



**VIA ELECTRONIC MAIL –**

January 6, 2021

Jake Janicek  
EH&S Specialist  
Environmental Health and Safety  
Caerus Oil and Gas LLC  
143 Diamond Avenue  
Parachute, Colorado 81635

**Subject: Closure Assessment Sampling  
Hatch Gulch Pig Launcher  
Hatch Gulch Area  
Rio Blanco County, Colorado**

Dear Mr. Janicek:

WSP USA Inc. (WSP), on behalf of Caerus Oil and Gas LLC (Caerus), conducted pothole delineation and excavation confirmation soil sampling associated with a historic spill/release of produced water identified at the Hatch Gulch Pig Launcher (Facility ID: 470882) pad location (Site). These samples were collected as part of a continued assessment associated with the spill/release at the Site. Initial characterization sampling was conducted under a former operator [Colorado Oil and Gas Conservation Commission (COGCC) Operator Number 100264] on January 18, 2019 after the operator discovered the spill/release caused by a half inch stainless steel ball valve freezing and causing it to crack which released produced water onto the frozen gravel covered ground. The Site is located in the Hatch Gulch area of operation in Rio Blanco County, Colorado (Figure 1). All previous remediation activities can be referenced under COGCC Document Numbers 40228676, 402361957, and 402897758.

**SOIL SAMPLING ACTIVITIES – HATCH GULCH PIG LAUNCHER**

On December 1, 2021, WSP personnel visited the Site to perform additional assessment activities associated with the historic spill/release. With the assistance of Western Slope Field Services, Inc. (WCO) four hydro-vacuum potholes were advanced in each cardinal direction surrounding the previously identified point of release (POR). Each pothole was advanced to a depth of 6 feet below ground surface (bgs). A total of three confirmation soil samples were collected from each of the four pothole locations at depths of 1 to 2 feet, 3 to 4 feet, and 5 to 6 feet bgs. The WSP field scientist inspected the soil samples for the presence or absence of petroleum hydrocarbons odor and/or staining. The soil was characterized by visually inspecting the confirmation soil samples and field screening the soil head space using a photoionization detector (PID) to monitor for the presence and or absence of volatile organic vapors.

In addition, on December 1, 2021, WSP personnel collected eight background soil sample from four locations in each cardinal direction off the original pad disturbance in undisturbed native soils. Background soil samples were collected at depths of 0.5 feet to 1-foot and 1-foot to 1.5 feet bgs using a hand auger. All soil samples were collected in clean laboratory prepared containers and submitted to Pace Analytical (Pace) of Mount Juliet, Tennessee for analysis of constituents listed in COGCC Table 910-1. The laboratory analytical report is provided in Enclosure A. The pothole and background sample locations are illustrated on Figure 2.

Based on analytical results from the December 1, 2021 sampling event, WSP personnel returned to the Site on December 21, 2021 to complete the removal of identified exceedances of sodium adsorption ratio (SAR) and pH associated with the historic produced water release. These remaining impacts were identified to the north and east of the initial POR location surrounding the pig launcher. The excavation activities were completed using two hydro-

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vacuum trucks operated by WCO personnel in order to remove the impacted material previously identified at former pothole locations PH-1 and PH-2. Once the impacted material was determined to be removed through soil screening, five confirmation soil samples were collected from the floor and sidewalls of the open excavation. Confirmation soil sample depths ranged from 3 feet bgs to 4.5 feet bgs. An estimated 30 cubic yards of soil was removed through excavation activities. The confirmation soil sampling activities were conducted by a WSP field scientist who inspected the soil samples for the presence or absence of petroleum hydrocarbons odor and/or staining. The soil samples were characterized by visually inspecting the confirmation soil samples and field screening the soil head space using a PID to monitor for the presence or absence of volatile organic vapors. The soil sample was submitted to Pace for analysis of constituents approved per the COGCC reduced analyte suite which included SAR and pH (Document Number 402897758). The laboratory analytical report is provided in Enclosure A and summarized in Table 1. The excavation extent and confirmation soil sample locations are illustrated in the enclosed Figure 3.

## ANALYTICAL RESULTS – HATCH GULCH PIG LAUNCHER

Laboratory analytical results for the pothole soil samples exceeded COGCC Table 910-1 Concentration Levels (CL) for arsenic, SAR, and pH. All soil samples for each of the four potholes soil samples exceeded the COGCC Table 910-1 CL for arsenic with concentrations ranging from 3.03 milligrams per kilogram (mg/kg) in sample 20211201- HATCHGULCH(PH-3)@1'-2' to 4.37 mg/kg in sample 20211201- HATCHGULCH(PH-3)@3'-4'. SAR values exceeded the COGCC Table 910-1 CL in three samples: 20211201- HATCHGULCH(PH-1)@1'-2' (14.1 mg/kg), 20211201- HATCHGULCH(PH-1)@3'-4' (12.5 mg/kg), and 20211201- HATCHGULCH(PH-2)@1'-2' (12.8 mg/kg). Soil sample 20211201- HATCHGULCH(PH-2)@1'-2' exceeded the COGCC Table 910-1 CL for pH with a value of 9.42. All other analytes were either below the laboratory detection limit or within the COGCC Table 910-1 CLs.

Background soil samples exceeded the COGCC Table 910-1 CL for arsenic in all samples ranging from 2.73 mg/kg in sample 20211201- HATCHGULCH(BG-3)@0.5-1' to 6.46 mg/kg in sample 20211201- HATCHGULCH(BG-1)@0.5-1'. All other analytes were either below the laboratory detection limit or within the COGCC Table 910-1 CLs.

Laboratory analytical results of all excavation confirmation soil samples collected on December 21, 2021 were within the COGCC Table 910-1 CL for SAR and pH. All laboratory analytical results are included as Enclosure A and summarized in Table 1.

## CONCLUSIONS – HATCH GULCH PIG LAUNCHER

Based on the data provided herein, WSP recommends that Caerus request a “No Further Action” designation under this remediation project (COGCC Remediation Number 15405) for the Site. This recommendation is based on the reasonings stated below.

- No hydrocarbon impacts were observed when completing the field investigation; and
- All inorganic identified exceedances under COGCC Table 910-1 were confirmed to be removed through confirmation soil sample analytical results.



Please contact us at (970) 618-4514 or (970) 658-7025 if you have any questions regarding this report or require additional information.

Kind regards,

A handwritten signature in blue ink, appearing to be 'D. Held'.

Dustin Held  
Sr. Consultant, Environmental Geologist

A handwritten signature in black ink, appearing to be 'Parker Coit'.

Parker Coit, P.G.  
Sr. Consultant, Geologist

Encl.

## FIGURES



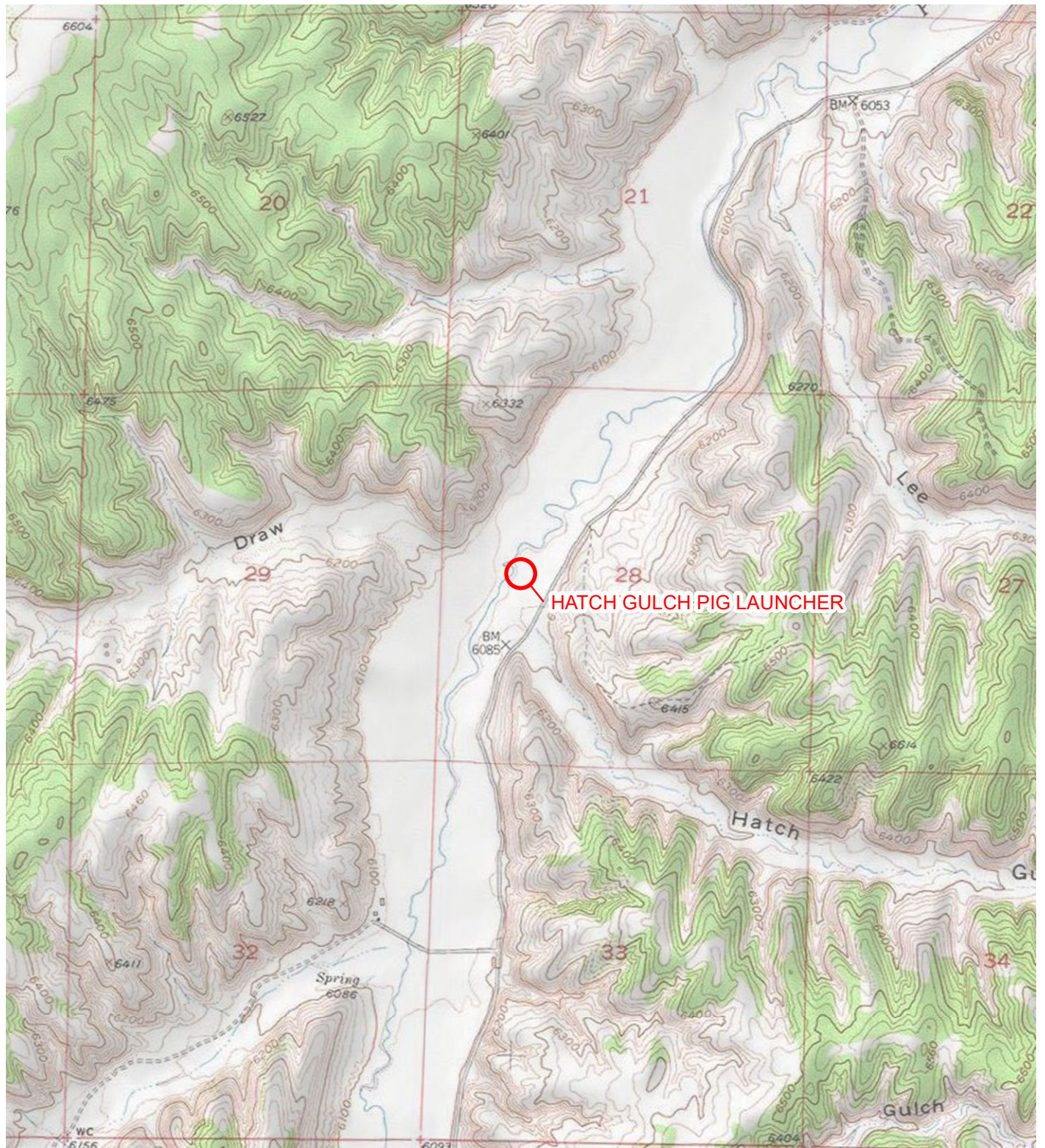
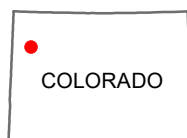
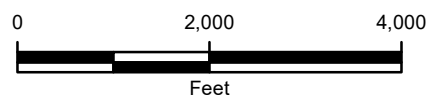


IMAGE COURTESY OF ESRI/USGS

# LEGEND

○ SITE LOCATION



**FIGURE 1**  
**SITE LOCATION MAP**  
**HATCH GULCH PIG LAUNCHER**  
**SWNW SEC 28-T1S-R97W**  
**RIO BLANCO COUNTY, COLORADO**  
**CAERUS OIL AND GAS LLC**







## LEGEND

- POTHOLE
- ▲ BACKGROUND SOIL SAMPLE

**FIGURE 2**  
**SITE MAP**  
**HATCH GULCH PIG LAUNCHER**  
**SWNW SEC 28-T1S-R97W**  
**RIO BLANCO COUNTY, COLORADO**  
**CAERUS OIL AND GAS, LLC**

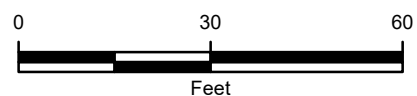




IMAGE COURTESY OF ESRI (MAXAR 11/4/2020)

## LEGEND

- SOIL SAMPLE
- [ - - - ] EXCAVATION EXTENT (12/21/2021)



**FIGURE 3**  
**EXCAVATION SITE MAP**  
**HATCH GULCH PIG LAUNCHER**  
**SWNW SEC 28-T1S-R97W**  
**RIO BLANCO COUNTY, COLORADO**  
**CAERUS OIL AND GAS, LLC**



## TABLE



TABLE 1

SOIL ANALYTICAL RESULTS  
HATCH GULCH PIG LAUNCHER  
RIO BLANCO COUNTY, COLORADO  
CAERUS OIL AND GAS LLC

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	CONFIRMATION SOIL SAMPLES			
			20211201- HATCHGULCH(PH-1)@1'-2'	20211201- HATCHGULCH(PH-1)@3'-4'	20211201- HATCHGULCH(PH-1)@5'-6'	20211201- HATCHGULCH(PH-2)@1'-2'
Sample Date			12/1/2021	12/1/2021	12/1/2021	12/1/2021
Sample Depth Range (feet)			1-2	3-4	5-6	1-2
Sample Type			Confirmation	Confirmation	Confirmation	Confirmation
Arsenic	0.39	mg/kg	<b>3.12</b>	<b>3.73</b>	<b>4.18</b>	<b>3.91</b>
Barium	15,000	mg/kg	125	200	209	173
Cadmium	70	mg/kg	0.165	0.197	0.226	0.255
Chromium (III)	120,000	mg/kg	12.9	25.6	30.0	18.6
Chromium (VI)	23	mg/kg	ND	ND	ND	ND
Copper	3,100	mg/kg	8.23	10.4	12.7	9.94
Lead	400	mg/kg	5.63	7.69	9.02	6.86
Mercury	23	mg/kg	ND	ND	ND	ND
Nickel	1,600	mg/kg	17.2	14.9	17.0	15.2
Selenium	390	mg/kg	0.903	1.07	1.45	ND
Silver	390	mg/kg	ND	ND	ND	ND
Zinc	23,000	mg/kg	24.6	35.7	40.7	34.7
EC	4.0	mmhos/cm	1.650	1.520	1.290	1.750
pH	6 - 9	SU	8.54	8.61	8.45	<b>9.42</b>
SAR	12	unitless	<b>14.1</b>	<b>12.5</b>	9.21	<b>12.8</b>
TPH-GRO		mg/kg	0.0298	0.0255	0.0293	0.0286
TPH-DRO		mg/kg	2.29	1.15	5.43	2.08
TPH	500	mg/kg	2.3198	1.1755	5.4593	2.1086
Benzene	0.17	mg/kg	ND	ND	ND	ND
Toluene	85	mg/kg	0.00210	0.00288	0.00320	0.00303
Ethylbenzene	100	mg/kg	ND	ND	ND	ND
Total Xylenes	175	mg/kg	0.000891	0.0140	0.00158	0.00117
Acenaphthene	1,000	mg/kg	ND	ND	ND	ND
Anthracene	1,000	mg/kg	ND	ND	ND	ND
Benzo(A)anthracene	0.22	mg/kg	ND	ND	ND	ND
Benzo(B)fluoranthene	0.22	mg/kg	ND	ND	ND	ND
Benzo(K)fluoranthene	2.2	mg/kg	ND	ND	ND	ND
Benzo(A)pyrene	0.022	mg/kg	ND	ND	ND	ND
Chrysene	22	mg/kg	ND	ND	ND	ND
Dibenzo(A,H)anthracene	0.022	mg/kg	ND	ND	ND	ND
Fluoranthene	1,000	mg/kg	ND	ND	ND	ND
Fluorene	1,000	mg/kg	ND	ND	ND	ND
Indeno(1,2,3,C,D)pyrene	0.22	mg/kg	ND	ND	ND	ND
Naphthalene	23	mg/kg	ND	ND	ND	ND
Pyrene	1,000	mg/kg	ND	ND	ND	ND

NOTES:  
ND - less than the stated reporting limit  
**BOLD** - indicates result exceeds the COGCC concentration level  
COGCC - Colorado Oil and Gas Conservation Commission  
EC- electrical conductivity  
mg/kg - milligrams per kilogram  
mmhos/cm - millimhos per centimeter  
SAR - sodium adsorption ratio  
SU - standard unit  
TPH-GRO - total petroleum hydrocarbons-gasoline range organics  
TPH-DRO - total petroleum hydrocarbons-diesel range organics  
TPH - combination of TPH-GRO and TPH-DRO  
NA - analyte not analyzed  
ND - analyte not detected

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HATCH GULCH PIG LAUNCHER  
RIO BLANCO COUNTY, COLORADO  
CAERUS OIL AND GAS LLC

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	CONFIRMATION SOIL SAMPLES			
			20211201- HATCHGULCH(PH-2)@3'-4'	20211201- HATCHGULCH(PH-2)@5'-6'	20211201- HATCHGULCH(PH-3)@1'-2'	20211201- HATCHGULCH(PH-3)@3'-4'
Sample Date			12/1/2021	12/1/2021	12/1/2021	12/1/2021
Sample Depth Range (feet)			3-4	5-6	1-2	3-4
Sample Type			Confirmation	Confirmation	Confirmation	Confirmation
Arsenic	0.39	mg/kg	<b>4.00</b>	<b>3.74</b>	<b>3.03</b>	<b>4.37</b>
Barium	15,000	mg/kg	160	163	155	222
Cadmium	70	mg/kg	0.138	0.109	0.128	0.243
Chromium (III)	120,000	mg/kg	27.0	26.4	26.2	22.9
Chromium (VI)	23	mg/kg	ND	ND	ND	ND
Copper	3,100	mg/kg	7.85	8.24	8.25	13.1
Lead	400	mg/kg	6.94	7.07	7.46	9.45
Mercury	23	mg/kg	ND	ND	ND	ND
Nickel	1,600	mg/kg	13.9	14.3	13.4	14.4
Selenium	390	mg/kg	1.70	0.962	ND	1.16
Silver	390	mg/kg	ND	ND	ND	ND
Zinc	23,000	mg/kg	32.3	33.8	32.7	37.7
EC	4.0	mmhos/cm	0.883	1.280	1.370	1.850
pH	6 - 9	SU	8.45	8.36	8.39	7.88
SAR	12	unitless	4.90	6.34	8.08	2.12
TPH-GRO		mg/kg	0.0362	0.0339	0.0424	0.0416
TPH-DRO		mg/kg	0.926	1.39	2.40	8.35
TPH	500	mg/kg	0.9622	1.4239	2.4424	8.3916
Benzene	0.17	mg/kg	ND	ND	ND	ND
Toluene	85	mg/kg	0.00337	0.00322	0.00329	0.00340
Ethylbenzene	100	mg/kg	ND	ND	ND	ND
Total Xylenes	175	mg/kg	0.00139	0.00131	0.00158	0.00178
Acenaphthene	1,000	mg/kg	ND	ND	ND	ND
Anthracene	1,000	mg/kg	ND	ND	ND	ND
Benzo(A)anthracene	0.22	mg/kg	ND	ND	ND	ND
Benzo(B)fluoranthene	0.22	mg/kg	ND	ND	ND	ND
Benzo(K)fluoranthene	2.2	mg/kg	ND	ND	ND	ND
Benzo(A)pyrene	0.022	mg/kg	ND	ND	ND	ND
Chrysene	22	mg/kg	ND	ND	ND	ND
Dibenzo(A,H)anthracene	0.022	mg/kg	ND	ND	ND	ND
Fluoranthene	1,000	mg/kg	ND	ND	ND	ND
Fluorene	1,000	mg/kg	ND	ND	ND	ND
Indeno(1,2,3,C,D)pyrene	0.22	mg/kg	ND	ND	ND	ND
Naphthalene	23	mg/kg	ND	ND	ND	ND
Pyrene	1,000	mg/kg	ND	ND	ND	ND

