391-1 09/23/24 23:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	ND		1.61	4.00
C28-C36 Motor Oil Range	ND		0.274	4.00
(S) o-Terphenyl	65.9			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4123391-2 09/23/24 23:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.4	78.8	50.0-150	
(S) o-Terphenyl			65.8	18.0-148	

L1777460-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777460-01 09/24/24 00:24 • (MS) R4123391-3 09/24/24 00:37 • (MSD) R4123391-4 09/24/24 00:50

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 %
C10-C28 Diesel Range	48.6	ND	ND	ND	70.6	77.9	1	50.0-150			9.71	20
(S) o-Terphenyl					58.5	65.9		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4123450-2 09/23/24 22:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	ND		0.00209	0.00600
Anthracene	ND		0.00230	0.00600
Benzo(a)anthracene	ND		0.00173	0.00600
Benzo(b)fluoranthene	ND		0.00153	0.00600
Benzo(k)fluoranthene	ND		0.00215	0.00600
Benzo(a)pyrene	ND		0.00179	0.00600
Chrysene	ND		0.00232	0.00600
Dibenz(a,h)anthracene	ND		0.00172	0.00600
Fluoranthene	ND		0.00227	0.00600
Fluorene	ND		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	ND		0.00181	0.00600
1-Methylnaphthalene	ND		0.00449	0.0200
2-Methylnaphthalene	ND		0.00427	0.0200
Naphthalene	ND		0.00408	0.0200
Pyrene	ND		0.00200	0.00600
(S) p-Terphenyl-d14	96.4			23.0-120
(S) Nitrobenzene-d5	19.9			14.0-149
(S) 2-Fluorobiphenyl	35.5			34.0-125

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4123450-1 09/23/24 22:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0529	66.1	50.0-120	
Anthracene	0.0800	0.0466	58.3	50.0-126	
Benzo(a)anthracene	0.0800	0.0463	57.9	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0586	73.3	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0547	68.4	49.0-125	
Benzo(a)pyrene	0.0800	0.0496	62.0	42.0-120	
Chrysene	0.0800	0.0599	74.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0549	68.6	47.0-125	
Fluoranthene	0.0800	0.0565	70.6	49.0-129	
Fluorene	0.0800	0.0569	71.1	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0529	66.1	46.0-125	
1-Methylnaphthalene	0.0800	0.0553	69.1	51.0-121	
2-Methylnaphthalene	0.0800	0.0524	65.5	50.0-120	
Naphthalene	0.0800	0.0573	71.6	50.0-120	
Pyrene	0.0800	0.0577	72.1	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4123450-1 09/23/24 22:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			95.1	23.0-120	
(S) Nitrobenzene-d5			27.1	14.0-149	
(S) 2-Fluorobiphenyl			44.0	34.0-125	

L1777460-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777460-02 09/24/24 11:16 • (MS) R4123627-1 09/24/24 11:35 • (MSD) R4123627-2 09/24/24 11:54

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 %
Acenaphthene	0.0800	ND	0.0401	0.0393	50.1	49.1	1	14.0-127			2.02	27
Anthracene	0.0800	ND	0.0486	0.0446	60.8	55.8	1	10.0-145			8.58	30
Benzo(a)anthracene	0.0800	ND	0.0504	0.0475	63.0	59.4	1	10.0-139			5.92	30
Benzo(b)fluoranthene	0.0800	ND	0.0544	0.0474	68.0	59.3	1	10.0-140			13.8	36
Benzo(k)fluoranthene	0.0800	ND	0.0578	0.0535	72.3	66.9	1	10.0-137			7.73	31
Benzo(a)pyrene	0.0800	ND	0.0538	0.0494	67.3	61.8	1	10.0-141			8.53	31
Chrysene	0.0800	ND	0.0628	0.0588	78.5	73.5	1	10.0-145			6.58	30
Dibenz(a,h)anthracene	0.0800	ND	0.0620	0.0583	77.5	72.9	1	10.0-132			6.15	31
Fluoranthene	0.0800	ND	0.0483	0.0421	60.4	52.6	1	10.0-153			13.7	33
Fluorene	0.0800	ND	0.0488	0.0459	61.0	57.4	1	11.0-130			6.12	29
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0550	0.0497	68.8	62.1	1	10.0-137			10.1	32
1-Methylnaphthalene	0.0800	ND	0.0421	0.0439	52.6	54.9	1	10.0-142			4.19	28
2-Methylnaphthalene	0.0800	ND	0.0440	0.0436	55.0	54.5	1	10.0-137			0.913	28
Naphthalene	0.0800	ND	0.0438	0.0443	54.8	55.4	1	10.0-135			1.14	27
Pyrene	0.0800	ND	0.0527	0.0468	65.9	58.5	1	10.0-148			11.9	35
(S) p-Terphenyl-d14					98.1	96.0		23.0-120				
(S) Nitrobenzene-d5					37.1	43.8		14.0-149				
(S) 2-Fluorobiphenyl					44.0	48.3		34.0-125				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

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

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

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
T8	Sample(s) received past/too close to holding time expiration.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

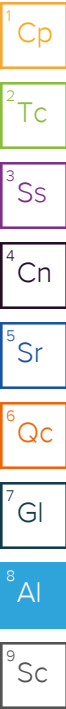
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

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

* 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 Analytical.