NOTES:  
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mg/kg - milligrams per kilogram  
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SAR - sodium adsorption ratio  
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TPH-GRO - total petroleum hydrocarbons-gasoline range organics  
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HATCH GULCH PIG LAUNCHER  
RIO BLANCO COUNTY, COLORADO  
CAERUS OIL AND GAS LLC

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	CONFIRMATION SOIL SAMPLES			
			20211201- HATCHGULCH(PH-3)@5'-6'	20211201- HATCHGULCH(PH-4)@1'-2'	20211201- HATCHGULCH(PH-4)@3'-4'	20211201- HATCHGULCH(PH-4)@5'-6'
Sample Date			12/1/2021	12/1/2021	12/1/2021	12/1/2021
Sample Depth Range (feet)			5-6	1-2	3-4	5-6
Sample Type			Confirmation	Confirmation	Confirmation	Confirmation
Arsenic	0.39	mg/kg	<b>3.30</b>	<b>4.25</b>	<b>3.06</b>	<b>3.29</b>
Barium	15,000	mg/kg	180	217	180	181
Cadmium	70	mg/kg	0.159	0.235	0.123	0.171
Chromium (III)	120,000	mg/kg	26.7	22.8	27.5	27.9
Chromium (VI)	23	mg/kg	ND	ND	ND	ND
Copper	3,100	mg/kg	10.2	12.1	9.09	9.36
Lead	400	mg/kg	8.19	9.67	8.01	7.73
Mercury	23	mg/kg	0.0205	ND	ND	ND
Nickel	1,600	mg/kg	14.3	14.1	14.1	13.8
Selenium	390	mg/kg	ND	ND	0.909	ND
Silver	390	mg/kg	ND	ND	ND	ND
Zinc	23,000	mg/kg	35.9	38.7	34.1	33.2
EC	4.0	mmhos/cm	1.080	0.888	1.760	1.740
pH	6 - 9	SU	8.21	8.55	8.23	8.81
SAR	12	unitless	1.67	5.43	4.87	10.9
TPH-GRO		mg/kg	0.0313	0.0375	0.0447	0.0390
TPH-DRO		mg/kg	1.08	5.20	1.55	1.05
TPH	500	mg/kg	1.1113	5.2375	1.5947	1.0890
Benzene	0.17	mg/kg	ND	ND	ND	ND
Toluene	85	mg/kg	0.00317	0.00285	0.0032	0.00332
Ethylbenzene	100	mg/kg	ND	ND	ND	ND
Total Xylenes	175	mg/kg	0.000916	0.00116	0.00147	0.00134
Acenaphthene	1,000	mg/kg	ND	ND	ND	ND
Anthracene	1,000	mg/kg	ND	ND	ND	ND
Benzo(A)anthracene	0.22	mg/kg	ND	ND	ND	ND
Benzo(B)fluoranthene	0.22	mg/kg	ND	ND	ND	ND
Benzo(K)fluoranthene	2.2	mg/kg	ND	ND	ND	ND
Benzo(A)pyrene	0.022	mg/kg	ND	ND	ND	ND
Chrysene	22	mg/kg	ND	ND	ND	ND
Dibenzo(A,H)anthracene	0.022	mg/kg	ND	ND	ND	ND
Fluoranthene	1,000	mg/kg	ND	ND	ND	ND
Fluorene	1,000	mg/kg	ND	ND	ND	ND
Indeno(1,2,3,C,D)pyrene	0.22	mg/kg	ND	ND	ND	ND
Naphthalene	23	mg/kg	ND	ND	ND	ND
Pyrene	1,000	mg/kg	ND	ND	ND	ND

NOTES:  
ND - less than the stated reporting limit  
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COGCC - Colorado Oil and Gas Conservation Commission  
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TABLE 1

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HATCH GULCH PIG LAUNCHER

RIO BLANCO COUNTY, COLORADO

CAERUS OIL AND GAS LLC

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	CONFIRMATION SOIL SAMPLES				
			20211223- HATCH GULCH (FLOOR) @ 4.5'	20211223- HATCH GULCH (N-WALL) @ 3'	20211223- HATCH GULCH (E-WALL) @ 4'	20211223- HATCH GULCH (S-WALL) @ 4'	20211223- HATCH GULCH (W-WALL) @ 4'
Sample Date			12/23/2021	12/23/2021	12/23/2021	12/23/2021	12/23/2021
Sample Depth Range (feet)			4.5	3	4	4	4
Sample Type			Confirmation	Confirmation	Confirmation	Confirmation	Confirmation
Arsenic	0.39	mg/kg	NA	NA	NA	NA	NA
Barium	15,000	mg/kg	NA	NA	NA	NA	NA
Cadmium	70	mg/kg	NA	NA	NA	NA	NA
Chromium (III)	120,000	mg/kg	NA	NA	NA	NA	NA
Chromium (VI)	23	mg/kg	NA	NA	NA	NA	NA
Copper	3,100	mg/kg	NA	NA	NA	NA	NA
Lead	400	mg/kg	NA	NA	NA	NA	NA
Mercury	23	mg/kg	NA	NA	NA	NA	NA
Nickel	1,600	mg/kg	NA	NA	NA	NA	NA
Selenium	390	mg/kg	NA	NA	NA	NA	NA
Silver	390	mg/kg	NA	NA	NA	NA	NA
Zinc	23,000	mg/kg	NA	NA	NA	NA	NA
EC	4.0	mmhos/cm	NA	NA	NA	NA	NA
pH	6 - 9	SU	8.13	7.75	8.33	7.98	8.29
SAR	12	unitless	0.940	8.60	3.22	5.96	1.62
TPH-GRO		mg/kg	NA	NA	NA	NA	NA
TPH-DRO		mg/kg	NA	NA	NA	NA	NA
TPH	500	mg/kg	NA	NA	NA	NA	NA
Benzene	0.17	mg/kg	NA	NA	NA	NA	NA
Toluene	85	mg/kg	NA	NA	NA	NA	NA
Ethylbenzene	100	mg/kg	NA	NA	NA	NA	NA
Total Xylenes	175	mg/kg	NA	NA	NA	NA	NA
Acenaphthene	1,000	mg/kg	NA	NA	NA	NA	NA
Anthracene	1,000	mg/kg	NA	NA	NA	NA	NA
Benzo(A)anthracene	0.22	mg/kg	NA	NA	NA	NA	NA
Benzo(B)fluoranthene	0.22	mg/kg	NA	NA	NA	NA	NA
Benzo(K)fluoranthene	2.2	mg/kg	NA	NA	NA	NA	NA
Benzo(A)pyrene	0.022	mg/kg	NA	NA	NA	NA	NA
Chrysene	22	mg/kg	NA	NA	NA	NA	NA
Dibenzo(A,H)anthracene	0.022	mg/kg	NA	NA	NA	NA	NA
Fluoranthene	1,000	mg/kg	NA	NA	NA	NA	NA
Fluorene	1,000	mg/kg	NA	NA	NA	NA	NA
Indeno(1,2,3,C,D)pyrene	0.22	mg/kg	NA	NA	NA	NA	NA
Naphthalene	23	mg/kg	NA	NA	NA	NA	NA
Pyrene	1,000	mg/kg	NA	NA	NA	NA	NA

NOTES:

ND - less than the stated reporting limit

**BOLD** - indicates result exceeds the COGCC concentration level

COGCC - Colorado Oil and Gas Conservation Commission

EC- electrical conductivity

mg/kg - milligrams per kilogram

mmhos/cm - millimhos per centimeter

SAR - sodium adsorption ratio

SU - standard unit

TPH-GRO - total petroleum hydrocarbons-gasoline range organics

TPH-DRO - total petroleum hydrocarbons-diesel range organics

TPH - combination of TPH-GRO and TPH-DRO

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TABLE 1

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HATCH GULCH PIG LAUNCHER  
RIO BLANCO COUNTY, COLORADO  
CAERUS OIL AND GAS LLC

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	BACKGROUND SOIL SAMPLES			
			20211201- HATCHGULCH(BG-1)@.5-1'	20211201- HATCHGULCH(BG-1)@1-1.5'	20211201- HATCHGULCH(BG-2)@.5-1'	20211201- HATCHGULCH(BG-2)@1-1.5'
Sample Date			12/1/2021	12/1/2021	12/1/2021	12/1/2021
Sample Depth Range (feet)			0.5-1	1-1.5	0.5-1	1-1.5
Sample Type			Confirmation	Confirmation	Confirmation	Confirmation
Arsenic	0.39	mg/kg	6.46	4.93	3.49	4.00
Barium	15,000	mg/kg	321	246	189	189
Cadmium	70	mg/kg	0.434	0.414	0.179	0.257
Chromium (III)	120,000	mg/kg	36	33.5	40.8	44
Chromium (VI)	23	mg/kg	ND	ND	ND	ND
Copper	3,100	mg/kg	21.9	18	10.6	12.6
Lead	400	mg/kg	15.6	12.6	8.68	10.3
Mercury	23	mg/kg	0.0229	ND	ND	0.0418
Nickel	1,600	mg/kg	29.7	17.7	16.5	19.6
Selenium	390	mg/kg	ND	ND	ND	ND
Silver	390	mg/kg	ND	ND	ND	ND
Zinc	23,000	mg/kg	67.2	55.7	40.1	47.6
EC	4.0	mmhos/cm	0.388	0.490	0.163	0.153
pH	6 - 9	SU	7.61	7.48	7.80	8.15
SAR	12	unitless	0.178	0.215	0.244	0.18
TPH-GRO		mg/kg	NA	NA	NA	NA
TPH-DRO		mg/kg	NA	NA	NA	NA
TPH	500	mg/kg	NA	NA	NA	NA
Benzene	0.17	mg/kg	ND	ND	ND	ND
Toluene	85	mg/kg	0.00298	0.00308	0.00280	0.00288
Ethylbenzene	100	mg/kg	ND	ND	ND	ND
Total Xylenes	175	mg/kg	0.0011	0.00133	0.00128	0.00115
Acenaphthene	1,000	mg/kg	ND	ND	ND	ND
Anthracene	1,000	mg/kg	ND	ND	ND	ND
Benzo(A)anthracene	0.22	mg/kg	ND	ND	ND	ND
Benzo(B)fluoranthene	0.22	mg/kg	ND	ND	ND	ND
Benzo(K)fluoranthene	2.2	mg/kg	ND	ND	ND	ND
Benzo(A)pyrene	0.022	mg/kg	ND	ND	ND	ND
Chrysene	22	mg/kg	ND	ND	ND	ND
Dibenzo(A,H)anthracene	0.022	mg/kg	ND	ND	ND	ND
Fluoranthene	1,000	mg/kg	ND	ND	ND	ND
Fluorene	1,000	mg/kg	ND	ND	ND	ND
Indeno(1,2,3,C,D)pyrene	0.22	mg/kg	ND	ND	ND	ND
Naphthalene	23	mg/kg	ND	ND	ND	ND
Pyrene	1,000	mg/kg	ND	ND	ND	ND

NOTES:  
ND - less than the stated reporting limit  
**BOLD** - indicates result exceeds the COGCC concentration level  
COGCC - Colorado Oil and Gas Conservation Commission  
EC- electrical conductivity  
mg/kg - milligrams per kilogram  
mmhos/cm - millimhos per centimeter  
SAR - sodium adsorption ratio  
SU - standard unit  
TPH-GRO - total petroleum hydrocarbons-gasoline range organics  
TPH-DRO - total petroleum hydrocarbons-diesel range organics  
TPH - combination of TPH-GRO and TPH-DRO  
NA - analyte not analyzed  
ND - analyte not detected

TABLE 1

SOIL ANALYTICAL RESULTS  
HATCH GULCH PIG LAUNCHER  
RIO BLANCO COUNTY, COLORADO  
CAERUS OIL AND GAS LLC

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	BACKGROUND SOIL SAMPLES			
			20211201- HATCHGULCH(BG-3)@.5-1'	20211201- HATCHGULCH(BG-3)@1-1.5'	20211201- HATCHGULCH(BG-4)@.5-1'	20211201- HATCHGULCH(BG-4)@1-1.5'
Sample Date			12/1/2021	12/1/2021	12/1/2021	12/1/2021
Sample Depth Range (feet)			0.5-1	1-1.5	0.5-1	1-1.5
Sample Type			Confirmation	Confirmation	Confirmation	Confirmation
Arsenic	0.39	mg/kg	2.73	3.66	6.02	4.98
Barium	15,000	mg/kg	169	227	235	201
Cadmium	70	mg/kg	0.3	0.285	0.235	0.224
Chromium (III)	120,000	mg/kg	30.7	40.5	37.2	33.6
Chromium (VI)	23	mg/kg	ND	ND	ND	ND
Copper	3,100	mg/kg	14.5	13.4	14	12.7
Lead	400	mg/kg	9.94	11.2	14.2	10.4
Mercury	23	mg/kg	0.0414	0.0292	0.0288	0.0324
Nickel	1,600	mg/kg	13.2	18	19.4	17.2
Selenium	390	mg/kg	ND	ND	0.872	ND
Silver	390	mg/kg	ND	ND	ND	ND
Zinc	23,000	mg/kg	50.3	49.2	50.1	46.6
EC	4.0	mmhos/cm	0.868	0.269	0.166	0.208
pH	6 - 9	SU	7.1	7.68	7.92	7.8
SAR	12	unitless	NA	0.323	0.398	0.385
TPH-GRO		mg/kg	NA	NA	NA	NA
TPH-DRO		mg/kg	NA	NA	NA	NA
TPH	500	mg/kg	NA	NA	NA	NA
Benzene	0.17	mg/kg	ND	ND	ND	ND
Toluene	85	mg/kg	0.00552	0.00318	0.00293	0.0033
Ethylbenzene	100	mg/kg	ND	ND	ND	ND
Total Xylenes	175	mg/kg	0.00274	0.0012	0.00143	0.00113
Acenaphthene	1,000	mg/kg	ND	ND	ND	ND
Anthracene	1,000	mg/kg	ND	ND	ND	ND
Benzo(A)anthracene	0.22	mg/kg	ND	ND	ND	ND
Benzo(B)fluoranthene	0.22	mg/kg	ND	ND	ND	ND
Benzo(K)fluoranthene	2.2	mg/kg	ND	ND	ND	ND
Benzo(A)pyrene	0.022	mg/kg	ND	ND	ND	ND
Chrysene	22	mg/kg	ND	ND	ND	ND
Dibenzo(A,H)anthracene	0.022	mg/kg	ND	ND	ND	ND
Fluoranthene	1,000	mg/kg	0.00431	0.00383	ND	ND
Fluorene	1,000	mg/kg	ND	ND	ND	ND
Indeno(1,2,3,C,D)pyrene	0.22	mg/kg	ND	ND	ND	ND
Naphthalene	23	mg/kg	ND	ND	ND	ND
Pyrene	1,000	mg/kg	0.00263	0.00230	ND	ND

NOTES:  
ND - less than the stated reporting limit  
**BOLD** - indicates result exceeds the COGCC concentration level  
COGCC - Colorado Oil and Gas Conservation Commission  
EC- electrical conductivity  
mg/kg - milligrams per kilogram  
mmhos/cm - millimhos per centimeter  
SAR - sodium adsorption ratio  
SU - standard unit  
TPH-GRO - total petroleum hydrocarbons-gasoline range organics  
TPH-DRO - total petroleum hydrocarbons-diesel range organics  
TPH - combination of TPH-GRO and TPH-DRO  
NA - analyte not analyzed  
ND - analyte not detected



## ENCLOSURE A – LABORATORY ANALYTICAL REPORT

**Caerus Oil and Gas**

Sample Delivery Group: L1437907  
Samples Received: 12/03/2021  
Project Number: HGPG  
Description: Hatch Gulch Pig Launcher  
Site: HGPG  
Report To: Brett Middleton  
143 Diamond Avenue  
Parachute, CO 81635

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 National**12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 [www.pacenational.com](http://www.pacenational.com)

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



# SAMPLE SUMMARY

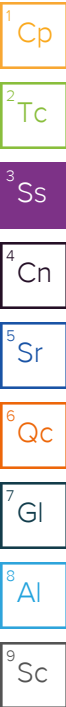
## 20211201-HATCHGULTCH(PH-1)@1'-2' L1437907-01 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 10:35

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 20:43	12/08/21 20:43	CCE	Mt. Juliet, TN
Calculated Results	WG1785869	1	12/08/21 08:12	12/08/21 12:57	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:51	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784409	1	12/06/21 11:00	12/06/21 12:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784925	1	12/06/21 14:26	12/08/21 09:54	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785869	1	12/08/21 08:12	12/08/21 12:57	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:17	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1785874	5	12/08/21 08:09	12/08/21 13:27	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 11:44	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784981	1	12/04/21 16:37	12/07/21 07:01	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 01:16	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/08/21 23:44	AGW	Mt. Juliet, TN



## 20211201-HATCHGULTCH(PH-1)@3'-4' L1437907-02 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 10:50

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 20:46	12/08/21 20:46	CCE	Mt. Juliet, TN
Calculated Results	WG1785869	1	12/08/21 08:12	12/08/21 13:00	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:51	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784409	1	12/06/21 11:00	12/06/21 12:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784925	1	12/06/21 14:26	12/08/21 09:56	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785869	1	12/08/21 08:12	12/08/21 13:00	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:20	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1785874	5	12/08/21 08:09	12/08/21 13:30	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 12:06	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784981	1	12/04/21 16:37	12/07/21 07:20	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 01:29	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 00:02	AGW	Mt. Juliet, TN

## 20211201-HATCHGULTCH(PH-1)@5'-6' L1437907-03 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:00

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 20:49	12/08/21 20:49	CCE	Mt. Juliet, TN
Calculated Results	WG1785869	1	12/08/21 08:12	12/08/21 13:02	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:51	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784409	1	12/06/21 11:00	12/06/21 12:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784925	1	12/06/21 14:26	12/08/21 09:58	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785869	1	12/08/21 08:12	12/08/21 13:02	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:23	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1785874	5	12/08/21 08:09	12/08/21 13:33	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 12:27	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784981	1	12/04/21 16:37	12/07/21 07:39	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 01:56	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 00:20	AGW	Mt. Juliet, TN

# SAMPLE SUMMARY

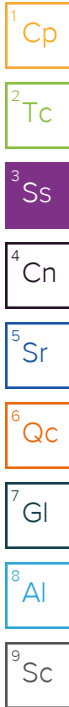
## 20211201-HATCHGULTCH(PH-2)@1'-2' L1437907-04 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:08

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 20:52	12/08/21 20:52	CCE	Mt. Juliet, TN
Calculated Results	WG1785869	1	12/08/21 08:12	12/08/21 13:05	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:54	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784409	1	12/06/21 11:00	12/06/21 12:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784925	1	12/06/21 14:26	12/08/21 10:00	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785869	1	12/08/21 08:12	12/08/21 13:05	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:25	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1785874	5	12/08/21 08:09	12/08/21 13:37	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1787329	1	12/10/21 11:07	12/10/21 17:20	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784981	1	12/04/21 16:37	12/07/21 07:58	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 02:37	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 00:38	AGW	Mt. Juliet, TN



## 20211201-HATCHGULTCH(PH-2)@3'-4' L1437907-05 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:15

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 20:55	12/08/21 20:55	CCE	Mt. Juliet, TN
Calculated Results	WG1785869	1	12/08/21 08:12	12/08/21 12:54	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:54	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784409	1	12/06/21 11:00	12/06/21 12:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784925	1	12/06/21 14:26	12/08/21 10:02	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785869	1	12/08/21 08:12	12/08/21 12:18	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:28	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1785874	5	12/08/21 08:09	12/08/21 12:37	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 13:10	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 00:02	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 01:43	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 00:55	AGW	Mt. Juliet, TN

## 20211201-HATCHGULTCH(PH-2)@5'-6' L1437907-06 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:20

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 20:58	12/08/21 20:58	CCE	Mt. Juliet, TN
Calculated Results	WG1785869	1	12/08/21 08:12	12/08/21 13:08	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:57	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1785392	1	12/07/21 14:00	12/07/21 15:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784925	1	12/06/21 14:26	12/08/21 10:04	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785869	1	12/08/21 08:12	12/08/21 13:08	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:36	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1785874	5	12/08/21 08:09	12/08/21 13:40	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 13:32	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 00:20	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 02:10	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 01:13	AGW	Mt. Juliet, TN

# SAMPLE SUMMARY

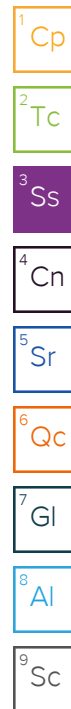
## 20211201-HATCHGULTCH(PH-3)@1'-2' L1437907-07 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:25

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 21:06	12/08/21 21:06	CCE	Mt. Juliet, TN
Calculated Results	WG1784894	1	12/06/21 14:02	12/08/21 12:58	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:58	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1785392	1	12/07/21 14:00	12/07/21 15:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 08:50	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1784894	1	12/06/21 14:02	12/07/21 18:37	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:39	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1784892	5	12/06/21 14:00	12/06/21 23:23	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1787003	1	12/04/21 16:37	12/10/21 02:29	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 00:40	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 02:24	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 01:31	AGW	Mt. Juliet, TN



## 20211201-HATCHGULTCH(PH-3)@3'-4' L1437907-08 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:33

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 21:09	12/08/21 21:09	CCE	Mt. Juliet, TN
Calculated Results	WG1784894	1	12/06/21 14:02	12/08/21 12:58	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 12:58	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784899	1	12/07/21 10:00	12/07/21 11:27	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 08:52	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1784894	1	12/06/21 14:02	12/07/21 18:40	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:42	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1784892	5	12/06/21 14:00	12/06/21 23:27	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1787003	1	12/04/21 16:37	12/10/21 02:51	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 00:59	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:05	12/06/21 04:26	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 01:49	AGW	Mt. Juliet, TN

## 20211201-HATCHGULTCH(PH-3)@5'-6' L1437907-09 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:40

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 21:12	12/08/21 21:12	CCE	Mt. Juliet, TN
Calculated Results	WG1784894	1	12/06/21 14:02	12/08/21 13:00	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 13:00	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784899	1	12/07/21 10:00	12/07/21 11:27	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 08:54	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1784894	1	12/06/21 14:02	12/07/21 18:43	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:44	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1784892	5	12/06/21 14:00	12/06/21 23:30	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 15:02	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 01:18	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:06	12/06/21 03:18	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 02:06	AGW	Mt. Juliet, TN

# SAMPLE SUMMARY

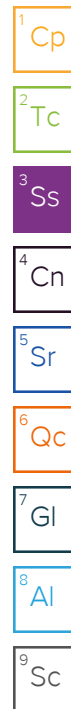
## 20211201-HATCHGULTCH(PH-4)@1'-2' L1437907-10 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:45

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 21:14	12/08/21 21:14	CCE	Mt. Juliet, TN
Calculated Results	WG1784894	1	12/06/21 14:02	12/08/21 13:04	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 13:04	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784899	1	12/07/21 10:00	12/07/21 11:27	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 08:56	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1784894	1	12/06/21 14:02	12/07/21 18:46	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:47	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1784892	5	12/06/21 14:00	12/06/21 23:33	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 15:24	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 01:37	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:07	12/06/21 04:12	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 02:24	AGW	Mt. Juliet, TN



## 20211201-HATCHGULTCH(PH-4)@3'-4' L1437907-11 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 11:50

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 21:17	12/08/21 21:17	CCE	Mt. Juliet, TN
Calculated Results	WG1784894	1	12/06/21 14:02	12/08/21 13:04	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 13:04	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1785392	1	12/07/21 14:00	12/07/21 15:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 08:57	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1784894	1	12/06/21 14:02	12/07/21 18:48	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:50	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1784892	5	12/06/21 14:00	12/06/21 23:37	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1787003	1	12/04/21 16:37	12/10/21 03:12	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 01:56	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:07	12/06/21 02:51	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 02:42	AGW	Mt. Juliet, TN

## 20211201-HATCHGULTCH(PH-4)@5'-6' L1437907-12 Solid

Collected by  
Korey Kennedy

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

Received date/time  
12/03/21 09:00

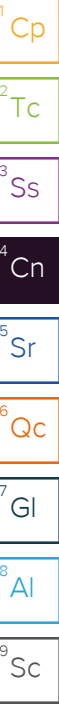
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784351	1	12/08/21 21:20	12/08/21 21:20	CCE	Mt. Juliet, TN
Calculated Results	WG1784894	1	12/06/21 14:02	12/08/21 13:05	BDS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 13:05	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1785392	1	12/07/21 14:00	12/07/21 15:00	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784566	1	12/07/21 01:46	12/07/21 06:07	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 08:59	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1784894	1	12/06/21 14:02	12/07/21 18:51	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784346	1	12/07/21 11:42	12/08/21 18:53	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1784892	5	12/06/21 14:00	12/06/21 23:40	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1784377	1	12/04/21 16:37	12/09/21 16:07	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 16:37	12/07/21 02:15	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1784356	1	12/05/21 11:07	12/06/21 03:04	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 03:00	AGW	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



Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	SAR				
Sodium Adsorption Ratio	14.1		1	12/08/2021 20:43	WG1784351

Calculated Results

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Trivalent	12.9		0.133	1.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>

Wet Chemistry by Method 3060A/7196A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Hexavalent	U		0.640	2.00	1	12/08/2021 12:51	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	pH				
pH	8.54	<a href="#">T8</a>	1	12/06/2021 12:00	<a href="#">WG1784409</a>

Sample Narrative:  
L1437907-01 WG1784409: 8.54 at 18.2C

Wet Chemistry by Method 9050AMod

	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Analyte	umhos/cm		umhos/cm			
Specific Conductance	1650		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:  
L1437907-01 WG1784566: at 25C

Mercury by Method 7471A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Mercury	U		0.0180	0.0400	1	12/08/2021 09:54	<a href="#">WG1784925</a>

Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Barium	125		0.0852	0.500	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Cadmium	0.165	<a href="#">J</a>	0.0471	0.500	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Chromium	12.9		0.133	1.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Copper	8.23		0.400	2.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Lead	5.63		0.208	0.500	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Nickel	17.2		0.132	2.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Selenium	0.903	<a href="#">J</a>	0.764	2.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Silver	U		0.127	1.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>
Zinc	24.6		0.832	5.00	1	12/08/2021 12:57	<a href="#">WG1785869</a>

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l	mg/l			
Hot Water Sol. Boron	1.05		0.0167	0.200	1	12/08/2021 18:17	<a href="#">WG1784346</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.12		0.100	1.00	5	12/08/2021 13:27	<a href="#">WG1785874</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0298	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 11:44	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	108			77.0-120		12/09/2021 11:44	<a href="#">WG1784377</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 07:01	<a href="#">WG1784981</a>
Toluene	0.00210	<a href="#">J</a>	0.00130	0.00500	1	12/07/2021 07:01	<a href="#">WG1784981</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 07:01	<a href="#">WG1784981</a>
Total Xylenes	0.000891	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 07:01	<a href="#">WG1784981</a>
(S) Toluene-d8	99.7			75.0-131		12/07/2021 07:01	<a href="#">WG1784981</a>
(S) 4-Bromofluorobenzene	99.2			67.0-138		12/07/2021 07:01	<a href="#">WG1784981</a>
(S) 1,2-Dichloroethane-d4	103			70.0-130		12/07/2021 07:01	<a href="#">WG1784981</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	2.29	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 01:16	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	73.1			18.0-148		12/06/2021 01:16	<a href="#">WG1784356</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/08/2021 23:44	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/08/2021 23:44	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/08/2021 23:44	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/08/2021 23:44	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl-d14	96.7			23.0-120		12/08/2021 23:44	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	78.2			14.0-149		12/08/2021 23:44	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	89.6			34.0-125		12/08/2021 23:44	<a href="#">WG1785524</a>

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.5		1	12/08/2021 20:46	WG1784351

## Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	25.6		0.133	1.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>

## Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 12:51	<a href="#">WG1784664</a>

## Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.61	<a href="#">T8</a>	1	12/06/2021 12:00	<a href="#">WG1784409</a>

## Sample Narrative:

L1437907-02 WG1784409: 8.61 at 18.2C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1520		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

## Sample Narrative:

L1437907-02 WG1784566: at 25C

## Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 09:56	<a href="#">WG1784925</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	200		0.0852	0.500	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Cadmium	0.197	<a href="#">J</a>	0.0471	0.500	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Chromium	25.6		0.133	1.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Copper	10.4		0.400	2.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Lead	7.69		0.208	0.500	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Nickel	14.9		0.132	2.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Selenium	1.07	<a href="#">J</a>	0.764	2.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Silver	U		0.127	1.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>
Zinc	35.7		0.832	5.00	1	12/08/2021 13:00	<a href="#">WG1785869</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.05		0.0167	0.200	1	12/08/2021 18:20	<a href="#">WG1784346</a>

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

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.73		0.100	1.00	5	12/08/2021 13:30	<a href="#">WG1785874</a>

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0255	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 12:06	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	107			77.0-120		12/09/2021 12:06	<a href="#">WG1784377</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 07:20	<a href="#">WG1784981</a>
Toluene	0.00288	<a href="#">J</a>	0.00130	0.00500	1	12/07/2021 07:20	<a href="#">WG1784981</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 07:20	<a href="#">WG1784981</a>
Total Xylenes	0.00140	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 07:20	<a href="#">WG1784981</a>
(S) <i>Toluene-d8</i>	98.3			75.0-131		12/07/2021 07:20	<a href="#">WG1784981</a>
(S) <i>4</i> -Bromofluorobenzene	97.8			67.0-138		12/07/2021 07:20	<a href="#">WG1784981</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	104			70.0-130		12/07/2021 07:20	<a href="#">WG1784981</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	1.15	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 01:29	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	47.1			18.0-148		12/06/2021 01:29	<a href="#">WG1784356</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 00:02	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 00:02	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 00:02	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 00:02	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	66.3			23.0-120		12/09/2021 00:02	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	59.2			14.0-149		12/09/2021 00:02	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	65.1			34.0-125		12/09/2021 00:02	<a href="#">WG1785524</a>

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	9.21		1	12/08/2021 20:49	WG1784351

## Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	30.0		0.133	1.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>

## Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 12:51	<a href="#">WG1784664</a>

## Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.45	<a href="#">T8</a>	1	12/06/2021 12:00	<a href="#">WG1784409</a>

## Sample Narrative:

L1437907-03 WG1784409: 8.45 at 18.3C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1290		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

## Sample Narrative:

L1437907-03 WG1784566: at 25C

## Mercury by Method 7471A

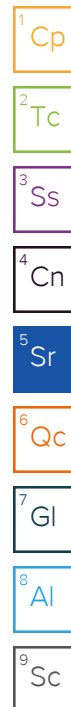
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 09:58	<a href="#">WG1784925</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	209		0.0852	0.500	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Cadmium	0.226	<a href="#">J</a>	0.0471	0.500	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Chromium	30.0		0.133	1.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Copper	12.7		0.400	2.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Lead	9.02		0.208	0.500	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Nickel	17.0		0.132	2.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Selenium	1.45	<a href="#">J</a>	0.764	2.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Silver	U		0.127	1.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>
Zinc	40.7		0.832	5.00	1	12/08/2021 13:02	<a href="#">WG1785869</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.22		0.0167	0.200	1	12/08/2021 18:23	<a href="#">WG1784346</a>



## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.18		0.100	1.00	5	12/08/2021 13:33	<a href="#">WG1785874</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0293	<u>J</u>	0.0217	0.100	1	12/09/2021 12:27	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	107			77.0-120		12/09/2021 12:27	<a href="#">WG1784377</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 07:39	<a href="#">WG1784981</a>
Toluene	0.00320	<u>J</u>	0.00130	0.00500	1	12/07/2021 07:39	<a href="#">WG1784981</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 07:39	<a href="#">WG1784981</a>
Total Xylenes	0.00158	<u>J</u>	0.000880	0.00650	1	12/07/2021 07:39	<a href="#">WG1784981</a>
(S) <i>Toluene-d8</i>	101			75.0-131		12/07/2021 07:39	<a href="#">WG1784981</a>
(S) <i>4</i> -Bromofluorobenzene	97.6			67.0-138		12/07/2021 07:39	<a href="#">WG1784981</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	102			70.0-130		12/07/2021 07:39	<a href="#">WG1784981</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	5.43	<u>B</u>	0.769	4.00	1	12/06/2021 01:56	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	63.9			18.0-148		12/06/2021 01:56	<a href="#">WG1784356</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 00:20	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 00:20	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 00:20	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 00:20	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	85.8			23.0-120		12/09/2021 00:20	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	66.0			14.0-149		12/09/2021 00:20	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	79.7			34.0-125		12/09/2021 00:20	<a href="#">WG1785524</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.8		1	12/08/2021 20:52	WG1784351

## Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	18.6		0.133	1.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>

## Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 12:54	<a href="#">WG1784664</a>

## Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	9.42	<a href="#">T8</a>	1	12/06/2021 12:00	<a href="#">WG1784409</a>

## Sample Narrative:

L1437907-04 WG1784409: 9.42 at 18.4C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1750		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

## Sample Narrative:

L1437907-04 WG1784566: at 25C

## Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 10:00	<a href="#">WG1784925</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	173		0.0852	0.500	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Cadmium	0.255	<a href="#">J</a>	0.0471	0.500	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Chromium	18.6		0.133	1.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Copper	9.94		0.400	2.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Lead	6.86		0.208	0.500	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Nickel	15.2		0.132	2.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Selenium	U		0.764	2.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Silver	U		0.127	1.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>
Zinc	34.7		0.832	5.00	1	12/08/2021 13:05	<a href="#">WG1785869</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	2.28		0.0167	0.200	1	12/08/2021 18:25	<a href="#">WG1784346</a>

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



## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.91		0.100	1.00	5	12/08/2021 13:37	<a href="#">WG1785874</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0286	<u>J</u>	0.0217	0.100	1	12/10/2021 17:20	<a href="#">WG1787329</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	105			77.0-120		12/10/2021 17:20	<a href="#">WG1787329</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 07:58	<a href="#">WG1784981</a>
Toluene	0.00303	<u>J</u>	0.00130	0.00500	1	12/07/2021 07:58	<a href="#">WG1784981</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 07:58	<a href="#">WG1784981</a>
Total Xylenes	0.00117	<u>J</u>	0.000880	0.00650	1	12/07/2021 07:58	<a href="#">WG1784981</a>
(S) Toluene-d8	101			75.0-131		12/07/2021 07:58	<a href="#">WG1784981</a>
(S) 4-Bromofluorobenzene	95.9			67.0-138		12/07/2021 07:58	<a href="#">WG1784981</a>
(S) 1,2-Dichloroethane-d4	100			70.0-130		12/07/2021 07:58	<a href="#">WG1784981</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	2.08	<u>B J</u>	0.769	4.00	1	12/06/2021 02:37	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	54.5			18.0-148		12/06/2021 02:37	<a href="#">WG1784356</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 00:38	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 00:38	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 00:38	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 00:38	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl-d14	83.8			23.0-120		12/09/2021 00:38	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	66.2			14.0-149		12/09/2021 00:38	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	75.3			34.0-125		12/09/2021 00:38	<a href="#">WG1785524</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.90		1	12/08/2021 20:55	WG1784351

## Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	27.0		0.133	1.00	1	12/08/2021 12:54	<a href="#">WG1785869</a>

## Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 12:54	<a href="#">WG1784664</a>

## Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.45	<a href="#">T8</a>	1	12/06/2021 12:00	<a href="#">WG1784409</a>

## Sample Narrative:

L1437907-05 WG1784409: 8.45 at 19.7C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	883		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

## Sample Narrative:

L1437907-05 WG1784566: at 25C

## Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 10:02	<a href="#">WG1784925</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	160		0.0852	0.500	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Cadmium	0.138	<a href="#">J</a>	0.0471	0.500	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Chromium	27.0	<a href="#">O1</a>	0.133	1.00	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Copper	7.85		0.400	2.00	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Lead	6.94		0.208	0.500	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Nickel	13.9		0.132	2.00	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Selenium	1.70	<a href="#">J</a>	0.764	2.00	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Silver	U		0.127	1.00	1	12/08/2021 12:18	<a href="#">WG1785869</a>
Zinc	32.3		0.832	5.00	1	12/08/2021 12:18	<a href="#">WG1785869</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.411		0.0167	0.200	1	12/08/2021 18:28	<a href="#">WG1784346</a>



## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.00	<a href="#">Q1</a>	0.100	1.00	5	12/08/2021 12:37	<a href="#">WG1785874</a>

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0362	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 13:10	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	107			77.0-120		12/09/2021 13:10	<a href="#">WG1784377</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 00:02	<a href="#">WG1784988</a>
Toluene	0.00337	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 00:02	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 00:02	<a href="#">WG1784988</a>
Total Xylenes	0.00139	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 00:02	<a href="#">WG1784988</a>
(S) <i>Toluene-d8</i>	102			75.0-131		12/07/2021 00:02	<a href="#">WG1784988</a>
(S) <i>4</i> -Bromofluorobenzene	96.4			67.0-138		12/07/2021 00:02	<a href="#">WG1784988</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	98.0			70.0-130		12/07/2021 00:02	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.926	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 01:43	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	67.9			18.0-148		12/06/2021 01:43	<a href="#">WG1784356</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 00:55	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 00:55	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 00:55	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 00:55	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	85.0			23.0-120		12/09/2021 00:55	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	64.3			14.0-149		12/09/2021 00:55	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	79.0			34.0-125		12/09/2021 00:55	<a href="#">WG1785524</a>