Company Name/Address: Civitas - CO 4480 Garfield Street Denver, CO 80216			Billing Information: Jacob Evans PO Box 4995 The Woodlands, TX 77387			Analysis / Container / Preservative <div style="display: flex; justify-content: space-between;"> <div>Pres Chk</div> <div>Background TABLE915 8ozClr-NoPres</div> <div>CHLORIDE,SULFATE 125mlHDPE-NoPres</div> <div>Full TABLE915 8ozClr-NoPres</div> <div>TDS 1L-HDPE NoPres</div> <div>V8260 40mlAmb-HCl</div> </div>			Chain of Custody Page <u> </u> of <u> </u> MT JULIET, TN <small>12065 Lebanon Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubs/pas-standard-terms.pdf</small> SDG # G112 Acctnum: CIVTASBCO Template: T260090 Prelogin: P1101489 PM: 824 - Chris Ward PB: Shipped Via: FedEX Ground		
Report to: Mike Dinkel			Email To: samples@quandaryconsultants.com;rlodge@qu			<div style="display: flex; justify-content: space-between;"> <div> Project Description: Well decomis </div> <div> City/State Collected: Ft. Lupton, Co </div> <div> Please Circle: PT <input checked="" type="radio"/> CT <input type="radio"/> ET <input type="radio"/> </div> </div>					
Phone: 573434 6969		Client Project # CIVTASBCO-QUANDARY		Lab Project # CIVTASBCO-QUANDARY							
Collected by (print): Robert Lodge		Site/Facility ID # Radman Bruntz 21-26		P.O. # 							
Collected by (signature): 		Rush? (Lab MUST Be Notified) Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day <input type="checkbox"/>		Quote # Standard							
Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>		Date Results Needed Standard		No. of Cntrs 							
Sample ID Comp/Grab Matrix * Depth Date Time											
FL-B01 @ 3'			SS	3'	9-12-24	0945	3				
FL-B03 @ 6'			SS	6'		0920	3				
FL-B04 @ 6'			SS	6'		1000	3				
FL-B05 @ 5'			SS	5'		1028	3				
WH-B01 @ 6'			SS	6'		1015	3				
WH-BG 01 @ 3'			SS	3'		1050	2	X			
WH-BG 01 @ 6'			SS	6'		1052	2	X			
WH-BG 02 @ 3'			SS	3'		1055	2	X			
WH-BG 02 @ 6'			SS	6'		1057	2	X			

* Matrix:

SS - Soil AIR - Air F - Filter

GW - Groundwater B - Bioassay

WW - WasteWater

DW - Drinking Water

OT - Other

Remarks:

Backgrounds - 915-1 metals, Soil suitability (pH, EC, SAR, Boron)

pH Temp

Flow Other

Samples returned via:

☐ UPS ☐ FedEx ☐ Courier

Tracking #

9-12-24 1527

Trip Blank Received: Yes ☐ No ☒

HCL / MeOH TBR

Relinquished by: (Signature)

Date:

9-12-24

Time:

1527

Received by: (Signature)

Temp: °C

14.9

Bottles Received:

0.840.3 = 1.1 23

Relinquished by: (Signature)

Date:

9-12-24

Time:

18:00

Received by: (Signature)

Date:

09/13/2014

Time:

18:00

Relinquished by: (Signature)

Date:

09/13/2014

Time:

18:00

Received for Lab by: (Signature)

Hold:

NCF / QK

Condition:

NCF / QK

Sample Receipt Checklist	
COC Seal Present/Intact:	<input checked="" type="checkbox"/> NP <input type="checkbox"/> Y <input type="checkbox"/> N
COC Signed/Accurate:	<input checked="" type="checkbox"/> <input type="checkbox"/> N
Bottles arrive intact:	<input checked="" type="checkbox"/> <input type="checkbox"/> N
Correct bottles used:	<input checked="" type="checkbox"/> <input type="checkbox"/> N
Sufficient volume sent:	<input checked="" type="checkbox"/> <input type="checkbox"/> N
If Applicable	
VOA Zero Headspace:	<input checked="" type="checkbox"/> <input type="checkbox"/> N
Preservation Correct/Checked:	<input checked="" type="checkbox"/> <input type="checkbox"/> N
RAD Screen <0.5 mR/hr:	<input checked="" type="checkbox"/> <input type="checkbox"/> N