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	SAR				
Sodium Adsorption Ratio	6.34		1	12/08/2021 20:58	WG1784351

Calculated Results

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Trivalent	26.4		0.133	1.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>

Wet Chemistry by Method 3060A/7196A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Hexavalent	U		0.640	2.00	1	12/08/2021 12:57	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	pH				
pH	8.36	<a href="#">T8</a>	1	12/07/2021 15:00	<a href="#">WG1785392</a>

Sample Narrative:  
L1437907-06 WG1785392: 8.36 at 18.7C

Wet Chemistry by Method 9050AMod

	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Analyte	umhos/cm		umhos/cm			
Specific Conductance	1280		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:  
L1437907-06 WG1784566: at 25C

Mercury by Method 7471A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Mercury	U		0.0180	0.0400	1	12/08/2021 10:04	<a href="#">WG1784925</a>

Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Barium	163		0.0852	0.500	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Cadmium	0.109	<a href="#">J</a>	0.0471	0.500	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Chromium	26.4		0.133	1.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Copper	8.24		0.400	2.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Lead	7.07		0.208	0.500	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Nickel	14.3		0.132	2.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Selenium	0.962	<a href="#">J</a>	0.764	2.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Silver	U		0.127	1.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>
Zinc	33.8		0.832	5.00	1	12/08/2021 13:08	<a href="#">WG1785869</a>

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l	mg/l			
Hot Water Sol. Boron	0.861		0.0167	0.200	1	12/08/2021 18:36	<a href="#">WG1784346</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.74		0.100	1.00	5	12/08/2021 13:40	<a href="#">WG1785874</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0339	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 13:32	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	107			77.0-120		12/09/2021 13:32	<a href="#">WG1784377</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 00:20	<a href="#">WG1784988</a>
Toluene	0.00322	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 00:20	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 00:20	<a href="#">WG1784988</a>
Total Xylenes	0.00131	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 00:20	<a href="#">WG1784988</a>
(S) Toluene-d8	102			75.0-131		12/07/2021 00:20	<a href="#">WG1784988</a>
(S) 4-Bromofluorobenzene	99.1			67.0-138		12/07/2021 00:20	<a href="#">WG1784988</a>
(S) 1,2-Dichloroethane-d4	99.1			70.0-130		12/07/2021 00:20	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	1.39	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 02:10	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	63.5			18.0-148		12/06/2021 02:10	<a href="#">WG1784356</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 01:13	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 01:13	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 01:13	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 01:13	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl-d14	76.5			23.0-120		12/09/2021 01:13	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	49.2			14.0-149		12/09/2021 01:13	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	63.7			34.0-125		12/09/2021 01:13	<a href="#">WG1785524</a>

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	SAR				
Sodium Adsorption Ratio	8.08		1	12/08/2021 21:06	WG1784351

Calculated Results

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Trivalent	26.2		0.133	1.00	1	12/08/2021 12:58	<a href="#">WG1784894</a>

Wet Chemistry by Method 3060A/7196A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Hexavalent	U		0.640	2.00	1	12/08/2021 12:58	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	pH				
pH	8.39	<a href="#">T8</a>	1	12/07/2021 15:00	<a href="#">WG1785392</a>

Sample Narrative:  
L1437907-07 WG1785392: 8.39 at 18.3C

Wet Chemistry by Method 9050AMod

	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Analyte	umhos/cm		umhos/cm			
Specific Conductance	1370		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:  
L1437907-07 WG1784566: at 25C

Mercury by Method 7471A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Mercury	U		0.0180	0.0400	1	12/08/2021 08:50	<a href="#">WG1784927</a>

Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Barium	155		0.0852	0.500	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Cadmium	0.128	<a href="#">J</a>	0.0471	0.500	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Chromium	26.2		0.133	1.00	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Copper	8.25		0.400	2.00	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Lead	7.46		0.208	0.500	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Nickel	13.4		0.132	2.00	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Selenium	U		0.764	2.00	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Silver	U		0.127	1.00	1	12/07/2021 18:37	<a href="#">WG1784894</a>
Zinc	32.7		0.832	5.00	1	12/07/2021 18:37	<a href="#">WG1784894</a>

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l	mg/l			
Hot Water Sol. Boron	0.426		0.0167	0.200	1	12/08/2021 18:39	<a href="#">WG1784346</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.03		0.100	1.00	5	12/06/2021 23:23	<a href="#">WG1784892</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0424	<a href="#">J</a>	0.0217	0.100	1	12/10/2021 02:29	<a href="#">WG1787003</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	107			77.0-120		12/10/2021 02:29	<a href="#">WG1787003</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 00:40	<a href="#">WG1784988</a>
Toluene	0.00329	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 00:40	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 00:40	<a href="#">WG1784988</a>
Total Xylenes	0.00158	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 00:40	<a href="#">WG1784988</a>
(S) <i>Toluene-d8</i>	103			75.0-131		12/07/2021 00:40	<a href="#">WG1784988</a>
(S) <i>4</i> -Bromofluorobenzene	101			67.0-138		12/07/2021 00:40	<a href="#">WG1784988</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	107			70.0-130		12/07/2021 00:40	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	2.40	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 02:24	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	67.0			18.0-148		12/06/2021 02:24	<a href="#">WG1784356</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 01:31	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 01:31	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 01:31	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 01:31	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	90.9			23.0-120		12/09/2021 01:31	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	64.9			14.0-149		12/09/2021 01:31	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	80.0			34.0-125		12/09/2021 01:31	<a href="#">WG1785524</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.12		1	12/08/2021 21:09	WG1784351

<sup>1</sup> Cp

<sup>2</sup> Tc

Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	22.9		0.133	1.00	1	12/08/2021 12:58	<a href="#">WG1784894</a>

<sup>3</sup> Ss

<sup>4</sup> Cn

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 12:58	<a href="#">WG1784664</a>

<sup>5</sup> Sr

<sup>6</sup> Qc

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.88	<a href="#">T8</a>	1	12/07/2021 11:27	<a href="#">WG1784899</a>

<sup>7</sup> Gl

<sup>8</sup> Al

Sample Narrative:

L1437907-08 WG1784899: 7.88 at 16.4C

<sup>9</sup> Sc

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1850		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:

L1437907-08 WG1784566: at 25C

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 08:52	<a href="#">WG1784927</a>

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	222		0.0852	0.500	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Cadmium	0.243	<a href="#">J</a>	0.0471	0.500	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Chromium	22.9		0.133	1.00	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Copper	13.1		0.400	2.00	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Lead	9.45		0.208	0.500	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Nickel	14.4		0.132	2.00	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Selenium	1.16	<a href="#">J</a>	0.764	2.00	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Silver	U		0.127	1.00	1	12/07/2021 18:40	<a href="#">WG1784894</a>
Zinc	37.7		0.832	5.00	1	12/07/2021 18:40	<a href="#">WG1784894</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.531		0.0167	0.200	1	12/08/2021 18:42	<a href="#">WG1784346</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.37		0.100	1.00	5	12/06/2021 23:27	<a href="#">WG1784892</a>

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0416	<a href="#">J</a>	0.0217	0.100	1	12/10/2021 02:51	<a href="#">WG1787003</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	106			77.0-120		12/10/2021 02:51	<a href="#">WG1787003</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 00:59	<a href="#">WG1784988</a>
Toluene	0.00340	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 00:59	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 00:59	<a href="#">WG1784988</a>
Total Xylenes	0.00178	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 00:59	<a href="#">WG1784988</a>
(S) <i>Toluene-d8</i>	101			75.0-131		12/07/2021 00:59	<a href="#">WG1784988</a>
(S) <i>4</i> -Bromofluorobenzene	98.4			67.0-138		12/07/2021 00:59	<a href="#">WG1784988</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	103			70.0-130		12/07/2021 00:59	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	8.35	<a href="#">B</a>	0.769	4.00	1	12/06/2021 04:26	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	67.2			18.0-148		12/06/2021 04:26	<a href="#">WG1784356</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 01:49	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 01:49	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 01:49	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 01:49	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	95.6			23.0-120		12/09/2021 01:49	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	68.2			14.0-149		12/09/2021 01:49	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	85.4			34.0-125		12/09/2021 01:49	<a href="#">WG1785524</a>

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	SAR				
Sodium Adsorption Ratio	1.67		1	12/08/2021 21:12	WG1784351

Calculated Results

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium, Trivalent	26.7		0.133	1.00	1	12/08/2021 13:00	<a href="#">WG1784894</a>

Wet Chemistry by Method 3060A/7196A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium, Hexavalent	U	<a href="#">J5 J6 O1</a>	0.640	2.00	1	12/08/2021 13:00	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	pH				
pH	8.21	<a href="#">T8</a>	1	12/07/2021 11:27	<a href="#">WG1784899</a>

Sample Narrative:  
L1437907-09 WG1784899: 8.21 at 16.3C

Wet Chemistry by Method 9050AMod

	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Analyte	umhos/cm		umhos/cm			
Specific Conductance	1080		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:  
L1437907-09 WG1784566: at 25C

Mercury by Method 7471A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Mercury	0.0205	<a href="#">J</a>	0.0180	0.0400	1	12/08/2021 08:54	<a href="#">WG1784927</a>

Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Barium	180		0.0852	0.500	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Cadmium	0.159	<a href="#">J</a>	0.0471	0.500	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Chromium	26.7		0.133	1.00	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Copper	10.2		0.400	2.00	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Lead	8.19		0.208	0.500	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Nickel	14.3		0.132	2.00	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Selenium	U		0.764	2.00	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Silver	U		0.127	1.00	1	12/07/2021 18:43	<a href="#">WG1784894</a>
Zinc	35.9		0.832	5.00	1	12/07/2021 18:43	<a href="#">WG1784894</a>

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l	mg/l			
Hot Water Sol. Boron	0.564		0.0167	0.200	1	12/08/2021 18:44	<a href="#">WG1784346</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.30		0.100	1.00	5	12/06/2021 23:30	<a href="#">WG1784892</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0313	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 15:02	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	108			77.0-120		12/09/2021 15:02	<a href="#">WG1784377</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 01:18	<a href="#">WG1784988</a>
Toluene	0.00317	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 01:18	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 01:18	<a href="#">WG1784988</a>
Total Xylenes	0.000916	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 01:18	<a href="#">WG1784988</a>
(S) <i>Toluene-d8</i>	101			75.0-131		12/07/2021 01:18	<a href="#">WG1784988</a>
(S) <i>4</i> -Bromofluorobenzene	98.4			67.0-138		12/07/2021 01:18	<a href="#">WG1784988</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	97.6			70.0-130		12/07/2021 01:18	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	1.08	<a href="#">B J J3</a>	0.769	4.00	1	12/06/2021 03:18	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	47.1			18.0-148		12/06/2021 03:18	<a href="#">WG1784356</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 02:06	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 02:06	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 02:06	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 02:06	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	83.7			23.0-120		12/09/2021 02:06	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	65.3			14.0-149		12/09/2021 02:06	<a href="#">WG1785524</a>
(S) <i>2</i> -Fluorobiphenyl	77.9			34.0-125		12/09/2021 02:06	<a href="#">WG1785524</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.43		1	12/08/2021 21:14	WG1784351

## Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	22.8		0.133	1.00	1	12/08/2021 13:04	<a href="#">WG1784894</a>

## Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 13:04	<a href="#">WG1784664</a>

## Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.55	<a href="#">T8</a>	1	12/07/2021 11:27	<a href="#">WG1784899</a>

## Sample Narrative:

L1437907-10 WG1784899: 8.55 at 16.5C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	888		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

## Sample Narrative:

L1437907-10 WG1784566: at 25C

## Mercury by Method 7471A

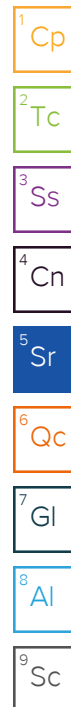
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 08:56	<a href="#">WG1784927</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	217		0.0852	0.500	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Cadmium	0.235	<a href="#">J</a>	0.0471	0.500	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Chromium	22.8		0.133	1.00	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Copper	12.1		0.400	2.00	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Lead	9.67		0.208	0.500	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Nickel	14.1		0.132	2.00	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Selenium	U		0.764	2.00	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Silver	U		0.127	1.00	1	12/07/2021 18:46	<a href="#">WG1784894</a>
Zinc	38.7		0.832	5.00	1	12/07/2021 18:46	<a href="#">WG1784894</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.803		0.0167	0.200	1	12/08/2021 18:47	<a href="#">WG1784346</a>





## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.25		0.100	1.00	5	12/06/2021 23:33	<a href="#">WG1784892</a>

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0375	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 15:24	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	103			77.0-120		12/09/2021 15:24	<a href="#">WG1784377</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 01:37	<a href="#">WG1784988</a>
Toluene	0.00285	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 01:37	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 01:37	<a href="#">WG1784988</a>
Total Xylenes	0.00116	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 01:37	<a href="#">WG1784988</a>
(S) <i>Toluene-d8</i>	102			75.0-131		12/07/2021 01:37	<a href="#">WG1784988</a>
(S) <i>4</i> -Bromofluorobenzene	97.9			67.0-138		12/07/2021 01:37	<a href="#">WG1784988</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	98.0			70.0-130		12/07/2021 01:37	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	5.20	<a href="#">B</a>	0.769	4.00	1	12/06/2021 04:12	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	74.6			18.0-148		12/06/2021 04:12	<a href="#">WG1784356</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 02:24	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 02:24	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 02:24	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 02:24	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	82.8			23.0-120		12/09/2021 02:24	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	56.9			14.0-149		12/09/2021 02:24	<a href="#">WG1785524</a>
(S) <i>2</i> -Fluorobiphenyl	71.5			34.0-125		12/09/2021 02:24	<a href="#">WG1785524</a>

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	SAR				
Sodium Adsorption Ratio	4.87		1	12/08/2021 21:17	WG1784351

Calculated Results

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Trivalent	27.5		0.133	1.00	1	12/08/2021 13:04	<a href="#">WG1784894</a>

Wet Chemistry by Method 3060A/7196A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Hexavalent	U		0.640	2.00	1	12/08/2021 13:04	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	pH				
pH	8.23	<a href="#">T8</a>	1	12/07/2021 15:00	<a href="#">WG1785392</a>

Sample Narrative:  
L1437907-11 WG1785392: 8.23 at 18.3C

Wet Chemistry by Method 9050AMod

	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Analyte	umhos/cm		umhos/cm			
Specific Conductance	1760		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:  
L1437907-11 WG1784566: at 25C

Mercury by Method 7471A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Mercury	U		0.0180	0.0400	1	12/08/2021 08:57	<a href="#">WG1784927</a>

Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Barium	180		0.0852	0.500	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Cadmium	0.123	<a href="#">J</a>	0.0471	0.500	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Chromium	27.5		0.133	1.00	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Copper	9.09		0.400	2.00	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Lead	8.01		0.208	0.500	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Nickel	14.1		0.132	2.00	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Selenium	0.909	<a href="#">J</a>	0.764	2.00	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Silver	U		0.127	1.00	1	12/07/2021 18:48	<a href="#">WG1784894</a>
Zinc	34.1		0.832	5.00	1	12/07/2021 18:48	<a href="#">WG1784894</a>

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l	mg/l			
Hot Water Sol. Boron	0.355		0.0167	0.200	1	12/08/2021 18:50	<a href="#">WG1784346</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.06		0.100	1.00	5	12/06/2021 23:37	<a href="#">WG1784892</a>

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0447	<a href="#">J</a>	0.0217	0.100	1	12/10/2021 03:12	<a href="#">WG1787003</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	108			77.0-120		12/10/2021 03:12	<a href="#">WG1787003</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 01:56	<a href="#">WG1784988</a>
Toluene	0.00320	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 01:56	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 01:56	<a href="#">WG1784988</a>
Total Xylenes	0.00147	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 01:56	<a href="#">WG1784988</a>
(S) <i>Toluene-d8</i>	101			75.0-131		12/07/2021 01:56	<a href="#">WG1784988</a>
(S) <i>4</i> -Bromofluorobenzene	97.1			67.0-138		12/07/2021 01:56	<a href="#">WG1784988</a>
(S) <i>1,2</i> -Dichloroethane- <i>d4</i>	102			70.0-130		12/07/2021 01:56	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	1.55	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 02:51	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	61.7			18.0-148		12/06/2021 02:51	<a href="#">WG1784356</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 02:42	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 02:42	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 02:42	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 02:42	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl- <i>d14</i>	92.2			23.0-120		12/09/2021 02:42	<a href="#">WG1785524</a>
(S) Nitrobenzene- <i>d5</i>	64.2			14.0-149		12/09/2021 02:42	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	80.6			34.0-125		12/09/2021 02:42	<a href="#">WG1785524</a>

Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	SAR				
Sodium Adsorption Ratio	10.9		1	12/08/2021 21:20	WG1784351

Calculated Results

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Trivalent	27.9		0.133	1.00	1	12/08/2021 13:05	<a href="#">WG1784894</a>

Wet Chemistry by Method 3060A/7196A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Hexavalent	U		0.640	2.00	1	12/08/2021 13:05	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	pH				
pH	8.81	<a href="#">T8</a>	1	12/07/2021 15:00	<a href="#">WG1785392</a>

Sample Narrative:  
L1437907-12 WG1785392: 8.81 at 18.2C

Wet Chemistry by Method 9050AMod

	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Analyte	umhos/cm		umhos/cm			
Specific Conductance	1740		10.0	1	12/07/2021 06:07	<a href="#">WG1784566</a>

Sample Narrative:  
L1437907-12 WG1784566: at 25C

Mercury by Method 7471A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Mercury	U		0.0180	0.0400	1	12/08/2021 08:59	<a href="#">WG1784927</a>

Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Barium	181		0.0852	0.500	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Cadmium	0.171	<a href="#">J</a>	0.0471	0.500	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Chromium	27.9		0.133	1.00	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Copper	9.36		0.400	2.00	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Lead	7.73		0.208	0.500	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Nickel	13.8		0.132	2.00	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Selenium	U		0.764	2.00	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Silver	U		0.127	1.00	1	12/07/2021 18:51	<a href="#">WG1784894</a>
Zinc	33.2		0.832	5.00	1	12/07/2021 18:51	<a href="#">WG1784894</a>

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l	mg/l			
Hot Water Sol. Boron	1.25		0.0167	0.200	1	12/08/2021 18:53	<a href="#">WG1784346</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.29		0.100	1.00	5	12/06/2021 23:40	<a href="#">WG1784892</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0390	<a href="#">J</a>	0.0217	0.100	1	12/09/2021 16:07	<a href="#">WG1784377</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	107			77.0-120		12/09/2021 16:07	<a href="#">WG1784377</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 02:15	<a href="#">WG1784988</a>
Toluene	0.00332	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 02:15	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 02:15	<a href="#">WG1784988</a>
Total Xylenes	0.00134	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 02:15	<a href="#">WG1784988</a>
(S) Toluene-d8	101			75.0-131		12/07/2021 02:15	<a href="#">WG1784988</a>
(S) 4-Bromofluorobenzene	99.1			67.0-138		12/07/2021 02:15	<a href="#">WG1784988</a>
(S) 1,2-Dichloroethane-d4	100			70.0-130		12/07/2021 02:15	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	1.05	<a href="#">B J</a>	0.769	4.00	1	12/06/2021 03:04	<a href="#">WG1784356</a>
(S) <i>o</i> -Terphenyl	43.6			18.0-148		12/06/2021 03:04	<a href="#">WG1784356</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 03:00	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 03:00	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 03:00	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 03:00	<a href="#">WG1785524</a>
(S) <i>p</i> -Terphenyl-d14	97.3			23.0-120		12/09/2021 03:00	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	72.2			14.0-149		12/09/2021 03:00	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	88.4			34.0-125		12/09/2021 03:00	<a href="#">WG1785524</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3738590-1 12/08/21 12:49

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1437907-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1437907-05 12/08/21 12:54 • (DUP) R3738590-3 12/08/21 12:57

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

L1437915-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1437915-02 12/08/21 13:40 • (DUP) R3738590-8 12/08/21 13:40

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

Laboratory Control Sample (LCS)

(LCS) R3738590-2 12/08/21 12:50

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chromium,Hexavalent	24.0	25.2	105	80.0-120	

L1437907-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437907-09 12/08/21 13:00 • (MS) R3738590-4 12/08/21 13:00 • (MSD) R3738590-5 12/08/21 13:01

	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	%	%		%			%	%
Chromium,Hexavalent	20.0	U	13.1	15.9	65.3	79.6	1	75.0-125	J6		19.8	20

L1437907-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L1437907-09 12/08/21 13:00 • (MS) R3738590-7 12/08/21 13:03

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Chromium,Hexavalent	633	U	875	138	50	75.0-125	J5

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1437633-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1437633-05 12/06/21 12:00 • (DUP) R3737392-2 12/06/21 12:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	6.93	6.94	1	0.144		1

Sample Narrative:

OS: 6.93 at 19.7C

DUP: 6.94 at 19.4C

L1437633-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1437633-11 12/06/21 12:00 • (DUP) R3737392-3 12/06/21 12:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	6.45	6.50	1	0.772		1

Sample Narrative:

OS: 6.45 at 18.9C

DUP: 6.5 at 18.8C

Laboratory Control Sample (LCS)

(LCS) R3737392-1 12/06/21 12:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	9.99	99.9	99.0-101	

Sample Narrative:

LCS: 9.99 at 19.2C





L1437995-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1437995-01 12/07/21 11:27 • (DUP) R3737871-3 12/07/21 11:27

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	pH	su		%		%
pH	7.71	7.73	1	0.259		1

Sample Narrative:

OS: 7.71 at 16.5C

DUP: 7.73 at 16.8C

Laboratory Control Sample (LCS)

(LCS) R3737871-1 12/07/21 11:27

	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 17C

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3738017-1 12/07/21 15:00

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

Sample Narrative:

LCS: 9.98 at 17.7C

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3737705-1 12/07/21 06:07

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

Sample Narrative:

BLANK: at 25C

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3737705-3 12/07/21 06:07

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance		38.8	1	13.2		20

Sample Narrative:

DUP: at 25C

L1437907-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1437907-05 12/07/21 06:07 • (DUP) R3737705-4 12/07/21 06:07

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	883	874	1	1.02		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3737705-2 12/07/21 06:07

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	258	96.2	85.0-115	

Sample Narrative:

LCS: at 25C



Method Blank (MB)

(MB) R3738333-1 12/08/21 09:15

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3738333-2 12/08/21 09:17

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.525	105	80.0-120	

L1437633-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437633-01 12/08/21 09:19 • (MS) R3738333-3 12/08/21 09:21 • (MSD) R3738333-4 12/08/21 09:23

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.500	U	0.554	0.562	111	112	1	75.0-125			1.29	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3738366-1 12/08/21 08:20

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3738366-2 12/08/21 08:22

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.514	103	80.0-120	

L1437916-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437916-20 12/08/21 08:24 • (MS) R3738366-3 12/08/21 08:26 • (MSD) R3738366-4 12/08/21 08:28

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.500	U	0.649	0.556	130	111	1	75.0-125	<u>J5</u>		15.5	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3738225-1 12/07/21 17:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Copper	1.17	U	0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R3738225-2 12/07/21 17:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	103	103	80.0-120	
Cadmium	100	99.3	99.3	80.0-120	
Chromium	100	99.0	99.0	80.0-120	
Copper	100	99.0	99.0	80.0-120	
Lead	100	100	100	80.0-120	
Nickel	100	101	101	80.0-120	
Selenium	100	102	102	80.0-120	
Silver	20.0	17.5	87.4	80.0-120	
Zinc	100	98.7	98.7	80.0-120	

L1437186-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437186-01 12/07/21 17:36 • (MS) R3738225-5 12/07/21 17:44 • (MSD) R3738225-6 12/07/21 17:47

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 %
Barium	100	175	260	270	85.2	95.2	1	75.0-125			3.78	20
Cadmium	100	0.592	98.5	100	97.9	99.8	1	75.0-125			1.95	20
Chromium	100	4.50	96.5	98.3	92.0	93.8	1	75.0-125			1.87	20
Copper	100	10.0	107	109	96.9	98.5	1	75.0-125			1.52	20
Lead	100	9.88	108	112	98.6	102	1	75.0-125			3.01	20
Nickel	100	8.93	109	111	99.9	102	1	75.0-125			1.83	20
Selenium	100	U	86.6	90.2	86.6	90.2	1	75.0-125			4.02	20
Silver	20.0	U	17.7	18.1	88.6	90.6	1	75.0-125			2.22	20
Zinc	100	34.1	121	124	86.5	90.1	1	75.0-125			2.94	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3738497-1 12/08/21 12:13

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	0.124	U	0.0852	0.500
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Copper	U		0.400	2.00
Lead	0.211	U	0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R3738497-2 12/08/21 12:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	100	100	80.0-120	
Cadmium	100	94.4	94.4	80.0-120	
Chromium	100	93.3	93.3	80.0-120	
Copper	100	95.7	95.7	80.0-120	
Lead	100	95.5	95.5	80.0-120	
Nickel	100	95.3	95.3	80.0-120	
Selenium	100	93.9	93.9	80.0-120	
Silver	20.0	16.9	84.6	80.0-120	
Zinc	100	93.9	93.9	80.0-120	

L1437907-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437907-05 12/08/21 12:18 • (MS) R3738497-5 12/08/21 12:26 • (MSD) R3738497-6 12/08/21 12:28

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 %
Barium	100	160	249	248	89.8	88.1	1	75.0-125			0.696	20
Cadmium	100	0.138	96.0	95.6	95.9	95.4	1	75.0-125			0.446	20
Chromium	100	27.0	118	117	90.9	90.3	1	75.0-125			0.582	20
Copper	100	7.85	104	104	96.5	95.9	1	75.0-125			0.624	20
Lead	100	6.94	107	106	99.7	99.5	1	75.0-125			0.168	20
Nickel	100	13.9	114	113	100	99.4	1	75.0-125			0.688	20
Selenium	100	1.70	93.9	93.3	92.2	91.6	1	75.0-125			0.652	20
Silver	20.0	U	17.2	16.9	86.1	84.5	1	75.0-125			1.84	20
Zinc	100	32.3	123	122	90.5	90.1	1	75.0-125			0.334	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3739014-1 12/08/21 18:03

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

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

(LCS) R3739014-2 12/08/21 18:06 • (LCSD) R3739014-3 12/08/21 18:08

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	0.992	0.987	99.2	98.7	80.0-120			0.578	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3737645-1 12/06/21 22:01

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3737645-2 12/06/21 22:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	90.3	90.3	80.0-120	

L1437186-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437186-01 12/06/21 22:08 • (MS) R3737645-5 12/06/21 22:18 • (MSD) R3737645-6 12/06/21 22:21

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	2.72	84.0	91.1	81.3	88.4	5	75.0-125			8.11	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3738466-1 12/08/21 12:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3738466-2 12/08/21 12:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	108	108	80.0-120	

L1437907-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437907-05 12/08/21 12:37 • (MS) R3738466-5 12/08/21 12:47 • (MSD) R3738466-6 12/08/21 12:50

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 %
Arsenic	100	4.00	102	102	97.9	98.4	5	75.0-125			0.543	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3738819-2 12/09/21 07:44

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)	109			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3738819-1 12/09/21 05:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.32	115	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			103	77.0-120	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3739287-3 12/09/21 19:02

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)	110			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3739287-2 12/09/21 18:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.21	94.7	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			98.3	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3739529-3 12/10/21 16:32

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)	109			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3739529-2 12/10/21 15:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.13	93.3	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			101	77.0-120	

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

Method Blank (MB)

(MB) R3738030-3 12/07/21 06:42

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	102			75.0-131
(S) 4-Bromofluorobenzene	99.8			67.0-138
(S) 1,2-Dichloroethane-d4	103			70.0-130

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

(LCS) R3738030-1 12/07/21 05:44 • (LCSD) R3738030-2 12/07/21 06:04

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	0.110	0.109	88.0	87.2	70.0-123			0.913	20
Ethylbenzene	0.125	0.108	0.107	86.4	85.6	74.0-126			0.930	20
Toluene	0.125	0.106	0.106	84.8	84.8	75.0-121			0.000	20
Xylenes, Total	0.375	0.320	0.323	85.3	86.1	72.0-127			0.933	20
(S) Toluene-d8				99.9	98.0	75.0-131				
(S) 4-Bromofluorobenzene				100	102	67.0-138				
(S) 1,2-Dichloroethane-d4				114	115	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3737911-3 12/06/21 22:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	0.00130	U	0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	102			75.0-131
(S) 4-Bromofluorobenzene	99.4			67.0-138
(S) 1,2-Dichloroethane-d4	95.6			70.0-130

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

(LCS) R3737911-1 12/06/21 21:10 • (LCSD) R3737911-2 12/06/21 21:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.110	0.110	88.0	88.0	70.0-123			0.000	20
Ethylbenzene	0.125	0.113	0.116	90.4	92.8	74.0-126			2.62	20
Toluene	0.125	0.112	0.110	89.6	88.0	75.0-121			1.80	20
Xylenes, Total	0.375	0.333	0.326	88.8	86.9	72.0-127			2.12	20
(S) Toluene-d8				103	101	75.0-131				
(S) 4-Bromofluorobenzene				102	100	67.0-138				
(S) 1,2-Dichloroethane-d4				107	110	70.0-130				

L1436873-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1436873-01 12/06/21 22:26 • (MS) R3737911-4 12/07/21 04:47 • (MSD) R3737911-5 12/07/21 05:06

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	U	0.116	0.105	93.5	84.7	1	10.0-149			9.95	37
Ethylbenzene	0.129	U	0.119	0.111	96.0	89.5	1	10.0-160			6.96	38
Toluene	0.129	0.00163	0.119	0.111	94.7	88.2	1	10.0-156			6.96	38
Xylenes, Total	0.386	0.00151	0.352	0.331	94.2	88.6	1	10.0-160			6.15	38
(S) Toluene-d8					101	101		75.0-131				
(S) 4-Bromofluorobenzene					99.4	99.9		67.0-138				
(S) 1,2-Dichloroethane-d4					103	104		70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3737266-1 12/05/21 22:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) High Fraction	2.20	J	0.769	4.00
(S) o-Terphenyl	61.3			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3737266-2 12/05/21 23:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) High Fraction	50.0	41.0	82.0	50.0-150	
(S) o-Terphenyl			98.6	18.0-148	

L1437907-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437907-09 12/06/21 03:18 • (MS) R3737266-3 12/06/21 03:31 • (MSD) R3737266-4 12/06/21 03:45

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) High Fraction	48.8	1.08	25.1	32.4	51.4	66.4	1	50.0-150		J3	25.4	20
(S) o-Terphenyl					53.2	71.7		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3738822-2 12/08/21 22:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	87.9			14.0-149
(S) 2-Fluorobiphenyl	103			34.0-125
(S) p-Terphenyl-d14	119			23.0-120

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3738822-1 12/08/21 22:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0652	81.5	50.0-126	
Acenaphthene	0.0800	0.0684	85.5	50.0-120	
Acenaphthylene	0.0800	0.0692	86.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0660	82.5	45.0-120	
Benzo(a)pyrene	0.0800	0.0599	74.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0694	86.8	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0660	82.5	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0696	87.0	49.0-125	
Chrysene	0.0800	0.0660	82.5	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0653	81.6	47.0-125	
Fluoranthene	0.0800	0.0652	81.5	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3738822-1 12/08/21 22:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0645	80.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0688	86.0	46.0-125	
Naphthalene	0.0800	0.0577	72.1	50.0-120	
Phenanthrene	0.0800	0.0685	85.6	47.0-120	
Pyrene	0.0800	0.0661	82.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0701	87.6	51.0-121	
2-Methylnaphthalene	0.0800	0.0665	83.1	50.0-120	
2-Chloronaphthalene	0.0800	0.0666	83.3	50.0-120	
(S) Nitrobenzene-d5			95.7	14.0-149	
(S) 2-Fluorobiphenyl			97.4	34.0-125	
(S) p-Terphenyl-d14			97.7	23.0-120	

L1437915-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437915-01 12/08/21 22:51 • (MS) R3738822-3 12/08/21 23:09 • (MSD) R3738822-4 12/08/21 23:27

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 %
Anthracene	0.0768	U	0.0430	0.0409	56.0	53.3	1	10.0-145			5.01	30
Acenaphthene	0.0768	U	0.0436	0.0415	56.8	54.0	1	14.0-127			4.94	27
Acenaphthylene	0.0768	U	0.0431	0.0418	56.1	54.4	1	21.0-124			3.06	25
Benzo(a)anthracene	0.0768	U	0.0427	0.0411	55.6	53.5	1	10.0-139			3.82	30
Benzo(a)pyrene	0.0768	U	0.0459	0.0442	59.8	57.6	1	10.0-141			3.77	31
Benzo(b)fluoranthene	0.0768	U	0.0411	0.0393	53.5	51.2	1	10.0-140			4.48	36
Benzo(g,h,i)perylene	0.0768	U	0.0427	0.0411	55.6	53.5	1	10.0-140			3.82	33
Benzo(k)fluoranthene	0.0768	U	0.0393	0.0385	51.2	50.1	1	10.0-137			2.06	31
Chrysene	0.0768	U	0.0431	0.0409	56.1	53.3	1	10.0-145			5.24	30
Dibenz(a,h)anthracene	0.0768	U	0.0415	0.0400	54.0	52.1	1	10.0-132			3.68	31
Fluoranthene	0.0768	U	0.0433	0.0422	56.4	54.9	1	10.0-153			2.57	33
Fluorene	0.0768	U	0.0414	0.0398	53.9	51.8	1	11.0-130			3.94	29
Indeno(1,2,3-cd)pyrene	0.0768	U	0.0450	0.0432	58.6	56.3	1	10.0-137			4.08	32
Naphthalene	0.0768	U	0.0337	0.0321	43.9	41.8	1	10.0-135			4.86	27
Phenanthrene	0.0768	U	0.0437	0.0427	56.9	55.6	1	10.0-144			2.31	31
Pyrene	0.0768	U	0.0442	0.0416	57.6	54.2	1	10.0-148			6.06	35
1-Methylnaphthalene	0.0768	U	0.0469	0.0451	61.1	58.7	1	10.0-142			3.91	28
2-Methylnaphthalene	0.0768	U	0.0421	0.0399	54.8	52.0	1	10.0-137			5.37	28
2-Chloronaphthalene	0.0768	U	0.0289	0.0274	37.6	35.7	1	29.0-120			5.33	24
(S) Nitrobenzene-d5					52.7	47.1		14.0-149				
(S) 2-Fluorobiphenyl					59.6	55.9		34.0-125				
(S) p-Terphenyl-d14					62.2	58.8		23.0-120				

1

Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

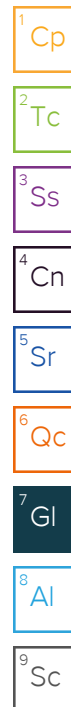
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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.
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.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
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.



# ACCREDITATIONS & LOCATIONS

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


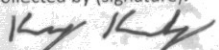
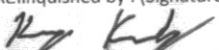
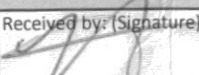

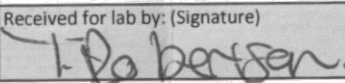
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Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1 6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1 4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.



<b>Caerus Oil &amp; Gas LLC</b> <b>143 Diamond Avenue</b> <b>Parachute, CO 81635</b> <b>970-285-9606</b>				Billing Information:				Pres Chk		Analysis / Container / Preservative										Chain of Custody Page <u>1</u> of <u>2</u>	
				Same as above																 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859	
Report to: <b>bmiddleton@caerusoilandgas.com</b>				Email To: <b>bmiddleton@caerusoilandgas.com</b>																	
Project Description: <b>Hatch Gulch Pig Launcher</b>				City/State Collected: <b>Piceance, CO</b>																	
Phone:		Client Project #		Lab Project #																	
Fax:		<b>HGPG</b>		<b>HGPG</b>																	
Collected by (print): <b>KORBY KENNEDY</b>		Site/Facility ID #		P.O. #																	
		<b>HGPG</b>		<b>HGPG</b>																	
Collected by (signature): 		Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day		Quote #																	
Immediately Packed on Ice <input type="checkbox"/> N <input checked="" type="checkbox"/> Y <input type="checkbox"/> X				Date Results Needed <u>Standard TAT</u>																	
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPH-GRO/DRO	BTEX	TABLE 910- PAH's	SAR, EC, pH	TABLE 910- Metals									
2011201-HATCH GULCH (PH-1) @ 1'-2'		G	SS	1'-2'	12/1/21	10:35	2	X	X	X	X	X									
2011201-HATCH GULCH (PH-1) @ 3'-4'		G	SS	3'-4'		10:50	2	X	X	X	X	X									
2011201-HATCH GULCH (PH-1) @ 5'-6'		G	SS	5'-6'		11:00	2	X	X	X	X	X									
2011201-HATCH GULCH (PH-2) @ 1'-2'		G	SS	1'-2'		11:08	2	X	X	X	X	X									
2011201-HATCH GULCH (PH-2) @ 3'-4'		G	SS	3'-4'		11:15	2	X	X	X	X	X									
2011201-HATCH GULCH (PH-2) @ 5'-6'		G	SS	5'-6'		11:20	2	X	X	X	X	X									
2011201-HATCH GULCH (PH-3) @ 1'-2'		G	SS	1'-2'		11:25	2	X	X	X	X	X									
2011201-HATCH GULCH (PH-3) @ 3'-4'		G	SS	3'-4'		11:33	2	X	X	X	X	X									
2011201-HATCH GULCH (PH-3) @ 5'-6'		G	SS	5'-6'		11:40	2	X	X	X	X	X									
2011201-HATCH GULCH (PH-4) @ 1'-2'		G	SS	1'-2'		11:45	2	X	X	X	X	X									
* Matrix: SS - Soil   AIR - Air   F - Filter GW - Groundwater   B - Bioassay WW - WasteWater DW - Drinking Water OT - Other		Remarks:  Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier																			
Relinquished by: (Signature) 		Date: 12/1/21	Time: 17:00	Received by: (Signature) 		Trip Blank Received: Yes/No HCL / MeOH TBR		Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input type="checkbox"/> Y <input type="checkbox"/> N													
Relinquished by: (Signature) 		Date: 12/2/21	Time: 1500	Received by: (Signature)		Temp: 38.10°C Bottles Received: 24		If preservation required by Login: Date/Time													
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature) 		Date: 12/3/21 Time: 900		Hold:  Condition: NCF / OK													



Condition:  
NCF / OK

## Caerus Oil and Gas

Sample Delivery Group: L1445651  
Samples Received: 12/23/2021  
Project Number: HGPL  
Description: Hatch Gulch Pig Laucher  
Site: HGPL  
Report To: Brett Middleton  
143 Diamond Avenue  
Parachute, CO 81635

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.

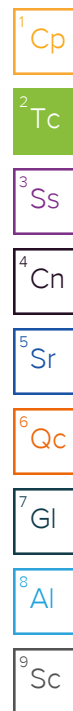


## Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 [www.pacenational.com](http://www.pacenational.com)

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# SAMPLE SUMMARY

## 20211221-HATCH GULCH (FLOOR) @ 4.5' L1445651-01 Solid

Collected by  
Korey Kennedy

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

Received date/time  
12/23/21 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1796227	1	01/03/22 12:00	01/03/22 12:00	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1795701	1	12/30/21 09:00	12/30/21 11:00	GI	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

## 20211221-HATCH GULCH (N-WALL) @ 3' L1445651-02 Solid

Collected by  
Korey Kennedy

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

Received date/time  
12/23/21 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1796227	1	01/03/22 12:03	01/03/22 12:03	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1795701	1	12/30/21 09:00	12/30/21 11:00	GI	Mt. Juliet, TN

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

## 20211221-HATCH GULCH (E-WALL) @ 4' L1445651-03 Solid

Collected by  
Korey Kennedy

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

Received date/time  
12/23/21 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1796227	1	01/03/22 12:05	01/03/22 12:05	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1795701	1	12/30/21 09:00	12/30/21 11:00	GI	Mt. Juliet, TN

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

## 20211221-HATCH GULCH (S-WALL) @ 4' L1445651-04 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/21/21 12:15

Received date/time  
12/23/21 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1796227	1	01/03/22 12:08	01/03/22 12:08	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1795701	1	12/30/21 09:00	12/30/21 11:00	GI	Mt. Juliet, TN

## 20211221-HATCH GULCH (W-WALL) @ 4' L1445651-05 Solid

Collected by  
Korey Kennedy

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

Received date/time  
12/23/21 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1796227	1	01/03/22 12:11	01/03/22 12:11	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1795701	1	12/30/21 09:00	12/30/21 11:00	GI	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



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.940		1	01/03/2022 12:00	WG1796227

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.13	T8	1	12/30/2021 11:00	WG1795701

Sample Narrative:

L1445651-01 WG1795701: 8.13 at 19.9C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	8.60		1	01/03/2022 12:03	WG1796227

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.75	T8	1	12/30/2021 11:00	WG1795701

Sample Narrative:  
L1445651-02 WG1795701: 7.75 at 20C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.22		1	01/03/2022 12:05	WG1796227

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.83	T8	1	12/30/2021 11:00	WG1795701

Sample Narrative:  
L1445651-03 WG1795701: 8.83 at 20C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.96		1	01/03/2022 12:08	WG1796227

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.98	T8	1	12/30/2021 11:00	WG1795701

Sample Narrative:  
L1445651-04 WG1795701: 7.98 at 20.1C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.62		1	01/03/2022 12:11	WG1796227

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.29	T8	1	12/30/2021 11:00	WG1795701

Sample Narrative:  
L1445651-05 WG1795701: 8.29 at 20.1C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1445464-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1445464-04 12/30/21 11:00 • (DUP) R3746289-2 12/30/21 11:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.42	8.48	1	0.710		1

Sample Narrative:

OS: 8.42 at 20C

DUP: 8.48 at 20C

L1445651-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1445651-01 12/30/21 11:00 • (DUP) R3746289-3 12/30/21 11:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	pH	su		%		%
pH	8.13	8.14	1	0.123		1

Sample Narrative:

OS: 8.13 at 19.9C

DUP: 8.14 at 20C

Laboratory Control Sample (LCS)

(LCS) R3746289-1 12/30/21 11:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	9.95	99.5	99.0-101	

Sample Narrative:

LCS: 9.95 at 19.9C

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# 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.

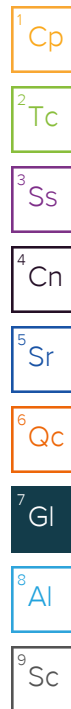
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

## Abbreviations and Definitions

Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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

T8	Sample(s) received past/too close to holding time expiration.
----	---



# 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1 6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1 4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.



[illegible]

**Caerus Oil and Gas**

Sample Delivery Group: L1437915  
Samples Received: 12/03/2021  
Project Number: HGPG  
Description: Hatch Gulch Pig Launcher  
Site: HGPG  
Report To: Brett Middleton  
143 Diamond Avenue  
Parachute, CO 81635

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 National**12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 [www.pacenational.com](http://www.pacenational.com)

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



# SAMPLE SUMMARY

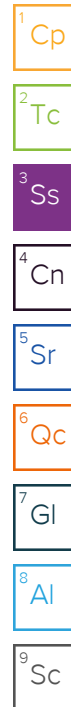
## 20211201-HATCHGULTCH(BG-1)@.5'-1' L1437915-01 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 09:55

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784355	1	12/09/21 19:06	12/09/21 19:06	CCE	Mt. Juliet, TN
Calculated Results	WG1785343	1	12/07/21 13:30	12/09/21 05:57	CCE	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 13:13	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784353	1	12/06/21 09:00	12/06/21 10:53	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784653	1	12/07/21 04:58	12/07/21 07:32	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784925	1	12/06/21 14:26	12/08/21 10:06	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785343	1	12/07/21 13:30	12/09/21 05:57	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784349	1	12/08/21 12:13	12/09/21 20:31	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1786004	5	12/10/21 07:37	12/10/21 11:48	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 17:53	12/07/21 02:34	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/08/21 22:51	AGW	Mt. Juliet, TN



## 20211201-HATCHGULTCH(BG-1)@1'-1.5' L1437915-02 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 10:00

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784355	1	12/09/21 19:09	12/09/21 19:09	CCE	Mt. Juliet, TN
Calculated Results	WG1785343	1	12/07/21 13:30	12/09/21 06:00	CCE	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 13:40	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784353	1	12/06/21 09:00	12/06/21 10:53	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784653	1	12/07/21 04:58	12/07/21 07:32	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 09:01	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785343	1	12/07/21 13:30	12/09/21 06:00	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784349	1	12/08/21 12:13	12/09/21 20:34	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1786004	5	12/10/21 07:37	12/10/21 12:04	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 17:53	12/07/21 02:53	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 04:46	AGW	Mt. Juliet, TN

## 20211201-HATCHGULTCH(BG-2)@.5'-1' L1437915-03 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 13:25

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784355	1	12/09/21 19:11	12/09/21 19:11	CCE	Mt. Juliet, TN
Calculated Results	WG1785343	1	12/07/21 13:30	12/09/21 06:08	CCE	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 13:16	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784353	1	12/06/21 09:00	12/06/21 10:53	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784653	1	12/07/21 04:58	12/07/21 07:32	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784927	1	12/06/21 14:23	12/08/21 09:07	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785343	1	12/07/21 13:30	12/09/21 06:08	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784349	1	12/08/21 12:13	12/09/21 20:37	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1786004	5	12/10/21 07:37	12/10/21 12:07	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 17:53	12/07/21 03:12	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 03:17	AGW	Mt. Juliet, TN

## 20211201-HATCHGULTCH(BG-2)@1'-1.5' L1437915-04 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 13:30

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784355	1	12/09/21 19:14	12/09/21 19:14	CCE	Mt. Juliet, TN
Calculated Results	WG1785343	1	12/07/21 13:30	12/10/21 15:29	MRM	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1785229	1	12/10/21 03:55	12/10/21 15:29	MRM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784375	1	12/06/21 14:00	12/06/21 15:17	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784653	1	12/07/21 04:58	12/07/21 07:32	ARD	Mt. Juliet, TN

# SAMPLE SUMMARY

## 20211201-HATCHGULTCH(BG-2)@1'-1.5' L1437915-04 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 13:30

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7471A	WG1784465	1	12/05/21 13:48	12/06/21 17:02	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785343	1	12/07/21 13:30	12/09/21 06:11	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784349	1	12/08/21 12:13	12/09/21 20:39	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1786004	5	12/10/21 07:37	12/10/21 12:11	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 17:53	12/07/21 03:31	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 03:35	AGW	Mt. Juliet, TN



## 20211201-HATCHGULTCH(BG-3)@.5'-1' L1437915-05 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 13:40

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1785343	1	12/07/21 13:30	12/09/21 06:13	CCE	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1784664	1	12/06/21 15:26	12/08/21 13:19	BDS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784353	1	12/06/21 09:00	12/06/21 10:53	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784653	1	12/07/21 04:58	12/07/21 07:32	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784465	1	12/05/21 13:48	12/06/21 17:04	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785343	1	12/07/21 13:30	12/09/21 06:13	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784349	50	12/08/21 12:13	12/09/21 20:42	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1786004	5	12/10/21 07:37	12/10/21 12:21	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1.99	12/04/21 17:53	12/07/21 03:50	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 05:04	AGW	Mt. Juliet, TN

## 20211201-HATCHGULTCH(BG-3)@1'-1.5' L1437915-06 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 13:45

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784355	1	12/09/21 19:17	12/09/21 19:17	CCE	Mt. Juliet, TN
Calculated Results	WG1785343	1	12/07/21 13:30	12/10/21 15:39	MRM	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1785229	1	12/10/21 03:55	12/10/21 15:39	MRM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784353	1	12/06/21 09:00	12/06/21 10:53	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784653	1	12/07/21 04:58	12/07/21 07:32	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784465	1	12/05/21 13:48	12/06/21 17:06	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785343	1	12/07/21 13:30	12/09/21 06:16	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784349	1	12/08/21 12:13	12/09/21 20:45	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1786004	5	12/10/21 07:37	12/10/21 12:24	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 17:53	12/07/21 04:09	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 03:53	AGW	Mt. Juliet, TN

## 20211201-HATCHGULTCH(BG-4)@.5'-1' L1437915-07 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 13:50

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784355	1	12/09/21 19:20	12/09/21 19:20	CCE	Mt. Juliet, TN
Calculated Results	WG1785343	1	12/07/21 13:30	12/10/21 15:48	MRM	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1785229	1	12/10/21 03:55	12/10/21 15:48	MRM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784375	1	12/06/21 14:00	12/06/21 15:17	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784653	1	12/07/21 04:58	12/07/21 07:32	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784465	1	12/05/21 13:48	12/06/21 17:08	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785343	1	12/07/21 13:30	12/09/21 05:06	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784349	1	12/08/21 12:13	12/09/21 20:47	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1786004	5	12/10/21 07:37	12/10/21 12:27	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1784988	1	12/04/21 17:53	12/07/21 04:28	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 04:11	AGW	Mt. Juliet, TN

# SAMPLE SUMMARY

20211201-HATCHGULTCH(BG-4)@1'-1.5' L1437915-08 Solid

Collected by  
Korey Kennedy

Collected date/time  
12/01/21 13:55

Received date/time  
12/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1784355	1	12/09/21 19:23	12/09/21 19:23	CCE	Mt. Juliet, TN
Calculated Results	WG1785343	1	12/07/21 13:30	12/10/21 15:52	MRM	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1785229	1	12/10/21 03:55	12/10/21 15:52	MRM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1784375	1	12/06/21 14:00	12/06/21 15:17	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1784653	1	12/07/21 04:58	12/07/21 07:32	ARD	Mt. Juliet, TN
Mercury by Method 7471A	WG1784465	1	12/05/21 13:48	12/06/21 17:10	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1785343	1	12/07/21 13:30	12/09/21 06:19	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1784349	1	12/08/21 12:13	12/09/21 20:55	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1786004	5	12/10/21 07:37	12/10/21 12:31	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1785502	1	12/04/21 17:53	12/08/21 03:42	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1785524	1	12/08/21 17:19	12/09/21 04:28	AGW	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# 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

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L1437915-05 unable to be run for SAR due to the matrix.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.178		1	12/09/2021 19:06	WG1784355

Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	36.0		0.133	1.00	1	12/09/2021 05:57	<a href="#">WG1785343</a>

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	12/08/2021 13:13	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.61	<a href="#">T8</a>	1	12/06/2021 10:53	<a href="#">WG1784353</a>

Sample Narrative:  
L1437915-01 WG1784353: 7.61 at 19.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	388		10.0	1	12/07/2021 07:32	<a href="#">WG1784653</a>

Sample Narrative:  
L1437915-01 WG1784653: at 25C

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0229	<a href="#">J</a>	0.0180	0.0400	1	12/08/2021 10:06	<a href="#">WG1784925</a>

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	321		0.0852	0.500	1	12/09/2021 05:57	<a href="#">WG1785343</a>
Cadmium	0.434	<a href="#">J</a>	0.0471	0.500	1	12/09/2021 05:57	<a href="#">WG1785343</a>
Chromium	36.0		0.133	1.00	1	12/09/2021 05:57	<a href="#">WG1785343</a>
Copper	21.9		0.400	2.00	1	12/09/2021 05:57	<a href="#">WG1785343</a>
Lead	15.6		0.208	0.500	1	12/09/2021 05:57	<a href="#">WG1785343</a>
Nickel	29.7		0.132	2.00	1	12/09/2021 05:57	<a href="#">WG1785343</a>
Selenium	U		0.764	2.00	1	12/09/2021 05:57	<a href="#">WG1785343</a>
Silver	U		0.127	1.00	1	12/09/2021 05:57	<a href="#">WG1785343</a>
Zinc	67.2		0.832	5.00	1	12/09/2021 05:57	<a href="#">WG1785343</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.37		0.0167	0.200	1	12/09/2021 20:31	<a href="#">WG1784349</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.46		0.100	1.00	5	12/10/2021 11:48	<a href="#">WG1786004</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 02:34	<a href="#">WG1784988</a>
Toluene	0.00298	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 02:34	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 02:34	<a href="#">WG1784988</a>
Total Xylenes	0.00110	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 02:34	<a href="#">WG1784988</a>
(S) Toluene-d8	102			75.0-131		12/07/2021 02:34	<a href="#">WG1784988</a>
(S) 4-Bromofluorobenzene	97.4			67.0-138		12/07/2021 02:34	<a href="#">WG1784988</a>
(S) 1,2-Dichloroethane-d4	100			70.0-130		12/07/2021 02:34	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/08/2021 22:51	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/08/2021 22:51	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/08/2021 22:51	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/08/2021 22:51	<a href="#">WG1785524</a>
(S) p-Terphenyl-d14	73.2			23.0-120		12/08/2021 22:51	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	59.1			14.0-149		12/08/2021 22:51	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	68.2			34.0-125		12/08/2021 22:51	<a href="#">WG1785524</a>

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

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.215		1	12/09/2021 19:09	WG1784355

## Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	33.5		0.133	1.00	1	12/09/2021 06:00	<a href="#">WG1785343</a>

## Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 13:40	<a href="#">WG1784664</a>

## Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.48	<a href="#">T8</a>	1	12/06/2021 10:53	<a href="#">WG1784353</a>

## Sample Narrative:

L1437915-02 WG1784353: 7.48 at 20C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	490		10.0	1	12/07/2021 07:32	<a href="#">WG1784653</a>

## Sample Narrative:

L1437915-02 WG1784653: at 25C

## Mercury by Method 7471A

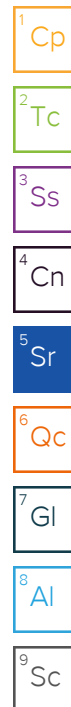
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	U		0.0180	0.0400	1	12/08/2021 09:01	<a href="#">WG1784927</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	246		0.0852	0.500	1	12/09/2021 06:00	<a href="#">WG1785343</a>
Cadmium	0.414	<a href="#">J</a>	0.0471	0.500	1	12/09/2021 06:00	<a href="#">WG1785343</a>
Chromium	33.5		0.133	1.00	1	12/09/2021 06:00	<a href="#">WG1785343</a>
Copper	18.0		0.400	2.00	1	12/09/2021 06:00	<a href="#">WG1785343</a>
Lead	12.6		0.208	0.500	1	12/09/2021 06:00	<a href="#">WG1785343</a>
Nickel	17.7		0.132	2.00	1	12/09/2021 06:00	<a href="#">WG1785343</a>
Selenium	U		0.764	2.00	1	12/09/2021 06:00	<a href="#">WG1785343</a>
Silver	U		0.127	1.00	1	12/09/2021 06:00	<a href="#">WG1785343</a>
Zinc	55.7		0.832	5.00	1	12/09/2021 06:00	<a href="#">WG1785343</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.50		0.0167	0.200	1	12/09/2021 20:34	<a href="#">WG1784349</a>



## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.93		0.100	1.00	5	12/10/2021 12:04	<a href="#">WG1786004</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 02:53	<a href="#">WG1784988</a>
Toluene	0.00308	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 02:53	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 02:53	<a href="#">WG1784988</a>
Total Xylenes	0.00133	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 02:53	<a href="#">WG1784988</a>
(S) Toluene-d8	102			75.0-131		12/07/2021 02:53	<a href="#">WG1784988</a>
(S) 4-Bromofluorobenzene	99.6			67.0-138		12/07/2021 02:53	<a href="#">WG1784988</a>
(S) 1,2-Dichloroethane-d4	100			70.0-130		12/07/2021 02:53	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 04:46	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 04:46	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 04:46	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 04:46	<a href="#">WG1785524</a>
(S) p-Terphenyl-d14	52.4			23.0-120		12/09/2021 04:46	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	38.3			14.0-149		12/09/2021 04:46	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	47.2			34.0-125		12/09/2021 04:46	<a href="#">WG1785524</a>

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



Calculated Results

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	SAR				
Sodium Adsorption Ratio	0.244		1	12/09/2021 19:11	WG1784355

Calculated Results

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Trivalent	40.8		0.133	1.00	1	12/09/2021 06:08	<a href="#">WG1785343</a>

Wet Chemistry by Method 3060A/7196A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Chromium,Hexavalent	U		0.640	2.00	1	12/08/2021 13:16	<a href="#">WG1784664</a>

Wet Chemistry by Method 9045D

	Result	Qualifier	Dilution	Analysis date / time	Batch
Analyte	pH				
pH	7.80	<a href="#">T8</a>	1	12/06/2021 10:53	<a href="#">WG1784353</a>

Sample Narrative:  
L1437915-03 WG1784353: 7.8 at 19.7C

Wet Chemistry by Method 9050AMod

	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Analyte	umhos/cm		umhos/cm			
Specific Conductance	163		10.0	1	12/07/2021 07:32	<a href="#">WG1784653</a>

Sample Narrative:  
L1437915-03 WG1784653: at 25C

Mercury by Method 7471A

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Mercury	U		0.0180	0.0400	1	12/08/2021 09:07	<a href="#">WG1784927</a>

Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/kg		mg/kg	mg/kg			
Barium	189		0.0852	0.500	1	12/09/2021 06:08	<a href="#">WG1785343</a>
Cadmium	0.179	<a href="#">J</a>	0.0471	0.500	1	12/09/2021 06:08	<a href="#">WG1785343</a>
Chromium	40.8		0.133	1.00	1	12/09/2021 06:08	<a href="#">WG1785343</a>
Copper	10.6		0.400	2.00	1	12/09/2021 06:08	<a href="#">WG1785343</a>
Lead	8.68		0.208	0.500	1	12/09/2021 06:08	<a href="#">WG1785343</a>
Nickel	16.5		0.132	2.00	1	12/09/2021 06:08	<a href="#">WG1785343</a>
Selenium	U		0.764	2.00	1	12/09/2021 06:08	<a href="#">WG1785343</a>
Silver	U		0.127	1.00	1	12/09/2021 06:08	<a href="#">WG1785343</a>
Zinc	40.1		0.832	5.00	1	12/09/2021 06:08	<a href="#">WG1785343</a>

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Analyte	mg/l		mg/l	mg/l			
Hot Water Sol. Boron	0.325		0.0167	0.200	1	12/09/2021 20:37	<a href="#">WG1784349</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.49		0.100	1.00	5	12/10/2021 12:07	<a href="#">WG1786004</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 03:12	<a href="#">WG1784988</a>
Toluene	0.00280	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 03:12	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 03:12	<a href="#">WG1784988</a>
Total Xylenes	0.00128	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 03:12	<a href="#">WG1784988</a>
(S) Toluene-d8	99.2			75.0-131		12/07/2021 03:12	<a href="#">WG1784988</a>
(S) 4-Bromofluorobenzene	96.9			67.0-138		12/07/2021 03:12	<a href="#">WG1784988</a>
(S) 1,2-Dichloroethane-d4	98.4			70.0-130		12/07/2021 03:12	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 03:17	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 03:17	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 03:17	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 03:17	<a href="#">WG1785524</a>
(S) p-Terphenyl-d14	95.0			23.0-120		12/09/2021 03:17	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	67.6			14.0-149		12/09/2021 03:17	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	83.1			34.0-125		12/09/2021 03:17	<a href="#">WG1785524</a>

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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.180		1	12/09/2021 19:14	WG1784355

Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	44.0		0.133	1.00	1	12/10/2021 15:29	<a href="#">WG1785343</a>

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	12/10/2021 15:29	<a href="#">WG1785229</a>

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.15	<a href="#">T8</a>	1	12/06/2021 15:17	<a href="#">WG1784375</a>

Sample Narrative:  
L1437915-04 WG1784375: 8.15 at 18.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	153		10.0	1	12/07/2021 07:32	<a href="#">WG1784653</a>

Sample Narrative:  
L1437915-04 WG1784653: at 25C

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0418		0.0180	0.0400	1	12/06/2021 17:02	<a href="#">WG1784465</a>

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	189		0.0852	0.500	1	12/09/2021 06:11	<a href="#">WG1785343</a>
Cadmium	0.257	<a href="#">J</a>	0.0471	0.500	1	12/09/2021 06:11	<a href="#">WG1785343</a>
Chromium	44.0		0.133	1.00	1	12/09/2021 06:11	<a href="#">WG1785343</a>
Copper	12.6		0.400	2.00	1	12/09/2021 06:11	<a href="#">WG1785343</a>
Lead	10.3		0.208	0.500	1	12/09/2021 06:11	<a href="#">WG1785343</a>
Nickel	19.6		0.132	2.00	1	12/09/2021 06:11	<a href="#">WG1785343</a>
Selenium	U		0.764	2.00	1	12/09/2021 06:11	<a href="#">WG1785343</a>
Silver	U		0.127	1.00	1	12/09/2021 06:11	<a href="#">WG1785343</a>
Zinc	47.6		0.832	5.00	1	12/09/2021 06:11	<a href="#">WG1785343</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.361		0.0167	0.200	1	12/09/2021 20:39	<a href="#">WG1784349</a>

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.00		0.100	1.00	5	12/10/2021 12:11	<a href="#">WG1786004</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 03:31	<a href="#">WG1784988</a>
Toluene	0.00288	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 03:31	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 03:31	<a href="#">WG1784988</a>
Total Xylenes	0.00115	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 03:31	<a href="#">WG1784988</a>
(S) Toluene-d8	99.8			75.0-131		12/07/2021 03:31	<a href="#">WG1784988</a>
(S) 4-Bromofluorobenzene	98.1			67.0-138		12/07/2021 03:31	<a href="#">WG1784988</a>
(S) 1,2-Dichloroethane-d4	101			70.0-130		12/07/2021 03:31	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 03:35	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 03:35	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 03:35	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 03:35	<a href="#">WG1785524</a>
(S) p-Terphenyl-d14	86.0			23.0-120		12/09/2021 03:35	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	59.5			14.0-149		12/09/2021 03:35	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	74.2			34.0-125		12/09/2021 03:35	<a href="#">WG1785524</a>

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

## Calculated Results

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chromium, Trivalent	30.7		0.133	1.00	1	12/09/2021 06:13	<a href="#">WG1785343</a>

## Wet Chemistry by Method 3060A/7196A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.640	2.00	1	12/08/2021 13:19	<a href="#">WG1784664</a>

## Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.10	<a href="#">T8</a>	1	12/06/2021 10:53	<a href="#">WG1784353</a>

## Sample Narrative:

L1437915-05 WG1784353: 7.1 at 19.6C

## Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	868		10.0	1	12/07/2021 07:32	<a href="#">WG1784653</a>

## Sample Narrative:

L1437915-05 WG1784653: at 25C

## Mercury by Method 7471A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Mercury	0.0414		0.0180	0.0400	1	12/06/2021 17:04	<a href="#">WG1784465</a>

## Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Barium	169		0.0852	0.500	1	12/09/2021 06:13	<a href="#">WG1785343</a>
Cadmium	0.300	<a href="#">J</a>	0.0471	0.500	1	12/09/2021 06:13	<a href="#">WG1785343</a>
Chromium	30.7		0.133	1.00	1	12/09/2021 06:13	<a href="#">WG1785343</a>
Copper	14.5		0.400	2.00	1	12/09/2021 06:13	<a href="#">WG1785343</a>
Lead	9.94		0.208	0.500	1	12/09/2021 06:13	<a href="#">WG1785343</a>
Nickel	13.2		0.132	2.00	1	12/09/2021 06:13	<a href="#">WG1785343</a>
Selenium	U		0.764	2.00	1	12/09/2021 06:13	<a href="#">WG1785343</a>
Silver	U		0.127	1.00	1	12/09/2021 06:13	<a href="#">WG1785343</a>
Zinc	50.3		0.832	5.00	1	12/09/2021 06:13	<a href="#">WG1785343</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.04	<a href="#">J</a>	0.835	10.0	50	12/09/2021 20:42	<a href="#">WG1784349</a>

## Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Arsenic	2.73		0.100	1.00	5	12/10/2021 12:21	<a href="#">WG1786004</a>



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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000929	0.00199	1.99	12/07/2021 03:50	<a href="#">WG1784988</a>
Toluene	0.00552	<a href="#">BJ</a>	0.00259	0.00995	1.99	12/07/2021 03:50	<a href="#">WG1784988</a>
Ethylbenzene	U		0.00147	0.00498	1.99	12/07/2021 03:50	<a href="#">WG1784988</a>
Total Xylenes	0.00274	<a href="#">J</a>	0.00175	0.0129	1.99	12/07/2021 03:50	<a href="#">WG1784988</a>
(S) Toluene-d8	98.1			75.0-131		12/07/2021 03:50	<a href="#">WG1784988</a>
(S) 4-Bromofluorobenzene	102			67.0-138		12/07/2021 03:50	<a href="#">WG1784988</a>
(S) 1,2-Dichloroethane-d4	112			70.0-130		12/07/2021 03:50	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Fluoranthene	0.00431	<a href="#">J</a>	0.00227	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
Pyrene	0.00263	<a href="#">J</a>	0.00200	0.00600	1	12/09/2021 05:04	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 05:04	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 05:04	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 05:04	<a href="#">WG1785524</a>
(S) p-Terphenyl-d14	28.2			23.0-120		12/09/2021 05:04	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	23.6			14.0-149		12/09/2021 05:04	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	26.5	<a href="#">J2</a>		34.0-125		12/09/2021 05:04	<a href="#">WG1785524</a>

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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.323		1	12/09/2021 19:17	WG1784355

Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	40.5		0.133	1.00	1	12/10/2021 15:39	<a href="#">WG1785343</a>

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U	<a href="#">J6 O1</a>	0.640	2.00	1	12/10/2021 15:39	<a href="#">WG1785229</a>

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.68	<a href="#">T8</a>	1	12/06/2021 10:53	<a href="#">WG1784353</a>

Sample Narrative:  
L1437915-06 WG1784353: 7.68 at 19.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	269		10.0	1	12/07/2021 07:32	<a href="#">WG1784653</a>

Sample Narrative:  
L1437915-06 WG1784653: at 25C

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0292	<a href="#">J</a>	0.0180	0.0400	1	12/06/2021 17:06	<a href="#">WG1784465</a>

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	227		0.0852	0.500	1	12/09/2021 06:16	<a href="#">WG1785343</a>
Cadmium	0.285	<a href="#">J</a>	0.0471	0.500	1	12/09/2021 06:16	<a href="#">WG1785343</a>
Chromium	40.5		0.133	1.00	1	12/09/2021 06:16	<a href="#">WG1785343</a>
Copper	13.4		0.400	2.00	1	12/09/2021 06:16	<a href="#">WG1785343</a>
Lead	11.2		0.208	0.500	1	12/09/2021 06:16	<a href="#">WG1785343</a>
Nickel	18.0		0.132	2.00	1	12/09/2021 06:16	<a href="#">WG1785343</a>
Selenium	U		0.764	2.00	1	12/09/2021 06:16	<a href="#">WG1785343</a>
Silver	U		0.127	1.00	1	12/09/2021 06:16	<a href="#">WG1785343</a>
Zinc	49.2		0.832	5.00	1	12/09/2021 06:16	<a href="#">WG1785343</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.858		0.0167	0.200	1	12/09/2021 20:45	<a href="#">WG1784349</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

## Metals (ICPMS) by Method 6020

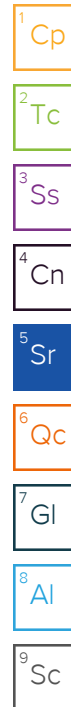
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.66		0.100	1.00	5	12/10/2021 12:24	<a href="#">WG1786004</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 04:09	<a href="#">WG1784988</a>
Toluene	0.00318	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 04:09	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 04:09	<a href="#">WG1784988</a>
Total Xylenes	0.00120	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 04:09	<a href="#">WG1784988</a>
(S) Toluene-d8	102			75.0-131		12/07/2021 04:09	<a href="#">WG1784988</a>
(S) 4-Bromofluorobenzene	99.4			67.0-138		12/07/2021 04:09	<a href="#">WG1784988</a>
(S) 1,2-Dichloroethane-d4	111			70.0-130		12/07/2021 04:09	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Fluoranthene	0.00383	<a href="#">J</a>	0.00227	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
Pyrene	0.00230	<a href="#">J</a>	0.00200	0.00600	1	12/09/2021 03:53	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 03:53	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 03:53	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 03:53	<a href="#">WG1785524</a>
(S) p-Terphenyl-d14	85.1			23.0-120		12/09/2021 03:53	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	59.3			14.0-149		12/09/2021 03:53	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	75.2			34.0-125		12/09/2021 03:53	<a href="#">WG1785524</a>





Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.398		1	12/09/2021 19:20	WG1784355

Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	37.2		0.133	1.00	1	12/10/2021 15:48	<a href="#">WG1785343</a>

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	12/10/2021 15:48	<a href="#">WG1785229</a>

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.92	<a href="#">T8</a>	1	12/06/2021 15:17	<a href="#">WG1784375</a>

Sample Narrative:  
L1437915-07 WG1784375: 7.92 at 19C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	166		10.0	1	12/07/2021 07:32	<a href="#">WG1784653</a>

Sample Narrative:  
L1437915-07 WG1784653: at 25C

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0288	<a href="#">J</a>	0.0180	0.0400	1	12/06/2021 17:08	<a href="#">WG1784465</a>

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	235	<a href="#">J5 O1</a>	0.0852	0.500	1	12/09/2021 05:06	<a href="#">WG1785343</a>
Cadmium	0.235	<a href="#">J</a>	0.0471	0.500	1	12/09/2021 05:06	<a href="#">WG1785343</a>
Chromium	37.2	<a href="#">O1</a>	0.133	1.00	1	12/09/2021 05:06	<a href="#">WG1785343</a>
Copper	14.0		0.400	2.00	1	12/09/2021 05:06	<a href="#">WG1785343</a>
Lead	14.2	<a href="#">O1</a>	0.208	0.500	1	12/09/2021 05:06	<a href="#">WG1785343</a>
Nickel	19.4	<a href="#">O1</a>	0.132	2.00	1	12/09/2021 05:06	<a href="#">WG1785343</a>
Selenium	0.872	<a href="#">J</a>	0.764	2.00	1	12/09/2021 05:06	<a href="#">WG1785343</a>
Silver	U		0.127	1.00	1	12/09/2021 05:06	<a href="#">WG1785343</a>
Zinc	50.1	<a href="#">O1</a>	0.832	5.00	1	12/09/2021 05:06	<a href="#">WG1785343</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.370		0.0167	0.200	1	12/09/2021 20:47	<a href="#">WG1784349</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.02		0.100	1.00	5	12/10/2021 12:27	<a href="#">WG1786004</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/07/2021 04:28	<a href="#">WG1784988</a>
Toluene	0.00293	<a href="#">B J</a>	0.00130	0.00500	1	12/07/2021 04:28	<a href="#">WG1784988</a>
Ethylbenzene	U		0.000737	0.00250	1	12/07/2021 04:28	<a href="#">WG1784988</a>
Total Xylenes	0.00143	<a href="#">J</a>	0.000880	0.00650	1	12/07/2021 04:28	<a href="#">WG1784988</a>
(S) Toluene-d8	102			75.0-131		12/07/2021 04:28	<a href="#">WG1784988</a>
(S) 4-Bromofluorobenzene	99.3			67.0-138		12/07/2021 04:28	<a href="#">WG1784988</a>
(S) 1,2-Dichloroethane-d4	105			70.0-130		12/07/2021 04:28	<a href="#">WG1784988</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 04:11	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 04:11	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 04:11	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 04:11	<a href="#">WG1785524</a>
(S) p-Terphenyl-d14	68.1			23.0-120		12/09/2021 04:11	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	49.3			14.0-149		12/09/2021 04:11	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	63.5			34.0-125		12/09/2021 04:11	<a href="#">WG1785524</a>

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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.385		1	12/09/2021 19:23	WG1784355

Calculated Results

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	33.6		0.133	1.00	1	12/10/2021 15:52	<a href="#">WG1785343</a>

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.640	2.00	1	12/10/2021 15:52	<a href="#">WG1785229</a>

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.80	<a href="#">T8</a>	1	12/06/2021 15:17	<a href="#">WG1784375</a>

Sample Narrative:  
L1437915-08 WG1784375: 7.8 at 18.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	208		10.0	1	12/07/2021 07:32	<a href="#">WG1784653</a>

Sample Narrative:  
L1437915-08 WG1784653: at 25C

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0324	<a href="#">J</a>	0.0180	0.0400	1	12/06/2021 17:10	<a href="#">WG1784465</a>

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	201		0.0852	0.500	1	12/09/2021 06:19	<a href="#">WG1785343</a>
Cadmium	0.224	<a href="#">J</a>	0.0471	0.500	1	12/09/2021 06:19	<a href="#">WG1785343</a>
Chromium	33.6		0.133	1.00	1	12/09/2021 06:19	<a href="#">WG1785343</a>
Copper	12.7		0.400	2.00	1	12/09/2021 06:19	<a href="#">WG1785343</a>
Lead	10.4		0.208	0.500	1	12/09/2021 06:19	<a href="#">WG1785343</a>
Nickel	17.2		0.132	2.00	1	12/09/2021 06:19	<a href="#">WG1785343</a>
Selenium	U		0.764	2.00	1	12/09/2021 06:19	<a href="#">WG1785343</a>
Silver	U		0.127	1.00	1	12/09/2021 06:19	<a href="#">WG1785343</a>
Zinc	46.6		0.832	5.00	1	12/09/2021 06:19	<a href="#">WG1785343</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.401		0.0167	0.200	1	12/09/2021 20:55	<a href="#">WG1784349</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.98		0.100	1.00	5	12/10/2021 12:31	<a href="#">WG1786004</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	12/08/2021 03:42	<a href="#">WG1785502</a>
Toluene	0.00330	<a href="#">U</a>	0.00130	0.00500	1	12/08/2021 03:42	<a href="#">WG1785502</a>
Ethylbenzene	U		0.000737	0.00250	1	12/08/2021 03:42	<a href="#">WG1785502</a>
Total Xylenes	0.00113	<a href="#">U</a>	0.000880	0.00650	1	12/08/2021 03:42	<a href="#">WG1785502</a>
(S) Toluene-d8	103			75.0-131		12/08/2021 03:42	<a href="#">WG1785502</a>
(S) 4-Bromofluorobenzene	97.1			67.0-138		12/08/2021 03:42	<a href="#">WG1785502</a>
(S) 1,2-Dichloroethane-d4	98.9			70.0-130		12/08/2021 03:42	<a href="#">WG1785502</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Acenaphthene	U		0.00209	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Acenaphthylene	U		0.00216	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Chrysene	U		0.00232	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Fluoranthene	U		0.00227	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Fluorene	U		0.00205	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Naphthalene	U		0.00408	0.0200	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Phenanthrene	U		0.00231	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
Pyrene	U		0.00200	0.00600	1	12/09/2021 04:28	<a href="#">WG1785524</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	12/09/2021 04:28	<a href="#">WG1785524</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	12/09/2021 04:28	<a href="#">WG1785524</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	12/09/2021 04:28	<a href="#">WG1785524</a>
(S) p-Terphenyl-d14	89.6			23.0-120		12/09/2021 04:28	<a href="#">WG1785524</a>
(S) Nitrobenzene-d5	64.6			14.0-149		12/09/2021 04:28	<a href="#">WG1785524</a>
(S) 2-Fluorobiphenyl	78.3			34.0-125		12/09/2021 04:28	<a href="#">WG1785524</a>

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

Method Blank (MB)

(MB) R3738590-1 12/08/21 12:49

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1437907-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1437907-05 12/08/21 12:54 • (DUP) R3738590-3 12/08/21 12:57

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

L1437915-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1437915-02 12/08/21 13:40 • (DUP) R3738590-8 12/08/21 13:40

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

Laboratory Control Sample (LCS)

(LCS) R3738590-2 12/08/21 12:50

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chromium,Hexavalent	24.0	25.2	105	80.0-120	

L1437907-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437907-09 12/08/21 13:00 • (MS) R3738590-4 12/08/21 13:00 • (MSD) R3738590-5 12/08/21 13:01

	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	%	%		%			%	%
Chromium,Hexavalent	20.0	U	13.1	15.9	65.3	79.6	1	75.0-125	J6		19.8	20

L1437907-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L1437907-09 12/08/21 13:00 • (MS) R3738590-7 12/08/21 13:03

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Chromium,Hexavalent	633	U	875	138	50	75.0-125	J5

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3739527-1 12/10/21 15:24

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chromium,Hexavalent	U		0.640	2.00

L1437915-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1437915-04 12/10/21 15:29 • (DUP) R3739527-3 12/10/21 15:38

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

L1438289-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1438289-05 12/10/21 15:58 • (DUP) R3739527-8 12/10/21 15:58

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

Laboratory Control Sample (LCS)

(LCS) R3739527-2 12/10/21 15:25

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chromium,Hexavalent	24.0	25.1	104	80.0-120	

L1437915-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437915-06 12/10/21 15:39 • (MS) R3739527-4 12/10/21 15:42 • (MSD) R3739527-5 12/10/21 15:42

	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	%	%		%			%	%
Chromium,Hexavalent	20.0	U	1.92	1.84	9.59	9.19	1	75.0-125	J6	J6	4.21	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1437294-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1437294-03 12/06/21 10:53 • (DUP) R3737353-2 12/06/21 10:53

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	pH	su		%		%
pH	8.92	8.92	1	0.000		1

Sample Narrative:

OS: 8.92 at 19.3C

DUP: 8.92 at 19.6C

L1437306-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1437306-01 12/06/21 10:53 • (DUP) R3737353-3 12/06/21 10:53

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	7.66	7.71	1	0.651		1

Sample Narrative:

OS: 7.66 at 19.2C

DUP: 7.71 at 19.2C

Laboratory Control Sample (LCS)

(LCS) R3737353-1 12/06/21 10:53

	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 19.1C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1437294-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1437294-12 12/06/21 15:17 • (DUP) R3737512-2 12/06/21 15:17

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	pH	su		%		%
pH	8.28	8.30	1	0.241		1

Sample Narrative:

OS: 8.28 at 18.6C

DUP: 8.3 at 18.4C

L1437294-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1437294-21 12/06/21 15:17 • (DUP) R3737512-3 12/06/21 15:17

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	pH	su		%		%
pH	8.43	8.47	1	0.473		1

Sample Narrative:

OS: 8.43 at 18.4C

DUP: 8.47 at 18.7C

Laboratory Control Sample (LCS)

(LCS) R3737512-1 12/06/21 15:17

	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 18.2C

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Method Blank (MB)

(MB) R3737719-1 12/07/21 07:32

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

Sample Narrative:

BLANK: at 25C

L1437915-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1437915-04 12/07/21 07:32 • (DUP) R3737719-3 12/07/21 07:32

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	153	157	1	2.90		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1438085-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1438085-02 12/07/21 07:32 • (DUP) R3737719-4 12/07/21 07:32

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	10800	11200	1	3.19		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3737719-2 12/07/21 07:32

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	271	101	85.0-115	

Sample Narrative:

LCS: at 25C



Method Blank (MB)

(MB) R3737709-1 12/06/21 16:16

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3737709-2 12/06/21 16:17

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.529	106	80.0-120	

L1437836-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437836-01 12/06/21 16:19 • (MS) R3737709-3 12/06/21 16:21 • (MSD) R3737709-4 12/06/21 16:23

	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	%	%		%			%	%
Mercury	0.500	U	0.503	0.475	101	95.0	1	75.0-125			5.71	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3738333-1 12/08/21 09:15

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3738333-2 12/08/21 09:17

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.525	105	80.0-120	

L1437633-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437633-01 12/08/21 09:19 • (MS) R3738333-3 12/08/21 09:21 • (MSD) R3738333-4 12/08/21 09:23

	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	%	%		%			%	%
Mercury	0.500	U	0.554	0.562	111	112	1	75.0-125			1.29	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3738366-1 12/08/21 08:20

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3738366-2 12/08/21 08:22

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.514	103	80.0-120	

L1437916-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437916-20 12/08/21 08:24 • (MS) R3738366-3 12/08/21 08:26 • (MSD) R3738366-4 12/08/21 08:28

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.500	U	0.649	0.556	130	111	1	75.0-125	<u>J5</u>		15.5	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3738909-1 12/09/21 05:01

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Copper	U		0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R3738909-2 12/09/21 05:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	102	102	80.0-120	
Cadmium	100	99.0	99.0	80.0-120	
Chromium	100	99.0	99.0	80.0-120	
Copper	100	100	100	80.0-120	
Lead	100	98.8	98.8	80.0-120	
Nickel	100	100	100	80.0-120	
Selenium	100	98.4	98.4	80.0-120	
Silver	20.0	17.4	87.0	80.0-120	
Zinc	100	97.7	97.7	80.0-120	

L1437915-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437915-07 12/09/21 05:06 • (MS) R3738909-5 12/09/21 05:15 • (MSD) R3738909-6 12/09/21 05:18

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 %
Barium	100	235	320	364	85.5	129	1	75.0-125		J5	12.7	20
Cadmium	100	0.235	96.6	93.3	96.4	93.0	1	75.0-125			3.53	20
Chromium	100	37.2	125	128	87.5	91.2	1	75.0-125			2.91	20
Copper	100	14.0	112	107	97.7	93.4	1	75.0-125			3.91	20
Lead	100	14.2	111	107	97.3	92.9	1	75.0-125			4.04	20
Nickel	100	19.4	120	119	100	99.5	1	75.0-125			0.811	20
Selenium	100	0.872	95.4	90.9	94.5	90.0	1	75.0-125			4.85	20
Silver	20.0	U	17.2	16.5	86.0	82.4	1	75.0-125			4.31	20
Zinc	100	50.1	136	134	86.3	84.3	1	75.0-125			1.42	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3739378-1 12/09/21 20:24

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

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

(LCS) R3739378-2 12/09/21 20:26 • (LCSD) R3739378-3 12/09/21 20:29

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	0.995	103	99.5	80.0-120			3.00	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3739353-1 12/10/21 11:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3739353-2 12/10/21 11:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	90.8	90.8	80.0-120	

L1437915-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437915-01 12/10/21 11:48 • (MS) R3739353-5 12/10/21 11:58 • (MSD) R3739353-6 12/10/21 12:01

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	6.46	95.6	96.1	89.1	89.7	5	75.0-125			0.615	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3737911-3 12/06/21 22:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	0.00130	U	0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	102			75.0-131
(S) 4-Bromofluorobenzene	99.4			67.0-138
(S) 1,2-Dichloroethane-d4	95.6			70.0-130

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

(LCS) R3737911-1 12/06/21 21:10 • (LCSD) R3737911-2 12/06/21 21:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.110	0.110	88.0	88.0	70.0-123			0.000	20
Ethylbenzene	0.125	0.113	0.116	90.4	92.8	74.0-126			2.62	20
Toluene	0.125	0.112	0.110	89.6	88.0	75.0-121			1.80	20
Xylenes, Total	0.375	0.333	0.326	88.8	86.9	72.0-127			2.12	20
(S) Toluene-d8				103	101	75.0-131				
(S) 4-Bromofluorobenzene				102	100	67.0-138				
(S) 1,2-Dichloroethane-d4				107	110	70.0-130				

L1436873-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1436873-01 12/06/21 22:26 • (MS) R3737911-4 12/07/21 04:47 • (MSD) R3737911-5 12/07/21 05:06

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	U	0.116	0.105	93.5	84.7	1	10.0-149			9.95	37
Ethylbenzene	0.129	U	0.119	0.111	96.0	89.5	1	10.0-160			6.96	38
Toluene	0.129	0.00163	0.119	0.111	94.7	88.2	1	10.0-156			6.96	38
Xylenes, Total	0.386	0.00151	0.352	0.331	94.2	88.6	1	10.0-160			6.15	38
(S) Toluene-d8					101	101		75.0-131				
(S) 4-Bromofluorobenzene					99.4	99.9		67.0-138				
(S) 1,2-Dichloroethane-d4					103	104		70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3738689-3 12/08/21 03:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	100			75.0-131
(S) 4-Bromofluorobenzene	103			67.0-138
(S) 1,2-Dichloroethane-d4	105			70.0-130

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

(LCS) R3738689-1 12/08/21 01:48 • (LCSD) R3738689-2 12/08/21 02:06

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	0.112	0.117	89.6	93.6	70.0-123			4.37	20
Ethylbenzene	0.125	0.109	0.116	87.2	92.8	74.0-126			6.22	20
Toluene	0.125	0.108	0.112	86.4	89.6	75.0-121			3.64	20
Xylenes, Total	0.375	0.332	0.346	88.5	92.3	72.0-127			4.13	20
(S) Toluene-d8				97.4	99.1	75.0-131				
(S) 4-Bromofluorobenzene				101	103	67.0-138				
(S) 1,2-Dichloroethane-d4				109	107	70.0-130				

L1437918-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437918-04 12/08/21 11:58 • (MS) R3738689-4 12/08/21 12:36 • (MSD) R3738689-5 12/08/21 12:55

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	0.990	0.0806	0.777	0.514	70.3	43.8	8	10.0-149		J3	40.7	37
Ethylbenzene	0.990	11.2	20.4	19.4	929	828	8	10.0-160	E V	V	5.03	38
Toluene	0.990	0.0915	0.891	0.594	80.8	50.8	8	10.0-156		J3	40.0	38
Xylenes, Total	2.97	47.4	82.2	77.9	1170	1030	8	10.0-160	V	V	5.37	38
(S) Toluene-d8					88.0	78.6		75.0-131				
(S) 4-Bromofluorobenzene					96.8	75.3		67.0-138				
(S) 1,2-Dichloroethane-d4					124	123		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3738822-2 12/08/21 22:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	87.9			14.0-149
(S) 2-Fluorobiphenyl	103			34.0-125
(S) p-Terphenyl-d14	119			23.0-120

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3738822-1 12/08/21 22:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0652	81.5	50.0-126	
Acenaphthene	0.0800	0.0684	85.5	50.0-120	
Acenaphthylene	0.0800	0.0692	86.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0660	82.5	45.0-120	
Benzo(a)pyrene	0.0800	0.0599	74.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0694	86.8	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0660	82.5	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0696	87.0	49.0-125	
Chrysene	0.0800	0.0660	82.5	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0653	81.6	47.0-125	
Fluoranthene	0.0800	0.0652	81.5	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3738822-1 12/08/21 22:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0645	80.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0688	86.0	46.0-125	
Naphthalene	0.0800	0.0577	72.1	50.0-120	
Phenanthrene	0.0800	0.0685	85.6	47.0-120	
Pyrene	0.0800	0.0661	82.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0701	87.6	51.0-121	
2-Methylnaphthalene	0.0800	0.0665	83.1	50.0-120	
2-Chloronaphthalene	0.0800	0.0666	83.3	50.0-120	
(S) Nitrobenzene-d5			95.7	14.0-149	
(S) 2-Fluorobiphenyl			97.4	34.0-125	
(S) p-Terphenyl-d14			97.7	23.0-120	

L1437915-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437915-01 12/08/21 22:51 • (MS) R3738822-3 12/08/21 23:09 • (MSD) R3738822-4 12/08/21 23:27

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 %
Anthracene	0.0768	U	0.0430	0.0409	56.0	53.3	1	10.0-145			5.01	30
Acenaphthene	0.0768	U	0.0436	0.0415	56.8	54.0	1	14.0-127			4.94	27
Acenaphthylene	0.0768	U	0.0431	0.0418	56.1	54.4	1	21.0-124			3.06	25
Benzo(a)anthracene	0.0768	U	0.0427	0.0411	55.6	53.5	1	10.0-139			3.82	30
Benzo(a)pyrene	0.0768	U	0.0459	0.0442	59.8	57.6	1	10.0-141			3.77	31
Benzo(b)fluoranthene	0.0768	U	0.0411	0.0393	53.5	51.2	1	10.0-140			4.48	36
Benzo(g,h,i)perylene	0.0768	U	0.0427	0.0411	55.6	53.5	1	10.0-140			3.82	33
Benzo(k)fluoranthene	0.0768	U	0.0393	0.0385	51.2	50.1	1	10.0-137			2.06	31
Chrysene	0.0768	U	0.0431	0.0409	56.1	53.3	1	10.0-145			5.24	30
Dibenz(a,h)anthracene	0.0768	U	0.0415	0.0400	54.0	52.1	1	10.0-132			3.68	31
Fluoranthene	0.0768	U	0.0433	0.0422	56.4	54.9	1	10.0-153			2.57	33
Fluorene	0.0768	U	0.0414	0.0398	53.9	51.8	1	11.0-130			3.94	29
Indeno(1,2,3-cd)pyrene	0.0768	U	0.0450	0.0432	58.6	56.3	1	10.0-137			4.08	32
Naphthalene	0.0768	U	0.0337	0.0321	43.9	41.8	1	10.0-135			4.86	27
Phenanthrene	0.0768	U	0.0437	0.0427	56.9	55.6	1	10.0-144			2.31	31
Pyrene	0.0768	U	0.0442	0.0416	57.6	54.2	1	10.0-148			6.06	35
1-Methylnaphthalene	0.0768	U	0.0469	0.0451	61.1	58.7	1	10.0-142			3.91	28
2-Methylnaphthalene	0.0768	U	0.0421	0.0399	54.8	52.0	1	10.0-137			5.37	28
2-Chloronaphthalene	0.0768	U	0.0289	0.0274	37.6	35.7	1	29.0-120			5.33	24
(S) Nitrobenzene-d5					52.7	47.1		14.0-149				
(S) 2-Fluorobiphenyl					59.6	55.9		34.0-125				
(S) p-Terphenyl-d14					62.2	58.8		23.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

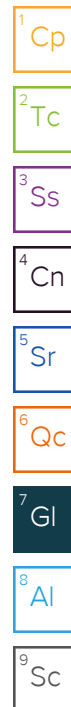
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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.
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.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
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.
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.
V	The sample concentration is too high to evaluate accurate spike recoveries.



# ACCREDITATIONS & LOCATIONS

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



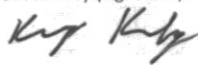
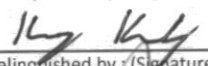
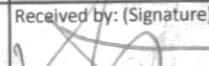
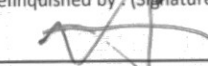
Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1 6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1 4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.



<b>Caerus Oil &amp; Gas LLC</b> <b>143 Diamond Avenue</b> <b>Parachute, CO 81635</b> <b>970-285-9606</b>				Billing Information:				Analysis / Container / Preservative				Chain of Custody Page <u>1</u> of <u>1</u>		
				Same as above								 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859		
Report to: <b>bmiddleton@caerusoilandgas.com</b>				Email To: <b>bmiddleton@caerusoilandgas.com</b>				<div style="display: flex; justify-content: space-between;"> <div> TPH- GRO/DRO BTEX TABLE 910- PAH's SAR, EC, pH TABLE 910- Metals </div> <div> </div> </div>				 L# <b>1437415</b> Ta <b>H060</b> Acctnum: Template: Prelogin: TSR: PB: Shipped Via:		
Project Description: <b>Hatch Gulch Pig Launcher</b>				City/State Collected: <b>Piceance, CO</b>										
Phone:		Client Project #		Lab Project #										
Fax:		<b>HGPG</b>		<b>HGPG</b>										
Collected by (print): <b>KOREY KENNEDY</b>		Site/Facility ID # <b>HGPG</b>		P.O. # <b>HGPG</b>										
Collected by (signature): 		Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day		Quote #		Date Results Needed								
Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>				<b>Standard TAT</b>		No. of Cntrs								
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time									
20211201-HATCH GULCH (BG-1) @ 0.5'-1'	G	SS	0.5'-1'	12/1/21	9:55	2		X	X	X	X			
20211201-HATCH GULCH (BG-1) @ 1'-1.5'	G	SS	1'-1.5'	↓	10:00	2		X	X	X	X			
20211201-HATCH GULCH (BG-2) @ 0.5'-1'	G	SS	0.5'-1'		13:25	2		X	X	X	X			
20211201-HATCH GULCH (BG-2) @ 1'-1.5'	G	SS	1'-1.5'		13:36	2		X	X	X	X			
20211201-HATCH GULCH (BG-3) @ 0.5'-1'	G	SS	0.5'-1'		13:40	2		X	X	X	X			
20211201-HATCH GULCH (BG-3) @ 1'-1.5'	G	SS	1'-1.5'		13:45	2		X	X	X	X			
20211201-HATCH GULCH (BG-4) @ 0.5'-1'	G	SS	0.5'-1'		13:50	2		X	X	X	X			
20211201-HATCH GULCH (BG-4) @ 1'-1.5'	G	SS	1'-1.5'		13:55	2		X	X	X	X			
* Matrix: SS - Soil   AIR - Air   F - Filter GW - Groundwater   B - Bioassay WW - WasteWater DW - Drinking Water OT - Other				Remarks:				pH _____ Temp _____ Flow _____ Other _____				Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		
Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier				Tracking #				5016 1232 0011 Trip Blank Received: Yes / No HCL / MeOH TBR				If preservation required by Login: Date/Time		
Relinquished by: (Signature) 		Date: 12/1/21		Time: 17:00		Received by: (Signature) 		Temp: 3.8-4.3°C		Bottles Received: 16		Hold: _____ Condition: NCF / OK		
Relinquished by: (Signature) 		Date: 12/2/21		Time: 1500		Received by: (Signature)		Date: 12/3/21		Time: gae				
Relinquished by: (Signature)		Date:		Time:		Received for lab by: (Signature) T. Robertson		Date:		Time:				